

TEN-E Guidelines specify a European-wide energy transmission network



New legislative measures adopted

The Council adopted the Commission proposal for a revision of the Trans-European Energy (TEN-E) Guidelines on 24 July 2006, confirming the favourable vote of the European Parliament in second reading in Plenary on 4 April.

TEN-E Guidelines

The TEN-E guidelines are an important policy instrument for establishing the effective operation of the internal energy market and reinforcing the security of energy supply by better linking the national markets and by strengthening relations with third countries in the energy sector. Increasingly interlinked regional and national markets give customers the benefit of better service quality, a wider choice of energy mix and competitive prices. The 2006 guidelines clearly reflect the three main objectives of Europe's energy policy, namely sustainability, competitiveness and security of supply.

Concerning renewable energy, the integration of wind generated electricity – in the future increasingly from off-shore wind parks - into the high-voltage grid and subsequent transport to the distant load centres constitutes a Europe-wide challenge, exceeding already today the national dimension.

○ **General Objective**

The objective is to boost and to accelerate the implementation and construction of connections and to increase the incentives for private investors.

For this purpose, the missing links in the transmission infrastructure have been identified and ranked according their impact for cross-border trade and associated inter-regional exchanges and, further, according to their maturity. In particular, the guidelines integrate fully the ten new Member States in the network.

○ **Specific Actions**

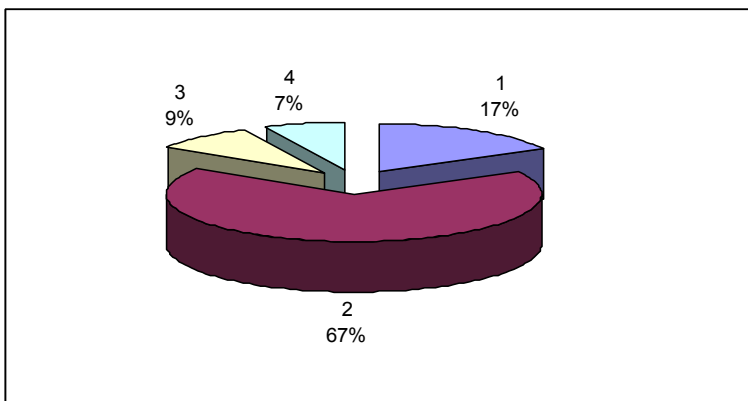
The projects of highest priority, the Projects of European Interest support the rapid implementation of the most important cross-border interconnection capacity. These projects are of cross-border nature and the maturity of the projects is shown by a firm commitment to start before end of 2006 and the normal completion date is 2010 at the latest.

The guidelines present 42 projects of European interest, which are of utmost importance to achieve the abovementioned objectives (see diagrams on pages 3 & 4). The diagram for the projects of European interest for natural gas shows the long transport routes through neighbouring and third countries to the EU. In contrast, the diagram for the projects of European interest for electricity shows that electricity is generated and distributed mainly inside the EU and, furthermore, that these links are rather short with the exception of sea-bed cables. The list detailing the projects of European interest including the Member States involved is presented.

In addition, the guidelines provide the frame for increased coordination, exchange of information and the possibility of appointment of a European Coordinator. Concerning the implementation of the 'Projects of European Interest' they foresee coordination meetings for cross-border sections, monitoring of progress in implementation carried out by Commission and Member States (jointly with companies) and, when appropriate, Community support, including incentives by the European Investment Bank.

○ **Indicative volume of investment**

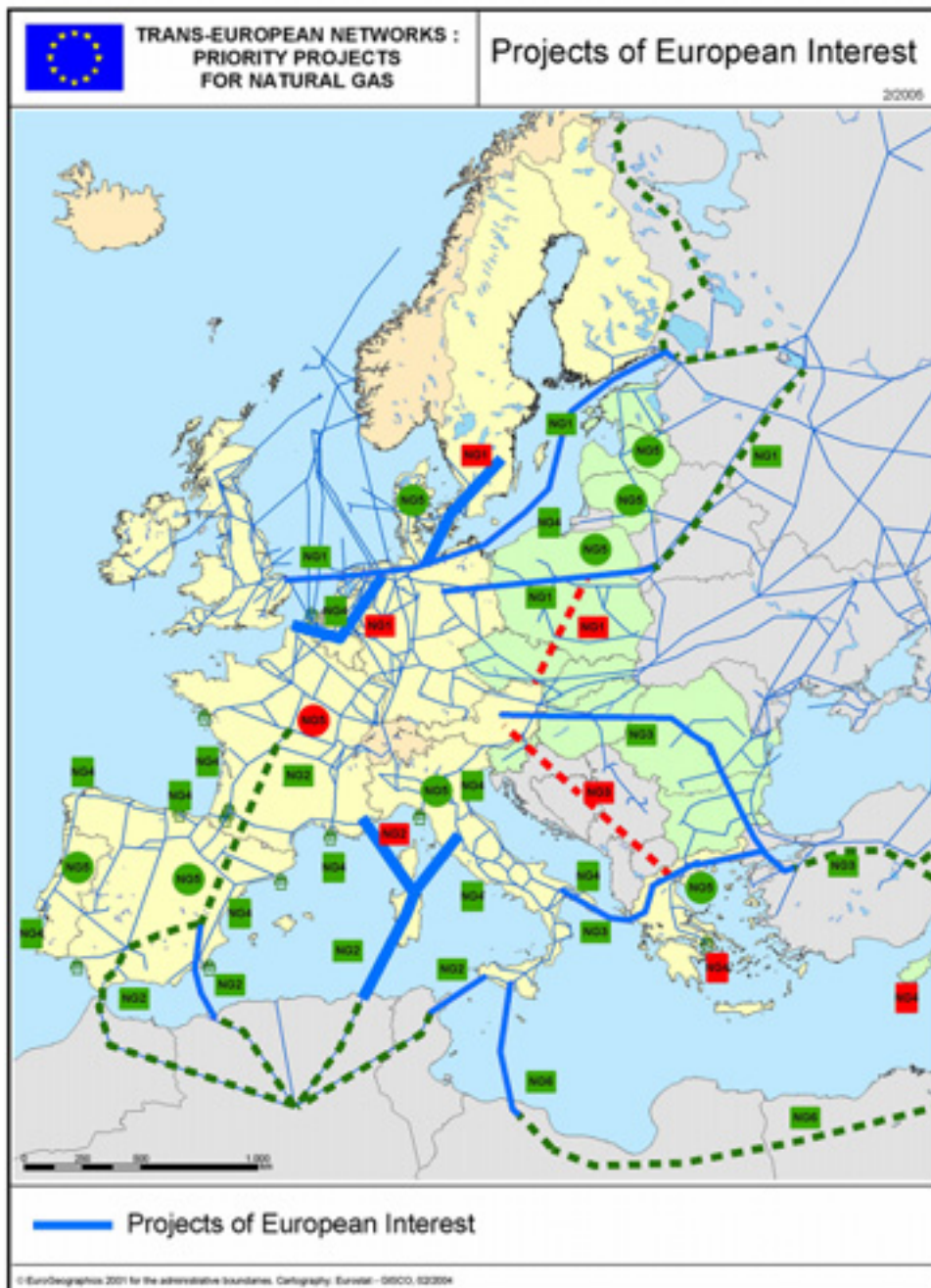
The total amount of the estimated cost is about **28 billion Euros**



1. **4.8 billion €** - electricity projects of European interest
2. **19 billion €** - gas projects of European interest
3. **2.5 billion €** - LNG (Liquefied Natural Gas) priority projects
4. **2.0 billion €** - storage priority projects

Priorities for gas transmission

Concerning natural gas there is a strongly increasing dependence on gas import in the next 20-30 years. The Trans-European Energy Networks policy aims at securing and diversifying additional gas import capacity from sources in Russia, the Caspian basin region, Northern Africa and the Middle East. Within the TEN-E policy, a realistic target was to set up an additional gas import capacity of up to 100 Billion Cubic Meters by 2013. This objective is foreseen to be matched by increased pipeline import capacity of about 50 Billion Cubic Meters per year (bcm/a) in conjunction with additional Liquefied Natural Gas import capacity of about 50 bcm/a.



Concerning electricity networks, its main function is to create and foster a real European electricity market. The existing capacities of the electrical interconnections are largely insufficient for the further increase of exchange and trade. Consequently, in March 2002 at the Barcelona European Council, the Heads of State and government agreed to set a target for Member States, according to which the level of electricity interconnections should be equivalent to at least 10% of their installed production capacity by 2005. For this objective additional interconnection capacity between the Member States is essential.



The increasing need for new energy infrastructures

The enlarged European Union will become increasingly dependent on energy imports. If no measures are taken in the next 20 to 30 years, 70% of the Union's energy requirements, as opposed to the current 50%, will be covered by imported products (Green Paper 'A European Strategy for Sustainable, Competitive and Secure Energy' 8 March 2006). In particular, imports of natural gas and oil will rise. This calls for a diversification of the energy mix as well as for additional supply routes.

The electricity demand in the enlarged EU25 will rise continuously. Under baseline assumptions the electricity demand is projected to expand by 1.5% per year in the period 2000-2030. Repeated electricity black-outs have been experienced in several countries in the recent years. These black-outs are caused by weak links in Europe's electricity transmission networks, insufficient coordination between national or regional electricity markets and insufficient power production capacity.

The creation and completion of the truly European internal market requires sufficient gas and electricity cross-border transmission capacity. Linking national networks and constructing additional interconnections between Member States is an element of integration, introducing a European energy transmission network. This Europe-wide reference network for energy interconnections needs to overcome the limitations of the still fragmented national networks.



The need for EU action

The need for a common European energy policy, in particular the need to establish a common European grid have been stated explicitly in the conclusions of the Informal Meeting of EU Heads of State or Government held at Hampton Court on 25 October 2005. This need was strongly emphasised again in the Spring European Council. In the Presidency Conclusions of 24 March the European Council requested that "Given the urgency of the challenges to be faced, the European Council invites the Commission to start with developing a Priority Interconnection Plan and facilitating the realisation of priority infrastructure projects contributing to diversification of supply and integration of regional markets into the EU internal market, while noting the primary role of the enterprises involved."

The Commission will base the Priority Implementation Plan for electricity and gas networks on the TEN-E guidelines, which specify 42 projects of European interest. In addition, information on the state of play of the Liquefied Natural Gas (LNG) terminals is provided.

For more detailed information, see the Annex and following website:
http://ec.europa.eu/dgs/energy_transport/index_en.html

See also IP/06/1054

Annex: Projects in Electricity and Gas Networks

Projects in Electricity and Gas Networks

○ **ELECTRICITY**

Aveline (FR) - Avelgem (BE) line	Kassø (DK) – Revsing (DK) – Tjele (DK) line
Moulaine (FR) – Aubange (BE) line	V. Hassing (DK) - Trige (DK) line
Lienz (AT) – Cordignano (IT) line	Hamburg/Krümmel (DE) – Schwerin (DE) line
New interconnection between Italy and Slovenia	Skagerrak 4 (DK) – Norway undersea cable
Udine Ovest (IT) – Okroglo (SI) line	Connection of Poland and Lithuania, including the upgrading of the Polish electricity network and the PL-DE section as necessary to allow participation in the internal energy market
S. Fiorano (IT) – Nave (IT) – Gorlago (IT) line	Estlink undersea cable link between Finland and Estonia
S. Fiorano (IT) – Robbia (IT)	Fennoscan undersea cable link between Finland and Sweden
Venezia Nord (IT) – Cordignano (IT) line	Halle/Saale (DE) – Schweinfurt (DE)
St-Peter (AT) – Tauern (AT) line	Neuenhagen (DE) – Vierraden (DE) – Krajnik (PL) line
Südburgenland (AT) – Kainachtal (AT) line	Dürnröhr (AT) – Slavětice (CZ) line
Austria-Italy (Thaur-Brixen) interconnection through the Brenner rail tunnel	New interconnection between Germany and Poland
Sentmenat (ES) – Becanó (ES) – Baixas (FR) line	Velké Kapušany (SK) – Lemešany (SK) – Moldava (SK) – Sajoivanka (HU)
Valdigem (PT) – Douro Internacional (PT) – Aldeadávila (ES) line and Douro Internacional facilities	Gabčíkovo (SK) – Velký Ďur (SK)
Philippi (EL) – Hamidabad (TR) line	Stupava (SK) – south-east Vienna (AT)
Undersea cable link between England (UK) and the Netherlands	Electricity connection between Tunisia and Italy
Undersea cable link between Ireland and Wales (UK)	Kassø (DK) – Hamburg/Dollern (DE) line

○ **GAS**

North European gas pipeline
Yamal – Europe gas pipeline
Natural gas pipeline linking Denmark, Germany and Sweden
Increase in transmission capacity on the Germany – Belgium – United Kingdom axis
Algeria – Tunisia – Italy gas pipeline
Algeria – Italy gas pipeline, via Sardinia and Corsica, with a branch to France
Medgas gas pipeline (Algeria – Spain – France – Continental Europe)
Turkey – Greece – Italy gas pipeline
Turkey – Austria gas pipeline
Lybia – Italy gas pipeline