Energy infrastructure priorities for 2020 and beyond

2011/2034(INI) - 17/11/2010 - Non-legislative basic document

PURPOSE: to present the priorities for the next two decades with regard to energy infrastructure.

BACKGROUND: the Energy Policy for Europe, agreed by the European Council in March 2007, establishes the Union’s core energy policy objectives of competitiveness, sustainability and security of supply. The internal energy market has to be completed in the coming years and by 2020 renewable sources have to contribute 20% to our final energy consumption, greenhouse gas emissions have to fall by 20% and energy efficiency gains have to deliver 20% savings in energy consumption.

Adequate, integrated and reliable energy networks are a crucial prerequisite not only for EU energy policy goals, but also for the EU's economic strategy. A **new EU energy infrastructure policy** is needed to coordinate network development on a continental scale. The challenge of interconnecting and adapting our energy infrastructure to the new needs concerns all sectors. Currently, the EU is paying the price for its outdated and poorly interconnected energy infrastructure. The risk and cost of disruptions and wastage will become much higher unless the EU invests as a matter of urgency in smart energy networks, and exploits its potential for energy efficiency improvements. In the longer term, these issues are compounded by the EU decarbonisation goal to reduce our greenhouse gas emissions by 80-95% by 2050, and raise the need for further developments, such as an infrastructure for large-scale electricity storage, charging of electric vehicles, CO2 and hydrogen transport and storage.

Around EUR 1 trillion must be invested in our energy system between today and 2020 in order to meet energy policy objectives and climate goals. About half of it will be required for networks, including electricity and gas distribution and transmission, storage, and smart grids. Of this, about EUR 200 billion are needed for energy transmission networks alone. However, only about 50% of the required investments for transmission networks will be taken up by the market by 2020. This **leaves a gap of about EUR 100 billion**. Realising all investments needed in transmission for infrastructure would create an additional 775,000 jobs during the period 2011-2020 and add EUR 19 billion to our GDP by 2020, compared to growth under a business-as-usual scenario.

CONTENT: this Communication outlines **a blueprint** which aims to provide the EU with a vision of what is needed for making our networks efficient. . It puts forward a new method of strategic planning which includes the following:

- identify the energy infrastructure map leading towards a European smart **supergrid interconnecting networks** at continental level;
- focus on a limited number of **European priorities which must be implemented by 2020** to meet the long-term objectives and where European action is most warranted;
- based on an agreed methodology, identify concrete projects necessary to implement these priorities (declared as projects of European interest);
- support the implementation of projects of European interest through new tools, such as improved regional cooperation, permitting procedures, better methods and information for decision makers and citizens and innovative financial instruments.

The Commission proposes the following short term priorities to make energy infrastructure suitable for the 21st century.

1) **Making Europe's electricity grid fit for 2020**. It is proposed to focus attention on the following priority corridors :

- offshore grid in the Northern Seas and connection to Northern as well as Central Europe – to integrate and connect energy production capacities in the Northern Seas with consumption centres in Northern and Central Europe and hydro storage facilities in the Alpine region and in Nordic countries;
- interconnections in South Western Europe to accommodate wind, hydro and solar, in particular between the Iberian Peninsula and France, and further connecting with Central Europe, to make best use of Northern African renewable energy sources and the existing infrastructure between North Africa and Europe;
- connections in Central Eastern and South Eastern Europe – strengthening of the regional network in North-South and East-West power flow directions, in order to assist market and renewables integration, including connections to storage capacities and integration of energy islands;
- completion of the BEMIP (Baltic Energy Market Interconnection Plan) – integration of the Baltic States into the European market through reinforcement of their internal networks and strengthening of interconnections with Finland, Sweden and Poland and through reinforcement of the Polish internal grid and interconnections east and westward.

2) Diversified gas supplies to a fully interconnected and flexible EU gas network. Three priority corridors have been identified:

Southern Corridor to diversify sources at the EU level and to bring gas from the Caspian Basin, Central Asia and the Middle East to the EU;

linking the Baltic, Black, Adriatic and Aegean Seas through in particular: (i) the implementation of BEMIP and (ii) the North-South Corridor in Central Eastern and South-East Europe;

North-South Corridor in Western Europe to remove internal bottlenecks and increase short-term deliverability, thus making full use of possible alternative external supplies, including from Africa.

3) **Ensuring the security of oil supply**: the aim of this priority is to ensure uninterrupted crude-oil supplies to land-locked EU countries in Central-Eastern Europe, currently dependent on limited supply routes, in case of lasting supply disruptions in the conventional routes. Diversification of oil supplies and interconnected pipeline networks would also help not to increase further oil transport by vessels, thus reducing the risk of environmental hazards in the particularly sensitive and busy Baltic Sea and Turkish Straits.

4) **Roll-out of smart grid technologies**: the aim of this priority is to provide the necessary framework and initial incentives for rapid investments in a new "intelligent" network infrastructure to support i) a competitive retail market, ii) a well-functioning energy services market which gives real choices for energy savings and efficiency and iii) the integration of renewable and distributed generation, as well as iv) to accommodate new types of demand, such as from electric vehicles. The Commission will set up a smart grids transparency and information platform.

The Commission goes on to set out certain objectives for the longer term networks, such as European Electricity Highways and a European CO2 transport infrastructure.

From priorities to projects: first project lists should be ready in the course of 2012. The projects identified would be examined at EU level to ensure consistency across the priorities and regions and ranked in terms of their urgency with regard to their contribution to the achievement of the priorities and Treaty objectives. Projects meeting the criteria would be awarded a 'Project of European Interest' label.

In order to improve preparation and implementation of the project, the Commission proposes regional cooperation between different countries. It also proposes creating a stable framework for financing by working on two fronts: (i) further improving the cost allocation rules and (ii) optimising the European Union's leverage of public and private funding.

Based on the views expressed by the institutions and stakeholders on this blueprint, the Commission intends to prepare in 2011, appropriate initiatives as part of its proposals for the next multiannual financial framework.