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Svensk Energi (Swedish Energy Association) response to the public consultation on ERGEG's Position Paper on Smart Grids

Svensk Energi, the electricity industry association in Sweden, welcomes the opportunity to comment on the "Position Paper on Smart Grids".

General comments

ERGEG has launched a public consultation on its Position Paper on Smart Grids. The paper describes a number of important views and proposals regarding some, but not all, regulatory aspects of electricity networks and their(?) regulation in the future. We have noted that unbundling and the right to build and own lines connecting power plants to the networks are not discussed. In general Svensk Energi thinks the description in the paper of the smart grid, its components, drivers and impacts are accurate and valid.

Like ERGEG, Svensk Energi is of the opinion that the deployment of new technologies must be a means to eventually reach the EU objectives. Investments in "smarter" networks must provide better value and direct benefits for all grid users. We are of the opinion that regulators are key facilitators in this process.

Questions for public consultation

Section 1 – Introduction

Q1. Do you consider that networks, transmission and distribution, are facing new challenges that will require significant innovation in the near future?

Svensk Energi:
Yes, among other things the implementation of distributed generation and also introduction of EVs will create a need of significant changes in TSO and DSO innovation to maintain an efficient and stable electricity system.

Q2. Do you agree with the ERGEG's understanding of smart grid? If not, please specify why not.

Svensk Energi:
In general yes. Svensk Energi would like to stress the fact that new types of IPP (Independent Power Producers) are entering the market, especially the wind-power market. They often have no historical background in power production and their views and demands on the TSO/DSO are different from

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those of traditional utility owned producers. This will require more detailed and stronger requirements on grid-codes for connection and operation.

Q3. 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?

Svensk Energi:
Yes, in general we agree, though energy efficiency not always leads to electricity consumption reduction. Heat pumps and electrical vehicles are examples of energy efficiency measures that result in reduced use of fossil fuels and reduced total energy consumption, but to increased electricity demand. Thus, a shift from direct use of fossil fuels to efficient electric systems are an important tool to mitigate climate change.
A regulated income frame (allowed income) based on the DSO assets, set for several years reduce the effects on DSO profits from reduced energy consumption in the short run.

Section 2 – Drivers for smart grids

Q4. 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.

Svensk Energi:
In general yes, but Svensk Energi would like to highlight that to give the incentives for the customers to invest in demand response, time shift of loads and other energy efficiency means it's crucial to have increase price transparency.

Section 3 – Smart grid opportunities and regulatory challenges

Q5. Do you agree that a user-centric approach should be adopted when considering the deployment of smart grids?

Svensk Energi:
Yes.

Q6. How should energy suppliers and energy service companies act in the process of deploying smart grids solution?

Svensk Energi:
It must be a price transparency for the real electricity system costs - e.g. spot prices, congestion prices, temporary local capacity problems and extra balance power costs.

Q7. Do you think that the current and future needs of network users have been properly identified in Section 3.3?

Svensk Energi:
Yes. We would like to point out the fact that single customers rarely can demand higher quality of supply than other customers in the area. In some

cases (e.g. large industrial plants) extra lines can be built to a singular customer to reduce the risk of an outage.

Q8. 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.

Svensk Energi:
Yes.

Q9. 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.

Svensk Energi:
From a DSO perspective, costs are expected to increase. Hence incentives are needed in the regulation, especially in the implementation phase. In the coming years investments in smart grid solutions will increase, but the business case is not yet clear.

Larger customers, with spot market based electricity prices and capacity based grid tariffs, already have some incentives for energy efficiency measures. When it comes to small customers more transparent prices for peak hours need to be in place before efficient and cost effective solutions will enter the market. It is also important to understand that from a customer point of view it is the total costs, network, supply and taxes that give the economical incentives.

Q10. Would you add to or change the regulatory challenges set out in Section 3.6?
Svensk Energi:
Svensk Energi agrees that it is of importance that the regulators understand that often in deployment of new technologies the costs are there day one and benefits comes in the future.

Section 4 – Priorities for Regulation

Q11. Do you agree that regulators should focus on outputs (i.e. the benefits of smart grid) rather than inputs (i.e. the technical details)?

Svensk Energi:
Yes.

Q12. 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?

Svensk Energi:
It is important that KPIs are measurable and able to monitor and follow up.

Quantified reduction of carbon emissions is probably the most important issue from a climate mitigation perspective. The challenges are to define relevant and measurable KPIs. Two items might be relevant here:
- Ratio of reliably available generation capacity and peak demand
- Share of electrical energy produced by renewable sources
Share of electrical energy produced by renewable sources can be part of this. Also number or total installed capacity (MW) of heat pumps can be part of a KPI.

Q13. Which output measures should be in place to incentivize 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?

Svensk Energi:
One possible indicator is the trend of utilization time for peak load (annual energy flow / peak load) at different levels of both TSO and DSO grids. This can show the trend and success of introducing demand response and incentives for load shifting from peak load hours to other hours, at both the customer side and interaction with distributed generation.

Q14. Do you think that network companies need to be incentivized to pursue innovative solutions? How and what output measures could be set to ensure that the network companies pursue innovative solutions/technologies?

Svensk Energi:
Yes, to start R&D projects, pilots and implementation of more long-term and risky investments need to be incentivized. Incentives will be needed for the implementation phases, where a clear positive business case is not in place from a DSO perspective, even if it is from a society perspective. One way to handle this can be to allow the DSO to add these types of investments to the regulated asset base, if the asset base is the base for the regulated acceptable income level for the DSO.

Q15. Do you consider that existing standards or lack of standards represent a barrier to the deployment of smart grids?

Svensk Energi:
Yes, lack of standards is a barrier, especially in countries with many DSOs. Lack of common standards for e.g. access to metering values, access to meter-on-line and demand response interfaces is a barrier when the DSOs chooses different solutions, different ambition levels etc. The market players needs one-single-interface standard to access customers for all different DSO implementations.

Q16. Do you think that other barriers to deployment than those mentioned in this paper can be already identified?

Svensk Energi:

As mentioned above, countries with many DSOs will have challenges to reach consensus for applied interfaces. Standards are needed to be an enabler for the open market.

Q17. Do you believe new smart grid technologies could create cross subsidies between DSO and TSO network activities and other non-network activities?

Svensk Energi:
With clearly defined roles for TSOs and DSOs this should not be a problem.

Q18. What do you consider to be the regulatory priorities for electricity networks in relation to meeting the 2020 targets?

Svensk Energi:
To incentivize R&D and give DSO investors a positive payback of investments of smart grid implementation when the society business case is positive, but the DSO business case is not.

Yours sincerely,

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