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REPORT

2011

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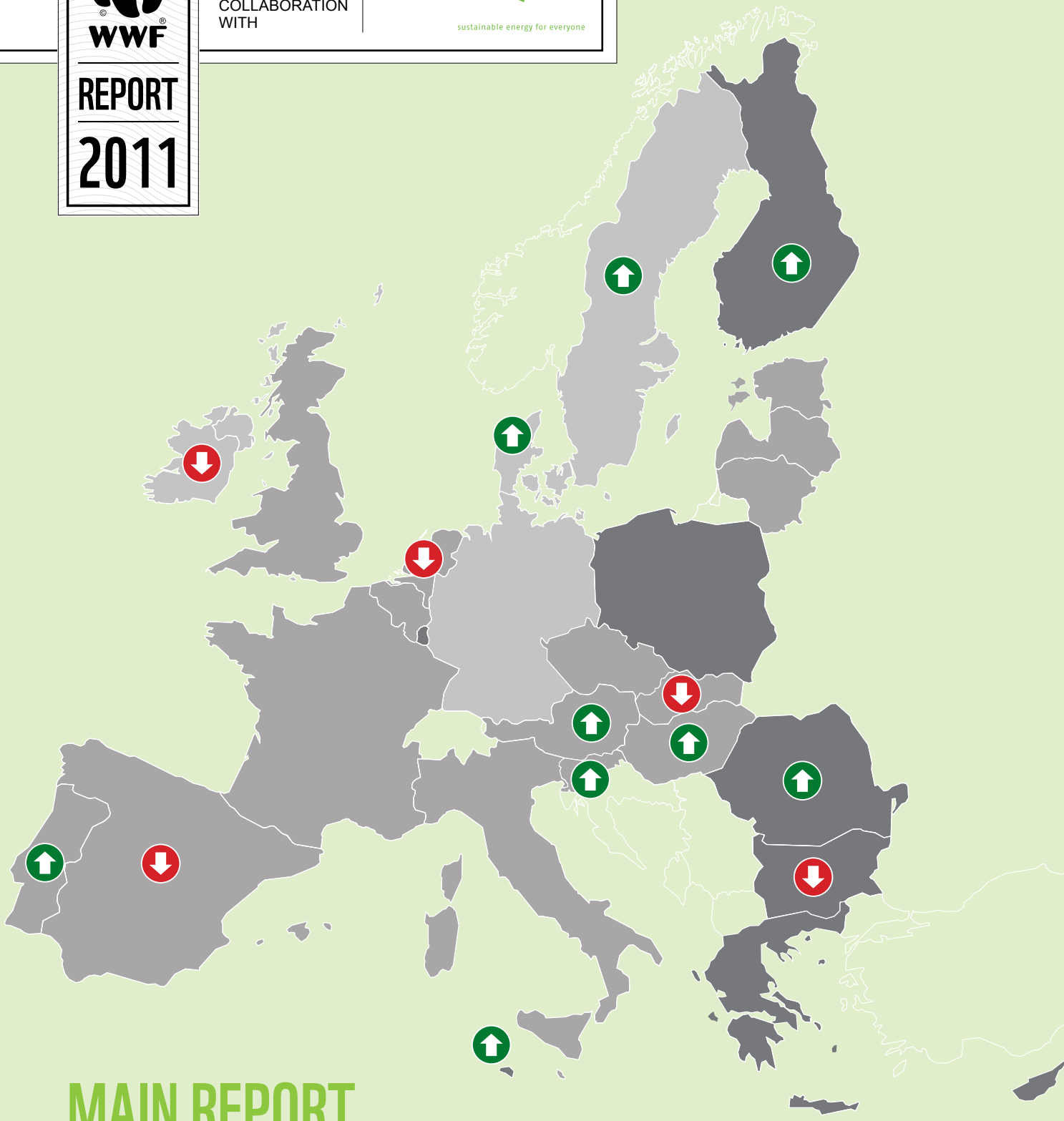

MAIN REPORT

EU CLIMATE POLICY TRACKER 2011

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Why we are here
To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

www.wwf.eu

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Published in November 2011 by WWF-World Wide Fund for Nature
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”I welcome this review of greenhouse gas emissions reduction policies within the European Union. We share similar aspirations for the future, namely the EU commitment to achieving an 80-95% reduction in greenhouse gas emissions by 2050, playing our part in limiting below 20C the global temperature rise due to climate change.

The examples of best practice policy by individual Member States highlighted within the report are very encouraging although it also demonstrates that Member States still make significant progress in climate policies through the implementation of tried and tested actions.

Our current ‘Resource Efficient Europe’ initiative will help to mainstream resource efficiency into a variety of policy areas including the forthcoming ‘2050 Low Carbon Economy Roadmap’, ‘Transport White Paper’ and the ‘Energy Efficiency Plan’.

The analyses presented in your report will be a very valuable resource for fixture action towards achieving EU targets.

I wish to thank you for your continuing support for strong EU action on climate change.”

Excerpt from a letter addressed to WWF by José Manuel Barroso,
President of the European Commission on, the EU Climate Policy Tracker 2010,
3 March 2011

FOREWORD

If there was a crisis making headlines this past year, it was about debt, and not climate. Saving the economy has been on the top of every politician's agenda. So perhaps it's hard to see how a report indicating that Europe is not doing enough to combat climate change fits into the current focus on financial woes. But if we have learned anything from the debt crisis, it is that the seeds of trouble are sown well in advance, and are generally well recognised at the time. We ignore them at our peril.

The economic implications of failing to combat climate change will be disastrous. Poorly managing our carbon budget will be no less, indeed far more, problematic than the mismanagement leading to the financial crisis.

Furthermore, there is mounting evidence that combating climate change, focusing on energy efficiency and renewable energy, can create jobs and lead to economic growth starting today, while creating the basis for new growth industries of the future.

Three concepts underpin the necessity to move forward on climate and energy policy, whatever the broader political and economic environment:

Urgency - the climate crisis is not a far off problem. The impacts are already felt today, and will only become more severe in the future. Moreover, it would be impossible to contend with those impacts and avoid further damage by waiting until it's too late. Solutions have to begin now.

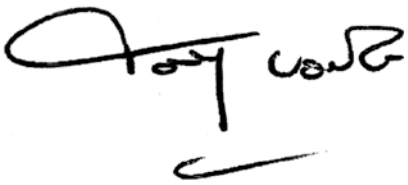
Opportunity - investing in renewable energy and energy efficiency is an economic opportunity; indeed it is probably better described as an economic necessity. The world has dug itself into a financial pit - looking for solutions from renewed over-consumption and finite, environmentally damaging resources, is simply grasping at another shovel. Europe is well positioned as a leader in low-carbon innovation; properly designed policy can drive a new wave of investment.

Responsibility – faced with the challenge of combating climate change in an era of financial uncertainty, our political leaders need to make progress on both fronts together. It would be irresponsible to mishandle or completely miss out on opportunities to make good policy choices, which continue to arise on the agenda even now.

This report holds two references in focus at the same time: a 2050 goal of near-total decarbonisation, and our current policy trajectory. The EU Climate Policy Tracker helps us understand to what degree politicians are making the best of the chances given to them to legislate in a way that aligns those two references.

The EU Climate Policy Tracker presents a clear vision as a metric against which policy is measured, and a transparent assessment of what is happening around Europe. It is intended to be a resource for those seeking information, a means of sharing best practice, and a way of holding policymakers to account.

Looking at developments in the past year, we can see that even in a crisis, environment, energy and climate can retain a high level of political importance. Germany put forward bolder nuclear energy phase out plans, and Italian voters massively rejected a return to nuclear. The UK published the next in a series of carbon budgets, and Denmark marked out a renewed course of accelerated decarbonisation plans. In fact, in every country around the Union there is an example of positive action. Of course, while this is encouraging, it's still not enough. It's time to recognise climate policy for what it is: an intrinsic part of our economic and social strategy to meet the challenge of transitioning to a world that, despite limited resources, is able to meet the needs of more people, more equitably, and in harmony with nature.



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EU CLIMATE POLICY TRACKER 2011

A WWF report, produced by Ecofys

Additional to this report you can find a summary report, individual country profiles of the 27 EU member states, information about our methodology and all references and sources used for this report on our website: www.climatepolicytracker.eu

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EXECUTIVE SUMMARY

Limiting the rise in the average global temperature to 2°C has been the EU goal since 1996, and in December 2010 the UN recognised the need to consider a 1.5°C limit. Avoiding overshooting these levels will require massive emissions reductions – in the order of 80-95% for industrialised countries, like those in the EU. The next ten years are crucial in establishing whether society will be able to make this transition, or whether temperature increase limits will be irreversibly missed.

Last year, the European Union Climate Policy Tracker (EU CPT) investigated each member state's implementation of policy and legislation, and rated their progress towards a 2050 vision of deep decarbonisation using renewable energy. The uniquely developed rating scheme, modelled on appliance efficiency labels (A-G), gave an indication of how member states were doing compared to a 'low-carbon policy package'. The average score was an 'E', indicating that the level of effort needed to treble, to be on a pace to reach the 2050 vision. However, aggregating best practices across sectors and countries doubled the score – meaning that the tools are already at hand for major improvements across Europe.

This report builds on last year's EU CPT by giving an update on action in member states, and an indicative trend in the rating, as well as adding a new section on EU policy. The addition of an EU section is appropriate, with the Commission having produced a roadmap on a low-carbon economy by 2050, a transport white paper, and with another roadmap for 2050 focused on energy anticipated by the end of 2011. This report seeks to answer the question of whether these and other related initiatives are sufficient to help Europe reach its low-carbon goals.

When interpreting the results of this report, it is important to understand that the goal underlying the vision here is not the same as the one in the European Commission's 'low-carbon economy' roadmap published in March, 2011. There is a disagreement on what it means to be on the path to avoiding dangerous climate change. Our analysis indicates that global cuts of around 80% are needed by 2050, translating to the high end of the 80 to 95% range that is the indicative policy in Europe. The Commission's roadmap investigates the less ambitious end of that range. The rating scale presented here also places a high premium on certainty. Policies that appear more likely to have effective implementation, funding that is long-term and certain, and targets that are binding - these rate more highly. Exploring these factors is a major part of the chapter on EU policy.

The vision also supports the view that we should move to a fully renewable energy system by 2050. This is to emphasise not only that greenhouse gas cuts are important, but that other environmental, energy security, and social values also matter. Cutting dangerous and costly dependencies on fossil fuel imports, and avoiding the millennia-long legacy of nuclear waste are just two examples.

Regarding EU policy, the report observes that:

- Close to half of the performance of a member state is directly related to legislation from the EU.
- Many EU policies assist the member states in formulating ambitious climate policies, with the Renewable Energy Directive and the Energy Performance of Buildings Directive as prominent examples.
- Some EU policies that prescribe harmonised rules, such as the Ecodesign Directive or the cap on the Emission Trading System, are too weak but also restrictive – the risk inherent in such policy approaches.
- Some areas important for a path towards a low-carbon economy are not, or only very indirectly, covered by the EU: targets beyond 2020, investments in electricity grids and distribution, redesign of products, energy efficiency in industry, retrofit of existing buildings, freight transport and low-carbon agriculture policy.

In evaluating current policy and plans on the table for the future, we find that:

- The present EU-level policy package is insufficiently stringent to reach 2050 low-carbon goals, with an estimated average score of 'E'.
- EU-level policies on renewables are more stringent than those on energy efficiency.
- The EU's new plans, consisting of a roadmap on a low-carbon economy by 2050, a transport white paper and an energy efficiency plan, show significant improvements, but are still insufficient to be in line with a low-carbon economy.

At member state level we find that in terms of developments since last year's report:

- Nine EU member states have, on balance, made progress, and five have fallen further behind. Overall, current effort remains insufficient to meet a low-carbon vision.
- The majority of new policy developments in EU member states are either a direct implementation of EU legislation or are linked to EU legislation. This reinforces the message that intensification of policies at the EU-level can have a large impact on countries' performance.
- The financial crisis has made its impact felt: although green growth is part of many gover nment plans, real transformation is little in evidence. Cuts in support to alleviate short-term budget gaps have appeared in several countries.

Assessment at sectoral level indicates few consistent trends, with changes for the better and the worse in evidence

- There has been a standstill in long-term strategies. Ireland and the Netherlands took back earlier commitments. Denmark and Germany are the exception to the rule – formulating low-carbon targets towards 2050.
- In electricity supply, there is reduced support for renewable electricity, mainly for photovoltaics (PV). This is partly justified given the decrease in production cost and very strong market growth. Still, in Spain and the Czech Republic, support for solar photovoltaics (PV) was cut retroactively, reducing greatly needed future investment certainty.
- Industry is still barely tackled by policies.
- In buildings, there has been a focus on measures to stimulate renovation policy and improved certification of buildings.
- Transport policies mainly focus on efficiency of existing cars, with premium or labelling systems for new cars in many countries.
- In forestry and agriculture there are few innovative policies to report.

Overall there are two key recommendations:

1. EU policy needs significant strengthening to help Europe develop towards a low-carbon economy. The first needed step is **significant improvement of the EU's existing cornerstone policies:**

- Revision of the EU Emissions trading system cap and reduction trajectory to align with 2050 decarbonisation, as well as measures to reduce the current credit oversupply.
- Introduce a CO2 tax as part of the Energy Tax Directive.
- Tightening the requirements for CO2 efficiency of passenger cars.
- Tightening of standards under the Ecodesign Directive.
- Guidance to member states on how to encourage retrofit for energy efficiency and renewable energy as part of the Energy Performance of Buildings Directive.

Second, there is a need for **new policies to close existing gaps**:

- Legal agreement on long term targets and strategies beyond 2020
- A greater ambition for energy savings through 2020.
- Explicitly targeting the redesign of products, with the objective to make these less material intensive, longer lasting and 100% recyclable.
- Legislation on freight transport via road, rail or shipping.
- A long term climate perspective on EU agriculture policy.

2. Finally, additional action across all sectors in all member states is needed. There is ample scope for member states to learn from each other. To name a few opportunities:

- Germany put forward bolder nuclear energy phase out plans enabling a positive energy transition, Italian voters massively rejected a return to nuclear and Denmark began marking out a renewed course of accelerated decarbonisation plans.
- Austria introduced environmental taxes in transport, and Ireland will double its carbon tax to €30 per tonne by 2014.
- Finland, Hungary and Latvia further improved their support schemes for renewable energy.
- The Slovenian government set up programmes to co-finance biomass district heating systems and the UK adopted an innovative feed-in tariff for renewable heat.

In every country in the European Union there is an example of positive action. A wider application of these policies across the EU would result in further greenhouse gas emissions reductions. This report seeks to help facilitate such exchanges.

CONTENTS

1. INTRODUCTION

Government policy is the single biggest driver behind the fight against climate change. Although there are regular statistical updates on greenhouse gas emissions, there is far less transparency about the status of the policies that influence increases or decreases in emissions. It is essential to have a means of understanding the sufficiency of policy before it's too late to take action. This is what the EU Climate Policy Tracker (EU CPT) is intended to do.

1.1 Objective

The objective of this project is to provide:

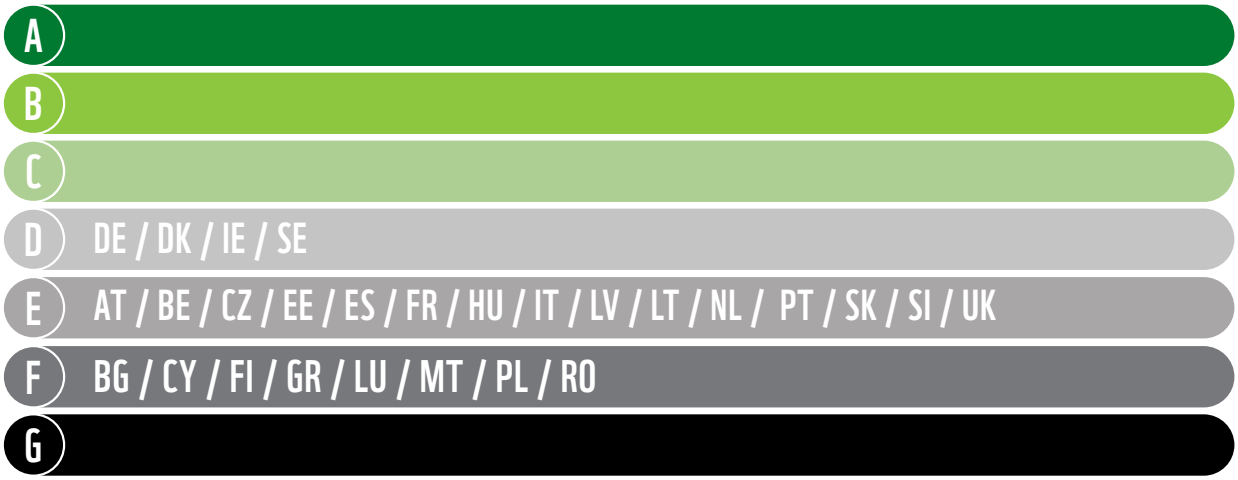
- **Transparency** on what policies are being implemented versus what policies are needed to limit the effects of climate change;
- **A factual basis for public discussion** on climate and energy policy packages;
- An information resource to enable countries to **learn** from each others best policy practice.

The present analysis builds on the initial 2010 Climate Policy Tracker for the European Union (Höhne et al. 2010a). It provides a rating methodology for all EU member state policies that affect greenhouse gas emissions and has three unique aspects:

- **Comprehensive:** The analysis includes all policy areas that both positively and negatively influence greenhouse gas emissions.
- **Comparative:** All countries are rated by the same methodology, so that their performance in renewables, efficiency and overall climate policy can be easily compared.
- **Ambitious:** Policies are rated against the clear goal of having a low-carbon economy by 2050. The report includes policies that initiate long-term transformations, such as the development of new technologies, and not only on the least costly options for emissions reduction to reach 2020 targets.

The 2010 EU Climate Policy Tracker analysed policies in all sectors of the economy that, positively or negatively, influence greenhouse gas emissions. Based on this uniquely developed rating method, indicators were developed and scored against the benchmark of a low-carbon policy package needed now to achieve a low-carbon economy by 2050. Aggregated scores for the indicators were given for the policy areas, sectors and for the national level. The results were presented on a scale from A (excellent) to G (poor).

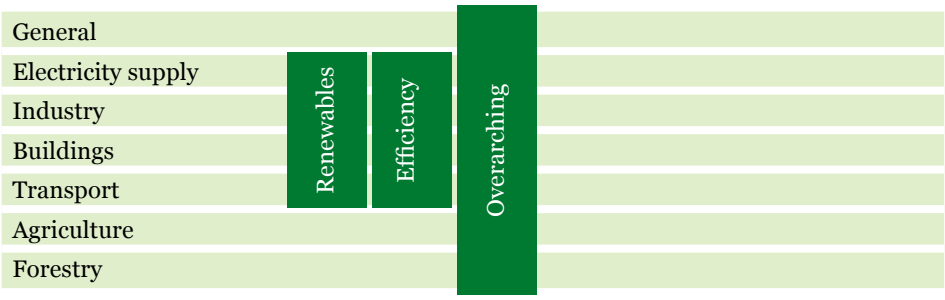
Figure 1 - 1. Results from the 2010 Climate Policy Tracker for the European Union (Höhne et al. 2010)



As last year, policies on renewables and energy efficiency are considered separately. All other elements are grouped under an 'overarching' category, including measures aimed primarily at greenhouse gas reduction, for example, carbon capture and storage, modal shift in transport, emissions trading systems or taxes. We analyse six economic sectors: electricity supply; industry; buildings; transport; agriculture; and forestry. A seventh, general category is added to include cross-sectoral and long-term climate strategies.

Figure 1 - 2. Dimensions of the analysis.

Last year's analysis showed that, with ratings between 'D' and 'F', all European countries must



intensify their policy efforts to reach a low-carbon economy. At the same time many best practice examples were found across countries, sectors and policy areas. If a country were to use all the best practice policy examples that are already implemented throughout Europe, it would receive a 'C' rating, which is substantially more than average.

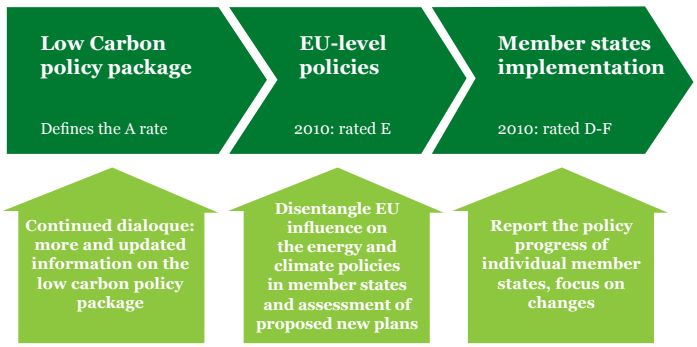
This year, our focus is on reporting the **progress** in climate and energy policy the EU-27 countries have made since our last assessment in October 2010. We also pay special attention to **the role that EU legislation** plays in national policy packages.

1.2 Methodology

For the 2011 update of the EU Climate Policy Tracker, we present a three step approach to reporting European member states' policy package progress, (see Figure 1 - 3):

- **Low-carbon policy package:** We again review several low-carbon scenarios for the EU and the world and defined the technical requirements to reach a low-carbon economy by 2050. Based on that we defined a low-carbon policy package with steps that must be implemented immediately to reach the desired ambition in the required timeframe.
- **The role of EU–level policies:** To better ascertain the interaction between EU policies and the policies of individual member states, we analyse the balance between national versus EU competencies in more detail. How does EU policy influence the energy and climate package scores for the individual member states? And how will this change in the future with the new EU plans?
- **Member state implementation:** To report the policy progress of individual member states, we focus on reporting changes, either positive or negative. All policy changes for the period between 1 July 2010 and 1 September 2011 are reported. We refrain from the semi-quantitative rating of a country's entire policy package as we did in 2010. One of last year's conclusions was that individual policies change, but that the long-term policy setup determines the overall rating. Countries with a long track record of ambitious policymaking rated well. Hence, changes from one year to the next will not significantly change the rating. The ratings will be updated in the 2012 version taking into account two years of change.

Figure 1 - 3. Three step approach to the EU Climate Policy Tracker 2011.



1.3 Structure of this report

This report starts with additional and updated information about the challenges of moving towards a low-carbon economy and delivering the accompanying low-carbon policy package, see Chapter 2.

In Chapter 3 we give the EU policy perspective. We first evaluate currently implemented EU policies and then consider the plans for more comprehensive EU policies, i.e. the various roadmaps that are being discussed.

Chapter 4 analyses the results of our country assessment. We identify trends in EU member state policy.

For each of the 27 EU member states, we have developed a country profile. These profiles can be found in Chapter 6 and they are also available via the project website: www.climatepolicytracker.eu.

2. A LOW-CARBON POLICY PACKAGE

Policy plays a central role in achieving emissions reductions but cause and effect are complex to evaluate. How do we know if we are on the right track, so we can adjust before it's too late? To help, we have created a low-carbon policy package. Based on an extensive review of relevant methodologies, it specifies the technological and behavioural changes that are needed for each sector in the economy, and translates them into measurable requirements.

2.1 The challenge of creating a zero carbon economy

Limiting the rise in the average global temperature to 2°C has been the EU goal since 1996, and in December 2010 the UN recognised the need to consider a 1.5°C limit. Avoiding overshooting these levels will require massive emissions reductions – in the order of 80-95% for industrialised countries, like those in the EU. The next ten years are crucial in establishing whether society will be able to make this transition, or whether temperature increase limits will be irreversibly missed. International action on climate change has regained traction with the successful agreement at the international climate negotiations in Cancun, Mexico in December 2010. As part of the Cancun agreement, all 198 parties to the UNFCCC agreed to limit the global temperature increase to 2°C, and to revise this agreement downwards (towards 1.5°C) in 2015. Although international agreement on the corresponding global and national emissions reductions is still pending, global emissions will have to be at least halved by 2050, with developed countries reducing 80% to 95% by 2050.

However the UNFCCC process is far from being a comprehensive, ambitious or legally-binding international agreement on climate change, and government action and supranational political initiatives are needed more than ever to formulate guidelines and implement reliable framework conditions. In this respect, the European Union is one of the key world players, because of its economic and political weight.

2.2 A low-carbon energy vision

Our framework defines the benchmark for the 'A' rating in the EU Climate Policy Tracker methodology. It includes four essential building blocks:

- Efficiency improvements as key requisite to a sustainable low-carbon future;
- A 100% renewable energy supply by 2050 - which according to the scenarios is technically possible and economically feasible for Europe;
- Sustainable land use;
- Prompt action.

1. Efficiency improvements as key requisite to a sustainable low-carbon future

- A fully sustainable low-carbon future is only possible if the **best available energy efficiency options** and technologies are fully implemented.
- **Paradigm shift in industrial production:** Material efficiency needs to be enhanced in addition to energy efficiency. Industrial production must be redefined to 'reduce, re-use and recycle'. It means avoiding material-intensive products and focusing on long-lasting, 100% recyclable products.
- **Wide application of zero emission buildings:** Buildings need to be retrofitted to very high energy efficiency standards.
- **Transport:** Assuming a massive shift away from individual energy-intensive mobility, the remaining passenger car fleet must meet ambitious energy efficiency requirements.
- **The carbon efficiency of food** should be improved. This includes reducing wastage and a shift to food with a lower carbon intensity.

2. A 100% renewable energy supply by 2050

- Mobilise all electricity supply options from sun, wind and water.
- Electric transport based on renewables is needed wherever possible. This implies almost 100% electric passenger cars and a greater use of public transport. With a 100% renewable energy supply, sustainable biomass is a very scarce resource and it should be used in areas where there are no technological alternatives, e.g. trucks, aviation and shipping, therefore, passenger cars must run on electricity with suitable batteries.
- Significant enhancement of the electricity grid is necessary. The grids should be capable of sharing and exchanging clean energy.
- Strict sustainability criteria for biofuels. To ensure that renewable energy, most particularly renewable energy from biofuels, is compatible with environmental and development goals, strict sustainability criteria should be developed and enforced.

3. Sustainable land use

- Comprehensive land use strategies must be developed to solve the potential conflict in land use as agricultural areas, forests and wood production compete with each other for food production, carbon storage and as a source of biofuels.
- Major reductions in non-energy emissions in agriculture are necessary. Where there are currently no mitigation options, research must be intensified.

4. Prompt action

- Time is very short, so action must begin immediately to initiate rapid transformation.

These building blocks translate to separate targets for each of the sectors, (see Table 2 - 1).

Table 2 - 1. Sectoral targets for a low-carbon vision.

Sector	Target
Electricity supply	100% renewable energy supply by 2050
Industry	Around 90% reduction in greenhouse gas emissions by 2050
Buildings	Around 100% reduction of energy use for space heating, domestic hot water and air-conditioning Around 30% reduction for electricity demand for appliances and lighting
Transport	Around 90% reduction in greenhouse gas emissions by 2050
Agriculture	Around 50% reduction in greenhouse gas emissions by 2050
Forestry	Ensure forest as a carbon sink while using it for the sustainable production of biomass

2.3 Alternative low-carbon visions

While there is a general consensus on most elements of the four building blocks in this low-carbon vision, some areas are subject to controversy regarding the appropriate solutions. We used the following principles for the formulation of the best practice policy package:

- We do not consider nuclear energy to be a long-term, sustainable solution for the energy sector, due to its safety concerns and unsolved waste disposal problem. Thus, active support from governments for nuclear power will divert resources from the sustainable solutions. It is therefore not considered best practice in this report.
- We define carbon capture and storage (CCS) by the source of emissions: support for CCS for biomass is considered best practice because it is currently the only option available to actively remove CO2 from the atmosphere over long time spans. Support for CCS in industrial process emissions is considered best practice as currently few technical options have moved beyond the initial research stages, and it is yet unproven whether recent innovations can be mobilised on a commercial scale. However, support for CCS from coal power plants leads to a negative rating unless it is coupled with an emission performance standard of at least 350 g/kWh for all new power plants. Through this, CCS becomes a means of accelerating decarbonisation rather than a means of competing for resources with other technical options.
- We **only** consider electric transport to be best practice when the increased power demand is coupled to increased renewable capacity and does not lead to direct or indirect lock-in effects of nuclear or fossil power.
- To **assure** sustainable land use, we consider it to be best practice only if an integrated national sustainable land use approach considers all type of land uses. We do not determine whether carbon sequestration in biomass or bio-energy should be favoured. Additionally, a framework for sustainable biomass imports is required to ensure that leakage is minimised.

We take the vision described above as an initial premise upon which policies can be formulated to enable the required technological and behavioural change.
An alternative vision could be formulated around less electricity savings and more electricity supply through nuclear and CCS. Such vision would change the general results of this study only to a small extent for three reasons:

- This **change** applies only to electricity generation (25% of EU's emissions), required actions on all other areas stay unchanged.
- The **reduced** demand in electricity saving is limited, because nuclear and CCS are also expensive.

Very significant efforts would have to be given to CCS and nuclear and would take resources away from the support for renewables. However, most EU countries are currently providing significant efforts on renewable electricity.

2.4 Low-carbon policy package

Working from this low-carbon vision, we specify the technological and behavioural changes that are needed to get there for each of the sectors. The resulting policies are then derived from the necessary technical and behavioural requirements. Our low-carbon policy package translates the necessary changes into specific and measurable requirements.

By specifying the changes and making the requirement measurable, our definition of the low-carbon policy package determines to a certain extent the outcome of the evaluation. We identified policy elements that must be incorporated to reach the intended target, and were explicitly neutral regarding the specific instrument used.

For example for electricity supply, the package must include sufficient and stable support for renewable electricity generation for a diverse set of technologies. The low-carbon policy package does not prescribe however, whether this support would be generated by a feed-in-tariff or a renewable energy obligation. The IPCC concluded in its 2011 Renewable Energy special report that there is no one-size-fits-all policy. Experience has shown that the effectiveness and efficiency of different policy combinations depends on factors such as the level of technological maturity, affordable capital, ease of integration into the existing system and the available resources for renewable energy (IPCC, 2011).

The sections below summarise our low-carbon policy package. The low-carbon policy package is organised by policies that support renewable energy, those that support energy efficiency and all remaining incentives. The tables list the topic areas that need to be covered. It also includes indicators by which this can be measured, each preceded by a weighting factor between brackets. The low-carbon policy package would also remove all barriers to implementation. Such barriers are indicated by negative weighting factors and represent the maximum discount on the score. For more details about the aggregation of indicators see the methodological report of 2010 (Höhne et al. 2010b).

If all indicators receive maximum score, an 'A' score is given. An 'A' score would signal that policies are implemented that are sufficient to reach a low-carbon economy by 2050. A 'G' score would signal no or only very limited policies in this area.

2.4.1 General

	Best practice	Indicators
	Implement an ambitious, comprehensive climate strategy to arrive at a low-carbon economy. • The fundamental changes can only be achieved with a strategy that is long-term, is of sufficient stringency and binding character and is coordinated across sectors.	[0.4] A strategy including a stringent and binding greenhouse gas target towards 95% reduction by 2050. [0.3] An ambitious and comprehensive climate strategy for a low-carbon economy in 2050. [0.3] An integrated innovation strategy exists, with sufficient resources for research and development.

2.4.2 Electricity supply

	Best practice	Indicators
RENEWABLES (60%)	Use all nationally available renewable potentials to a maximum ecologically viable level. • To achieve the necessary share of renewable electricity production most countries will need to explore all available renewable potentials. • Therefore the policy instruments need to be structured to suport the development of a wide range of different sources and also to enable higher price options (e.g. PV) to become more and more competitive in the market. • The goal of all support activity must be to strengthen the development of renewable electricity production technology allowing them to become truly competitive in the market as fast as possible. Prepare system integration (into grid and demand pattern) of a large share of fluctuating renewable electricity. • Electricity grids spanning larger geographical areas. • Flexible demand adapting to supply (industrial processes, smart meters and appliances, heating systems related to electricity (heat-pumps, combined heat & power) using large heat storage, electric cars ...). • Storage systems. • Non-fluctuating renewable electricity (biomass, geothermal, hydro from reservoirs).	[0.6] (Investment) support for renewable energy sources should be of sufficient level, in the upper half of the cost range. [0.25] The size of the support scheme should lead to an increase of over 20% in the share of renewable electricity in the period 2010 till 2020. [0.1] Policies should include support for high price technologies. [0.05] A stringent framework to assure the sustainability of biomass from import is required. [-0.2] Unpredictable and unstable and the support (once granted). [-0.2] Administrative barriers. [-0.2] Grid barriers. [-0.1] No investments or implementation strategy to assure renewable energy oriented grid structures should be in place.
EFFICIENCY (20%)	Apply the most efficient Combined Heat and Power (CHP): • Especially in the transition phase, with a mix of renewable and fossil fuel production capacity, the highest efficiency available to minimise emissions. • Infrastructure should be targeted towards industrial use, as residential heat demand is expected to decrease significantly due to efficiency measures.	[1.0] Policies that lead to a 10% additional share of electricity production from combined heat and power in 2020, e.g. through dedicated planning and integration in spatial plans.

OVERARCHING (20%)	Ensure that no reverse incentives are given • Use carbon capture and storage (CCS) only as bridge technology. We differentiate CCS by the source of emissions: Support for CCS for biomass is considered best practice, because it is currently to only option to actively remove CO2 from the atmosphere. Support for CCS in industrial processes emissions is considered best practice, as currently no other technical options are foreseeable to reduce these emissions. However, support for CCS from coal power plants leads to negative rating unless it is coupled to an emission performance standard of at least 350 g/kWh of produce electricity of all new power plants. Here, clearly other technical options are available, which would compete for the resources spent for coal CCS. • Subsidies or tax exemptions on energy for conventional fuel supply should be avoided. Give sufficient price signals • The current allocation within the European Emissions Trading System (2009/29/EC) for the period 2010-2020 is not compatible with a low-carbon economy: it requires emission reductions of 21% by 2020 below 2005 rates, while a low-carbon policy package targets a 35% to 40% reduction (not specified between electricity supply and industry). Price levels are not sufficient, partly because the use of cheaper non-EU originated emissions rights is allowed.	[0.5] Countries need to either apply a more stringent Emissions Trading System allocation or set emissions performance standards for coal fired power plants, in total leading to 35% to 40% reduction below 2005 in 2020. [0.2] Regarding CCS, incentives should focus on biomass carbon capture for a low-carbon policy package. Coal fired CCS is considered counterproductive, unless it is explicitly linked to an emission performance standard of all new coal power plants. [0.2] Subsidies or tax exemptions for conventional fuel supply and consumption by power plants (direct and indirect) should be phased out on the short-term. [0.1]The present level of energy or CO2 taxes in the energy sector should be more than 100% of the energy price. [-0.2] Active support for nuclear energy. [-0.2] Incentives for coal CCS.

2.4.3 Industry

	Best practice	Indicators
RENEWABLES (25%)	Maximise renewable energy in industry • Maximise heat production on-site in industrial areas through geothermal and concentrated solar heat. • Maximise use of sustainable biomass for high temperature heat supply not met by other renewable sources. • Increased process integration across unit operations ensuring optimal use of waste heat and waste materials (e.g. bio-refineries, co-siting).	[0.8] Policies to support a 10% increase in share of renewable energy in industry is needed in 2020. • Renewable energy process heat & fuels in industrial use. • Integrated processes generating renewable energy. • Alternative fuel use (renewables, waste, lower carbon fuels) [0.2] A stringent sustainability requirement on biomass.
EFFICIENCY (25%)	Use best practice equipment only. • This holds for electric equipment such as electric motors and compressed air. Improve end-use energy efficiency significantly. • Efficiency improvements of more than 2% year, resulting in ~55% reduction in energy intensity in 2050.	[0.8] Support schemes or other agreements that lead to sufficient additional improvements in energy efficiency, through generic investment subsidies, subsidies for specific technologies or voluntary agreement. • The use of most efficient technology for new installations. • Retrofit with most efficient technology available and apply continuous improvement. • Energy and carbon management systems obligatory for all corporate players. • Promote frameworks to exchange experience. • Support increased heat transport & storage capacity and according business models in industrial areas. • Promotion of integrated, closed energy processes. [0.2] Policies that support the demonstration of breakthrough technologies either through a systematic scheme or through 'lighthouse' projects.
OVERARCHING (50%)	Give sufficient price signals • The current allocation within the European Emissions Trading System (2009/29/EC) for 2010-2020 is not compatible with a low-carbon economy. It only requires emissions reduction of 21% by 2020 below 2005 rates, while a low-carbon policy package targets 35 to 40% reduction (not specified between electricity supply and industry). Price levels are not sufficient, partly because the use of cheaper non-EU originated emissions rights is allowed. Restructure material systems • Reduce demand for carbon–intensive products by designing products that require less material and by replacing material with a high carbon footprint (over the whole life-cycle) with less carbon–intensive materials. • Maximise re-use and recycling. • Minimise production of waste with maximised use of waste flows for electricity supply production.	[0.5] Active support towards the redesign of less material-intensive products which are long-lasting, 100% recyclable. [0.1] Incentives for biomass or process emission carbon capture and storage. [0.15] The present levels of energy tax for industry should be more than 100% of the energy price to factor-in external costs and motivate energy savings and use of renewables. [0.15] Stringency of the EU wide emissions trading cap for industry at 35% - 40% below 2005 rates by 2020. [0.1] Subsidies or tax exemptions for conventional fuel supply and consumption by power plants (direct and indirect) should be phased-out in the short-term.

2.4.4 Buildings

	Best practice	Indicators
RENEWABLES (25%)	Use renewable options for heating and cooling: • Solar systems. • Heat pumps. • Biomass boilers. • Combined heat and power (e.g. on biogas basis). • Renewable district heat. • Passive cooling measures (e.g. external shading). Advance new technologies Incentives for an uptake of renewable energy and advanced energy technologies (e.g. heat pumps, vacuum insulation) in new and existing houses with a target 1% of buildings per year.	[0.8] Policies to support, at minimum, a 10% increase by 2020 in the use of renewable heating and cooling would be needed. [0.2] Stringent sustainability requirements on biomass. [-0.2] No comprehensive, ambitious and implemented policies to overcome the landlord-tenant problem.
EFFICIENCY (65%)	Improve energy efficiency in existing buildings Integrate CO2-saving measures whenever a building undergoes major renovation, to reach 100% savings by 2030. The energy-related renovation rate should be 3% per year. • High thermal insulation level for roofs, facades and ground floors. • Low energy windows. • Ventilation with heat recovery. • Passive cooling measures (e.g. external shading). • Efficient energy supply (e.g. condensing boilers, later switch to 100% renewables). Advance efficient new buildings Widespread introduction of zero emission buildings (regarding emissions for space heating, domestic hot water and cooling energy) the latest by 2014. Use most efficient appliances Phase-out of inefficient equipment and full introduction of highly energy efficient systems, like: • Efficient lighting. • Smart buildings (building automation). • High efficient dishwashers, refrigerators, washing machines etc. • Efficient computers and monitors.	[0.5] Financial and/or regulatory incentives that lead to a retrofit rate of existing building stock of 3-4% per year until 2020 and 2% thereafter [0.25] New buildings to be zero emission by 2014. [0.2] Financial or other incentive to stimulate the purchase of equipment 1-2 classes beyond the Eco-design standard, or adoption of more stringent standards [0.05] Public procurement guidelines for all technologies that require sufficiently ambitious levels of energy efficiency for buildings and appliances. [-0.3] No proper implementation and enforcement of existing building energy certification. [-0.3] Long or complicated procedures for renewable and energy efficiency measures. [-0.2] No solutions to the landlord-tenant problem. [-0.2] No proper implementation and enforcement of new building regulations.
OVERARCHING (10%)	Give sufficient price signals	[1.0] Present tax levels of more than 100% of the energy prices.

2.4.5 Transport

	Best practice	Indicators
RENEWABLES (30%)	Prepare a longer term restructuring towards electric transport • Optimise the longer-term fuel mix for individual transportation. This would include moving to almost 100% electric passenger vehicles, or if battery technology is not available to hydrogen, by 2050. Optimise current fuel mix for both mass and individual transportation • The focus should be on the least emissions per person-km. With electric transport still in progress, the current best technology is biofuel that meets high sustainability criteria.	[0.6] Sufficient incentives to increase renewable energy sources in transport - consisting of biofuels and renewable based electricity - to meet a 10% share in 2020. [0.4] Stringent sustainability requirements on biomass. [-0.2] Absence of plans to develop an infrastructure for electric mobility.
EFFICIENCY (50%)	Optimise vehicles along efficiency criteria • Optimise vehicles along efficiency criteria (optimised engine technology, weight, construction materials). • Influence the car market towards higher vehicle efficiency / less overall consumption with existing technologies (Hybrid, biofuels, fuel-saving tyres, smaller vehicles, etc.). • Influence the van and truck markets towards higher vehicle efficiency with existing technologies, e.g. improved aerodynamics, hybrid, biofuels, fuel-saving tyres, etc. • Implement fuel-saving / emissions-reducing measures in shipping (slow steaming, efficient route planning, fuel cells, power supply in ports, improved fuel quality, etc).	[0.7] Clear policy trajectory to reducing new car emissions per kilometre so as to reach 95 g-CO2/km in 2015. [0.3] Incentives to reduce new freight vehicle emissions per kilometre by 25% in 2020.
OVERARCHING (20%)	Prepare a modal shift to more low-carbon forms of transport • Increase public ground transportation (rail, metro, bus, etc.) significantly, as they present the best ratio of energetic input to person-km. • Increase foot and bike traffic (both number of journeys and distance travelled). • Develop integrated low-emission concepts for cities and urban agglomerations (priority for public transport, bicycles, town planning for 'short distances' etc.). • Reduce individual motorised mobility to those market segments where no alternatives can be provided. Give sufficient price signal, avoid counterproductive policies.	[0.4] Strategies for modal shift and reduction of traffic. A 5% reduction in emissions from cars and trucks – either via decreased use or uptake in more efficient modes, like rail – should be targeted for 2020. [0.3] Sufficient investments in low-carbon transport infrastructure, leading to a 20% increase in the capacity of carbon efficient modes by 2020. [0.3] Sufficient tax levels of more than 400% of the energy prices. [-0.3] Counterproductive incentives that promote higher fuel use in transport.

2.4.6 Agriculture

Best practice	Indicators
Use low-carbon foods • Emissions can be reduced through substituting foods with a higher climate impact for ones with a lower impact, considering that lifestyle choices around food are particularly difficult for governments to influence. • There is a global market in food. • Measures to change demand include • Reduction in meat and dairy consumption. • Reduction in wastage of food. • Shift to low-carbon foods (nationally produced or imported). Stimulate low-emission agriculture practices • Reduced use of nitrogen fertilizers. • Increased use of climate-friendly soil cultivation practices. • Reduce emissions or increase efficiency of animals, including breeding, improved feed practices and grazing intensity. • Plant breeding to increase efficiency. • Livestock manure management. Make optimal use of carbon stock lands • Emissions need to be avoided both by protecting high carbon stock land and by creating sinks in biomass and soil. • Optimisation of land use. • Protection of high carbon stock lands (i.e. peat lands and wetlands), including the restoration of such lands where they have been destroyed or degraded in the past.	[0.2] Ambitious limit on nitrogen load per hectare, leading to a load of 170 kg/ha for more than 80% of agricultural land. [0.3] Ambitious incentives to reduce methane emissions from animals, leading to 40% reduction in 2020 compared to 1990 levels. [0.2] Sufficient funding allocated to promotion of sustainable farming with positive impact on greenhouse gas emissions and consumption practices including labelling, information programmes, etc. [0.3] Consistent and implemented land use strategy, including all major and minor sectors and their interrelationship. [-0.2] The absence of a land use plan or registry including protected areas of high carbon stock lands.

2.4.7 Forestry

Best practice	Indicators
Create an integrated sustainable land use approach (agriculture, forestry and conservation). From the forestry perspective this needs to include: • Thorough knowledge of the land resources; and the means to detect and monitor the impact of change. • Avoid conflicting institutional mandates. • Define land use in appropriate registers. • Stock vs. biomass use. • Consideration of age class distribution of forests. • Consideration of adaptation needs. • Identify appropriate balance between production and environmental impact across land-based systems. • Effective means to monitor the impact of development activities on the key elements of sustainability. Ensure forest as a carbon sink while using it for the sustainable production of biomass. • Choosing locally adapted/native tree species as biomass and near to natural management practices. • Afforestation and reforestation. • Avoiding deforestation. • Forest restoration, conservation and preservation. • Forest management practices i.e. forest regeneration, fertilisation, choice of species, uneven aged stand management, reduced forest degradation, optimised forest rotations. • Controlled burning / wildfire avoidance. • Insect and disease management programmes. • Awareness raising and research.	[0.3] A consistent land use strategy that includes all major and minor sectors and considers their interrelationships. [0.15] A set of policies are implemented that cover all aspects of the strategy. [0.25] Forest management strategy covers all types of forest land and has a long-term perspective, including adaptation. [0.1] Strong and clear policy rules regulating deforestation, applicable to all country area. [0.1] Information strategy for professionals and forest owners on at least three of the following topics: adaptation, climate change and R&D, available in different formats (website, printed) and easily accessible by target group. [0.1] Policies to support domestic wood use, including a detailed biomass plan (EU requirement). [-0.25] The absence of a register covering at least 70% of the country; lack of regular updates (i.e. at least every 10 years). [-0.25] The absence of a good forestry inventory, with consistent data and systematic data collection.

3. EU-LEVEL ENERGY AND CLIMATE POLICY

Enthusiasm for climate policy quite clearly varies in intensity around Europe. The member state ratings in last year's report, and this update, demonstrate this fact. And yet, all member states collectively comprise the EU, which has staked out many areas of climate policy and therefore largely defines collective ambition. Here we explore the relationship between EU and member state level action, and assess the current direction of EU policy, which help us evaluate Europe's chances of achieving a low-carbon policy package.

3.1 EU regulatory approaches and resulting flexibility for member states

EU legal provisions take different forms, ranging from very flexible approaches such as guidelines, declarations and communications which are not binding but can still have significant impact in practice in member states, to approaches such as directives which are legally binding but leave member states flexibility in the implementation; to standards and decisions which are legally binding and entirely and directly applicable in member states, without flexibility.

The following examples of EU laws in the area of energy and climate are in order of decreasing flexibility for member states:

- **Process:** Policies that prescribe to member states a process of (non-binding) target setting, planning, implementation and monitoring of national policies and measures. The Energy Performance of Buildings Directive falls into this category (Directive 2010/31/EU) as well as the Energy Services Directive (Directive 2006/32/EC, as amended).
- **Binding targets:** Policies that impose a binding target on member states and prescribe a process of planning, implementation and monitoring of national policies and measures. Here, the current Renewable Energy Directive serves as an example, as well as the Effort Sharing Decision (Decision No 406/2009/EC).
- **Harmonised rules:** Policies that provide common EU-wide rules, which have to be implemented by member states to prevent differentiated national legislation. One example is the recently reviewed EU-ETS, with a central EU-wide cap, and harmonised allocation rules (Directive 2009/29/EC).
- **Standards:** Policies that are entirely and directly applicable in all member states. Typically, 'product' regulations define standards for specific technologies, such as CO_2 emissions limits for passenger cars (Regulation (EC) No 443/2009) or for electric motors (Commission Regulation (EC) No 640/2009).

In general, laws that have been adopted under internal market provisions provide the least flexibility (e.g. Eco-design regulations), whereas laws adopted under environmental or energy chapter provisions provide (much) more flexibility.

Based on these elements Table 3 -1 provides an overview of the flexibility of current legislation selected from the EU climate and energy package.

Table 3-1. The flexibility of EU member states in the implementation of EU laws

			Adopted under the Treaty provisions of[1]:		
		Flexibility for member states	Environment	Internal Market	Energy
Energy Services Directive	Directive 2006/32/EC	Process	X		(X)*
CHP Directive	Directive 2004/9/EC	Process	X		(X)*
Energy Performance of Buildings Directive	Directive 2010/31/EU	Process			X
Energy Tax Directive	Directive 2003/96/EC	Harmonisation rules giving minimum tariffs		X	
Effort sharing Decision	Decision No 406/2009/EC	Binding targets	X		
Renewable Energy Directive	Directive 2009/28/EC	Binding targets	X	X	
EU Emissions Trading Scheme	Directive 2009/29/EC	Harmonisation rules	X		
Eco-Design Directive	Directive 2009/125/EC	Harmonisation rules		X	
CO2 standards for passenger Cars	Regulation No 443/2009	Standard	X		

* The recently published proposal for a Directive on energy efficiency (COM(2011) 370final: repealing Directives 2004/8/EC and 2006/32/EC) will fall under the Energy chapter provisions of the Treaty

[1] The Lisbon Treaty entered into force on 1 December 2009. EU laws are adopted under specific provisions of the Treaty, environment provisions (Article 192 Treaty of the Functioning of the European Union (TFEU); ex-article 175 EC Treaty), internal market provisions (Article 114 TFEU, ex-article 95 EC Treaty) and most recently established under the new TFEU also energy provisions (Article 194 TFEU). When EU laws are adopted under the environmental provisions of the Treaty, rather than internal market provisions, member states are in principle allowed to enforce more stringent standards. Until recently, the European Treaties did not explicitly recognize EU competency on energy issues. This has changed under the new TFEU, in which the new energy chapter provides the Union the competence to develop a more strategic and harmonised energy policy to be implemented in the member states. Nonetheless, energy policies (e.g. conditions for exploitation of energy sources, choices between sources, structure of energy supply), remain largely the domain of member states.

3.2 Comparison of EU-level policies to low-carbon policy package

EU directives and other EU regulation cover a wide range of policy areas analysed in this study, some with overlapping influence. In the following sections we will describe European level policy, sector by sector.

3.2.1 General

The three major targets of the 2008 Climate and Energy Package committed the EU to:

- Reducing greenhouse gas emissions by 20% from 1990 to 2020;
- Reducing energy consumption by 20% below business-as-usual until 2020;
- Increasing the share of renewables to 20% in 2020.

These objectives were further integrated as the third target of the EU 2020 strategy.

The EU has agreed to reduce its greenhouse gas emissions by 80% to 95% until 2050, but a firm target or implementation strategy has yet to be agreed.

Another target of Europe's 2020 strategy relates to innovation: 3% of the EU's GDP (public and private combined) should be invested in R&D/innovation and each country is committed to translate this into national targets. The target is not specifically focused on climate or energy and as such it does not directly ensure enough resources are available for R&D in this area.

Policy gap between low-carbon policy package and EU policies	Options for member states to increase the ambition level
• EU is committed to reduce greenhouse gas emissions by 80% to 95% until 2050, but this target is not binding. An agreed climate strategy does not yet go beyond 2020. • Innovation strategies and the amount of resources for R&D in climate change and energy are determined nationally.	• Overall non-binding targets, with binding targets on renewables and regulations on industrial emissions. • Individual member states can independently adopt stringent emission targets for 2050. So far only UK and Ireland have such targets.

3.2.2 Electricity supply

The Renewable Energy Directive (2009/28/EC) sets binding targets for the share of renewable energy by 2020 and directs each member state to produce a National Renewable Energy Action Plan (NREAP) providing, among other things, projections of how to reach these targets. The renewable targets do not specify the sector, so it is up to member states how much of it they would want to achieve in the electricity sector. The expectation is that these targets translate to 15%-20% higher renewable electricity share in 2020. The Directive also regulates some detailed issues regarding for example grid priority or sustainability criteria.

The combined heat and power (CHP) Directive (2004/8/EC) aims to stimulate energy saving by requiring countries to study the potential and to set up policies to overcome the main barriers. The impact of the Directive heavily depends on the individual implementation at member state level, which is weak at the moment. The poor implementation means that the Directive makes only a marginal improvement on member state policy.
The current allocation within the European Emissions Trading System (2009/29/EC) for the period 2010-2020 is not compatible with a path leading to a low-carbon economy. It currently requires emission reductions of 21% by 2020 below 2005 rates. Price levels are not sufficient, partly because the use of cheaper non-EU originated emissions rights are allowed, but also because a large surplus of carbon emission allowances (EUAs) have emerged.

The Carbon Capture and Storage (CCS) Directive (2009/31/EC) establishes a legal framework for CCS and requires that the feasibility of CCS is assessed for installations with more than 300 MW electrical capacity. It does not distinguish between biomass and coal carbon capture and storage.

The Energy Tax Directive (2003/96/EC) exempts taxes on fossil fuels for electricity production, which counteracts best practice.

	Policy gap between low-carbon policy package and EU policies	Options for member states to increase the ambition level
Renewables	• Good agreement, except no requirement support differentiated by technology.	• Each member state is free to develop its own policy package to meet Europe's binding targets.
Energy Efficiency	• Requirements of the CHP Directive not ambitious enough. • Lack of policies to increase in conversion efficiency and transport losses.	• Each member state is free to develop its own policy package.
Overarching	• Allocation of the ETS not ambitious enough (would have to be 35% to 40%). • No focus on biomass carbon capture for best practice.	• The ETS effectively prevents countries from implementing ambition levels higher than that set by the allocations. • Member states could set an emission performance standard for fossil fuel power plants that is more stringent than current phase III plans in order to meet best practice.

3.2.3 Industry

Support of renewable energy in industry is indirectly covered in the directives on renewable energy and the Emissions Trading System.

The efficiency of appliances in industry is regulated by the Eco-design Directive (2009/125/EC), which at present covers 11 product groups of which electrical motors is the most significant for industry. In a low-carbon policy package the standard would allow only the most efficient appliances. Doubling of the current standards would be needed to achieve this.

The Directive on Integrated Pollution Prevention and Control has been revised recently (2008/1/EC). It recasts seven earlier Directives and regulates harmful emissions from EU industries.

The main thrust of the directive is to increase the use of 'best available techniques' (BATs), an obligation to ensure that industrial operators use the most cost-effective techniques to achieve a high level of environmental protection.

The Energy Tax Directive gives low minimum levels of energy tax and has substantial exemptions for industry.

The Carbon Capture and Storage (CCS) Directive (2009/31/EC) establishes a legal framework for CCS and requires that the feasibility of CCS is assessed for installations with more than 300 MW electrical capacity.

The Landfill Directive set targets to decrease biodegradable waste that can be land filled with a reduction target of 75% in 2010 compared to 1995. As a result methane emission were reduced.

	Policy gap between low-carbon policy package and EU policies	Options for member states to increase the ambition level
Renewables	• Support for demonstration projects that use renewable process heat and fuels or integrated process generation of renewable energy.	• Each member state is free to develop its own policy package to meet Europe's binding targets.
Energy Efficiency	• Target is in line with best practice but policies are missing: a doubling of the ambition on energy-efficiency would be needed for a low-carbon policy package.	• Due to internal market regulations, member states cannot implement stricter energy efficiency norms that those in the Ecodesign Directive. • Member states can implement additional energy saving support schemes, e.g. white certificates.
Overarching	• Allocation of the ETS not ambitious enough (would have to be 35% to 40%). • Little support for product redesign which is less material-intensive, long-lasting, 100% recyclable. • No incentives for biomass or process emission carbon capture and storage. • Insufficient levels of energy taxes for industry to factor-in external cost and motivate energy savings and use of renewables.	• The ETS is effectively preventing countries to implement ambition levels higher than the allocations.

3.2.4 Buildings

The recast Energy Performance of Buildings Directive (EPBD) (2010/31/EU) obliges countries to ensure minimum energy performance requirements for existing and new buildings at cost-optimal levels. All new buildings need to comply with a 'nearly zero energy standards' by around 2020.

The EPBD introduces requirements for energy performance certificates for existing buildings, but does not set targets or support measures to reach high refurbishment rates.

The Renewable Energy Directive (2009/28/EC) requires that member states set minimum standards for the use of renewable energy sources in new buildings and in existing buildings that are subject to major renovation.

The Eco-design Directive (2009/125/EC) requires that producers make the reduction of energy use and other environmental impacts an integral part of the design of electrical appliances. At present 11 product groups, covering 40% of electrical consumption in the EU are regulated. The electricity savings achieved by these standards are around half of what could be saved by applying only the most energy efficient appliances.

The Energy Labelling Directive (2010/30/EU) keeps consumers informed about the energy performance of appliances. The latest recast included a new category of A+++, rather than redefine the criteria on the scale A-G and, as such, does not adequately promote the best performing appliances, as is needed under a low-carbon policy package.
The Energy Tax Directive prescribes minimum tax levels for heating fuels and electricity, but they are low (below 10% of energy prices). Higher levels than those prescribed in the Energy Tax Directive are needed to factor in external costs and motivate energy savings and use of renewables.

	Policy gap between low-carbon policy package and EU policies	Options for member states to increase the ambition level
Renewables	• EPBD energy performance standards do not require a minimal amount of renewable heating and cooling (A low-carbon policy package requires a 10% increase by 2020).	• Member states implement requirements for the minimal amount of renewable energy in heating and cooling.
Energy Efficiency	• Nearly zero energy standards for new buildings only required by 2020 (instead of already by 2014). • No support to increase retrofit rate (best practice: 3% per year until 2020 and >2% thereafter). • Requirements of the Eco-design Directive are improving, but too low for best practice.	• Removal of barriers such as the landlord-tenant dilemma and effective enforcement of standards. • Setting stricter standards than those of the Eco-design Directive is not allowed due to internal market regulations. Member states can only implement policies that encourage customers to buy highly efficient appliances.
Overarching	• Minimum energy tax rate of 10% is too low. Best practice would be a tax rate of more than 100%.	• Member states can apply higher taxes than the minimum values.

3.2.5 Transport

The Renewable Energy Directive (2009/28/EC) sets a binding target for a 10% share of biofuels in transport fuel usage by 2020. This target is in line with the 10% that would be required from a low-carbon policy package.

The Regulation on Energy Efficiency for passenger cars (443/2009) regulates the CO2 performance of new cars. It prescribes 130 g-CO2 /km for the new passenger car fleet entering the market phased in between 2012 to 2015 and sets indicative medium-term target of 95 g-CO2/km.

The Energy Tax Directive prescribes minimum level taxes for transport fuels, but they are low (below 40%-50% of energy prices). Higher levels than those prescribed in the Energy Tax Directive are needed to factor in external cost and motivate energy savings and use of renewables.

Cohesion Fund beneficiaries can be supported in investment in (low-carbon) transport infrastructure.

	Policy gap between low-carbon policy package and EU policies	Options for member states to increase the ambition level
Renewables		• Member states need to ensure the share of renewable energy sources in transport of 10%.
Energy Efficiency	• Trajectory to reach 95 g-CO2/km by 2020 (not 2015 as in best practice). • Freight transport is not covered by EU Regulations.	• Reduce passenger emissions to achieve 95g/km by 2015 by support mechanisms. • Reduce new freight vehicles emissions.
Overarching	• No incentives for modal shift and to avoid traffic. • No investment in low-carbon transport infrastructure. • Minimum levels of below 40%-50% of energy price is too low (400% would be best practice).	• Member states can apply fuel or CO2 taxes higher than the minimum values.

3.2.1 Agriculture

Subsidies play an important role in shaping European agricultural practices. However, while in other sectors the relationship between energy-related subsidies and emissions is rather straightforward; this is not the case for agriculture. The effect of reducing or abolishing these subsidies on emissions is complex and has not yet been analysed. We therefore do not consider changes to agricultural subsidies as part of the best practice package, although reform of the EU subsidy scheme could be considered to take emissions more into consideration.

In a recent communication on the EU's Common Agricultural Policy (CAP) until 2020 (COM(2010) 672), the Commission also includes a greater emphasis on environmental issues, including climate and energy. In generally, the CAP should aim to support agriculture which performs well both economically and ecologically across the EU. Key objectives include food security, natural resources, and a balanced territorial development of the sector. The communication refers explicitly to the promotion of energy efficiency, carbon sequestration, biomass and renewable energy production and, more generally, innovation. A future CAP could also aim to further reduce the nitrogen loads of agricultural land, which is currenty regulated by the Nitrates Directive (91/676/EEC).

Policy gap between low-carbon policy package and EU policies	Options for member states to increase the ambition level
• Formulation and implementation of a consistent and comprehensive land use strategy, incorporating agriculture, forestry, conservation and other land uses, based on the latest available science. • Effective measures to reduce nitrogen loads per hectare. • Ambitious incentives to reduce methane emissions from animals. • Sufficient funding allocated to promotion of sustainable farming and consumption practices with positive impact on greenhouse gas emissions.	• Implement national measures by for example 2013 to promote energy efficiency, carbon sequestration, biomass and renewable energy production in agriculture.
• No incentives for modal shift and to avoid traffic. • No investment in low-carbon transport infrastructure. • Minimum levels of below 40%-50% of energy price is too low (400% would be best practice).	• Member states can apply fuel or CO2 taxes higher than the minimum values.

3.2.2 Forestry

The Renewable Energy Directive (2009/28/EC) encourages member states to complete a biomass template as part of their National Renewable Energy Action Plans. This should help them examine their supplies of (domestic and imported) biomass as well as uses of biomass from the three main sources: the forestry sector, and agricultural and municipal waste.
Furthermore, Cohesion Fund beneficiaries can be supported when investing in reforestation, erosion control and nature conservation.

Policy gap between low-carbon policy package and EU policies	Options for member states to increase the ambition level
• Formulation and implementation of a consistent and comprehensive land use strategy, covering agriculture, forestry, conservation and other land uses, based on the latest available science. • Strategy for forest management planning and prevention of deforestation.	• Complement their biomass section in their National Renewable Energy Action Plan with an integrated vision on the balance between forest-based biomass production and the sector's potential carbon sink value.

3.3 Plans and strategies

The overarching policy strategy for the EU is laid down in the Europe 2020 strategy for smart, sustainable and inclusive growth adopted by the European Heads of State and Government (the European Council) on 17 June 2010. This strategy contains the 'flagship initiative' for a resource-efficient Europe which provides a long-term framework for action in the fields of climate change, energy, transport, industry and other policy areas. Key deliverables under the resource efficiency flagship were recently published in communications on:

- A Roadmap for moving to a competitive low-carbon economy in 2050 (COM(2011) 112 final);
- White Paper on Transport (COM(2011) 144 final); and
- Energy Efficiency Plan (COM(2011) 109 final).

In the context of the publication of the low-carbon economy roadmap, the European Council of 4 February 2011 called for due consideration for the fixing of intermediary stages en route to reaching the EU's 2050 climate objective.

3.3.1 Low-carbon economy roadmap

The Roadmap Communication identifies potential actions to enable the delivery of an 80% reduction in greenhouse gases by 2050. The roadmap consists of a set of EU-scenarios, modelled in different global contexts. The modelling exercise points to a cost-effective reduction pathway to a 80%-to-95% reduction in 2050 via intermediate reductions within EU borders of 25% in 2020, 40% in 2030 and 60% in 2040 (all compared to 1990 emissions).

The most important conclusion of all decarbonisation scenarios is the massive shift from fuel expenditure to investment. Averaged out over 40 years, the additional investment needed to realise the low-carbon roadmap is €270bn annually.

At the same time average annual fuel costs are to decrease by between €175bn-€320bn per year depending on the scenario. The roadmap notes that investment is to a large extent to be spent in the domestic economy, whereas fuel expenses are to a large extent flowing to third countries, considering the EU's strong reliance on fossil fuel imports.

In line with low-carbon policy package	Insufficient in comparison with low-carbon policy package
• Recognition of electrification and energy savings as key levers. • Wide deployment of existing technologies. • Required volume of upfront investments (first transport, then built environment, power sector and industry).	• Percentage reduction milestones are insufficient. • Conservative on energy savings in the 2010-2030 period (as compared to the Vision) • Renewables in the roadmap supply 50 – 55% of electricity in 2050 the rest by CCS and nuclear (as compared to 100% renewables in the Vision). • Decarbonisation of the transport sector is slower.

3.3.2 White paper on transport

The white paper Roadmap to a single European Transport Area - Towards a competitive and resource efficient transport system (COM(2011) 144 final) sets twelve goals, from which five are particularly relevant to a low-carbon transport future:

- Halve the use of conventionally fuelled cars in urban transport by 2030, phase out in cities by 2050, and achieve essentially CO2-free logistics in major urban centres by 2030.
- Low-carbon sustainable fuels in aviation to reach 40% by 2050.
- At least a 40% cut in shipping emissions by 2050.
- 30% of road freight over 300 km should shift to other modes by 2030 and more than 50% by 2050.
- Complete a European high speed rail network by 2050. By 2050, the majority of medium distance passenger transport should go by rail.

The white paper envisages a modal shift to trains and shipping for long-distance transport, whereas the final miles of a journey are performed with clean vehicles. The overall greenhouse gas emission reduction target is 60% in 2050, in line with the low-carbon economy roadmap.

In line with low-carbon policy package	Insufficient in comparison with low-carbon policy package
• No more conventionally fuelled cars in cities. • Major shift for freight and passenger transport from road to rail/water. • Efficiency improvement in aviation.	• Emphasis on the long-term action (lacking shorter-term actions using existing technologies for freight and passenger transport). • Focus on cities (lacking electrification of all passenger car travel). • No replacement of remaining non-renewable fuels in aviation, shipping and road vehicles.

3.3.3 The Energy Efficiency Plan 2011

With current policy, the EU will achieve only half of its objective of saving 20% of primary energy use by 2020. In its Energy Efficiency Plan 2011 (COM(2011) 109 final), the Commission announces several initiatives to achieve this target, as a key step towards achieving long-term energy and climate goals:

- Initiatives to improve the market for energy services companies (ESCOs) and reduce barriers for financing of energy saving projects.
- Obligations for utilities, or energy distributors, to enable their customers to cut their energy consumption.
- Initiatives for more efficient power generation, including stimulus for increased use of Combined Heat Power production. To achieve this, district heating systems should be combined with electricity generation wherever possible.
- Public authorities will be required to refurbish at least 3% of their buildings (by floor area) each year.

The Plan announces the revision of the existing Energy Services and Combined Heat and Power Directives as the first legal step in the implementation of the initiatives.

In line with low-carbon policy package	Insufficient in comparison with low-carbon policy package
• No more conventionally fuelled cars in cities. • Major shift for freight and passenger transport from road to rail/water. • Efficiency improvement in aviation.	• Emphasis on the long-term action (lacking shorter-term actions using existing technologies for freight and passenger transport). • Focus on cities (lacking electrification of all passenger car travel). • No replacement of remaining non-renewable fuels in aviation, shipping and road vehicles.

3.3.4 Directive on energy efficiency

A proposal for a Directive on energy efficiency and amending and subsequently repealing Directives 2004/8/EC and 2006/32/EC (COM(2011) 370 final) is currently discussed. Key measures in the draft directive include:

- Promotion of the energy services market, including the requirement for each member state to set up an energy efficiency obligation scheme in which all energy distributors or all retail energy sales companies should make energy savings equal to 1.5% of the national energy consumption in the previous calendar year. Equivalent measures resulting in the same rate of energy savings would be allowed as well.
- Annual renovation of public buildings at a rate of 3% per year.
- Several measures to support efficient energy transformation, transmission and distribution (e.g. promote high-efficiency CHP).

In line with low-carbon policy package	Insufficient in comparison with low-carbon policy package
• Overall objective of realising 20% savings in primary energy use by in 2020. • Rate of 3% energy efficient renovation is ambitious – in the draft directive this rate is applicable only to public buildings.	• No obligation to implement binding energy efficiency targets. • Still need an unambiguous definition of energy efficiency improvements. • Several measures with uncertain outcomes, such as the member state opt-out for an energy savings obligation schemes.

3.4 Summary

This section provides a summary of the above evaluation of the current policies and new plans being made at the EU level

3.4.1 How important are climate and energy policies at EU-level for member states' climate performance?

EU-level policies influence member state policies in two dimensions: coverage and flexibility. First, EU-level policy does not cover all areas in the low-carbon policy package, for example it covers building codes, but does not incentivise increased renovation rates. The remaining areas are left to member states. Second, EU legal provisions encompass a range of approaches that give more or less flexibility to member states. These range from 'high flexibility,' such as directives with non-binding targets, for example the current 20% energy saving target, to 'low flexibility', such as standards directly enforced in member states, for example under the Ecodesign Directive (see Table 2).

Close to half of a country's performance on our rating scale is defined by the ambition of EU legislation. The level varies per sector, in the dimensions of coverage and flexibility. For example energy efficiency in transport is strictly defined by CO2 efficiency standards for new passenger cars and vans with no flexibility, but it does not cover freight transport via road, rail or shipping.

Many EU policies assist member states in formulating ambitious climate and energy policies. Examples are the Energy Performance of Buildings Directive, which prescribes a process that all member states have to comply with, without providing detailed targets. Another example is the Renewable Energy Directive, which sets binding targets, but leaves the actual policy to the member states. In these cases, member states implement the EU-level policy to a varying degree, some over- and some underperforming. Clear and measurable targets and measures help to ensure consistency and stringency.

Some EU policies prescribe harmonised rules that can restrict ambition. The converse example of the role of harmonised rules is that they run the risk of being watered down in the policy development process – evident in the cap in the Emission Trading System or the ambition level of the Ecodesign Directive for some products. In such cases they may even impede countries from implementing more stringent policies.

3.4.2 How do the climate policies at EU-level compare to what is necessary to reach a low-carbon economy in 2050?

The EU-level policy package is insufficiently stringent to reach 2050 low-carbon goals. We estimate the EU policy package receives an average score of 'E', two-thirds away from what would be necessary to match the low-carbon policy package. There are several concrete options to improve European policy on the table now, and other changes are quite easy to recognise (see Table 2).

EU-level renewable energy policies are more stringent and effective than those for energy efficiency. Policies for renewable energy are clearly articulated, with measurable targets and implementation plans in member states. Energy efficiency policies are scattered in several directives and lack clear and measurable targets.

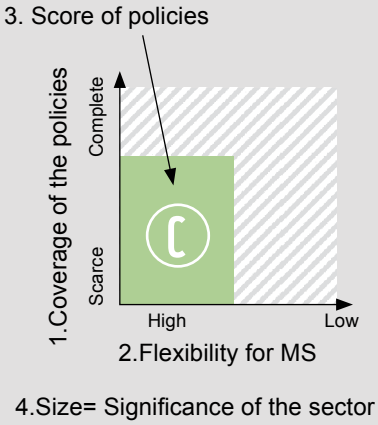
Some areas important for a path towards a low-carbon economy are minimally covered by the EU. At present there are mostly non-binding targets or strategies beyond 2020, investments in electricity grids and distribution is still under development, little work is done on

the redesign of products to be material efficient, energy efficiency in industry is only indirectly covered by the EU emission trading system, there are as yet no incentives for retrofit of existing buildings, freight transport via road, rail or shipping is not covered, and climate plays a minimal role in agriculture policy.

The overall message from the icon is that the larger the coloured area, the more the score of the individual member state is influenced by EU policy.

Description of the 4 step approach used to evaluate EU energy and climate policies:

1. **Coverage of the policies:** Indication of the share of topic areas that ideally be covered in a low-carbon policy package (4 stages: scarce, some, high, complete).
2. **Flexibility for member states:** Indication of the flexibility to the member states ranging from 'high flexibility' such as directives with non-binding targets to 'low flexibility' such as standards directly enforced in member states (4 stages: low, limited, significant, high).
3. **Scoring of policies:** The rating of the existing EU policies against the benchmark of the indicators. The rating gives scores to the EU policies on a scale from 'A' (excellent) to 'G' (insufficient), assuming optimal implementation of the policy at member state level.
4. **Significance of the sector and policy area:** The relative importance of the sector (based on its share of emissions) and policy areas renewable energy, energy efficiency and overarching (3 steps: below 5%, 5% to 10%, above 10%).



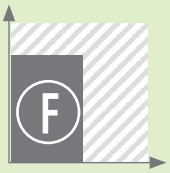
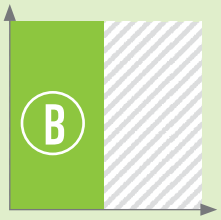
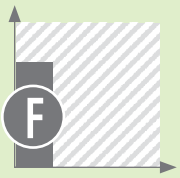
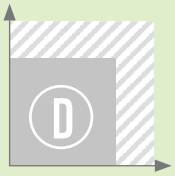
How to read this example:

Coverage: A majority but not all topics that we identified as part of low-carbon policy are covered by the EU policies.

Flexibility: The EU policy consists of a directive with binding targets, leaving flexibility to the member state on the policy implementation – and for a lower or higher score on the respective indicators.

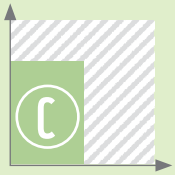
Score: The EU policies relevant for this sector rate 'C'. The score applies to the non-striped area only.

Table 2. Summary table with indicative rating of implemented EU regulations

GENERAL		• Coverage is high. The EU is committed to reduce greenhouse gas emission by 80% to 95% by 2050. However, an agreed climate strategy does not yet go beyond 2020. Innovation strategies and the amount of resources for research and development in climate change and energy are mainly determined nationally. • Flexibility for member states is significant. Long term EU targets are not yet legislated or binding. Resources for research and development have some EU guidelines. • Score: 'F'. Although the longer term target is a step in the right direction, the target is not binding and the implementation strategy only reaches until 2020.
ELECTRICITY SUPPLY	**Renewables** 	• Coverage is almost complete. The Renewable Energy (RES) Directive sets renewable targets for 2020 and regulates most prominent barriers. • Flexibility for member states is significant. The RES Directive sets binding targets – member states have flexibility in choosing support mechanism and are not required to differentiate between different types of technology. The most prominent barriers are regulated. • Score: 'B'. The target of the RES Directive of 20% renewable energy in 2020 is quite ambitious. In the electricity supply sector this translates to a 15-20% increase in renewable electricity's share in 2020, which is almost as ambitious as the 20% increase required in the low-carbon policy package.
	Energy efficiency 	• Coverage is high, with a directive aiming to stimulate combined heat and power (CHP) use. Losses during distribution of electricity and heat have only recently been covered by the recently proposed draft of the Energy Efficiency Directive. Investments in electricity grids are as yet minimally coordinated by the EU. • Flexibility for member states is high, as the CHP Directive gave non-binding targets until 2010. Its impact heavily depends on implementation at member state level, which is weak at the moment. • Score: 'F'. The requirements of the CHP Directive are not ambitious enough.
	Overarching 	• Coverage is high with the EU emission trading system (ETS) giving price signals to power generation, although emissions performance standards for fossil fuel power plants are not set. Member states continue to subsidise conventional fuel supply. The EU gives a legal framework for carbon capture and storage (CCS) and taxes are covered by the Energy Tax Directive. • Flexibility for member states is limited overall, due to the emission trading system. Member states have higher flexibility to adopt additional legislation on taxes, subsidies and carbon capture and storage. • Score: 'D'. EU emission trading system so far does not give sufficient price signals. Since taxes on power production are exempted from minimum tariffs, they are far away from the required levels of around 100% of the energy price. Subsidies on coal mining are allowed until 2018.

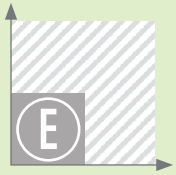
INDUSTRY

Renewables



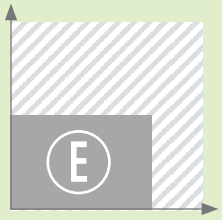
- Coverage is high, with the RES Directive influencing the use of renewables in industry and potentially imposing sustainability criteria on biomass. Demonstrations can be funded through Cohesion and NER300 funds.
- Flexibility is high as member states have flexibility in choosing if support mechanism for renewable energy apply to industry and how sustainability criteria are applied.
- Score: 'C'. Corresponding to the 'B' score on renewable electricity, achieving the 20% renewables target will help reach 10% share of renewables in industry in 2020 that is given in the low-carbon policy package. The lack of stringent biomass sustainability requirements is a problem for heat production in industry.

Energy efficiency



- Coverage is medium, with only the Eco-design Directive directly impacting energy efficiency policies in industry. EU emission trading system has an indirect effect. The recently proposed – but not yet adopted - Energy Efficiency Directive includes frequent and mandatory energy audits for large companies, as well as a greater use of residual heat and heat from cogeneration.
- Flexibility for member states is significant, since there is no binding energy efficiency target for member states. Member states are tied to the norms on electrical motors set in the Eco-design Directive.
- Score: 'E'. The EU energy efficiency target of 20% is in line with a low-carbon policy package, but policies are missing. Doubling of ambition in energy efficiency in industry is needed.

Overarching



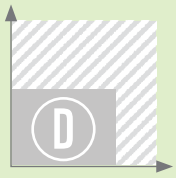
- Coverage is medium, with an Energy Tax Directive setting minimal tax levels and the EU emission trading system regulating CO2 prices in industry. The main gap is the redesign of products to be less material intensive, longer lasting and 100% recyclable is not targeted. Although the EU has made a resource-efficient Europe one of its 'flagship initiatives', this has not yet translated into policies.
- Flexibility for member states is limited as the EU emission trading system is giving harmonised rules with only limited flexibility to member states. Countries could increase taxes, or stop exemptions, on industrial energy use.
- Score: 'E' The minimum energy tax levels for industry are too low and with significant exemptions. EU emission trading system does not give sufficient price signals.

BUILDINGS

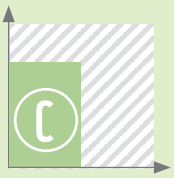
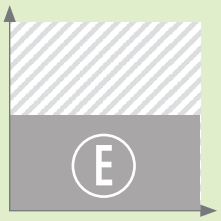
Renewables

- Coverage is almost complete as the use of renewable energy and new technologies are supported by the Energy Performance of Buildings Directive and the share of RES in buildings is (indirectly) covered by the RES Directive.
- Flexibility is high as member states have the flexibility in choosing support mechanisms. There is no specific building related target for the increase in the use of renewable heat and cooling in buildings.
- Score: 'C'. Corresponding to the 'B' score on renewable electricity, achieving 20% renewables target will help reach the additional 10% share of renewables in buildings in 2020 that is given in the low-carbon policy package. The lack of stringent biomass requirements is a problem for heat production in buildings.

Energy efficiency



- Coverage is medium, as the Eco-design Directive sets minimum performance standards for (some) equipment. The Energy Performance of Buildings Directive sets standards for existing buildings, although the most prominent barriers (such as the landlord-tenant dilemma) are not regulated. A significant gap is retrofitting of the existing building stock.
- Flexibility for member states is limited. Member states have significant flexibility in complying with the demands for existing buildings, but cannot adopt stricter norms on appliances regulated by the Eco-design Directive.
- Score: 'D'. The ambition level of the Eco-design Directive should be doubled and the requirement for nearly zero energy buildings should be shifted from 2020 to 2014 for a maximum score.

	Overarching 	• Coverage is complete, with the Energy Tax Directive affecting the only indicator in this area. • The flexibility for member states is medium, since member states should adopt the minimum tariffs set in the Energy Tax Directive but are free to impose higher taxes if they see fit. • Score: 'G', the minimum tariffs set in the Energy Tax Directive are too low to have a real effect.
TRANSPORT 	**Renewables** 	• Coverage is high. The RES Directive sets a binding target of 10% share of renewables in transport in 2020, including sustainability criteria. The gap is that there is no EU legislation on the development of infrastructure for electric mobility. • Flexibility for member states is significant. Member states are free to decide on policy measure to meet the binding target. • Score: 'C'. Target of 10% renewables in 2020 is in line with the requirements for a low-carbon policy package, but the sustainability criteria are insufficient.
	Energy efficiency 	• Coverage is medium. EU has CO2 efficiency standards for new passenger cars and vans. The main gap is freight transport via road, rail or shipping is not covered. With about 9% of the primary energy use in the EU it is the most significant economic activity not covered. • Flexibility for member states is low. Emission norms for vans and passenger cars are part of an EU regulation directly and entirely applicable to all member states. • Score: 'E'. Standard for new passenger cars is phased in from 2012 to 2015 (130 gCO2 per km) with a longer term (not binding) target of 95 gCO2 per km.
	Overarching 	• Coverage is medium. The Energy Tax Directive sets minimum tax levels for transport fuels. The major gaps are that EU has no legislation that is targeted at a modal shift or reduction of traffic. Investments in low-carbon infrastructure are partially targeted by Cohesion funds available for investment in rail transport. • Flexibility for member states is limited. Spending of Cohesion fund money has restrictions. Member states can impose higher taxes than the minimum standards. • Score: 'F'. Minimum tax levels for transport fuels are around 40-50% of the energy price, while they should be 400% of the current energy price.
AGRICULTURE 		The major gap in the EU's agriculture policy is that it does not include a long term climate perspective. A reform of the EU subsidy scheme, taking emissions into consideration, would be needed, especially in the longer term of our vision, when agriculture will become the main emitter of greenhouse gas emissions.
FORESTRY 		he EU's forestry policy is guided by the RES Directive, which encourages member states to complete biomass plans, and the Cohesion Funds, where beneficiaries can be supported for investment in reforestation. Gaps are that comprehensive land use strategies, forest management and prevention of deforestation are not directly targeted at EU-level.

3.4.3 How do the plans for future climate policy at EU level move Europe closer to a low-carbon economy?

Current plans show significant improvements, but are still insufficient to be in line with a low-carbon economy. Several policy developments are currently under discussion. These constitute a further step towards a low-carbon economy, but still leave gaps. In particular, long-term plans are still in the discussion phase, efforts and targets on energy efficiency would have to be more specific and binding, plans for tightening the cap of the emission trading system are missing, and planned action on freight transport and modal shift is limited (see Table 3).

Table 3. EU level action: current level, necessary level and future plans

	Gaps and insufficient ambition in current EU policy	Stringency necessary towards a low-carbon economy by 2050	Action suggested in new EU plans
GENERAL	Long-term targets or agreed strategies beyond 2020 missing	Legally binding goal of 95% reductions by 2050	Climate roadmap suggests 80% reductions by 2050, with interim milestones
ELECTRICITY SUPPLY	Investments in electricity grids and distribution missing	Significant investments in electricity grids	Infrastructure communication recommends electricity highways as of 2020
	Targets in combined heat and power (CHP) Directive not ambitious enough	10% additional share of CHP in 2020	Draft Energy Efficiency Directive: new thermal generation should include efficient CHP
	Cap and reduction trajectory in the emission trading system not ambitious enough	Reduction of between 35 and 40% below 2005 levels by 2020	Climate roadmap indicates cuts of 43-48% by 2030 and 88-92% by 2050
INDUSTRY	Redesign of products not supported	Strategy to redesign of products to be more material efficient, 100% recyclable	Resource-efficiency is one of its 'flagship initiatives', but not yet translated into policies
	Energy efficiency in industry only indirectly covered by the EU emission trading system	Improve energy efficiency in industry by more than 2% per year	Draft Energy Efficiency Directive: Frequent and mandatory energy audits, energy savings obligation scheme, targets not specified, climate road map weak on energy efficiency
	Cap of the emission trading system not ambitious enough	Reduction of 35 to 40% from 2005 to 2020	Climate roadmap indicates cuts of 43-48% by 2030 and 88-92% by 2050
BUILDINGS	Incentives for retrofit of existing buildings missing	Incentives to increase retrofit rate to 3% per year	Draft Energy Efficiency Directive: Target of 3% renovation rate for public buildings only
	Energy efficiency standards for appliances not ambitious enough	One to two classes beyond Ecodesign Directive	-
TRANSPORT	Standard for new passenger cars of 130 gCO_2 per km phased in 2012 to 2015 not ambitious enough	Standard for new cars of 95 gCO_2 per km in 2015	White paper focuses only on long-term action
	Freight transport via road, rail or shipping not covered	Reduce new freight vehicle emissions per kilometre by 25% in 2020	White paper includes only limited action on freight transport
	Modal shift and reduction of traffic not covered	5% of emission avoided or moved from cars and trucks to more carbon efficient modes like rail in 2020	-
AGRICULTURE FORESTRY	Climate perspective on agriculture and forestry policy missing	Formulation and implementation of a consistent and comprehensive land use strategy Goals and incentives for CH_4 and N_2O reductions	

4. THE TRENDS IN EU MEMBER STATES POLICIES

An overall assessment of EU member state policies finds that **nine have, on balance, made progress, and five have fallen further behind.** Assessment at sectoral level indicates few consistent trends, with changes for the better and the worse in evidence.

Our analysis shows that the majority of new policy developments in EU member states are either a direct implementation of EU legislation or are linked to EU legislation. This reinforces the message in chapter 3, that intensification of policies at the EU-level can have a large impact on countries' performance.

Certainly the financial crisis has made its impact felt: although green growth is part of many government plans, real transformation is little in evidence. Cuts in support to alleviate short-term budget gaps have appeared in several countries.

4.1 How much does the implementation of EU policies account for action in member states during the past year?

The majority of last year's developments in EU member states were linked to EU legislation:

- The promotion of renewable heating measures as part of the Renewable Energy Directive. The UK introduced an innovative 'feed-in tariff' for heat, Finland now stimulates the use of wood fuel and biogas combined heat and power (CHP) with a feed-in premium and Slovenia introduced a programme to promote biomass boilers and solar collectors in households.
- Support schemes for renewable electricity are linked to binding targets for the share of renewable energy in 2020. Over the past year, some countries reduced support for (mainly) photovoltaic solar energy: Slovak Republic, Czech Republic, Italy, France, Spain, UK, Estonia, Germany and Belgium. Finland introduced a feed-in premium scheme and Hungary now limits its feed-in support to genuinely renewable energy.
- The transposition in national law of the Eco-design Directive in Bulgaria and Romania.
- Changes in buildings codes and building certification as a reaction to the Energy Performance of Buildings Directive, for example in Cyprus, Finland, Romania and Slovenia.
- Changes in regulation for biofuel to reach the binding target of 10% share of biofuels in transport in 2020: Ireland, Germany, Spain, and the UK have increased quotas or new support. Still, Bulgaria, Poland and the Slovak Republic abolished policies that were intended to help reach the target.
- New policies that support the purchase of energy efficient new cars often related to the upcoming EU standard of the maximum of 130 g-CO2 per km for the new passenger car fleet that is phased in 2012 to 2015: Romania and UK introduced a new premium for efficient cars, whereas France and Austria applied stricter emission levels to their premium system. On the other hand Italy did not extend its incentives for efficient cars in 2011.

Only a quarter of developments is independent of, or goes beyond, EU legislation. Examples are the 2050 target of independence from fossil fuels in Denmark, the developments in aviation tax in Germany and Austria and carbon taxation in countries like Sweden, the UK and Ireland.

Description of the approach used to evaluate member states energy and climate policies:

We analysed the policy progress of individual member states, focussing on new or abolished policies over the period of 1 July 2010 until 1 September 2011. The conclusions are based on individual country profiles, which are presented in Chapter 6.

We analysed the progress per country, on sectoral level and per policy area. Icons are used to indicate the trend on balance:

- Positive policy developments since last year's situation,
- Negative policy developments since last year's situation,
- Negative and positive policy developments are balanced or new plans where issued, but not yet implemented.
- When there are no policy developments, we report this as empty (white).

Important considerations when interpreting the results are:

- Our focus is on implemented new policies: we did not include continued policies or the effect of existing policies into our analysis.
- To keep a focus on change rather than on an update of the score, we did not quantify smaller and larger changes.
- The focus is on adopted legislation. However, we do mention developments if they are considerable, always making it clear that when it concerns plans only.

4.2 How did the financial crisis affect member state climate policies?

The economic crisis has led to a stimulus in green growth, but also to budget cuts of support policies: Although energy and climate change are said to be integral to many economic reform packages, no country has taken the opportunity to really transform their economy towards a low-carbon future.

Measures resulting directly from budget cuts can for example be seen in Germany, which temporarily shifted the budget for its building energy efficiency support programme between years. Bulgaria, Poland and the Slovak Republic have reduced support or ended their quota obligations for biofuels. In Romania, biofuels are no longer exempt from excise tax. Spain cut its support for electric vehicles due to budgetary constraints. Research funds suffered from budget cuts in both Hungary and the Netherlands. The Netherlands prematurely cancelled a support scheme for renewable heat in households. The only countries that have set aside dedicated funding for energy efficient renovation are Germany, Austria and Ireland.

4.3 How have member state climate policies changed over the last year?

Positive and negative policy developments have occurred in all countries, but the overall picture remains largely unchanged – current efforts are insufficient to meet the low-carbon vision. All EU countries need to intensify their efforts. Progress in European member states' energy and climate policies has been minimal. Efforts are still not strong enough to lead to a low-carbon economy in the long term.

Country results are summarised in Figure 2. Nine of the EU-27 countries took a step forward in their climate and energy policy package. Five countries have shifted further away from achieving a low-carbon economy in 2050. Assessment at sectoral level indicates few consistent trends, with changes for the better and the worse in evidence, as demonstrated by Table 4 and the examples of most important developments per sector in the following paragraphs.

Figure 2. Overall developments in the EU-27 climate and energy policy packages from 1 July 2010 until 1 September 2011.

Colours indicate the country trend on balance:

positive policy developments since last year's situation,

negative policy developments since last year's situation.

The colours of the countries indicate last year's score.

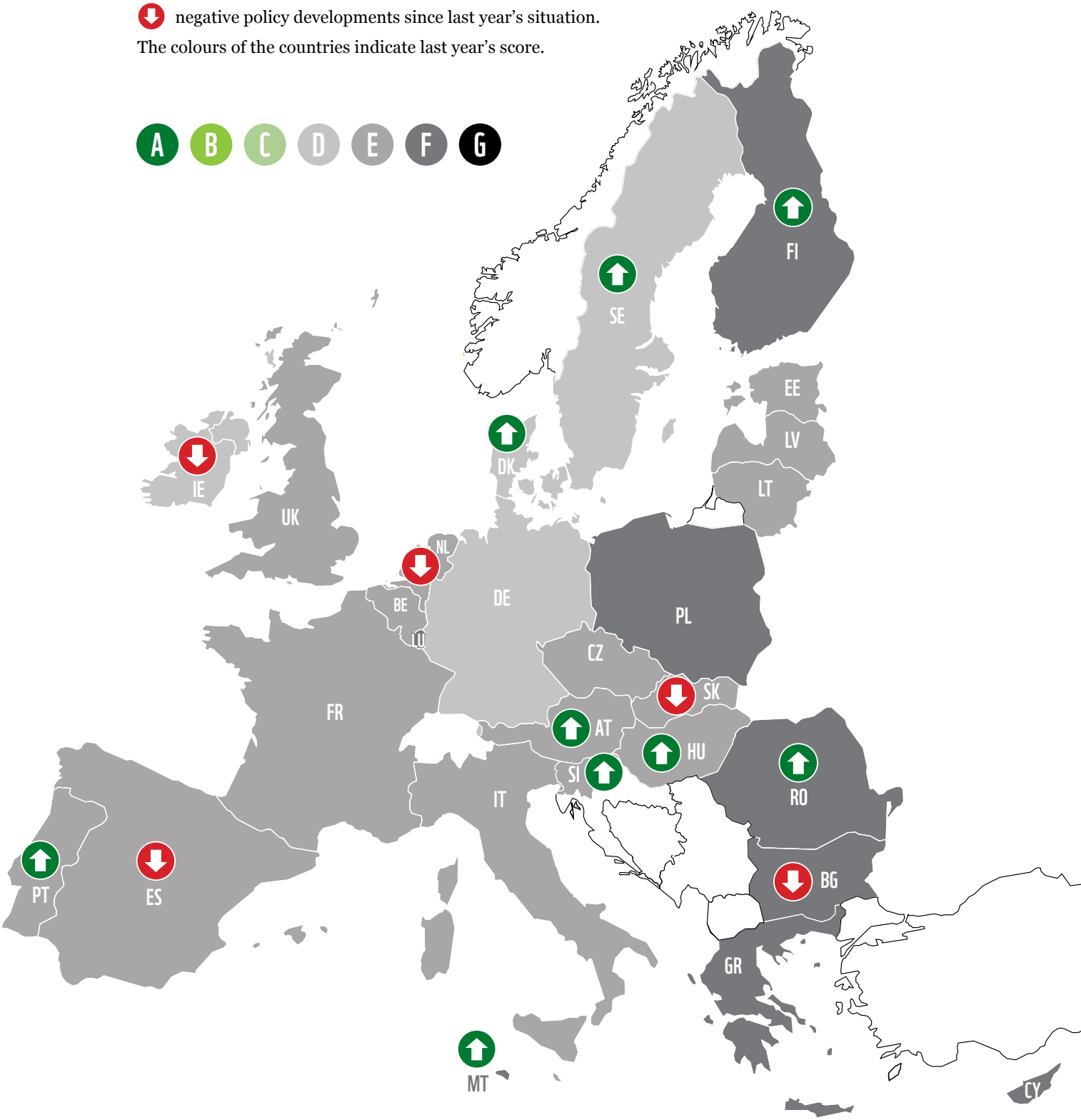


Table 4. Across all sector intensified action is needed

	Trend since 2010	2010 rating	2011 trend
GENERAL	A standstill in long term strategies	A B C D E F G	⇔
ELECTRICITY SUPPLY	Reduced support for renewable electricity, mainly for solar photovoltaic , partly justified	A B C D E F G	↓
INDUSTRY	Industry still barely tackled by policies	A B C D E F G	⇔
BUILDINGS	Buildings renovation policy focus, but limited action	A B C D E F G	↑
TRANSPORT	Efficiency of existing cars is main policy area in transport policies	A B C D E F G	↑
AGRICULTURE	No new, innovative policies on agricultural greenhouse gas emissions	A B C D E F G	⇔
FORESTRY	Forestry laws in Eastern Europe	A B C D E F G	↑

Colours indicate the 2011 trend:

- ↑ positive policy developments since last year's situation,
- ↓ negative policy developments since last year's situation,
- ⇔ negative and positive policy developments are balanced or new plans where issued, but not yet implemented.

GENERAL

A standstill in most long term strategies

With respect to overall country low-carbon strategies, the situation in many countries is the same as it was last year. Denmark has presented an Energy Strategy 2050 with the aim to become independent from fossil fuels by 2050. This strategy has not yet been discussed by the parliament, but there is a general agreement for a clear 2050 target. Germany has introduced its Energy Concept with the long-term target to reduce emissions by 80-95% by 2050, but this target is not legally binding. France and Romania have taken some smaller steps forward by assigning funding for research and development in renewable energy. On the other hand, Ireland has shelved its climate change bill and the Netherlands has reduced its targets for 2020 to the minimum EU-levels.

ELECTRICITY SUPPLY

Reduced support for renewable electricity, mainly for solar photovoltaic (PV), partly justified

Some countries reduced support for renewable electricity, mainly the support levels for solar photovoltaic (Slovak Republic, Czech Republic, Italy, France, Spain, UK, Estonia, Germany and Belgium). The reduction of support levels for solar PV is justifiable given the decrease in production cost and very strong market growth. Still, the support reductions were often implemented as a step change and have reduced future investment certainty. This is especially the case in Spain and the Czech Republic, where the support for solar PV was cut retroactively, either by cutting the tariff or by introducing a tax for existing installations.

INDUSTRY

Still barely tackled by policies

Renewables in industrial sectors were not particularly targeted by new (or existing) policies and only six countries saw some change in policy. In Ireland the existing renewable heat deployment scheme for industrial buildings was closed. Slovenia introduced a co-financing programme for the installation of biomass boiler equipment and Malta started a credit scheme for the use of renewable sources in small and medium enterprises.

Efficiency in industry remains an area that is barely tackled by policies. Developments mainly concerned extending existing programmes. Ireland, Czech Republic and France extended existing programmes to stimulate energy efficiency projects in industry. Slovenia is co-financing the construction of biomass district heating systems.

A minority of countries have targeted the tax exemptions for industry. While Greece is the only country that lowered energy prices for their industry, and Finland has plans to lower energy taxation for energy intensive industry, Germany, the UK and Austria, have reduced tax benefits for intensive industry. The changes in these three countries are minor, and increase the tax levels of certain fuels by a few percent.

BUILDINGS

Buildings: renovation policy focus, but limited action

Some countries further stimulated the use of renewable heat in buildings, but the overall efforts to promote renewable heat are still too low. While the Netherlands prematurely cancelled a support scheme for renewable heat in households, the UK introduced an innovative 'feed-in tariff' for heat. The latter began with support for the non-domestic sector in 2011 and will extend to the domestic sector in 2012. Finland now stimulates the use of wood fuel and biogas combined heat and power with a feed-in premium. Slovenia introduced a programme to promote biomass boilers and solar collectors in households.

Energy efficiency in buildings is the area with most positive developments: twelve countries have taken steps forward. However, these steps are small and do not exploit the full potential of energy efficiency improvements in buildings. The focus is on improved certification of buildings and temporary measures to stimulate (energy efficient) renovation of buildings (the Netherlands, Spain, Austria and Ireland). But last year also saw shifts or cuts in budgets for renovation projects (Germany, the UK)

No new carbon or energy taxes for households were adopted in the past year, with the exception of Cyprus, where the energy tax for consumers was doubled to fund renewable energy production. Ireland has planned to further increase its carbon tax to €30 per tonne of CO_2 in 2014.

TRANSPORT

Policies mainly focussing on efficiency of existing cars

The purchase of energy efficient new passenger cars was further promoted in a number of countries, but no country introduced any further measures to promote the energy efficiency of existing vehicles. The Dutch tax on new passenger cars is now connected to their CO_2 emissions intensity. Romania and UK introduced a new premium for efficient cars, whereas France and Austria applied stricter emission levels to their premium system. On the other hand Italy did not extend its incentives for efficient cars in 2011. Germany, a country that has had fewer policies to support efficient car use, will now introduce the energy labelling of cars.

Lithuania and Estonia have taken some initial steps to promote electric mobility. Malta and Ireland increased or introduced support for the purchase of electric vehicles, and Italy will start new incentives for electric vehicles either at the end of this year or the beginning of next year. Support for biofuels shifted in many countries. Some countries took a step backwards due to reduced support or the ending of quota obligations for biofuels (Bulgaria, Poland, and Slovak Republic). Ireland, Germany, Spain, and the UK have increased quotas or new support.

A levy for air traffic was introduced in Germany and Austria. France saw a slight increase in the tax on domestic aviation.

AGRICULTURE AND FORESTRY

Forestry laws in Eastern Europe but no new innovative policies on agricultural greenhouse gas emissions

Policies on forestry were introduced or enhanced in some new EU member states. For example, Romania and Bulgaria introduced afforestation legislation. Greece published forestry maps and approved a law on the preservation of biodiversity. The Czech Republic and Slovenia are creating conditions for sustainable forest management and the Slovak Republic approved a national action plan for agricultural and forestry biomass.

Table 5. Summary of policy developments per country. Colours indicate the trends per policy area and sector.

	Renewables				Efficiency				Overarching							Total
	ELECTRICITY	INDUSTRY	BUILDINGS	TRANSPORT	ELECTRICITY	INDUSTRY	BUILDINGS	TRANSPORT	GENERAL	ELECTRICITY	INDUSTRY	BUILDINGS	TRANSPORT	AGRICULTURE	FORESTRY	
AT	↑	×	×	×	×	×	↑	↑	×	×	↑	×	↔	×	×	↑
BE	↓	×	×	×	×	↔	↓	×	↔		×	×	×	×	×	↔
BG	↔	×	↔	↓	×	×	↑	×	↔	↓	×	×	×	×	↑	↓
CY	↔	×	×	×	×	×	↑	↓	↔	×	×	↑	×	×	×	↔
CZ	↓	×	×	×	×	↑	×	×	↔	×	×	↔	↔	×	↑	↔
DE	↔	×	↔	↑	×	↔	↔	↑	↔	↔	↑	×	↔	×	×	↔
DK	×	×	×	×	×	×	×	×	↑	×	×	×	×	×	×	↑
EE	↔	×	×	↑	×	×	↑	↔	↔	×	×	×	↓	×	×	↔
ES	↓	↔	×	↔	×	×	↑	↔	↔	↓	×	×	×	×	×	↓
FI	↑	×	↑	↔	↑	↔	↑	×	↔	×	×	×	×	×	↔	↑
FR	↓	×	×	×	↔	↔	↔	↔	↑	↑	↔	×	×	×	×	↔
GR	↑	×	↑	×	×	×	↑	×	↔	×	↓	↔	↓	×	↑	↔
HU	↑	×	×	×	×	↔	×	×	↔	↑	×	×	×	×	×	↑
IE	↔	↓	↑	↑	↓	↔	↑	×	↓	×	↓	↔	↑	↓	×	↓
IT	↓	×	↑	↑	×	↔	↑	↔	×	↔	↔	×	↔	×	×	↔
LT	↑	↑	↔	↔	↑	×	×	×	↔	↔	×	×	×	×	×	↔
LU	×	×	×	×	×	×	↔	×	↔	×	×	×	×	↔	↔	↔
LV	↑	×	↑	×	×	×	↔	×	×	×	×	×	↔	×	×	↔
MT	↑	↔	×	↑	×	×	×	↑	×	×	×	×	×	×	×	↑
NL	↓	×	↓	×	×	×	↑	↔	↓	↓	×	×	×	↔	×	↓
PL	×	×	×	↓	↑	×	↑	×	↔	↔	×	×	↔	×	×	↔
PT	×	↑	↑	↑	×	×	×	×	↔	↑	↔	↔	×	↑	×	↑
RO	×	×	×	↑	↔	×	↑	×	↑	↔	×	×	×	↔	↑	↑
SE	↑	×	×	↑	×	×	×	×	×	×	×	×	↔	×	×	↑
SI	↔	↑	↑	↔	×	↑	↔	×	↔	×	×	×	×	×	↔	↑
SK	↓	×	×	↓	×	×	×	×	×	↔	×	×	×	×	↔	↓
UK	↓	×	↑	↑	×	×	↓	↔	↔	↓	×	↑	×	×	↔	↔

↑ positive policy developments since last year's situation,

↓ negative policy developments since last year's situation,

↔ negative and positive policy developments are balanced or new plans where issued, but not yet implemented.

× When there are no policy developments, we report this as empty.

The policy developments behind these scores can be found in the country profiles in Chapter 6.

Concrete examples of best practices in member states
In every country, we found positive or innovative developments – often small but sometimes also significant. Some examples include:

Austria	Introduced environmental taxes in transport to increase government income.
Belgium	Plans to amend its voluntary agreement scheme with industry to include product design and disposal.
Bulgaria	Adopted a new law on forestry, banning construction in national forests and introducing the concept of ecosystem services.
Cyprus	New buildings are required to have the infrastructure necessary for renewable electricity production pre-installed.
Czech Republic	Will publish a new climate change policy during 2011, and in july 2011 approved a new air pollution act.
Denmark	Has the goal of independence from coal, oil and gas by 2050.
Estonia	Started using 500 electric cars and will introduce further support on acquisition of electric cars and charging infrastructure.
Finland	Supports heat produced using wood fuel and biogas combined heat and power (chp) by an additional new premium of 20€ per mega watts (mw) for wood fuel chp and 50 € per mw for biogas chp.
France	Put aside €6 billion for research and development in the field of sustainable development.
Germany	Will phase out all nuclear power plants by 2022 enabling a positive energy transition.
Greece	Removed the cap for the support of residential solar photovoltaic (pv) measures.
Hungary	Prepared a new railway strategy to increase the share of rail transport in both passenger and freight transportation.
Ireland	Will double its carbon tax to 30€ per tonne CO2 by 2014.
Italy	Extended a 55% tax rebate scheme for energy efficiency measures in buildings.
Latvia	Simplified the administration required for the feed-in tariff.
Lithuania	Approved a national strategy for renewable energy development.
Luxembourg	Will publish CO2 abatement and energy efficiency plans during 2011.
Malta	Further focused on renewables: introduction of a higher feed-in tariff for solar photovoltaic (pv) and plans for offshore wind parks.
the Netherlands	The purchase tax on new cars now depends on the CO2 emitted.
Poland	Recently introduced a white certificate scheme to boost energy efficiency.
Portugal	Started new development programmes on smart grids including the potential 'buffer' effect of large hydro and electric vehicles.
Romania	Adopted a new afforestation plan and started to enhance control on illegal deforestation.
Slovak Republic	Reinstated their ministry of environment under the new government.
Slovenia	Co-financed the construction of biomass district heating systems
Spain	Increased their biofuels target.
Sweden	Set the goal of achieving a transport fleet that is independent from fossil fuels in 2035.
UK	Adopted a feed-in tariff for heat for non-domestic and domestic users.

5. THE WAY FORWARD

This policy assessment finds that action at both EU and national level needs to be taken to develop a low-carbon economy – the gap between the current policy trajectory and one that will help avoid significant global warming is still very large. Importantly, plans have been tabled in the past year at EU-level that begin to outline the steps necessary to make the transition. But they remain in the discussion phase. Given both flexibilities and gaps in EU legislation, there will continue to be significant room for national initiative. Member states need to take responsibility for action on all sectors.

5.1 EU policy needs significant strengthening to help Europe develop towards a low-carbon economy

Agreeing EU climate policies that are stringent in ambition but flexible in application would significantly help increase the success of member state policies. Clear and measurable targets help to ensure consistency, and give greater guarantees of achieving desired goals. However, for EU-wide harmonised rules or standards there is the risk that they are watered down in the policy development process to a lowest common denominator ambition level. This tendency is a danger inherent in collective decision making, and will have to be guarded against – in part through better recognition of the importance of such decisions, as indicated in this report.

Many of the policy elements needed to reach a low-carbon economy are already in place at EU-level, but they are insufficient in scope or ambition. The first needed step is **significant improvement of the EU's existing cornerstone policies:**

- Aligning the cap and reduction trajectory of the EU emission trading system to achieve 2050 decarbonisation: the current trajectory overshoots this goal by 20 years. It will also be necessary to eliminate the large credit surplus built up in the system.
- Introduce a CO2 tax as part of the Energy Tax Directive.
- Tightening the requirements for CO2 efficiency of passenger cars.
- Tightening standards under the Eco-design Directive.
- Guidance to member states on how to incentivise retrofits for energy efficiency and renewable energy as part of the Energy Performance of Buildings Directive.

In addition, there is a need **for new policies to close existing gaps:**

- **Legal agreement on long term targets or strategies beyond 2020.** The EU's position is to reduce its greenhouse gas emissions by between 80% and 95% by 2050, but strategy is still under discussion. Legislation is needed on post-2020 greenhouse gas reduction targets, as well as targets increasing the share of renewable energy and achieving further energy savings.
- **Greater ambition on energy savings for 2020.** The Energy Efficiency Directive should be the vehicle to agree binding energy efficiency targets for all member states, or binding measures that achieve comparable outcomes. Unambiguous definitions of energy efficiency improvements, and agreed methodologies to measure these, are an important basis for action.
- **Explicitly targeting the redesign of products, with the objective to make these less material intensive, longer lasting and 100% recyclable.** Although the EU has made a resource-efficient Europe one of its 'flagship initiatives', this has not yet translated in to policies. This task can best be implemented at the EU-level.
- **Legislation on freight transport via road, rail or shipping.** This area is currently not targeted, despite being significant - it accounts for about 9% of primary energy use in the EU.
- **A long term climate perspective on EU agriculture policy.** Subsidies play an important role in shaping European agricultural practices. Subsidy reform, taking emissions into consideration, is necessary - particularly given that in the longer term, agriculture may very well represent a large share of greenhouse gas emissions.

5.2 European member states need to take responsibility for action in all sectors.

Additional action across all sectors in all member states is needed. For some sectors, such as building renovations, car efficiency and forestry, intensified action has been taken in the last 12 months, but also for other sectors such intensified action needs to be initiated. This will include further elaboration of long term climate change mitigation strategies, effective policies and/or increased funds for renewable energy, targeted policies for industry, and innovative policies on agricultural greenhouse gas emissions.

There is ample scope for member states to learn from each other. Over the past year there have been positive or innovative developments in many countries, and a wider application of these across the EU could result in further greenhouse gas emissions reductions. Each member state can increase its performance by taking up good examples from other member states. For this purpose we have prepared country-specific recommendations in individual country profiles that can be downloaded from www.climatepolicytracker.eu.

6. COUNTRY RESULTS

We analysed the policy progress of individual member states in the EU, focussing on new or abolished policies over the period of 1 July 2010 until 1 September 2011.

For each of the 27 EU member states we have prepared a country profile that consists of:

- An overall assessment, including rating;
- Recommendations on most urgent actions;
- A table summarising the trends per sector and policy area;
- The main findings of the 2010 assessment;
- Description of the policy developments in the last 12 months;
- A detailed description of the policies per sector.

In our analysis we have used the following icons:

Letters indicate last year's score:

Arrows indicate the recent policy trend:


Positive policy developments since last year's situation


Negative policy developments since last year's situation


Negative and positive policy developments are balanced or policy plans that are not yet implemented

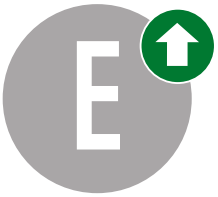
The size of the icons indicates the relative importance of the sector: small, medium or large.

In the section *Sectors in details* policies that changed during the period 1 July 2010 until 1 September 2011 are given in bold.

Important considerations when interpreting the results are:

- Our focus is on implemented new policies: we did not include continued policies or the effect of existing policies into our analysis.
- To keep a focus on change rather than on an update of the score, we did not quantify smaller and larger changes.
- The focus is on adopted legislation. However, we do mention developments if they are considerable, always making it clear that when it concerns plans only.

AUSTRIA



Overall assessment

The 2010 Climate Policy Tracker gave Austria a rating of E. In general, the energy and climate policy is stable with some small positive changes. Like many European countries, Austria faces tightened budgets, but support for energy and climate policy was not affected. In 2011, Austria introduced some environmental taxes for the transport sector, including a mineral oil tax of 20€/t CO2 and an air traffic fee. A special focus was put on thermal renovation; the funds available could improve renovation rates by an additional 1% per year.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Austria does not have a comprehensive climate and energy strategy to achieve a zero carbon economy by 2050. See, for example, the UK for legally-binding targets and carbon budgets or Denmark for a comprehensive energy strategy.
- Austria could increase use of renewables and energy efficiency in industry. Policies focussing on small and medium-sized enterprises (outside ETS), could for example look at Sweden's recently introduced CO2 tax for this sector. Also the energy tax exemptions for manufacturing could be reconsidered, perhaps in combination with negotiated efficiency targets, again following the example of Sweden.
- Austria could significantly increase its energy efficiency ambition for the transport sector. The especially counterproductive measures on commuter tax allowance and mileage allowance for business trips could be subject to revision.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F *No recent policy developments.*
ELECTRICITY SUPPLY	D ↑ • Increased budget for feed-in tariffs.	E *No recent policy developments.*	E *No recent policy developments.*
INDUSTRY	F *No recent policy developments.*	E *No recent policy developments.*	F ↑ • Tax exemptions for large energy users have been abandoned for service companies, but still exist for producing industry.
BUILDINGS	E *No recent policy developments.*	F ↑ • A new budget of €100 million is available in 2011 for thermal renovation.	F *No recent policy developments.*
TRANSPORT	C *No recent policy developments.*	F ↑ • The malus of the bonus-malus-system for passenger cars has been tightened.	F ↔ • Increase of commuter tax allowance, but at the same time improving tax conditions for the use of public transport to work. • Introduction of air traffic fee from 1 April 2011 onwards. • Increase of mineral oil tax due to CO2 emissions: 20€/t. • Decrease of vehicle tax (depending on weight).
AGRICULTURE			D *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 analysis showed that many sectors and policy areas were covered by a broader set of initiatives but that many of them are not sufficiently ambitious to transform Austria into a low-carbon economy by 2050. Important areas such as promoting material-efficient and fully recyclable products and efficiency in transport were not developed. The success stories are that:

- Austria is among the leading European countries as regards use of solar-thermal heat for private households.
- In 2007, the Climate and Energy fund was set up with an endowment of €500m to support the implementation of the Austrian Climate Strategy. The Fund provides subsidies to promote innovative projects, e.g. renewable energy supply.

Policy developments in the last 12 months

The last elections in Austria took place in 2008; the next ones are planned for 2013.

Austria's current climate strategy, published in March 2007 and its energy strategy, published in April 2010, cover the period up to 2020. No new strategy going beyond 2020 has been published.

In 2008 the Austrian government introduced two so-called economic recovery plans; the first one had a focus on small and medium-sized enterprises, and the second, on building insulation. As a result of these plans, the budget for 2011 includes cuts of around €3bn. At the same time the budget foresees increased investment in the fields of education, universities, research and development and thermal renovation. All in all, these measures account for €400m of which €100m is assigned to thermal renovation and €100m to research and development. A new Technology Fund of €200m, aims at applied research and bringing ideas to marketability. A focus on the following areas is foreseen (though not yet finally approved): resources and energy including electric mobility, climate protection and demographic change.

Although Austria's consolidation mainly focuses on the expenditure side, income increases are also addressed through taxes: about one third of the increased income from taxes is expected to be raised by environmental taxes. As of beginning of 2011, the mineral oil tax increased by 20€/t (labelled CO2 surcharge), the cost of insuring CO2 intensive vehicles was increased, and as of 1 April 2011, airplane tickets are subject to an air traffic fee.

The budget for thermal renovation is €100m in 2011 and it is planned to be made available annually. Its aim is to increase the renovation rate, lower buildings' energy demands and CO2 emissions and to give incentives to the local building sector.

The Ministry for the Environment's regular budget for environmental support is mainly aimed at energy efficiency and renewable energy measures. With a budget of over €90m, the Ministry expects to trigger investments of about €580m and to secure or create 5,600 green jobs.

Sectors in detail

GENERAL

Many sectors and policy areas are covered by a broader set of initiatives, but many of them are not sufficiently ambitious to transform Austria into a low-carbon economy by 2050.

ELECTRICITY SUPPLY

Renewables

Austria traditionally has a large share of renewable electricity, mainly from hydropower. Since 2002, renewables are supported mainly through the Austrian Green Electricity Act (Ökostromgesetz).

The feed-in tariff has undergone various changes, including limited budgets, which has led to a decline in new installations. The support scheme has recently been adjusted with prolonged guarantee periods and a higher budget. Small hydro and photovoltaics (PV) are now covered through an investment scheme and not by the feed-in tariff. **These agreed changes are promising and could re-stimulate capacity increases especially in the fields of wind, hydro and biomass. In July 2011, an amendment of the Ökostromgesetz was published which still needs to be notified by the EU Commission. The amended law will run until 2020.**

There is no preferential grid access and the cost for grid extensions is often paid for by the renewables project. This could be improved by adjusting legislation accordingly. The preferential dispatch rules are exemplary. However, no overall strategy for a fully renewable grid structure exists.

The government plans to increase the budget available for renewable electricity (RES-E) support with a one-off €110m fund which will help to reduce waiting lists that have been building-up. In addition, the annual amount of support increases from €21m to €50m, which is split between renewable energy (RE) technologies according to their potential.

Energy efficiency

The feed-in tariff for biomass and biogas is directly connected to the use of combined heat and power (CHP) for these fuels, as a minimum conversion efficiency of 60% is required. This very effectively promotes the use of highly efficient CHP technology. This resulted in a total growth of CHP production of 83% between 1996 and 2007.

Overarching

There is a general exemption on energy taxes for energy suppliers.

Power plants pay no tax for hard coal and 3% for fuel oil. There are no plans to reduce these tax exemptions and subsidies.

While the main business association, the IV (“Industriellenvereinigung”) demanded support for R&D as well as infrastructure investment and legal frameworks for carbon capture and storage (CCS), it is likely that there will be no major support in the medium term for biomass- or coal-based CCS.

INDUSTRY

Renewables	Some demonstration projects for renewable energies in the industry are covered by the feed-in tariff, but they are not sufficient to develop the sector's potential.
Energy efficiency	Efficiency measures are targeted mainly towards small and medium-sized enterprises, which traditionally play a large role in the sector. The support through the 'Klima:aktiv' campaign covers consulting services, information provision and investment support. 'Best practice' projects receive additional funding. The target is to save 20,000 t of CO2 per year.
Overarching	There are substantial refunds of energy taxes for energy intensive industries. According to the finance ministry, tax refunds amount to 1/3 of total energy tax revenues. Although the Austrian Court of Auditors recommended, in 2005, to make use of the options opened by the EU tax directive in order to reform and move towards a more environmentally-friendly energy taxation system, these have not yet been taken up by the government. There is some evidence of more environmentally-friendly taxation (e.g. introduction of a CO2-tax, adaptation of mineral oil taxes) as part of a possible general tax reform. **In the 2011 budget, service companies that are large energy consumers have been excluded from energy tax refunds, so now only energy-intensive industries can profit from these refunds.** Some measures or strategies for restructuring the industrial and material system can be found in the resource efficiency action plan which will be finalised by the end of 2010.

BUILDINGS

Renewables	A grant scheme to support renewable technologies at the national level, targets commercially-active investors and supports district heating, biomass plants, solar-thermal and heat pumps. **Within the "Climate and energy fund" (Klima- und Energiefonds), in 2011, special programmes for private households are available: €3m for wood heating, and two programmes for photovoltaics (PV) up to 5kWp (regular PV and facade integrated PV in prefabricated houses).** In addition, support for individual households is administered at the regional level. It also includes investment grants for the similar types of activities, although level and conditions vary widely. **Since March 2011, a special bonus for environmentally-friendly heating is available within the framework of the thermal renovation programme (see efficiency in buildings).** Information campaigns and training carried out at the regional and national levels support the deployment of renewable technologies. However, no measures have been taken to make investment in such technologies more attractive for rented space by improving tenants' ability to reduce their green investment costs. This area needs significant improvement. In 2002, the regional building law introduced an obligation to use renewable energy sources as a legal requirement for all public buildings.
Energy efficiency	The new Energy Strategy adopted by the Council of the Ministers at the start of 2010 includes a 3% target for the annual retrofit rate by the year 2020, with a linear trajectory starting from current retrofit rates (1% per annum). However, since instruments to support this are under the responsibility of the regions, are not ambitious enough and are not well coordinated (although a new agreement according to Art. 15a of the constitution sets common minimum standards), additional measures need to be taken to achieve the target laid out in the national Energy Strategy. **The 2011 budget foresees €100m for the thermal renovation of buildings; €70m for private households and €30m for businesses. Until April 2011, over 2,800 households were granted support of up to €5,500. It is planned to provide €100m for thermal renovation, annually.** Public procurement guidelines are detailed in an agreement (in relation to Art. 15a B-VG) and include ambitious standards for new buildings, retrofit and for technical appliances. This is a good example that could easily be followed by other countries

Overarching	Only a moderate energy tax for households of around 13.5% for natural gas and 17.7% for oil exists.

TRANSPORT

Renewables	Renewables in transport are mainly supported through a biofuel obligation, enacted in 2004, which includes a growing share of biofuel in petrol and diesel, supported by tax incentives for high shares of biofuel and bio ethanol. However, this policy is not supported by a framework to ensure the sustainability of biofuels from national or international sources. **Austria was one of the seven countries to meet the target of 5.75% biofuels in the fuel mix in 2010.** Additionally the action plan for electric transport targets the use of renewable electricity and the promotion of electrification of public transport. However, this plan is not yet substantiated by concrete measures.
Energy efficiency	A 'bonus-malus' system for new vehicle registration fees is the main tool used to promote efficiency of vehicles. Vehicles with emissions above a certain threshold are taxed higher (malus) than those below a threshold value (bonus). Introduced in 2008, the system was tightened in 2010 to further reduce CO2-emissions from newly registered vehicles. It is yet to be judged whether this measure will be sufficient to put Austria on a path towards 95g/km in 2015 for newly registered vehicles. **At the beginning of 2011, the malus was tightened further for the coming two years, and in 2013, the CO2 emission level at which car owners have to pay a higher malus will decrease again.**
Overarching	Austria has the second highest per-capita investment in rail infrastructure in Europe and also supports a wide range of activities around climate friendly mobility, with "klima:aktiv mobil" providing both financial support and an information programme. **The budget cut in 2011 leads to less investment in road infrastructure, but at the same time, available money for new investment in rail infrastructure is also cut. However, the budget for regional public transport is not affected.** To reduce emissions from freight transport and to shift road transport to rail, various measures aim at supporting combined freight transport. Those measures consist of financial support, fiscal incentives (e.g. incentives regarding vehicle tax) and other support measures (e.g. liberalised initial and final combined transport hauls, exemption from driving bans on lorries). One of the financial support measures is a programme that supports investment in transport units and technology innovations until 2014. Past support periods of this programme reached less than 3% of road freight transport. However, various measures also promote higher fuel use: a commuter tax allowance, mileage allowance for business trips, and the low level of mineral oil taxes. The problem is aggravated by uncoordinated regional planning leading to urban sprawl.

AGRICULTURE

	Ambitious limits on nitrogen load per hectare and incentives to reduce methane emissions from animals exist. A consistent land-use strategy exists and sufficient funding is allocated to the promotion of sustainable farming with a positive impact on greenhouse gas emissions and consumption practices including labelling, information programmes, etc.

FORESTRY

	The strategy for forest management planning is consistent and policy tools to ensure implementation exist. Between 1990 and 2007, an increase of the total forest carbon stock took place.

BELGIUM

Overall assessment

The 2010 version of the Climate Policy Tracker gave Belgium a rating of E. Since last year, the policy package has largely remained the same. In June 2010, federal elections were held in Belgium. Since then negotiations on forming a new coalition have been ongoing. The absence of a federal government has impeded the development and introduction of new environmental policies. During that time only small changes, mostly budget cuts, have been made to existing policies.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- The Belgian climate policy is established until 2012. There is a need for a comprehensive national climate and energy strategy towards a zero carbon economy by 2050. See for example UK and Ireland.
- The support for energy efficiency of cars has not been adjusted since its introduction and should be adjusted for market and technology evolution. The efficiency of cars could be further improved, for example by further fiscal benefits for efficient new (company) cars. See for example the Netherlands or France.
- Belgium has relatively low tax levels for households, transport and industry. Higher energy taxes or a CO_2 tax could raise energy efficiency. See for example the Netherlands and Denmark.
- Belgium strongly needs to tackle the renovation of buildings in a comprehensive manner. See for example Germany.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G • The absence of a federal government has impeded the development and introduction of new environmental policies. Nevertheless, this does not prevent regions from developing their own action plans.
ELECTRICITY SUPPLY	D • Minimum prices for solar PV have been lowered • Green certificates for biomass co-firing is subsidising coal.	F *No recent policy developments.*	E *No recent policy developments.*
INDUSTRY	F *No recent policy developments.*	F • Revision of voluntary agreement scheme foreseen to also include product design / disposal.	E *No recent policy developments.*
BUILDINGS	F *No recent policy developments.*	F • Energy Efficiency certificates for non-residential buildings is delayed.	F *No recent policy developments.*
TRANSPORT	E *No recent policy developments.*	E *No recent policy developments.*	F *No recent policy developments.*
AGRICULTURE			E *No recent policy developments.*
FORESTRY			E *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 results show that Belgium's overall performance was dominated by the complex relationship between the Belgian Federal Government and the autonomous regions. While at the regional level there were some ambitious approaches, there was an overall lack of harmonisation across the measures, and those issues which required national level solutions often lagged behind.

- In Belgium, regional targets are set for cogeneration. Flanders aims for a 5.25% share of combined heat and power production (CHP) in electricity production by 2012 and its separate certificate system acts as a stimulus. Plans have been adopted to increase the share to 10.5% by 2021. Wallonia aims at 20% renewable electricity and high-quality CHP in electricity production in 2020. In the existing support system for renewable electricity, certificates for high-quality CHP can be supplemented with certificates for renewable electricity.
- Belgium has several good public transport policies. The Federal government finances 20% of the employer cost for commuters' public transport season tickets. Furthermore, there is a tax incentive to promote carpooling. Wallonia & Flanders pay 100% of the costs for a number of employers. Additionally, there is an obligation for private train companies to increase passenger transport by 25% from 2006 to 2012.

Policy developments in the last 12 months

Most of the environmental policies are initiated and governed on a regional basis. However, the political standstill since the federal elections of June 2010 has impeded real successes or progress on a number of important issues.

For the existing environmental policies, ample action has been taken. Most polices are being pursued with minimal revision or adjustments. Only budgets were adapted; the majority were reduced. Some examples:

- "Ecologiepremie" is a Flemish capital grant for enterprises for environmental investments. The budget for this grant is reduced from €120m in 2009 to €102m in 2011.
- In the previous scheme for Solar photovoltaics (PV) minimum prices were reduced gradually every year starting at 350 €/MWh in 2010 to 90 €/MWh in 2018. The new 2011 scheme, starts at a minimum price of 330 €/MWh which is reduced quarterly. Installation being installed after 1 July 2011 will therefore start at a minimum price of 300 €/MWh and from 1 October the minimum price will be 270 €/MWh. In 2016 the minimum price of 90 €/MWh will be reached, two years earlier than under the previous scheme.

Belgium's National Climate Plan establishes the Belgian climate policy by describing policies until 2012. This means that a new multiple year vision is expected within the next year. However, the lack of a government has hampered the development of post-2012 climate policies, making it impossible to decide how the efforts for reaching the national 2020 greenhouse gas emission reduction target of 15% or the renewables target of 13% would be shared among the regions and the federal level.

The Walloon Agency for Air and Climate has commissioned a study on how to reach a low-carbon economy by 2050, also examining socio-economic implications. The study takes place in the context of a future climate law that aims to cut emissions by defining carbon budgets in the short, medium and long-terms. The results are expected to be published by the end of September 2011. Another study on the possibilities for Belgium to maximise its renewable energy share by 2050 has been announced by the four energy ministers (Flanders, Wallonia, Brussels and federal), with expected publication not before the first half of 2012. In Flanders a study is underway on climate policy measures between 2013 and 2020. This autumn stakeholders are included in the process to define a new climate policy plan.

Sectors in detail

GENERAL

The country's overall performance is dominated by the complex relationship between the Belgian Federal Government and the autonomous regions. While on regional level some ambitious approaches exist, there is an overall lack of harmonisation across the measures, and those issues which require a solution on the national level often lag behind. Apart from renewable energy and combined heat and power (CHP), there are hardly any targets set

The Belgian climate policy is established until 2012, but is under development for the period until 2020. This process is expected to take several years. To become effective in terms of a low-carbon economy, short-term results are needed. There also needs to be a comprehensive climate and energy strategy towards a zero carbon economy by 2050. Climate and energy policy is distributed over different federal and regional organisations and knowledge is not shared broadly across these. Wallonia has a regional climate and energy strategy until 2020. **The Flemish region's climate policy plan is formulated until 2012.**

The political standstill since the federal elections of June 2010 has impeded real successes or progress on a number of important issues.

ELECTRICITY SUPPLY

Renewables

In Belgium, renewable electricity is promoted through quota obligations, green certificates and by giving it priority on the grid for both connection and congestion. However, there is not yet a strategy designed to create a grid that can accommodate a large share of renewable electricity.

In the Flemish region, the minimum prices for solar PV were lowered in January and July 2011. They will be lowered again in October 2011 and after that at longer intervals.

Energy efficiency

Regional targets for CHP exist. Flanders aims for a 5.25% share of CHP in electricity production by 2012 and stimulates this through a regional CHP certificate system. Wallonia aims at a 14% CHP share, being part of the existing support system for RES. This has the effect that electricity generated from high quality CHP is exchangeable by RES-E, i.e. higher CHP deployment might be at the expense of RES-E deployment and vice versa.

Overarching

The Belgian Federal Government stopped tax exemptions on the use of coal, coke, lignite and fuel oil for electricity generation.

Additionally, a new tax of € 8.65/ton was introduced for using the above-mentioned fossil fuels for electricity production.

Green certificates are highly rewarded, making co-firing biomass in coal fired power plants very attractive. Because of the higher CO2 content of coal compared to natural gas, this does not have a positive impact on CO2-emission reductions.

Nuclear energy remains a much debated topic. After the Fukushima accident, the Belgian authorities agreed to take some time to reflect on the subject, and there remains uncertainty about the nuclear phase-out law which is in place since 2003. The lack of progress on this issue does not contribute to a favourable investment environment for alternative energy sources.

INDUSTRY

Renewables	Quota systems are implemented at the national and regional levels. **In Flanders, enterprises are eligible for the "ecologiepremie" that gives financial support to environmental investment. In Wallonia a similar support measure is available to support companies and independent professionals.** European standards on biomass are applied, but biomass imports are not promoted or regulated by the Belgian government.
Energy efficiency	Industrial parties that represent more than 80% of energy consumption are included in voluntary agreements to improve energy efficiency. Involved parties will be exempted from the energy tax. **A revision of this scheme will include not only processes but also product design and disposal. This has not been implemented so far.** There is no structural support for demonstration or breakthrough technologies. Support is only granted on an ad-hoc basis.
Overarching	Belgium has a good policy on recycling and collection of recyclable materials. Glass, paper and plastic, metal and carton packaging is being collected separately. Non-recyclable packaging waste is also reduced by an Eco-tax. Plastic and aluminium packaging is also taxed. There is a small programme in Flanders that promotes Eco design of products on a voluntary basis. At the federal level, product standards are currently elaborated in relation to the European Directive on Eco Design for Energy-using Products (EuP Directive), but no measures are implemented that go beyond the EU requirements.

BUILDINGS

Renewables	At the federal level, in addition to incentives provided by regional authorities, tax reductions **and green loans** are given for investments in renewable energy. Solar thermal and PV are rewarded with a higher tax reduction than other technologies.
Energy efficiency	Tax incentives and rebates on improving efficiency are also applicable for tenants. There are also some low interest loans available. **Energy Efficiency Certificates for non-residential buildings will not be implemented before the end of 2011. The majority of public buildings are obliged to make energy efficiency information publicly available. For residential buildings the Energy Efficiency Certificate is mandatory since 2009. It is used to give potential buyers or tenants information on the energy performance and costs of the house.** **Wallonia and Brussels were warned by the European Commission in June 2011 for lagging behind in the implementation of the EPBD.** **In the context of the exemplary role of government, an important instrument consists of promoting third-party financing opportunities: FEDESCO is established and financed by the federal government and invests as a third-party financer in projects to increase energy efficiency in public buildings via energy performance contracts, energy monitoring systems and PV panels in the 1,800 buildings used by the Federal government, for example.** **The Flemish Secretary of Energy announced in September 2011 that annually 3,000 rental houses will be isolated. This way the Secretary hopes that in 2020 all Flemish houses are energy efficient.**
Overarching	There is no carbon tax in place.

TRANSPORT

Renewables	There is no policy or strategy to develop an infrastructure for electric vehicles in Belgium. The share of biofuels in transport is in line with the EU target. Incentives for electric vehicles and a quota system to stimulate national biofuels production have been put into place.
Energy efficiency	Belgian emissions targets are in line with EU standards. In Flanders, there is an investment subsidy for efficient lorries. Generally there are some incentives and tax reductions for energy efficient cars available together with customer information on efficient cars. **However, the Belgian support system has not been adjusted since its introduction, which leads to too many cars now being eligible for support.**
Overarching	There are investment programmes for the public transport sector and incentives for a modal shift. For example, the federal government subsidises 20% of the costs for a public transport season ticket for commuting. Furthermore, there is an obligation for private train companies to increase passenger transport by 25% over the period 2006–2012. Besides stimulating public transport, there are no ambitious policies towards a low-carbon infrastructure put into place.

AGRICULTURE

	Despite the moderate biomass potential in Belgium, Belgium aims at producing biofuels. Reaching a target of 5.75% by 2010 will require the import of energy crops.

FORESTRY

	Several policies that prohibit deforestation without a development permit and compensation. There is a policy in place that restricts the use of illegally cut wood. **In the Walloon region, the Forest Code includes the necessity of maintaining and improving the forest resources and their contribution to the carbon cycle, thus recognising the sustainable development of forest as the first guiding principle.**

BULGARIA

F

Overall assessment

The 2010 version of the Climate Policy Tracker gave Bulgaria a rating of F and developments over the last year did not see a general improvement. The stability of the policy support for renewables remains a point of attention. A new act for renewables was adopted in April, but contained significant last minute changes to the advantage of biomass and disadvantage of solar photovoltaics (PV) and wind. Plans for new nuclear power might decrease attention on energy efficiency and renewables. Bulgaria abandoned the obligatory share of biofuels in transport, increasing diesel fuel use. A new forestry act was adopted that should better promote afforestation of Bulgaria's national forests.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- An integrated long-term climate policy strategy beyond 2020 is necessary to provide clear direction for Bulgaria. Examples are the UK and Ireland.
- In industry, there are no policies to promote energy efficiency or the use of renewables. Many such exemplary policies are to be found throughout Europe.
- Now that a feed-in premium for the support of renewable energy projects is agreed, the licenses for renewable energy projects should be granted to stop the 'silent moratorium'.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G ⇔ • Bulgaria's energy strategy till 2020 was adopted in June 2011 with a focus on nuclear power, local coal electricity generation and energy efficiency.
ELECTRICITY SUPPLY	F ⇔ • New Feed-in tariff introduced April 2011. Tariffs kept at the same level, but for shorter period for PV and wind, and increased for electricity from biomass.	G *No recent policy developments.*	G ↓ • Stability of support remains uncertain: silent moratorium on new renewable investments continues, run time in new support system was adjusted. • Bulgaria focuses on nuclear power plants in its 2020 strategy.
INDUSTRY	E *No recent policy developments.*	E *No recent policy developments.*	G *No recent policy developments.*
BUILDINGS	F ⇔ • Expected legislation to overcome main barrier on the lack of organisation among home owners did not come into place.	E ↑ • Europen Performance of Buildings Directive and Ecodesign Directive were transposed and adopted in April 2011.	G *No recent policy developments.*
AGRICULTURE TRANSPORT	E ↓ • The obligatory biofuel component in all transport fuels is cancelled.	G *No recent policy developments.*	G *No recent policy developments.*
			E *No recent policy developments.*
FORESTRY			F ↑ • A new Forestry Law came in place banning constructions in national forests and introducing the concept of ecosystem services.

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The main finding of last year's analysis was that Bulgaria has sought to implement policies, i.e. supporting renewables in electricity production. However, it still has a long way to go to develop into a low-carbon economy. A relative success story is the establishment of a certification system for buildings, thus implementing the European Energy Performance Building Directive (EPBD). This performance rating will be mandatory for public buildings. In the private sector, new buildings and ones that are modernised or restructured will need a certificate. But still, much work remains to be done, especially in the residential sector. The largest barrier here is the lack of organisation among home owners.

Policy developments in the last 12 months

No elections took place in Bulgaria during the scope of this study. The last parliamentary elections that led to a new government were in 2009. Around October 2011 the municipal and presidential elections took place.

In April 2011 Bulgaria adopted a new Renewable Energy Act. The law follows a 'silent moratorium' on all renewable energy projects under development since June 2010. Although no moratorium was officially imposed, no renewable projects were licensed during the period. When the Act was adopted in April, it contained substantial last minute changes, compared to the earlier version. The feed-in tariff periods for solar PV and geothermal energy were reduced from 25 to 20 years and for wind and hydro from 15 to 12 years. On the other hand, energy production from biomass will now be compensated with a feed-in tariff for 20 years instead of 12. The law does not yet specify how the licensing procedures for small scale renewables, such as roof-top photovoltaics (PV), are simplified, as is required by Directive.

In March 2011, Bulgaria adopted a new Forestry Act. The act reflects some significant changes, such as the ban on construction work in national forest and it introduces the concept of ecosystem services;
The Bulgarian energy strategy up to 2020 was adopted by the government in June 2011 as part of the National Reform Programmes required by the EU. The strategy does not contain new legislation. It does however put an emphasis on nuclear power, with plans: to increase capacity by 2 GW and to increase Bulgaria's system capacity to 11 GW. New policies in energy efficiency and renewable energy could therefore be hampered by the focus on nuclear power production. The strategy identifies coal mining as the continuing basis of electricity production in Bulgaria and connects this with plans to build new carbon capture and storage (CCS).

The Bulgarian government has also put forward a draft law on CCS. It is likely that the law will be adopted in the near future, in an attempt to avoid an EU fine for late transposition of the 2009 CCS Directive. The deadline for transposition was the 25 June 2011.

In August 2011 Bulgaria launched a national investment plan which calls for the 'Application for distribution of free emission allowances for 2013–2020'. This relates to the exceptional case of certain coal-dependent Eastern European countries which continue to receive free EU emissions trading scheme (ETS) allowances beyond the scheduled deadline for full auctioning of allowances.

Economic measures were discussed and planned during the first quarter of 2010 when the economic crisis was severely hitting the labour market and when it also became clear that the national expenditures would exceed the budget. The cuts predominantly included measures to decrease the size of the public sector, but not affecting the already small departments of environment and water. Privatisation of the District Heating Company of Sofia (51% immediate privatisation and full sell off after a few years) and the use of emission trading revenues for the national budget are the most direct implications relating to energy and climate change.

As an indirect effect of budget cuts, Bulgaria removed the obligatory biofuel component from all diesel fuels in contradiction with the EU legislation that requires obligatory biofuel inclusion in all liquid fuels. The quota was cancelled as it was perceived to further increase already high fuel prices. With the removal of the biofuels component, the share of diesel fuel increased by 4%.

Sectors in detail

GENERAL

An integrated long-term climate policy strategy is necessary to provide clear direction for Bulgaria, **but the timeframe of the energy strategy adopted in June 2011 only runs until 2020.**

Policies covering all relevant sectors need to be developed and implemented to a much higher degree. Clear responsibilities are needed for the state authorities in monitoring policy implementation.

In September 2011 Bulgaria is due to adopt second national plan on energy efficiency. The government is also preparing a third National Action Plan, which is due to be finalised in Spring 2012.

ELECTRICITY SUPPLY

Renewables	Bulgaria passed ambitious renewable energy legislation in 2008 and attracted a lot of potential investors applying for support (PV: 1.6 GWp). Unfortunately, the strategy for reaching the EU renewable energy targets has not been well structured. This resulted in a (temporary) suspension of the policy until the implications for the public budget are brought to light. Additionally, the national grid operator continued to control (and thus to limit) grid access of renewable electricity projects. **In April 2011 a new renewable energy act came into force. It fixes the feed-in-tariffs for green electricity producers for a number of years – 20 years for PV, biomass and geothermal and 12 for wind, hydro and other sources.**
Energy efficiency	There are few policy mechanisms in place that allow a small cogeneration plant based on renewable energy to sell into district heating where available. Even though some support exists, it is unlikely that it will lead to a 5% share. Through the Energy Act independent producers of heat energy could sell to district heating networks. There is only one such producer connected so far – the rendering of Alexandrovska Hospital, Sofia, Bulgaria.
Overarching	No additional measures, such as a carbon tax or CCS projects are being considered. **In August 2011, the Bulgarian government introduced a draft carbon and capture (CCS) law to transpose the European Directive on CCS.** **Biomass could receive a boost with the new renewable energy act**

INDUSTRY

Renewables	No policy for integration of renewable energy in industry.
Energy efficiency	Voluntary agreements on efficiency in industry. However, for the most part they were not transposed.
Overarching	Energy efficiency is focusing predominantly on European funding and "market mechanisms" without indicating what these could look like. **Possible funding through the Green Investment scheme but Bulgaria is becoming late with this mechanism and the rules are still not defined.**

BUILDINGS

Renewables	The government is working on legislation to stimulate renewable energy in buildings. **The new renewable energy act sets minimum requirements for renewable energy in all new and refurbished buildings at 15% for energy used for heating and cooling. It is unclear how this will be implemented, monitored and controlled.**
Energy efficiency	**The new EPBD 2010/31/EU and new Ecodesign directive 2009/125/EU were transposed and adopted in April 2011.**
Overarching	In Bulgaria, a certification system for energy efficient buildings has been implemented. The system is used mainly for new buildings and for ones that are modernised or reconstructed. For public buildings, certification is mandatory. **Tax relief is awarded to all refurbished buildings that have been successfully audited in line with the national energy efficiency requirements**.

TRANSPORT

Renewables	Blending of 4% bio-diesel with conventional diesel has been obligatory in Bulgaria since March 2010. Nonetheless, this does not apply for blending ethanol into petrol. The target is lower than EU requirements. **In April 2011 the Government announced that biofuel blending was to be stopped because of the high fuel prices. This follows a series of protests because of the high-fuel prices.**
Energy efficiency	No policies on the promotion of vehicle efficiency could be found.
Overarching	Bulgaria has an eco-tax for the import of second-hand cars from Western Europe. This import tax is controversial and opposed by the sellers of old vehicles. However, it is too low in order to have serious impact on the number of imported old cars. To increase the number old cars with catalytic converters, Bulgaria introduced a 50% road tax rebate. Some free parking for electric cars is considered in downtown Sofia as of 2012 but the project for the local legislation is not in place yet.

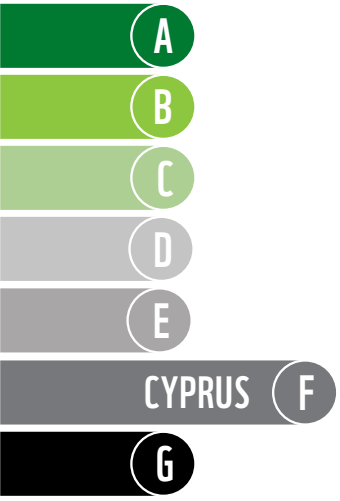
AGRICULTURE

Between 2000 and 2008, greenhouse gas emissions from agriculture decreased by almost 10%. As there is no integrated agricultural land development strategy in place, this effect cannot result from any sectoral policy. Two likely reasons are: a) economic difficulties in the agricultural sector in the post-socialist restructuring of the economy and b) further restructuring challenges since joining the EU.

FORESTRY

Bulgaria does not have a consistent land-use strategy in place. There is a short-term forestry development strategy, but this has not been implemented and is not mandatory yet.

A new Forestry law came into force in March 2011 reflecting some significant changes such as a ban on construction works in the national forests and the introduction of ecosystem services as a concept.



CYPRUS

Overall assessment

The 2010 version of the Climate Policy Tracker gave Cyprus a rating of F. In the last year, some progress in renewable energy installation was observed, but at the same time, the plans for an additional 100 megawatts (MW) of wind energy were not approved. Cyprus did not see much development towards a greener economy. It is currently developing a strategy to be in line with the EU 2050 roadmap, but no details are publicly available yet.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- A consistent climate strategy for the period after 2020 has not been developed and thus, the path to a low-carbon economy in Cyprus is not paved yet. See for example Denmark, UK and Ireland.
- Policies to promote energy efficiency in the transport sector are not substantial. As an example, (see Luxembourg), a bonus system for the purchase of efficient new cars, according to the CO2 emissions of the vehicle could be applied.
- More support instruments for renewable energy and efficiency measures in smaller industries, which predominate in Cyprus, are needed. This should include financial support instruments as well as the provision of information and technical assistance.

CYPRUS F

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G • Strategy for 2050 under development.
ELECTRICITY SUPPLY	E • Cancelled plan for 100MW additional wind.	E *No recent policy developments.*	F *No recent policy developments.*
INDUSTRY	F *No recent policy developments.*	E *No recent policy developments.*	G *No recent policy developments.*
BUILDINGS	D *No recent policy developments.*	G • Energy Performance certificate introduced • New buildings have to pre-install infrastructure necessary for renewable electricity production.	G • Doubling of energy tax for consumers to fund renewable energy.
TRANSPORT	F • The obligatory biofuel component in all transport fuels is cancelled.	E • Subsidy system removed, low implementation for new system.	F *No recent policy developments.*
AGRICULTURE			E *No recent policy developments.*
FORESTRY			C *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 analysis found that in Cyprus support exists in the energy and buildings sector, but it is not sufficient. The industry and transport sectors need to be addressed further so that the transformation to a low-carbon economy can take place. The current policy framework, including a feed-in tariff for renewable electricity, runs from 2009-2013 and targets a 9% share for renewable energy in electricity generation by 2013. A new framework, submitted to the European Commission in 2010, covering the period from 2013-2020 raises the target to 13% of renewable electricity in total electricity production. The Energy efficiency target for 2010 was achieved (the main contribution came from the residential sector) and according to the calculations it is expected that the target set for 2016 will be also achieved.

Policy developments in the last 12 months

Elections took place in May 2011 but as all major parties agreed on the plans towards green energy, no basic differences in this field resulted from these elections.

No plans concerning a "new green deal" were published. The National Renewable Energy Action Plan was the main policy development. Further, discussions are initiated for the creation of a national strategy in line with the EU 2050 Roadmap.

No specific economic recovery plans were published and also no specific budget cuts were announced in 2010.

In Cyprus a special "Energy Fund" for the promotion of the use of renewable energy and energy efficiency was created in 2003 by imposing an energy tax of 0.022 €ct/kWh on electricity consumption. This fund is used for subsidising the difference between the feed-in tariff and the current market price for electricity. In 2010, this energy tax was doubled to 0.044 €ct/kWh in order to increase the respective incomes.

No plans to stimulate green economy were included in the government plans of the last year.

In 2010, Cyprus reached agreement with most of its neighbouring countries for the exploration of possible natural gas fields in its maritime economic zone. This development supports the trend towards the increased share of natural gas in electricity generation, which will have positive effects on the reduction of emissions by the sector, but could also create less favourable conditions for the development of renewable electricity generation. In addition, Cyprus is one of the seven EU Member States that have still not implemented the 2008 directive on the inclusion of the aviation sector in the EU's emissions trading scheme (ETS).

In July 2011 an explosion at a naval base on the island created major damage to its main power plant, triggering daily blackouts that have severely affected the financial and tourism sectors on the island. The economic damage resulting from the blast is estimated as being in the range of €1bn-€3bn or as much as 20% of gross domestic product. This development is expected to have a major impact on the future economic situation of the country and subsequently on policies targeting a low-carbon economy.

Sectors in detail

GENERAL

A consistent climate strategy for the period after 2020 has not been developed and thus, the path to a low-carbon economy in Cyprus is not paved yet. **Currently, a strategy is under development in line with the EU 2050 Roadmap. Details of this strategy are not yet public.**

Support does exist in the energy and buildings sector, but is not sufficient. The industry and transport sectors need to be addressed further so that the transformation to a low-carbon economy can take place. The energy efficiency target for 2010 was achieved.

ELECTRICITY SUPPLY

Renewables	A feed-in tariff supports the generation of electricity from solar photovoltaics (PV), wind and biomass. In addition, investment grants are available for renewable electricity projects. The current aim for 2013 is to reach 9% of renewable electricity; a new framework with the target of 13% by 2020 was submitted to the European Commission in 2010. **In 2010, progress in renewable energy installation in Cyprus was observed, with installations and applications highly increased. However, the plans for the construction of 100MW of additional wind capacity to the 165MW foreseen within the Feed-in tariff (FIT) were not approved although power purchase agreements (PPAs) for the whole capacity were already approved. However, a total of 83MW wind capacity is expected to be constructed by the end of 2011. The PV installed capacity reached 6.3MW while the total volume of applications received was 22MW and additionally PPAs for 25MW CSP were approved.** The use of oil for electricity production is financially penalised in order to create a shift towards natural gas as a conventional fuel.
Energy efficiency	CHP is supported under the same system as renewable energies but in the past, the CHP share of electricity has not increased.
Overarching	A penalty on oil-use in electricity generation applies in order to create a shift towards natural gas.

INDUSTRY

Renewables	Small industry is predominant in Cyprus. Enterprises benefit from a fund to support renewable electricity production and other renewable technologies for heating and cooling. However, this funding mechanism is not sufficient to boost the development of renewables in industry.
Energy efficiency	Energy efficiency measures can access a fund established in 2004. Energy intensity in industry has significantly decreased, dropping 22% from 2000 to 2006.
Overarching	A maximum demand tariff is applied to industrial consumers with a high load.

BUILDINGS

Renewables	Renewable energies for heating and cooling are successfully supported in Cyprus: from 1990 to 2005 their use has increased by 16%.
Energy efficiency	The implementation of the Energy Performance in Buildings Directive (EPBD) started in 2009, but no trajectory to zero energy buildings or any other measures to substantially reduce buildings' energy consumption are in place. **In 2010 the Energy Performance Certificate was made mandatory for new buildings and buildings that are sold or rented. The energy performance requirements were strengthened and new buildings are required to have a B energy rating, to comply with an average U-value and to pre-install the infrastructure necessary for renewable electricity production. For all new residential buildings it is also mandatory to install a solar thermal system for the production of hot water.**
Overarching	There are discussions about a support policy for efficient governmental buildings to set good examples, but nothing has been decided or implemented yet. **The Ministry of Commerce, Industry and Tourism and the government owned land development company are cooperating in order to build the first nearly zero energy residences in Cyprus, but there are no such buildings implemented yet.**

TRANSPORT

Renewables	Currently, the quota for biofuels is at 2%, which is far below the necessary share to reach a low-carbon transport sector. Due to problems with the high volatility of bioethanol in high temperatures, only the replacement of diesel with biodiesel is applied. According to the national plan, this percentage will be increased to 2.4%. Renewable electricity for electric mobility is not considered in transport policies in Cyprus.
Energy efficiency	**The direct subsidies used as the main support instruments for renewable transport were replaced in 2010 by a new system of incentives for replacement of old vehicles with new, energy efficient ones. However, the volume of the programme is small and has had very limited implementation.**
Overarching	No strategies or policies exist in other areas of transport such as modal shift or investment in low-carbon transport infrastructure. From 2000 to 2008, per capita emissions from transport have increased by 33%. **In the aviation sector, Cyprus is one of the seven member states that have still not implemented the 2008 directive on the inclusion of the aviation sector in the EU's emissions trading scheme (ETS).**

AGRICULTURE

The agricultural sector is addressed by several policies: for vulnerable zones, a limit of 170 kg nitrate per hectare is in place, other areas are covered by recommendations for nitrate loads, but these are not binding.

Methane emissions from manure are supposed to decrease through the use of processing units with biogas electricity generation; further units are planned but not built yet.

A consistent land use strategy does not exist for all land; only new land use is targeted by the current strategy.

FORESTRY

Forest management and avoiding deforestation is a priority in Cyprus and the respective plans are implemented by the Department of Forests of the Ministry of Agriculture, Natural Resources and Environment. However, no land use plan including forests exists.

CZECH REPUBLIC

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave the Czech Republic a rating of E. Since then, no major changes have taken place; some minor changes have improved the overall situation (e.g. extension of budget available for energy efficiency projects in industry; speeding-up process for the green savings programme). But at the same time, the support for photovoltaics (PV) was cut to about half the feed-in tariff of 2010 and a tax on such electricity was introduced.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- In general, the relevant Czech policies lack the ambition needed to really move the economy towards a low-carbon future. An overall strategy and target for the country is under development, and it could consider building on the experience gained in the UK and Ireland.
- Industry policies are rather weak. Voluntary agreements have been pending for a long time, but have not yet been implemented. Good practice examples of voluntary agreements are found in Denmark, Sweden and the Netherlands.
- The transport sector seems to be neglected in the energy and climate policies, especially freight transport. The sector strategy that is under development should further enhance policies to promote vehicle efficiency, the support for electric vehicles using renewables and a modal shift.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G ⇔ • New climate change policy to be published before end of 2011 • New air pollution act approved in July 2011.
ELECTRICITY SUPPLY	D ↓ • Tax of 26% on electricity from PV plants built in 2009 and 2010 • The feed-in tariff for PV was about halved in 2011 compared to 2010.	E *No recent policy developments.*	F *No recent policy developments.*
INDUSTRY	E *No recent policy developments.*	G ↑ • Extended budget for energy efficiency projects.	F *No recent policy developments.*
BUILDINGS	C *No recent policy developments.*	F *No recent policy developments.*	G ⇔ • Plan to speed up the process of "green savings programme".
TRANSPORT	G *No recent policy developments.*	F *No recent policy developments.*	F ⇔ • "super strategy – green paper" on transport structure development until 2025 approved by ministry, yet to be evaluated by Government.
AGRICULTURE			D *No recent policy developments.*
FORESTRY			F ↑ • Concept for forest management from 2012 onwards.

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 analysis showed that the Czech Republic has not yet defined either a long-term target to reduce its emissions or a strategy to develop into a low-carbon economy. However, support programmes for renewables in electricity production and buildings are in place. The agricultural and forestry sectors are also targeted. In contrast, the important industrial sector is not appropriately targeted by policies to reduce emissions and move towards a low-carbon economy.

- The Czech Republic has relatively good support systems and programmes for renewables in all sectors. However, in the electricity sector, the support is not planned and guaranteed for the long-term.
- A combined building sector support for renewable energies and energy efficiency exists.

Policy developments in the last 12 months

The last elections in the Czech Republic took place in May 2010 and saw a centre-right coalition take the place of the formerly elected socialists.

In their coalition agreement and Policy Statement from August 2010, air pollution and energy efficiency are mentioned as environmental priorities. In March 2011, the 'Government Council for energy and raw materials strategy of the Czech republic', was established. Its aim is to serve as a permanent body to support the government's development of a national strategy for these fields.

Currently the main strategic document for the Czech Republic relating to climate change is the National Programme to Abate the Climate Change Impacts in the Czech Republic from 2004. A new climate change policy is under preparation and should be published before the end of 2011.

The Czech government is currently working on an update of the sustainable development strategy. A framework document on this topic, meant to facilitate decisions in the national and international context, was approved in January 2010.

At the beginning of 2009, the old government had introduced an economic stimulus package.

For the 2011 budget, the state budget will be cut "across-the-board" and will decrease expenditure for ministerial operations, other state institutions, and investment. The plan is to achieve a balanced budget by 2016. With the 2011 budget, the government wishes to limit the state deficit to 4.6% of GDP instead of about 6.7% of GDP. The government said that for 2011, they had to focus on fast cuts, but for 2012, real reforms of state budget will take place.

However, in March 2011, the Czech constitutional court abolished parts of the laws necessary for such budget cuts. The government could still pass the laws, but it could take several months.

Explicitly mentioned are expenditures regarding transportation infrastructure, which should decrease.

Tax exemptions for photovoltaics (PV) and other 'green' power plants were ended for 2011. In December 2010, the government adopted a law imposing a tax of 26% on electricity generated in PV plants installed in 2009 and 2010.

CEZ, the Czech energy group, will decide in 2013 whether to extend the nuclear power plant in Temelin. The decision to extend this plant has strong political backing, as none of the parties currently in the parliament are opposed to nuclear energy. The government has agreed to support "renewable and nuclear energy" so as to decrease energy dependency and CO2 emissions.

Sectors in detail

GENERAL

The country has not yet defined both a long-term target to reduce its emissions and a strategy to develop into a low-carbon economy. However, support programmes for renewables in electricity production and buildings are in place. The agricultural and forestry sector are also targeted. In contrast, the important industrial sector is not targeted appropriately. The Czech Republic has relatively good support systems and programmes for renewables in all sectors. However, in the electricity sector, the support is not planned and guaranteed for the long-term. Although an energy tax does exist, it is set at a very low level and therefore does not give sufficient incentive to reduce energy use.

In general, the relevant Czech policies lack the ambition to really transform the economy towards a low-carbon future. An overall strategy (the National Programme to Abate the Climate Change Impacts of the Czech Republic) was published in 2004 but never updated. **Currently, a new climate change policy is under preparation and to be published in 2011.**

In July 2011, the Government has approved the new Air Protection Act, which focuses on air polluters, increasing the effectiveness of the charges for air pollution, reducing bureaucracy and allowing municipalities to define "low emission zones" in their territories.

The Governmental Council for energy and raw materials strategy of the Czech Republic was established in March 2011 as a permanent advisory body to the Government on energy and raw-material policy; its first meeting took place on 1 June and focused on the impact of the German decision to step out of nuclear energy and on the need to educate new energy experts in the Czech Republic.

ELECTRICITY SUPPLY

Renewables	**A national action plan for renewable energy was published in July 2010 and approved by the Decision of 25/08/2010, presenting targets for 2020; following this action plan, a review of the renewable energy installations validation process is currently on-going.** A feed-in tariff and green bonuses are in place in the Czech Republic to support the use of renewable energy in electricity generation. The tariff level depends on the technology used. The instrument provides a good legal framework, but long-term reliability has been affected by political decisions. Recently, PV support was lowered as it was decided that the national renewable energy target could be reached with less effort. **At the end of 2010, the feed-in tariff (FIT) for PV was lowered substantially for 2011, now only being roughly half of what the 2010 tariffs were. In addition, a tax of 26% on the electricity generated from PV plants installed in 2009 / 2010 was introduced. This increases the instability of the support framework.** **Additional constraints relating to renewable energy are currently being discussed by the government, in the form of an obligation to equip all installations of 100 kW or more with an automatic dispatch control which would mean renewable energy production could be automatically curtailed.** In theory, renewable installations are preferably connected to the grid while the congestion management is non-discriminatory. However, currently, applications for grid connection are being denied as new renewable capacity is exceeding the available grid capacity. The transmission system situation will continue to present a large barrier as planned investments into the infrastructure are insufficient. **In March 2010, the Czech Ministry of Environment issued guidance on the development of PV, wind, biomass and biogas projects, as well as a whole new online information resource describing technical aspects of renewable energy technologies (biomass, wind, biofuels, PV, solar thermal, small hydro, geothermal, biogas).**
Energy efficiency	Combined heat and power production (CHP) is supported through a feed-in tariff. Biomass and biogas CHP units are additionally supported by financial aid from a state fund.
Overarching	The level of energy tax for power production fuels is relatively low and there is no CO2 tax in place. The subsidy for coal mining has significantly decreased since 1990 and currently, no such subsidy for mines in operation exists. However, state aid is provided for environmental liabilities related to mines that are no longer in operation, which constitutes an indirect subsidy. R&D about carbon capture and storage (CCS) for fossil fuel plants is supported financially in one research project while there is no explicit support for biomass CHP. There is significant political support for new nuclear power stations and currently, an environmental impact assessment is being carried out for two additional blocks of the Temelin nuclear plant. The preparation of nuclear waste disposal sites is also actively supported by the state.

INDUSTRY

Renewables	The use of renewables in industry is almost neglected in the Czech Republic. R&D for demonstration or pilot projects in the industry is supported through the Ministry of Industry. However, in 2009, only 2 out of about 500 projects included renewables. There is some minor support through a state programme which covers part of the structural and investment costs, but this is not sufficient to lead to a low-carbon industry.
Energy efficiency	Energy efficiency in industry is also poorly targeted. Voluntary agreements are planned in the future and a joint declaration of the Ministry of Environment and the largest Czech utility has yet to be ratified, although it has been pending for a long time. **The national program EFEKT providing support to energy efficiency projects (energy-efficient lighting, use of landfill gas and waste energy, new small hydro, advice on how to save energy costs) has been extended once more for 2011 by the Ministry of Industry and Trade with a budget of €1.2m.**
Overarching	The redesign of products for a future low-carbon economy is not subject to any support, nor is CCS for biomass or process emissions.

BUILDINGS

Renewables	The support for renewables in heating and cooling is rather successful: from 1990 to 2005, the share of renewables used for thermal applications increased by 18%. The support comes from a Green Investment Scheme. Enterprises, public buildings and households are all targeted by special financial support programmes. The landlord-tenant conflict regarding the inclusion of retrofitting costs in rents is not addressed in the Czech Republic. A high share of the current building stock is owned by municipalities and the respective tenancy agreements do not reflect the issue. Gradually, a higher share of flats is expected to be offered on the private market. The chance of addressing the landlord-tenant problem at an early stage should be used.
Energy efficiency	New buildings in the Czech Republic are subject to efficiency standards set at a low-energy level from 2012 onwards and at a passive house level from 2020 on. There is no trajectory set towards zero energy buildings. However, the eligibility standards for the support programmes for renewable energies and energy efficiency in buildings are stricter than the general building codes. While in the past, building standards were poorly enforced, this has improved significantly in recent years. Public support programmes are linked to compliance with standards, or at even more ambitious levels. Financial support has to be reimbursed if the required standards are not fulfilled. For existing buildings, minor support exists for retrofitting. The current programme is not sufficient to promote high retrofit rates. The Ecodesign Directive has been transposed into Czech legislation in 2000. There are no plans to promote efficiency beyond the EU requirements. Some public procurement guidelines regarding energy efficient and environmentally-friendly appliances exist, but their implementation depends on the specific institution (e.g. ministries, municipalities) and their internal rules of procedure.
Overarching	The level of taxes for energy (electricity and natural gas) used in buildings is very low. There are discussions about a carbon tax and such a tax is planned to align with the implementation of future EU-directives. However, these instruments are still under discussion. **The Green Savings Programme (Zelena Usporam), focusing on support for heating installations using renewable energy sources and on investment in energy savings in buildings, is on-going, and the Minister for the Environment decided to speed-up the process for the more than 40,000 households waiting to modernise their homes via this programme. Around 19,000 households have benefited from the initiative since 2009.**

TRANSPORT

Renewables	The aim of the Czech Government is to reach a plateau of transport-related CO2 emissions in 2010, and to achieve a decrease of 5% by 2013. However, there are no national plans for electric mobility, neither in combination with renewables nor with conventional electricity. The biggest state energy company is planning a pilot project with electric vehicles. There is no ambition to move beyond the EU biofuels target.
Energy efficiency	The Czech transport sector, similarly to its industrial sector, is rather neglected when it comes to policies and measures to move it towards a low-carbon future. Regarding CO2 emissions for new passenger cars, there is no ambition to surpass the EU target. Freight vehicle emissions, too, are not targeted by reduction measures.
Overarching	Policies for modal shift and avoiding transport exist, but not beyond a horizon of 2013. The targets lack sufficient financial backing and are therefore likely to be missed. **In January 2011, the Ministry of Transport approved the so-called "Superstrategie – green paper": this document presents a first version of the plans for the transport structure development by 2025, which is now to be validated by the Government.**

AGRICULTURE

There is no single land use strategy, but rather diverse aspects are covered in several strategies, such as brownfield renewal strategies or in urban planning. These strategies, which were developed separately, show inconsistency.

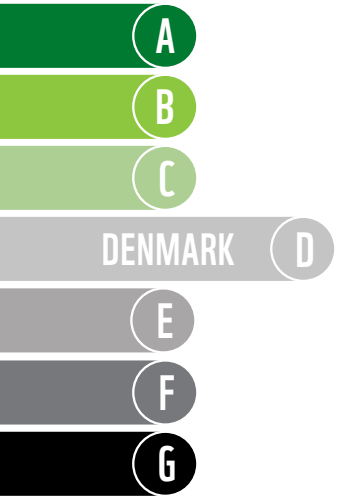
Nitrogen load in agriculture is addressed though limits for different types of crops and landscapes. The level varies between 70 and 260 kg/ha. In some cases, the limit is 0. Around 50% of the agricultural area is subject to these limits. Improved feedstock and manure management is expected to reduce methane emissions by 20%.

FORESTRY

A national Forest Plan is implemented through individual forest management plans set within a timeframe that runs up to 2013. The long-term strategy will only be updated in 2013.

Deforestation is not permitted; clear cuts have to be reforested within two years. This is valid for all forests and country areas and non-compliance is punished.

In February 2011, the Ministry of Agriculture published a Decision and concept document relating to the Czech economic policy for the management of forests from 2012.



DENMARK

Overall assessment

The 2010 Climate Policy Tracker gave Denmark a rating of D. Implemented climate and energy policies did not see significant changes over the last year; however the government published a strategy on how Denmark can become independent of fossil fuels by 2050. The strategy contains specific recommendations and details the financial impact. The strategy has not yet been negotiated in the Danish Parliament and has therefore not resulted in new legally agreed targets, policies or measures.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Denmark's long history of policies promoting renewable energy and energy savings has led to its current comparatively high share of renewable electricity production. Denmark is one of the European countries which is best-placed to make the switch to 100% renewable energy and become independent from fossil fuels. Denmark can show further leadership in Europe by bringing forward its target to become free from fossil fuels from 2050 to, for example, 2040.
- The Danish target of independence from fossil fuels needs to be strengthened by making it legally binding, linking it to interim carbon budgets and strategies, and putting concrete policies in place to reach the target. See for example the UK.
- Danish policy has for decades favoured private car use and the focus on low-carbon transport has been low. Introduction of measures such as road pricing, congestion charges or a city toll, as well as an action and investment plan promoting the use of electric vehicles, are for example recommended. Good examples to promote energy efficiency of cars can be found for example in France.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F ↑ • February 2011 the government published its proposal for an Energy Strategy for 2050 to be independent from coal, oil and gas by 2050.
ELECTRICITY SUPPLY	B *No recent policy developments.*	E *No recent policy developments.*	D *No recent policy developments.*
INDUSTRY	G *No recent policy developments.*	D *No recent policy developments.*	E *No recent policy developments.*
BUILDINGS	C *No recent policy developments.*	E *No recent policy developments.*	D *No recent policy developments.*
TRANSPORT	F *No recent policy developments.*	D *No recent policy developments.*	E *No recent policy developments.*
AGRICULTURE			C *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- ↑ Positive policy developments since last year's situation
- ↓ Negative policy developments since last year's situation
- ↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

In 2010 Denmark did not have a long-term greenhouse gas target. A long history of diversified support for renewables has led to the current comparatively high share of renewable electricity production. Danish climate policy was especially weak in relation to the transport sector. Energy efficiency in buildings was another area where much more action was needed. Highlights of the Danish policy package are:

- Denmark has a diversified support system for renewables and has been very successful in integrating a high share of renewable sources, especially wind, into its grid.
- Denmark has an advanced and highly decentralised electricity system, where 20% of all electricity generated comes from wind turbines.
- Denmark produces no nuclear energy. In 1985 the parliament decided against producing nuclear energy in Denmark.

Policy developments in the last 12 months

A liberal-conservative government has been in place from 2001 to 2011. Parliamentary elections were held in September 2011. The past year saw little change in the energy and climate policy package.

The main policy development took place in February 2011 when the government published its proposal for an Energy Strategy for 2050. The proposal builds on the recommendations made in September 2010 by the Danish Commission of Climate but is an energy strategy rather than a climate strategy.

The goal of the Danish government is to achieve independence from coal, oil and gas by 2050, but the proposed measures focus on the period until 2020. By 2020, the strategy aims to reduce the use of fossil fuels in the energy sector by 37%, compared with 2009; increase the share of renewable energy to 33% and reduce primary energy consumption by 9%, compared with 2006.

The past year saw little change in the energy and climate policy package. The economic recovery plans published by the government included cuts in public investment, a halting of automatic adjustments to pensions and suspension of some planned tax reforms. Energy and climate policies were not affected by these plans.

Sectors in detail

GENERAL

In September 2010, the Danish Climate Commission published their recommendations on how Denmark could be completely independent of fossil fuels - with wind (to provide 80% of electricity by 2050) and biomass as the dominant fossil fuel substitutes combined with heat pumps, electric cars and smart grids. The recommendations also included a target of reducing greenhouse gases by 80%-95% compared with 1990. In February 2011, the Danish Government reinforced the long-term goal to phase out fossil fuels with the release of the proposal for an 'Energy Strategy 2050'. This proposal aims to reduce fossil fuel use in the heat and power sectors by a third in 2020 (compared to 2009) and to promote renewables in addition to those included in Denmark's EU renewable energy action plan It also announces a more ambitious energy savings for 2020 (6% compared with 4% previously), and a 50% energy efficiency obligation for energy companies to be met by 2013, and a 75% target for 2017-20.

The government is working for an EU commitment to reduce overall emissions of greenhouse gases by 30% by 2020 relative to the 1990 level but Denmark is yet to set its own long-term greenhouse gas target for 2050. Nor has Denmark set a national 2020 emission reduction target or proposed measures in the Energy Strategy 2050 in line with the 30% EU target. A long history of diversified support for renewables has led to the current comparatively high share of renewable electricity production. Danish climate policy is especially weak in relation to the transport sector. Energy efficiency in buildings is another area where much more action is needed.

Denmark's Climate Policy Tracker rating benefits from the fact that Denmark launched an active Energy Efficiency Policy immediately after the oil crises of the 1970s. It resulted in a shift towards gas, expansion of combined heat and power (CHP), development and expansion of wind energy and biomass use. Policies included a broad range of instruments, in particular economic tools. A change of government in 2001 meant a break with the active Climate and Energy Efficiency Policy and the introduction of a policy without national targets and which planned to meet Kyoto-obligations by heavily relying on the purchase of credits. The result has been that the trend of decreasing Danish greenhouse gas emissions stopped after 2004 and did not fall again until the economic recession in 2009. More recently, there have been signs of a return to a more active climate and energy policy.

ELECTRICITY SUPPLY

Renewables

Denmark has high levels of renewable electricity generation installed, especially wind. Support is in place through price premiums and tenders for offshore wind power. Support levels are subject to regular review, but for each individual installation the conditions at the moment of grid connection apply and stay constant over time.

Support is given to different types of installations, except large hydro (>10MW), very small home photovoltaics (PV) systems (<6kW) and geothermal power production.

Especially for biogas, the Danish guaranteed price of 0.76 DKK/kWh is considered too low to secure investment. Furthermore, a lack of clarity regarding the potential for future sales of biogas through the natural gas network hampers growth in this area. **The Energy Strategy 2050 plans to increase the use of biogas by subsidising biogas production and ending the use of coal.** The transmission grid operator Energinet.dk provides some additional subsidies to small installations and loan guarantees to research opportunities for local wind power generation.

Denmark has an objective to double the share of renewable energy, so that it accounts for at least 30% of energy consumption by 2020 (extended final energy consumption) and 20% by 2011 (gross energy consumption) compared to 15% in 2007. These targets are derived from the EU Renewable Electricity Supply target of 20% renewable electricity supply by 2020. Denmark has agreed to a 30% renewable energy objective as part of the 'burden sharing' arrangement agreed under this target. The 20% renewable energy target by 2011 was established by the Parliament as a result of an energy agreement between both government and opposition parties for the period 2008-2011. The long-term vision for Denmark is to be 100% independent from fossil fuels.

Denmark promotes renewable electricity through price regulation. Producers receive a variable premium on top of the market price. The sum of the premium and the market price shall not exceed a certain statutory maximum, which depends on the date of grid connection and the source of energy used. For wind energy, a fixed premium is given on top of the market price for a certain period. In some cases, plant operators are granted a guaranteed bonus and are thus not subject to a statutory maximum. Transmission grid operator Energinet.dk pays an additional subsidy to small systems for the generation of electricity, even small pilot projects are eligible.

In recent years, Denmark has experienced difficulties in finding locations for onshore wind turbines, in part due to political hesitation originating from scepticism toward wind turbines. In 2008, a compensation scheme for wind turbine neighbours was introduced, which makes the deployment of onshore wind turbines more difficult and expensive.

Denmark is introducing sustainability criteria for biomass used for the production of biofuels and bioliquids as set out in the Renewable Energy Directive; **its voluntary sustainability criteria for biomass and biofuels is in development.**

Energy efficiency	The energy efficiency of Danish power plants is relatively high with just over 37% in 2007. Implementation of combined heat and power reached a historically high level in Denmark in the late nineties and since then, approximately 80% of district heating and 50-60% of thermal electricity production originates from combined heat and power (CHP). However, the specific situation of Denmark with high and fluctuating imports of electricity from its Nordic neighbours makes it difficult to evaluate the share of CHP in total production. From year-to-year total CHP production does not vary greatly, while total electricity production can vary significantly due to market conditions in the Nordic electricity market, thus influencing the share of CHP. In addition, the increase in wind generated electricity leads to a decrease in the share of CHP. In 2008, 55% of thermal electricity production (i.e. the total production, excluding wind energy and hydropower) was generated in combination with heat, but the share is declining. In 1990, the share was 36.8%, while the figure was 17.6% in 1980. CHP is part of the municipal heat planning policy. Municipal governments assess heat demand and supply options and then introduce restrictions on electric heating and power production without heat recovery.
Overarching	Denmark has an advanced and highly decentralised electricity system, where 20% of all electricity generated comes from wind turbines. All renewable electricity has priority access to the grid and utilities are obliged to receive and pay for the electricity. In 2008 the government abolished the "coal stop", which was introduced in 1997 to put a cap on the quantity of coal being used and to ensure that new plants did not use coal. In November 2008, the Danish parliament approved an agreement on guidelines for the future expansion of the main electricity transmission grid in Denmark. According to the agreement, new and existing (overhead) 132-150 kV power lines will be installed underground. Furthermore, the political parties formally agreed to promote the intelligent management of the future electricity grid, i.e. extended use of smart meters, smart grids etc. A parliamentary decision not to produce nuclear energy in Denmark was made in 1985.

INDUSTRY

Renewables	There is funding available for research, development and demonstration projects for renewable energy, such as for biomass to bioenergy, conversion technologies and waste to energy.
Energy efficiency	Danish voluntary agreements with industry on the implementation of energy efficiency projects are supported by taxation measures. Enterprises with particularly high energy consumption can contract with the Danish Energy Authority regarding energy-efficiency improvements, in return for a discount in CO2 taxes and heating taxes. The agreements are complied with by industry, but the requirements for payback periods of up to five years are not very severe. Taxes on energy consumption have been increased from the first of January 2010.
Overarching	There are no direct subsidies for energy-intensive industry for conventional fuel supply and consumption (direct and indirect). At present, no initiatives to promote production of chemicals and materials from renewables exist. **Denmark's EU sectors that fall under the emission trading scheme (ETS) reduced emissions by 0.5% in 2010.**

BUILDINGS

Renewables	More than 50% of buildings use district heating with a high share of it coming from renewables. Renewable heat is exempt from some taxes. Biomass, being CO2 neutral, is exempt from the CO2 tax. Solar heating plants are exempt from both energy and CO2 taxes. Municipalities are obliged to set up heat plans based on feasibility studies (as determined by the Act on Heat Supply).
Energy efficiency	Building codes include standards for retrofit activities. For new buildings, the 2006 standards have been adjusted to require at least an additional 25% reduction in energy consumption in 2010 and a further 25% additional reduction by 2015 and again by 2020. This means that from 2020, new buildings must be below the level of passive houses.

Overarching	The law was changed in 2009 to address the landlord-tenant problem but results remain to be seen. Electricity use per capita in homes has been steadily decreasing since 1990, mainly due to substitution of electric heating and more efficient products. Specific energy and CO2 taxes have some influence on consumer behaviour.

TRANSPORT

Renewables	All biofuels – sustainable or not - have been exempt from the CO2 tax imposed on ordinary petrol and diesel for transport since January 2005. Since January 2010, oil companies are obliged to ensure that at least 5.75% of annual sales of fuel for land transport consist of biofuels. Electric cars are exempt from both vehicle tax and fuel consumption charges up to 2016. A research scheme for electric vehicles has been set up with a budget of around €2 million until 2012.
Energy efficiency	Denmark has high taxes on the purchase of vehicles and car ownership which favour fuel efficient vehicles. Nevertheless, both the number and weight of cars have been rising for years.
Overarching	Danish policy has for decades favoured private car use. This trend has been further enhanced under the current government. From 2002 to 2008, investment in roads increased by 66% from 3 billion DKK (~€ 4 m) to 5 billion DKK (~€ 7 m) per year (culminating in 2006 with 7 billion DKK (~€1 bn)), while investments in railways remained stable at around 1.5 billion per year.

AGRICULTURE

	In 1989, Denmark was the first country in the world to introduce a ban on straw and stubble burning in open fields. Today, Denmark is converting a total of 1.5 million tonnes of straw to energy annually. Denmark has been experimenting with the development of biogas stations, which among other things convert manure into sustainable energy and eco-friendly fertiliser. This trend is now hampered by low sales prices for biogas electricity and other barriers. The Green Growth Agreement is a government plan establishing a long-term strategy for environmental policy in the agricultural industry. Among the goals is the reduction of greenhouse gas emissions in the agricultural sector by 800,000 tonnes annually. Approximately half of these reductions are to come from a market-based restructuring of nitrogen regulation. The Agreement also includes green agriculture and food industry strategy, with the goal of 50% of livestock manure be used for green energy by 2020. Measures to facilitate the use of livestock manure include tax equalisation between vegetable biomass and livestock manure, and modification of the Waste Incineration Directive. **However, while the agreement in theory is a step in the right direction, Denmark is still not implementing the principles of the agreement and therefore its effects are limited. Land use planning approaches should be improved.**

Unlike its Scandinavian neighbours, Denmark is not a country in which forestry plays an important role within the national economy.

Instead of clear-cut systems, forest owners are invited and given small incentives to apply near-to-nature forest management regimes in the future. At the current conversion rate, 50% of state forests, which constitute 25% of the Danish forest area, are expected to be converted to near-to-nature forestry by around 2050.

Denmark has a relatively ambitious afforestation target, and forests are strongly protected from conversion to other land uses. However, actual afforestation is currently limited due to lack of designated afforestated areas as well as due to public subsidies giving insufficient incentives. Afforested areas are automatically protected as forest reserves. In particular, the Forestry Act protects the existing forest from conversion to other land use. This means that most of the forested land in Denmark will remain as forest.

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ESTONIA

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave Estonia a rating of E. Early in 2010 the subsidy levels for renewable energy were reduced. Estonia's government now wants to revise the subsidies for renewable energy producers again. However, the government of Estonia is increasing investment in the renewable energy sector, using the revenues from CO2 quotas sold, known as assigned amount units (AAU). Funds for financial support of wind farms, energy efficiency improvement of local government buildings and efficient public transport have already been allocated. Furthermore an Electric Mobility Programme has been set up. The measures undertaken can be described as a positive trend, while not yet being a significant improvement.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- An overall strategy to reduce greenhouse gas emissions covering all sectors is needed (e.g. see UK, Ireland). Except for the building, agricultural and forestry sectors, policies are not sufficient and are based on a piecemeal approach.
- Estonia does not have significant incentives for energy efficiency of new cars and has one of the lowest efficiency rates for new cars in Europe (e.g. see the innovative bonus-malus system for new cars in place in France and Austria)
- The building stock is characterised by poor insulation, high energy consumption and need for renovation. As efficiency standards in the building and energy sector are still at a low level, efficiency improvements are economically attractive. For good examples of renovation programmes, see the recent developments in Austria.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F ⇔ • "Estonia 2020" published in April 2011; energy sector: equal focus on environment, competitiveness and security of supply.
ELECTRICITY SUPPLY	F ⇔ • Reduced the level of support for renewable electricity. • Investments in wind through green investment scheme (GIS).	E *No recent policy developments.*	D *No recent policy developments.*
INDUSTRY	G *No recent policy developments.*	D *No recent policy developments.*	F *No recent policy developments.*
BUILDINGS	F *No recent policy developments.*	F ↑ • Measures have been initiated for building renovation. • GIS support for energy efficiency. • Plans to improve national building legislation.	F *No recent policy developments.*
TRANSPORT	F ↑ • Launch of the Electric Mobility Programme.	F ⇔ • Some investment in economical public transport.	F ↓ • biofuels no longer exempt from excise duty.
AGRICULTURE			E *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

Last year's analysis showed that Estonia faced several challenges due to post-socialist economic restructuring, such as the collapse of former key industries, a sudden rise in living standards for part of the population, a high amount of inward foreign investment and vulnerability to the economic crisis. Estonia focuses on the measures needed to meet EU targets and to benefit from Kyoto but is yet not aiming at more ambitious reductions. Estonian sustainability policies are specifically focused on nature protection and the avoidance of pollutants.

The highlights include:

- The agricultural sector is characterised by a good policy mix including limits for nitrogen loads. The consistent land use strategy is especially remarkable.
- Sustainable Forestry is put into practice and 30% of the forest area is already protected.

Policy developments in the last 12 months

The parliamentary elections took place in March 2011. The Reform Party, headed by the Prime Minister, Andrus Ansip, won the elections again. It is expected that the general policy of the Estonian government will remain the same as before.

Yet, there is no new climate or energy strategy since 2009. The draft National Reform Programme "Estonia 2020" which was published in April 2011 sets a focus on the development and implementation of the principles of so-called green economic growth for the next decade. For the energy sector, it calls for equal focus to be placed on environmental-friendliness, competitiveness and security of energy supply. It identifies the following preliminary targets: reducing greenhouse gas (GHG) emissions, compared to 1990 levels; increasing the share of renewables in final energy consumption to 25% by 2020; and maintaining final energy consumption at 2010 levels.

The developmental directions for the environmental-friendly energy area are to be set out in the Renewable Energy Development Plan, which is currently being prepared.

No budget cuts were announced that impact energy and climate issues. The priorities of the budget include ensuring the competitiveness of Estonia, which means that more funds will be allocated to education and investment. State budget expenditure is to increase 5% compared with 2010. In 2011, environmental protection expenditures amount to €251m, i.e. 4.2% of total budget expenditure. This represents an increase of €33.8m compared with the previous year due to the increased use of foreign aid for investment in local governments' water economy and waste handling.

In addition, Estonian government is increasing investment (under the green investment scheme - GIS) in the renewable energy sector, which will be financed from the funds received from selling CO2 quotas or so called assigned amount units (AAU). At the end of 2010, the Ministry of Economic Affairs and Communications allocated close to €22.4m under this measure for the construction of new wind farms. The GIS will result in about 27 MW wind generated installed capacity.

In March 2011 the government decided to launch the Electric Mobility Programme for Estonia with the Mitsubishi Corporation. It will be financed from the sale of emission allowances to the amount of €10m AAU. The Programme includes three parts: the Ministry of Social Affairs will take up the use of 507 Mitsubishi iMiev electric cars as samples; the Ministry of Economic Affairs and Communications will develop the grant scheme to support acquisition of electric cars; and a charging infrastructure for electric cars will be built.

Several important measures have been initiated, targeting the renovation of apartment buildings and raising general awareness of energy conservation. In 2010, a separate focus was put on energy savings in public sector buildings. Thus, a minimum of €45m (0.3% of the GDP) will be invested in public sector energy saving in 2010-2012. Further investment, under the Green Investment Scheme, will target energy efficiency improvements for local government buildings, which will lead to reduced energy consumption and reduced CO2 emissions.

In the beginning of 2010 the subsidy levels for renewable energy were reduced. However, Estonia's government wants to continue this process and to revise the current subsidies for renewable energy producers, in order to cut costs for consumers. The Ministry of Economic Affairs and Communications is preparing the amendments.

Since January 2005, biofuels used as motor or heating fuel are exempt from excise duties, but the exemption was only valid until July 2011.

The Government has some plans that could have a negative effect on renewable energy developments over the long-term. A nuclear law is being prepared which establishes a legal basis for the construction of nuclear power plants in Estonia.

Sectors in detail

GENERAL

Estonia focuses on the measures needed to meet EU targets and to benefit from Kyoto but does not target more ambitious reductions. Estonian sustainability policies are specifically focused on nature protection and the avoidance of pollutants. A plan to reform ecological taxes by 2012, which explicitly targets external costs, is included in the Development Plan of the Estonian Electricity Sector. **The progress of this reform is unclear.**

Currently the government of Estonia is increasing investment in the Green Investment Schemes (GIS) to support the renewable energy sector. It will be financed from the funds received from selling CO2 quotas or so called assigned amount units (AAUs).

No new climate or energy strategy since 2009. The national reform programme "Estonia 2020", Estonia's strategy to reach the Europe 2020 objectives, was approved in April 2011. The focus is on the development and implementation of the principles of green economic growth in the next decade. For the development of the energy sector, equal focus must be placed on the sector's environmental-friendliness, competitiveness and security of energy supply. In 2010, the emissions from sectors that fall under the emission trading scheme (ETS) increased by 40% in Estonia.

ELECTRICITY SUPPLY

Renewables	**The February 2010 amendment of the Electricity Market Act reduced the level of support for renewable electricity. Now only a premium of €53.7/MWh is available for renewable electricity.** The support is not differentiated by technology and is paid for a maximum of 12 years. However, since 2010, producers can apply for higher tariffs to cover all costs. **Under the GIS, around €22.4m were allocated for the construction of new wind farms.** **Wood and wood waste are by far the main renewable energy sources (accounting for about 97%).** Barriers exist, mainly in the integration of wind power into the electricity system.
Energy efficiency	A feed-in premium (€33.3/MWh) is applied if electricity is produced in an efficient cogeneration regime using waste, peat or oil-shale processing retort gas as a source of energy, with a capacity not exceeding 10 MW. **Currently there is no direct support scheme for heat from renewable energy sources in Estonia.**
Overarching	The ecological tax reform tries to gradually take external costs into account until full implementation in 2012. A pollution charge on fuel combustion has been implemented, but is too low to have a large impact due to lack of alternative options.

INDUSTRY

Renewables	There are no policies to promote renewable energies in the industrial sector.
Energy efficiency	There are no specific policies to increase energy efficiency in the industrial sector. However, energy efficiency is generally supported via the EU-ETS and the National Programme for Abatement of Greenhouse Gases. Several voluntary agreements exist between the Ministry of Environment and industry sectors. Many enterprises have established environmental management systems on the basis of the Environmental Impact Assessment and Environmental Management System Act.
Overarching	The share of recycled waste in total waste is approximately 10% below the EU average; but within two years it has increased by approx. 12%, reaching 45.7% in 2006. Producer liability for product waste is implemented, but apart from this no substantial policies exist to minimise waste and encourage re-use and recycling. There is an environmental charge (not sector specific) which doubled within three years. However, enterprises can be exempt from this tax if they invest in waste and pollution reduction.

BUILDINGS

Renewables	**No national and regional legislation concerning increased share of energy from renewable sources and no minimum requirements for the use of renewable energy in the building sector in Estonia have been established. There is also no accurate statistical data about the share of renewable energy in the building sector.** The share of **biomass** for heating has increased substantially since 1990. This is mainly due to greater domestic wood use for room heating and warm water, replacing electric boilers from the Soviet era when electricity prices rose.
Energy efficiency	**The building stock is characterised by poor insulation, high energy consumption and a need for renovation.** However, energy consumption for space heating and hot water has decreased since 1990. **A clear policy for saving energy in buildings is missing and there is no effective energy conservation plan. However, several important measures have been initiated, which target the renovation of apartment buildings and raising general awareness of energy conservation. In 2010, a separate priority was taken to increase energy saving in public sector buildings. Thus, a minimum of 700 million kroons (about € 45 m; 0.3% of the GDP) will be invested in public sector energy saving between 2010-2012.** **Under a Green Investment Scheme there will be investment in energy efficiency improvements to local government buildings (66 pieces of real estate), which will lead to reduced energy consumption and consequently reduced CO_2 emissions.**
Overarching	No relevant policies could be found. **There are plans to develop national building legislation and rules to establish the minimum level of energy use from renewable energy sources in buildings until 2012.**

TRANSPORT

Renewables	**The main target is to assure that 10% of transport fuels are produced on the basis of renewable energy by 2020. The share of biofuel in total consumption of petrol and diesel based on energy value was 0.6% in 2008.** **In March 2011 the government decided to launch the Electric Mobility Programme for Estonia. It will be financed from the sale of emission allowances (AAUs) to the value of €10m to the Mitsubishi Corporation. The Programme includes three parts: the Ministry of Social Affairs will take up the use of 507 Mitsubishi iMiev electric cars as samples; the Ministry of Economic Affairs and Communications will develop the grant scheme to support acquisition of electric cars; and a charging infrastructure for electric cars will be built.**
Energy efficiency	**The government of Estonia is to invest part of the revenue from the sale of emission credits into the development of public transport. The state will spend €21m on more than 100 economical new buses for public service from 2011 [8].** Estonia had the second lowest efficiency of new cars in the EU-25 in 2008.
Overarching	**Biofuels, for use as motor or heating fuel, were exempt from excise tax until July 2011; this exemption was since discontinued.** However, there is no consistent transport strategy yet in place.

AGRICULTURE

The agricultural sector is characterised by a sophisticated policy mix.

Limits for nitrogen loads exist. It is remarkable that a consistent land use strategy is implemented. The total emissions from agriculture declined by 56% from 1990–2007, although a large part of this effect was due to post-soviet transformation of the economy.

Major improvements are still possible in order to reduce methane emissions from animals and the incentives for sustainable farming could be increased.

However, it is positive that development and action plans for organic farming exist. The development plan targets an increase in the land area for organic farming from 72.8 thousand ha in 2006 to 120.0 thousand ha in 2013.

FORESTRY

Around 50% of the land area is covered by forests. Over 30% of the forest area is protected and a monitoring and information system for sustainable forestry has been launched for gathering and analysing forestry information. It is especially worth noting the consistent land use strategy which is in place. The principles of sustainable forestry are included in the Forest Act. The development plan of the Estonian Forestry (until 2010) mandates the re-forestation of 300.000 ha of out-of-use agricultural land. The Rural Development Plan 2007–2013 promotes the establishment of protected forests. The strategy for forest management seems to be sufficient.

FINLAND

F

Overall assessment

The 2010 version of the Climate Policy Tracker gave Finland a rating of F. Since then the trend is slightly positive as Finland introduced a feed-in premium scheme to promote the use of renewable energy in January 2011. The premium is in most cases adequate, although ambition levels for solar, wind and geothermal energy remain low.

After the elections in April 2011, a government was formed in June 2011. The new government has shown some climate ambition in the governmental programme, but the concrete policy measures are still quite unclear. For example, the decision about an ambitious climate law was left open in the government's programme.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Finland could benefit from policy measures that support energy saving and energy efficiency. The present plans to lower energy taxation for energy-intensive industries would result in lower incentives to save energy and thus should not be implemented.
- There is a clear focus on renewable energy production for biofuels and hydro energy. The target levels and subsidies for wind power, solar energy and geothermal energy are not very ambitious and could be increased. Small and micro-scale renewable energy production should be promoted. The taxation of peat should be strictly connected to its CO2 emissions.
- The transport sector is under-represented in energy and climate policies. There are no instruments to promote electric vehicles or a modal shift.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			D ⇔ • The new government is showing more climate ambition than the former one.
ELECTRICITY SUPPLY	F ↑ • Introduction of feed-in premium scheme in January 2011. • Geothermal and solar PV is not yet included.	F ↑ • Biomass combined heat and power is supported by new feed-in premiums.	G *No recent policy developments.*
INDUSTRY	E	F ⇔ • The government plans to decrease the energy taxation for energy intensive industries.	E *No recent policy developments.*
BUILDINGS	E ↑ • Use of wood fuel and biogas combined heat and power is stimulated with feed-in premiums.	F ↑ • Energy efficiency regulations for new buildings will be tightened from the beginning of 2012 by around 20%.	F *No recent policy developments.*
TRANSPORT	F ⇔ • 7 TWh consumption target for liquid biofuels for 2020. but promotion measures not set yet.	E *No recent policy developments.*	F *No recent policy developments.*
AGRICULTURE			F *No recent policy developments.*
FORESTRY			D ⇔ • Increased political support of biomass for energy production might impact the carbon storage capacity of Finnish forests.

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 analysis showed that in spite of a comparatively high share of combined heat and power (CHP), district heating, biomass and hydro energy, other renewable options were hardly supported. Finland had policies to stimulate the use of renewable energy but all of these were on a voluntary basis. The clear focus is on nuclear energy with two additional nuclear reactors being targeted besides the one already under construction. In addition it is worth mentioning that:

- Under the 'National Forest Programme', the Finnish forests are monitored and conserved. Since the 1970s, the area of forest is constantly increasing.
- Finnish industry can be considered as comparatively energy efficient, mostly because of frequent use of CHP. Heat from power plants and industrial processes is used both in industry and for district heating.

Policy developments in the last 12 months

Finnish elections were held in April 2011. Six parties constitute the government formed in June 2011. When a new government is formed in Finland, a governmental programme is released and unlike in many other countries, the programme in Finland is quite binding. In practice the governmental programme determines the policy of the government.

The new government is showing some climate ambition in their programme, but the concrete measures they have taken are quite minor so far. Positive changes in policy include the gradual reform of the taxation of peat, so that it will be more closely linked to emissions. The government also stated that no new permissions for nuclear power plants are to be admitted. However, the government did not overturn the plans for two nuclear power plants initiated by the last government. An ambitious climate law, as was suggested by environmental and development organisations was mentioned, but its application is quite open-ended in the governmental programme.

Finland published its second National Energy Efficiency Action Plan in June 2011. The plan is mainly based on existing policy measures and the renovation of the existing building stock's energy efficiency has been mainly left out of the measures. The Finnish position towards the upcoming Energy Efficiency Directive seems to be negative.

On 1 January 2011, Finland introduced a new feed-in-premium scheme to promote the implementation of renewable energy. For wind power, small wood-using combined heat and power plants and biogas, the premium will be equivalent to the difference between the pre-defined target price and the actual market price of renewable electricity for a period of 12 years. For electricity production from wood chips, the premium price depends on the emission permit price (the higher the permit price, the lower the premium). Besides the feed-in premiums, small hydropower energy plants are still supported by an investment grant and with a small energy production subsidy. Solar power use by industry is supported by a small energy subsidy and in households by a tax offset.

As a result of the increasing support for the use of biomass in energy production, it is expected that more wood will be used as fuel. While this will further increase the amount of biomass used, it will also affect the CO_2 storage capacity of the Finnish forests. The possible negative effect of decreased sink capacity by the Finnish forest stock is subject to international climate debate.

Finland has a 7 TWh consumption target for liquid biofuels by 2020. The policy which measures for the promotion of liquid biofuels have not yet been set. The target is 20% and it assumes that the target will mostly be met by wood-based biofuels.

Besides renewable energy, Finland is one of the European countries that is planning new nuclear power facilities. It is uncertain if the recent events in Fukushima, following the earthquake in Japan, will influence these developments. However, since there is a close interaction between Finnish industry and nuclear production, the advancement of renewable energy might be hindered by the increasing nuclear capacity.

Sectors in detail

GENERAL

The new government has set new climate objectives, but concrete measures are still quite unclear. The increase in renewable energy production is mostly based on wood energy and this might have negative impacts, for example on biodiversity and the carbon stock of forests and forest soils. Thus, the sustainability of biomass use for liquid biofuels as well as for heat and power and the decrease in the CO2 emissions should be guaranteed.

ELECTRICITY SUPPLY

Renewables	In the beginning of 2011, Finland introduced a feed-in premium scheme to promote use of renewable energy. The premium is equivalent to the difference between the target price and the market price of renewable electricity. An exception is made for electricity production using wood chips, where the premium price depends on the emission permit price. The higher the permit price, the lower the premium. Renewable energy technologies that are eligible for this scheme are: Power by wood chips (> 100 kW), Wind power (>500 kW), Biogas power plants (>100 kW and efficiency > 50%) and Wood fuel combined heat and power (> 100 kW, >8 MW). The tariff prices (i.e. the target prices) are €83.50/MWhe for wind power (with the exception of €105.30/MWhe for the first three years of a wind power plant until 2015), €83.50/MWhe for biogas and wood fuel combined heat and power. For biogas and wood fuel combined heat and power the additional premium for heat production is €50 for biogas and €20 for wood fuels for each produced unit of electricity. Small hydropower (<10 MW) receives energy production subsidy of €4.20/MWhe and investment grant of up to 40% of the investment costs.
Energy efficiency	Finland makes extensive use of combined heat and power and district heating and thus the efficiency of energy production is quite high. **Biogas and wood fuel combined heat and power is promoted by a heat premium in the feed-in tariff scheme.**
Overarching	Finland's former CO2 tax used to be higher than the price effect of the EU ETS. When the EU ETS became mandatory, CO2 emissions went up due to the diminished cost. **Finland supports nuclear power. The new government did not overturn the plans to build two nuclear power plants made by the last government. However, the government has stated that no additional nuclear power plants will be built.**

INDUSTRY

Renewables	**The forest industry utilises wood and black liquor in their energy production. Other renewables currently play minor roles in industrial processes. In the new feed-in tariff scheme small scale combined heat and power from wood is promoted by new feed-in premiums. Although some industries are already making plans and building pilot scale plants, there are no policy measures to promote geothermal energy heat production."**
Energy efficiency	Initiatives, such as auditing are in place to make industry more efficient, but these are voluntary. Finland's industry can be considered to be comparatively energy efficient, which is partly due to the high combined heat and power share. **The new government plans to decrease energy taxation for energy-intensive industries. It is to be assumed that this will have negative climate impacts.**
Overarching	Industry and electricity or heat production are highly interdependent in Finland. Industrial companies own power companies and excess process heat coming from industry is used for district heating.

BUILDINGS

Renewables	The government intends to reduce the use of oil as fuel for heating in existing buildings. However, few specific policy instruments on the use of renewable energy in the building sector exist. There are energy grants for residential buildings that cover up to 60% of the labour cost of installing heat pumps. **Based on the law supporting renewable electricity production, heat produced using wood fuel and biogas combined heat and power is supported by an additional premium: €20/MW for wood fuel combined heat and power and €50/MW for biogas combined heat and power.** **The new feed-in tariff scheme does not take into account micro-scale renewable energy production in buildings, for example, small-scale solar and wind energy.**
Energy efficiency	There is a lack of initiatives regarding energy efficiency in the building sector, but building norms are already satisfactory because of local climate conditions. There are energy grants for residential buildings that cover 20-25% of the cost of heating system improvement, external energy audits, external repair work and ventilation. **To improve the energy efficiency of buildings, regulations regarding energy consumption in new buildings will be tightened. From the beginning of 2012 energy consumption in new buildings should be around 20% lower than existing regulated levels.** **Energy efficiency standards follow EU legislation. Support for energy efficiency measures in renovation is not yet sufficient.**
Overarching	No overarching instruments could be found.

TRANSPORT

Renewables	First-generation biofuels are currently not considered a major option. They are considered to lack cost-efficiency and be poor at reducing greenhouse gas emissions. Second-generation biofuels and electric vehicles are currently favoured in the discussion, driven by the strong position of the energy industry. **A 7 TWh consumption target has been set for liquid biofuels by 2020. The measures to promote liquid biofuels have not yet been set. The target is 20% and it assumes that the target will mostly be met by wood-based biofuels. Support and infrastructure is needed for electric vehicles.** No additional support for electric vehicles exists.
Energy efficiency	The existing purchase tax depends on the emissions of the vehicle. This tax, together with the economic recession, has led to an increase in the demand for smaller, more efficient cars. Car density per inhabitant is high, especially in the remote parts of Finland, where public transport is very limited.
Overarching	There are no incentives for a modal shift and no major investment in public transport infrastructure. In Finland many families have two cars, especially those who live in remote parts of the country. Public transport is also limited in these parts of the country. Vehicle tax is based on the emissions of the car, but there is not enough support for public transport and biking.

AGRICULTURE

Over the last years Finnish agriculture emissions have decreased.

There is no policy banning the transformation of peat lands into agricultural land.

FORESTRY

Finland has adopted a National Forest Programme to monitor and preserve its forests. Although Finnish wood is used intensively, the volume of the forests has been growing constantly over the last 30 years. In the next 10-20 years loggings are expected to increase as the forest stock gets older meaning that the carbon stock (and carbon sink) will also diminish significantly. In international climate negotiations, Finland does not accept responsibilities to compensate for the loss of this carbon sink.

The increasing use of wood biomass in energy production may have negative impacts on the carbon stock of the forests. The biodiversity of the forests, as well as nutrient stability, may be threatened if the biomass harvest is not sustainable. In the National Forest Programme, the loggings are expected to increase in the near future, which would, in turn decrease the carbon stock of Finnish forests. In the National Forest Programme the decrease of the carbon sink is expected to be 20-30 million tons of CO_2 annually, in comparison with the average levels in 2005-2008.

Finland warned that biomass criteria would have to be valid globally - not only at EU level - and that no additional standards would be needed in addition to standards for sustainable forestry.

FRANCE

Overall assessment

The 2010 version of the Climate Policy Tracker gave France a rating of E. Climate policy is relatively well developed compared to the other EU Member States, but yet not ambitious enough to transform France into a low-carbon economy. Climate policy in France did not change significantly in the past 12 months. Existing policy initiatives have continued with minor changes. A rather strong cut was made at the beginning of 2011 to the support of photovoltaics (PV), which now receives a significantly lower feed-in tariff. On the positive side, the second phase of France's white certificate scheme has started, lasting until 2013. In July 2011 a national climate change adaptation plan was published.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- There is a lack of industry-related action. France could increase its ambition for both renewable energy and energy efficiency in industry. This could include higher energy taxes (France's taxes being comparatively low) in combination with tax exemptions when voluntary agreements are met. Good examples of such schemes are found in Denmark, Sweden and Germany.
- The overall strategies in the Plan Climat, published in 2010, run until 2020, which is a relatively short-term timeframe. France was the first country to introduce a binding long-term goal of reducing emissions by a factor of four by 2050 through the Grenelle I law in August 2009. In summer 2010, the Grenelle II law presented the first concrete actions needed to reach the defined targets, but it does not yet present a comprehensive long-term strategy to achieve them. At the end of June 2011, the French Government launched a working group on possible scenarios to reduce the country's emissions by 80% in 2050. Good practises with longer-term strategies are found in Denmark and the UK.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			D ↑ • €6bn for research and development in the field of sustainability. • "national adaptation plan until 2015" published in July 2011. • June 2011: working group launched on scenarios to reduce emissions by 80% until 2050.
ELECTRICITY SUPPLY	E ↓ • Lower tariff for both large and small PV. • Reduced tax credits for PV installations, also for enterprises.	F ↔ • White certificate scheme extended to a second phase (2011-2013).	F ↑ • €28m investment for smart grids
INDUSTRY	F *No recent policy developments.*	F ↔ • 6th tender for research and development projects for energy efficiency in industry.	E ↔ • Experiment on CO_2 label on manufactured goods.
BUILDINGS	F *No recent policy developments.*	E ↔ • Extended white certificates scheme: most actions in residential buildings. • New target to reduce energy demand in buildings by 38% by 2020 and thermal renovation of 400.000 flats per year from 2013.	F *No recent policy developments.*
TRANSPORT	E *No recent policy developments.*	C ↔ • Stricter emission levels for bonus / malus in cars • Extended white certificates scheme: additional actions in transport sector.	D *No recent policy developments.*
AGRICULTURE			D *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of 2010 show that in France, although most areas are addressed, the policies and measures are not ambitious enough to transform France into a low-carbon economy. France rates comparatively well in transport, but incentives for the use of renewables and energy efficiency by industry are very limited.

Highlights include:

- There is a well-functioning support system for electricity generated from renewable sources through a feed-in tariff with long support periods (15/20 years) and a cap on only a very limited area of the support. However, tariffs for photovoltaics (PV) have been reduced in several stages. The requirements for wind turbine installations were strengthened, adding new legal constraints and administrative procedures.
- France currently has some of the lowest levels of greenhouse gas emissions for new cars (131g CO2/km) and has introduced a bonus-malus system to further lower these emissions.
- Well-managed forests exist in France and extensive information regarding climate change and sustainable forest management is available for public and privately owned forests.

Policy developments in the last 12 months

The last national elections in France took place in 2007, with the next scheduled for 2012. However, the French government has been re-organised, with a new minister for Ecology, Sustainable Development, Transport and Accommodation since November 2010, which also led to delays in foreseen initiatives.

No new climate strategies in addition to the existing Plan Climat (published in March 2010 and which runs until 2020) were published recently.

In July 2011, France presented its national adaptation plan (Plan national d'adaptation au changement climatique), following several years of national consultation on the topic. The five year plan (2011 to 2015) is based on more than 200 recommendations published in 2010 during the consultation phase and presents concrete steps to be carried out, divided among 20 different sectors.

Since the economic recovery strategy of 2009, which covered the period 2009-2010, no new strategy has been published.

In autumn 2010, the government announced rather strong budget cuts and the reduction of public spending. The 2011 budget was approved in December 2010. The plan is to limit the public deficit to 6% of the French GDP (versus 7.7% in 2010) and to reach 2% in 2014. A large part of the budget shortfall is to be reached through the cutting of tax breaks (€10bn). These cuts were made as the introduction of a CO2 tax failed in 2010 and the new budget did not foresee higher taxes on energy. For civil aviation, the tax was increased by 1.5%.

The 2011 budget had four major priorities: implementation of the "Grenelle de l'environnement II" law, investment in green research and development, the creation of housing space and better protection from risk (e.g. arising from climate change). The foreseen budget for Grenelle measures is still available. The available budget for ecology increased by almost 10% from the previous year.

No plans to stimulate economic sectors that could have a negative effect on CO2 emissions have been identified. There were strong discussions about the exploitation of shale gas: three permits had been granted in 2010, but in early 2011 the Government decided to forbid this type of exploitation in France.

Sectors in detail

GENERAL

The overall strategies in the Plan Climat, published in 2010, have a time horizon until 2020, which is relatively short-term. France was the first country to introduce a binding long-term goal of reducing emissions by a factor of four by 2050 through the Grenelle I law in August 2009. **The Grenelle II law, published on 12 July 2010, presents the concrete actions needed to reach the defined 2020 targets in six main sectors: buildings and urbanisation, transport, energy and climate, biodiversity, health and governance. It is also supposed to pave the way to reaching the 2050 target of reducing emissions by a factor of four. This law also includes an obligation for private companies with more than 500 employees, public entities of more than 250 employees and cities with more than 50000 inhabitants to measure their carbon footprint (Bilan Carbon).**

At the end of June 2011, the French Government launched a working group on possible scenarios to reduce the country's emissions by 80% in 2050.

ELECTRICITY SUPPLY

Renewables

A feed-in tariff is the main support instrument in place for renewable electricity. The tariff is differentiated according to the technology used. PV, geothermal and offshore wind power receive the highest tariffs. The support is granted for 15 to 20 years and is not generally capped. There is a cap for PV regarding the number of hours that can benefit from the tariffs.

As the current PV projects widely exceed the country's objectives, France has decided to reduce its feed-in tariff (FIT) for this technology and increase regulation. Since July 2011, PV installations below 100 kWp receive significantly lower tariffs which will be reviewed on a quarterly basis. For larger installations and ground-mounted ones, only those selected via tenders will receive support: a European call for tender was published in July 2011 for roof installations above 250 kWp and ground-mounted installations, and a national call for tender was published in August 2011 for roof installations between 100 and 250 kWp. A new quality label was launched in July 2011: AQPV. This label is meant to promote high-quality and French-manufactured PV panels.

Small biomass installations also benefit from the feed-in tariff since the end of 2009 and the lastest amendments made in January 2011, support large installations through a call for tenders for biomass projects.

On 5 July 2011, a European tender was published for French offshore wind projects. The aim of this tender is to develop 5 wind farms, each in a specific region; the size of each wind farm will vary (from a minimum of 420 MW to a maximum of 750 MW), and the sites are planned to be operational by 2017.

With regard to access and use of the grid, renewable energy plant operators are not given preferential treatment. Both are handled without discrimination against any technology or operator. Only the existing electricity suppliers are obliged to purchase renewable electricity and benefit from national compensation. This creates, de facto, a competitive distortion in the access to renewable electricity between existing suppliers and newcomers. The French grid (except for some French islands where the limit of renewables in the grid has been reached) is quite well developed and can, at least currently, support renewables without additional investment. Thus there is no strategy targeting renewable energy oriented grid structures. However, there is funding for studies in the field of smart grids which in the future will be able to support an increased share of renewable energy.

Energy efficiency	Support for combined heat and power (CHP) is currently only provided to small scale applications. Support for large CHP was phased out. The current situation will probably not lead to a big increase in CHP. **In January 2011, the second phase of France's white certificate scheme started and will run until the end of 2013 as part of Grenelle II. Sellers of energy (electricity, gas, heat etc.) are obliged to increase energy efficiency of their customers. Energy savings have reached close to 205 TWh cumac (cumac means actualised savings over lifetime of action) by end of June 2011, including 65.2 TWh cumac of energy saving in the first period (June 2006 to June 2009).** **During the spring of 2011, the government launched a 'cash for scrap' scheme for old gas boilers (prime à la casse des chaudières): when a boiler more than 15 years old is changed for a low temperature one, a €100 incentive is received; €250 is given if a condensation boiler is bought.** **In June 2011, France sent its second National Plan on Energy Efficiency to the European Commission, and launched a round table discussion on energy efficiency for households, companies and the state. First results are expected in the third quarter of 2011, including the fiscal measures and the action plan should be validated by the end of the year.**
Overarching	In France, CCS is supported without any restrictions on technology. Thus, it could be used for coal, gas or biomass. Currently, R&D in this field is financially supported for demonstration-scale projects. Traditionally, France has relied on nuclear power and there is no strong political ambition to change that. A new reactor is currently being built in Flamanville and a second 'third generation' EPR was announced in 2008 by President Sarkozy. **France still is very favourable towards nuclear energy and in May 2011 spoke out against introducing EU-wide criteria for nuclear stress tests.** **At the beginning of July 2011, the French Government announced that it would invest €28m into six innovative smart grid projects (the overall investment including partners' shares will be €115m).**

INDUSTRY

Renewables	There are tenders for the use of renewables, especially biomass, in industry, the tertiary sector and agriculture. The demonstration fund, equipped with €400m for the period 2009-2012, supports R&D and demonstration projects in the fields of renewables, energy efficiency, CCS, smart grids, etc. The chemical industry signed a voluntary agreement regarding the use of primary material from renewable origin. A share of 15% is targetted by 2017, compared to 7% which was the case in 2008.
Energy efficiency	Energy efficiency in the industrial sector is almost neglected, apart from the ETS. A voluntary agreement with some members of the sector was signed but no penalties were introduced for non-compliance. Apart from the aim of increased efficiency, no clear target has been set by this agreement. Recently, a new law was introduced under which funding for various types of low-carbon development can be provided, including for industry. Its first call for applications was in the summer of 2010, so some budget for breakthrough technologies was available. **The ADEME (French environment and energy management agency), together with TOTAL, launched in 2011 the 6th tender for research projects on energy efficiency in industry.**
Overarching	The tax level applicable in the industry sector is rather low. **In July 2011, the test use of a CO2 label on all manufactured goods began in France.**

BUILDINGS

Renewables	Renewables in the building sector are supported through tax deductions, zero interest loans and lower VAT for material and installation costs. Schools and other public buildings can also benefit from a regional feed-in premium for public services. A tax credit has been rather successful. The overall share of renewable energy in thermal applications has started to increase since 2007.
Energy efficiency	New buildings in the tertiary sector and new public buildings may not use more than 50 kWh/m² after mid-2011. For privately-owned new homes, this limit will become effective by the end of 2012. From 2020 onwards, new buildings may not use more primary energy than they generate themselves from renewable energies, i.e. only zero energy new buildings will be allowed. With regards to retrofitting of buildings, the state wants to set a good example and renovate public buildings and social housing and has allocated a budget with specific targets and a timeframe for this. For private households, financial incentives like zero interest loans and tax refunds have been set. This will, however, not lead to a sufficiently high retrofit rate. The white certificate scheme is an interesting measure, which has already led to good results, even though the target has not been very stringent. A new target, which is yet to be set, should be much more stringent. France is a front runner regarding the landlord-tenant problem; certain conditions apply regarding the kind and amount of retrofitting measures and resulting energy consumption, but considering these, the costs can be put (partly) onto the tenant, who in return benefits from lower energy costs. **In January 2011, the second phase of France's white certificate scheme started, lasting until the end of 2013 as part of the Grenelle II law. The building sector is the sector where white certificates are easiest to obtain, and since the beginning of the scheme, most action has been seen in residential buildings (over 80% of energy savings within the scheme); the sector is also encouraged to reach certain goals for low-income households.** **In March 2011, the ministry published 16 recommendations to help reach the target for the building sector of reducing energy demand by 38% by 2020 and realising the thermal renovation of 400,000 flats per year from 2013 onwards. How these measures will be achieved cannot be judged yet.**
Overarching	The tax level in the building sector is rather low.

TRANSPORT

Renewables	France fixed the target for biofuels at 7% by 2012 and 10% by 2015. There are no sustainability criteria for the production or import of biofuels at the national level. For electric vehicles, renewables are not explicitly targeted as a source for electricity. It is assumed that electricity will come from conventional fuels. A nuclear energy commission participates in R&D for batteries for electric vehicles with the aim of producing non-carbon electricity. Backing for electric vehicles is granted through R&D support for batteries, support for electric vehicle purchase, the obligation for new (and subsequently existing) buildings to provide charging stations. Still, the aim to have 2 million vehicles and 4 million charging stations by 2020 seems rather ambitious.

Energy efficiency	New cars have to comply with an emission level of 95g CO_2/km by 2020. Currently, new cars in France emit, on average, 131g CO_2/km, which is the second lowest value in Europe. Since 2008, a bonus-malus system is in place to further decrease these emissions**: a bonus ranging from €400 to €5,000 is paid for cars emitting less than 110g CO_2/km;** buyers of new cars emitting more than 150g CO_2/km have to pay a malus of ranging from €200 to €2,600. **From 2012, the malus will start as of 141g CO_2.** Freight transport is addressed under a voluntary agreement (not signed by all actors) to reduce emissions by 20% by 2020. Participants in this agreement are evaluated annually, but there is no penalty for non-fulfilment of the target. **In January 2011, the second phase of France's white certificate scheme started and will run until the end of 2013 as part of Grenelle II. The transport sector has seen additional standardised measures in the fields of modal shift, combined transport, etc. However, actions in this sector are still very limited (less than 1% of energy saving within the scheme).**
Overarching	The main area of support for a modal shift is the combined transport of goods which is part of the transport strategy of France. Investment grants for combined rail/road transport are given. Regarding infrastructure, investment in railways, river transport and ports is given priority and €97bn are allocated for non-road transport until 2020.

AGRICULTURE

	The agricultural sector is not subject to very ambitious policies. France has not implemented the EU Nitrates Directive sufficiently, but some departments have action plans to reduce nitrogen loads. No overall land use strategy exists, but in urban codes, land use and its interrelations are included. Land use registers, including those for protected areas, exist and they are updated every ten years.

FORESTRY

	The current French national forest programme only runs until 2015 and cannot be considered long-term. However, it does cover all types of forests and includes questions on adaptation. There is a wide range of information for private and state-owned forests; climate change is addressed along with sustainable forest management. Information can be obtained via the internet or offline and regular information events are organised by ONF (Office National des Forêts – National Forest Office) for state forests and private forest owners. A good forest inventory exists with various data that can be obtained via a website.

A
B
C
GERMANY D
E
F
G

GERMANY

D

Overall assessment

The 2010 version of the Climate Policy Tracker gave Germany a rating of D. Germany's climate policies have undergone major discussion in the last 12 months, although the changes have not (yet) improved policies that lead towards a low-carbon economy.

The main development concerned the Energy Concept - the September 2010 version included an extension of the lifetime of Germany's nuclear power plants. The Energy Concept set a (not legally binding) 2050 CO2 emission reduction target of 80-95% compared to 1990 levels and introduced long-term renewable energy targets. In June 2011, a new version of the Energy Concept was approved, with the major change being the phasing-out of all nuclear power plants by 2022. The corresponding laws were approved by parliament in June. It has not been defined which power generation sources should replace the nuclear capacity, which could lead to an increased coal power generation capacity. Another important law on accelerated grid expansion is intended to enable greater penetration of renewable energies.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Germany could significantly increase its energy efficiency ambition for transport. Several measures were discussed but have not yet been implemented, including an emission standard for vans, an increase and expansion of the road toll, additional incentives for low-emission vehicles. At the same time, modal shift and avoiding transport need to be addressed. Road toll revenues are currently discussed as fiscal measures only and do not encourage modal shift as it does not address additional rail capacity funding .
- Energy efficiency in industry is another area which could be improved. The manufacturing industry is a cornerstone of the German economy and policies in this area have been treated with care in the past. The energy efficiency law, which was adopted in April 2010, was relatively moderate. New policies are necessary to stimulate the competitive edge of German industry while at the same time increasing energy efficiency and reducing greenhouse gas emissions. Examples could include public guarantees for energy efficiency measures, or more ambitious negotiated agreements with industry in combination with tax advantages (see for example Denmark).

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			D ⇔ • Energy Concept: long-term but not legally binding to reach 80-95% reduction of emissions until 2050.
ELECTRICITY SUPPLY	B ⇔ • Cuts in tariffs for solar PV, in line with PV market developments led to slow down in PV development in the first half of 2011. • Efforts to improve grids and storage for large renewable uptake (EnLag).	D *No recent policy developments.*	F ⇔ • Nuclear phase out until 2022, but not clear whether coal /gas or renewables will replace phased out capacity. • Germany strong opponent to European coal subsidy phase out.
INDUSTRY	D *No recent policy developments.*	F ⇔ • Additional eco-tax rebate conditional to energy efficiency measures.	D ↑ • Tax benefits for energy intensive industry reduced.
BUILDINGS	C ⇔ • lower support in 2011 due to frontloading of funds in 2009. • Additional obligation for public buildings.	D ⇔ • Lower support in 2011 due to frontloading of funds in 2009.	F *No recent policy developments.*
TRANSPORT	C ↑ • Blending-in quota biofuel increased.	F ↑ • Introduction of efficiency label for cars from December 2011 onwards	D ⇔ • Air passenger tax introduced. • Planned increase of toll abolished.
AGRICULTURE			D *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 analysis concluded that despite its relatively good position in comparison to other countries, Germany still has to double its efforts to get on track for a low-carbon economy. The target to reduce emissions by 40% by 2020 is not binding and there was no comprehensive climate and energy strategy beyond 2020. More ambitious policies are especially needed to promote efficiency in industry and transport. In addition, several incentives still increase greenhouse gas emissions, such as tax rebates for energy-intensive industries and for company cars and travel to work.

Highlights include:

- Germany is at the forefront in the promotion of renewable energy in the electricity sector. The use of an adequate, long-term and predictable feed-in tariff encourages the construction of many renewable energy production sites. The differentiated feed-in tariff leads to one of the most diversified ranges of renewable energy technologies used within the European Union.
- Germany implemented a package of measures to promote efficiency and renewables in buildings. There are moderately ambitious performance standards for new buildings, combined with differentiated support systems to exceed these standards and to stimulate energy efficient renovation. A law on renewable heat use complements the package. Still, the effect is not sufficient to reach necessary refurbishment rate, due to insufficient overall financial volume (and which has recently been further reduced) and the administrative barriers that remain.

Policy developments in the last 12 months

Various state-level elections took place in 2011, but no national elections. Elections showed an increasing trend of ecological awareness, leading to increased votes for the green party, partly driven by the nuclear catastrophe in Fukushima. It remains to be seen whether this trend persists.

The major development over the past year was the release of the Energy Concept – a long-term strategy for future energy supply until 2050 - in September 2010 by the German Federal Government. The strategy set goals to reduce CO2 emissions by 80-95% compared to 1990 levels, to increase the share of renewable energy in electricity consumption to 80% and to decrease electricity consumption by 25% until 2050. The concept includes few details on the policies needed to meet these targets. Although the strategy includes targets for 2030, 2040 and 2050 these are not binding. The first version of the Energy Concept included an expansion of Germany's nuclear power plants with a tax on nuclear energy. This was revised after the Fukushima accident and according to the version approved in June 2011, nuclear energy will be phased out in Germany by 2022 at the latest, but the tax on nuclear energy remains.

Mainly triggered by the publication of the Energy Concept and the public debate resulting from the nuclear catastrophe in Fukushima, several relevant laws were adopted over the past year:

1. The nuclear phase-out: While the Energy Concept initially included an extension to the lifespan of the country's nuclear plants, Germany's government after Fukushima decided to phase out nuclear power by 2022, close to what had been the previous government's policy.
2. Amending support for renewable electricity generation: The feed-in tariffs were revised, including a broadening of the possibility for producers to choose between a fixed feed-in tariff and a market premium, so as to provide incentives for market and system integration of renewable energies.
3. Grid extension: In June 2011, the government amended the legislation by enacting the Grid Expansion Acceleration Act (NABEG) and amending the Energy Industry Act (EnWG), which improved the conditions for grid expansion.
4. Amending the energy and climate fund: The law on the energy and climate fund was created at the beginning of 2011 and amended in June 2011. It is mainly financed by the tax on nuclear energy and, as of 2012, by the profits made from auctioning CO2 allowances in the ETS. The aim of the fund is to support measures in the fields of energy efficiency, renewable energy, energy storage and grid technology, national and international climate protection and the development of electric mobility.

5. The climate protection law as regards city and municipality development mainly changes the building law code and introduces an article on climate protection.

In 2010/2011 no further economic recovery plans or measures were implemented. Some measures under the economic recovery plan Konjunkturpaket 2 are valid until the end of 2011.

In June 2010 an austerity programme (Zukunftspaket) was announced, which is supposed to reduce the budget deficit by €80bn until 2014. For 2011, budget cuts of €7bn (~1%) were announced in November 2010. Subsidies for renewable heat systems were 15% lower for 2011 and the programme for building refurbishment (CO2-Gebäudesanierungsprogramm) was also smaller in 2011 than previously. However, this was not due to budget cuts, but rather because of the success of the programme in 2009 when funds from 2010 and 2011 were frontloaded as well as a shift towards a different financing programme. For 2012 the budget will again reach a scale of €1.5bn.

As of January 2011, in parallel with the prolongation of nuclear power plant life spans, a consumption tax on nuclear energy was introduced. The levy amounts to €145/g of fuel. The tax remains effective, even after the decision to phase out nuclear energy. However, three out of the four large energy supply companies are currently filing a law suit against the continued existence of the tax. The plan to increase motorway tolls for trucks was dropped in September 2010, leaving toll rates unchanged until 2013, while there are discussions about including passenger cars as well. Tolls for freight transport were extended to selected main countryside highways. In July, the government adopted a law to introduce efficiency labelling for cars which starts in December 2011. As a part of the Zukunftspaket a tax on air passengers (of €8-€45) has been introduced and eco-tax reductions for manufacturers and farmers have been reduced.

Even though the government has introduced cuts to the tariff for photovoltaics (PV), the overall level of support is still sufficiently high to trigger further investment. The speed of PV expansion, though, has slowed down substantially in the first half of 2011. The tariff guaranteed for new plants declines not only with time, but also as a function of the level of PV market development.

In the context of an anticipated phase out of nuclear power plants the government plans to support new coal and gas power plants with up to 5% of the budget from the energy and climate fund from 2013 to 2016. Also due to lobbying from Germany, the initial plan to phase out subsidies for coal by 2014 at the European level was abolished and the phase out was prolonged until 2018.

The German government has agreed on a €1bn programme for research and demonstration of e-mobility by 2014, which will be financed largely by the Energy and Climate Fund.

Sectors in detail

GENERAL

The government approved the Energy Concept, a strategy for the energy sector until 2050. The strategy sets the goals to reduce CO2 emissions by 80-95% compared to 1990 levels, to increase the share of renewable energy in electricity consumption to 80% and to decrease electricity consumption by 25% until 2050. It is not legally binding and only in some cases includes details on policies to reach these targets.

The national target of reducing greenhouse gas emissions by 40% compared to the 1990 level by 2020 is not binding.

ELECTRICITY SUPPLY

Renewables

Germany has a differentiated support system for various renewable energy technologies, leading to several types being used. The high feed-in tariff guaranteed for a period of 20 years led to a strong increase in the production of renewable energy. **It has grown from 3% in 1990 to 17% in 2010 and 20% by the first half of 2011.**

Even though the government has introduced cuts to the tariff for PV, the overall level of support is still sufficiently high to trigger further investment. As of July 2010, feed-in tariffs for solar photovoltaics (PV) have been lowered substantially and future decreases have been accelerated. The rate of decrease is related to the level of PV market development. The reduction of tariffs was further tightened in April 2011. Solar PV is no longer supported on agricultural sites. PV development has slowed down substantially in the first half of 2011.

Biomass: The feed-in tariff is apportioned to and thus paid for by end consumers, and it is planned that households will not have to pay more than an additional €3.5 ct/kWh. Therefore, the government plans to cut the feed-in tariff for biomass.

Electricity producers that generate at least 50% of their electricity from renewables and at least 20% from wind or sun were exempt from additional costs that other electricity producers had to pay if their renewable electricity was not supported through the feed-in tariff. This exemption is abolished as of January 2012. However, apportionment is limited to €2 ct/kWh for these producers, while it was around €3.5 ct/kWh in the past year for other producers.

Improvements are needed in the field of congestion management and improvement of the transmission system. Currently grid operators do not need to accept new renewable energy under specific conditions in case of congestion. This could potentially see the latest and thus most efficient wind plants being turned off.

In June 2011, the government amended the legislation by enacting the Grid Expansion Acceleration Act (NABEG) and the Energy Industry Act (EnWG), which improved the conditions for grid expansion. The EnWG requires transmission system operators to present annually a grid development plan to the regulator, from 2012 on. These three year plans are to contain measures that are necessary to secure grid operation, including a timeline, and information on how previous measures were implemented.

Energy efficiency	The Act on the modernisation of combined heat and power production (CHP) aims to promote CHP by paying a premium and granting preferential grid access. There is special support for mini CHP plants to be used in households. The total for all premiums is limited to €750m per calendar year, **but this budget is currently not fully used. Changes to the CHP law from June 2011 mean that support is not limited by time (formerly 4-6 years) but rather by use (30,000 full operating hours).** Germany has set a goal of increasing the share of CHP to 25% by 2020; currently this goal still seems distant, as the share was 13% in 2009 and growth rates are at around 0.5% per year.
Overarching	Subsidies on hard coal are still substantial, but have decreased and are to be phased out by 2018. Lignite mining receives exemptions for payments for water and mineral resources extraction. All energy production plants are exempted from mineral oil tax. There are no emission performance standards for new fossil fuel power plants. Funding is provided for research and pilot projects on carbon capture and storage (CCS). **A law on CCS process emissions passed the parliament in July, but was rejected by the Federal Council (Bundesrat) in September 2011.** **Following the accident in Fukushima, Germany's government announced that it would phase out all nuclear power plants by 2022; the respective law was approved in June 2011. This has not lead to an increased target for renewables, but the government has announced plans to support new coal and gas power plans with up to 5% of the energy and climate fund's budget for 2013-2016.**

INDUSTRY

Renewables	There are only limited activities to promote renewable energy in the industry sector. The German Bank for Reconstruction (KfW) offers some consultancy, financial support and funding for R&D.
Energy efficiency	Several small support measures exist, but they are insufficient in size and scale when compared to the overall size of German industry to significantly change business decisions. The measures include support via consultancy, specific loans for energy efficiency measures, awards and funding for demonstration projects for new technologies in the solar-thermal sector. **As of 2013, energy-intensive industries will be required to have energy management systems in place in order to benefit from a reduced eco-tax rate.**
Overarching	Energy-intensive industry is exempt from paying its share of increased electricity prices due to the feed-in tariff. This exemption was introduced in 2006 and no plans exist for a phase-out. In 2010, the coverage of businesses was increased, which led to an increase of the total exemption from €650m to €1.1bn in 2010. In order to receive this exemption, businesses are obliged to prove that they monitor and analyse their energy efficiency potentials. **Eco-tax cuts for the manufacturing industry have been reduced for 2011. The reduced rate was raised to 75% from formerly 60% of regular eco-tax rates. The maximum threshold value for application of the reduced tax rate is now raised to €1000 from formerly €512. An additional eco-tax break for energy-intensive industry has been slightly lowered from 95% to 90%. It was decided that from 2013 on this additional tax break will only be provided if a company proves that it takes efforts to improve energy efficiency. These efforts have to be certified by an energy management system or an equivalent tool.** There are programmes and an agency in place to promote material efficiency improvements. Companies who want to reduce their production waste and emissions receive funding. Several laws are in place to improve the efficiency of specific products. No incentives are being provided for carbon-capture technologies in process emissions. **A law on CCS passed the parliament in July, but was rejected by the Federal Council (Bundesrat) in September 2011.**

BUILDINGS

Renewables	The law on heat use in buildings aims at an average of 14% share of renewable energy for heating by 2020. New buildings must have a share of renewable energy of between 15% and 50%, depending on the type of building and the type of renewable energy source used. Standards for existing buildings can be set by the states, but few have made use of this option. **The law was revised in May 2011 to introduce an obligation for public buildings to procure a minimum of 15% of their heating and cooling demand from renewable sources. Alternatively, the municipality can build solar thermal installations on public buildings to provide for the heating and cooling demand for third buildings.** The government is providing support of up to €115m per year for renewable energy use for heating during the period 2009-2012. **Support conditions for different renewable energy technologies were improved as of March 2011. Support for solar collectors, boiler exchange and heat pumps were increased or prolonged. The subsidies, however, will only be granted for existing buildings and for the "most innovative technologies", which excludes, for example, efficient heat pumps and small combined heat and power systems. The overall budget has been cut by 15% compared to the 2010 budget.** The landlord-tenant problem has been partly addressed in the way that owners can increase the rent by up to 11% of the investment cost of renewable energy installations annually. The system is very inflexible and does not reflect the size of investment and its energy saving potential.
Energy efficiency	Existing regulation of energy efficiency in new buildings is moderately ambitious. With potential amendments under discussion a near passive house standard could be within reach by 2015. There are several financial support mechanisms for both retrofitting measures and efforts to substantially surpass standards for new buildings. **The budget supporting energy efficient buildings by the Kreditanstalt für Wiederaufbau (KfW) was lowered in 2011 (partially due to frontloading of the available budget in 2009), however, it will be increased to €1.5bn per year for the period 2012-2014.** The effect will not be sufficient to reach the necessary renovation rates, due to the insufficient scale of support and remaining administrative barriers. **The Energy Concept goal is to double refurbishment rates. It has been argued that new instruments are needed to meet the targets.** Enforcement mechanisms for new buildings regarding standards and the obligation to use renewable heat are rather strict, albeit with room for improvement regarding on-site inspection and enforcement of modernisation measures. The Law on Energy Using Products promotes and regulates energy efficiency of appliances, implementing the EU directive. Initiatives to provide information on energy efficient products exist, but are not yet sufficient to trigger the needed change. **Since August 2011, amendments to the regulation on public procurement mean that government purchase contracts are also based on efficiency criteria.**
Overarching	Energy tax is rather low in comparison to energy prices.

TRANSPORT

Renewables	The regulation on biofuels Biomassekraftstoff-Nachhaltigkeitsverordnung goes beyond EU requirements. Biofuels can benefit from tax reductions, but only those which have 35% less emissions (rising to 60% after 2017) than conventional fuels. Biofuels must constitute an increasing share of fuel for transport. **Germany was one of the seven countries that met the EU target of 5.75% biofuels in 2010.** **Increase use of ethanol in gasoline products (from 5% to 10%) is allowed as of December 2010. However, the blending of biofuel (E10) was insufficiently communicated to the public and thus has not been well received by consumers fearful of engine damage and lower efficiency.** Electric vehicles are promoted mainly via model regions and investment in R&D. **An overall budget of €1bn is allocated until 2014**. However, while political statements stress that electricity shall come from renewable sources, policy has yet to relect this. Additionally investment in infrastructure for electric vehicles needs more attention.
Energy efficiency	Germany has formulated a voluntary target of 130g/km as the average for new passenger vehicles by 2012, which is more ambitious target than the current EU requirements. However, the tax incentives for electric and natural gas cars is barely sufficient to reach the EU target. Average emissions from trucks have decreased by 32% between 1995 and 2007. **A new law, passed in July 2011, will introduce efficiency labels for cars as of December 2011. While the general concept was well received, the efficiency categories established in the law, which are based on the CO2 intensity as well as the weight of a car, have been criticised.** **Germany was one of the opposing nations, but the EU recently agreed to set the emission limit for vans to 147g/km by 2020.**
Overarching	There are support programmes for low CO2-emitting modes of transport, but the total effect is limited. For personal transport 15 regional networks are promoted, while for freight, investment is in handling plants and train track extensions. The "Masterplan on Freight Traffic and Logistics" aims to internalise external costs, e.g. climate cost. Despite several transport-related plans emanating from different ministries, an overall integrated planning approach is lacking. Taxes on cars are relative to the energy they consume. There is an energy tax which includes a share of the eco-tax although the share is not very high. Many policies exist to reduce the attractiveness of private vehicles, but not enough to make rail traffic more attractive. **The plan to increase motorway tolls for trucks was dropped by the Government in September 2010, leaving toll rates unchanged until 2013. There are discussions about including passenger cars as well. Tolls for freight transport were extended to selected main countryside highways.** **A passenger tax has been introduced for flights, but it has been criticised for not providing an incentive for airlines to achieve high load factors for their planes (e.g. as was the experience in the UK).** Several subsidies for higher emission and fuel-intensive transportation modes exist, like tax reductions for company cars and travel to work.

AGRICULTURE

There is no national strategy on land use - this remains under the jurisdiction of the federal states. There is also no clear policy to reduce animal emissions, although some research is funded in this area.

On average German farmer produce a surplus of 103kg N/ha/yr. Yet the policy has not been sufficiently well implemented and it is unclear whether the national goal of 80 kg N/ha/yr until 2011 can be met.

There are several forms of information about ecological land use, like the law on eco-labelling (Ökokennzeichnungsgesetz). Additionally, subsidies to convert land to ecological use of €210/ha and to maintain ecological use of land of €270/ha are available.

FORESTRY

The jurisdiction on forest policy lies with the federal states and not the national government. Forest owners are obliged to manage their forest sustainably. The target is to convert 5% of the wooded area into natural forest by 2020. The aim is for 80% of the woodland to have certified high ecological standards by 2010 and 10% of privately-held forest shall be converted into protected areas.

Various programmes target forest-related issues; stakeholders are informed via different channels about climate change, its impact on forests and the forest's potential to mitigate climate change.

Afforestation is financially supported as long as it fulfils certain criteria. For deforestation, a permit is needed. Reports on the conditions of the forest are published annually and every ten years a comprehensive forest inventory is performed.

GREECE

F

Overall assessment

The 2010 version of the Climate Policy Tracker gave Greece a rating of F. Several positive initiatives have since been introduced, such as the new renewable energy law, the creation of a green fund, the publication of forest maps and the target of €3.1m renovation measures in households by 2020. However, the current policy framework is heavily defined by the economic crisis and the focus on cost reduction. In several cases policies with negative effects for low-carbon development were introduced. This puts into question the effectiveness of government's climate initiatives.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- There is a lack of ambition to increase energy efficiency and renewable energy employment within industry. The restructuring of electricity prices has meant that some industries' electricity prices have in fact decreased. Higher energy prices, through changes in the taxation system, in combination with agreements on energy efficiency improvements have proven to be successful for example in Denmark.
- Lignite is the main energy source in the Greek system - and plans to open new mines and end the monopoly of the Public Power Corporation are being considered. However, this development could seriously affect the transition of the energy sector to a low-carbon future. The Greek government should make clear that changes in the ownership of lignite producers will not undermine the shift to green sources and actions.
- The efficiency of the Greek cars, vans and trucks could be further improved.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G ⇔ • 20-20-20 national strategy published, however, not all laws that followed reflected this strategy.. • Publication of the Greek equivalent of the Stern Report.
ELECTRICITY SUPPLY	D ↑ • New law on permissions of renewable energy projects: easier procedures. • Ministerial decision on the share of renewables in the electricity mix.	E *No recent policy developments.*	F *No recent policy developments.*
INDUSTRY	F *No recent policy developments.*	G *No recent policy developments.*	F ↓ • Partial decrease of electricity prices for industries.
BUILDINGS	E ↑ • PV law: removal of cap for residential PV.	G ↑ • New programmes on energy efficiency. • Pilot project to renovate 1,000 houses without investment cost for house owners.	G ⇔ • Problems in securing loans for energy efficiency improvements.
TRANSPORT	F *No recent policy developments.*	F *No recent policy developments.*	F ↓ • Car taxation based on CO2 emissions. • 40% price increase in public transport tickets in Athens.
AGRICULTURE			D *No recent policy developments.*
FORESTRY			F ↑ • Publication of forest maps. • Law on preservation of biodiversity.

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of 2010 found that although Greece had an official climate strategy, it was only defined until 2010 and there was no binding target for greenhouse gas emissions reduction. Greece had no long-term binding greenhouse gas emission targets. In terms of implemented policies, all sectors lacked sufficiently ambitious measures, while the most important and emission-intensive sectors of industry, transport and the buildings sector were rated very low.

- Greece has a well functioning support system for household photovoltaics (PV) (feed-in tariff at the highest possible level and administrative barriers have been removed). Moreover, a new law requires the installation of PV systems in combination with solar thermal systems in every new or completely renovated building.

Policy developments in the last 12 months

The political situation in Greece was dominated by the economic crisis and the measures undertaken to overcome it.

Since the last version of the report, no new climate strategies have been introduced. As the crisis hit hard, Greece signed a memorandum on economic recovery, which has been the cornerstone of all policies, focusing mainly on cost curtailment. Budget cuts were announced for all sectors of the economy (€2-4bn for 2011 and a target of €12-14bn by 2013 according to the medium-term financial strategy programme). The cuts include the sectors analysed by this study. Policies are focused on cost reduction and while the government believes that green development is a way to combat the economic crisis, few incentives to support such development were presented.

A positive development in 2010 was the law on the creation of a fund to support the green economy. The Green Fund will receive 5% of the revenues generated by emission trading allowances.

Several of the economic recovery plans could have negative effects on CO2 emissions or renewable energy development. For example, the opening of the market for lignite mining could have adverse effects on the expansion of renewable energy sources and the fast-track procedure for new investments which oversimplifies the environmental permitting system. Also, the restructuring of electricity prices in order to avoid cross-subsidisation led to lower prices for some industry sectors, reducing the incentive for ambitious energy efficiency improvements.

Although there are also positive developments, with sometimes very ambitious targets the effect of these new policies is uncertain due to the current financial situation. The positive initiatives include:

- Aligning targets for the long-term development of renewable energy with the 20-20-20 EU renewables strategy, with the main focus being on wind energy.
- A new law on renewable energy authorisation that creates a better environment for renewables projects.
- The cap on the use of PV for residential PV was removed.
- A new programme on energy saving in houses was introduced in November 2010. The programme wants to realise 3.1 million energy efficiency measures in buildings by 2020. Due to the economic crisis the general response is relatively low and realisation of this target is questionable.
- A pilot project involving 1,000 buildings will upgrade the buildings energy performance with no initial investment by the owners, but through refunding the costs via the reduction in energy bills.

Sectors in detail

GENERAL

Although Greece has an official climate strategy, there are no binding targets for greenhouse gas emissions reduction by 2050. **The main policy development in 2010 was the publication of the National Renewable Energy Action Plan, aligning the targets for the long-term development of renewable energy with the 20-20-20 EU renewables strategy, with the main focus on wind energy. Setting this official commitment was a positive development. However laws and regulations dealing with the economic recovery of the country (e.g. medium-term programme on financial strategy, 'fast-track' law, investment law) are downgrading the priority given to green measures and targets.**

In terms of implemented policy, certain sectors lack sufficiently ambitious measures, while the most important and emission-intensive sectors are rated very low.

ELECTRICITY SUPPLY

Renewables

The primary support instrument for renewable electricity is a feed-in tariff that was introduced in 2006. It covers all renewable technologies and the tariff depends on the technology used. Still, the administrative and technical environment is not very favourable as there are significant project delays – these are mainly due to legal appeals, delays in the construction of power plants because of transaction of licenses among the investors and the lack of access to a proper electricity grid. Major barriers, especially for wind development, include the lack of integrated and binding national land use planning, access to information and stakeholder involvement.

To deal with these problems a law was introduced in 2010 to accelerate the licensing of renewable energy projects. This initiative has been criticised for oversimplifying procedures which could endanger environmental protection. The law allowed the regulator to issue a higher number of permits for renewable energy projects in 2010 than in all previous years cumulatively. Additionally, a new biodiversity law adopted early in 2011 limits the potential for renewable energy development in some categories of protected areas.

The framework for PV development supports fast growth in the residential sector. However the initially defined capacity cap for residential installations and the framework for agricultural PV installations were criticised. The cap on residential installations was finally removed. Investigations into geothermal energy potential started in 2011.

In the connection to and use of the grid, renewable energy projects are preferred to conventionally fuelled sources. **Concerning the electricity network development, in 2010 a study was published on the interconnection of Crete and the continental system in line with scenarios of high renewable energy penetration levels.**

Energy efficiency

Combined heat and power production (CHP) is also supported through the feed-in tariff for renewables and more specified tariffs for different CHP technologies which have been proposed but not yet implemented. The national target of increasing CHP electricity by 12% will probably be missed.
There is an absence of white certificates or other similar schemes for the promotion of energy efficiency in the electricity supply.

Overarching

In Greece, heavy subsidies for the Public Power Corporation (PPC) are in place. The lignite deposits are provided tax-free and the PPC has a monopoly in the Greek market. **Under the conditions set by the economic recovery programme, the lignite market should be opened by providing 40% of the lignite resources to other parties. Due to objections from the PPC, the use of new lignite fields was being considered. This would enforce the lignite presence in the system. This idea was since been dropped by the ministry and alternatives are currently under examination.**
CCS technology is not supported in Greece, neither for coal or gas, nor for biomass.

INDUSTRY

Renewables	Although there are no targeted policies in this area and only few pilot projects used in the industry sector, the use of renewables for heat or fuel use has increased by 1.4% from 2000 to 2007. Most likely, this is due to autonomous developments within sectors.
Energy efficiency	The energy efficiency of the industrial sector is addressed by very few incentives (subsidies for EMS and a pilot version of a voluntary agreement scheme). In addition to the EU-ETS, there are no support schemes for emissions trading in place and there is no support for breakthrough technologies. Without strengthening this sector's efforts in the future, it will not be possible to achieve a low-carbon economy.
Overarching	Energy-intensive industries, mainly steel and aluminium, profit from very low tariffs for their electricity use, which does not support the development of renewable energies or energy efficiency measures. **In the light of the current economic crisis, a further decrease in the electricity price for industry was introduced in June 2011.** Furthermore, the energy tax for conventional fuels used in the industry is rather low. There is some minor support in place for the development of innovative product design, but it is not very ambitious.

BUILDINGS

Renewables	Renewable heating in buildings has been supported through investment grants, subsidies and tax deductions since 1995. Budget restrictions meant that lower support was introduced in 2006 and is still in place. **The removal of the cap for residential PV was a positive development for the further deployment of the technology.**
Energy efficiency	**An obligation for new low-carbon buildings was introduced by the law for the promotion of renewable energy (Law 3851/2010).** However, no trajectory to zero energy buildings can be seen. The requirements of the Ecodesign Directive have been introduced in Greek legislation. There is labelling for white appliances and in 2009 a successful programme on energy efficient air conditioners was introduced. **A very ambitious programme called 'Building the Future' for energy saving in houses was introduced in November 2010. The programme wants to realise 3.1 million energy efficiency measures in buildings in the period until 2020. Due to the economic crisis the general response is relatively low and realisation of this target is questionable.** **The PPC singed a memorandum of collaboration with the Centre for renewable energy to provide energy services in the residential sector (ESCO). In this pilot programme 1,000 buildings will receive an energy performance upgrade. No initial investment is required by the owners, but the refunding of the renovation cost is generated through the subsequent reductions in the energy bills.** EU regulation on building certificates has been implemented, with considerable delay of four years. The enforcement of this legislation is not very strong and problems regarding the certification of energy inspectors exist.
Overarching	The tax levels for energy used in buildings, is in general quite low. Natural gas is promoted by the government in order to reduce diesel use in households. There is no energy tax for natural gas if it is used for heating buildings, which may hinder use of renewables. **The consumption of energy is decreasing because of the high rates of unemployment and the huge increase of direct and indirect taxes on household income and property. The lack of funding schemes is lowering the possibilities for the promotion of energy efficiency measures in the building stock.**

TRANSPORT

Renewables	A share of up to 5% biofuels has to be used by refineries. Additionally, a quota for biofuels is set annually, which is exempt from fossil fuels tax. Subsidies of between 40% and 55% for biofuels, but not for bioethanol, exist. This support has lead to a small increase (0.9%) in the use of biofuels between 2005 and 2007. The quota is set at 7%, but current trends indicate that it is unlikely that this will be reached. Electric mobility does not play a role in the future strategy of the transport sector in Greece.
Energy efficiency	No incentives to reduce new vehicle emissions below the EU standard are in place. For freight transport, there are no incentives for lower emission trucks. This problem is aggravated by the fact that the Greek vehicle fleet is quite old, (18 years on average).
Overarching	Only minor investments are planned for low-carbon modes of transport. Action is mainly taken at the city/community level and no overall strategy exists. Modal shift strategies do not really play a role in the Greek transport sector. In 2010, a change in the system was introduced with cars being taxed based on their CO2 emissions. **Additionally, a car scrapping bonus to increase the use of more energy efficient cars was started, but due to the economic crisis the market response has been relatively low.** **Finally, a severe increase in the price of tickets for public transport (partially due to an increase in fuel prices) in turn creates a counter-incentive for the shift towards low-carbon modes of transport as less people use public transportation.**

AGRICULTURE

In the agricultural sector, limits for nitrogen loads do exist and are mainly enforced where EU subsidies are paid. While there are no initiatives to reduce methane emissions and there is only limited support for sustainable farming practices, total emissions from agriculture have decreased significantly - by more than 10% from 2000 to 2008.
Since 1999, land use in Greece is surveyed through the CORINE programme, which is updated every 10 years. There is no additional registry or respective legislation. Protected areas are mapped.

FORESTRY

No forest inventory exists for the whole of Greece, which constitutes a major uncertainty factor for investors.
Forest areas are sufficiently protected by the National Constitution and by the forest legislation against land use change. Although the legislation is clear and very strict, there are significant problems with efficient application, primarily due to the lack of forest mapping.
In 2010 progress was observed on country forest mapping. Laws protecting forest areas in Athens and on the simplification of procedures authenticating forest maps were introduced. As a result, several forest maps were published, initially prioritising the metropolitan area of Athens. In addition, a new law on biodiversity conversation, adopted in 2011, included Natura 2000 sites in the national protected areas system. The law also updated the framework for the conversation of these areas.

HUNGARY

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave Hungary a rating of E. Overall climate and energy policy developments are positive. Hungary tackled one of the issues that we identified as being in need of improvement last year: the subsidy scheme for renewables and gas-fuelled combined heat and power has been split. The controversial feed-in tariff system (KÁT) is currently under revision; gas and biomass co-fired combined heat and power plants (that receive a large part of the funding) will gradually benefit less from the feed-in tariff. To support heat production in gas and biomass combined heat and power plants a new subsidy scheme is expected as of September 2011. The new government – elected in spring 2010 – considers the green economy as a future driver of development. The National Renewable Energy Action Plan was adopted in 2010. A new, national energy strategy was adopted by the government and sent to Parliament for discussion and adoption in their autumn session.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- In the transport sector there are no policies to promote the energy efficiency of cars, vans or trucks.
- There are no strong policies to support the energy efficiency of industry.
- Policies in the building sector are lagging behind, although subsidy schemes are being prepared to stimulate renovation of existing buildings, grant-related procedures are bureaucratic and too slow.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			D ⇔ • New renewable energy strategy, with more ambitious renewable energy target. • Since April 2011 sustainability is part of the constitution. • Budget of Innovation Fund is reduced by € 37m.
ELECTRICITY SUPPLY	E ↑ • Feed in tariff is only for renewable energy, not gas and biomass co-firing in combined heat and power anymore. • New feed-in tariff for combined heat and power heat expected for January 2012.	D *No recent policy developments.*	F ↑ • Crisis tax amounting € 264m divided to three years on the energy sector.
INDUSTRY	E *No recent policy developments.*	E ⇔ • Virtual Power Plant programme launched.	F *No recent policy developments.*
BUILDINGS	E *No recent policy developments.*	F *No recent policy developments.*	D *No recent policy developments.*
TRANSPORT	F *No recent policy developments.*	G *No recent policy developments.*	G *No recent policy developments.*
AGRICULTURE			D *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

Last year's Climate Policy Tracker found that overall Hungary's efforts were insufficient. It presented a very mixed picture, with some good efforts in agriculture, forestry and partly in promoting renewable electricity production. In general, however, there is a lack of ambition in most sectors. There are hardly any efforts to tackle greenhouse gas emissions from the transport sector, while European regulation is implemented rather weakly in the building sector. Hungary has clear and strict laws to protect land, forests and soil. The use of land cannot be changed without prior consent of the respective authority. For forests, the aim is to increase the area of forested land and maintain or improve its naturalness and biodiversity via proper management.

Policy developments in the last 12 months

New elections were held in the course of spring 2010, and a new government was formed on 29 May 2010 by the prior leading opposition party alliance. The government holds a qualitative majority (>2/3, ~67%) of votes in the Parliament. The same party alliance won the majority of seats during the municipal elections, which were held in the course of autumn 2010.

In April 2011, the Hungarian Parliament voted in favour of the new constitution. In relation to environment it states that Hungary is to protect and sustain a healthy environment. It obliges the state and all of its members to preserve natural resources (soil, water and biodiversity).

The National Climate Strategy 2008-2025 was adopted by the Hungarian Parliament in 2009. Since then no new climate strategy or protection programme has emerged. As there is no Ministry for Environment anymore, the field of climate politics was shifted to the Ministry of National Development, within which it is supervised by the Minister of State for Climate and Energy Affairs.

A new, National Energy Strategy was adopted by the government in July 2011 and sent to Parliament for discussion and adoption in their autumn session. If all measures are implemented, the strategy would result in a 50% reduction in greenhouse gas emissions compared to 1990 levels.

The recent government announced a new recovery plan. This included: immediate measures to balance the budget; and a long-term strategy (Széll Kálmán Plan) to decrease the national debt and increase the economic performance of Hungary. The long-term strategy is implemented via the Széchenу Plan, sub-divided into seven programmes. The green economy is envisaged as one of the future leading sectors that will contribute 200,000 new jobs. The plan is for the renewable energy sector to create 70,000 jobs. Grants are allocated to this goal in the Green Economy Development Programme.

The government supports the plan of its predecessor to prolong the lifespan, by 20 years, i.e. until 2035, of the only nuclear plant in Hungary. This nuclear plant covers nearly 40% of overall electricity production in Hungary. It also continues the subsidy programmes financed by EU Cohesion Policy Funds. The Green Economy Development Programme finances energy perfomance improvements for buildings, renewable energy-based power production and awareness-raising.

Budgetary cuts impact the climate and energy package in several ways. The budget of the Research and Technological Innovation Fund is reduced by €37m. The budget cuts do not affect subsidy programmes like the Green Investment System or Green Economy Development Programme. In relation to its budget balancing priority, the government imposed a crisis tax amounting €264m over three years on the energy sector.

The excise tax and VAT for fossil fuels, energy and CO2 have not changed since the summer of 2010. In June 2011, the tax on bioethanol E85 was increased. The National Renewable Energy Action Plan (NREAP) and the present version of the Energy Strategy support second generation biofuels; however, the government passed a bill to levy a duty on E85 as from July 2011. No changes are foreseen with regard to the taxation and VAT on green products and investments.

The NREAP sets a more ambitious renewable energy target (14.65%) than is allocated by the EU for Hungary (13%). The action plan approaches renewable energy policy in the context of climate, energy, agricultural, social and economic policy. It aims for a more balanced mix of renewable energy supply, which currently is strongly biased towards biomass use.

A major change regarding the stimulation of the green economy is that the subsidy scheme for renewable energy and gas-fuelled combined heat and power plants will now be financed from separate budgets. As of 2011, such combined heat and power plants will gradually benefit less and less from the feed-in tariff for electricity originally designed for green energy, thus allocating more money for real green power production. The feed-in tariff for purely renewable fired plants will remain the same until the end of 2011. Details on the support for heat production in gas and biomass combined heat and power plants are expected in September 2011.

Another driver of the green economy is the Green Investment System, which subsidises investments which improve the energy performance of buildings, energy production and the purchase of energy efficient lamps and household equipment. The investments are subsidised via the sale of CO2 quotas. In the course of 2011, the focus of subsidies will be moved towards investments targeting 60% energy savings, both for existing building stock and new constructions.

Sectors in detail

GENERAL

Hungary has clear and strict laws to protect land, forests and soil. The use of land cannot be changed without prior consent of the respective authority. For forests, the aim is to increase the territory of the forest ecosystem and to maintain or improve its diversity. **The concept of environmental and economic sustainability has been strengthened by its inclusion in the constitution.**

The government has started the second revision of the National Energy Efficiency Action Plan.

ELECTRICITY SUPPLY

Renewables	The main support instruments at national level are the feed-in tariffs for electricity and the investment grants from EU structural funds. The available budget for renewable electricity is limited. Most of the feed-in tariffs were used to support pure gas and also biomass co-fired combined heat and power plants, which received around two thirds of feed-in funding. In 2009, only 4% of electricity consumed was generated using renewable energy sources. From the funding going into renewables, most is provided to coal plants using 10%-20% biomass for co-firing. This makes the power companies running the coal plants more profitable and slows down the move to renewables. **This system is being abolished in the course of 2011, so that feed-in tariffs for electricity will be paid only to power plants fired purely with renewable energy. A new form of support for gas or biomass-fired heat production in combined heat and power plants is expected by January 2012. A tender for a 410 MW wind power project was cancelled; capacity remains at 330 MW.** **The concession fee for coal mining was increased significantly, but is still below the fee for gas drilling when comparing the energy content.** The Hungarian government stimulates the agricultural sector to intensively participate in the development of the bio-energy segment through supporting second generation biofuel production (NREAP). There is support for three categories of bio-energy, among which is solid biomass for electricity production.
Energy efficiency	**Gas and coal / biomass co-fired combined heat and power was supported until mid-2011 through the feed-in tariff system and received the largest share of funding.** Most of the combined heat and power support goes to large, inefficient and already existing combined heat and power. The system is not designed to promote investment in new, efficient combined heat and power installations. **The system was abolished as of mid-2011.**
Overarching	No other specific policies could be found that target emissions in the electricity supply sector.

INDUSTRY

Renewables	Between 2000 and 2007 the share of renewable heat/fuel use in industry increased by around 3%. This trend is largely responsible for the fairly decent rating of this sector, but it is not due to outstanding policies. There are no specific policies for use of renewable fuel in industrial processes.
Energy efficiency	The energy-intensity index in industry improved by almost 25% between 2000 and 2006. There are no outstanding policies in this area, so the fairly decent rating can mainly be attributed to the past trend. **A Virtual Power Plant Programme was launched, targeting industrial level energy efficiency, proportionate to a 200MW power plant capacity. It is yet unclear how successful the programme will be.**
Overarching	According to the public procurement law, public tenders, "are allowed to include environmental or sustainability aspects" in the tender documentation. No significant efforts to reform the industrial sector could be found.

BUILDINGS

Renewables	The installation of renewable energy production units, is not obligatory but is supposed to be considered in building design.
Energy efficiency	Energy efficiency must be taken into consideration when designing new buildings. However, this weak implementation of the EU requirements is not likely to lead towards zero carbon buildings in the near future. **The elaboration of the National Buildings Energy Retrofit Programme is expected before the end of 2011. The current uncertainty about state subsidies for retrofitting hinders large-scale investment.**
Overarching	In compliance with the EU regulation, energy labelling is only obligatory for new buildings and governmental buildings above 1,000m2. Gradually labelling will be extended to other buildings. However, there are no sanctions in cases where the energy audit is not performed.

TRANSPORT

Renewables	Hungary is a laggard on transport policy. The only incentives to promote climate-friendly developments are a reduced excise duty for biofuels and tolls for trucks. These were introduced in 2008 as part of an environmental policy.
Energy efficiency	Measures targeting vehicle efficiency are not supported.
Overarching	There are no policies to support modal shift. **The work on a new National Transport Strategy is expected to start before the end of 2011. The Hungarian railway company together with the responsible ministry prepares a new railway strategy to increase the share of rail transport for both passenger and freight transportation.**

AGRICULTURE

A decree from the Ministry of Agriculture states that nitrogen loads per hectare of land cannot exceed 170 kg/ha.

Within a subsidy programme, grants are possible for, among others, biomass, biogas and biomethane utilisation. Funds of up to €37m are available since 2009, but implementation is very slow.

There is some protection for the quantity and quality of land and soil; clear and strict rules exist on land use change.

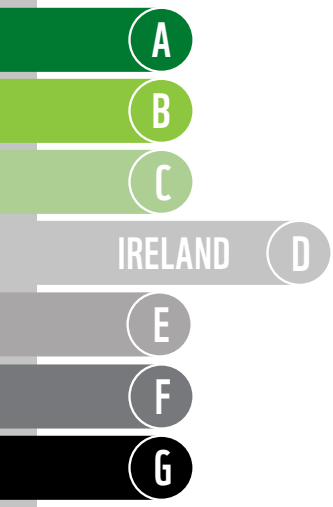
Agricultural land has to be maintained and used. The use of land cannot be changed without prior consent of the respective authority.

A new National Rural Development Strategy is under public consultation; it puts more emphasis on sustainable agriculture.

FORESTRY

The Hungarian Forestry Law aims at maintaining and increasing the forest area. The naturalness and biodiversity of existing forests has to be kept or improved.

There are no clear sustainability standards for biomass use in power generation which also affects forests.



IRELAND

Overall assessment

The 2010 version of the Climate Policy Tracker gave Ireland a rating of D. The overall trend for Ireland is negative, with the most significant change being the shelving of the draft Climate Change Bill that would have committed Ireland to an 80% reduction in emissions by 2050. The global economic crisis has had a particularly significant impact on Ireland and a change of government puts the focus firmly on economic recovery. A number of policies that support renewable electricity, heat and transport have been closed or suspended. Nevertheless, a new National Biofuels Obligation Scheme has been introduced and feed-in tariffs for renewable electricity generation is also to be expanded, pending state aid clearance by the European Commission. The carbon tax introduced in 2010 will be doubled by 2014. This is expected to lead to approx €330m in overall savings.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- A longer-term strategy is needed after the shelving of the Climate Change Bill that would have committed Ireland to an 80% reduction in emissions by 2050.
- Ireland could improve the energy efficiency of its industry. Special efforts need to focus on material efficiency and reduction of waste through reuse and recycling. Good examples of such schemes are found in Germany.
- Energy efficiency of buildings should be further improved through renovation programmes.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			B ↓ • Delay in Climate Change Bill. • New programme outlines commitment to develop wind and marine energy resources. • Carbon tax planned to increase to €30 by 2014.
ELECTRICITY SUPPLY	C ↔ • Plans to extend scope of Renewable Energy Feed In Tariff (REFIT) scheme for renewable electricity generation (pending EU approval).	C ↓ • Close of combined heat and power deployment programme. • Extension of ReFIT pending.	F *No recent policy developments.*
INDUSTRY	F ↓ • Renewable Heat deployment scheme for industrial buildings closed. • Combined heat and power scheme closed.	F ↔ • Scheme of accelerated capital allowances for expenditure by companies on energy efficiency extended to 2014.	G ↓ • Two of the key schemes available to industry (ReHeat and combined heat and power deployment scheme) closed due to budgetary constraints. • The Better Energy Workplaces programme introduced.
BUILDINGS	E ↑ • New government committed to doubling home renewable and energy efficiency schemes before phasing them out in 2013.	F ↑ • New scheme offering tax relief up to €10,000 to make homes more efficient. • Home Energy Saving Scheme relaunched as Better Energy Homes programme.	F ↔ • Better Energy Workplaces and Better Energy Homes programmes launched in May 2011. • Renewable Heat deployment scheme.
TRANSPORT	D ↑ • New biofuels obligation scheme.	D *No recent policy developments.*	D ↑ • New electric vehicles grant Scheme. • Increase in mineral oil tax on petrol and auto-diesel.
AGRICULTURE			C ↓ • Food Harvest 2020 scheme calls for increase in agricultural output, with no policy to counteract higher emissions.
FORESTRY			C *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of last year's assessment showed that a lot of work remains to transform the country into a low-carbon economy by 2050, especially in the industry and buildings sectors. However, Ireland's National Climate Strategy aimed to reduce emissions 80% by 2050 and new climate change legislation is being prepared to address both mitigation and adaptation issues across all sectors and government departments. There is no fixed date for delivery.

Ireland's energy sector has managed to significantly increase the country's power generation conversion efficiency, while decreasing the carbon intensity of electricity generated from fossil fuels. This has resulted in nearly a third less CO2 emissions per kWh of electricity produced in 2007 compared to 1990.

Agriculture and forestry related issues are well covered. Agriculture in particular is of major economic importance to Ireland. Even though there is no overall land use strategy, there are many programmes in both sectors to increase the levels of sustainable farming and sustainable forestry. These programmes (e.g. the Rural Environmental Protection Scheme and the BioEnergy Scheme) have lead to a total decrease in agricultural greenhouse gas emissions of 10.5% between 2000 and 2008.

Policy developments in the last 12 months

A general election was held in Ireland on the 25 February 2011, following the collapse of the governing coalition. This was triggered by widespread domestic condemnation of Ireland's acceptance of a multi-billion Euro bailout by the EU to mitigate Ireland's deepening banking crisis. Following the worst defeat of a sitting government since the formation of the Irish state in 1921, the incumbent party Fianna Fáil was swept from power and replaced by centre-right party Fine Gael in coalition with the Labour Party (as junior member).

Prior to the dissolution of the Parliament a draft Climate Change Bill was presented by the Green Party (then part of the governing coalition with Fianna Fáil). This would have set a binding 2050 target of at least 80% reduction in net emissions, and would have established the National Climate Change Strategy and annual carbon budgets on a statutory basis. However, the Bill was not passed prior to the general election, and has since been dropped from the Senate's agenda. However, in Fine Gael's Programme for Government (published since coming to power) the party underlines its commitment to pass climate legislation, stating: "we will publish a Climate Change Bill which will provide certainty surrounding government policy and provide a clear pathway for emissions reductions, in line with negotiated EU 2020 targets." However, no timetable or indication of the ambition of such a bill is yet known.

Following the announcement of the bailout, the previous government published a new national budget on the 7 December 2010. In exchange for the €85bn rescue package from the EU and International Monetary Fund, Ireland had to agree to work to cut its deficit to 3% of GDP by 2015. The budget detailed €6bn worth of spending cuts and tax rises, across almost all sectors of the economy. The expected gross current expenditure savings of the budget are expected to total €2.2bn. Of this, €8m is expected to be saved from the budget for the Communications, Energy and Natural Resources Ministry, and €84m from the Ministry for Environment, Heritage and Local Government. These savings are to be made through administrative efficiencies, and lower Exchequer contributions. Exact measures to be cut or curtailed are still being decided upon. A National Recovery Plan 2011–2014 was also published by the new Government, providing a blueprint for a return to sustainable economic growth. One of the priority areas noted in the National Recovery Plan is the reduction of waste and energy costs faced by businesses through the introduction of smart grids and a greater share of renewable energy.

A second National Energy Efficiency Action Plan was submitted to the European Commission at the end of June 2011, updating the measures that will be implemented in order to achieve a national energy saving of 20% by 2020, including measures to assist small and medium-sized enterprises to lower electricity costs. The range of measures to achieve this saving includes tax incentives to promote the use of energy efficiency technologies, improved efficiency standards in buildings and increased electric vehicle deployment.

The new Fine Gael/Labour government's Programme for Government, details their plans relating to renewable energy and climate change which include:

- Funding to be doubled for home energy efficiency and renewable energy programmes (e.g. Better Energy Homes, Warmer Homes Scheme) until the end of 2013, after which time these schemes will be ended.
- After 2013, the roll out of a 'pay as you save' scheme to continue home energy efficiency retrofitting work without recourse to public funding. In a pay as you save scheme the value of the measure implemented is assigned to the building and paid off through the building's utility bills. The repayment tariff is set up to cost less than the savings achieved through reduced energy consumption.
- Establishment of Ireland as a renewable manufacturing hub to attract international and domestic investment. Positioning Ireland as a leading player in the global carbon market, and a centre of excellence in the management of carbon.
- Publication of a Climate Change Bill which will provide certainty surrounding government policy and provide a clear pathway for emissions reductions, in line with negotiated EU 2020 targets.
- Introduction of legislation to support the geothermal and marine energy sectors.
- A renewable feed-in tariff for micro-generators who produce electricity for their homes, farms and businesses and who wish to sell surplus electricity to the grid.

As part of the recovery plan, the carbon tax of €15/tonne CO2 introduced in the 2010 is planned to increase to €30 by 2014. This is expected to lead to approx €330m in overall savings, according to the government. The scope of the carbon tax will remain the same, applying to kerosene, fuel oil, natural gas, diesel and petrol but not to electricity.

Sectors in detail

GENERAL

The new government has committed to developing a Climate Change Bill in the near future. Exact differences from the previous shelved draft are still unknown. The government has begun to explore the potential for domestic offsetting in Ireland. A delay in EU approval for the extended REFIT scheme is causing some renewable projects to not be realised. Other schemes have closed due to budgetary constraints (e.g. ReHeat), while new schemes have been introduced (Biofuel Obligation Scheme).

Since early 2010, there has been a carbon tax of €15/tonne CO_2 on liquid and gaseous fossil fuels. However, installations falling under the EU ETS are exempt from this. **This tax will be doubled to €30 by 2014.**

ELECTRICITY SUPPLY

Renewables	Ireland has excellent wind power conditions, yet its share of renewable energy has only increased by 7% over the last 20 years. In 2006 a feed-in tariff was implemented (ReFIT), with the aim of 40% of renewables in gross electricity consumption by 2020. The scheme covers large and small-scale wind energy, hydro, biomass landfill gas, and other biomass. In 2009, this was extended to cover biomass/anaerobic digestion combined heat and power, ocean energy (wave and tidal) and offshore wind, although so far the extended scope has not received EU approval and cannot be implemented. The country has started to investigate how to integrate larger amounts of wind electricity into its all-island grid. Planning is now at an advanced stage.
Energy efficiency	**The combined heat and power Deployment Programme was closed in 2010 due to lack of funds, and the renewable feed-in tariff (ReFIT) is inactive while EU approval for State Aid is pending. However, once approved this scheme will operate with an extended scope, and will facilitate wave and tidal projects as well as wind, hydro and biomass projects.** Through the combined heat and power Deployment Programme and the feed-in tariff, which apply to different forms of combined heat and power production, the country has stimulated energy generation from (small and large-scale) combined heat and power, with a target of 800MW installed capacity by 2020 – around 10% of electricity generation.
Overarching	The government is targeting a 40% penetration of renewables into electricity demand. Renewable energy feed-in tariffs for measures such as wind, hydro and biomass continue to await EU state aid approval.

INDUSTRY

Renewables	**Two of the key support schemes for industry were closed in 2010 due to budgetary constraints.** These were the Renewable Heat Deployment Programme (ReHeat) and the combined heat and power deployment scheme. The government has stated that these schemes will be replaced by market-based mechanisms but has not specified further details. The use of renewable heat/fuel saw a modest increase over the last decade, thanks to the ReHeat scheme, which covered boilers fuelled by wood chips and/ or wood pellets, solar thermal systems, and heat pumps for industrial, commercial and community use. When ReHeat was launched in 2007, the target was 5% heat from renewable sources by 2010.

Energy efficiency	Overall, industry in Ireland is very far from becoming a low-carbon sector by 2050. Energy intensity has increased and the voluntary agreements in place to promote energy efficiency have low ambition levels. **A Better Energy Workplaces scheme has been introduced, whose aim is to stimulate energy-saving actions in the business and public sectors. €11.5m in has been allocated in 2011 to provide grants for sustainable energy upgrades and to networking, training and advisory services.** Accelerated Capital Allowances (ACA) were introduced as a tax incentive in the Finance Act of 2008 to encourage the purchase of energy efficient equipment in the industry and services sectors. **The ACA scheme has been extended until 2014.**
Overarching	The cut of emissions that are covered under the emission trading scheme (ETS Phase II) is minimal and the target for Phase III is not very ambitious. There are no policies on material use and no additional incentives to cut emissions. A huge increase in waste for landfill and incineration is accompanied by a massive increase in landfill gas emissions. A number of initiatives targeting industry were cut due to budgetary constraints, such as the Renewable Heat Deployment programme and the combined heat and power deployment programme. **A new programme called 'Better Energy Workplaces' was launched in May 2011. It provides financial support for a range of sustainable energy measures in the workplace. The scheme is already (as of September 2011) closed to new applicants.**

BUILDINGS

Renewables	In 2006, the Greener Homes Scheme was launched, providing grant assistance to home owners who want to buy renewable energy heating systems. By 2010 the emission savings were 37,000 tonnes. **Funding is to be doubled for home energy efficiency and renewable energy programmes (e.g. Better Energy Homes Scheme, Warmer Homes Scheme) until the end of 2013, after which time these schemes will be ended.**
Energy efficiency	Ireland's building regulations of 2008 require a 40% reduction in energy demand and CO2 emissions associated with heating, domestic hot water and lighting compared to the 2005 regulations. There are plans to increase this to 60% reduction and eventually to increase this reduction to 70% in a further iteration of building regulations in 2013. To this end, a pilot scheme, Low-carbon Homes, has been put in place to demonstrate the best technologies. New energy efficiency standards are in place for domestic oil and gas-fired boilers. The Better Energy Homes Scheme (formerly the Home Energy Savings Scheme) and the Warmer Homes Scheme aim to improve the energy efficiency of existing homes by subsidising the upgrade of insulation and other space and water heating technologies. **The December 2010 budget also introduced tax relief of up to €10,000 for individuals looking to make their homes more energy efficient. Relief will be given at the standard rate of income tax in the tax year following the renovation.**

Overarching	Ireland has been compliant with the EPBD since 2006 by making energy ratings in buildings mandatory. Due to Ireland's economic boom over the last two decades, electricity consumption per capita has increased substantially. In the public sector there is a 33% energy savings target and a requirement to meet at least part of demand from renewable sources. **Under the Better Energy Homes Scheme launched in May 2011 although tariffs for most individual measures decreased, the amount of overall funding increased.** **Funding is to be doubled for home energy efficiency and renewable energy programmes until the end of 2013, after which time these schemes will be ended.**

TRANSPORT

Renewables	A new biofuels obligation was introduced in 2010 together with a Mineral Oils Tax Relief Scheme for non-fossil fuels. The goal is to reach 10% biofuels by 2020. However, the increase in the last decade has not even reached 1%.
Energy efficiency	A policy to differentiate the vehicle registration tax (VRT) according to greenhouse gas emissions was introduced in 2008. VRT was previously about 20% of the average vehicle cost. This measure has led to significant reduction in the purchase of high greenhouse gas emitting vehicles. The Motor Tax is charged to maintain and upgrade the road network and has been redesigned using a categorisation based on CO2 emissions for new vehicles. A vehicle scrapping scheme was introduced in 2010 whereby passenger cars over ten years old being replaced with a new vehicle from the lowest two CO2 categories would be given a government subsidy. The scheme ran until June 2011.
Overarching	Due to the recession transport emissions are expected to fall in 2011. Due to the emissions differentiation introduced into the Vehicle Registration Tax, emissions from new cars have fallen. There has been an intensive campaign in the last few years to stimulate public transport, mainly in the Greater Dublin Area. The Smarter Travel policy is the Government's strategy to reduce overall emissions from transport by 2020. This will be done by targeting a modal shift from cars to public transport as well as increased walking and cycling in the smaller cities and towns and reduced travel through land use planning and policies such as e-working. Policies include investment in public transport infrastructure, reduced spending on road infrastructure and fiscal instruments. The Smarter Travel Project fund seeks to support individual demonstration projects. New electric vehicle grant scheme: Ambitious targets are in place for the electrification of the vehicle fleet. The objective is to develop a smart grid where cars are charged at the best points of the day or night. The objective is for electric vehicles to make up 10% of the transport fleet by 2020. This target is supported by a range of measures. **The government gives a €5,000 grant per vehicle and exempts them from registration tax. Additionally a partnership between the government, the Energy Supply Board and Renault-Nissan is to supply the necessary infrastructure and vehicles.**

AGRICULTURE

Agriculture is economically a very important sector in Ireland accounting for 40% of non-ETS emissions. Agriculture emissions continue to rise. A focus on sustainability was provided via the Rural Environmental Protection Scheme, which finished in 2009. The scheme rewarded farmers for environmentally-friendly farming activities and for bringing about environmental improvement on existing farms.

The Department of Agriculture has invested a substantial amount of funding in research related to the mitigation of enteric fermentation, using dietary supplementation, pasture based systems and also computer modelling of bovine production systems. Ireland is one of the few developed world countries that has an advisory system in place to move research information from the research centres to the farms.

Other programmes include the Suckler Welfare Scheme, which has a side-effect of increasing the efficiency of beef production, and bioenergy grants to stimulate production of willow and miscanthus. This has lead to a decrease in total agricultural emissions of over 10% in the last decade.

In June 2010 the government launched the Food Harvest 2020 programme that set out a vision for Irish food agriculture and fisheries industries until 2020. The plan aims for a 33% increase in food exports by 2020. Measures to achieved sustainable growth include incorporating sustainability into its Beef Quality Assurance Scheme.

FORESTRY

There are a range of programmes relating to forestry in Ireland, which have been rather successful. This includes an afforestation grant and premium scheme to encourage the planting of forests by compensating forest owners for the costs of forestry establishment and for the income foregone during the maturation of the timber crop. The Forest Environment Protection Scheme grants aid and premiums to encourage farmers to combine the establishment of high ecological-value woodland with their participation in the REPS. The establishment of woodland under this scheme is designed to maximize its environmental contribution. However, in recent years planting rates have fallen short of the national target for 17% of forest land cover by 2030.

The Forestry Development Programme supports the objectives of the National Development Plan 2007-2013 by addressing structural weaknesses and development gaps in order to maximise the potential of the forestry sector.

ITALY

Overall assessment

The 2010 version of the Climate Policy Tracker gave Italy a rating of E. Since then, there were some small advances in policy, but Italy still lacks a comprehensive climate strategy reflecting a true ambition to reach a low-carbon economy, a situation compounded by a general lack of coordination and push at the national level. The National Renewable Energy Action Plan was published in June 2010 and the Energy Efficiency Action Plan in July 2011, and they contain initiatives which are supposed to be implemented in the fourth quarter of 2011. However, the difficult economic situation could delay or reduce incentives to move towards a low-carbon economy, unless the government finally starts to consider the green economy as one of the most promising recovery strategies.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Italy is still lacking a comprehensive climate strategy to move it to a low-carbon economy, a situation compounded by a general lack of coordination and push from the national level. Examples of countries that have put forward comprehensive climate strategies are the UK and Denmark.
- Italy's white certificate scheme targets energy efficiency in industry. To be more effective, more support is needed to prioritise of the necessary measures, audits and energy management systems. See for example the energy audits that are obligatory in Denmark.
- Policies to improve the energy efficiency of buildings should be improved. Although sector standards exist and certification has recently become obligatory, penalties and enforcement are not in place. Furthermore, administrative bottlenecks are hampering the process.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G *No recent policy developments.*
ELECTRICITY SUPPLY	D • PV feed-in tariff has been reduced and is subject to continuous changes.	E *No recent policy developments.*	E • Stop to the nuclear plans but no clear new energy and climate strategy.
INDUSTRY	F *No recent policy developments.*	E • Some small positive update to the white certificates mechanism but no significant changes.	E • Energy efficiency plan in compliance with Directive 32/06 has been approved. Strategy is extended to 2020. Target for 2016 is still 9.6%.
BUILDINGS	E • The Renewable Decree n.28/2011 introduces obligations for new buildings and major renovations from June 2012 onwards.	G • Decree n.28, introduces obligation of energy certificate during building transactions. • 55% tax rebates for energy efficiency measures has been extended to 2011.	F *No recent policy developments.*
TRANSPORT	F • New incentives for electric cars approved and starting end of 2011, beginning of 2012.	F • Incentives for the purchasing of more ecological cars have not been extended to 2011. • Benefits for fuel switch of circulating vehicles have been created.	E • Law proposals, such as one introducing incentives for electric vehicles, but no actual new measures were introduced yet.
AGRICULTURE			D *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of the 2010 Climate Policy Tracker found Italy, which was subject to an ambitious Kyoto target, to have some good policy initiatives but it was lacking a comprehensive strategy to reach a low-carbon economy and implemented policies were counteracting this ambition somewhat. A stronger focus on efficiency and renewables, have been promised, although these remain mostly at the planning stage. The use of renewable energy is stimulated by guaranteeing a feed-in tariff over the long-term. Depending on the technology, it varies between 15 and 20 years. This is combined with a renewables obligation which is supported by a green certificate scheme. The 55% fiscal incentive, renewed in 2009 and 2010, for energy-efficiency measures in buildings, including solar-thermal, insulation and glass substitution, was extended to 2011.

Policy developments in the last 12 months

In 2010, no elections took place and no new government was installed. Nevertheless, the government showed clear difficulties in maintaining internal cohesion, creating a critical and unclear political situation, which hindered the already difficult global economic and political situation.

No relevant climate strategy plan was published in 2010 and no specific long term targets for 2020 or 2050 have been fixed by the government in terms of emissions reduction.

In June 2010, following EU Renewable Energy Directive, Italy has published the National Renewable Energy Action Plan which has set targets in line with European goals but is lacking ambition considering the renewable energy potential.

During the summer 2011 Italy experienced strong market speculation, as high public debt reduced the risk appetite of investors in Italian companies. The government was forced to increase the measures to reduce public debt in order to reach budget break even point before 2014 and obtain the support of ECB. New taxes on energy companies have been created (so called Robin Tax), which will also apply to renewable energy production. Nevertheless, as in most European countries, the economic framework remains difficult.

The 55% tax deduction for energy efficiency improvements in the building sector has been extended to 2011 and deductions can be claimed over ten years instead of five. This extension allows the Government to defer the 'deduction payment', resulting in an indirect income for the public pursue. It is not clear yet if the changes to the financial law needed to achieve budget break-even will affect this important incentive.
In general, Italy is not creating sufficient measures to stimulate the economy. Due to its high rate of public debt, priority is currently given to balancing the public accounts. Promoting the green economy is not yet prioritised widely enough.

At the time of writing a number of climate policy measures were being drafted or were due to begin implementation in late 2011/2012, such as a new package for renewable energy and energy efficiency measures that start after 2013, and an obligation to install photovoltaics (PV) in buildings over a certain size. However, until such measures are finalised they cannot truly be reflected in this assessment.

The Italian strategy against climate change targets CO2 emissions reduction in the energy sector through the gradual substitution of fossil fuels (mainly natural gas) with renewable sources and development of new nuclear power plants so as to reach a share of 25% energy from nuclear by 2020. The return to nuclear, following a referendum in 1987, was strongly opposed by public opinion, and a new referendum, held three months after the Fukushima nuclear disaster, has completely halted the nuclear development plan. The government is to publish a new Energy Plan (expected 15 September 2011).

Sectors in detail

GENERAL

Italy lacks a comprehensive climate strategy, although public awareness has increased enormously in just a few years. Local initiatives at municipal level provide best practice examples.

The Energy Efficiency Action Plan was published in July 2011. With the National Renewable Energy Action Plan published in June 2010, Italy has set specific targets for 2020 in line with EU indications but they are not ambitious enough to realise the full potential.

ELECTRICITY SUPPLY

Renewables

Support for renewable electricity is high but important barriers need to be removed to meet future targets, such as administrative bottlenecks.
There is grid priority for renewable energy producers, and they are granted priority in transmission, as long as grid security can be maintained. In this sense current grid capacity is not sufficient. The national grid operator (Terna) has an ambitious investment plan which will hopefully solve the current congestion problems, especially in Southern Italy, where most of the wind capacity is present.

The support is guaranteed for 15-20 years (differentiated by technology). However, the stability of support is not completely predictable in the absence of a medium to long-term strategy and because of frequent changes.

In 2009, a 15 year feed-in tariff for RES-E schemes under 1 MW was introduced. This tariff is expected to have a significant impact on the market.

Photovoltaics (PV) are supported with a premium (Conto Energia) initially introduced in 2005 and then modified again in 2007. This premium for PV production is constant for 20 years and differentiated by size and level of architectural integration.

In August 2010 the third Conto Energia introduced important changes such as new rules and tariffs for plants becoming operational as of January 2011, incentives also for concentrated PV plants, a national target of 8,000 MW by 2020. But this version will not last long: in March 2011 it was decided by Decree Law 28/2011 that Conto Energia III will only be valid for plants becoming operational before 31/08/2011. For PV plants that becoming operational after 31/08/2011 a new Conto Energia IV was published by Ministerial Decree in May 2011.

The Decree Law 28/2011 also introduces some important news for other RES: a new incentive system will be established for electricity producers with renewable sources beginning their activities after 01/01/2013; the green certificate mechanism will end in 2015 with a transition period between 2011 and 2015; and administrative simplifications will be introduced. A new complete set of measures for renewable energy and energy efficiency starting in 2013 is expected to be published in autumn 2011.

Energy efficiency

Combined heat and power (CHP) trends are positive. However, to achieve further increases, stronger policies, less barriers, clarity and stability of existing incentives are needed.

In 2007, specific incentives for (high-efficiency) CHP plants were introduced, such as a feed-in tariff for cogeneration. **At the beginning of August 2011, a decree aligning definitions of high efficiency cogeneration was signed, filling an important gap in the legislative framework. A decree on renewed CHP incentives is expected in autumn 2011.**

INDUSTRY

Overarching	**The Italian government is implementing the EU Directive on Carbon Capture and Storage (CCS, Directive 2009/31/CE). Up till now only private pilot carbon capture and storage (CCS) projects exist. The Environmental Ministry has published a notice regarding financing CCS and energy production projects with renewable sources which defines access criteria and participation terms.** **Concerning the nuclear strategy, a law decreeing a two year suspension of nuclear power development was adopted. In the June 2011 referendum, which had almost 55% participation, 94% voted in favour of a complete stop to nuclear development plans.**
Renewables	Incentives for renewable energy are generally compatible with their application for industrial use. Conto Energia IV focuses strongly on roof-based plants. **New incentives are to be agreed later in 2011 for solar thermal energy.** The focus is mainly on electricity production units of medium size (up to 1 MW).
Energy efficiency	Italy has implemented a White Certificate System to reduce industrial energy consumption. The certificates add 10%-15% to the value of the saved energy for the first 5-8 years. This increases the investment in energy efficiency, but not substantially. **The authority for electricity and gas (AEEG) is going to review some aspects of the certificate mechanism in order to guarantee more efficient procedures, stronger support for long lasting measures, and to introduce new technical sheets for standard projects.**
Overarching	Taxes account for more than 35% of fuel cost (for natural gas). For large consumers, such as the industry sector, a lower rate applies. The tax for electricity use is approximately 14%, but if system costs and grid costs are included, the total tax will increase to 38%. **New Entrants Reserves for the 2008-2012 period have finished, so new entrants need to buy credits in advance, which will be reimbursed after the proceedings of the auctions for 2013 allocations.** The taxes on energy and natural gas have remained constant in recent years. A carbon tax was introduced some years ago, but it was never really applied. Some consumer-facing sectors voluntarily implement good polices, thanks to the diffusion of carbon footprint practice for retail products and organisations, such as by reducing packaging weight and using recycled materials. This is increasing consumer awareness and creating more demand for such initiatives.

BUILDINGS

Renewables	The Italian Government has introduced different incentives. For example, tax deductions at the national and municipal level for the use of renewable sources in buildings. As has happened in the past for other important regulations, the law is published but the implementing measures are still pending and sanctions are not sufficiently enforced. A 55% tax reduction for efficiency measures in building renovation which is available to businesses as well as residential users has achieved good results. **This tax reduction has been renewed for 2011. This tax deduction incentive may yet be influenced by the government's primary focus on achieving budget break-even.** In 2006, buildings larger than 1,000m2 were obliged to install a PV system and solar thermal system covering >50% of hot water and heating demand if a heating system is being newly installed or replaced. **This obligation has now been integrated into the Renewable Decree, 28 /2011, which, as from 1 June 2012, will also require 20% of heating and cooling energy and 50% of energy for sanitary water to come from renewable energy for any new building (some exemptions are made for historical and city centres). Similar regulation applies to electricity use.**

Energy efficiency	Developments are moving in the right direction, but much is left to voluntary initiatives. A stronger political statement is needed to increase progress towards a zero carbon built environment. Policies for new building standards exist but there is no evidence of substantial penalties for non-compliance being enforced and nor is there evidence of the expected outcomes of existing tax incentives for renovation. **The budget for 2011 extended the 55% tax deduction for 2011, for the interventions such as installation of solar panels for hot water production; substitution of heating systems; and building energy re-qualification.** A €11m per year fund for energy efficiency was established. It is also used to finance tax incentives for energy saving lighting systems in non-residential buildings. **These incentives have been extended to 2011. For extraordinary building repair and renovation, a 36% tax deduction has been extended until 2012.** **Sustainability rating systems such as LEED or ITACA are starting to be integrated into the requirements for new important private and public building projects.**
Overarching	Taxes on natural gas and electricity are moderate, respectively accounting for 38% and 14% of the energy price. This is way too low to change behaviour or trigger investment in renewables and energy efficiency.

TRANSPORT

Renewables	Some local, mostly market-driven initiatives for implementing an electric mobility infrastructure exist, but there is no ambitious and comprehensive policy for renewable energy transport yet. **A specific policy to promote vehicles fuelled by renewable energy sources is being implemented, as indicated in the National Action Plan for RE published in June 2010. Legislative decree 28/2011 stated energy calculation methods from renewable fuels for all transport typologies.** **A specific policy for electric cars supporting zero emission mobility in Italy, including incentives of up to €5,000 per electric vehicle purchased, tax rebates, and economic support for the recharging infrastructure construction was approved in July 2011 and will soon becomes law.**
Energy efficiency	Policies to increase vehicle efficiency need improvement. A policy encouraging the substitution of old freight vehicles exists, however there is no specific reduction target. **Financial incentives for fuel conversion (the MSE 2011 incentive) - €500 for conversion to GPL and €650 for conversion to methane - were available from March until April 2011, when the €25m fund expired.**
Overarching	There is lack of coordination between public bodies which could control the shift to low-carbon transport. The train infrastructure should be maintained and promoted more efficiently. The taxes on transport fuels are very high. There are no taxes on CO_2 apart from ETS on aviation. **A road tax proportional to CO_2 emissions is included in the draft of the sustainable mobility law. Italy has implemented the EU directives which monitor CO_2 emissions from aviation.**

AGRICULTURE

	The existing agricultural strategy is not oriented towards energy sustainability. There are no ambitious incentives at the national level, but there are some regional initiatives to reduce nitrogen loads. A law from March 2010 is intended to promote farmers' markets and products with a short supply chain. There are some marketing projects to promote locally and regionally certified products.

FORESTRY

	More than 86.6% of national forest area is regulated by a planning instrument. At the regional level, some areas (Toscana, Liguria and Basilicata) are 100% planned. There is a differentiated tariff for local biomass used for electricity generation.

LATVIA

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave Latvia a rating of E. No significant changes to climate policy have taken place in Latvia in the last 12 months. However, changes in Latvia's renewable electricity legislation during 2010 were made to the implementation of feed-in tariffs. The new regulations are more transparent and clear. The law on renewable energy was due to come into force on 1 July 2011, however by the end of August it was still not effective. Climate change financial instruments have been used to support renewable electricity, heat and transport. These instruments are designed to limit greenhouse gas emissions by introducing renewable energy technologies in heat and electricity production. They have already been applied to the household sector, public buildings and various sizes of businesses. There was no information about a possible prolongation of Latvia's Energy Efficiency Action Plan, the Climate Change Mitigation Programme and the quota obligations for biofuels available.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Latvia is lacking an overall, comprehensive and long-term climate strategy with ambitious and binding national targets to provide long-term certainty to all stakeholders (see UK or Ireland for example).
- Policies on transport, in particular modal shift and energy efficiency could be developed further. Budget-neutral measures to stimulate the purchase of efficient cars could be introduced (see example of taxes based on CO2 emissions in Germany, or the bonus/malus system for the purchase of new cars in France).
- Significant cost-effective energy saving potential could be tapped more comprehensively with measures to stimulate the energy efficient renovation of buildings. If efforts to renovate buildings fall short of this energy efficiency ambition, such moderately renovated buildings will be 'locked-in' for the next 30 years.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G • Some plans, programmes, obligations have not been renewed.
ELECTRICITY SUPPLY	E • A new order of administration of feed-in tariffs has been implemented.	E • Improved support for renewable energy CHP.	E • A law on renewable energy is being prepared.
INDUSTRY	D • Support available for renewable energy use in industry since January 2011.	E *No recent policy developments.*	F *No recent policy developments.*
BUILDINGS	G • Several programmes for renewable energy in buildings (households, municipal).	F *No recent policy developments.*	D *No recent policy developments.*
TRANSPORT	E • Support for biofuel production has been set for 2011, but quota obligations have not been renewed.	F *No recent policy developments.*	F *No recent policy developments.*
AGRICULTURE			F *No recent policy developments.*
FORESTRY			C *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

In 2010 the Climate Policy Tracker found that Latvia's climate policy follows individual case-by-case demands rather than a consistent and long-term climate strategy. An exception is the forestry sector. Efficiency levels in the building and industry sector are low, which make efficiency improvements economically attractive. Barriers to such improvements still have to be overcome.

The highlight of Latvia's sustainability policy is the forestry sector. The entire state forest is certified by FSC and there is a comprehensive set of policies around sustainable forest management, notwithstanding that Latvia has had to deal with a particularly difficult situation following the privatisation of huge parts of its forest area. Generally speaking a consistent land use strategy is defined.

Policy developments in the last 12 months

Parliamentary elections took place in October 2010. The government consists of two centre-right political groups (the Unity Parliamentary Group and the Union of Greens and Farmers) which replaced a coalition of three political groups. The Cabinet of Ministers began exercising its duties on 3 November 2010. The Latvian parliament elected Bērziņš (a member for the Union of Greens and Farmers) as president on 2 June 2011. On 23 July 2011, the Latvian parliament was dissolved in referendum. New parliamentary elections are planned for 17 September 2011.

The government did not publish new climate strategies, although climate change financial instruments have been used.

Seeking to stabilise its economy, Latvia agreed a €7.5bn international support package for 2009-2011. Much of the bailout loan has been used to finance Latvia's budget deficit, enabling the government to pay public sector wages and maintain public services. In 2009 Latvia approved a Medium Term Economic Recovery Plan (which runs until 2015). It includes the following economic recovery measures: improvement of tax policy, reduction of administrative burden, support to micro-enterprises, facilitation of innovations, financial support for entrepreneurship, stimulation of export goods and services, implementation of public-private partnership projects.

In order to pay state aid for the biofuel produced in 2010, additional financing of €23.6m has been set.

Amendments have been made to excise duties (i.e. the duty on diesel fuel has been increased) and Value Added Tax (i.e. abolition of reduced rate for natural gas supplies to households and a standard VAT rate of 22% applied).

Latvia's Government plans to stimulate the green economy. Climate Change financial instruments have been used for environmental and energy efficiency measures with the focus on climate benefits.

On 2 December 2009, Latvia issued notice of its intention to subsidise the construction and operation of a new 400 MW thermal power plant. In January 2010 the European Commission authorised the subsidy for which Latvia now intends to organise a call for tenders.

Sectors in detail

GENERAL

Latvia's climate policy follows individual case-by-case demands rather than being based on a consistent, long-term climate strategy.

ELECTRICITY SUPPLY

Renewables

Latvia has a high share of renewables in electricity production, which is mainly due to a history of large-scale hydropower, although this has decreased over the last years. The support policy is based on a feed-in tariff which is differentiated by technology and sufficiently high, but capped to a limited share of consumption per technology.

Since April 2010, a new feed-in tariff has been implemented. The tariff is granted to biomass, biogas, solar and wind power stations on the basis of a tender. Hydropower plants receive feed-in tariff by submitting an application and necessary documents to the Ministry of Economy and they do not participate in a tender. The new regulation is more transparent and clearer for all. All renewable energy technologies receive support for 20 years. Hydropower receives support if the installed electric capacity is less than 5 MW. For renewable electricity produced in large power plants a reduced feed-in tariff is applied. After 10 years of operation, the level of support will be reduced.

Additionally, some taxes are favourable for renewables, financial support is available from EU structural funds, **and climate change financial instruments are used.**

However, high uncertainty due to frequent policy changes and changes in the permitting and planning procedures hamper investment. **The Law on renewable energy was due to come into force on 1 July 2011, however by the end of August it had yet to do so. On 9 June 2011 the first reading of Law took place, the second one could be submitted until 15 September 2011.**

Energy efficiency

The regulation that handles mandatory procurement of cogenerated electricity has been changed. Now combined heat and power (CHP) plants participating within this framework might receive support in a form of a feed-in tariff. CHPs (less than 4 MW) producing electricity using renewable energy and peat might receive an enlarged feed-in compared to other CHPs (of less than 4 MW). All CHP plants participating within the framework of mandatory procurement with an installed capacity of more than 4 MW, might receive both, feed-in and a capacity payment.

Additional support can be received via direct grants from an EU regional aid scheme.

Overarching

Latvia has implemented a tax on natural resources, which taxes users of imports that release pollutants, as well as a tax on CO2 emissions stemming from energy/electricity consumption. Reductions on the tax can apply if environmental protection measures are carried out. **Water use in waterworks, including hydropower plants and reservoirs, is exempted from the natural resources tax. Electricity supplied to the end user is taxable. However if electricity is produced by renewables, in hydropower plants or CHP power plants complying with the efficiency criteria, it is exempt from this tax.**

In January 2010, EC approved aid for the construction and operation of a 400 MW thermal power plant between 2015 and 2025 in Latvia. Seeking to diversify Latvia's energy mix, the plant should feed on either Liquefied Natural Gas (LNG) that is regasified in Latvia or on solid fuel such as coal, lignite or peat mixed with at least 10% biomass.

In 2010, emissions from the trade sector increased by around 30% in Latvia.

INDUSTRY

Renewables	There are no specific policies to support renewable energies in the industrial sector. There are some general policies to promote renewables but it is not clear if and how far the industry sector is covered. **Based on Regulation No. 12 of 4 January 2011, the industrial sector might receive support under the measure Renewable energy, reduction of GHG. The support is provided to acquisition, construction, installation, reconstruction or replacement of specified renewable energy technologies (heating, electricity generating, cogeneration).**
Energy efficiency	The substantial increase in efficiency in industry between 1995 and 2007 can be mainly attributed to the general restructuring of the sector after the political changes in the early 90's. However, Latvia also has a number of policy measures that target efficiency in the sector. Within industry, the use of the best available techniques, which are detailed in the Latvian Industry Development Guidelines (2004-2013), include the promotion of environmentally-friendly technologies and cleaner production. There are policies on energy audits, information and consultation on energy efficiency and the promotion of best practices. These policies are part legislation and part information provision.
Overarching	The share of recycled waste has decreased in recent years, indicating that policies are not sufficient to keep up with increases in waste production as a result of economic growth. Measures taken include reductions to the natural resource tax for those undertaking waste reduction projects, improving recycling and implementing voluntary packaging management programmes. Additionally, environment and energy management systems are promoted.

BUILDINGS

Renewables	There are no building obligations that require the use of renewable sources for heat or electricity production. **During 2010-2011, the building sector can receive support for the purchase, installation and connection of specified renewable energy equipments under the following measures: Renewable energy for household sector, Complex solutions to reduce GHG in municipal buildings and Complex solutions to reduce GHG in State and local government vocational education building.**
Energy efficiency	The building stock in Latvia is characterised by poor insulation, high energy consumption and a need for renovation. Energy use per capita has increased significantly due to higher standards of living. The EPBD is implemented, but with low standards that are far from the objective of zero carbon buildings. A programme running from 2009 to 2013 supports energy efficient renovation contributing a maximum of 50% of eligible costs. The target groups for this programme are multi-dwelling houses and social housing. There are some small incentives to increase the efficiency of appliances such as information campaigns and labelling. **Based on Regulations No. 1185 of 28 December 2010, the building sector can receive support under the measure Low energy buildings.** There are procurement guidelines for efficiency improvements in the public sector that cover energy efficient electrical equipment, energy audits and the construction of new public administration buildings. Additionally, there is a financial support scheme for municipalities and some small information campaigns. No systematic change can be expected from these measures.
Overarching	There are procurement guidelines for efficiency improvements in the public sector that cover energy efficient electrical equipment, energy audits and the construction of new public administration buildings. Additionally, there is a financial support scheme for municipalities and some small information campaigns. No systematic change can be expected from these measures.

TRANSPORT

Renewables	Biofuels in the transport sector are supported with a combination of a quota obligations, fixed direct governmental support and additional fiscal measures (e.g. exemption of excise duty for biofuels, tax reductions). **The Regulation on Conformity Assessment of Petrol and Diesel stipulates that only diesel with biodiesel content of 4.5-5.0% and petrol with 4.5-5.0% of bioethanol may be sold in Latvia.** The ability of the incentive to trigger further production and to maintain sustainability standards needs to be closely monitored. **The climate change financial instrument Renewable energy in transport sector supports renewable energy utilisation in the transport sector.**
Energy efficiency	Since 2004, different tax rates have been applied to passenger cars depending on age and engine size but not related to emissions.
Overarching	There is some funding for investments in public transport infrastructure and some concepts and guidelines for the promotion of public transport/bicycles. However, there is no stringent strategy and the measures are not sufficient to counter the sharp increase in emissions from transport caused by increasing standards in the country.

AGRICULTURE

The total emissions from agriculture declined substantially between 1990 **and 2008, although there is no stringent policy mix. The key drivers for the fall in emissions are the decline in animal populations and a decline in the use of nitrogen fertilizer due to the economic crisis between 1991 and 1995.** A land use strategy is developed and consistent, although too general in parts. Limits for nitrogen loads exist. Major improvements are possible to reduce methane emissions from animals as there is no dedicated policy. Funding for sustainable farming is available based on EU funds; there is no national incentive apart from that.

FORESTRY

A system for the management of specially protected areas has been developed in Latvia. This system, incorporated in the NATURA 2000 network, covers 12.24% of the territory of Latvia. The majority of the specially-protected areas in Latvia are covered by forests.

LITHUANIA

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave Lithuania a rating of E. The most important changes since then are related to the improvement of renewable energy policy in Lithuania. The national strategy for the development of renewable energy sources as well as the implementation plan for 2010-2015 was approved in 2010. Accordingly, support schemes, which could ensure favourable conditions for renewable energy utilisation, are due to be prepared and implemented this year. The law on renewable energy came into force in May 2011. The adoption of new policy could have positive impacts, but currently it can only be considered as being the first step towards improvement. The National Energy Independence Strategy was adopted by the government in June 2011.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Lithuania's national energy strategy runs until 2025, but renewable energies and energy efficiency are only one out of many priorities. An integrated long-term climate policy strategy is necessary
- One of the main sectors that require significant improvement is the transport sector: the national transport strategy focuses on road infrastructure and inter-modal transport instead of supporting modal shift towards public transport.
- The other important sector is the agricultural sector. Here measures are needed to reduce methane emissions from animals and to support sustainable farming with state funding in addition to EU funding.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F *No recent policy developments.*
ELECTRICITY SUPPLY	D • The National Strategy for Development of renewable energy was approved in 2010. • New Law on renewable energy entered into force in May 2011.	E *No recent policy developments.*	F *No recent policy developments.*
INDUSTRY	E *No recent policy developments.*	D *No recent policy developments.*	F *No recent policy developments.*
BUILDINGS	G • Funds available from special programme "Climate Change".	F • It is considered an option to subsidise 50% of the renovation costs in 2011-2012.	F *No recent policy developments.*
TRANSPORT	D *No recent policy developments.*	E *No recent policy developments.*	F • Lithuania's first electro mobility charging station was installed.
AGRICULTURE			E *No recent policy developments.*
FORESTRY			C *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 Climate Policy Tracker found that although there is an existing national energy strategy in place until 2025, renewable energy and energy efficiency are only one out of many priorities. Excluding the forestry sector, which follows the principles of sustainable forestry and which plans to increase the overall forest area of the state by 3% by the year 2020, no sector has a stringent low-carbon policy mix. Despite the difficult economic situation, the country has put some effort into increasing energy efficiency in the building sector and the share of renewable energies in the country's energy mix. The success stories of Lithuania are:

- There is a consistent set of sustainable policies in forestry. Several measures like planting of forests and limitations on felling are integrated in the implementation strategy of the Lithuanian forestry sector. In the energy sector, the ambitious goal is to increase the share of CHP plants to 35% of total electricity generation by 2025. Due to the shutdown of Ignalina Nuclear Power Plant at the end of 2009, which was the cheapest source of electricity, combined heat and power (CHP) plants are now more economically attractive, even without additional support. Furthermore, public procurement requires that suppliers implement environmental management systems. This is a good way to promote energy efficiency in industry.

Policy developments in the last 12 months

In 2010-2011, no state elections took place and no new government was installed, but local and municipal elections led to new local governments.

The National Strategy for Development of Renewable Energy Systems (RES) was approved by decision No. 789 on 21 June 2010. The main aim is to ensure that the share of renewable energy in the country's total final energy consumption reaches at least 23% by 2020. The implementation plan for 2010-2015 was approved by decision No. 1-180 on 23 June 2010. The plan requires the preparation of support schemes to ensure favourable conditions for renewable energy utilisation.

By the end of 2011 a draft the National Strategy for Climate Change Management Policy for the period 2013-2050 and action plan for the period 2013-2020 are expected to be developed and should be presented to the Government for adoption by May 2012. The strategy and action plan will cover the strategic goals and international commitments of the state relating to adaptation and mitigation of the effects of climate change.

No new economic recovery measures were implemented. There were no budget cuts announced by the government for climate or energy policy related activities.

However, during 2010 the Fund of the Special Programme for Climate Change did not receive revenues from the sale of greenhouse gas (GHG) assigned amount units; therefore there was no possibility to support renewable energy (RES) projects from this source. In 2011, revenues from the sale of GHG assigned amount units will be used for the implementation of energy efficiency projects (modernisation of public buildings/ schools; and for the purchase of municipal buses) and renewable energy projects (replacement of old heating systems with boilers used wood chips in schools and centralised heating systems in municipalities). The Lithuanian Environmental Investment Fund (LEIF) usually supports renewable energy investment projects in the form of subsidies on the interest rate and soft loans. However, the acceptance of investment projects was suspended in the beginning of 2010 until October 2010 due to the economic situation in the country.

The government did not implement measures that would increase its income and worsen the situation for renewable energy or increase CO2 emissions.

Discussions are taking place in the government on how to stimulate the building renovation process. Currently only 15% of the renovation costs are subsidised by the state budget and the subsidy can be doubled if the renovated multi-apartment building reaches energy efficiency class D and reduces energy costs by not less than 40%.

The government has plans for strategic energy projects that could have a negative effect on renewable energy developments in the long-term perspective: the building of a new nuclear power plant and the development of the natural gas infrastructure.

The government intends to increase the speed limit on some highways from 120 km per hour to 130 km per hour. At present one highway is assigned and three others will soon follow.

To stimulate the building market, the VAT rate on labour used during renovation was temporarily reduced from 19% to 6% for the period October 2010-June 2011. Although it applies to all renovation, it can have a positive impact for energy efficiency retrofitting.

Starting in January 2011, vehicle tax has been made dependent on the CO2 emitted, replacing a tax based on the price of the car.

Sectors in detail

GENERAL

Lithuania's national energy strategy runs until 2025. **Currently efforts are being made to improve renewable energy (RES) sector development in Lithuania. The National Strategy for Development of RES was approved in 2010. The new law on renewable energy entered into force in May 2011.** Despite the difficult economic situation, the country has put some effort into increasing energy efficiency in the building sector and the share of renewable energies in the country's energy mix.

The main sectors which require significant improvement are the transport and the agricultural sectors. An integrated climate strategy is lacking.

ELECTRICITY SUPPLY

Renewables	The current support instrument is a feed-in tariff differentiated by technology and guaranteed for 10 years. However, several barriers exist, like long lead-times for authorisation, environmental impact assessment procedures, and changes in the legal status of land. **The adoption of the new law on renewable energy could have positive impacts for the renewable energy sector development in Lithuania.**
Energy efficiency	The national energy strategy sets an ambitious goal for CHP plants; they are to reach 35% of total electricity generation by 2025. However, there is no direct support for CHP, although it is possible to apply for subsidies and soft loans. Due to the shutdown of the Ignalina Nuclear Power Plant at the end of 2009, CHP plants are now economically attractive, even without additional support. **According to the amendment of the Law on Heat adopted in June 2010, heat suppliers must purchase from independent heat producers which satisfy quality, supply security and environmental requirements.**
Overarching	Some additional measures are included in different national strategies e.g. pollution standards for fuel combustion.

INDUSTRY

Renewables	There are no industry-specific policies or funds for the promotion of renewable energy, only general industrial policies.
Energy efficiency	Due to the NEEAP, there are some voluntary agreements with enterprises which are supposed to lead to energy savings of 740 GWh by 2016. However, it is unclear whether they are ambitious enough and will actually deliver. There are also some information programmes, but here, too, the impact is very unclear.
Overarching	There is a law on waste management and a waste management plan. In addition, a law on management of packaging and packaging waste was implemented in 2002. **In 2011 priority is being given to the improvement of the biodegradable waste management system.** Recycling of secondary raw materials and re-usable packaging is being promoted as part of the national strategy for sustainable development. However, all these measures are not sufficient to counter the growth of waste caused by the increasing wealth of the country. Public procurement criteria require the implementation of environmental management systems by suppliers, to promote energy efficiency. This is an innovative and welcome step in the right direction.

Renewables	There are no building laws that require the use of renewables in buildings, nor incentives to use renewable technologies. **However, in 2011 funds from the Special Programme for Climate Change are foreseen for the improvement of energy efficiency and renewable energy utilisation in private, multi-apartment and public buildings.**

BUILDINGS

Energy efficiency	The building stock is characterised by poor insulation, high energy consumption and need for renovation. Performance standards for buildings are not very ambitious. A programme was initiated to modernise at least 70% of all multi-apartment buildings by 2020 and reduce the relative consumption of thermal energy per dwelling area by up to 30%, compared to the year 2004. However, a 30% reduction is far below what is technically and economically possible and the ambition level should be increased. **There are discussions in the government about how to stimulate the building renovation process. Currently only 15% of renovation costs are subsidised by the state budget, although the subsidy is doubled if the renovated multi-apartment building reaches energy efficiency class D and reduces energy costs by not less than 40%. Increasing subsidies to 50% of the renovation cost for the 2011-2012 period is under consideration.** There are some small incentives to increase the efficiency of appliances, including for example design and labelling requirements.
Overarching	A financial support scheme to improve energy performance in public buildings exists. However, it is unclear whether this is part of an overall sustainable procurement strategy. At least two information centres (national/ regional) which address smart uses of energy are operating.

TRANSPORT

Renewables	**At present four biodiesel production plants are in operation with the total nominal capacity of 150 kt. Bioethanol is produced in two plants with a total capacity 60 kt.** Biofuels are supported through tax exemptions/reductions and a compensation for raw materials. They are certainly not sufficient for developing a low-carbon economy. The lack of legislative framework **and specific support for electric vehicles that use renewable electricity are hindering progress, though in April 2011 Lithuania's first electro mobility charging station opened in Kaunas..**
Energy efficiency	No specific policies to increase energy efficiency in cars.
Overarching	Some measures are included in the National Transport Strategy, but the focus is on road infrastructure and inter-modal transport instead of supporting modal shift towards public transport. Overall, the transport system is characterised by severe problems - due to a lack of infrastructure, old cars etc. – and as such it provides a good starting point to create a consistent strategy that is oriented towards a low-carbon transport system.

AGRICULTURE

A land use strategy is implemented and consistent. Financial incentives for organic farming are based on EU funding. The **Lithuanian Rural Development Programme for 2007-2013 supports production of biogas from farm waste, cultivation of short-rotation plantations and the building of wind power plants up to 250 kW capacity (included in the measure Modernization of agricultural holdings). Other financed activities include: disposal of non-hazardous waste by incinerating or producing steam, and disposal of straw and hay waste by producing pellets.**

Measure are needed to reduce methane emissions from animals and to support sustainable farming with state funding, in addition to the EU funding available.

FORESTRY

Different policies and laws cover the principles of sustainable forestry. The target is to increase the overall forest area by 3% by the year 2020. Therefore several measures, such as the planting of forests and clearing limitations are integrated in the implementation strategy for the Lithuanian forestry sector.

LUXEMBOURG

F

Overall assessment

The 2010 version of the Climate Policy Tracker gave Luxembourg a rating of F. There have been no significant developments in the past 12 months. Towards the end of 2011 new policy measures are expected as part of the 2nd CO2 action plan.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Transport fuels sold to foreign cars and trucks make up approximately 40% of emissions in Luxembourg. This high share is encouraged by lower fuel taxes than in neighbouring countries. Initiatives on sustainable transport fuels are key for Luxembourg.
- Luxembourg does not have a longer-term climate strategy or target. (See for example UK and Ireland)
- To further target the energy efficiency of buildings, energy taxes on households could be raised. They are currently one of the lowest in Europe. Also for industry, higher CO2 and energy taxation in combination with exemptions from negotiated agreements would spur energy efficiency and innovation. Good examples are found in Germany, Denmark and Sweden.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G • CO2 abatement and energy efficiency action plans are expected during 2011. • Pacte Climat is being developed with Luxembourg municipalities.
ELECTRICITY SUPPLY	F *No recent policy developments.*	E *No recent policy developments.*	G *No recent policy developments.*
INDUSTRY	F *No recent policy developments.*	F *No recent policy developments.*	F *No recent policy developments.*
BUILDINGS	F *No recent policy developments.*	F • Implementation of EU's Building Directive requirement on gas boiler inspection.	G *No recent policy developments.*
TRANSPORT	F *No recent policy developments.*	F *No recent policy developments.*	F *No recent policy developments.*
AGRICULTURE			E • National Plan for Sustainable Development published, but without new measures.
FORESTRY			F • National Plan for Sustainable Development published, but without new measures.

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

In 2010, the Climate Policy Tracker analysis showed that Luxembourg's policy package focused on renewable electricity generation with some energy efficiency measures in buildings and cars, leaving other areas untouched. The action was not sufficient to transform the whole economy. Low tax levels on transport fuels encouraged higher emissions. The main success story in Luxembourg is that support for renewable electricity generation through a feed-in tariff is generally designed in the right way with sufficient tariffs for different types of technologies, fixed tariffs for 15 or 20 years and a policy without end date and no cap. Still, administrative barriers hamper the employment of the full potential of renewable energy in Luxembourg.

Policy developments in the last 12 months

The political situation in Luxembourg did not change during the last year. Elections were held in 2009 and the current Prime Minister of the Christian Social Party Jean-Claude Juncker is Europe's longest-serving head of government. A substantial change in climate policies has not occurred.

In April 2011 the National Reform Programme Luxembourg 2020 was adopted. This programme, as required by the EU, develops a strategy for 2020 based on five targets. The plan itself does not present new policy measures to reach the EU targets on renewable, CO2 abatement and energy efficiency. Instead, the new measures will be detailed in a CO2 reduction plan that is expected by the end of 2011. A first draft is to be presented to members of the Climate Partnership in October 2011. Thematic working groups of the climate partnership have developed proposals for the Department of Environment of the Ministry of Sustainable Development and Infrastructure. From these proposals, the ministry compiled a catalogue of 35 priority measures in April 2011 which will help to develop the second CO2 action plan.

The second national energy efficiency action plan was expected in June 2011, to replace the 2007 energy efficiency plan, but it has not been sent to the EU Commission yet. A draft version contained few new measures but focused mainly on increasing support for decentralised renewable energy use and some measures for private households.

Also the National Plan for Sustainable Development, adopted in November 2010, reiterates the need for sustainable development, but no concrete new policy measures have yet been initiated.
Luxembourg did see some small developments on individual topics.

- The government reiterated that Luxembourg will not favour nuclear development on its own territory.
- In September 2010, Luxembourg further implemented the EU requirement in the Energy Performance of Buildings Directive (EPBD) that requires a regular review and inspection of boilers after only 15 years of service.

Sectors in detail

GENERAL

	The country does not have a climate strategy including long-term targets. **The second National Energy Efficiency Action Plan (NEEAP) has not yet been sent to the EU Commission. The action plan for CO2 abatement is expected to be presented in its first draft in October 2011.**

ELECTRICITY SUPPLY

Renewables	A feed-in tariff for wind, solar, hydro, sewage and biogas, solid biomass and waste wood was introduced in 1993 and amended in February 2008. It can be combined with investment subsidies. The mechanism has sufficiently high tariffs for different types of technologies, fixed tariffs for 15 or 20 years and a policy without end date and no cap. However, it has not managed to trigger substantial investments in line with the potential of the country.
Energy efficiency	There is some support for micro-CHP, and some investment subsidies and feed-in tariffs for cogeneration up to 1.5 MW. However, grid-connected CHP deployment is currently blocked at the municipal level through legislation by the Ministry of Internal Affairs.
Overarching	There were no further incentives to decrease the carbon intensity of electricity production, which is also reflected in the upward trend in carbon intensity between 2002 and 2007.

INDUSTRY

Renewables	There are some grants available for energy efficiency and renewable energy investment for industry, but no significant policies to specifically target renewable fuel use. The grants cover up to 40% of eligible costs.
Energy efficiency	A voluntary agreement and grants for energy efficiency and renewable energy investments encourage measures.
Overarching	Luxembourg's main industrial product is steel. In recent years, government policy has targeted diversification; chemicals, medical products, rubber, tires, glass, and aluminium are now also produced. There are no efforts to initiate a transformation to a low-carbon industry, no redesign of products, high energy or CO2 taxes, or industrial process carbon capture and storage (CCS).

BUILDINGS

Renewables	There are grants available for the installation of renewable energy sources in households. Various renewable energy sources are subsidised, such as solar thermal and solar photovoltaic systems (30%-50% of the cost up to a specific maximum amount), geothermal heat (40%-50%), and biomass heaters (25%-30%).
Energy efficiency	Energy consumption for space heating and hot water increased substantially in the 1990-2005 period, influenced by an increase in population of around 20% between 1990 and 2005. Although there are some support schemes for energy-related retrofitting, the standards set are only moderately ambitious. While there are subsidies for energy efficient cooling appliances (refrigerators and freezers) and an information campaign oekotopten is financed by the Ministry for Sustainable Development, these measures are not broad enough to deliver substantial results. **In 2011, Luxembourg made some small further steps with the implementation of EU's energy performance in buildings directive (EPBD) requirement on gas boiler inspection.**
Overarching	No information on CO2 or specific energy taxes or on investment in energy-efficient government buildings could be found.

TRANSPORT

Renewables	Since 2007, a biofuels quota is set for operators providing transport fuels for consumption. Pure biofuels can also benefit from a tax deduction. The quota is set at 2% and revised annually. Luxembourg intends to reach half of its total renewable energy target of 11% by 2020 with biofuels. However, since the largest share of these biofuels must be imported, there needs to be close monitoring on where these fuels come from and whether strict sustainability criteria are being applied. There is no specific support for electric vehicles using renewable electricity.
Energy efficiency	Energy efficient vehicles are encouraged by taxation (see below) and subsidies, but the incentive is insufficient to limit the increase in vehicle fuel use.
Overarching	Luxembourg's CO2 Reduction Action Plan (2006) targeted transport by increasing vehicle fuel excise taxes, based on EU requirements, as well as reforming vehicle taxation and giving subsidies to encourage low-carbon vehicles and increase the use of public transportation. In 2007, Luxembourg introduced a so called Kyoto cent, a specific tax which was increased in 2008 to €25 per 1,000 litres of petrol. Although excise taxes have slowly increased, the difference with surrounding countries remains significant. Transport fuels sold to foreign cars and trucks account for approximately 40% of total emissions in Luxembourg. This is also illustrated by the increase of 96% in total per-capita emissions from transport between 1990 and 2008.

AGRICULTURE

Rural developments do not offer incentives and grants for organic farming; solely the preservation and the development of natural zones in rural landscapes are supported. **A national plan for sustainable development was published in November 2010, which included the agriculture sector, but without new measures.**

FORESTRY

Most woods are well managed. The Nature and Forests Administration (NFA) administers municipal woods (some 33% of the forests of Luxembourg), woods owned by the state (11%) and those belonging to public administration (1%). The remaining 55% are private forests, which are extremely fragmented. **A national plan for sustainable development was published in November 2010, including the forestry sector, but without new measures.**

MALTA

Overall assessment

The 2010 version of the Climate Policy Tracker gave Malta a rating of F. The energy policy of Malta is still mainly focused on stimulation of photovoltaics (PV) solar power and wind energy. For PV, existing policies have been extended, for wind energy, the focus is on offshore. Three possible locations for wind parks have been indicated. The feed-in-tariff for solar electricity that is fed back into the grid has been increased to €25 to €28 ct/kWh. The public transport reform of July 2011 is introducing new Euro V buses and is expected to cut emissions. Policies on renewable in heating and cooling and transportation have remained almost unchanged: the grant scheme for solar water heaters is prolonged and the once-only grant for electrical vehicles has been increased.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Malta needs a more comprehensive climate plan with targets and actions that reach beyond 2020 (See for example UK, Ireland).
- More measures are needed to decrease fossil fuel dependency in the electricity sector. The support mechanism for renewable energy needs increased stability and predictability and must be designed in a way to also allow non-domestic investment. Good practice examples can be found in various European countries.
- Malta should consider introducing support policies for CHP, as none exist so far.

MALTA F

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F *No recent policy developments.*
ELECTRICITY SUPPLY	F ↑ • Higher feed-in premium for solar that is fed back into the grid. • Malta is planning an offshore wind park.	G *No recent policy developments.*	F *No recent policy developments.*
INDUSTRY	E ↔ • Micro Tec Credit Scheme for SME but limitations and uncertain duration.	F *No recent policy developments.*	G *No recent policy developments.*
BUILDINGS	D *No recent policy developments.*	F *No recent policy developments.*	F *No recent policy developments.*
TRANSPORT	D ↑ • Increased purchase grants for electric cars. • lower road tax for electric cars.	F ↑ • Renewed Euro V fleet for public transport.	D *No recent policy developments.*
AGRICULTURE			D *No recent policy developments.*
FORESTRY			C *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 Climate Policy Tracker found that Malta, the smallest EU country, had made significant efforts to improve the environmental situation since its entry into the EU. They formulated a national strategy on climate containing 96 measures, though without an emission target and it does not go beyond 2020. In general, policy implementation has been mixed. A relative Maltese success story is that solar hot water heaters for buildings are well supported; up to 66% of costs are eligible to be covered. However, this support can be stopped by the government at any time, which causes investment uncertainty. There are active plantation management and reforestation projects being carried out.

Policy developments in the last 12 months

In Malta no elections have taken place since 2008 and no changes were made in the parliament or coalition. To further stimulate the use of renewable energies, in September 2010 Malta increased the feed-in premium for domestic solar electricity that is fed back into the grid. The majority of the incentives to promote renewable energy and improve energy efficiency were implemented; schemes to install photovoltaics (PV) and solar water heaters at domestic level were introduced, and schemes for the industry to improve its energy efficiency and to install solar and wind powered energy were set up. However, no continuation in the schemes has been guaranteed.

Grants for the purchase of electric cars were improved; however there has been a very low response. The 2011 reform of the public transport system, which saw the introduction of new Euro V buses, is expected to improve levels of service and reduce the quantity of CO2 emissions from public vehicles.

Besides individual-oriented policies, Malta is also developing plans for an offshore wind farm. Three places have been identified as possible locations of which one has been tested. Further tests are needed before Malta will decide if it is to build offshore wind park.

The government gave licences to two firms to start oil exploration in Maltese waters with operations that will run until January 2013.

Sectors in detail

GENERAL

Malta is the smallest EU country and its area is a limiting factor. However, since its entry into the EU, Malta has made significant efforts to improve the environmental situation.

The national strategy on climate has 96 measures but no emissions target and it does not go beyond 2020. In general, policy implementation has been mixed.

A more comprehensive climate plan is needed with targets and actions that look beyond 2020.

ELECTRICITY SUPPLY

Renewables	In the policy mix for land owners there is support for small grid-connected photovoltaic (PV) and wind installations, net metering for small PV with a fixed electricity price that is lower than the market price, and soft loans. There is no investment security with the existing system, as support can be terminated at any time. **Malta has increased the feed-in tariffs for solar electricity to €25 ct/kWh on the island of Malta and €28 ct/kWh on the island of Gozo. Prices are guaranteed for eight years. The feed-in premium of non-domestic solar energy is €20 ct/kWh and is guaranteed for seven years.** **Malta is considering building an offshore wind park in the Mediterranean Sea. Feasibility testing is ongoing. It is unknown when the final investment decision will be made.**
Energy efficiency	Malta has no specific targets to increase the share of combined heat and power (CHP) despite having plans to support CHP. However, the latest power plant addition to Malta's energy park is not going to use CHP and retrofitting of the two existing plants is not foreseen. **Furthermore, no new concrete policies are being discussed and the support scheme for Small and Medium-sized Enterprises (SMEs) appears to be limited.**
Overarching	Some efficiency measures for existing power plants are in place. However, an additional combined-cycle diesel engine power plant is planned which could optionally also be implemented as a natural gas plant.

INDUSTRY

Renewables	**A Micro Tac Credit scheme to increase the production of renewable energies by SMEs has been promoted. However there are limitations in the funds available and uncertainties over its duration.**
Energy efficiency	An addition to the mix of policy instruments to increase energy efficiency, is the energy auditing schemes being implemented, such as the energy auditing scheme for major industrial activities and an 'Eco-contribution' scheme to provide an incentive to minimise waste (in the industrial, commercial & domestic sectors). However, the impact of the incentives are unclear.
Overarching	No policies found to supporting the redesign of products. The mineral oil/ excise duty tax is insufficient.

BUILDINGS

Renewables	A support scheme for domestic solar hot water heaters covers up to 66% of costs up to a maximum of €460 per family/installation. The scheme can be modified or terminated at any time, which makes long-term planning difficult. Support for geothermal energy is being planned but not yet implemented. **To stimulate renewable energy in the built environment, the government offers soft loans for hotels and restaurants to encourage investment in cleaner technologies.**
Energy efficiency	**The EU directives (Energy Performance of Buildings, Ecodesign) have been transposed and an ad hoc office within the Ministry of Resources and Rural Affairs has been created. However, implementation and enforcement of the directives by public authorities appears to be weak.** While there is a funding scheme for roof insulation in lace, additional measures to support retrofitting and ambitious performance standards are needed.
Overarching	There are some good public sector initiatives such as exemplary energy efficiency measures in public buildings or social housing and an information campaign. However, there is no CO2 tax and energy taxes could be more stringent.

TRANSPORT

Renewables	The target from the Biofuel Directive will likely be met through specific support for biofuels produced from waste and some other sources and tax exemptions for the biomass share in biodiesel; there is an incentive for electric cars in existence but no explicit requirement for renewable electricity. **Purchase grants for electric cars have been increased. However the take-up of this scheme has been very poor. With few units being sold, it makes it more difficult for the country to reach its target of 5,000 electric cars on the road by 2020.**
Energy efficiency	Regarding the EU initiative on emission performance standards, some policies support better energy efficiency via speed limits, energy efficient driving, congestion management, etc. However, Malta has no vehicle manufacturer. There are no incentives for freight transport. A new public transport reform is replacing all old buses with a new and more efficient Euro V fleet.
Overarching	The overall policy mix is contradictory and needs improvement. There are various policies in place to encourage modal shift alongside strong incentives for continued car use (road improvements, traffic control, etc...).

AGRICULTURE

The existing code of good agricultural practice needs to be improved by being made climate relevance. Limits on nitrogen loads per hectare are included in the best practise code. A shift to organic farming is not supported in the existing code. A project to mainstreaming climate change issues in the land-use planning process of the Maltese islands is to be delivered by 2013.

Wastewater is poorly used in the agricultural sector, and recent development of sewage treatment plants has not included the reuse of water in the agricultural sector.

FORESTRY

Malta has a very limited forest area, more than 70% of which is publicly owned. One hundred percent of the forested areas are plantations and under management plans. There are also some afforestation projects underway.

NETHERLANDS

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave the Netherlands a rating of E. Developments over the last 12 months show a weakening of policy in several areas. The Netherlands lowered its ambition by selecting EU targets instead of its previously formulated and more far-reaching national targets. A new government has not developed a vision or strategy that looks beyond 2020. Plans for a green deal, published in October 2011, contain no new steps in the transition towards a low-carbon economy. The stability of the renewable energy policy also remains a point of concern, with a lack of clarity about the scale of future support.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- The Netherlands lacks an ambitious, long-term and binding national target to provide long-term certainty to all stakeholders (See for example UK, Ireland).
- The stop-and-go policy for renewables needs to be replaced by a stable, long-term system, as the ongoing discussion about replacing instrument creates investment uncertainty. Removing budget restrictions from the current support system SDE+ would be an important step in the right direction (see Germany for example).
- The recent change in taxation for new vehicles and continued support for electric vehicles are steps in the right direction, but the ambition level for for energy efficiency in existing fuel-based vehicles need to be increased.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			E ↓ • Renewable energy target for 2020 reduced to minimum EU levels. • Green deal of October 2011 does not contain new long term strategy. • Research funds will be cut.
ELECTRICITY SUPPLY	F ↓ • Feed-in premium scheme renewed, focus on cheapest technologies.	F *No recent policy developments.*	F ↓ • Fiscal advantage for green investments cut back.
INDUSTRY	E *No recent policy developments.*	F *No recent policy developments.*	E *No recent policy developments.*
BUILDINGS	E ↓ • Subsidy scheme for renewable heat in households (2008-2011) cancelled prematurely.	F ↑ • VAT rate on renovation is temporarily reduced.	D *No recent policy developments.*
TRANSPORT	D *No recent policy developments.*	E ↔ • Intention to increase speed limit highways to 130 km/hr. • Purchase tax on new cars depends on the CO2 emitted. • Intention to apply fiscal advantages only to extremely efficient cars from 2012 onwards.	F *No recent policy developments.*
AGRICULTURE			C ↔ • Plans to further extent the National Ecological Network are put on hold as part of the government's budget cuts.
FORESTRY			C *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 Climate Policy Tracker showed that while the Netherlands had formulated a strategy with targets for 2020, the implementing measures were insufficient. The stability of the Dutch (renewable) energy and climate policy is a key point to be taken into consideration.

Success stories are:

- The Netherlands is considered a frontrunner in developing sustainable biomass criteria, although these criteria are not obliged for government support.
- Energy taxes for households are relatively high, representing 50% of the total consumer price.
- The Netherlands provides substantial support for energy efficient new cars with fiscal incentives; both for private and company use.

Policy developments in the last 12 months

On 14 October 2010, a new right-wing coalition minority government took office, following elections resulting from the collapse of the central-left cabinet in February 2010. The new government distanced itself somewhat from the previous administration's energy policy, setting a target of 14% for renewables in final, consumed energy, in line with the European Union legislation. This is lower than the previous target of 20% renewable energy in primary production, even after correcting for the differences between final and primary energy. The Dutch energy plans, published in June 2011, state that:

- Nuclear energy is to play an important role in reducing CO2 emissions.
- A new Green Deal with business that will replace the previous government's strategy. Details are not yet know.
- The existing key financial support instrument for renewable energy - the feed-in premium scheme SDE – will be replaced by a new scheme called SDE+. A capped budget of €1.5bn will be available for new installations as from 1 July 2011. This is equivalent to approximately €100m per year. The main difference is that the SDE+ optimises short-term implementation and has a strong focus on cost-effective technologies. Also small-scale photovoltaics (PV), i.e. <15 kWp, is no longer to be an eligible technology. The scheme has four sequential subsidy rounds, increasing per round from €9 ct/kWh to €15 ct/kWh. The previous scheme, which supported innovative technologies that are currently more expensive, was put on hold.

Several budget cuts were announced that impact the Dutch energy and climate package:

- The government plans not to renew research funded by natural gas revenues from 2011 onwards, resulting in budget cuts of up to approximately €500m annually by 2015. At present these funds mainly aid research into a bio-based economy and carbon capture and storage.
- Regulations to stimulate green investment have been scaled back. Under a green investment scheme, interest or dividends derived from investments are exempt from income tax and are thus attractive for investors. As from January 2011 the tax advantage was reduced from 2.5% to 2.2%. The plan is to incrementally reduce the exemption to 1.3% by 2014. Plans will affect both commercial investment in renewable energy and consumers taking (lower) interest loans to renovate buildings.
- Subsidies for renewable heat in households were cancelled prematurely as of February 2011. Of the total budget of €66m assigned for the years 2008-2011, €40m was spent before the scheme was abruptly ended.

The government intends to increase the speed limit on some highways from 120 km per hour to 130 km per hour. At present one highway is assigned and three others will soon follow.

To stimulate the building market, the VAT rate on labour used during renovation was temporarily reduced from 19% to 6% for the period October 2010-June 2011. Although it applies to all renovation, it can have a positive impact for energy efficiency retrofitting.

Starting in January 2011, vehicle tax has been made dependent on the CO2 emitted, replacing a tax based on the price of the car.

Sectors in detail

GENERAL

The Netherlands adopted EU targets. No strategy exists beyond 2020. The new government has announced a green deal with business, but details are not yet known (September 2011).

Innovation and research is of key importance to the Dutch knowledge economy, **but research budgets were cut at the beginning of 2011.**

ELECTRICITY SUPPLY

Renewables	**A new key financial support instrument for renewable energy, called the SDE+ to replace the feed-in premium scheme, SDE. A budget capped at €1.5bn for new installations will be available as from 1 July 2011. It is equivalent to approximately €100m per year. The main difference is that the SDE+ optimises short-term implementation, with a strong focus on cost-effective technologies. Also small-scale PV (<15 kWp) are no longer eligible. The scheme has four sequential subsidy rounds, increasing per round from €9 ct/kWh to €15 ct/kWh. The previous scheme to support innovative but currently more expensive technologies (e.g. geothermal energy, solar PV, off-shore wind) was put on hold. Changes to the system for 2012 onwards have yet to be determined – a requirement for co-firing of biomass and subsidies for renewable heat is under consideration.** Administrative bottlenecks with regards to renewable energy exist, especially for onshore wind power. Policy on renewable energy has been unstable over the last decade. Although the current subsidy scheme gives 12-15 years support once a subsidy is granted, the former scheme stopped unexpectedly in 2006. It took two years for this gap to be filled by the current scheme. Preferential treatment of renewable electricity is not yet established, but introduction of a new policy is underway. Noting the current share of renewable energy in the Netherlands this is not (yet) a barrier for growth of renewable energy. The Netherlands is considered a frontrunner in sustainable biomass criteria. The Cramer Criteria of 2006 are described in the standard NTA 8080, which is more stringent than EU legislation. Subsidies for biomass within the SDE scheme are not yet subject to sustainability criteria, but some 'high risk' biofuels (palm oil) are excluded.
Energy efficiency	There is no support for Combined Heat and Power (CHP) at present.
Overarching	The Netherlands is active in Carbon Capture and Storage (CCS), but activities do not focus on biomass CCS. **Initiatives to store carbon have been put on hold due to public resistance in late 2010.** Energy companies are exempted from the Regulatory Energy Tax. **There is no intention to have more stringent performance standards than those prescribed at the EU level. In 2011 three coal-fired power plants are being built in the Netherlands, and four more are planned. The electricity produced will mainly be exported. An earlier negotiated limit of 350 gCO2/kwh was dropped.**

INDUSTRY

Renewables	In the period 2008-2009, eleven industrial demonstration projects were subsidised, of which eight concerned the use of biomass. Although criteria for imported biofuels (NTA 8080) are stricter than EU legislation, they are not yet obligatory. Granting of subsidy is not subject to these criteria.

Energy efficiency	The main policy instruments are voluntary agreements, which have good coverage (90% of industry) and targets (2% energy efficiency per year), but they lack penalties for non-compliance.
Overarching	Two demonstration projects on CCS with process emissions were planned, but both were cancelled. Exemptions on the Regulatory Energy Tax are made for industry, including the horticulture sector.

BUILDINGS

Renewables	**Subsidies for renewable heat in households are no longer available: as of February 2011 the existing subsidy scheme was cancelled prematurely. Of the €66m budget reserved for 2008-2011, €40m was spent before the scheme ended.**
Energy efficiency	**The status of the previous government's target for new buildings to be climate neutral by 2020 is currently unclear.** Ambitious targets for retrofitting houses exist, but the policies (mainly financial incentives) are not sufficient to meet the targets. Building standards are only checked when granting permits prior to construction. Enforcement after construction is considered weak.
Overarching	There is a relatively high energy tax on energy use in households. Taxes represent about half of the end-user price.

TRANSPORT

Renewables	The policy is to reach 10% renewable energy use in transport by 2020, by blending-in biofuels. There are no policies that support the use of 'pure' biofuels in vehicles. Excise taxes on biofuels are similar to other transport fuels and are (relatively) high. Policies in place target 200,000 (5%) electric cars by 2020. Examples of measures taken to make electric vehicle very attractive financially include: exemption from vehicle tax; exemption from road tax; and appealing conditions for electric company cars. Companies can deduct investment in electric charging points from their income tax.
Energy efficiency	Some additional incentives exist, such as no vehicle tax for efficient cars. **The purchase tax is now based on the CO2 emitted. Campaigns promoting eco-driving have been extended for the period 2011-2014. The target is to reach the limits set by EU legislation.** **In June 2011, the government published plans to allow fiscal advantages (regarding the vehicle tax, road tax and fiscal scheme for company cars) to extremely energy efficient cars – i.e. those emitting less than 50 g CO2 / km until 2015.**
Overarching	There are several excise duties, which differ for diesel, petrol and natural gas. On average they are 100% of the fuel price, meaning that 50% of the total price is taxes.

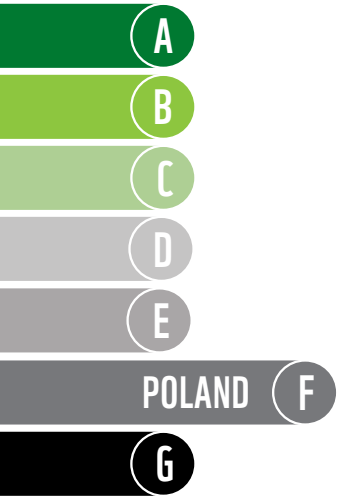
AGRICULTURE

In general the Netherlands is well organised with respect to land use planning. The framework is set out by the national government through the National Ecological Network Programme. **Plans to further extend the network are put on hold as part of the government's budget cuts.**

Nitrogen loads in the Netherlands are high due to intensive farming.

FORESTRY

Good laws against deforestation. Use of domestic wood is relatively low, accounting for 7% of total wood use.



POLAND

Overall assessment

The 2010 version of the Climate Policy Tracker gave Poland a rating of F. The policy package is stable compared to last year, with limited positive and some negative changes. Poland is currently implementing the EU climate and policy package, with action plans for renewable energy, low carbon and energy efficiency targets for 2020. Energy efficiency in buildings is supported through funds raised from the sale of emissions allowances and by a new white certificate scheme, which also covers generation, transmission end user savings and more. The tax exemption for biofuels recently expired. Poland is planning new nuclear power capacity and exploring the use of shale gas. The emissions cap for power plants is not strictly implemented as Poland plans to use the option of transitional free allocation of emissions allowances for power plants while aiming to complete the modernisation of the energy sector.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- In Poland, the use of renewable energies or energy efficiency in the industrial sector is not explicitly addressed by support policies.
- There is a lack of policy support to address the need for carbon efficiency improvement in the Polish transport sector. There are no plans for electric mobility, the CO_2 limits for new cars do not go beyond EU legislation and the budgeted investment in a future low-carbon infrastructure is insufficient.
- Renewable electricity production is supported via a quota system whose ambition levels are lower than those required by the EU.

POLAND F

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F ⇔ • New strategies developed to reach 2020 targets on renewable energy, efficiency and low carbon. • Polish roadmap for low carbon plan 2050 is expected to be finished in 2013.
ELECTRICITY SUPPLY	E *No recent policy developments.*	F ↑ • White certificate scheme introduced to increase energy efficiency; law adopted but scheme not fully operational yet.	E ⇔ • One out of two carbon capture and storage pilots cancelled. • Plans for new nuclear power plants • Studies and search for exploration of shale gas. • Plans for derogation of auctioning in the emission trading system.
INDUSTRY	E *No recent policy developments.*	G *No recent policy developments.*	F • Tax benefits for energy intensive industry reduced
BUILDINGS	G *No recent policy developments.*	F ↑ • White certificate scheme introduced to increase energy efficiency; law adopted but scheme not fully operational yet. • Plans to use sales of emission trading system's credits for renovation of public buildings.	G *No recent policy developments.*
TRANSPORT	F ↓ • Excise tax exemption for biofuels expired in April.	G *No recent policy developments.*	G ⇔ • Plans to shift EU cohesion funds of €1.2bn from rail to road projects.
AGRICULTURE			F *No recent policy developments.*
FORESTRY			E *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of the 2010 Climate Policy Tracker noted that although Poland has an energy strategy, it only runs until 2030 and the level of ambition is too low. Energy, industry and forestry policies exist, but are not sufficient to attain a low-carbon economy by 2050. Poland has had some success with its state forest policy and programme to increase the forested area, including guidelines on how to develop regional spatial development plans for afforested areas, but more work needs to be done. In the building, transport and agriculture sectors big efforts are needed to move towards a low-carbon future.

Policy developments in the last 12 months

There was no change in government in the last year. Elections took place in October 2011. Since 1 July 2011, Poland holds the Presidency in the Council of the European Union, where energy policy and the EU budget are expected to be key topics. As there is no recession in Poland, the government has not been required to issue special economic recovery plans, instead it is focused on making conditions easier for business by reducing bureaucracy. Although the 2011 budget for agriculture is higher than in 2010, this does not impact climate and energy policies.

Poland is implementing the EU's energy-climate package and has developed several action plans. In December 2010 a new National Action Plan for energy from renewable sources was adopted. It aligns targets for the share of renewable energy use with EU requirements. Poland has implemented an energy strategy that runs until 2030, while a broader policy paper National Programme for the Development of a Low-Carbon Economy, published in August 2011, focuses on the economic, social and environmental benefits of emissions reduction and reduced energy and material intensity, such as the creation of new jobs and enhanced economic competitiveness. This roadmap is expected to be finished in 2013. Furthermore, Poland will also develop a National Action Plan for Energy Efficiency.

Resulting from these action plans, Poland is implementing new policy measures:

- The law governing the support system for renewable energy is being amended to require a sustainable supply of renewable energy to final customers and the implementation of a national target of at least 15% share of renewable energy in gross energy consumption by 2020.
- In April 2011, a new law on energy efficiency introduced a white certificate system that makes it possible to trade certificates in energy efficiency. Companies that sell electricity, natural gas or heat to final consumers will be obliged to obtain certificates (if they have reduced energy consumption by investing in new technologies). The scheme is part of the implementation of European Energy Services Directive 2006/32/EC.

The excise tax exemption granted for the addition of biofuels to fuel expired at the end of April 2011
Climate and energy related plans that have yet to result in new legislation include:

- Funds raised from the sale of credits under the Emission Trading Scheme (so far €57m) are to be invested in projects that reduce energy consumption, with a special focus on the renovation of public buildings.
- Polish energy supply plans foresee the building of new nuclear power plants. Studies and exploration for shale gas are also being executed. The government plans to legislate for the use a transitional free allocation of emissions allowances for Polish power plants, derogating the amount auctioned under the European Emissions Trading Scheme.
- The government intends to set up a new investment programme for road projects, partly financed by reallocating €1.2bn of European Cohesion Fund support earmarked for rail transport.

In August 2011, the government issued proposals to move Poland towards a low-carbon economy by 2050. This roadmap will be finalised in 2013. However, Poland objected to EU plans to cut EU emissions by 25% by 2020.

Sectors in detail

GENERAL

Although Poland has an energy strategy, it does not look beyond 2030 and the level of ambition is too low. **More broadly, a National Programme for the Development of a Low-Carbon Economy is being developed to guide Poland towards a low-carbon economy up to 2050.**

Energy, industry and forestry policies exist, but are not sufficient to reach a low-carbon economy by 2050.

A big effort is needed to move the building, transport and agriculture sectors towards a low-carbon future.

Intensive exploration for gas from shale rock is ongoing, and plans for a nuclear power plant are being developed.

ELECTRICITY SUPPLY

Renewables

Support for renewable energies in the electricity sector is granted through a quota in combination with certificates of origin. The certification is the same for all technologies, so expensive technologies, like photovoltaics (PV), are not especially supported. The quota will increase from 10.4% in 2010 to 12.9% in 2017, which is only a third of the required increase. Experts see the current system as expensive and not very efficient. From 1990-2008, the share of renewable electricity increased by just 3%. The approval phase for renewables projects is rather long.

Renewable electricity producers are granted access to the grid 'without discrimination', i.e. not preferentially. Regarding congestion management, renewable electricity is treated preferentially. The Polish grid infrastructure in general will be reinforced, and renewables are one of the reasons for that. However, no strategy taking into account the special needs of renewables exists.

The National Action Plan for Energy from Renewable Energy Sources targets a 15.5% share of renewable energy sources in energy production by 2020. Meanwhile, in accordance with EU energy and climate package, Poland should by then be producing up to 15% of green electricity and heat.

Energy efficiency

Combined Heat and Power (CHP) is supported through a quota system. However the current support is insufficient for strong growth of CHP use.

In April 2011 a white certificate system became law. It makes it possible to trade certificates of energy efficiency. Companies that sell electricity, natural gas or heat to final consumers will be obliged to obtain a certain number of certificates (if they have reduced energy consumption by investing in new technologies). The scheme is not yet operational, but is expected to become so in early 2012.

Overarching

The tax on conventional fuels for power plants is rather low. For coal and coke, Poland makes use of an exemption and has yet to set the tax at the minimum EU level, which will have to be done by 2012. Subsidies for coal mining have been substantially reduced since the 1990's, but some still exist and there are no plans to phase these out.

The government has made proposals for possible locations of a new nuclear power plant.

The development of CCS in combination with biomass or natural gas is not supported in Poland. Two pilot projects in combination with coal power plants were planned with the financial support of the EU. Due to the high costs and high investment risk, one of the investors recently resigned from applying for funding worth 5.5 billion polish zloty (€1.26bn) from the EU's NER300 programme. The other investor requires more support, like certificates for clean coal technologies for example, to be able to participate in the project.

INDUSTRY

Renewables	There are no special policies aimed at increasing the use of renewable energy in the industrial sector. There is a general support system for renewable energy: quota obligations for suppliers of electricity to end users. The Emissions Trading System also motivates industry to use renewable energy.
Energy efficiency	There is some financial support for energy efficiency projects in industry. **The Polish Sustainable Energy Financing Facility is a €150m credit line financed by European Bank for Reconstruction and Development. It was established to help small and medium-sized businesses invest in sustainable and energy efficient technologies.**
Overarching	Although there are no renewable energy policies dedicated to the use of renewables, companies are interested in using renewable energies if financially attractive. There are no policies in place that encourage the redesign of products to be longer-lasting, less material-intensive and recyclable.

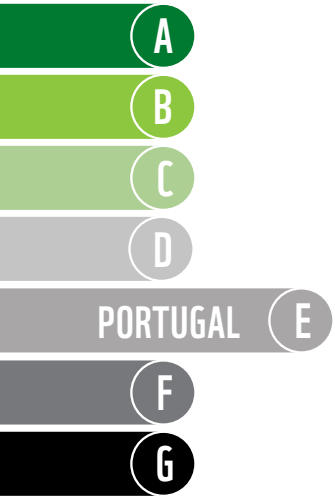
BUILDINGS

Renewables	Renewables in buildings for heating and cooling purposes were supported through the Thermomodernisation Fund which also targeted efficiency measures. Grants of 25% of the total investment were provided, however, the amount of available finance for 2010 was zero. Incentives for solar thermal collectors are given through a dedicated credit line. From 1990-2005, the use of renewables in buildings increased by 10%, without taking electricity into account.
Energy efficiency	No strong building standards are in place for new buildings and there is no aim to reach zero energy buildings in the near future. The Energy Performance of Buildings Directive (EPBD) has been transposed into Polish law but with serious delays. While certification exists for buildings there are no penalties for owners who do not possess these certificates. The legislation is rather weak and ineffective. **The EPBD-recast will also be implemented in Poland.**
Overarching	The level of taxes on energy for the building sector is quite low.

TRANSPORT

Renewables	A quota for biofuels was introduced in 2006. Targets are set annually, taking into account availability and production capacity as well as EU legislation. The quota started at 3.45% in 2008, and biofuels have to fulfil a target of 7.1% by 2013. **The subsidies for biofuels have been maintained in 2011; currently they are at the level of 1.5 billion polish zloty (€344m). In 2012 there will be a special fund created to promote the production and use of bio-components and biofuels.** No additional support for biofuels is in place. The sustainability of imported biofuels has not yet been addressed. Electric vehicles are not explicitly included in any strategy for the transport sector and thus renewable electricity does not play a role in the development of transport.
Energy efficiency	Poland has not yet implemented the EU target for new vehicle emissions. For freight vehicles, no incentives exist to reduce emissions. In the recent past emissions from trucks have increased rather than decreased – by 33% from 1995 to 2007.

Overarching	Poland aims to limit the growth of traffic and use lower carbon transport and technical and organisational solutions to reduce harmful influences on the environment. However, concrete measures to achieve these targets are missing in the transport policy. Tax levels for transport fuel are set at the minimum level required by EU legislation and do not encourage lower fuel use. **Excise tax allowance granted for the addition of biofuels to fuel expired in April 2011.**
AGRICULTURE	The rural development programme 2007-2013 provides financial support to the agricultural sector to reduce negative influences on the environment, such as with premiums for the reduction of fertilizer use. Apart from that, no strong policies in the field of agriculture currently exist.
FORESTRY	In the forestry sector, various policies are in place to protect forests and improve them. There are guidelines for forest management and regional spatial development plans. Poland has successfully implemented a programme to increase its forest area. From 1990 to 2007 the forest carbon stock increased. The state forestry agency collects forest inventory data from all districts. However, these measures are not sufficient to ensure low-carbon development in the forestry sector.



PORTUGAL

Overall assessment

The 2010 version of the Climate Policy Tracker gave Portugal a rating of E. Portugal is showing a slightly positive development in its comprehensive approach to creating a low-carbon and green economy. However, action is limited due to the difficult financial situation. Both energy efficiency and renewable energy are promoted and supported at all levels to some extent. Environment-related fiscal reform is being considered to eliminate indirect incentives for fossil fuel.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Portugal still lacks an ambitious, long-term and binding national strategy and target for 2050. The current strategy, in place since 2010, doesn't look beyond 2020. A 2050 plan would provide long-term certainty to all stakeholders (see for example UK, Ireland).
- Portugal needs to introduce an environmentally-sound taxation system, that favours renewables over fossil fuel based electricity generation (see for example Denmark).

PORTUGAL E

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F • Low Carbon National Roadmap 2020: December 2011. • Sectoral low carbon plans: December 2012. • Climate Change National Plan 2020: December 2012.
ELECTRICITY SUPPLY	C *No recent policy developments.*	E *No recent policy developments.*	F • New development programs on smart grid and enhancement of 'buffer' effect of large hydro and electric vehicles.
INDUSTRY	F • A new 'mini-production' incentive entered into force, for small and medium enterprises.	E *No recent policy developments.*	F • Taxation level for fossil fuel planned but not yet effective.
BUILDINGS	F • Mini production system improved.	G *No recent policy developments.*	F *No recent policy developments.*
TRANSPORT	D • New decree law for biofuels, sustainability criteria introduced.	F *No recent policy developments.*	C *No recent policy developments.*
AGRICULTURE			D • Locally produced non-food biomass from agriculture used in biodiesel production gives the right for 1.3 credits of biodiesel production.
FORESTRY			E *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 Climate Policy Tracker highlighted the significant effort to implement new policies to reach the Kyoto target, but noted significant gaps in the country's path to low-carbon development. Several good initiatives were planned but not yet implemented in 2010.

Highlights include:

- Portugal's well-designed feed-in tariff for renewable energy sources which means it is about to reach the ambitious target of having 45% of consumed electricity powered by renewable energies.
- Energy efficiency policies for the industrial, building and transportation sectors are promising.

Policy developments in the last 12 months

Portuguese debt to GDP ratio is very high, and in early 2011 international rating agency's raised concerns about the economy. On 23 March 2011 the Prime Minister José Sócrates resigned after parliament his austerity plan. He agreed to continue in his function until new elections in June 2011.

José Sócrates lost the election to the centre-right Social Democrat party (PSD). The new Portuguese Prime Minister is Pedro Passos Coelho.

Portuguese bonds were downgraded again in spring 2011 together with the rating of some of the major Portuguese bank. As a consequence the Portuguese government negotiated a €78bn bailout deal with the European Union and the International Monetary Fund. Under the terms of the deal, Portugal must cut its budget deficit from 9.1% to 5.9% this year, and then reduce it to 3% by 2013. Recent developments show that Portugal is on track to meet its 2011 deficit goal.

The green economy was one of the Sócrates' Governments priorities in re-launching the economy. The strategy was developed through a package of quite ambitious and comprehensive incentives and measures for R&D, public administration, industry, households, smart grids and transport. The new Prime Minister Passos Coelho is also strongly committed to renewable energies and supports the measures taken by the previous government in this area.

The publication of the National Energy Strategy (Estrategia National para Energia 2020) was approved by the previous government (with Cabinet Resolution n.29) on 15 April 2010. An important step in defining the framework of the country's renewable targets for 2020, the Strategy also forms a very important element of overall Portuguese government policy. It aims to increase energy efficiency and thus lower final energy demand by 10% by 2015 and 20% by 2020. It also plans to increase the share of renewables to 31% of energy and 60% of electricity production by 2020. The Strategy includes implementing measures.

The government is undertaking a comprehensive policy planning process:

- A Low-Carbon National Roadmap 2020 is to be ready by 31 December 2011;
- Sectoral low-carbon plans to be ready by 31 December 2012; and
- The Climate Change National Plan 2020 to be ready by 31 December 2012.

As in many other countries, most criticism of renewable energies has been about the level of expenditure related to subsidies and tax exemptions. In a period of financial crisis, any subsidy is obviously subject to easy criticisms, but in this case the support for an 'energy revolution' was strong and an integral part of the re-launch and development of Portuguese economy. This is unlikely to change in the future.

The fiscal regime, and in particular the new VAT regime (most recently changed on 1 January 2011) is not completely oriented to supporting the green economy even if there are reduced VAT levels for renewable energy products (13% instead of 23%, which has been in place for several years). In early August 2011 the Portuguese Finance Minister Vitor Gaspar announced an additional measure to meet the 2011 budget target - the government is to bring forward a planned increase in the VAT on electricity and natural-gas services from 2012 to the last quarter of 2011.

There are initiatives underway to review the taxation system in order to align it to environmental objectives. The aim is to eliminate distortions, like the fact that electricity produced with fossil fuels is subsidised via grandfathered permits in the ETS and is not taxed (for some time, not even primary energy was taxed), making it difficult for renewables to compete. Discussions are ongoing in the Ministries of State and Finance.

Sectors in detail

GENERAL

Portugal is currently developing its strategy and is undergoing a comprehensive planning process:

- Low-Carbon National Roadmap 2020: (to be ready by 31 December 2011);
- Sectoral low-carbon plans: (to be ready by 31 December 2012); and
- Climate Change National Plan 2020: (to be ready by 31 December 2012.

Portugal still lacks a planning process that reaches beyond 2020.

ELECTRICITY SUPPLY

Renewables

Feed-in tariffs are available for almost all renewable electricity producers and have, in combination with tendering schemes for wind and biomass, proved to be very effective. They have led to very steep growth of both installed capacity and produced electricity over the last five to six years. Both the scheme and the tariffs are continuously monitored against results and level of maturity of the market. The scheme is used in combination with periodic tenders to assign grid connection lots.

Specific micro-production (up to 5.78 kW) and a new mini-production (up to 250 kW) subsidy schemes are available for households and SMEs.

Energy efficiency

Co-generation is supported by means of the inclusion of co-generated electricity in the Special Regime Production that also support renewable micro-production. **Forestry biomass has been granted a higher coefficient since January 2011 (9.6 from 8.2), resulting in an increase of some 10% of the indicative average feed-in tariff (now €109/MWh) which should also result in a higher usage of co-generation from biomass.** The potential development of this technology is high both for industrial and tertiary usage.

Overarching

There has been a decrease of carbon intensity in fossil-based electricity production of 20% between 1990 and 2007. The taxation system is still not correctly designed to favour sustainable energy. For instance, there is an energy tax on electricity produced from fossil fuels which is lower than the energy tax for the use of biomass. There is support for CCS, although this is not specifically for coal.

There are indications of a move towards favourable taxation of sustainable energy. Until now, no real environmental fiscal regime was in place, although there is a reduced rate of VAT (13% instead of 23%) for renewable energy products.

New development programmes for both smart grids and the enhancement of a potential 'buffer' effect of large hydro and electric vehicles were introduced.

INDUSTRY

Renewables	There are some initiatives to promote renewables in industry, although administration can be a bottleneck. Several measures were put in place to simplify the licensing of renewable energies. **The new mini-production subsidy schemes (up to 250 kW) can be very useful for SMEs if correctly managed.**
Energy efficiency	Portugal has a well-designed integrated support scheme for energy efficiency in industry, which includes energy audits, monitoring and target setting. Sanctions are applied for not reaching the agreed targets. The system is still in its infancy, but is on the right path. Here, too, bureaucracy could be a potential barrier. **Energy Efficiency is promoted in all sectors under the PNAEE (National Action Plan for Energy Efficiency) which sets targets for 2015. Results for 2010 highlighted the important contribution of the integrated support scheme managed by ADENE, the National Energy Agency. Periodic reports on the status of the programme available on the website of ADENE.**
Overarching	Taxes on fossil fuels have been raised for companies which are not part of the EU-ETS and are not part of specific agreements for energy efficiency targets. At the moment, there is no CO2 tax as an incentive to use renewable energy, but one is expected. The introduction of taxes for industrial fuel is in its implementation phase. There are promising plans for fiscal reform which would remove indirect incentives for fossil fuel consumption. The level of tax takes into account the need for industries to adapt gradually.

TRANSPORT

Renewables	Energy certification for buildings in Portugal includes an obligation to install solar panels in new buildings where conditions are appropriate. Solar Thermal Programmes have led to the installation of 400,000 m2 of panels in the last three years. The installed capacity of solar panels in Portugal of 750,000 m2, is 44% over the intermediate result planned in the PNAEE. **Micro production of electricity (up to 5,78kW) is supported by a specific programme, which has been recently (2011) improved.** Although no policy on importing biomass yet exists, there has been a draft proposal from the Association of Renewable Energy Producers to incorporate sustainability criteria for biomass into the Portuguese legislation.
Energy efficiency	The National Plan for Energy Efficiency (PNAEE), includes measures for the transport, building, industry, services and public administration sectors. In 2010, the energy certification system resulted in some 400,000 energy certificates for buildings, making the system a best practice example in a report by the International Energy Agency (IEA). Portugal is implementing the Eco-design Directive with bonuses for highly efficient appliances. Progress has been made on new building standards (trajectory to 'near zero carbon' buildings in 2018) and energy certification of buildings is mandatory for all new buildings (residential and services) and for building transactions since 2008. **Other 'efficient home' programmes are in place, e.g. promoting anti-standby systems, efficient lighting, efficient appliances and so on.**
Overarching	Taxes for energy consumption in buildings are relatively low.

BUILDINGS

Renewables	Portugal was one of the seven countries meeting the EU target of 5.75% biofuels in 2010. The Decree Law n.º 117/2010 from October 2010 introduced sustainability criteria for the production and usage of biofuels and bio-liquids. It defines the limits for the obligatory incorporation of biofuels from 2011 to 2020, and creates a trading system for gas and fuel traders, as a market mechanism to reach the given objectives. Local biomass and therefore agriculture are favoured by higher incentives. A maximum price of biodiesel has been also set. Objectives are set as follows: a) 2011 & 2012 — 5 %; b) 2013 & 2014 — 5,5 %; c) 2015 & 2016 — 7,5 %; d) 2017 & 2018 — 9 %; e) 2019 & 2020 — 10 %. An electric vehicle programme (MOBI-E) is being implemented. Since April 2010, there have been grants of €5,000 per electric vehicle (for the first 5,000 cars sold). This can increase by to up to €1,500 if an old car is scrapped. Electric cars receive an exemption from the vehicle tax and can be deducted from income tax liability. Portugal plans to build 1,300 charging stations across the country by July 2011, plus 50 extra-fast charging stations.
Energy efficiency	Portugal has set a target of 120gCO_2/km for 2015. This development is on track, with tax exemptions for low-carbon vehicles and the incorporation of CO_2 emissions into the calculation of vehicle taxes (CIEC). A car scrapping scheme is also in place. **There is also a programme to increase the number of metro passengers in Lisbon, Porto, and Sul do Tejo. Results have been promising, with an increase of 3.3% equivalent to 8 million new passengers in 2010 compared to 2009.**
Overarching	Various initiatives for modal shifts, such as new logistic platforms and development of 'sea motorways'. The plans seem feasible but results need to prove effectiveness in future years.

AGRICULTURE

The strategy for agriculture is not as developed as for other sectors. Nonetheless, nitrogen loads are particularly low. The National Programme for Climate Change (PNAC) includes measures for agriculture and forests. It also includes the promotion of agricultural and forest sinks. A 'Portuguese Carbon Fund' supports the installation of agricultural sinks.

The promotion of biofuels includes an incentive for local cultivation by applying a factor 1,3 to the biofuel incorporation goals obtained from local non-food biomass.

FORESTRY

There is a National Forestry Strategy, with a subsequent National Plan for Forestry defence. A Permanent Forestry Fund was created in 2004 and incentives range from awareness-raising, structural prevention and forestry planning to management and research and technical assistance. In July 2010, additional funds were approved through the PRODER project, which is a rural development programme that includes measures on forestry and specifically on preventing forest fires and minimising the effects from forest fires.

ROMANIA

F

Overall assessment

The 2010 version of the Climate Policy Tracker gave Romania a rating of F. Romania has since taken further steps to implement the EU Directives. An afforestation plan was adopted for the period until 2035 and severe penalties on illegal cuts were introduced. A subsidy scheme for hybrid and electric cars was introduced. Romania plans to continue subsidies on coal mining.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- The Romanian industrial sector needs special attention: there is a lack of sufficient incentives for the use of renewable energies and for energy efficiency.
- A comprehensive and long-term climate policy strategy is necessary to show a clear direction for Romania. Good examples can be found in the UK and Ireland.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G ↑ • Target to increase research funds for renewable energies to 0.75% of GDP.
ELECTRICITY SUPPLY	F *No recent policy developments.*	F ↔ • Further implementation of the requirements of the combined heat and power Directive.	E ↔ • Plans to continue subsidies on coal mining and modernisation of coal power plants.
INDUSTRY	G *No recent policy developments.*	G *No recent policy developments.*	F *No recent policy developments.*
BUILDINGS	E *No recent policy developments.*	G ↑ • Romania has introduced the energy certificates system for buildings and transposed the Eco-design Directive.	D *No recent policy developments.*
TRANSPORT	F ↑ • Biofuel quota for 2011: 5%; Biofuels have to meet certain criteria (e.g. minimum emission reduction).	G *No recent policy developments.*	F *No recent policy developments.*
AGRICULTURE			F ↔ • Romania conducted an agricultural census improving knowledge on land use.
FORESTRY			E ↑ • National afforestation plan was launched in November 2010.

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The 2010 Climate Policy Tracker noted that Romania faces several economic challenges. It is starting to implement energy and climate polices, but they are in no way sufficient to put the country on a pathway to a low-carbon economy. Several plans were underway but not yet implemented in 2010.

Highlights are that:

- Romania's renewable energy share of electricity production increased by 8% between 1990 and 2007.
- The share of renewable energy (without electricity) in buildings (firewood) increased almost 30% between 1990 and 2005.

Policy developments in the last 12 months

There were no changes to the government in Romania in 2011. Local and parliament elections are due to take place in 2012.

In December 2010, Romania announced economic stimulation measures but the plans do not affect the energy and climate package. The government wants to reduce the budget deficit to 3% by 2012, to 2.4% by 2013, and to 1.9% in 2014. Cuts to the number of state employees and a VAT rate increase - from 19% to 24% - are foreseen. Romania intends to increase the share of GDP available for research and development to 0.75% in 2013.

Romania has not developed energy or climate change strategies. At the initiative of the green party, a Green Institute was established in February 2011. This non-governmental institution acts only as a think-tank.
Romania has implemented EU regulations:

- Energy Performance of Buildings Directive (EPBD): Since January 2011, energy certificates are required for buildings that change owner, although enforcement of this requirement is weak. There are no fines in place for non-compliance or any other defined procedures that apply in this case.
- Emissions Trading Scheme: Romania will probably use its derogation for allocation of free allowances to the power sector. It needs to decide for how many years and to what extent they want to make use of this possibility, and must submit an application to the European Commission by 30 September 2011.
- Eco-design Directive: Romania transposed the Eco-design Directive which is in force since March 2011.
- The Directive on Combined Heat and Power: In December 2010 Romania published the methodology for the electricity prices and bonuses for producers of energy from cogeneration plants.

With respect to biofuels, in March 2011, the government ended the exemption from excise taxes. The level of excise tax for biofuels is now the same level as for standard fuel (49% for gasoline and 44% for diesel). According to the current legislation, the content of biofuels has to represent at least 5% of the total fuel volume.

Since April 2011, electric cars receive subsidies of up to 20% of the price of the vehicle, up to a limit of €3,700. Hybrid vehicles are given a discount of up to 10%, up to a limit of €1,800.
In the area of fossil fuels, Romania continues to offer subsidies for coal mining. In this respect, a subsidy plan will be developed in the near future.

Charges for electricity for industry are lower than those for individual consumers. On 6 April 2011 the European Commission issued an infringement procedure on Romania's failure to liberalise the markets in gas and electricity and to comply with EU regulations and align price regulation for natural gas and energy. According to the first draft of the Romanian energy strategy for the period 2011–2035, in the period between 2016-2020 two new nuclear units should come into operation at Cernavoda, providing an overall capacity of 1,440 MW, and in the period 2020-2025 a new nuclear plant will be built in two phases, ensuring up to 3,200 MW from Romania's nuclear plants.

Sectors in detail

GENERAL

The country faces several economic challenges. It is starting to implement energy and climate polices, that are intended to put the country on a pathway towards a low-carbon economy. **Several strategies are being implemented (e.g. Energy Certificates system; Agricultural Census; National Afforestation plan up to the year 2035, National Renewable Energy action Plan, National plan for controlling illegal forestry cuts) or will be implemented in the near future (such as the strategic energy measures for the period 2011–2035).**

The research fund for renewable energies is supposed to receive funding which corresponds to 0.75% of GDP.

ELECTRICITY SUPPLY

Renewables

The 2010 targets for renewable electricity were already met in 2007. Romania has renewable energy policies, but they are not effective yet. Most were planned to become effective between 2008 and 2010. Because of economic recession, these laws are still postponed.

Green Certificates became operational in 2005. The annual quota for renewable energy that benefits from this promotion system is increasing every year. The strategy is to give renewable electricity priority access on the electricity grid, but implementing measures are not in place.

Romania developed a biomass master plan in July 2010, but has yet to implement it. Specific measures for the promotion of the use of energy from biomass are included in the National Renewable Energy Action Plan.

Law 220/2008 for the production of electricity from renewable energy sources has been modified and completed by several legislative acts. The application norms for Law 220 are in place and approved by the Romanian Government. The European Commission approved the Romanian Green Certificates renewable energy support scheme.

Energy efficiency

Romania is implementing the EU Directive that requires an increase of 10% in electricity production from Combined Heat and Power (CHP) by 2020.

New laws from 2011 provide the methodology for determining and adjusting prices for electrical and thermal energy produced in cogeneration power plants that benefit from the existing scheme support and the bonus for high-efficiency cogeneration. The new legislation also details the methodology for determining and monitoring the contribution of high-efficiency cogeneration.

Overarching

There are no strong policies to encourage renewable electricity. There are some taxes, for instance on CO2, but these are low and not sufficient.

Via the European Structural Funds, the Romanian Government offers incentives for the use of renewable sources.

Romania will continue to subsidise the use of fossil fuels and the modernisation of coal power plants.

INDUSTRY

Renewables	Romania has strategies in place in order to reach its targets for renewable energies. However, concrete action plans are lacking and hence there is room for improvement in implementation. There are only a few demonstration projects for industrial use of renewables, which are financed by the Romanian Environment Fund.
Energy efficiency	**In December 2010, the Romanian Ministry of the Economy published the methodology to establish electricity prices and bonuses for producers of energy from cogeneration plants. (Order 37 from 2010). There are currently no voluntary agreements, except for waste due to the producer responsibility.**
Overarching	Subsidies for the use of fossil fuels in energy-intensive industries have decreased. Furthermore, use of alternative energy in industry is promoted by national strategies. In their National Strategy for Sustainable Development, Romania states that the specific consumption rates for materials and energy losses should be reduced by 1.2%–1.5% per year. The strategy points in the right direction; however, there is no clear policy on implementation yet. Implicit energy tax is below 100% at present, but action plans and regulations are planned to increase it gradually.

BUILDINGS

Renewables	The use of renewables in buildings (firewood) has increased since 1990, but not due to energy policy. Although EU policies are transposed in national legislation, implementation is still lagging behind due to administrative barriers.
Energy efficiency	Zero emission buildings for demonstration are supported. The EU Eco-design Directive 2005/32/CE is transposed into Romanian law, but no real enforcement has been added; some incentive programmes were initiated, but they are in a preliminary phase. **Early 2011, the Romanian Government issued a decision on minimum requirements for ecological design of high energy demand products; this governmental decision transposes the new EU Eco-design Directive 2009/125/CE.** Administrative barriers are hindering the improvement of energy efficiency in buildings. **In January 2011, Romania introduced the energy certificates system for buildings. Any building which is subject to a transaction (either selling or renting) has to have an energy certificate which states its energy performance. The Romanian legislation still lacks penalties for not producing this certificate. This situation is expected to be solved by the Ministry of Development which is preparing a change to the law.**
Overarching	Energy taxes are at the level of the energy price. They are not significant enough to be effective.

TRANSPORT

Renewables	Romania transposed the EU legislation regarding the promotion of biofuel use, which means that they will have to have 10% biofuels by 2020. **According to government legislation from August 2010:** **- from 1 January 2011, diesel fuel has to have a biofuel content of at least 5% in volume** **- from 1 January 2011, gasoline has to have a biofuel content of at least 5% in volume** **Biofuels can be introduced on the market only if they are produced from raw materials coming from an agricultural area of the European Union, obtained through technologies that comply with good agricultural and environmental conditions; lead to a reduction of at least 35% in CO2 emission during the life cycle, compared to conventional fuels and meet the technical specifications required by the European Union.** However, Romania is lacking clear energy crop legislation. **A law with respect to incentives for energy crops is currently (2011) under consideration.** There are no plans for an infrastructure on electric mobility. **Discussions are being carried out and the Ministry of Environment and Forestry will offer financial support for the purchase of electrical cars through the Rabla project.**
Energy efficiency	Incentives for reducing emissions exists only for cars (based on EU regulation), but not for freight vehicles.
Overarching	**Romania is making efforts in motorway/highway development. However, the focus is on railway, water and air transport.**

AGRICULTURE

	The 2010 Agricultural Census provisional results were published in July 2011 and were obtained by processing 5 million registered forms containing data on agricultural areas in use, the main livestock species in farms and agricultural workloads. Romania has implemented measures that target a nitrogen load of 170 kg N/ha for over 80% of agricultural areas. However, based on available information there is no certainty that this has been reached by now. Insufficient funding for sustainable farming means that a positive impact on greenhouse gas emissions has not been reported. Register and limits for protected areas exist, but a centralised land use database with recent data is missing. **This will be updated based on the agricultural census results.**

FORESTRY

	Rules are clear and strong, applicable nationwide, but are weakly implemented. **From the beginning of 2011, the Ministry of Environment began active monitoring and promised to develop severe penalties for illegal cuttings. The national plan for controlling illegal forestry cuts is in the process of public debate.** **A new afforestation plan for the period 2010–2035 is to afforest a land surface of 422,000 ha.**

SLOVAKIA

Overall assessment

The 2010 version of the Climate Policy Tracker gave Slovakia a rating of E. There have not been significant changes in Slovakian climate policy, but support conditions for new renewable electricity installations have deteriorated as tariffs decreased by 10%. The quota obligations for biofuels in transport sector have not been prolonged for 2010 and 2011. However, the newly elected government did reinstate the Ministry of Environment. There were no significant changes in other sectors: programmes and support schemes remain the same as in previous years. The overall situation is in many aspects characterised by post-socialist structures, with a strong focus on economic development.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- An overall strategy to reduce greenhouse gas emissions is needed for all sectors. Except for the forestry sector, policies are not sufficient and based on a piecemeal approach.
- Climate and energy policy for the industrial sector is limited. Across Europe, many examples good policy examples to increase energy efficiency in industry can be found – for example through negotiated agreements in combination with tax rebates (see Denmark or Germany)
- Policies for the transport sector are lacking. There is a need to focus on modal shift and a reduction of traffic demand.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G • Reinstated Ministry of Environment.
SUPPLY	D • Decrease of renewable electricity support. • Revisions of renewable heat support makes investment in renewable heat less attractive.	F *No recent policy developments.*	G *No recent policy developments.*
ELECTRICITY	E *No recent policy developments.*	F *No recent policy developments.*	E *No recent policy developments.*
INDUSTRY	F *No recent policy developments.*	F *No recent policy developments.*	G *No recent policy developments.*
BUILDINGS	D • Quota obligations for biofuel in transport have not been prolonged for 2010 and 2011.	F *No recent policy developments.*	G *No recent policy developments.*
TRANSPORT			D • Romania conducted an agricultural census improving knowledge on land use.
AGRICULTURE			E • National Action Plan for agricultural / forestry biomass approved.
FORESTRY			

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of the 2010 Climate Policy Tracker emphasised the economic challenges that the country faces. An overall strategy to reduce greenhouse gas emissions that covers all sectors is needed. Except for the forestry sector, policies are not sufficient and based on a piecemeal approach. The carbon effects of policy are not adequately considered. The efficiency standards in the building and energy sectors are low; thus efficiency improvements are economically attractive and substantial reductions in energy use have been achieved. The positive ratings are often due to improvements in the past, not new policies.

The highlights included:

- The implementation of support for renewable electricity production.
- The consistent implementation of a land use strategy; and the practice of sustainable forestry.

Policy developments in the last 12 months

Parliamentary elections, which took place on 12 June 2010, were won by the opposition. The current prime minister – member of the centre-right Slovak Democratic and Christian Union-Democratic Party - Iveta Radičová replaced Robert Fico, from the Social Democracy party and leader of the left coalition. The new government has prioritised the strengthening of the economic situation and the cutting of expenditure. Following the elections, the Ministry of Environment was reinstated and the minister was appointed in December 2010.

Law No. 137/2010 on Air Protection, which came into force in June 2010, transposes both the EU Directive 2008/50/EC on ambient air quality and the Directive 2006/123/ES concerning the permit requirements of eligible emission measurements.

No new climate strategy plans or economic recovery plans involving energy and climate measures were published in 2010. The new government committed itself to fiscal consolidation and structural reforms. In particular, it intends to cut the deficit by around 2.5% of GDP in 2011, and plans to improve the education system, public procurement and the judiciary. Budget cuts are mainly related to the public sector.

In December 2010, the Slovak Parliament adopted an Amendment to the Renewable Energy Sources Promotion Act, decreasing the maximum possible annual tariff and abandoning the 10% margin. By means of legislative changes, the state is trying to regulate the construction of photovoltaic (PV) and wind energy facilities. Pursuant to the amendment, effective as of 1 February 2011 (apart from some provisions effective as of 1 April 2011), only solar rooftop facilities or solar facilities on the exterior wall of buildings with capacity not exceeding 100 kW are promoted in the form of feed-in premium.

There are programmes to provide grants for green economy related projects, including research and pilot projects.

There are no indications that Slovakia's stimulation of economic sectors could have a negative effect on CO_2 emissions or on renewable energy development.

The government intends to increase the speed limit on some highways from 120 km per hour to 130 km per hour. At present one highway is assigned and three others will soon follow.

To stimulate the building market, the VAT rate on labour used during renovation was temporarily reduced from 19% to 6% for the period October 2010-June 2011. Although it applies to all renovation, it can have a positive impact for energy efficiency retrofitting.

Starting in January 2011, vehicle tax has been made dependent on the CO_2 emitted, replacing a tax based on the price of the car.

Sectors in detail

GENERAL

The country faces several economic challenges. An overall strategy to reduce greenhouse gas emissions is needed. Except for the forestry sector, policies are not sufficient and are based on a piecemeal approach. The carbon effects of policy are not prioritised. The efficiency standards in the building and energy sector are low; thus efficiency improvements are economically attractive and substantial reductions in energy use have been achieved.

The reinstatement of the Ministry of Environment indicates that more attention is to be paid to climate change in future policy and budgeting.

ELECTRICITY SUPPLY

Renewables	**The key support instrument for renewable electricity is a feed-in premium, where a fixed price is paid in addition to the current electricity price. Additionally, renewable energies are exempt from the consumption tax and voluntary green certificates for renewable-based electricity can be used. In 2010, legislative amendments reduced support by lifting the maximum tariff decrease limitation.**
Energy efficiency	Slovakia supports electricity produced in highly efficiency Combined Heat and Power (CHP) plants depending on capacity, type of fuel, technology used and the date in which the power plant was put into operation. The share of CHP in electricity production increased by 8% between 2002 and 2007.
Overarching	No significant overarching policies found. The carbon intensity of fossil fuel-based electricity production actually increased by 6% between 1990 and 2007.

INDUSTRY

Renewables	Very limited support only extends to demonstration projects. Some support is available under the SAIDC (Slovak Agency for International Development Cooperation) programme.
Energy efficiency	Energy efficiency measures are only starting. Funding of up to €5m per project is available for energy efficiency improvements. A total of €128m was set aside for information and training support until 2010. In addition, since 2005, industries in the heat delivery sector are required to have energy managers.
Overarching	Recycling is identified as a priority, since the share of recycled waste is one of the lowest in the EU. A fund to help organise recycling and financed by producers and importers of 10 specific products. Other measures to restructure industry practices are not present.

BUILDINGS

Renewables	Builders of new large buildings need to perform a technical, economical and environmental evaluation of alternative energy systems. A grant scheme for support of biomass boilers and solar panels is in place.
Energy efficiency	The temperature-corrected energy consumption for space heating and hot water per m² decreased by 31% between 1990 and 2005, whereas the average electricity use per capita increased by 49%. The Energy Performance of Buildings Directive (EPBD) is implemented, but the standards for buildings are not ambitious. Subsidies for housing renovation are available as loans (and financed through the sale of surplus emission allowances under the Kyoto Protocol). However, the impact is limited as efficiency improvement requirements are missing and consumers are credit-averse. The Eko Fund supports non-profit activities, e.g. the improvement of energy efficiency in buildings.
Overarching	No overarching policies found.

TRANSPORT

Renewables	The support for biofuels was based on a quota obligation - without a penalty for non-fulfilment - and an excise tax exemption for biofuels. **Quota obligations for biofuel in transport sector were valid up to 31 December 2009 but were not prolonged for 2010 and 2011.** There is no specific support for electric vehicles that use renewable electricity.
Energy efficiency	The average emissions in 2008 were 150 g CO_2/km (close to the EU average). There is a decreasing trend for such emissions. No significant policies found.
Overarching	There is a toll on highways and selected roads since 1996, but the impact was rated low.

AGRICULTURE

Ambitious limits for nitrogen loads exist at least for financially supported land. A land use strategy is implemented and consistent. Financial incentives for organic farming and other soil protection measures based on EU funding and on detailed conditions are available. Major improvements are possible to reduce methane emissions from animals and the incentives for sustainable farming could be increased.

FORESTRY

There is a national forest programme to secure sustainable forest management and the Slovakian Forest Act also includes conditions for sustainable management. **The national action plan to use agricultural and forestry biomass for energy purposes clearly highlights the importance of biomass availability and its real possibilities for Slovakia.**

A
B
C
D
SLOVENIA E
F
G

SLOVENIA

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave Slovenia a rating of E. Over the last year Slovenia implemented some positive climate and energy policies. The drafts of the Climate Change Act and the Long-Term Climate (Low-Carbon) Strategy have been prepared. Progress in encouraging the switch to renewables and greater energy efficiency has been made and access to EU funding is expected to improve. Slovenia introduced programmes to co-finance renewable heat in households, industry and district heating with biomass. An amendment to the Regulation on Support of Electricity Produced from Renewables, introduces a 10% annual decrease of support for photovoltaic (PV) installations until 2014. Slovenia is improving the building certification process. Conditions have been created for sustainable forest management.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Slovenia does not yet have an ambitious, long-term national climate strategy with binding targets that provide long-term certainty to all stakeholders (see for example UK or Ireland). It needs to finalise its draft strategy.
- Slovenia's plans to build a 600 MW lignite-fired power plant are heavily counterproductive considering the positive developments and policies the country has undertaken. A best practise policy would be the implementation of an Emission Performance standard for (new) power plants. This policy would further strengthen Slovenia's efforts to develop a low-carbon economy.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			G ⇔ • Draft of the Climate Change Act. • Draft of the Long-Term Climate (Low-Carbon) Strategy.
ELECTRICITY SUPPLY	D ⇔ • Feed-in tariff has been reduced for solar PV. • Feed-in premium increased for all other technologies.	F *No recent policy developments.*	F *No recent policy developments.*
INDUSTRY	E ↑ • Programme of co-financing the installation of biomass boiler equipment.	D ↑ • Co-financing the construction of biomass district heating systems.	E *No recent policy developments.*
BUILDINGS	E ↑ • Programme of promotion of biomass boilers and solar collectors in households.	F ⇔ • Slovenia started improving the building certification process. The calculation of energy performance of buildings was updated.	D *No recent policy developments.*
TRANSPORT	E ⇔ • Distributors of fuel must ensure that the annual average content of biofuel in all transport fuel would increase till 5.5% in 2011.	E *No recent policy developments.*	D *No recent policy developments.*
AGRICULTURE			C *No recent policy developments.*
FORESTRY			D ⇔ • Conditions have been created for sustainable forest management.

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of the 2010 Climate Policy Tracker showed Slovenia to be the more advanced new EU member states. Significant efforts have been made to improve environmental performance, especially in the building, energy and transport sectors. The agricultural and forestry sectors are traditionally characterised by a sustainable policy. Although ambitious policies have been implemented to increase energy efficiency in households (insulation and heating systems), the increasing standard of living has almost overtaken these improvements. An overall long-term climate strategy is missing from the policy mix.

Highlights included:

- Obligatory installation of 25% renewable energy in new buildings.
- Tax on air pollution with CO2 exemptions for businesses which agree to reduce their emissions by at least 2.5% compared to base year.
- The Spatial Development Strategy defines the use of renewable energy sources as a priority for new or modernised public infrastructure and the use of combined heat and power (CHP) as priority for new or existing thermal power plants and district heating power plants. The Spatial Development Strategy also includes several aspects of sustainable transport and enables integrated planning.
- Very ambitious target of 20% organic land area by 2015.

Policy developments in the last 12 months

In 2010, a draft Climate Change Act and a draft Long-Term Climate (Low-Carbon) Strategy for Slovenia were prepared. The Climate Change Act is expected to be adopted by the National Assembly before the end of 2011. The Long-Term Climate (Low-Carbon) Strategy should be approved by the end of 2011 as well. The main aim of these documents is to provide a framework for long-term climate objectives and the implementation of a low-carbon society.

The global economic crisis has also affected Slovenia. Seeking to accelerate the economic recovery process, in the beginning of February 2010, the government adopted the Slovenian Exit Strategy for 2010–2013. The Climate Change Act is part of Slovenia's Exit Strategy, as efficient counter-climate change measures are expected to improve the long-term competitiveness of the economy and create new jobs with a higher added-value.

Government budget cuts have been announced. The government's general deficit for 2010 has been revised to 5.6% of GDP (or just over €2bn). The government plans to cut the budget gap to 4.8% of GDP (or to €1.8bn) in 2011 and 3.6% of GDP in 2012. However, the gap will be larger than forecast for 2011, as in May, Slovenia provided a €243m capital increase into loss-making Nova Ljubljanska Banka d.d., the country's biggest lender. This will cause the budget deficit to rise to 5.5% of GDP in 2011.

Expenditure related to the measure Regulation of efficient energy use and renewable energy will increase 3.9% in 2011 compared to 2010. This budget is planned to grow by only 2% in 2012 and 0.4% in 2013. For 2010-2011, €0.4m a year has been allocated for the measure Regulation, control and care of the production and distribution of electricity. Expenditures of the Environmental Agency for environmental policy and general administrative matters will increase from €6.04m (2010) to €8.6m (2011).

The amendment of the Law on Motor Vehicles Tax adopted in January 2010, means that the tax level now depends upon the amount of CO2 emitted and the type of fuel used.

The Government plans to stimulate the green economy. Slovenia's National Renewable Energy Action Plan for 2010-2020 determines various measures to stimulate renewable energy consumption.

A new 600 MW coal plant has secured €770m worth of loans from European financial institutions. The proposed coal plant at Termoelektrarna Sostanj in Slovenia will replace five less-efficient units, which are due to close. The new plant will burn lignite.

Sectors in detail

GENERAL

Significant efforts have been made to improve environmental performance, especially in the building, energy and transport sectors. Agricultural and forestry policy is characterised as being sustainable. Although ambitious policies have increased energy efficiency in households (insulation and heating systems), the rising standard of living has almost overtaken these improvements.

A draft Climate Change Act and a draft Long-Term Climate (Low-Carbon) Strategy have been prepared in 2010. Due to the economic crisis and changes in exercise duty Slovenia reduced its greenhouse gas emissions by over 7% (19.7 million tones of CO2) in 2009. Progress in encouraging the switch to renewable energy and greater energy efficiency is expected to lead to further improvements in acquiring EU funds.

ELECTRICITY SUPPLY

Renewables	The relatively well functioning renewable electricity support scheme is differentiated by technology and valid for 15 years. Producers of smaller plants may choose between a feed-in tariff (guaranteed purchase) and a feed-in premium (on top of power price) for renewable energy plants up to 5 MW and combined heat and power (CHP) plants up to 1 MW. Larger plants are only eligible for the feed-in premium. The Spatial Development Strategy defines the use of renewable energy sources as a priority for new or modernised public infrastructure. **An amendment to the Regulation on Support of Electricity Produced from renewable energy introduces a 10% annual decrease of support for PV installations until 2014.** **Slovenia objects to an EU standard for sustainable biomass criteria especially for energy use, warning that such standards would have to be applied globally.**
Energy efficiency	Slovenia supports electricity produced at highly efficient combined heat and power (CHP) plants. Support is dependent upon capacity, fuel used (fossil fuel and biomass) and number of operating hours a year (up to 4,000 or more than 4,000). Producers above 1 MW can apply for the feed-in premium. The Spatial Development Strategy defines the use of CHP as priority for new or existing thermal power plants and district heating power plants.
Overarching	A CO2 tax is in force. The ECO-Fund provides soft loans for investment in environmental protection at interest rates lower than market rates and is also relevant for the building and industry sectors.

INDUSTRY

Renewables	Subsidies, loans, education and information are provided for businesses which invest in environmentally-friendly heating.
Energy efficiency	Funds are also available for renewable energy use and the improvement of energy efficiency. Energy management training is provided. There is a programme for improving the energy efficiency of motor driven systems. Eco-labels and environmental management systems are implemented.
Overarching	High energy tax. There is an air pollution tax - with exemptions for businesses which agree to reduce CO2 emissions by at least 2.5% compared to the base year.

BUILDINGS

Renewables	Obligatory installation of renewable energy devices in new buildings and those undergoing major renovation. A minimum of 25% of the total power demand must be covered by the installation of renewable energy systems such as solar hot water, photovoltaics (PV) and ice storage for cooling. Low interest loans from the ECO-Fund are available for the installation of renewable energy in buildings.
Energy efficiency	Overall, there is a balanced mix of measures including information campaigns and financial incentives, e.g. investment in energy efficient government buildings. The Energy Performance of Buildings Directive (EPBD) is implemented. **Slovenia has started improving its certification process. The calculation of the energy performance of buildings was updated in July 2010.** There are some incentives (regulation, support and information) for the use of efficient appliances. Low interest loans of the ECO-Fund are available for energy efficiency in buildings.
Overarching	There are additional incentives, e.g. information campaigns.

TRANSPORT

Renewables	**Slovenia has implemented a quota obligation for a minimum 5.5% biofuels in transport by 2011.** In addition, biofuels are exempt from excise taxes and grants for growing energy crops are available. There is no specific support for electric vehicles that use renewable electricity.
Energy efficiency	There is a subsidy in place for the purchase of environmentally-friendly trucks since 2009. Slovenia has implemented a progressive tax on CO2 emissions of new and used cars. The tax level depends on the purchase price and the CO2 emissions of the vehicle. The tax varies between 0.5% and 31%. It has not yet been effective in halting the increase in emissions of new passenger cars. **For the first time, in 2010 and 2011, the budget allocated to modernise the railway network exceeded the road construction budget. It is also the biggest ever rail budget, amounting to €589.7m.**
Overarching	The total per capita emissions from transport increased by a factor of two between 1990 and 2008. However, the overall transport policy mix for the future is diversified and ambitious. Slovenia is one of the few European countries to have implemented a Spatial Development Strategy which includes several aspects of sustainable transport and enables integrated planning. There are financial incentives for bicycle lanes and public transport. Financial incentives for inter-modality and increase in rail freight are financed through taxes on road freight vehicles. External costs are included in tolls and other taxes on freight transport.

AGRICULTURE

The policies in the agricultural sector are well balanced overall. Nitrogen limits for livestock manure exist for the whole country. A consistent land use strategy is in place. Slovenia has set a very ambitious target of 20% organic land area by 2015. There are some financial incentives for organic farming, but these are based on EU funding and not on state funding. Significant improvements are possible to reduce methane emissions from animals and the incentives for sustainable farming could be increased.

FORESTRY

Sustainability is included in the Forest Act and the Forest Development Programme in Slovenia. Conditions have been created for sustainable forest management. A land use strategy is implemented and consistent.

SPAIN

E

Overall assessment

The 2010 version of the Climate Policy Tracker gave Spain a rating of E. In order to accelerate economic recovery, Spain has implemented different laws and programmes that aim to increase energy efficiency and energy savings in transport and the building sector, although some of the measures introduced are only temporary. Spain has increased its biofuel quota. These small positive developments are counteracted by negative developments, which were partly due to budget cuts. The feed-in tariffs for wind and solar power were significantly reduced for new and existing installations. Spain is prolonging its heavy coal subsidies and nuclear time spans. Furthermore, Spain's draft national climate strategy only extends to 2020, and intends to lower its overall 2020 renewables target compared to the previously published National Renewable Energy Action Plan.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- Spain's draft Renewable Action Plan until 2020 proposes the lowering of the 2020 renewables target from 22.7% to 20.8%. This is counterproductive to the achievement of the long-term target of a low-carbon economy and underestimates the Spanish potential. In addition, stability is needed to restore the trust of investors in renewable energies in Spain. Thus the objective of a 22.7% share of renewables in final energy consumption should be maintained or increased.
- More coherence in energy policies is needed to prioritise CO2 reduction. Spain should avoid supporting coal subsidies and instead maintain and increase support for renewable energies.
- Spain should introduce measures reduce CO2 emissions from the transport sector, which was the largest greenhouse gas emitting sector in 2009. Emissions from transport have increased by 71% since 1990 and are above average in other sectors. Plans to build new roads could increase transport-related emissions even further. The reduced speed limit, introduced in April 2011, was only a temporary measure and not sufficient for the sector.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			F ⇔ • Draft renewable action plan (July 2011) lower the 2020 renewable energy target from 22.7% to 20.8%.
ELECTRICITY SUPPLY	D ↓ • Retroactive cuts in solar PV feed-in tariffs. • Cuts in wind energy support. • Income tax deduction of 8% for renewable energy investment.	D *No recent policy developments.*	E ↓ • Coal subsidy approved. • Nuclear plants lifespan increased.
INDUSTRY	F ⇔ • Draft renewable action plan (July 2011): measures to support demonstration projects in industry.	E *No recent policy developments.*	E *No recent policy developments.*
BUILDINGS	D *No recent policy developments.*	G ↑ • Temporary energy saving measures plan. • Tax incentive for refurbishments.	F *No recent policy developments.*
TRANSPORT	E ⇔ • Increase of biofuel quota from 5.9% to 6.2% in 2011 and 6.5% in 2012 and 2013. • Decrease in subsidy for electric transport.	F ⇔ • Temporary energy saving measures (e.g. speed limit reduced during March – June 2011).	E *No recent policy developments.*
AGRICULTURE			D *No recent policy developments.*
FORESTRY			E *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

⇔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of the 2010 Climate Policy Tracker noted the important initiatives in renewable electricity generation and use of renewables in buildings, but it found that policy was lacking for other sectors, in particular the transport sector. An integrated long-term, low-carbon plan is needed to replace the national climate strategy, which is only in place until 2020. The lack of overall ambition was shown, for example by the 2020 target for Spain, which according to the EU climate and energy package would result in +31% greenhouse gas emissions compared to 1990. This target was less ambitious for 2020 than for 2012 (+15% compared to 1990).

Highlights included:

- In Spain, a well functioning feed-in premium scheme for renewable electricity generation is in place; Spain is amongst the world-leaders regarding installed capacity. The focus is on wind and solar technologies. However, the policy framework has been unstable lately. In 2009, a cap was introduced for solar and wind and retroactive changes to the incentive framework for renewables irritated producers and investors.
- Spain has introduced an obligation to use solar thermal energy (30-70% of warm water demand) and introduced a minimum contribution to electricity consumption by photovoltaics (PV), for new and retrofitted buildings. It will save approx. 30%-40% of energy use per household.

Policy developments in the last 12 months

Elections in Spain are due to take place on 20 November 2011.
No changes have been made to the Spanish climate strategy. The government drafted a Renewable Action Plan 2011-2020 (Plan de Energias Renovables – PER). Following public consultation the document was sent to the European Commission for review in July. The plan targets a 20.8% share for renewable energy sources in total gross final energy consumption. This objective is lower than the objective of a former plan (National Renewable Energy Action Plan – NREAP) sent to the European Commission in July 2010 and targeting a share of 22.7% by 2020.

The new Law on Sustainable Economy of March 2011 introduces measures to accelerate economic recovery. In addition, with the Royal Decree 6/2010 (Pacto de Zurbano) Spain adopted 31 anti-crisis measures in April 2010. In December 2010 the Spanish government decided on further austerity measures and economic stimuli in order to avoid a bailout from the EU and IMF, and with the aim to reduce national debt to 6% of GDP by 2011.

In April 2011 the Strategy to increase energy efficiency and reduce CO2 emissions in the transport and building sectors was implemented, one of the intentions of which is to aid economic recovery. Also, the Spanish government adopted a package of temporary measures to reduce energy consumption. The Plan for increased Energy Savings of March 2011 introduces 20 measures in the transport and building sectors to reduce final energy consumption by 3.5% and to cut the use of petrol and diesel by 15% and 11% respectively. However, these measures are of a temporary nature (e.g. the reduced speed limit was reversed in July and set back to 120km/h).

In September 2010 the Spanish government approved the austerity budget for 2011 which includes an overall spending cut of 7.7% to €122bn. Measures include a 5% cut in public sector wages, departmental budget cuts of 16%, as well as a tax increase for incomes above €120,000. In April 2011 the IMF warned Spain that further measures were needed to reach the 2013 EU deficit target of 3%. However, Spain has not taken action so far.

The environment and agriculture ministry will receive €2.5bn less, a 34% cut from 2010. However, the climate sector is not one of the most affected sectors. The budget for the promotion of electric vehicles is decreased by 19% compared to 2010 (now €81 million). The government's energy saving and energy efficiency strategy and renewable energy plan are to get €60m, down from €67m in 2010.

Royal Decrees RD 1565/2910 and RD-L 14/2010 have reduced feed-in tariffs for wind and solar power installations (according to the EU Commission in a retroactive manner) and oblige the operators to choose between one of the two available mechanisms (tariff or premium). Tariffs on ground-based solar PV plants have been cut by up to 45% depending on size and technology. Industry association ASIF expressed concerns that newly-installed capacity would drop to 250 MW annually compared with 500MW today. In addition, the premium for wind power producers will be cut by 35% until 2013.

The Government did not take measures to increase its revenues related to energy or CO2. Sources within the Ministry of Industry signalised that the draft version of the Law on Energy Efficiency and Renewable Energies includes a CO2 tax to finance energy efficiency and renewable energy projects. The tax would mainly affect residential heating and transport fuels.

Article 1 of the Royal Decree 6/2010 introduces income tax deductions of up to 10% and VAT deductions of 8% on total investment when renovating residential buildings, until the end of 2012. The Sustainable Economy Law introduces an income tax deduction of 8% for investments related to renewable energies. Up to 20% (with a ceiling of €6,000) of the cost of electric vehicles are subsidised.

IDAE (Instituto para la Diversificación y Ahorro de la Energía - Institute for Diversification and Saving of Energy), a public entity reporting to the Ministry of Industry, has launched a package of financial support programmes to promote renewable energy sources within the building sector. The different programmes, named BIOMCASA, GEOTCASA and SOLCASA support the generation of heat, hot water and air conditioning using biomass, geothermal energy or solar energy, respectively. In May 2011, the IDAE has launched the new GIT programme (Grandes Instalaciones Térmicas – large thermal installations) to provide financial support to all projects for renewable thermal energy not rewarded by BIOMCASA, GEOTCASA or SOLCASA due to their size and complexity.

In September 2010 the European Commission approved the Spanish government's plan to double subsidies for domestic coal in the coming four years (up to €800m) and give it preferential access to the wholesale electricity market. Together with Germany, Spain was one of the major opponents of phasing out coal subsidies on European level before 2014.

Furthermore, the Sustainable Economy Law of March 2011 states that nuclear power plants have an unlimited lifespan, a reversal of policy outlined in earlier drafts that favoured limiting the lifespan of nuclear plants.

Sectors in detail

GENERAL

No changes have been made to the Spanish Climate Strategy. The government is currently working on a Renewable Action Plan 2011-2020 (Plan de Energias Renovables – PER). The target share of renewable energy sources of 20.8% in total gross final energy consumption by 2020 is lower than that set by the former action plan (National Renewable Energy Action Plan – NREAP) which targeted a share of 22.7%.

ELECTRICITY SUPPLY

Renewables

Spain supports the use of renewables for electricity generation by a feed-in premium or a feed-in tariff. The level of support for renewables has been rather high. The support is differentiated according to technology. Biomass has never succeeded in Spain because tariffs are too low.

Tariff cuts in 2011 (especially for PV and wind) and new regulations introduced by Royal Decrees 1614/2010, 1565/2010 and 14/2010 severely slowed the deployment rate for both technologies and has also negatively affected other renewable energy sources, such as solar thermal electricity.

The administrative environment for renewable projects could be improved. The policy framework is unstable because in the past, the target for PV and biomass was surpassed and a cap was introduced in 2009. In addition, attempts were made to change the framework retroactively, causing protests by investors. Spain is very decentralised and at the moment, permitting procedures differ from region to region. On the positive side, grid access and congestion management give preference to renewables by law in the whole of Spain. Nevertheless, a non-transparent framework and high administrative burdens can cause difficulties in accessing the grid. An expansion of the Spanish power grid is envisaged, but without a special focus on the needs of renewables.

With the implementation of the new Sustainable Economy Law 8% of investment in renewables can be deducted from income tax.

Energy efficiency

Combined Heat and Power (CHP) is also supported through a feed-in premium. The premium differs according to technology. Biomass renewable CHP gets a higher tariff than fossil CHP. The support is not sufficient to increase the use of CHP to required levels.

Overarching

In September 2010, the European Commission approved the Spanish government's plan to double subsidies for domestic coal in the coming four years (up to €800m) and give it preferential access to the wholesale electricity market. Together with Germany, Spain was one of the major opponents to the phasing-out of coal subsidies in the EU prior to 2014.
Energy taxes for electricity producers are amongst the lowest in the EU and there is no CO_2 tax in place. **The Energy Efficiency and Renewable Energies Law which is being drafted during 2011 may create a new CO_2 emissions tax to finance renewable energies and energy efficiency.**

The plan to limit the lifespan of nuclear plants was dropped in the final version of the Sustainable Economy Law adopted in March 2011. Instead nuclear plants have an unlimited lifespan and some security criteria were introduced.

Spain currently (2011) has a significant power generation overcapacity, and the government intends to subsidise electricity generators (imported coal and gas) to maintain the overcapacity.

INDUSTRY

Renewables	Incentives for the use of renewables in industry are neglected in Spain. **The NREAP 2011-2020 has very few measures relating to geothermal energy and biofuels. A draft of the Renewable Energy Plan 2011-2020 was published in July 2011. Its measures mainly support model and demonstration projects for biomass and geothermal energy in industrial processes, as well as the application of solar thermal and biomass energy in industrial processes via the Renewable Heat Incentive Programme ICAREN, which is budgeting €515.5m for solar heat and €121m for biomass in industry for the period 2011-2020.**
Energy efficiency	Spain introduced an energy savings and efficiency strategy in 2004 which runs until 2012. It includes voluntary agreements, energy audits and financial support for efficiency measures. The aim is to reduce CO2 emission by 42 Mt by 2012. However, as the financial support only partly covers the necessary investment cost and noting the current financial situation in Spain, companies' investment capability for energy savings measures is severely limited and thus the target might not be reached.
Overarching	The energy tax for the industrial sector is amongst the lowest in the EU. The redesign of products to be more long-lasting, less material-intensive and more recyclable is targeted by the National Plan for Research and Development. However, this field is only a small part of the plan, which only runs until 2011 and no follow-up is in place.

BUILDINGS

Renewables	Spain was the first country in Europe to introduce an obligation to use renewable energy in buildings. Depending on the climatic zone and type of building, between 30% and 70% of hot water demand has to be covered by solar-thermal in new and renovated buildings. Also, solar PV has to be used for a certain share of the power demand. The landlord-tenant problem has not been addressed yet in Spain. It is not possible to include the costs of retrofitting into the rent.
Energy efficiency	Although there are mandatory energy performance standards for buildings, there is no trajectory towards zero energy buildings. Rather, the current technical building code aims to reduce primary energy use by between 30% and 40%. A new building code is to be implemented after 2012. Whether zero energy buildings will be targeted is not yet clear. Energy use certification for buildings is in place and includes a penalty mechanism. However, certification has yet to be properly implemented. Existing buildings are not fully integrated in the scheme. **The Plan to Increase Energy Savings introduces some short-term measures to reduce energy consumption, mainly in the transport and building sectors, resulting in approx. a 3.5% reduction in final energy consumption in both sectors. However, as the measures are temporary, its impact will be rather low. The Sustainable Economy Law introduces a tax deduction of 10% for refurbishments which lead to energy efficiency improvement.**
Overarching	The level of energy taxes is among the lowest in Europe.

TRANSPORT

Renewables	A partial tax exemption for biofuels exists. Electric mobility is part of integrated transport planning and €1.5m is allocated to develop the necessary infrastructure, including pilot projects with electric vehicles and loading stations. Electric mobility is not coupled to the use of renewable energy. **In 2011, the budget for the promotion of electric vehicles is decreased by 19% compared to 2010 (now €81m).** **The biofuel target for 2011 has been increased to 6.2% instead of 5.9%, and to 6.5% for 2012 and 2013.**
Energy efficiency	The efficiency of the transport sector is not prioritised in Spanish policymaking. There is a target for emission levels of new cars which is below the EU Directive, but there are only minor financial incentives in place to support the purchase of cars with emission levels below120 gCO2/km. **The Plan to Increase Energy Savings introduced a temporary (effective March – June 2011) maximum speed limit of 110km/h as well as some measures to optimise flight routes and modal shift in favour of rail. The Plan de ahorro, eficiencia energética y reducción de emisiones en el transporte y la vivienda introduces further measures to cut 34.000 MtCO2 by 2020.**
Overarching	The infrastructure for low-carbon modes of transport and modal shift is limited. Although there are plans to increase the amount of railway lines and the shares of transport by rail and on waterways, the transport budget currently includes big budgets for highways and other roads. This might potentially neutralise the impact of investment in alternative transport modes. As the Spanish automotive industry faced large problems due to the economic crisis, an incentive to buy new cars was introduced without connecting it to vehicle emissions.

AGRICULTURE

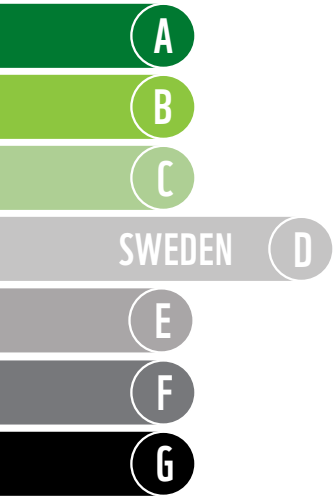
Total emissions from agriculture have been substantially reduced in the past (-11% from 2000-2008). A budget of €40m for the period 2008-2012 aims to reduce agricultural methane emissions by one fifth.

There is no national land-use strategy for Spain and only a few regions have their own individual strategies. The strategies are not coordinated.

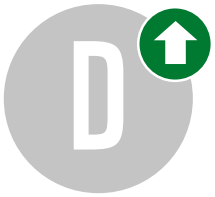
FORESTRY

Stringent forest management plans only exist for 13% of the total forest area. The percentage within private property is just 5%, which is especially worrying as 70% of forest area is private.

Even though a national forest strategy exists, competencies in this sector lie within the 17 regional governments. There are no national policy instruments to encourage convergence between regional policies and the national forest strategy. The national government funds transferred to regional governments should be conditional on regional strategies contributing to the implementation of the national strategy.



SWEDEN



Overall assessment

The 2010 version of the Climate Policy Tracker gave Sweden a rating of D. Energy and climate policy has remained relatively stable in Sweden over the past 12 months, with small positive changes to the energy and carbon tax system and an extension announced of the quota obligation for renewable electricity. Sweden also announced an intention to launch a joint tradable green certificate market with Norway as from 2012.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- The vision of no net emissions by 2050 should be turned into a full strategy with a legally binding trajectory with little, if any, offsetting of emissions and a coherent action plan including policy incentives to provide long-term certainty for all stakeholders. Ambitious, long-term and binding national targets are set in for example the UK or Ireland.
- Sweden's strong availability of biomass should not take the pressure off the development of electricity end-use efficiency, restructuring industry and investment in infrastructure supporting modal shift. Also, regulations and governance should be developed to ensure that the domestic production of renewable energies does not undermine biodiversity and ecosystem services. It is therefore of high importance for Sweden to start strongly supporting deployment of energy efficiency, solar and wind energy.

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL			D *No recent policy developments.*
ELECTRICITY SUPPLY	E ↑ • Extension of renewable energy obligation to 2035. • Mandatory sustainability requirements for bio-liquids. • Joint green certificate market with Norway from 2012.	G *No recent policy developments.*	E *No recent policy developments.*
BUILDINGS	C *No recent policy developments.*	E *No recent policy developments.*	E ↑ • Increases in energy and CO2 tax from 2011.
INDUSTRY	D *No recent policy developments.*	E *No recent policy developments.*	D *No recent policy developments.*
TRANSPORT	E ↑ • Mandatory sustainability requirements for biofuels.	D *No recent policy developments.*	E ↔ • Policy goal to reach fossil fuel independent transport fleet by 2035.
AGRICULTURE			C *No recent policy developments.*
FORESTRY			D *No recent policy developments.*

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

↑ Positive policy developments since last year's situation

↓ Negative policy developments since last year's situation

↔ Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

According to the 2010 Climate Policy Tracker analysis, Sweden adopts a vision that in 2050 the country will have no net emissions of greenhouse gases into the atmosphere. Standards in buildings and incentives for transport are also relatively high. Sweden has (traditionally) relatively strict energy standards for buildings. Renovated buildings need to reach the same standard as new buildings. Sweden has a long history of using biomass, both for heat and power, but also for materials. In 2009, biomass energy overtook oil to become the largest contributor to Sweden's energy mix. It is regularly used for combined heat and power (CHP) and as heat source in industry. The high share of biomass use is due to high availability and partly due to policy. However, a trajectory to zero energy buildings is not foreseen. However, the concentration on biomass has turned the focus away from electricity end-use efficiency, restructuring industry and investing in infrastructure to support a modal shift. The moratorium on new nuclear capacity was lifted, raising the possibility of increased dependence on nuclear energy and diverting resources away from much needed investment in efficiency and renewables.

Policy developments in the last 12 months

Sweden held a general election on 19 September 2010. The governing centre-right coalition party, the Alliance, lost its absolute majority but continues as a minority government. The far-right Sweden Democrats party won their first ever seats in Parliament. No major new climate strategies or plans have been published in Sweden in the past year, although small changes have been made to the energy and carbon tax system and an extension announced to the quota obligation for renewable electricity.

The Swedish economy has a history of reliance on exports of cars, telecommunications and construction materials and so was hard hit by the global financial crisis. However Sweden has a strong economy and the country has recovered more quickly than most. In October 2010 the Government published a conservative budget for 2011 aiming to re-establish a surplus and consolidate the economic recovery. The budget states that tackling climate change is a key priority. However, the funds allocated to energy efficiency are much below what is needed.

No specific budget cuts have been announced that will impact the climate and energy policies.

The beginning of 2011 saw an increase in the level of energy and CO2 tax payable by industry. Energy tax increased from 0% to 30% and CO2 tax increased from 21% to 30%. There are exemptions or partial exemptions for those installations covered by the EU emission trading system or for companies taking part in voluntary programmes.

As well as tackling climate change, the 2011 budget focuses on achieving higher welfare and employment. This is mainly done through increasing knowledge capital and creating an economic environment that stimulates innovation. No specific policies are announced that would have a particularly negative impact on CO2 emissions.

Sectors in detail

GENERAL

In 2009, Sweden adopted a vision that in 2050 the country will have no net emissions of greenhouse gases in the atmosphere. A comprehensive reduction strategy is detailed until 2020 with the target being to reduce Sweden's greenhouse gas emissions by 40% by then, compared to 1990 levels. One third of this target is to be achieved outside Sweden's borders through using flexible mechanisms.

In 2010, the emissions from the trade sector in Sweden increased by around 30%.

ELECTRICITY SUPPLY

Renewables	Sweden has had a tradable green certificate system in place to support renewable electricity, which has remained relatively unchanged since 2003. The system provides a relatively low level of support and is not specified by technology. **Legislative amendments which entered into force on 1 July 2010 extend the quota obligation until the end of 2035. The new renewable electricity target determines that renewable electricity production should increase by 25 TWh in 2020 compared to 2002 levels. Currently, the electricity certificates system applies only to electricity produced in Sweden. However, Norway and Sweden have agreed to introduce a joint green certificates market as from 1 January 2012. From 1 January 2011 bio-liquids used to generate electricity must demonstrate that they are sustainable in line with the Renewable Energy Directive. Peat is not yet defined as non-renewable.** Investment support was given to certain technologies, including offshore wind and wind in remote areas until 2009. **Solar heating has been supported but will not be supported as from 2012. Stopping support for solar electricity by 2013 is currently under discussion.** Lead times for the implementation of projects are relatively long compared to other EU member states. This lack of support instruments for many renewable energy technologies results in a relatively low ranking for Sweden in this area, despite its high current share of renewable electricity production. In 2009, biomass overtook oil to become the number one energy source in Sweden. Sweden's target under the EU Renewable Energy Directive is 49% renewables by 2020. The government has adopted a 50% target.
Energy efficiency	Sweden has a strong history in combined heat and power (CHP). Biomass CHP is also eligible for support under the green certificate system.
Overarching	The main electricity generation technologies in Sweden are nuclear and hydro. There is no coal in the Swedish energy mix. As such, the country has made no investments in CCS, either for coal or biomass. EU ETS installations are exempt from paying the CO2 tax, which applies to other sectors in Sweden.

INDUSTRY

Renewables	Demonstration projects for large-scale biomass in industry took place in the 1980's and 90's. Today, the use of biomass is common practice in many industrial sectors. Sweden does not have specific legislation in place regarding the sustainability of biomass used for electricity, but it does have a very long history of sustainable biomass use from domestic forests and waste.
Energy efficiency	A voluntary programme (PFE) for energy efficiency in energy-intensive industry exists. Companies are exempt from the energy tax for five years if they implement an energy management system and an energy survey on how to best improve energy efficiency. This covers roughly one fifth of Sweden's energy consumption. It is a relatively weak policy compared to what is needed. However, the pulp and paper industry in Sweden, which is an important sector, is highly efficient and has introduced various measures to increase efficiency. This has, however, not been driven by energy policy.
Overarching	Sweden has no policies in place to restructure industry to make it more material-efficient. Energy and CO_2 tax levels are relatively low, but **from 2011 energy tax increased from 0% to 30% and CO_2 tax increased from 21% to 30%.** There are exemptions or **partial exemptions** for those covered by the EU ETS or taking part in PFE.

BUILDINGS

Renewables	Some incentives for retrofit (e.g. wood pellet stoves) exist, but some are out of funding.
Energy efficiency	Relatively strict energy standards are in place, which apply to new and also existing buildings. However, no zero-energy standard is defined. Standards are differentiated according to region, but there is discouragement from national level that inhibits regions from being more progressive than the national standards. National standards are also seen by industry actors as being too weak, which should lead to stricter standards. Several small programmes support energy-efficient renovation, but some are short of funding.
Overarching	A CO_2 tax of 1.05 SEK/kgCO_2 (around €100/tCO_2) applies. Low electricity prices from nuclear and hydro lead to high rate of heating with electricity.

TRANSPORT

Renewables	Biofuels are exempt from energy and CO_2 taxes. Since 2006, all larger fuel stations are obliged to offer at least one type of biofuel. **From 1 January 2011 biofuels used in transport must demonstrate that they are sustainable in line with the Renewable Energy Directive.**
Energy efficiency	The car fleet in Sweden is dominated by large vehicles with high fuel use. Starting in 2010, new green cars are exempt from the vehicle tax for the first 5 years. Green cars are defined as vehicles that use E85/biogas or are very energy-efficient and do not emit more than 120g CO_2/km. Vehicle tax is linked to CO_2 emissions and is set to increase. **There is also a SEK 40,000 (€4,300) government grant available for the purchase of cars with emissions lower than 50g CO_2/km. Funding for this grant is however limited to SEK 200m (€22m) for the years 2012-2014 and so will only be sufficient for 5,000 cars.** There are also other incentives, such as free parking in certain regions and exemptions from the congestion tax for cars defined as being environmentally-friendly.
Overarching	Between 120m and 170m SEK (€12.9 – 18.3m) per year have been invested in research and demonstration projects for biofuel. In 2009, another 875m SEK was provided for R&D in biofuels for a period of three years. Approximately 450m SEK (€48m) shall be spent during the coming years on R&D for hybrid and electric vehicles. Petrol and diesel are subject to the CO_2 and energy tax. **The Swedish policy goal is for the transport fleet to be independent of fossil fuels by 2030.**

AGRICULTURE

Sweden has low nitrate levels but does not set a limit, such as nitrogen loads per hectare.

Financial support is offered to farmers introducing renewable energy or increasing energy efficiency of agricultural greenhouses. Organic farming also receives government support, both for crop and animal farms.

There are several labels for ecological agriculture. Additionally, there has been government funding for the consumer agency (konsumentenverket) to produce information material and campaigns.

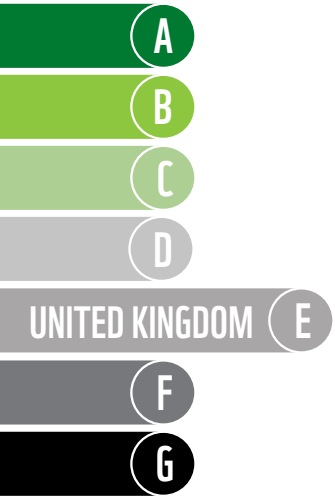
Emissions from soil management and animal production are not addressed sufficiently.

FORESTRY

Sweden has a long history of forestry management and of supporting and promoting domestic forests. There are very detailed forest inventories. Forest areas have increased significantly in the past and are now relatively stable.

Swedish forestry policy has a liberal market approach which relies on the assumption that the forestry sector will voluntarily balance production and environmental needs. As biomass mobilisation increases, problems with sustainability and the need for a regulating framework become more apparent. To date, this is lacking and some concerns have been expressed that in practice production takes priority over the environment.

Sweden warned that biomass criteria should be valid globally and not only at EU level, and that no additional standards are needed on top of standards for sustainable forestry.



UNITED KINGDOM

Overall assessment

The 2010 version of the Climate Policy Tracker gave the United Kingdom a rating of E. Since last year's assessment the UK government has announced a spending review which aims to reduce the country's economic deficit. Some renewable energy and energy efficiency schemes were cut as part of this review (for example the Warm Front Scheme), while others were reduced in scope (Renewable Heat Incentive, Carbon Trust). Some new measures are being introduced, such as a £3bn (€3.4bn) Green Investment Bank, a carbon floor price within the power sector, and the halting of airport runway expansion in the South East of England. The Carbon Reduction Commitment Energy Efficiency Scheme has now been transformed into essentially a carbon tax with revenues going to the Treasury instead of scheme participants. Overall the UK Committee on Climate Change warned in June 2011 that UK policies are failing to achieve the needed step change.

RECOMMENDATIONS ON MOST URGENT ACTIONS

- The UK could increase its efforts to support energy efficiency of passenger cars and freight trucks. Additional (positive or negative) incentives could increase the uptake of energy efficient vehicles. For examples see France with a revenue neutral bonus malus system for new cars.
- The Government needs to ensure that efforts to retrofit the UK's housing stock are significantly scaled-up and more clearly linked to delivery of the carbon budgets. The Green Deal needs to be supported by incentives and low interest rates if it is to appeal to owners of the millions of homes most in need of improvement and to lead to reductions in energy-related carbon emissions of sufficient scale.
- The remit of the Green Investment Bank needs to be clarified in terms of how the financing it will provide will achieve the scale of investment needed to transform the UK economy towards a low-carbon pathway, and it should be empowered to borrow before 2015.
- Ensure that the electricity market reform, which will be introduced in 2012, encourages a rapid deployment of renewables and measures to support demand reduction. The aim should be to deliver a nearly carbon-free power sector by 2030, as recommended by the Committee on Climate Change, with an overwhelming focus on efficiency and renewable energy sources.

UNITED KINGDOM E

Overview summary

	Renewables	Energy efficiency	Overarching
GENERAL	B • Green Investment Bank is set up; full operation starts in 2015. • Acceptance of 4th carbon budget was positive, although undermined by 2014 review and no action to tighten 2nd and 3rd budgets. • Cuts to funding for government organisations (Carbon Trust). • Carbon floor price to be introduced from 2013.		
ELECTRICITY SUPPLY	D • Government will review solar PV tariff one year earlier than scheduled, and reduced the tariff for systems larger then 50kw.	E *No recent policy developments.*	E • Shale gas exploration could detract from renewable initiatives. • Slow progress in delivering planned carbon capture and storage demonstration programme. • Carbon price floor for power sector. • Planned electricity market reform will introduce feed-in tariffs for all forms of low-carbon generation, with risk of excessive support for nuclear.
INDUSTRY	E *No recent policy developments.*	E *No recent policy developments.*	E *No recent policy developments.*
BUILDINGS	E • Feed-in tariff and Renewable Heat Incentive provides incentive for renewables.	E • Significant step back on ambition for zero carbon new homes from 2016. • Revenues from Carbon Reduction Commitment (CRC) energy efficiency scheme no longer hypothecated to scheme participants. • Cuts to Warm Front Scheme.	F • New Green Deal for improved household energy efficiency introduced in legislation. Significant potential, but uncertainty over likely scale-up and ambition.
TRANSPORT	E • Renewable Transport Fuel Obligation ambition increased to 3.5%. • Number of plug-in vehicle pilot projects increases.	E • New premiums for low emission hybrid and electric vehicles.	E *No recent policy developments.*
AGRICULTURE			C *No recent policy developments.*
FORESTRY	D • Planned sale of state-owned forest suspended following massive public protest.		

Letters indicate last year's score:

A B C D E F G

Arrows indicate the recent policy trend:

- Positive policy developments since last year's situation
- Negative policy developments since last year's situation
- Negative and positive policy developments are balanced or policy plans that are not yet implemented

The size of the icons indicates the relative importance of the sector: small, medium or large.

2010 analysis: main findings

The results of the 2010 Climate Policy Tracker analysis show that the UK has an ambitious, legally-binding Climate Change Act which commits the UK to reducing greenhouse gas emissions by at least 80% below 1990 levels by 2050. It sets carbon budgets in 5-year increments and has independent review provisions through its Committee on Climate Change. Before there were several initiatives covering many sectors and policy areas. However, in most cases, these were not ambitious enough to achieve a transformation to a low-carbon economy by 2050. Some important areas were underdeveloped, particularly in buildings and transport. While the government elected in May 2010 has indicated climate ambitions of a similar level as the previous government, budget cuts are currently being implemented and are anticipated across all areas of the economy. These could have serious implications on the policies that are currently rated positively.

- The UK is the only EU country with a legally-binding long-term commitment to reduce greenhouse gas emissions by at least 80% by 2050. This commitment is supported by innovative carbon budgets set in 5-year increments to ensure that emissions decline from day one. There is an additional provision for the carbon budgets to be tightened through government responses to recommendations from the independent Committee on Climate Change.
- Successful introduction of new policy instruments - for example the Carbon Trust, receive resources from a climate change levy and this finances further emission reductions.

Policy developments in the last 12 months

In May 2010 a general election was held in the UK, which resulted in a coalition government. The new government announced that one of its top priorities would be to reduce the national deficit, and as such announced a series of spending cuts across the economy. Measures focused on spending cuts rather than higher taxes, to a ratio of 80:20.

On the face of it the Department for Energy and Climate Change (DECC) came through the spending review better than expected: a 30% cut in administrative costs but just 5% annual cuts for four years. Capital spending for the department is to be increased. However, there were some casualties. The Warm Front Scheme, offering means-tested grants for energy efficiency measures such as home insulation, was abolished.

In May 2011 a fourth carbon budget was set under the Climate Change Act. This budget sets the UK's carbon targets for the five year period 2023-2027, and was set at a 50% reduction in UK emissions below 1990 levels. While this was in line with the recommendations of the UK Committee on Climate Change (CCC), the government did not adopt the CCC's further recommendations to tighten the carbon budgets for the years 2008–2022, leaving an improbable trajectory between this period and the target for 2023-2027. Following significant dispute between government departments, the government introduced a review of the fourth carbon budget in 2014, which threatens to undermine investor confidence. Moreover, the government did not accept the CCC's recommendation that the fourth budget should be met entirely through domestic action. The CCC's third annual progress report stated that emissions are falling too slowly in line with long-term targets, and that most reductions realised to date are actually the result of the economic recession.

The Chancellor has also announced plans for a 'floor price' for carbon dioxide emissions of £16 (€18) per ton. Fossil fuels used for the production of electricity will be liable to a tax that is equivalent to the difference between this floor price and the price of EU ETS allowances on the futures market. For 2013-2014 this difference has been calculated as £4.94 (€5.6)/tCO2. The floor price will rise to £30 (€34)/tCO2 by 2020.

The innovative Renewable Heat Incentive (RHI) was introduced in March 2011. The scheme provides tariff support for the installation of renewables. The scheme will begin with support for the non-domestic sector in 2011 and will extend to the domestic sector in 2012. However, before the scheme began a spending review was held in October 2010 and the extent of the original tariffs established under the scheme was scaled down by 20%.

Other measures introduced by the new government include the setting up of a Green Investment Bank - a £3bn (€ 3.4bn) long-term investment fund designed to facilitate clean technology initiatives. The bank is designed to spur investment in carbon emissions-cutting technologies and sectors. As well as the initial £3bn funding, the bank is also able to leverage up to £15bn (€ 17 bn) of private sector investment. The bank will be operational in shadow form from 2012, but will not be able to borrow independently until 2015 – which could significantly reduce its impact.

There is also growing interest in exploring potential shale gas reserves in the UK. Following opposition from environmental groups a Parliamentary enquiry was held into the environmental impact of shale gas 'fracking'. The enquiry found that the impact would be negligible and it suggested that the government continues with preparations for shale gas assessment. However, environmentalists are still concerned about the impact of the shale gas development, and the worry that it could detract from other, renewable initiatives.

The UK has also awarded £1bn (€1.1 bn) of capital funding to the country's first carbon capture and storage (CCS) demonstration project, although the new government has dropped plans for a levy on consumer bills to fund this. DECC states that this is the largest public funding contribution to a single CCS demonstration project anywhere in the world. In November 2010 the government also announced plans to proceed with 3 additional demonstration projects, although the funding mechanism for these has yet to be determined. The Office of Carbon Capture and Storage (OCCS) is developing a CCS Roadmap that will set out the timescales up to 2050 on which CCS needs to be deployed in the UK to meet climate change targets. The Roadmap will identify barriers and opportunities, and set out key action points. Despite being launched almost four years ago the government has still to identify which particular project will proceed with support and the demonstration programme has yet to get off the ground.

The Energy Bill introduced to Parliament on 8 December 2010 includes provision for a new Green Deal which aims to revolutionise the energy efficiency of British properties. The Government is establishing a framework to enable private firms to offer consumers energy efficiency improvements to their homes, community spaces and businesses at no upfront cost, and recoup payments through a charge in instalments on the energy bill. While a positive measure, the government has not yet made clear how the Deal will link to carbon budgets, or what relevant targets under the Deal would be.

The UK renewable feed-in tariff for smaller scale renewables was launched in April 2010. Any property owner who installs an eligible renewable electricity system can receive payment for every kilowatt hour they generate. A first review of the scheme was due in April 2012. However, the government decided to do this review early, and reduced the feed-in tariff for solar installations over 50kW – this has led to very strong complaints from the renewables industry. The government also announced plans in 2010 to sell off 258,000 hectares of state-owned forest, but following a massive public outcry this plan has currently been shelved.

As a revenue-raising measure, the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, has now been transformed into essentially a carbon tax, whose revenues will no longer be hypothecated to green measures of CRC scheme participants. Instead the money will go to the Treasury.

In July 2011 the government published its Electricity Market Reform White Paper, which set out measures to diversify the UK energy mix and encourage investment in renewables. It included measures such as the carbon price floor, feed-in tariffs for low-carbon electricity generation and an emissions performance standard of 450 gCO_2/kWh for coal-fired power stations. The White Paper is intended to become statute in 2013.

Sectors in detail

GENERAL

The UK is the only EU country with a legally binding long-term commitment to reduce greenhouse gas emissions by at least 80% by 2050. This commitment is supported by innovative carbon budgets set in 5-year increments to ensure that emissions decline from day one. The government is required to set carbon budgets for 5 year periods, as well as a programme that will ensure that the UK's emissions remain within the carbon budget. The Parliament determines the amount of CO2 emission that can be emitted for each carbon budget, as well as the amount of international credits that can be used for offsetting. For the first budget period (2008-2012), the limit for using international credit to offset domestic emissions is zero (except for ETS credits bought by companies that are part of the ETS). The strategy covers all sectors and is supported through further legislation. An independent committee, the Committee on Climate Change (CCC) determines how to meet the set target. The government can be summoned by the court (for example at the initiative of non-governmental organisations) when the activities taken to reach the targets of the Climate Change Bill are deemed insufficient and/or when the advice as proposed by the CCC has been ignored.

There are several initiatives covering many sectors and policy areas. However, in most cases, these are not ambitious enough to achieve a transformation to a low-carbon economy by 2050. **Funding for the Carbon Trust has been drastically reduced, and the structure of the Carbon Reduction Commitment (CRC) was significantly reduced during 2011.**

The government is introducing a Green Investment Bank with funding of £3bn (€ 3.4bn) to make investments in low carbon initiatives. The government is also introducing a carbon price floor for the power sector of £16 (€18) in 2013, in a bid to provide a clear price signal to low-carbon investors.

The proposed electricity market reform package launched in July 2011 does not provide sufficient focus on reducing energy demand, and support for low-carbon generation needs to be further elaborated to avoid an approach that is too focused on nuclear and not enough on the specific needs of renewables. This could impact negatively on the attractiveness of renewable investment in the UK.

ELECTRICITY SUPPLY

Renewables

A Renewables Obligation has been in place since 2002, which places an obligation on electricity suppliers to supply an increasing percentage of renewable electricity. It is a stable policy, which will be in place until at least 2037. The UK achieves around 6% renewable electricity currently. The obligation targets 15% renewable electricity by 2015. It offers sufficient support, particularly since technology banding was introduced. However, non-economic barriers have persisted, especially in the areas of grid access and planning. A feed-in tariff has been in place for small-scale renewables since April 2010.

The solar feed-in tariff for installations has been cut from 32.9p/kwh to 19p in 2011.

Scotland set a renewable electricity target of 100% for 2020.

Energy efficiency

Combined Heat and Power (CHP) support is not at a sufficient level to boost its uptake. The level of district heating networks is low. The target to achieve 10GW CHP in 2010 was not achieved.

Overarching	Phase 3 of the ETS has no free allocation for electricity production. Any new power plant over 300MW needs to be CCS-ready, including biomass CCS. **The UK has pledged £1 bn (€1.1 bn) to fund the country's first carbon capture and storage (CCS) demonstration project, although progress towards this has been slow. Funding for three additional demonstration projects is planned.** The Climate Change Levy varies as a percentage, from roughly 7% for electricity to 24% for coal. Electricity producers also face the cost of the white certificate scheme for energy efficiency. There is political and planning support for new nuclear capacity. Although there is no specific subsidy for nuclear – there are concerns that there are in fact several hidden subsidies, along with a streamlined planning process. This could distract important resources from promising current and future energy policies. **A carbon floor price of £16 (€18) a tonne will be introduced in 2013, in order to provide a clear price signal to investors, as well as to boost revenues. Fossil fuels used in the production of electricity will be liable to a tax rate equivalent to the difference between the floor price and the EU carbon price. This rate will start at £4.94/tCO2 in 2013. It appears that revenues from the carbon floor price and EU ETS will not be recycled for climate protection, and there are concerns from business and consumer groups about the potential impact on energy bills. The measure will also create a windfall profit for existing nuclear power plants.**

INDUSTRY

Renewables	There are some examples of industrial installations having on-site renewables. Industry can earn green certificates under the Renewables Obligation for renewable electricity production and get an exemption from the Climate Change Levy for green electricity produced.
Energy efficiency	Climate change agreements are a key initiative in this area. These are negotiated at the sectoral level and entitle energy-intensive industries to an 80% reduction in the Climate Change Levy if they meet energy efficiency or carbon reduction targets. It has been announced that the tax reduction will be reduced from 80% to 65%, thus making the instrument less attractive. In addition, the Carbon Reduction Commitment (CRC), a trading scheme for large non-domestic buildings and small industry (essentially a carbon tax), provides an incentive to uptake energy efficiency in particular, as well as other carbon abatement measures. Carbon Trust Technology Accelerators provide funding and support for different sub-sectors in renewables, as well as for energy efficiency. The Market Transport Programme focuses on sustainable products.
Overarching	A number of measures are in place: Carbon Trust, Carbon Labelling Programme (supply chain emissions), Market Transformation Programme and WRAP. These are good initiatives, but the uptake is not widespread across the industry.

BUILDINGS

Renewables	Renewable heat utilisation is currently very low in the UK. A Renewable Heat Incentive (RHI) was introduced in April 2011: the goal is 12% renewable heat by 2020. It is open to non-domestic buildings, who receive long-term tariff support through the scheme. The second phase will see households offered the same support, from October 2012 in line with the introduction of the Green Deal. The RHI is funded by a levy on suppliers of fossil fuels for heat and will cover a wide range of technologies. Some local authorities require a minimum percentage of onsite renewables before planning permission is granted for new buildings, but currently investment in new buildings is limited.

Energy efficiency	There is a target for all new houses to be zero carbon by 2016 and all new non-domestic buildings to be zero carbon by 2019. **But the target has been diluted by a third during 2011 by excluding energy consumed by domestic appliances.** The landlord-tenant dilemma has not been solved. A creative policy is the obligation on suppliers to produce savings from domestic buildings. The suppliers finance the efficiency measures of house owners and can put the costs on general energy prices. Separately and in addition, the CRC, basically a carbon tax on large non-domestic buildings and small industry, will provide an incentive for energy efficiency in buildings (including retrofit and appliances). **CRC allowances are currently set at £12 per tonne of carbon. The Warm Front Scheme, which offered a means-tested grant for energy efficiency measures such as home insulation, was abolished.** **The December 2010 Energy Bill introduced a Green Deal, whose aim is to dramatically increase the energy efficiency of UK properties. The Deal will allow private firms to supply energy efficiency measures to homes and businesses at no upfront cost, and to recoup payments through a charge in instalments as part of the building's energy bill. The government is currently undertaking a cost-benefit analysis of energy efficiency measures and expects to role out the framework in 2012.**
Overarching	The Energy Saving Trust is similar to the Carbon Trust for business but its remit is the domestic and transport sectors. **It was announced that the Energy Saving Trust will no longer receive government funding from April 2012.**

TRANSPORT

Renewables	The Renewable Transport Fuel Obligation started in 2008, with a target of 2.5%. The target was surpassed by fuel suppliers. **The target for 2010/11 is 3.5% by volume.** All fuel suppliers have to report on carbon and sustainability aspects of their biofuels to gain tradable certificates. No minimum carbon or sustainability requirements are to be set until the EU Renewable Energy Directive is fully implemented. The target increases to reach 5.75% in 2013, and the intention is to reach the 10% target in 2020. **Government grants of £5,000 (€5700) are still available for hybrid and electric vehicles (EVs) but the scheme is up for review in 2012. The Plugged-in Places initiative for charging infrastructure has been expanded from 3 to 8 locations. Funding for this measure will be up for review in 2013. Less positively, only £43 million in capital funding has been guaranteed in the government's spending review (far lower than the £230 million promised by the previous government), although a total of £300m for EVs has been budgeted up to 2015. The government Infrastructure Plan for EVs has moved from a blanket approach to prioritising home and workplace charging instead. The government still needs to ensure that sufficient public charging points exist to encourage EV uptake and reduce range anxiety.**
Energy efficiency	Tax incentives exist for low emission cars, but they are not sufficient. Examples include vehicle excise duty, road tax and company car tax which are banded according to emissions. The Department for Transport also runs various Modal Shift Programmes and Logistics Efficiency Programmes for freight. **The capital grant funding for hybrid and electric vehicles is continuing but is up for review in 2012.**
Overarching	Air passenger duty (APD) was increased from two to four tax bands based on distance travelled in November 2009. **In August 2011 the government responded to the 2009 Committee on Climate Change's report on reducing aviation emissions by 2050. It stated that further assessment was needed before adopting a reduction target for aviation. An inflation-rate rise in the APD was due in May 2011 but has been delayed until April 2012. Plans to replace the APD with a per-plane tax have also been shelved after the government announced that the options being pursued would be illegal under international law.**

AGRICULTURE

The UK inventory estimates that agriculture emissions in 2008 amounted to around 48 MtCO2e or 8% of total UK greenhouse gas emissions. Emissions have fallen from 61 MtCO2e in 1990, mainly due to reduced activity as a result of reform of the EU Common Agricultural Policy. The Government is aiming to reduce agriculture emissions by around 3 MtCO2e in England over the next ten years (a similar level of ambition in the rest of the UK would deliver an additional 1.5 MtCO2e). Without further abatement, agricultural emissions would account for a high share of allowed emissions by 2050 (e.g. around 28%). This would be unsustainable noting the emissions from other difficult-to-reduce sectors (e.g. aviation, shipping, and industry). Therefore it is important to continue to reduce the emissions intensity of agricultural production in the 2020s. There is also an urgent need to look at consumption emissions through issues such as diets/dietary choices.

On a net basis, the land use, land-use change and forestry (LULUCF) sector absorbed 2 MtCO2 in 2008. Going forward, LULUCF is forecast to revert to being a net emitter due to a decline in the historical forest planting rate.

Agricultural strategy includes all major sectors, but takes place at the local authority level, exposing decision-making to potential inconsistencies. The bio-energy strategy is out-of-date and in the process of being reformed in light of EU renewable energy targets. **Environmental Stewardship is an agri-environment scheme which offers payments to farmers and land managers in England for effective land management which protects and enhances the environment and wildlife. The scheme forms part of the Rural Development Programme for England (2007-2013).**

FORESTRY

All strategies cover a long-term perspective and all forest lands. Climate change adaptation/mitigation is covered but not extensively for all parts of the UK (e.g. not covered in Northern Ireland). Considerable online/printed resources are available via the Forestry Commission, covering climate change mitigation, adaptation and other related topics. Wood planting schemes, such as the Energy Crop Scheme and the Woodland Creation Grant are available in the UK.

The Renewable Obligation and the planned Renewable Heat Incentive (due April 2011) do not differentiate support for domestic wood use over imported. The UK Bio-energy Strategy is being updated. A country level forest inventory is available for 2009 (includes woodland area, planting area, etc). A detailed forest inventory is available by region (i.e. county), but it has not been updated since 2002.

In 2010 the government announced plans to sell off 258,000 hectares of state owned woodland. The government had concerns that the Forestry Commission was compromised by being both the forest regulator and the major producer of wood in the UK. However, following strong public opposition to the idea, and evidence that the sale of the forests would cost rather than save money, the plan was shelved.

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