ERGEG – Pilot Framework Guidelines on Electricity Grid Connection

IBERDROLA comments

IBERDROLA welcomes this opportunity to provide opinion on this issue and acknowledges the effort made by ERGEG in making this type of consultation which is necessary for the development of a well functioning European Electricity Market.
In this paper we are providing our views on the issue of Electricity Grid Connection.

General Issues

1. Are there additional major problem areas or further policy issues that should be addressed within the Grid Connection Framework Guideline?

- In December 2009, ERGEG published its "Guidelines of Good Practice on Electricity Grid Connection and Access". In this proposed Framework Guidelines, there is no reference to the access concept, although there are requirements and specifications for "Real-time information sharing", "Special requirements for critical grid situations" and other exchange of information needed for the operation of the grids. As all this aspects go beyond the pure Connection procedures, they should be included in a section related to <grid access rules>.

- The name "grid" is used in the Scope of the document for the Transmission grid only. It is also said that the code "will be applied by electricity transmission System Operators" without any reference to DSOs. But in other parts of the document, the term grid is used indistinctly for Transmission Grid and Distribution Grid (for example paragraph 3.3.1., should clarify if "connecting a consumption unit to the grid" means only the Transmission grid or also the Distribution grid.). The document should clarify when the term "grid" is considered as Transmission Network and when it is Distribution Network.

- It seems like DSOs, that are also networks operators, are mere executors of the decisions and instructions given by a TSO, that have no distribution grid to be responsible for, and therefore have no right to have their own Distribution grid code. For example, in paragraph 3.2.1. it is mentioned that "The network code(s) shall set out necessary requirements and procedures to be followed by DSOs when connecting distributed generation to the grid.", in paragraph 3.2.3. that "The DSO should be assigned the responsibility for transposing the requirements set by the TSO (or DSO)…" and in paragraph 3.2.4. that "The network code(s) shall set the requirement for DSOs to execute (…) the instructions given by the TSO."

  This should be taken into consideration in the whole document, clarifying if there is going to be different guidelines for connection and access to transmission and distribution grids, or in case these guidelines also apply to the distribution grids, give the DSO the proper state as a grid operator, not a "subsidiary" of the TSO in their own grids.

- The code does not mention any requirement related to the grid capacity studies the TSO / DSO has to perform before the acceptance of a new connection.

2. What timescale is needed to implement the provisions after the network code is adopted? Is 12 months appropriate or should it be shorter or longer?

The timescale required for implementation will depend on the transition arrangements for existing generators and generators holding future connection agreements. Sufficient time must be allowed for these generators to comply with the new provisions without undue economic penalty.

In any case, if some existing or contracted grid users have to adapt to the new network code, account should be taken of the following points:

- The new requirements should be based on commercial existing technologies; otherwise the timescale could be unreachable. Technologies under development cannot be guaranteed to be available on time.
- The timescale could be impacted by supply chain constraints if a large number of grid users need to install specialist equipment in order to adapt to new network code requirements.

3. Should harmonisation of identified issues be across the EU or, perhaps as an interim, by synchronous area?

To ensure a smooth transition, harmonisation by synchronous area would be preferable provided all synchronous areas are moving on a convergent path. In the end, all EU should have the same requisites.

Grid Users related Aspects

4. Should the requirements apply to existing grid users? How should it be decided? To which existing users should the requirements apply? How should timelines for transitional periods be set? Who should bear any costs of compliance?

This is a controversial issue since it deals with two conflictive objectives:

First, we believe that the minimum requirements should apply to all existing grid users as long as commercial technologies to comply are available in order to help manage the system, but

Second, we also think that the requirements should not be applied retrospectively to existing grid users or those holding current connection agreements as this increases regulatory uncertainty and discourages investment.

It would not be considered as retroactive in the cases when a grid user intends to make a significant change to its connected equipment e.g. re-planting when the new requirements can be factored into investment decisions.

If the requirements are to be applied retrospectively to existing generators, a long transition period should be set to enable investors to plan for the expenditure e.g. 10 years, and more important, it should be clear that the cost can be recovered during the rest of life of the user's units. For this reason, some exceptions should be defined for:

- Grid users that cannot adapt to network code because there is no commercial technology available or the technology is under development.
- Grid users whose facilities have a limited life and new investment are not justified.

Costs associated with minimum requirements should be recovered through charges to grid users,
In many cases, the need and the cost of new requirements to provide ancillary services should be carried on in a different way. These new requirements should not be mandatory for grid users, but schemes can be adopted to incentivise provision of the service on a commercial basis. The cost of these requirements should be recovered from ancillary services markets if it is possible or from bilateral contracts with the TSOs if it is not practicable to implement a market.

5. The framework guideline identifies intermittent generation, distributed generation and responsive demand as requiring specific grid connection guidelines. Is it appropriate to target these different grid users? How should the requirements for intermittent generation, distributed generation and responsive demand differ from the minimum requirements? Is there a need for more detailed definition / differentiation of grid users?

To avoid undue discrimination, the minimum requirements should be the same for all users with the exceptions mentioned in question 4. Beyond that, there should be as little differentiation as possible on the requirements placed upon different types of grid users. Different requirements can only be justified where the particular operating parameters of the user justify the use of different types of connection or make it impracticable to meet the common standard, e.g. where a lower capacity or single circuit connection is provided for intermittent generation to reflect the lower level of investment which can be economically justified.

Some requirements above the minimum ones can also be asked of intermittent generation, distributed generation and responsive demand in order to provide services to TSOs. Payment should be provided for these services, on the same basis as it is for other types of plant. The TSO should pay the cost for the grid users through access tariffs or bilateral contracts with generation or consumption units.

Implementation

6. Is it necessary to be more specific regarding verification, compliance and enforcement?

In broad terms, we think the framework is correct in leaving the matter to the network codes.

The verification process should be defined in the network code taking into account that the requirements for verification and compliance should be carefully considered to ensure that the economic burden of demonstration of compliance by the user does not outweigh the benefits to the TSO. The process should be clear, transparent and objective and the extent of mandatory verifications should be defined in order to prevent unnecessary cost for grid users. The period between verifications should be as long as possible.

The network code should also define who carries the cost of verifications. If the grid users pay this cost (only in the case of mandatory verifications), the tariffs should be fair, based on cost and approved by national regulators. If the verifications are requested by TSO, TSO should carry this cost.

One option for obtaining the minimum cost to the system and agents could to consider that In general, users should be assumed to be compliant until the physical performance of their plant or equipment indicates otherwise to the TSO.

7. What are the key benefits and types of costs (possibly with quantification from your view) of compliance with these requirements?

It is necessary in any system to have minimum connection requirements to improve the security of the power system and quality of electricity supply. Some form of such requirements will already exist in each grid. The benefit of looking at these on an EU-wide basis is to begin to create more of a standard platform, so that market integration can take place more efficiently.

From the point of view of a generation unit the types of cost are the cost of investment in new equipment, and the cost of maintenance, operation and verification. If it is possible, these costs should be recovered from energy and ancillary services markets. Otherwise, regulated payments or bilateral contracts should be envisaged to recover additional costs.

In assessing costs of compliance, it should be considered that regular testing could result in a burden on a grid user through disrupting their ability to operate the plant or equipment in the most economic manner in order to meet the requirements of compliance testing e.g. running generating plant for testing when market prices would normally preclude running.

8. How should significant generation and consumption units be defined?

To ensure standardisation across the EU, a common definition should be used. The definition should be defined by reference to the impact of the grid user upon its host transmission system with common de-minimis levels or banding used across Europe. Use of separate definitions in each host TSO grid area would potentially lead to undue discrimination through the different treatment of users of similar size and capacity.

Recognizing that the limit for a significant generation unit depends on the size of the power system that it is connected to, we think that a value between 50 MW and 100 MW would fair for most of the power systems.

9. For what real-time information is it essential to improve provisioning between grid users and system operators? Do you envisage any problems such greater transparency? What are the costs (or types of costs) and benefits you would see associated with this?

TSOs should receive all the real-time information that they need to guarantee the safety of the power system. They should also receive all changes in availability of significant generation and consumption units and the maintenance plan.

For transparency reasons and the well functioning of power market, TSOs should publish in their Web Pages individual production and availability data of generation units from a minimum threshold (e.g. 50 MW) and real time data and a forecast of demand and wind and solar production. Data provided for transparency issues should be harmonized across all EU Member States. Transparency will encourage competition and will create a level playing field for generators and suppliers.

It should be taken into account that there is a cost associated with the provision of information particularly in ensuring accuracy as provision approaches real time. The cost of implementing additional near real-time data capture and exchange systems should be carefully evaluated against any benefits from greater provision. Nevertheless, information needed for the security of the power system should be provided.

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