

## **T&D Europe position regarding EU Smart Grid TF/EG3 (regulatory recommendations for Smart Grids Deployment) on market models**

Version 2.1 date 16<sup>th</sup> October 2013

### **Summary and conclusion**

*The manufacturers within T&D Europe would like to highlight that they can provide the technical capabilities to fulfill cases I to III.*

*In our opinion it is essential for all cases that a fair access to data shall be guaranteed to all stakeholders.*

*The companies represented within T&D Europe wish to recommend to the European Commission their full availability in actively supporting the processes of implementation through projects identified by EEGI (European Electricity Grid Initiative) to reach new market models. This will in the end facilitate the deployment of the smart grids, and the integration of distributed resources as an active part of the system. Such processes should use existing projects as a spring-board. Many current practices and stakeholder positions tend to favour Case I. However, the (national) regulatory intervention to enforce the implementation of Case I should not prevent any future evolution towards Cases II and III and should not discriminate against Member States who have already chosen, or intend to choose, Case II and / or Case III or combinations of them.*

*In this sense, considering the already consistent investments made in the different Smart Grid pilot projects, the manufacturers are ready to support the market to reach the state-of-the-art in technology and performance. This would be in the interests of consumers and all actors in the value chain of the smart grid.*

### **A) Introduction**

The Expert Group for Regulatory Recommendations (EG3) within the EC-Smart Grid Task Force deals with market models. The target of EG3 is to identify a reference market model, as well as options of a feasible business model, to identify suitable tools to foster the implementation of Smart Grids, including an accelerated roll-out of Smart Meters. Further targets are to check the consequences related to the regulatory framework in order to facilitate the roll-out.

Due to the diverse situation in Member States it was not possible in 2012 to define a "one-size-fits-all" model. Therefore EG3 has worked out 3 different cases. Data handling and processing has been identified as the distinctive factor between the three cases. These three cases should represent different options of handling Smart Grids data.

In January 2013 the Expert Group has issued the EG3 First Year Report "Options on handling Smart Grids Data". The report describes the three cases, advantages and disadvantages for

consumers, business opportunities (synergies between ICT and Energy), and recommendations for regulatory intervention.

At the Steering Committee Meeting of the Smart Grids Task Force on July 9 2013 it was decided to reactivate EG3 discussions after the summer break to move discussions beyond data handling models.

T&D Europe was actively participating to the work of EG3 and would like to express its position regarding market models.

## **B) Requirements of the electricity system towards a “smart” system**

In order to achieve the overall European targets related to energy, the following tasks will need to be supported by future power grid systems and markets:

1. Integration of a high share of intermittent generation, such as wind and solar power.
2. Integration of a high share of highly distributed resources, such as distributed generation units and flexible loads.
3. Support of system stability, in particular frequency and voltage stability preferably also by distributed resources.
4. Incentives for efficient utilization of grid infrastructure, both in operation, e. g. by balancing out local generation and consumption, and planning. This includes enabling DSOs and TSOs to determine and forecast grid capacity (and bottlenecks) and enable them to invest in a timely and cost-efficient manner in the grid they operate, to facilitate transport of energy provided by distributed resources.
5. Increase awareness of consumers on energy use, empowering consumers to actively participate in the energy system through demand response, feedback and eventually also the strategic sale of micro generation resources.
6. Enabling more differentiated offerings for electricity consumers by all types of suitable service providers, thus supporting competition and creation of more value for consumers.

## **C) Cases**

Three cases have been identified during the discussions within EG3:

Case I - DSO as Market Facilitator: DSO responsible for collection and sharing of data

Case II - Third Party Market Facilitator (Independent Central Hub): New Data Facilitator to access control & integration of sharing data

Case III - Data Access Point Manager (DAM): Organizing open and neutral access to information from distributed resources for all market participants and leaving it up to them to organize, who should own and process data required for their purposes.

**D) Cases' benefits/features to achieve overall European targets related to energy**

**Benefits analysis**

	Case I	Case II	Case III
	<u>DSO as Market Facilitator</u>	<u>Third Party Market Facilitator</u>	<u>Data Access Point Manager (DAM)</u> :
1. Integration of a high share of intermittent generation: significant share from large <u>centralized</u> units	No clear preference, very efficient	No clear preference, very efficient	No clear preference, very efficient
2. Grid and Electricity Market Integration of a high share of highly <u>distributed</u> resources	supportive; focus is on "plug and automate" based grid integration of a very high number of distributed resources	supportive; focus is on "plug-and-play" based electricity market integration of a very high number of distributed resources	supportive; focus is on "plug-and-play" based electricity market integration of a very high number of distributed resources
3. Support system stability	High flexibility - This setup shows a strong support to local and general system stability	High flexibility - This setup shows a support with regard to general system stability	High flexibility - This setup shows a support with regard to local and general system stability by principle, because it gives all market participants direct access to the information they need
4. Incentives for efficient utilization of grid infrastructure	No particular incentive, flexible use of grids create income / incentives	No particular incentive, flexible use of grids create income / incentives	No particular incentive, flexible use of grids create income / incentives
5. Performance empowering consumers to actively participate in the energy system through demand response	Medium	Medium	Medium

6. Enabling differentiated offerings for electricity consumers	Low	High	High
--	-----	------	------

**E) Access to data**

Data handling and processing has been identified as the distinctive factor between the three cases. Case I assumes a central role of the DSO in data-related functions, while Cases II and III give these functions to new actors. Irrespective which party will consolidate and handle data, in our opinion it is essential that a fair and efficient access to data shall be guaranteed to all stakeholders, such as the rights of DSOs to apply data for network operation purposes, especially

- Guarantee complete access rights to metering data to end-users
- Guarantee rights to energy service providers , selected by the end-user, to take advantage of metering data and other relevant information, e.g. on demand response capabilities or distributed generation units
- Guarantee rights to energy service providers to simplified information to allow the creation of new innovative services

This will allow in our opinion the empowerment of end-users, via the direct application and / or delegation to their energy service providers or other service providers, such as aggregators. It will also enable a free and fair competition between traditional and new energy service providers.

Data handling and processing will become more complex. New data processing application have to be considered, such as big data analytics in order to manage information between Advanced Metering Management and Distribution Automation, this to ensure system optimization.

**F) Implementation of cases**

We have seen in the EG3 report that Case I has been already implemented in the Netherlands with a central hub and that Belgium has decided to adopt it as well. In Portugal decision has been taken to adopt it for switching. Supporters of a Case II central data hub model are Great Britain, Estonia, Denmark, Poland Nordic Exchange Markets and Italy. International supporters of this model are Province of Ontario in Canada, State of Texas, Ecuador and Australia. Elements of the Case III are already in use or being developed in Great Britain (Smart Energy Code on the process side) and in Germany (BSI protection profile on the technology side).

-5

After reviewing the implementation in those countries and the benefits analysis matrix in chapter D), in our opinion a step by step approach beginning with Case I would be suitable. This would facilitate the deployment of smart grids. A set of regulatory interventions needed to implement Case I should be defined for Case I, such as the non-discriminatory access to the grid infrastructure and neutrality to all other market parties, this to ensure that new products

and services can develop free of discrimination. A regular review of the functionality of the data hub, i. e. the types of available information, would be required in order to support development of new functionalities utilizing distributed resources.

The regulatory intervention to facilitate the implementation of Case I should not prevent the implementation of Cases II and III.

## G) Conclusion

The manufacturers within T&D Europe would like to highlight that they can provide the technical capabilities to fulfil cases I to III.

In our opinion it is essential for all cases that a fair access to data shall be guaranteed to all stakeholders.

The companies represented within T&D Europe wish to recommend to the European Commission their full availability in actively supporting the processes of implementation through projects identified by EEGI (European Electricity Grid Initiative) to reach new market models. This will in the end facilitate the deployment of the smart grids, and the integration of distributed resources as an active part of the system. Such processes should use existing projects as a spring-board. Many current practices and stakeholder positions tend to favour Case I. However, the (national) regulatory intervention to enforce the implementation of Case I should not prevent any future evolution towards Cases II and III and should not discriminate against Member States who have already chosen, or intend to choose, Case II and / or Case III or combinations of them.

In this sense, considering the already consistent investments made in the different Smart Grid pilot projects, the manufacturers are ready to support the market to reach the state-of-the-art in technology and performance. This would be in the interests of consumers and all actors in the value chain of the smart grid.

o o O o o