



INTERNATIONAL ASSOCIATION OF OIL & GAS PRODUCERS

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OGP Response to the Green Paper "A 2030 framework for climate and energy policies"

25 June 2013

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OGP Policy Principles:

1. **We agree with the trio of climate and energy policy objectives:** security of supply, sustainability and affordability of energy supporting industrial competitiveness and societal quality of life. OGP also believes that trade-offs among the objectives should be addressed openly, and the current emphasis needs to be re-balanced: **future policy choices should ensure that adequate weight is given to all three objectives.**
2. **The 20-20-20 framework is one of multiple, complex and overlapping policies** and, along with national implementing measures, has significantly increased investment uncertainty through the overall regulatory burden faced by energy market participants.
3. Therefore, **we do not support further triple targets** (greenhouse gas (GHG) / renewable energy sources (RES) / energy efficiency (EE), e.g. XX-XX-XX) for 2030 and believe **the EU should set an overall climate ambition for 2030 based on a single GHG target.** This target must take into account sound science, progress in international climate negotiations, and reflect existing and future commitments of other major trading partners. To ensure that the future EU GHG target is met and shared economy-wide, in addition to the EU ETS, legally binding effort-sharing targets at Member State level covering non-EU ETS emissions would need to be established. As part of a suitable international agreement, the EU climate ambition for 2030 might be incorporated in binding international targets.
4. **An undistorted EU ETS is a means to achieve an environmental target cost-effectively.** It should remain the central EU mechanism for CO₂ emissions reduction for electricity and industrial sectors, as it is a technology-neutral instrument. In contrast, the overarching renewables target distorts the EU ETS carbon signal, thus we do not support it. **Other policies and instruments, such as renewables and energy efficiency policies, should not interfere with the EU ETS.**
5. We recognise that currently there is an imbalance between demand and supply in the EU ETS. **We therefore support the review of structural measures for the long-term and look for early agreement of any required regime change for Phase IV.** While looking at potential changes, the long-term nature of the EU ETS needs to be better communicated by the European Commission (e.g. the current linear reduction factor leads to over 70% reduction in the ETS cap by 2050 and the ability to 'bank' between phases provides certainty).
6. **All sectors should contribute on an equitable and transparent basis to emissions reduction.** In the future, consistent carbon pricing across sectors should be promoted - this would ensure that emissions are reduced where most cost-effective.
7. **The Internal Energy Market needs to be completed as soon as possible in order to allow markets to deliver the most price-efficient solution.**
8. **Targets are not suitable instruments to measure or promote competitiveness and/or security of energy supply.** Indicators may be useful to track performance, but the economy is unlikely to respond efficiently to any mandatory target set in these fields.

9. **OGP would like to emphasise that security of supply for oil and natural gas is linked to diverse routes and sources, rather than to the misleading notion of “energy independence”.** Reduced import dependency is not a desirable goal in itself as it does not necessarily lead to lower energy prices or improved competitiveness. Such arguments also defy the efforts of the World Trade Organisation and those of the EU to negotiate Free Trade Agreements with other countries and regions.
10. **We also recognise the need to support R&D to bring promising low-carbon technologies to market,** but all energy sources should be integrated into the market and allowed to compete under normal market conditions, without subsidies (including system connection, balancing cost and exposure to price risk) as soon as possible.
11. The cumulative cost of ever-increasing and overlapping layers of regulation severely affect EU industrial competitiveness and may lead to even more industrial disengagement from the EU. **It is crucial that every new policy measure should be based on realistic assumptions and should be thoroughly tested with regard to its impact on industrial competitiveness.**
12. Within the 2030 energy and climate framework, **natural gas should be enabled as a reliable and immediately available option to help meet emissions reduction target cost-effectively** e.g. by substituting coal and fuel oil in power generation, and by complementing intermittent renewable energy sources. It should be noted that CO₂ emissions from a best-in-class natural gas-fired power plant are about half those of a best-in-class coal plant for the production of a unit of electricity.¹
13. Additionally, **natural gas from shales is potentially an opportunity for Member States to further diversify their natural gas supply sources, while lowering overall GHG emissions and stimulating economic growth.** OGP believes it can be developed safely and in an environmentally responsible way.

¹ IHS CERA Report [“Sound Energy Policy for Europe: Pragmatic Pathways to a Low-Carbon Economy”](#), 2011. Less than 50% compared to coal as set out on page 13 of the report [“Making the Green Journey Work – Optimised pathways to reach 2050 abatement targets with lower costs and improved feasibility”](#).

Introductory Remarks

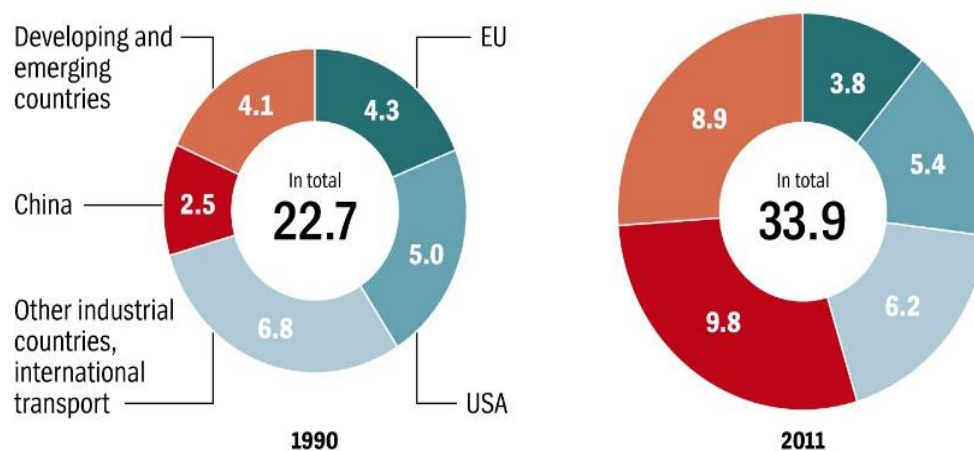
The International Association of Oil and Gas Producers (OGP) is composed of the world's leading publicly-traded, private and state-owned oil and gas companies, industry associations and major upstream service companies. OGP members produce more than half the world's oil and about one third of its gas.

In the context of forthcoming international climate negotiations and the on-going economic crisis, OGP welcomes the opportunity to provide input to the public consultation on the climate and energy policy framework for 2030.

We agree with the trio of climate and energy policy objectives: security of supply, sustainability and affordability of energy supporting industrial competitiveness and societal quality of life. OGP believes that trade-offs among the objectives should be addressed openly, and the emphasis of policies needs to be re-balanced: future policy choices should ensure that adequate weight is given to all three objectives. Energy underpins our economic development and is vital to advancing our competitiveness, energy security and foreign policy goals and, as highlighted by the European Council on 22nd May 2013, a well-functioning and fully interconnected Internal Energy Market is essential to the delivery of the trio of objectives, whereas investments are crucial for jobs, growth and competitiveness.²

OGP also supports the Green Paper's suggestion that the EU's policy and regulatory framework for 2030 should be outlined as early as possible because for long-term investments European industry needs the clarity and stability. Therefore, the EU's future climate policy for 2030 should be based on sound, realistic assumptions to ensure technological and economic feasibility and to remain in line with the actions taken by Europe's major trading partners and progress in international climate negotiations. Concerning international action, the EU represents just over 10% of global emissions and as shown in Figure 1 – this share is declining.

Figure 1: CO₂ emissions per year, in billions of tonnes; Source: Der Spiegel, <http://www.spiegel.de/international/world/bild-870638-430000.html> based on the JRC study, Trends in global CO₂ emissions 2012 Report



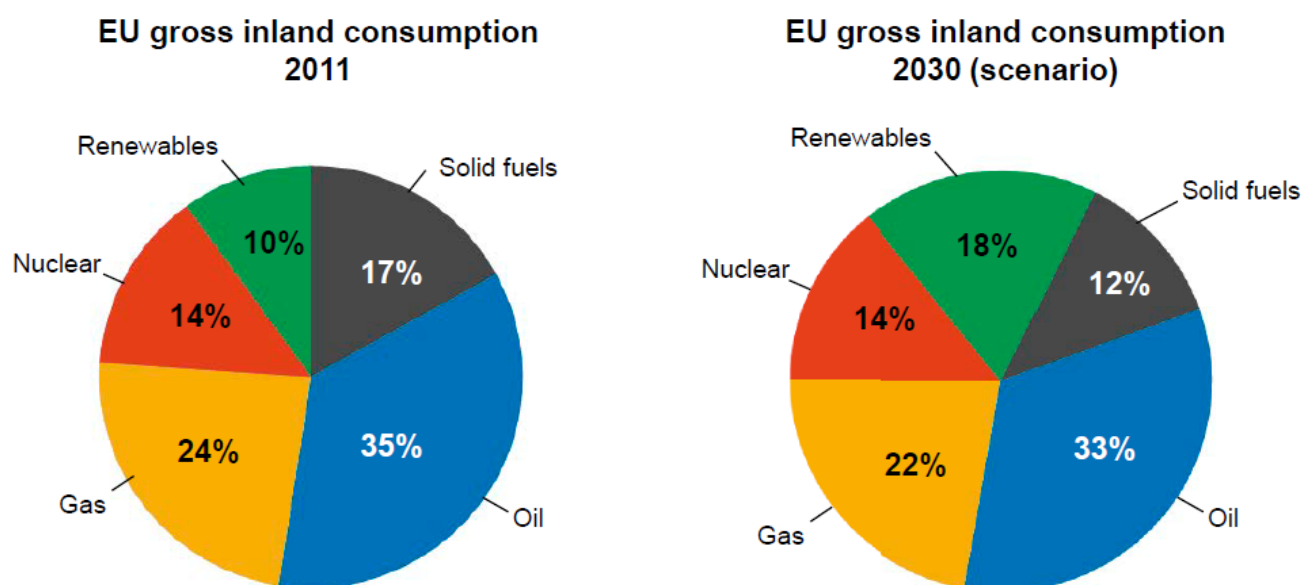
² European Council Conclusions of 22 May 2013.

Further unilateral action by the EU, therefore, will have little or no impact on global emissions or on the 2°C objective, but could compromise future growth and would increase carbon leakage which is already a major concern for industrial sectors. Addressing carbon leakage and the importance of EU competitiveness must be key considerations in designing the EU's post-2020 climate policy framework.

Climate and energy policies and instruments, both at national and EU level, should avoid multiple regulations and targets for the same policy objective, if the EU is to avoid excessive complexity, regulatory burden and unintended consequences. Policies and instruments should be, as far as possible, technology neutral to maximise innovation through market competition, while keeping costs to a minimum. They should also be transparent and predictable to ensure the necessary stability for industrial investment. A transitional support structure should be designed to develop promising new low carbon technologies – but such support structure should focus on R&D funding.

Within EU Climate and Energy Policy beyond 2020, both oil and natural gas should have the opportunity to compete as long-term, cost-efficient energy sources. Natural gas provides particular benefits in the transition to a low-carbon economy through substitution of coal, providing flexible generation and back-up for variable renewable energy sources. As demonstrated in Figure 2, oil and gas are forecast to remain significant share of the EU energy mix.

Figure 2: EU energy mix in 2011 and 2030; Source: “Energy challenges and policy Commission contribution to the European Council of 22 May 2013, Annex 5: Key facts on energy in Europe”



Finally, we urge the European Commission to ensure that all policy proposals are accompanied by a transparent, independently verified and thorough impact assessment. As suggested by the 2050 Energy Roadmap independent expert group, scenario modelling, which provides the basis of policy making, should likewise be conducted in a transparent manner, with assumptions made available to the public. Closer engagement with all stakeholders, including industry, is necessary to identify the best trade-offs between the three main climate and energy objectives: security of supply, sustainability and affordability of energy and competitiveness.

Lessons learned from the 2020 Climate & Energy Package

What has worked well in the EU 2020 framework?

As a result of the 2020 Energy and Climate Package, the EU is on course to achieve its main goal of decreasing CO₂ emissions via the EU ETS and effort-sharing among Member States. The EU ETS has worked as designed and has also addressed the competitiveness objective through the carbon leakage list. OGP is convinced that addressing energy and climate policies at EU, as opposed to Member State level, is simpler, ensures a level-playing field for energy companies and other industrial and commercial enterprises, encourages efficiency, and can be consistent with technology-neutrality and the use of market-based mechanisms.

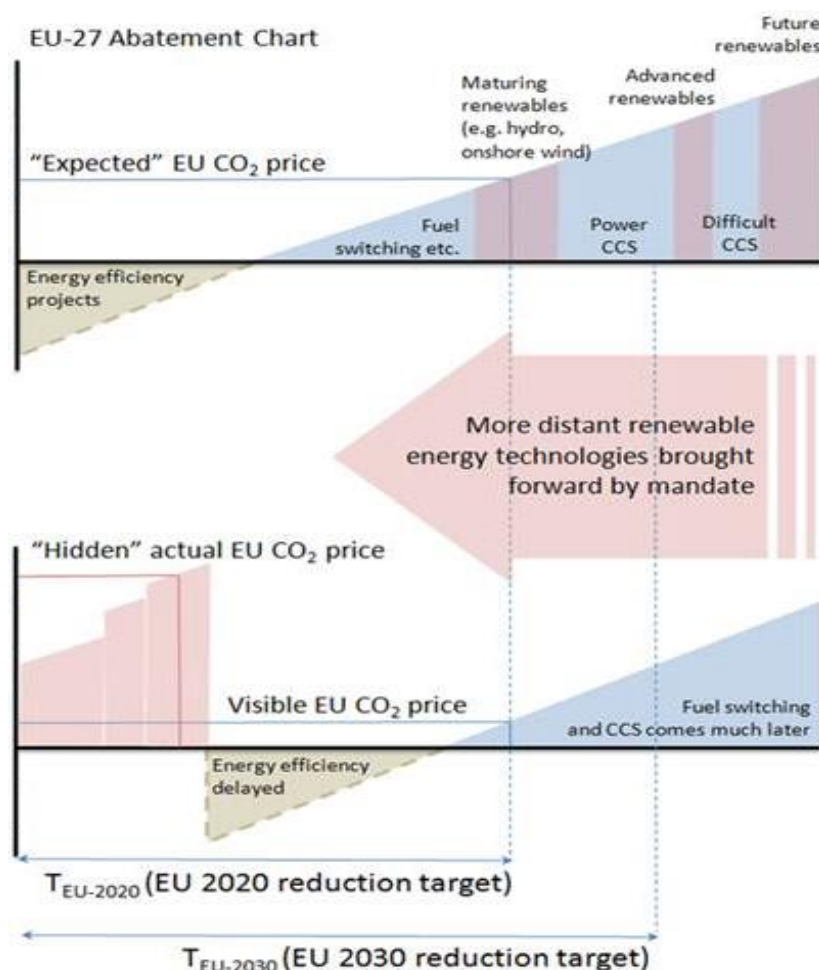
What has not worked in the 2020 framework?

EU climate and energy policies have three pillars: (1) sustainability, (2) security of supply and (3) affordability which is associated with economic competitiveness. The 20-20-20 package has primarily focused on the climate change mitigation, a portion of the first objective, while it failed to address the two others adequately. Therefore future policies should reconcile all three objectives and make trade-offs between them in full consultation with stakeholders. Additionally, the trade-offs between the potential loss in domestic competitiveness, energy security and jobs and local carbon reductions, which may be offset through leakage and result in no global emissions reduction, need to be recognised.

1. The triple headline targets for renewable energy, GHG emissions reduction and energy savings are not aligned and policies to deliver these goals overlap:

As shown in Figure 3, binding renewable energy targets, achieved by national level subsidies in the electricity sector, distort the cost of achieving the overarching GHG emissions reduction target, specifically the carbon price.

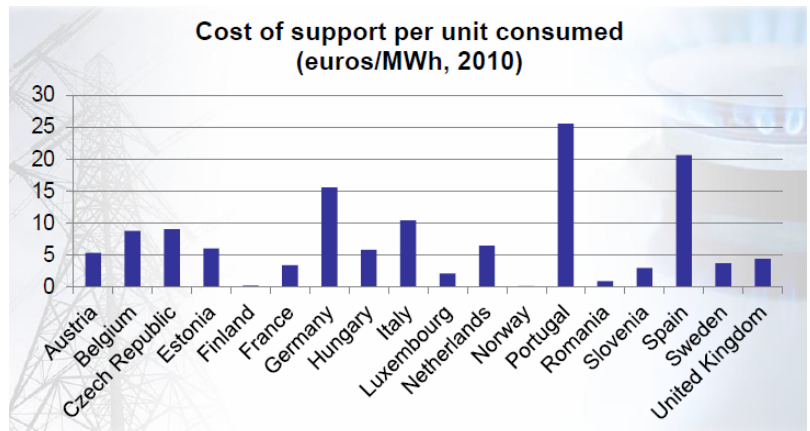
Figure 3: EU-27 Abatement Chart, The real price of CO₂ in the EU; Source: Shell.



In addition to the impact of other policies (such as renewable energy and energy efficiency), demand for ETS allowances has been reduced by unforeseen events, such as the financial crisis. A lower EUA price and availability of cheap coal (Figure 4), due to increasing supplies of shale gas in the US, has led to the burning of more emission-intensive coal for power generation in the EU at the expense of cleaner gas. Furthermore, some targets are not consistent (e.g. Renewables Energy Directive (RED) and Fuel Quality Directive (FQD)). This has resulted in increased regulatory burden for companies (e.g. FQD art. 7a implementation proposal).

2. OGP believes that elements of the current 2020 package are not a cost-effective way of meeting GHG emissions reduction targets.

The current framework, where measures overlap with the EU ETS, has proven a costly way of meeting the GHG target. The high cost of RES support schemes has contributed to increased electricity prices for end-consumers and industry in many countries and weighed on public finances in others, depending on the structure of national support. Figure 5 highlights the burden of RES incentives on consumers' expenditure in most EEA countries. In 2010, Portugal and Spain had the highest support level per unit of final electricity consumed at over €25/MWh and €20/MWh respectively. In Germany, the level of electricity surcharge paid by households to finance the deployment of renewables increased by 47% between 2012 and 2013.³ In Spain, it is estimated that RES support has caused public debt to swell by €28bn or 4% of the country's total debt.⁴



For these reasons, we look forward to the Commission's guidelines on (or even the harmonisation of) RES support schemes, followed by efforts within all Member States to apply these consistently.

3. In our view, non EU-ETS elements of the existing 2020 package are over-prescriptive and hinder innovation and sustainable long-term investment in the EU ETS:

- The 20-20-20 framework is one of multiple, complex and overlapping policies and, along with national implementing measures, has significantly increased investment uncertainty and the overall

Figure 4: "Cheaper, not cleaner"; Source: "The unwelcome renaissance", The Economist, 5th January 2013.

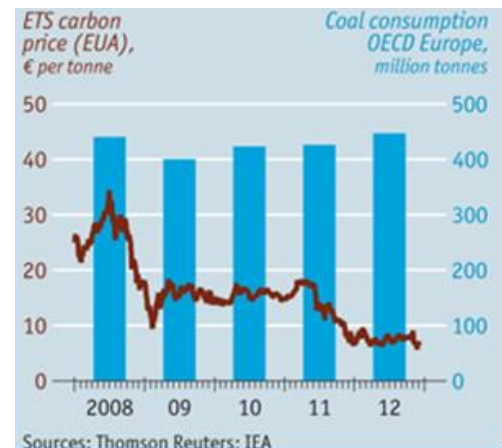


Figure 5: Cost of support per unit consumed (euros/MWh, 2010); Source: "Status Review of Renewable and Energy Efficiency Support Schemes in Europe", Presentation at the CEER Conference, 29 January 2013.

³ "German Renewable Surcharge to Rise 47%, Wind-Power Body Says", Bloomberg, <http://www.bloomberg.com/news/2012-10-12/german-renewable-surcharge-seen-5-27-euro-cents-kwh-correct.html>

⁴ "Spain Halts Renewable Subsidies to Curb \$31 Billion of Debts", Bloomberg, <http://www.bloomberg.com/news/2012-01-27/spain-suspends-subsidies-for-new-renewable-energy-plants.html>

regulatory burden faced by energy market participants. Any transitional incentive should be time and funding limited, and be phased out as soon as possible in order to force these technologies to demonstrate their ability to compete in the market.

- Political intervention in energy markets increases uncertainty for investors and reduces investor confidence in the price signals on which investment decisions rely. This exacerbates the difficulties in making investments in Europe. Financing projects on the basis of subsidies is not sustainable and leads to damaging retrospective changes. For example, power companies are moth-balling CCGTs and struggle to make necessary investment in Europe⁵ as the market is distorted.
- Despite the NER 300 programme, there is no large scale power or industrial Carbon Capture and Storage (CCS) project in the EU. CCS is an innovative technology and could prove an important technology for lowering emissions.

What is important when designing policies for 2030?

- The Commission should not propose additional policy tools for climate change mitigation. It should instead consolidate and simplify current instruments and ensure that existing measures are fully implemented.
- The completion of the Internal Energy Market (IEM) is crucial to promote all three objectives of the EU's climate and energy policy.
- While looking at potential changes, the long-term nature of the EU ETS needs to be better communicated by the European Commission (e.g. the current linear reduction factor leads to over 70% reduction in the ETS cap by 2050 and the ability to 'bank' between phases provides certainty). An expectation of undistorted continuation of the carbon market beyond 2020 is likely to have an increasing effect on EUA demand by investors and, therefore, on the price of an EUA.
- Electricity generated from renewable sources has the privilege of "either priority access or guaranteed access to the grid-system"⁶ or priority dispatch which are market distortions. Renewable energy should be dispatched onto the grid under the same terms and conditions as all other competing power sources. The cost of necessary infrastructure investments to fully integrate renewable electricity into the system (extending the grid is very expensive) needs to be balanced with the associated benefits (c.f. historic decisions on connection with gas grid - e.g. UK building of natural gas grid in 1970s excluded some small and remote communities). In its report, the OECD Nuclear Energy Agency estimated that the total grid-level system costs for variable technologies can reach up to USD 40 per MWh (€ 31) for onshore wind and up to USD 80 per MWh (€ 61) for solar.⁷
- Natural gas should be enabled as a reliable and an immediately available option to help meet emissions targets cost-effectively e.g. by substituting coal and fuel oil in power generation and heat sectors, and by complementing intermittent renewable energy sources. Policies should support unlocking its potential within the EU.

⁵ Citigroup study on "investable" power sector; statements by E.ON; investment plans of major European utilities.

⁶ Directive on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC; Article 16 (2b).

⁷ "Nuclear Energy and Renewables: System Effects in Low-carbon Electricity Systems", OECD Nuclear Energy Agency, 2012.

- Finally, as the EU faces a real decline in economic activity and its citizens face a sustained period of austerity, continued unilateral action on climate change may only lead to a weakening of EU competitiveness internationally.

Targets

- In general, we favour EU-wide policy mechanisms and approaches as they underpin the internal market by reducing intra-EU trade distortions and thus support EU competitiveness.
- The EU should set its overall climate ambition for 2030. This ambition should be based on a single GHG target reduction. This target must take into account sound science, progress at the international climate negotiations, and reflect existing and future commitments of other major trading partners. To ensure that the future EU GHG target is met and shared economy wide, alongside the EU ETS, legally binding effort-sharing targets at Member State level covering non-EU ETS emissions would need to be established. As part of a suitable international agreement the EU climate ambition for 2030 might be incorporated in binding international targets.
- Member States should be encouraged to trade non-ETS traded sector reductions to achieve national emissions targets cost-effectively. Use of offsets from international and/or domestic mechanisms could also assist.
- We do not support further triple targets (GHG / RES / energy efficiency e.g. XX-XX-XX) for 2030 for the reasons discussed above. Moreover, targets for energy efficiency and renewables which impact the EU ETS sectors are not helpful. They do not deliver lowest cost emissions reductions and undermine the role of the EU ETS as the primary driver for compliance with the GHG target.
- OGP does not support EU sectoral GHG targets with differentiated allocation for individual EU ETS sectors/sub-sectors, as they would result in a range of mitigation prices among sectors, thus destroying the EU ETS as a pan-European instrument. Sectoral targets would also increase costs, complexity, administrative burden, and introduce a competitive distortion between substituting products.
- Targets are not suitable for measuring or promoting security of supply and competitiveness (energy prices), but we could support a set of indicators to monitor progress in these areas.

Instruments

- As far as possible, instruments should be EU-wide, market-based and technology neutral.
- The EU ETS should be the single instrument applying to the electricity and industrial sectors, including our own oil and gas production sector. Other policies and instruments, such as renewables and energy efficiency policies, should not interfere with the EU ETS.
- For non-traded sectors, pan-European instruments, such as setting standards, are to be preferred - although we recognise that pan-EU measures cannot cover all national and geographic circumstances. However, national measures should not be used for national protectionism thus jeopardising the internal market. This includes increasing the cost of cross-border trade or indeed blocking it. For instance, standards for energy efficiency should be EU-wide and legally binding to improve cost effectiveness and support the internal market - but should not be applicable to EU ETS installations to avoid double regulation and distortion of EU ETS pricing.
- To promote energy savings cost-effectively, OGP strongly believes that future policies in the non-traded sector should first focus on those consumers, where progress can potentially be made at negative or low cost without overlapping with the (EU ETS). Better energy efficiency will help to conserve resources and improve international competitiveness, as well as reducing the EU's greenhouse gas emissions.
- As an international association, we support international measures that would address carbon leakage concerns and EU competitiveness. We welcome the possibility of bilateral agreements for emissions trading. In the absence of global measures and/or bilateral agreements, we prefer pan-European policy initiatives.
- When Member States make energy policy decisions without taking into account their impact on neighbouring States, the ability to complete the internal market is undermined:
 - The *Energiewende* in Germany and the electricity loop flows across the border into Poland and the Czech Republic have caused its neighbour to install circuit breakers to avoid the risk of brownout in its own country.
 - The Electricity Market Reform of the UK with a carbon floor price will now result in a competitive disadvantage in power costs for its industrial users compared with those in the rest of Europe⁸.
 - A variety of capacity mechanisms being developed nationally threaten fragmentation and divergence in the power markets of Europe.
- An undistorted EU ETS is a means to achieve an environmental target cost-effectively. It should remain the central EU mechanism for CO₂ emissions reduction for electricity and industrial sectors as it sets a single carbon price across countries and energy sources. It is technology neutral and market-based. It constitutes the right instrument to ensure emissions reductions in European industry are made at the lowest cost.

⁸ "Energy Efficiency and the ETS", European Parliament, January 2013.

- We recognise that currently there is an imbalance between demand and supply in the EU ETS. We therefore support the review of structural measures for the long term and look for early agreement of any required regime change for Phase IV.
- An appropriate market-based compensation scheme must remain in place to protect EU industry from carbon leakage. This should incorporate a comprehensive approach for both installations and new entrants to carbon leakage with support for both direct and indirect costs automatically considered on a harmonised EU sector / sub-sector basis. This must include indirect compensation calculated at installation level. Offshore installations that are not connected to the grid should not be considered as an EU ETS ‘electricity producer’ and should be permitted to qualify for support (free allocation and/or direct compensation), including for the electricity they produce for their own purposes.
- Innovation is a key driver to achieve a low-carbon economy. Technological change and development will significantly enhance the portfolio of options available and, over time, will bring down the cost of achieving global climate change goals. We also recognise the need to support R&D to bring promising low-carbon technologies to the market, but all energy sources should be integrated into the market and allowed to compete under normal market conditions, without subsidies (including system connection, balancing cost and exposure to price risk) as soon as possible. In fact, production subsidies⁹ for all fuels should be phased out. In doing this, cost-effective renewables will compete with conventional energy sources, and a level playing field amongst low-carbon and other energy sources will be achieved via the carbon price. Support schemes should be harmonised to give the lowest costs, prevent competitive distortions and encourage optimal deployment of potentially viable low-carbon technologies.
- Regarding financial instruments, we urge the Commission to ensure that R&D programmes in the energy sector (such as SET-Plan, Horizon 2020) are as far as possible technology neutral. We believe that a substantially increased R&D and innovation financing scheme is likely to bring faster and more significant results than the current specific support schemes. In addition, this approach will also be more cost-effective and will promote a more competitive EU through R&D. OGP is also in favour of public-private partnerships aimed at contributing to the R&D phase of new low-carbon technologies and at improving public perception of emerging technologies.

⁹ OGP does not accept the concept of tax reliefs as “subsidies” particularly when associated with tax regimes and rates significantly in excess of those levied on other industries. The deduction of business expenditures for tax purposes is a fundamental part of a normal tax regime.

Competitiveness & security of supply

OGP does not consider targets as good instruments to promote or measure competitiveness and/or security of energy supply. Indicators may be useful to track performance, but the economy is unlikely to respond efficiently to any mandatory target set in these fields. Targets would lead to overregulation and create overlaps with existing policy instruments, whereas indicators could show progress in a transparent way. We welcome the Commission's ambition, as expressed in the Industrial Policy Communication update, to reverse the declining role of industry and to bring competitiveness to the forefront. The proportion of manufacturing in the total EU GDP used in the Communication is a good indicator of international competitiveness.

Competitiveness and carbon leakage:

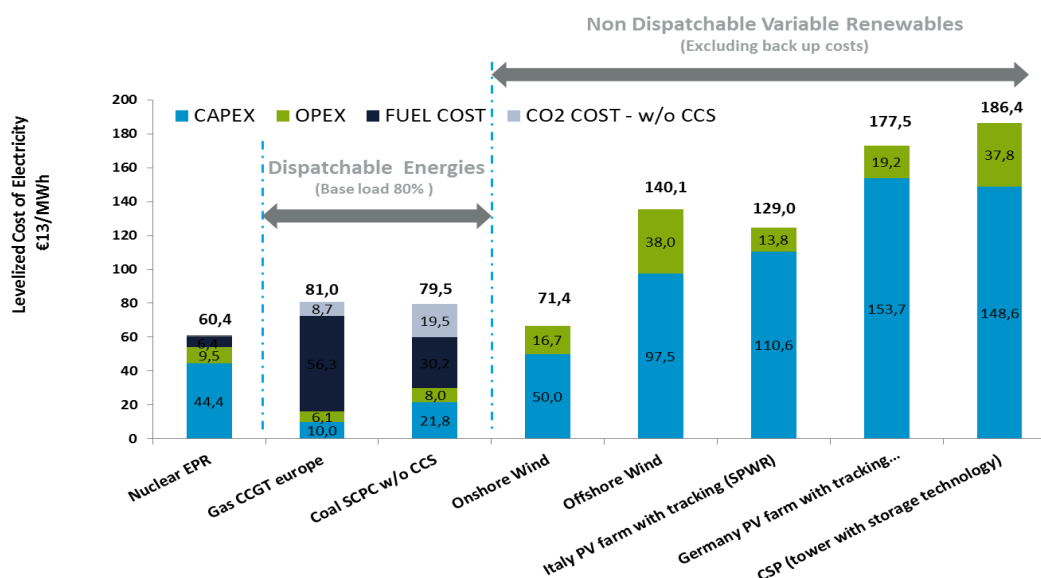
As the European Council of 22nd May 2013 highlights in its Conclusions, EU energy policy must ensure security of supply for households and companies at affordable and competitive prices and costs.¹⁰ This will foster competitiveness, boost economic growth and create new jobs. In order to achieve this, the following factors need to be considered:

- Besides energy and labour costs, the additional cost of European economic, climate and other policies further add to the competitive disadvantage of European industry. The cumulative costs of ever-increasing and overlapping layers of legislation severely impact industrial competitiveness and may lead to accelerated carbon leakage from the EU. It is crucial that every new policy measure is based on realistic assumptions and is thoroughly tested with regard to its impact on industrial competitiveness. EU policies should be designed as part of the global context.
- Energy policies and taxes can be reformed to ensure more competitively priced energy for consumers. However, as highlighted in the 2030 Green Paper, substantial investments are required to modernise the energy system, with or without decarbonisation, and will impact energy prices in the period up to 2030.
- The EU and Member States should work to remove market barriers, stimulate investment in production and transmission, take advantage of domestic oil and gas reserves and, most importantly, make the Internal Energy Market attractive for external suppliers.
- Despite their high costs, low-carbon technologies and renewable energy sources are widely believed to offer only positive contributions to industrial competitiveness. However, RES are more expensive than fossil fuels when both fixed and variable costs are taken into account (see Figure 6). RES also impose additional system costs due to higher grid connection and back-up capacity needs, which are expected to increase with the increase of RES in the energy mix. As Figure 6 shows, the promotion of RES has proven to be a very expensive way to reduce emissions compared to alternative reduction opportunity such as coal-to-gas switching. The high cost of renewables (financed by surcharges in consumer tariffs and/or public funds) and its impact on the increased electricity prices are rarely taken into account when the economic impact of such technologies is assessed.

¹⁰ European Council Conclusions, 22 May 2013.

- Addressing the issue of high electricity costs by promoting the increased use of indigenous RES, such as wind and solar “in order to avoid the large fossil fuel bill of the EU” is a simplistic and misleading approach. As Figure 6 outlines, at their current level of technological development, most European RES are more expensive than fossil fuels, if the total cost of initial investment, grid connection, subsidy and back-up capacity for intermittency are included. Therefore, RES currently pose a larger

Figure 6: Technical Costs of Electricity €/MWh; Assumptions: Gas price (plant gate) : 11 \$₁₃/MMbtu; Coal price (plant gate) : 115 \$₁₃/t (↔ 4,6 \$₁₃/Mmbtu); CO₂ : 25 €₁₃/t; 1€=1,3\$; Source: Total, 2011.



burden on European society than both domestically produced and imported fossil fuels.

- Total cost efficiency (including initial investments, maintenance, grid connections and back-up generation to integrate RES) must become the primary principle when designing any future policy instrument.
- A policy goal should be to integrate all renewable electricity capacity to the market as soon as possible. Progress of this should be measured in order to inform investors of one of the key risks in considering future renewable projects.

Employment impact:

- The oil and gas industry not only provides direct, highly skilled employment opportunities in Europe, it also creates world-class, competitive supply chains, including R&D programmes, and provides significant income streams to national and regional governments through taxation and royalty payments. For example, in the UK, the largest oil and gas producer in the EU, total corporate taxes paid by the industry in the latest financial year amounted to £11.2 billion (€14 bn), about 25% of all corporation taxes paid; whereas in Denmark total state revenue from oil and gas production is estimated at DKK30.6 billion (€4.1 bn) for 2011. These are in addition to the payroll taxes on employees' earnings and VAT on their expenditure. As far as employment is concerned, the oil and gas industry supports some 450,000 jobs in the UK alone. Unemployment in and around the city of Aberdeen in Scotland, the industry's main centre in N.W. Europe, is less than 2% when in many EU countries people are struggling to find work. In Norway, the largest producer of oil and gas in

Europe, the industry is even more significant and the prosperity it brings has resulted in one of the highest standards of living in the world.

- Domestic production of natural gas from unconventional sources, including shales, may provide economic benefits that could improve the competitiveness of local, regional and national economies. Increased employment, the development of a supply industry, significant tax revenues and royalties, along with potentially lower imported energy costs are expected where it takes place.¹¹
- The Oil and Gas Industry urges EU policymakers to carefully weigh up the impact of new policies in terms of estimated “green job” creation vs. the loss of industrial competitiveness and existing jobs in other sectors. The Green Paper quotes the Commission’s estimate in its *Staff Working Document Exploiting the Employment Potential of Green Growth* that the energy efficiency and renewable energy sectors could create 5 million jobs by 2020. However, the Green Paper fails to make a reference to another statement in the same document where it is underlined that in about 15 industries, which employ 12% of the EU’s workers - some 24 million people, “much adjustment” is expected as a result of energy efficiency and renewable policies.*
- A recent report by RWI has shown that, in the case of photovoltaics, Germany’s support scheme regime has

* “Accompanying Staff Working Document Exploiting the employment potential of green growth” (page 13, [here](#)), states: “Much of the adjustment in the high-carbon sector is expected to occur in only 15 industries (These include following industries: electrical energy, gas, steam and hot water; coal and lignite, peat; products of agriculture, hunting and related services; other non-metallic mineral products; crude petroleum and natural gas; basic metals; sewage and refuse disposal services; glass and glass products; coke, refined petroleum products, nuclear fuel; other land transportation services; articles of paper and paper board; manufactured gas and distribution services of gas; pharmaceuticals, medicinal chemicals, botanical prod.; chemicals, chemical products, manmade fibres; air transport services) occupying up to 12% of EU workers (or some 24 million people). At the same time, the gap between EU-15 and EU-10 is particularly striking – more than 20% of all employees in the EU-10 are working in the top 15 emitting industries, which is more than double the rate in EU-15 countries”.

¹¹ An independent study calculated that the development of unconventional resources supported 1.7 million jobs in the United States in 2012; a number which is expected to grow to 3 million by 2020. Further the study calculated a \$ 3.2 trillion investment into the United States economy from 2010 to 2035. As a result of shale gas development, home heating and electricity costs in the United States are \$ 930 lower per household per year. (Important to note: this does not include road fuels).

reached a level that by far exceeds average annual wages, with per-worker subsidies as high as €175,000.¹²

- The competitiveness and employment impact of the increased electricity costs resulting from the increased use of RES also need to be fully understood. Higher electricity bills directly burden industrial competitiveness, but they also leave less spendable income at households. Households' lower spending results in lower domestic consumption, lower industrial output and growth. Since for many households, marginal spending cuts mean less use of labour intensive services (restaurant visits, travel, leisure in general), the result is a further detrimental impact on employment.
- Current energy efficiency and renewable energy policies are thus not the most cost-efficient ways of pursuing employment and/or competitiveness objectives, including affordability of energy prices. The best way to achieve these is through policies which promote the most cost-efficient solutions using market mechanisms. International or Member State level trade barriers or other protectionist measures should be avoided.
- OGP strongly supports the completion of the Internal Energy Market, and considers it as a key tool to promote all three objectives of the EU's climate and energy policy. The Third Energy Package, the Gas Target Model, Security of Supply Regulation and Regulation on Wholesale Energy Market Integrity and Transparency (REMIT) together represent the collection of instruments for delivering transparent, liquid and well-functioning single European markets in gas and power. The Internal Energy Market must be completed in accordance to the prescribed schedule to allow markets to deliver the most price efficient solution. Once this goal is achieved, policymakers should secure and maintain fully integrated EU-28 gas and power markets. Market rationalisation must also be allowed to happen where appropriate, without national intervention. State aid rules should be applied uniformly across the EU.
- The best way to guarantee growth and jobs is to ensure competitiveness and affordability of energy prices. To achieve this, policies eventually must allow and promote solutions at the lowest possible economic cost through market mechanisms.

Security of energy supply:

- Indigenous RES contribute to security of electricity supply through additional volume and increasing diversity, but they also create new vulnerabilities via imported equipment (such as PV), and strategic raw materials (such as rare earths). Variable RES also adversely affect power system balancing, which compromises security of supply and imposes costs on the system.
- OGP would like to emphasise that security of supply for oil and natural gas is linked to diverse routes and sources, rather than to the misleading notion of "energy independence". Reduced import dependency is not a desirable goal in itself as it does not necessarily lead to lower energy prices or improved competitiveness. Such arguments also defy the efforts of the World Trade Organisation and those of the EU to negotiate Free Trade Agreements with other countries and regions.

¹² "Economic impacts from the promotion of renewable energies: The German experience", Rheinisch-Westfälisches Institut für Wirtschaftsforschung, 2009.

- In the European gas market, diversity of supply for both routes and sources has increased over the last 10 years and looks to continue increasing, contributing to security of supply and benefiting consumers. Today, over 50% of European natural gas supplies come from local production (EU27 + Norway) and the remaining portion comes from about 30 different countries. Member States that are highly dependent on external imports intend to diversify their gas supplies through new pipeline interconnectors and LNG terminals. Furthermore, Europe is within economic distance of 80% of global gas resources and already has an extensive and well-established network of gas infrastructure, including many LNG regasification terminals, as well as various long-haul pipeline connections for the North, East and South.**

** A vast internal gas distribution infrastructure with over 200,000 km of transmission pipelines extending across the continent and several thousands of km of pipelines, interconnections and extensions being built or planned, to ensure a reliable security of supply. A large-capacity transportation network that reaches neighbouring supply regions so that Europe can receive liquefied natural gas (LNG) by tanker. In 2011 Europe had a regasification capacity of 186 bcm/year a figure which is predicted to rise to 259 bcm/year by 2015. The development of oil and gas resources in the Caspian, North Africa and the Middle East and proposed pipelines can create multiple sources and entry points enhancing supply security.

- For the power generation, with coal / gas economics currently favouring coal, there is some risk that power security will rely too heavily on the combination of coal and renewables, with the consequence of higher CO₂ emissions. Whether this combination, especially in the case of high renewables penetration, is sufficient to contribute to reducing CO₂ emissions is something that must be investigated. An ever declining gas market simply advances the risk of an early return to illiquid markets and all that entails.
- The current focus on electrification policy goes against notions of efficient energy production. Electricity production accounts for a small portion of energy demand, with heat representing a much greater share. Gas to heat has a very high efficiency (around 80%), whereas gas via electricity to heat is significantly less energy efficient overall, at only about 55% efficiency. Relying on renewable power to provide electricity for heat has further challenges, as often the renewable source is not available at times of peak demand, when the marginal supply of electricity is probably from gas, and currently there remains no effective or economic method of power or heat storage at the necessary scale. The cost implications of infrastructure investment for mass electrification, as well as the likely public opposition to a proliferation of overhead and underground power lines, deserve much greater analysis.¹³
- The upstream industry believes that the Commission should take a more comprehensive approach towards the definition of security of supply. Rather than the current narrow view focused on

¹³ According to the UK's National Grid, this means that, on a very cold day in the UK, for example, if the volume of gas required for heat was converted into electricity to deliver the same amount of heat, the UK's electricity system would need to have a capacity which is four times larger than its present size.

imports of oil and gas, it should encompass a systematic approach to include back-up and grid capacity as a minimum.

Unconventional resources:

- OGP believes that natural gas from unconventional sources, including shales, would add to diversity of supply. Several European countries may hold commercially recoverable shale gas reserves, but industry needs to carry out initial exploration activities to determine the size and commercial viability of the potential resource.¹⁴
- When framing the proposed climate and energy policy framework for 2030, OGP urges the Commission to take into consideration the fact that the US shale gas production has revolutionised global energy supply. OGP believes that shale gas is potentially an opportunity for Europe and can be developed safely, in an environmentally responsible way; this is always the industry's priority.
- Given the current limited scale of the European onshore industry relative to its US counterpart, it would take some time before full development of unconventional gas in Europe can take place. It is important that the potential of European unconventional resources can be properly tested by exploration and appraisal and that experience and capability can be developed in Europe. It is worth noting that a study, "The legal and regulatory framework for shale gas exploration and exploitation activities in the EU" published by Phillippe & Partners, on behalf of the European Commission's DG Energy, in October 2011 concluded that existing legal and regulatory frameworks applicable to unconventional gas activities are adequate and practicable.
- OGP is committed to work with European and national policymakers and competent authorities to achieve appropriate long-term solutions for unconventional gas exploration and production in Europe to ensure that:
 - policy making around exploration and production is based on facts, science and sound risk-management; and
 - EU Member States can continue current exploration and any future production activities, as is their right under TFEU Article 194.2 .

Role of natural gas on the road towards a clean, competitive and secure future:

- Switching from higher to lower-carbon sources of energy, such as from coal to natural gas, while using existing infrastructure, can deliver substantial reductions in CO₂ emissions in power generation. CO₂ emissions from a best-in-class natural gas-fired power plant are about half those of

¹⁴ The study carried out by the JRC has concluded that shale gas production in Europe would alleviate the decline in domestic natural gas production. At today's prices this could save between EUR20-60 billion annually. In addition, shale production in other regions will diversify gas supply routes for Europe, for example, pending regulatory approval, the US may become an LNG exporter. Natural gas from shales may offer an unprecedented opportunity for some Member States to further diversify their natural gas supply sources. EIA, 2011. World Shale Gas Resources: An Initial Assessment of 14 Regions outside the United States; Wood Mackenzie data, 2010. IEA, *Are We Entering A Golden Age of Gas: World Energy Outlook*, 2011.

a best-in-class coal plant for the production of a unit of electricity.¹⁵ However, as already foreseen in “Model-based Analysis of the 2008 EU Policy Package on Climate Change and Renewables”, “the coexistence of the GHG with the RES targets does not imply increasing dependence of power generation on gas”.¹⁶

- Competitive upstream international and European markets ensure that natural gas can be supplied to the European wholesale markets at lowest cost. Strong regional and global competition is expected to grow as new more diverse resources are identified for indigenous development within Europe or as new sources of production available for export to Europe.
- Natural gas can provide baseload, intermediate and peaking electric power. In terms of capital investment per kW of installed capacity, gas power plants are the most affordable and can be constructed in the shortest time. Even with the transformational changes required to grid systems and storage, substantial flexible generation will still be required to support increasing quantities of variable renewables in the power mix. Natural gas-fired power currently offers the broadest range of flexibility in terms of start times, ramp rates, minimum stable load and overall performance while minimising capital investment. Therefore, gas-fired power stations will continue to offer policymakers flexibility and choice with low costs and should not be seen as “locked-in” investments¹⁷ as they will still be essential to help incorporate variable renewable energy sources into the EU’s energy network. Specifically, a programme of natural gas-fired power plants built before 2030 could transition into backing up renewables post-2030. The use of largely amortized plants for backup would be much more economic than building dedicated back-up for renewable capacity after 2030¹⁸. In the longer term, Carbon Capture and Storage (CCS) could play an important role in a decarbonised energy system. With the appropriate development of CCS, it could be retrofitted to natural gas power plants after 2030 in order to achieve near-zero emissions.¹⁹
- The “*Making the Green Journey Work*” report²⁰ shows natural gas offers considerable economic and societal benefits over the next 20 years. Notably:
 - investment need will be reduced by up to €450-550 billion;
 - annual energy cost savings per household will amount to €150-250;
 - 20-25 million jobs could be saved by lower energy costs in energy intensive industries²¹;

¹⁵ IHS CERA Report [“Sound Energy Policy for Europe: Pragmatic Pathways to a Low-Carbon Economy”](#), 2011. Less than 50% compared to coal as set out on page 13 of the report [“Making the Green Journey Work – Optimised pathways to reach 2050 abatement targets with lower costs and improved feasibility”](#).

¹⁶ “Model-based Analysis of the 2008 EU Policy Package on Climate Change and Renewables” By P. Capros, L. Mantzos, V. Papandreou, N. Tasios, June 2008, page 43.

¹⁷ According to the study for the European Climate Foundation, Capital Expenditure (CAPEX) for natural gas power plants without CCS is €700-800/kW of capacity compared with €1,400-1,500/kW for coal, €1,000-1,300/kW for onshore wind and much higher figures for offshore wind (€3,000-4,000/kW) and photovoltaics.

¹⁸ IHS CERA 2011 Sound Energy Policy for Europe: Pragmatic Pathways to a Low-Carbon Economy page 5.

¹⁹ Gas power generation + CCS needs half the storage space of coal power generation + CCS, because gas-fired power plants release around 60% less CO₂ than an equivalent coal-fired power station, ExxonMobil 2010. .

²⁰ Report [“Making the Green Journey Work – Optimised pathways to reach 2050 abatement targets with lower costs and improved feasibility”](#).

²¹ This is at a time when questions are being raised about green industries not being job intensive as highlighted by Michael Pollitt, Judge Business School, University of Cambridge at an Electricity Policy Research Group/Centrica/Center for Energy and Environmental Policy Research Conference in September 2011.

- emissions can be reduced while new technologies are researched and developed;
 - emissions on SO₂, NO_x, particulate matter and mercury will be reduced by burning gas;
 - the power sector will increase its robustness due to a balanced and diverse technology mix with lower reliance on variable technologies.
- In order for gas to play its part in reducing CO₂ emissions and providing flexible back-up to variable renewables, investment in gas projects needs to be attractive. This requires stable market terms and a level playing field between technologies and fuels. When the market is disproportionately distorted by preferential support for renewables (including priority dispatch), the carbon price signal is undermined in the EU ETS and it may be necessary to introduce a capacity payment regime in order to maintain the gas option in the market.

Capacity and distributional aspects

- The impact of climate and energy policies must be considered at EU and national levels. The Commission's analysis of impacts on Member State is very important and should be carried out properly before the new framework is established and efforts are distributed among Member States. For these reasons, OGP urges the Commission to ensure that all climate and energy policy proposals are accompanied by a transparent, independently verified and thorough impact assessment, which identifies intended and potential unintended consequences for each Member State, the industry and EU citizens.
- Although OGP recognises capacity and distributional issues are primarily matters to be addressed by Member States, we would like to underline the importance of developing renewable energy sources in accordance with the countries' natural potential, leaving distributional aspects subject to the market. This would lead to more cost-efficient support policies.
- The burden-sharing mechanism is an issue for Member States to agree. Nevertheless, we believe they should be able to trade emission obligations to maximise cost-effectiveness. Such national obligations should be legally binding alongside the EU ETS to prevent free riding / opting out of obligations. All sectors should contribute on an equitable and transparent basis to emissions reduction. In the future, consistent carbon pricing across sectors should be promoted - this would ensure that emissions are reduced where most cost-effective.