

## **Questions for public consultation**

Section 1 – Introduction

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

Yes, there are considerable challenges, as stated in the drafted report. In addition Teradata believes that there will be challenges around:

- The unprecedented amount of data being generated by smart grids that will need to be captured, stored, analysed and made available to users
- The requirement for a dramatic increase in the number of users accessing information, especially if information is made available to individual consumers
- The speed of change needed to meet regulatory and market needs

While new product and process innovation will be undoubtedly be required and delivered going forward there is currently a challenge around how to be innovative in the use of current “off the shelf” technologies and processes to deliver in the short term the EU’s goals. In this context one main area of innovation required today is around how to make the grid “smart”, i.e employing existing advanced information analysis to:

- Understand and influence consumption behavior
- Dynamically balance demand and supply of energy
- Reduce waste in transmission and distribution
- Optimize power generation operations

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

Yes we agree with the definition of smart grids. Our only concern is that the information management and analysis requirements that will put the “smart” in smart grids have not been fully defined. For example, the question of how the data generated from the smart grid will be utilized for each of the actors, and how they will benefit from this information is not detailed.

### **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?**

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.**

Yes, but we see the information analysis as a key enabler for these drivers.

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?**

The user centric approach is valid in gathering the requirements, but at the same time, in order to guarantee an efficient and effective solution, a holistic, agnostic approach towards information is needed to fulfill each user's need, while respecting privacy issues of the consumer.

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

Energy suppliers and energy service companies need to act in a consumer focused, results driven, fact based, transparent, auditable and timely manner while deploying smart grid solutions.

To enable the deployment of smart grids, interoperability and interchangeability standards are needed for exchange and sharing of information in a timely manner, to make the grid "smart".

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

It is unclear if the information management and analysis role has been properly identified across the grid. In particular, small customers may require access to information around their detailed consumption patterns to understand and modify their own behavior.

**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.**

In addition to the infrastructure requirements, there will be an information requirement to support the future network.

**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.**

Initially the investment cost may be higher, but the resulting total cost of ownership should be lower if the data generated by the smart grid is analysed and used to optimize operations and drive down wastage, i.e if the grid is actually made smart.

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

Information monopoly could hinder an efficient market, and information should be freely available to optimize the energy market competition and efficiency, while at the same time respect the consumers' privacy.

The regulators need to promote standardization of the smart grid information exchange, towards an open standard, to assure standardized communication in the smart grid (e.g. data standards for communication between users in the smart grid).

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)?**

**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?**

**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?**

**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?**

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

No. There are sufficient standards for data and information exchange today and these will continue to evolve in the future. The most important thing is that these standards are open and developed by the actors on the energy market and meets the demands of the smart grid's users.

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

There are barriers regard how data generated by a smart grid will be managed, mainly regarding:

- What are you going to do with the data to drive the benefits of a smart grid?
- Who owns the data generated by the grid?
- What analysis will be performed on the data to generate valuable information to act upon?
- How will information be shared between the different parties?
- How will individual consumer privacy be protected, while still enabling operational efficiencies and consumer choice?
- How will the information and analysis be provided to the hundred+ million users of the grid?

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

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