



Energising Europe

A new energy infrastructure for a 21st Century Europe

Europe's energy networks are in need of refurbishment and modernisation. The enlarged European Union (EU) has inherited poor west-east and north-south connections and the focus has been on national markets rather than balancing supply and trade across borders in a single internal market. For a truly European system we need to make sure energy from renewable sources can be absorbed into networks and that supplies are secure wherever you live. The European Commission has therefore tabled a new initiative to develop an integrated European energy network fit for today's challenges.

The binding targets set by the EU's Energy Policy for Europe and the challenges outlined above can only be met by the complete modernisation of our energy infrastructure. This means implementing supply corridors across the EU, turning networks into intelligent grids and ensuring supply of gas when and wherever needed.

Building an energy infrastructure that is fit for purpose

In its Communication 'Energy infrastructure priorities for 2020 and beyond – A Blueprint for an integrated European energy network', the Commission puts forward a new way of getting the infrastructure we need, by identifying the key projects of European interest, obtaining EU wide agreement for these projects and making sure that they are built with the same level of commitment in all Member States involved.

20-20-20 – the Energy Policy for Europe

This policy states that by 2020 renewable sources have to contribute 20% to our final energy consumption, greenhouse gas emissions have to be reduced by 20% and energy efficiency gains should deliver a 20% reduction in energy consumption.



THE COMMISSION SETS OUT A SERIES OF ENERGY INFRASTRUCTURE PRIORITIES FOR 2020 AND BEYOND.

ADDRESSING THE 2020 ENERGY POLICY CHALLENGES

To make our electricity grid fit for 2020 by establishing:

- Offshore grids in the Northern Seas and connections to Central Europe – from production capacity in the Northern Seas to centres of consumption in Central Europe.
- Connections of renewables in South Western Europe.
- Connections in Central Eastern and South Eastern Europe – to assist market and renewables integration.
- The Baltic Energy Market Interconnection Plan (BEMIP) – to integrate the Baltic States within the European market, strengthening interconnections with Finland, Sweden and Poland, and to reinforce the Polish grid and interconnections east and westward.

To diversify gas supplies through an integrated network by implementing:

- The Southern corridor – to diversify sources and bring gas in from the Caspian Basin, Central Asia and the Middle East.
- The BEMIP and the North-South corridor in Central Eastern and South Eastern Europe – to link the Baltic, Black, Adriatic and Aegean Seas.
- The North-South connections in Western Europe.

To ensure the security of oil supply by:

- Reinforcing the interoperability of the Central Eastern European pipeline network – to remove bottlenecks, enable reverse flows and ensure uninterrupted crude oil supplies to landlocked EU countries and take pressure off transportation by tankers in the Baltic Sea and Turkish Straits.

To roll out smart grid technologies by:

- Providing the necessary framework and incentives for rapid investment in an intelligent network infrastructure – to give real choices for savings, efficiency, and integration of renewables, and accommodate new demand such as electric vehicles.

PREPARING THE LONGER TERM NETWORKS

Over the longer term, in order to drastically reduce greenhouse gas emissions, the EU has to start now to design, plan and build the networks of the future. The Commission therefore also sets out priorities for longer term networks.

To establish European Electricity Highways by:

- Establishing a modular development plan – to allow the commissioning of the first Electricity Highways by 2020 which will accommodate rapidly increasing renewables generation in the EU and neighbouring countries.

To establish a CO₂ transport network by:

- Examining and agreeing on the technical and practical modalities of a CO₂ transport network – to build on the results of the European Industrial Initiative for CO₂ capture and storage launched under the SET-Plan.



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How best to turn the priorities into reality

First identify the projects...

Agreed and transparent criteria are the key to finding and supporting the projects that will make these priorities a reality on the ground.

Projects shall be examined according to these criteria to ensure consistency across the EU and ranked by levels of urgency. Those meeting best these criteria would be awarded the label of Project of European Interest.

Then help them get off the ground...

Dedicated regional platforms should identify concrete projects, draw up investment plans and monitor their implementation, as this method is now being demonstrated by the North Seas Countries' Offshore Grid Initiative (NSCOGI) and the Baltic Energy Market Interconnection Plan (BEMIP) initiative.

Faster and more transparent permitting procedures are vital to enable the implementation of the Projects of European Interest which are needed to meet our climate and energy objectives. This will be done by maintaining the high standards of environmental protection and better involving the public in the decision-making process.

Current permitting procedures are a barrier to implementation. A power line can take 15 years from planning to operation. Such delays jeopardise a large part of the investments needed by 2020.

Finally, support them by...

Leveraging private financing sources through improved cost allocation via right tariff setting by the regulators, according to the 'user pays principle'

Currently, tariff setting remains national and does not take into account wider European benefits, and very often it does not cover major technological changes such as the connection of offshore sources or wider reverse flow benefits of gas pipelines. In 2011, the Commission will take action with the regulators to address these shortcomings.

Optimising the leverage of public and private financing sources by mitigating investors' risks. This will be done on two fronts. Firstly, the EU will strengthen its partnership with international financial institutions, search for synergies within existing financial instruments and adapt them to the energy infrastructure sector. Secondly, the Commission will propose a new instrument which will combine financial mechanisms tailored towards the specific financial risks and needs faced by projects at the various stages of their development.

About €200 billion must be invested in smart transmission networks and storage until 2020 in order to meet the energy and climate policy objectives. However, it is estimated that, mainly due to non-commercial benefits and high risks, only little over half of these would be completed by 2020, leaving a gap of €100 billion. If permitting issues are resolved, an estimated gap of €60 billion will remain. If we want to have the infrastructure built in time, we have to fill the gap, alleviate the constraints faced by investors and mitigate project risks.



The benefits

The Blueprint puts forward practical ways to meet the 20-20-20 energy and climate policy targets by making it easier for energy from renewable sources to get onto the grid and targeting CO₂ capture and storage issues.

Optimising for the benefits of all European citizens the multiple renewable sources of energy in Europe, drawing on the best water, wind and sun locations, requires an integrated European network.

Such a network will ensure secure supply of electricity and gas for all EU citizens at affordable prices, irrespective of the country they live in.

It will enable the EU to deliver a properly functioning internal market, with positive effects on the EU's competitiveness and the faster emergence of a low-carbon energy system.

Through the realisation of investments, new jobs will be created, with positive growth effects for the wider European economy.

It puts forward ways to move towards intelligent grids, which will facilitate transparency and enable consumers to control appliances at their homes to save energy, facilitate domestic generation and reduce cost. New technologies will also help to boost innovation and technological leadership of the European industry, including SMEs.

The Blueprint proposes a more transparent permitting process in which citizen feedback is welcomed and incorporated, in which administrations at national, regional and local levels have clear guidance on the procedures and deadlines to respect, and in which businesses benefit from less uncertainty and risk when realising their investments.

Industry will benefit from support to mitigate the risk of investment in cutting-edge technologies and through financial leveraging and political backing.

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