

EXECUTIVE SUMMARY AND KEY RECOMMENDATIONS

EXECUTIVE SUMMARY

Significant developments have taken place in European energy policy since 2000, driven by increasing concern about global warming, and the effect of rapidly increasing energy prices on competitiveness and security of supply in the European Union (EU). The European Commission has risen to the challenges, proposing a range of policies to address them. While there have been concerns, for example by some member states regarding some of the policies, overall the proposals by the European Commission are sound. They correctly reflect the energy challenges faced by the world today, and their implementation will bring global benefits. In particular, the Commission's goals in the field of energy and environment are highly ambitious, but pursuing them will be necessary not only to ensure the EU contribution to the mitigation of climate change, but also to send a global signal that meaningful action can and ought to be taken now. To ensure that the very ambitious targets are being achieved in a balanced manner, it will be necessary to ensure regular reviews and constant tracking of the implementation of the whole policy package, not just of individual policies within it. The Commission will need to make sure that a suitable review mechanism is being established to this end. The biannual Strategic Energy Reviews of EU energy policy conducted by the Commission could serve as this mechanism.

Market reform has been a priority of the European Commission since the implementation of the first liberalisation package in 1996. Acknowledging insufficient progress, the 3rd Liberalisation Package was proposed in September 2007 and its options regarding unbundling were a bold step forward to achieve the long-harboured intent to create a true single, fully competitive and transparent internal energy market. The European Commission should be commended for its resolution in this area, and continue to pursue this goal and the acceptance of its proposals with vigour.

Energy security is a pressing issue in energy policy and has rapidly risen up the European Commission's priority list, because of increasing import dependence of the EU, and high energy prices. Import dependence is not a problem in itself, since a population-rich, modern industrialised economy is unlikely to achieve self-sufficiency in energy supply. The important issues are the management of supplier relations and of energy systems, enabling the investment in critical infrastructure, achieving diversification of supply, and preparing adequately for potential supply disruptions. While progress

has been made in all of these, the workload remaining for the European Commission is significant and multi-faceted, ranging from the regulation of infrastructure investment to diplomatic relations with external suppliers. It is in the latter area that a more prominent role for the European Commission could pay dividends for the security of supply of the EU, and the Commission should strive for increased responsibility in this area. Speaking with one voice, and acting in a consistent and unified manner will be crucial to moving towards closer relationships between the EU and the external suppliers on which it will increasingly depend in the future.

Continued use of nuclear energy in the EU is almost certainly going to be necessary to attain the policy goals in the areas of climate change and security of supply. Yet nuclear power generation is on the decline, with some member states pursuing active reactor retirement policies ahead of the economic and environmentally most beneficial dates. Two new reactors are currently under construction, and some member states are now seriously considering returning to nuclear reactor building. To help them achieve their aims, the European Commission should prepare a road-map for the replacement of retired and retiring nuclear capacity in the EU, outlining the policy measures required to facilitate nuclear new build. This is of particular importance for smaller member states, which may be interested in pursuing shared projects.

To pursue cost-effective CO₂ emissions reductions in the industrial and energy sector, the Commission has introduced the European Emissions Trading Scheme (EU-ETS), the first cross-border system of its kind. While the trial phase showed some significant problems, caused by low-quality data, over-allocation of allowances in National Allocation Plans (NAPs), and free allowance allocation, fundamentally the EU-ETS is working as intended, and is already delivering CO₂ savings. The Commission has already taken action to mitigate the problems, for example by significantly cutting allowances in the NAP approval process. Building on this, it has now proposed a major revision to the ETS, starting from 1 January 2013. The proposed changes are expected to remove those aspects of the first phase that led to problems, so that the next phase up to 2020 runs smoothly. The European Commission should be commended not only for taking the bold step to set up an ETS, despite its initial reservations regarding trading during the negotiation of the Kyoto Protocol, but also for persevering in the face of the problems encountered in the first phase of operation. While the Commission has made laudable proposals for the development of the ETS, and the correction of the problems observed, these proposals will now need to be clarified and adopted rapidly, to ensure investor security in particular in the power generation sector, where a new investment cycle is now beginning, but also to assure large energy users about the future framework affecting their industries.

Increasing energy efficiency will be the key to achieving the European Commission's environmental goals in a cost-effective manner, and will at

the same time increase security of supply in the EU. Energy intensity has decreased significantly since 1990, and the EU27 is now a leader among the IEA member regions in terms of energy consumption related to GDP. The EU-ETS is expected to lead to a renewed drive for energy efficiency in the industrial and transformation sectors, but it will not directly affect the 52% of CO₂ emissions from the non-trading sectors. It is in these sectors where national governments have to implement EU policies to improve energy efficiency. The Commission has made some real and impressive policy progress, for example in its proposals for fleet-wide average emission limits for vehicles in the EU, and in its intention to recast existing energy efficiency directives with a view to enhancing their effectiveness. It should follow through on these proposals and ensure their adoption and implementation. Successful implementation is expected to contribute to a reversal of the recent trend in energy efficiency, the improvements of which have slowed down since 2000, and to go some way in reaching the indicative 20% target for improvements. Disconcertingly, however, despite the commendable policies being developed by the Commission, an implementation gap has begun to emerge, and this will put the achievement of all the targets at risk. This concern is reinforced by the lack of a binding target for energy efficiency, which could make it very difficult for the Commission to achieve effective implementation. It should therefore reconsider the decision to make the target only indicative. In general, to ensure effective implementation of energy efficiency legislation, stringent monitoring and enforcement will also be required. Achieving this will not be easy, particularly considering the current understaffing of the energy efficiency activities at European Commission level.

In the area of renewables, although progress has been made, the 2010 targets set out by the Commission in the 2001 and 2003 directives regarding renewables in general, renewable electricity and renewable transport fuels have not been and are unlikely to be achieved. The reaction to this, in the context of the greater urgency assigned now to action on decarbonising energy supply, has been a move to increase targets and make them binding and enforceable. To achieve this very ambitious aim, further analysis of the economic and non-economic barriers which caused the failure to attain the 2010 indicative targets is required, to enable the European Commission and the member states to apply corrective actions. Also, the Commission should outline which action it will consider taking throughout the period leading from now to 2020, should member states miss interim targets. Experience from energy efficiency policy suggests that the actual enforcement mechanism may not be an adequate instrument. Instead, the Commission should reflect again on lifting the proposed restrictions on the trade of Guarantees of Origin ahead of 2020, once adequate progress has been made in delivering renewables production increases. Implementing a successful market for Guarantees of Origin could for example be achieved by using the model of the EU-ETS. The twin benefits of increased enforceability and cost reduction in achieving the target warrant serious consideration being given to such an amendment of the proposed policies.

Air pollution has been one of the early areas of action in energy and environment for the Commission. Commendable improvements have been achieved in reducing the emissions of air pollutants, in particular from large combustion sources, but further reductions are necessary to achieve the longer-term objectives set in the Thematic Strategy on Air Pollution (COM 2005/446). The current recast of the relevant directives takes into account the achievement of the EU policy goals set in the area of climate change. It will be important, as part of the ongoing co-decision process, that the proposals are retained in order to obtain the necessary reductions of air pollutant emissions, provided that they are fully in line with the Energy and Climate Change Package and do not counter security of electricity supply in the EU.

Carbon capture and storage (CCS) is a key technology to address the post-2020 climate challenges, not just within the EU, but on a global level. The Commission's proposed legislation to enable CCS is very welcome, and shows its full commitment to this important technology. It will now be important to raise the funds and consider possible innovative financing mechanisms necessary to proceed with the construction of the demonstration plants that will be required to commercialise CCS.

Fossil fuels contribute significantly to energy supply in the EU, and will continue to do so even when the Commission's targets for 2020 have been reached. Oil will then continue to contribute over 80% of transport fuel, and gas will continue to have a critically important role in power generation, where it is required to provide flexibility, and in heating. Coal, while it will no doubt see the largest decline, will continue to provide a large share of power generation. The Commission should facilitate the continued contribution from these fuels to EU security of supply, keeping in mind the need to significantly increase the efficiency with which they are being used.

Increased efforts in energy R&D are necessary not just to achieve the European Commission's 2050 vision of significant cuts in greenhouse gas emissions, but also to contribute to the 2020 goals. While it is commendable that the 2007 to 2013 Framework Programme 7 (FP7) has increased energy funding, it is arguable that the funding allocated is not commensurate to the aims pursued, when compared to the non-energy component, and that a serious misallocation within the energy component will retard R&D in non-nuclear energy projects, and particularly in energy efficiency. The very significant allocation of funds to nuclear fusion is difficult to understand in the light of the short- and medium-term challenges, which are not going to be addressed by this technology. The Strategic Energy Technology (SET) Plan has delivered a commendable blueprint for a rebalancing on the supply side, but there is still a risk that the overall focus on the supply side may result in a lack of R&D activity on demand-side technologies. The Commission should therefore give serious consideration to recast FP7 at the time of the mid-term evaluation to take account of the

changed priorities in the energy field, in particular by reinforcing non-nuclear and energy efficiency R&D activities within the European Commission's flagship R&D programme.

KEY RECOMMENDATIONS

The European Commission should:

- ▶ *Vigorously pursue the implementation of the proposed energy and climate change package of 23 January 2008, while taking particular account of:*
 - *The need to increase energy efficiency throughout all sectors of the economy, and to ensure proper implementation of the ambitious existing and proposed legislation in this area.*
 - *The market compatibility aspects relating to its implementation.*
 - *The need to provide investors in all aspects of energy demand, transport and production infrastructure with appropriate certainty regarding the mid- to long-term investment framework by clarifying policy intentions, and assuring policy implementation.*
- ▶ *Continue to push for the adoption of the proposals contained in the 3rd Liberalisation Package of September 2007, to make sure that European energy markets will be open, transparent and competitive in the future.*
- ▶ *Augment the funding levels for energy R&D to ensure that they are appropriate to the scale of the energy and climate challenges faced, and also consider rebalancing funding within the energy R&D budget to take proper account of the priorities in non-nuclear R&D.*