The European Commission has produced a new roadmap aiming to 'guarantee secure and sustainable energy supplies'. Stakeholders in the energy sector take note: this new EU Strategic Energy Review will form the basis of all future EU energy policy and pave the way for a reflection on the energy challenges facing Europe between 2020 and 2050.

Europe's ambitious new energy course

by Hughes Belin

The second EU Strategic Energy Review, which the European Commission published on 13 November 2008, did not attract much public notice. This is understandable perhaps, since in Brussels everyone was occupied with the Climate package at the time. Nevertheless, it is an extremely important document. After all, the first Strategic Energy Review, published two years ago, paved the way for the agreement, in March 2007, by European leaders on the now famous energy and climate policy targets for Europe: 20% renewable energy, 20% less greenhouse gas emissions and 20% more energy efficiency by 2020. This was then followed by the ambitious "energy and climate" legislative package which was formally adopted a month later.

The second Strategic Energy Review is yet again an ambitious piece of work. The Review, accompanied by a series of legislative proposals and an action plan (the EU Energy Security and Solidarity Action Plan), is expected to be endorsed by EU leaders in March 2009 and will set Europe's energy course for a long time to come. It consists of five major pillars: infrastructures and the diversification of supply sources, external relations, indigenous energy reserves, response mechanisms to gas and oil supply crises, and energy efficiency.

1 Infrastructures

The Commission proposes that six priority infrastructure actions be set in action immediately and asks European leaders to treat them as Community priorities.

First of all, priority is given to connecting the remaining isolated energy markets in Europe. In 2009, the Commission, in collaboration with national energy regulators, intends to develop a Baltic Interconnection Plan covering gas, electricity and storage. Work on this project will start immediately within a high level group set up by the member states concerned and a regional Summit meeting will be held in the second half of 2009 to launch its implementation.

The southern European gas corridor is also considered to be 'one of the EU's highest energy security priorities'. The Commission intends to invite representatives from the countries concerned to a ministerial meeting, the purpose of which will be to identify any remaining obstacles to the completion of the project. Then in mid-2009, the Commission will present a strategy paper on the Southern Gas Corridor (which includes the Nabucco pipeline) with the aim of securing firm commitments from partner countries such as Azerbaijan and Turkmenistan, Iraq and Mashreq countries as soon as possible. In the longer term, 'when political conditions permit', the EU may import supplies from other countries in the region, such as Uzbekistan and Iran.

Scroby Sand offshore wind farm in the North Sea. Photo: James Bass/EDP

The Commission will then investigate the situation of liquefied natural gas (LNG) in Europe and identify any shortcomings in this sector with a view to putting forward an effective LNG Action Plan for Europe. The idea is to ensure that adequate LNG capacity consisting of liquefaction facilities in producing countries and LNG terminals and ship-based re-gasification units in the EU are available to all member states.

The Commission aims to complete the Mediterranean energy ring linking Europe with the Southern Mediterranean through electricity and gas interconnections. The list of priority infrastructure projects adopted by the December 2007 Euromed Energy Ministerial Conference and the Mediterranean Solar Plan adopted in Paris in July 2008 form a blueprint for this development. They also receive financial and political support from the EU. The Commission is to present a strategy paper on this Ring by 2010, at the latest, outlining a plan to complete the missing links, including future relations with Iraq, the Middle East and Sub-Saharan Africa.

The development of the North-South gas and electricity interconnections within Central and South-East Europe will also receive priority. The Commission will work with the new European network of transmission system operators (ENTSO) helping them to draw up the first 10-year European Network Development Plan, scheduled for 2010, if necessary before the official entry into force of the future EU Directives on the liberalisation of electricity and gas markets.

Finally, the Commission intends to develop a blueprint for a North Sea offshore grid to interconnect national electricity grids in North-West Europe. It will allow the numerous planned offshore wind projects to plug into it. No schedule has been established for this project, though.
The Commission has however expressed a desire to promote the use of offshore wind which is expected to increase installed capacity by 30-40 times by 2020 and 100 times by 2030. The large-scale integration of offshore wind into power grids is seen to be one of the key issues for the forthcoming debate on European energy networks.

During 2009 and 2010, the Commission will analyse the financial requirements and potential funding sources for these priority actions. Work on these actions is scheduled to start in 2010, but given the limited budget of 22 billion euro per year currently allocated to trans-European Energy networks (TEN-E), additional funding will have to be found. The Commission has therefore launched a debate at a European level on how the existing TEN-E instrument could be replaced by a new EU Energy Security and Infrastructure Instrument which would aim to complete the internal energy market, ensure the development of the grid to meet the EU's renewable energy needs and guarantee the security of EU energy supply.

2 International relations

As part of its 'Energy diplomacy' the EU has established relations with producer and transit countries as well as other consumer countries: Norway, OPEC, the Gulf countries, Africa, Australia, Canada, Japan, the United States, China, Latin America (including Brazil) and the Caribbean. The EU now intends to propose new extended partnerships with these countries that establish clear and stable rules and develop deeper and legally binding ties between the EU and its energy partners. The EU also has Memoranda of Understanding on energy with a large number of third countries and should thus develop a new generation of "energy interdependence" provisions in broad-based agreements with producer countries outside Europe.

In addition the Commission has proposed arrangements for the transit of energy that 'guarantee normal flows even in periods of political tension', possibly by means of joint management and even ownership of pipelines by companies in supplier, transit and consumer countries.

In the case of Russia, which will remain the EU's main energy partner for the foreseeable future, more needs to be done to 'ensure that this relationship is based on trust'. The Commission proposes not only that the 1997 EU-Russian Partnership and Cooperation Agreement (PCA) be deepened and given a stronger and broader foundation but that it be accompanied by negotiations on a free-trade agreement, which tie in with Russia's accession to the WTO.

Either way, the new PCA should contain legally binding energy interdependence clauses, which in turn will allow for binding transit rules to be established which will apply to the entire European continent. 'The more the EU-Russia energy relation is put on a solid mutually-agreed and balanced legal basis, the more trust and confidence will grow, creating a climate conducive to investments in exploration and infrastructure projects' says the Commission.

And for the first time, the Commission recommends that a strategy for Belarus be developed, 'taking account of its importance as a neighbour and transit country'.

It should also be noted that the EU is open to cooperation in regard to nuclear safety with emerging countries intending to build nuclear power plants, to ensure that the new plants are built according to international nuclear safety standards and operate in accordance with the highest standards.

3 Indigenous reserves

Statistics published in 2006 indicated that the EU produces 46% of the energy that it consumes. This figure will drop to 36% by 2020. Implementation of the new EU energy policy would keep the rate at around 44% of EU consumption.
Renewable energy (which today represents around 9% of final EU energy consumption) is the EU's 'greatest potential source of

Al Gattara, the world's largest 216,000-square-metre LNG carrier. Photo: WPN/Hollandse Hoogte

indigenous energy'. The Commission now intends to publish a strategy paper which identifies and proposes actions to redress barriers to the use of renewable energy in the EU.

In maximising the EU's natural resources, the role of technology is crucial. In this respect, progress has already been made in implementing the Strategic Energy Technology Plan, notably on six European industrial initiatives: wind, solar, second generation biofuels, carbon capture & storage (CCS), electricity grids and sustainable nuclear fission. The initiatives are being developed in close cooperation with existing technology platforms (formal partnerships between industry, government agencies, academics and research institutes) and European industry.

With regard to CCS, Europe's aim to have up to twelve commercial scale demonstration plants in operation by 2015 and the G8 commitment to launch twenty demonstration plants globally by 2020 will require greater incentives than those currently available.
In order to establish appropriate financial mechanisms for development of renewable energy, the Commission is working with the EIB, the EBRD and other financial institutions to mobilise large-scale funding for investments in energy efficiency, renewable energy, the clean use of fossil fuels (read CCS) and combined heat and power from renewable energy.
The next step will be a strategy paper on Financing Low Carbon Technologies, which will be tabled by the Commission in 2009.

The Commission is also looking into accessing unconventional oil and gas reserves in the EU (and Norway) in order to 'promote the increased cost-effective and environmentally-compatible access to indigenous EU fossil fuels'.
In the oil sector, the Commission's energy market observatory is expected to present a strategy paper on refining capacity and EU oil demand in 2010.

4 Gas and oil supply crises

The Commission proposes a revision of the EU emergency strategic oil stocks legislation to make it more coherent with the International Energy Agency regime, increase the reliability and transparency of available stocks, simplify compliance and verification, and clarify emergency procedures. The Commission proposes that in future, EU member states submit anonymous weekly statistics of commercial oil stocks on their territory which the Commission will then use to produce weekly aggregate statistics for the whole of the EU. This initiative is expected to be implemented before the new EU directive on emergency oil stocks comes into force, in 2011 or 2012.

After four years of transposing EU law relating to the security of the EU's natural gas supply and a few crises on the way – the worst being in January 2006 when imports were reduced by 10% for 36 hours – the Commission feels it is time to acknowledge that 'today's mechanism is not sufficient to provide a timely response to a gas supply crisis which goes beyond the level that national measures can mitigate'. The Commission therefore intends to revise the 2004 EU directive on short-term security of gas supply.

Reactions:

'It is definitely the right set of measures at the right moment to stimulate the economy, boost job creation in the European construction industry and reduce energy bills for governments and citizens.'

Jan te Bos
Director-General of Eurima
(European Insulation Manufacturers Association)

'We need to shift buildings from being energy wasters to climate savers.'

Mariangiola Fabbri
Energy Policy Officer at WWF

'Research, which is seen to be a major element for the 2050 vision, is not represented strongly enough in the Commission's Strategic Review.'

Anne Laperrouze
Member of the European Parliament, Alliance of Liberals and Democrats (ALDE)

'If the concept of the European energy security will be based on the myth of non-existing hazard of Gazprom, then this concept will inevitably approve activities which are, to put it mildly, devoid of sense.'

Alexander Medvedev
Head of Gazprom Export

Set of valves at liquefied natural gas facility. Photo: Photolibrary/Hollandse Hoogte

5 Energy efficiency

The EU has committed itself to a 20% energy savings target in 2020, which, if met, would reduce CO_2 emissions by 860 Mt and save the EU €220 billion on its energy bill annually. But current legislation, if implemented, would only achieve 13% savings, whereas recent studies indicate that there are still additional opportunities for energy savings: 19% in industry, 20% in transport and 30% in households and services. In the Strategic Review, the Commission proposes to amend the EU Directive on the energy performance of buildings to include buildings smaller than 1000 m^2 and all refurbished buildings. The directive sets minimum requirements for energy performance of buildings, the issuing of energy certificates and regular inspections of boilers and air-conditioning systems, among other things.

The Commission also proposes to revise the EU Directive on energy labelling of household appliances (refrigerators, televisions, washing machines, etc.) and to extend it to other products, such as motors (e.g. in water pumps and elevators), windows and tyres. In 2009, the Commission will 85-measure Action Plan from 2006 giving local authorities more power to regulate energy use. Brussels will also launch a major 'build-up' initiative to raise awareness of the saving potential at all stages of the building cycle. By spring 2009, the Commission will adopt minimum energy performance requirements (so-called "ecodesign" measures) for energy-consuming products such as light bulbs, stand-by mode, street and office equipment, set-top boxes for televisions, and other 'white goods' (washing machines, etc.).

The Commission notes that the implementation of the 2004 Cogeneration Directive is not carried out properly and causes delays in developing the EU's cogeneration potential. It proposes new guidelines to calculate the electricity generated from combined heat & power.

A vision for 2050

In 2010, the Commission will review EU energy policy with a view to establishing a policy agenda for 2030 and a vision for 2050. This will be based on a round of consultations which will examine longer-term objectives such as: decarbonising the EU electricity supply by 2050, ending oil dependence in transport (by a shift to electric, hydrogen and alternative fuel cars, public procurement incentives and a wider range of fuels available at filling stations), building low energy and positive power buildings, building a smart interconnected electricity network (to accommodate decentralised power generation and the offshore supergrid ring around Europe to connect southern solar, western wave and northern wind or hydro energy with the main consumption centres), and promoting a high-efficiency, low-carbon energy system throughout the world.

On nuclear energy, the Commission has proposed a new draft directive establishing a European framework of nuclear safety, but it leaves decisions on expanding nuclear power to the member states.

'With this ambitious programme for rapid transformation in the European energy, automobile, civil and energy engineering sectors, Europe can place itself at the forefront of global technology', predicts the Commission.

EU Energy Ministers will discuss the Second Energy Strategic Review at their meeting in Brussels on 19 February 2009. If all goes according to plan, the EU leaders will endorse the review at their Spring Summit in March. ■