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UTC Europe Position

Green Paper: A European Strategy for Sustainable, Competitive and Secure Energy Commission of the European Communities SEC(2006) 317

The United Telecom Council, Europe (EUTC) is a non-profit association representing the information and communications technology (ICT) interests of electric, gas and water utilities operating in the nations of the European Union. The primary purpose of these entities is to provide safe and reliable energy and water to the citizens and businesses of their service territories. As such, they provide major benefits to their communities and to their nations.

What is not commonly known is that these entities rely heavily on wired, wireless and fiber-optical ICT networks to provide their basic services. Many of these networks are internally built and maintained. Moreover, the continued improvement and expansion of these networks will be a necessary part of the Commission's goals as stated in the Green Paper. Therefore, EUTC welcomes the opportunity to respond to portions of the Green Paper.

EUTC supports generally the goals and findings of the Green Paper concerning achievement of a more sustainable, competitive and secure energy environment and supply in the EU. EUTC's statements focus on a few of the six priority areas outlined and discussed in Section 2 of the Green Paper.

Section 2.1 Energy for growth and jobs in Europe: completing the internal European electricity and gas markets

EUTC notes generally the huge differences among utilities within EU Member States, which will make development of a single electricity and gas market difficult. Otherwise, EUTC emphasizes to the Commission that consideration of additional legislative measures needed toward this goal will require inclusion of ICT improvements¹ to make the desired progress possible. The achievement of "non-discriminatory network access, adequate available network capacity [and] liquidity on gas and electricity markets" assumes sophisticated and wide-ranging information

¹ "Information and Communications Technology" within critical infrastructure entities ("ICT" as used in this paper) includes the monitoring, controlling, field response and management communications infrastructures needed to ensure the secure, reliable operation of transmission and distribution networks.

DRAFT

exchange and control systems underlying electricity and gas transmission and delivery. As Member States are required to implement legislation and regulation to meet these ends, regulators also must understand the need for sufficient ICT assets to support physical infrastructures. In most cases, these assets will be purchased and maintained by utilities, making their cost part of the investment needed to improve the European electric and gas market.

Section 2.1(ii), *A priority Interconnection plan* -- EUTC agrees that better interconnection among electric service providers and between Member States is needed. Interconnection will help to balance appropriately supply and demand among widely differing energy-using States; to free up capacity needed elsewhere; to promote competition and investment in new infrastructure. However, the Commission should note that much of interconnection is based on information exchange: constant monitoring of energy flow and data exchange to determine the final destination of resources throughout an expanded "grid." ICT assets are key to such improvements. Similarly, ICT systems will be needed to control the infrastructure changes inherent in the increased generation capacity discussed in **Section 2.1(iii), *Investment in generation capacity***. Increased generation used for times of peak demand, as well as to supplement intermittent renewable energy sources, will require a carefully balanced infrastructure to ensure safe and reliable power delivery. Balance of electric, gas or water supplies already relies on ICT assets using a variety of technologies, even within utilities. A single European power market, with the goal of reliable energy to any part of the market at any time, will require huge investments by many entities in compatible control and monitoring systems that similarly can operate across borders and throughout the continent. Such systems are vital to safety as well as to reliability.

Further, in balancing supply and demand, especially as part of introducing a more competitive energy market, the Commission should encourage the adoption of real-time demand management technologies, such as advanced metering networks. Appropriate measures will be needed to enable secure ICT services for the effective management of such networks.

Section 2.2 An Internal Energy Market that guarantees security of supply: solidarity between Member States

EUTC agrees with the Green Paper's statement that "the development of smart electricity networks, demand management and distributed energy generation could all help at times of sudden shortage." However, EUTC would go further: such measures will be necessary for the success even of

DRAFT

routine reliable service as the market grows and demand on the infrastructure increases. To that end, many European utilities already are considering or implementing significant investment in “smarter” networks. The transparent and predictable market referred to in the Green Paper is needed to help utilities justify the large amounts of funding to enable these projects.²

Among the measures needed to ensure a high level of security of electricity supply, and to enable the development of sustainable energy sources, is to note the importance of secure ICT infrastructure for electric utilities. To that effect, the Commission should direct the regulatory authorities in Member States to take appropriate measures to ensure transmission and distribution system operators are not compromised in delivering the highly secure ICT infrastructures needed to support security in energy supply. Such measures should include, but not be limited to:

- Providing access to secure, dedicated radio frequency spectrum to support effective communications for system operators and their employees in the field, as well as to control and monitor infrastructures;
- Allowing preferential service allocations to transmission and distribution system operators when using public communication networks; for example, when using mobile phone and satellite services;
- Encouraging the deployment of communication systems which use the electricity supply network, such as those known as Power Line Communications, both to support internal infrastructure improvements and to provide services to the general public.

The Commission recommends in Section 2.2 of the Green Paper a proposed **European Centre for Energy Networks**, with powers to “collect, analyse and publish relevant information.” EUTC supports the creation of a body designed to continue work already begun to standardize security and reliability among transmission system operators (TSOs). However, EUTC suggests that working in reaction to events such as the 2003 blackouts alone would not meet the Commission’s goals. A Centre for networks also

² EUTC refers the Commission to one of the primary goals of Communication, i2010 – First Annual Report on the European Information Society, {SEC(2006) 604}, concerning increased investment in ICT in the EU. Beyond expansion of consumer networks, some emphasis on industrial ICT networks such as those used heavily by utilities would assist in reaching the goal noted in this report.

DRAFT

should work proactively, and its work should include ICT. EUTC recommends that the Centre's responsibilities should include identifying common practices in at least two areas:

- Real time network data – for example, what minimum performance characteristics should be required when TSOs are exchanging real time information on network stability?
- Operational voice systems – restoration of supply will be heavily dependant on the ability of TSOs to communicate during the post-fault period. With this in mind, establishing a common set of service characteristics could help to ensure that good communications remain in place regardless of events.

Section 2.4 An integrated approach to tackling climate change

Both energy efficiency and increasing use of renewable energy resources are vital to Europe's drive to address the effects of global climate change. EUTC member utilities are committed to this effort, and many already are major developers of renewable resources. But, when promoting electricity from renewable energy sources, it is necessary also to ensure appropriate measures for the provision of secure ICT services to electric utilities, whether through internal or external, commercial sources. The ability to "switch on" a renewable source, or move to another source if a system is unavailable, entails robust ICT networks. Utilities must have the regulatory support needed to build and maintain necessary networks by their preferred means.

Overall, the Green Paper's goals point to the ability of Europeans to choose from a variety of service providers; for those providers to use a variety of energy sources; and for the infrastructure as a whole to offer a secure and well-balanced flow of energy as needed. Generation plants, transmission lines and distribution networks alone cannot make this happen. Huge investment in ICT improvements and expansion also will be needed, with utilities employing both wired and wireless technologies to support their core infrastructures. As part of efforts toward more sustainable, competitive and secure electricity infrastructures, regulatory frameworks in Member States should provide investment signals for transmission and distribution system network operators that include recognition of the importance of their ICT infrastructures. Such signals should include maintenance and renewal of ICT infrastructures as well as electricity infrastructures.