



EDISON RESPONSE TO ERGEG PUBLIC CONSULTATION ON POSITION PAPER ON SMART GRIDS

General remarks

Edison welcomes the opportunity to comment Smart Grids approaches throughout the EU electricity grids. We would like to point out that the regulation of Smart Grids has been a largely unexplored area until now. Thankfully, ERGEG has now highlighted the major challenges and has provided some suggestions for possible solutions. The paper describes a number of important views and proposals regarding regulatory aspects of electricity networks and its regulation in the future.

Who we are

Born in 1881, Edison, one of the oldest energy companies in Europe. When the national monopoly on electricity was established in Italy in 1963, Edison had to diversify its business, but thanks to the first wave of EU Directives in 1996, it could re-focus its business on energy once again. Today Edison is the leading new entrant in the Italian energy market, with 50,2 billions kWh produced in 2008 and a market share of 16,4% of national output. Thanks to 7.000 MW of new highly efficient and low emission plants (CCGT thermo plants, as well as hydro and wind power plants), the Company has now a total installed capacity of more than 12.000 MW. In 2008, Edison reported revenues of 11.066 mln €.

Thanks to one of the most ambitious investment plans in Europe, Edison aims at becoming the second largest electricity company in Greece through the recently established joint venture with Hellenic Petroleum. As shown by the recently approved Business Plan (2009 – 2014), Edison will invest 7.2 billion euro in natural gas (exploration and production activities, in major gas import infrastructures, such as the Rovigo LNG offshore re-gasification terminal and the ITGI-Poseidon and GALSI pipelines) and in power generation sector, with a particular focus on renewable energy sources (hydro and wind power allow the Group to cover over 40% of the green certificate requirement with its own production). Other investments will constitute strategic developments in fast-growing markets, such as Greece, Romania and Turkey. As from 2009 the new offshore LNG terminal in Rovigo will contribute to the diversification of the country's supply sources with its



re-gasification capacity of 8 bcm of natural gas a year, equal to 10% of Italy's demand for natural gas. In 2012 there will be the start up of GALSI and ITGI pipelines, which will connect Italy and European markets to Algeria and Caspian Sea, two areas rich in hydrocarbons.

Answers to ERGEG discussion points

Section 1 – Introduction

1. Do you consider that networks, transmission and distribution, are facing new challenges that will require significant innovation in the near future?

There is a clear need for innovative solutions to be implemented in the transmission and mainly distribution networks. The technology exists, it is already innovative, and however, more efforts should be made in the implementation phase. This will require joint effort and coordinated active participation by all stakeholders. There is not yet a common technology and standards in technology and communication are still lacking.

2. Do you agree with the ERGEG's understanding of smart grid? If not, please specify why not.

We agree with the description proposed by ERGEG and based on the definition of the European Technology Platform on Smart Grids.

3. Do you agree that objectives of reducing energy consumption impose the need for decoupling regulated companies' profit from the volume of energy supplied? How can this be implemented?

We agree that objectives of reducing energy consumption impose the need for decoupling regulated companies' profit from the volume of energy supplied.

Distribution and transmission companies, as regulated companies, should not be subject to the energy demand in its remuneration but on the development, maintenance and operation of their networks and its components.

However we think that is important to focus more on the "optimization" of energy consumption than directly on reducing it: improving the efficiency is a sustainable way of contributing to achieving the 20/20/20 EU targets.



Section 2 – Drivers for smart grids

4. Do you agree with the drivers that have been identified in the consultation document? If not, please offer your comments on the drivers including additional ones.

We agree with the drivers that have been identified in the consultation document and we think that the application of the Smart Grids concept can improve customer service. Smart Grids is felt to be a necessity for the integration of distributed generation, renewable energy sources and hybrid cars into the electricity grid.

Section 3 – Smart grid opportunities and regulatory challenges

5. Do you agree that a user-centric approach should be adopted when considering the deployment of smart grids?

We agree that the electricity system and grid challenges must certainly be linked to the user-centric approach.

6. How should energy suppliers and energy service companies act in the process of deploying smart grids solution?

Energy suppliers and energy service companies acting in the process of deployment of smart grids solution should be flexible and adaptable to the new market trends and services evolution/transformation.

Energy supplier and energy service companies (ESCOs) should be in the process of smart grids definition and smart grid deployment. There must be a common interface between energy supplier and energy service companies and DSO/TSO to assure non discrimination to all players. Common interface should simplify and unify the smart grid system functionalities and assure the interoperability between various devices of different vendors.

It should be clear the roles and responsibilities of network companies in one hand and suppliers/ESCOs on the other hand. Network companies develop a regulated activity whereas suppliers/ESCOs are on a liberalized market.

Another very important item is the possibility for energy service companies to have access to customer data. Without this possibility energy service companies will not



be able to propose new and innovative services to customers and to act efficiently in the process of deploying smart grid solution.

7. Do you think that the current and future needs of network users have been properly identified in Section 3.3?

New services are expected to be provided by service providers and suppliers. We are in favour of sharing direct participation of all stakeholders in the definition of the new functionalities to be achieved by the smart grids.

A Smart Grid will require an integrated approach between the DSO and TSO. From the operations perspective the DSO and TSO will have to work together closely in the areas of outages, dispatch, voltage control and power flow control. Further areas for review can include a joint DSO/TSO strategy paper, organisation and systems in the Smart Grid environment, development of people skills and competencies, contestability issues, planning guidelines in a Smart environment, tariffs and customer benefits regulatory support.

8. Do you think that the main future network challenges and possible solutions have been identified in Section 3.4 and 3.5 respectively? If not, please provide details of additional challenges/solutions.

The main challenges for networks development and possible solutions have been identified in the report. Very important will be anyway security and ICT solutions of smart grids. Also scalability should not be underestimated.

It is remarkable as well and we fully support the need for a standardisation of the communication protocols which will prevent from expensive developments. This should be highlighted as much as possible.

9. Do you expect smarter grid solutions to be essential and/or lower cost than conventional solutions in the next few years? Do you have any evidence that they already are? If so, please provide details.

It should be considered that costs will not be necessarily lower than today, but the quality and services for all stakeholders may be improved and this improvement may be done at the lowest cost.

The consumer should be properly informed and trained about all the information that is going to manage and the benefits derived from that. Only in this way, the



consumer will be receptive enough to assume all costs involved and the targets could be achieved.

10. Would you add to or change the regulatory challenges set out in Section 3.6?

We think that European electricity networks have to be prepared to cope with the ambitious EU sustainability targets. These goals add new items to the existing mission of DSOs which has been to secure an acceptable level of network reliability and quality. The Smart Grids deployment not only includes innovative technologies, standardization, market considerations or the environmental impact but it also considers legislative and regulatory schemes to secure the developments in a timely way.

Finally, we think that to avoid missing the great potential of investments in smart grids it is necessary that Regulators will assure efficient and liberalized markets for metering services with free access to customer data for services providers. This is the base for all players to act efficiently in the process of deploying smart grid solution.

Section 4 – Priorities for Regulation

11. Do you agree that regulators should focus on outputs (i.e. the benefits of smart grids) rather than inputs (i.e. the technical details)?

We agree that regulators should focus on outputs rather than inputs but defining performance targets but indicators seem to be a hard and sensitive task to be developed. The success of the implemented regulation depends on these ones.

12. Which effects and benefits of smartness could be added to the list (1) - (7) presented in Section 4.1, Table 1? Which effects in this list are more significant to achieving EU targets? How can medium and long-term benefits (e.g. generation diversification and sustainability) be taken into account and measured in a future regulation?

We think that points (6) about interconnections and (7) about coordinated grid development are not specific issues of Smart Grids and they are not to be considered.



13. Which output measures should be in place to incentivise the performance of network companies? Which performance indicators can easily be assessed and cleansed of grid external effects? Which are suitable for European-level benchmarking and which others could suffer significant differences due to peculiar features of national/regional networks?

We think that indicators should be carefully designed and any benchmarking exercise should take into account that the results depend not only on the actual situation but also on the characteristics of the demand and other external factors.

The indicators should be depending on the smart grid's definition and this is going to be developed in parallel. Therefore, it is not realistic designing some incentives for a smart grid which are not adequate to afford the challenge.

14. Do you think that network companies need to be incentivised to pursue innovative solutions? How and what output measures could be set to ensure that the network companies pursue innovative solutions/technologies?

Incentives given by Regulators to DSOs for their involvement in R&D work and for the development and deployment of new technologies supporting Smart Grids should be improved. Thus the regulatory regime should give incentives that foster the transformation from the current grid system into a Smart Grid or a comparable concept able to cope with the EU policy goals.

15. Do you consider that existing standards or lack of standards represent a barrier to the deployment of smart grids?

We consider that existing standards or lack of standards represent a barrier to the deployment of smart grids and there is a need to define new standards to facilitate deployment of smart grids. Cooperation among stakeholders should be developed in this area.

16. Do you think that other barriers to deployment than those mentioned in this paper can be already identified?

A particular attention must be given to the education and availability of skills necessary for deployment as well as for maintaining the new solutions. "Change" will be one of the biggest barriers and this for all players in the landscape.



17. Do you believe new smart grid technologies could create cross subsidies between DSO and TSO network activities and other non-network activities?

This may be the case with regards to new services expected to be provided in the future. If these services are provided over the smart grid network also by DSOs/TSOs in a liberalized market framework, one question that follows is how to allocate the cost of the smart grid deployment between network companies and others suppliers/ESCOs to prevent network companies from cross-subsidizing their non-regulated activities.

18. What do you consider to be the regulatory priorities for electricity networks in relation to meeting the 2020 targets?

We stress the need for a predictable and transparent regulatory framework for the European electricity market. We recommend harmonising rules across Europe as far as possible. We call upon governments and regulatory authorities to work together towards an optimised business model for all parts of the value chain, from generators to consumers, so as to minimise total costs.

The risks could be minimised by providing a clear definition of responsibilities. This will contribute to defining the costs allocated for each stakeholder.