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Consultation Questionnaire

Key messages

It is essential to have FGs and related NCs dealing with identical or closely linked issues aligned in their interfaces. This is especially relevant for FG System Operation, as it sets the technical basis which will then be further detailed in Grid connection for technical requirements and CACM for structuring of the market interface.

As an overall issue it should be stated that NC should not be formulated too detailed, to keep space for differing national solutions, where appropriate (subsidiarity principle) and capability for adoptions to new developments without a complicated process to change European law.

The draft document, however, is very general. For an adequate degree of specification of the draft, we propose e.g. to make cross-references to well-proven national solutions, such as the transparency platform on fundamental data set up in Germany.

The questionnaire does not provide questions which open the floor for detailed statements and argumentations. For instance, BDEW would welcome specific questions on the challenges of the integration of renewables or on self-dispatch by market participants. Hence, in order to share our knowledge and experiences, we refer to established practices (esp. in Germany) and position papers of BDEW (where appropriate).

General Issues

1. The Initial Impact Assessment (IIA) identifies the following challenges (i) growing amount of distributed generation and variable generation (ii) increasing interdependence of control areas. Are there additional key cross-border challenges that the Framework Guidelines (FGs) and Network Code(s) on System Operation should address?

Principle of overall market efficiency

In addition to the challenges as of the IIA, we consider the principle of overall market efficiency as crucial. An efficient and safe system operation is interlinked with its economically sound and viable functioning and vice versa. Therefore, the FGs and Network Code(s) ought to adopt overall market efficiency as another superior key challenge.

Harmonising rules for RES where appropriate

As stated in Article 8 of Regulation (EC) 714/2009 and in the part “Scope” of the IIA, the key-focus of the FG and the NC on System Operation is on maintaining and further improving the already very high level of security of supply of the European power system and the relevant rules for cross-border issues. Based on the daily experience of our members, we can confirm the challenges caused by the integration of power from distributed renewable energy sources (RES), as mentioned above. However, it has to be stated that only a part of these challenges requires European-wide harmonisation.

EU-rules to link markets and systems

As well as there is a need for a secure system operation, there needs to be an effective linkage between the procurement and dispatch of reserves and ancillary services, as well as balancing mechanisms and traded energy markets. This should ensure that suitable incentives on market participants are maintained. A higher degree of harmonisation of market design, in this respect, is desirable and this needs to be given more emphasis in the Framework Guidelines.

2. The Framework Guidelines identify a number of actions and requirements to be included in the Network Code(s), as a solution to these challenges. Are the actions and requirements identified in the Framework Guidelines appropriate to solve these challenges?

Generally, we agree with the actions and requirements as defined in the FG. Any requirement going beyond existing international and also national standards must be underpinned with a sound technical analysis and cost-benefit analysis. However, we would like to point out the following issues:

Information exchange

One of our main concerns regarding the described proposals is the issue of “information exchange” - especially when looking at possible negative effects of an upcoming “mass problem” for the DSOs’ business, from handling data exchange with TSOs on decentralised production and demand (due to the high number of grid customers concerned). In any case, commercially sensitive data has to be respected. Aggregated data should be sufficient as a rule.

Also, the Network Codes shall not only be specific on information exchange from significant grid users to TSOs. An online publication of aspects such as frequency, balancing prices, load balancing factor, etc. can lead towards a higher security in system operation. We refer to the transparency platform on fundamental production data accessible via the webpage of the European Energy Exchange as an example of an extensive information provision (see <http://www.transparency.eex.com/de/>): Since October 2009, data of about 80 % of

the available generation capacity in Germany is published on that platform. BDEW supports this initiative and applies for further companies to contribute to its success.

Furthermore, defining intensive requirements e.g. on “real-time information sharing” could exceed the possibilities of existing grid and telecom infrastructures. It should be assessed, if the infrastructure in place could cover the high requirements and still secure the provisions on data privacy. Particularly the following aspects should be taken into account:

- Specification of real-time (e.g. latency) and required real-time data of consuming and producing systems,
- Need for definition of affected grid users (e.g. clear description of the characteristics of “significant users” and the specific requirements,
- Need for and availability of required new devices (e.g. smart meters, gateways or DG devices) and related standards to carry out measuring and control functions,
- Availability of needed standards for algorithms and information exchange,
- Available definition and appropriate integration of new market roles,
- Complement (or possibly overlap) to existing national legislation and regulation,
- Compliance with data security and data privacy principles (see recommendations of Smart Grid Taskforce EG2).

In our experience and to our understanding of the current situation, the balance of costs and benefits with regard to “real time” information exchange, with regard to distributed generation and the large number of grid users in this field, are not evident:

1. The description in Art. 1.4 linking real-time information, sharing with the delivery of data planned for in the Comitology Guidelines on Fundamental Data Transparency, is not consistent: Fundamental Data Transparency for market needs, as planned in the Transparency guideline, is not requested to be realised in real-time but in a much lower intensity.
2. Real-time data exchange needs to be limited to the necessary minimum in order to fulfil data security requirements at a managerial, technical and economic level. In addition, the technical limit of real-time data exchange has to be taken into consideration. Also, any provision on real-time data exchange has to be proportionate as it produces extremely high costs which have to reflect the benefit.
3. There has to be a clear purpose of the data collection and data exchange of DSOs with TSOs, with regard to the operation of the distribution grid and grid users connected to it. Unless this purpose is not clear, there is a conflict with data security principles.

New applications

In addition, with regard to Topic 6 “New applications”, we do not think that it is appropriate to group issues like “dynamic rating of power lines”, close interaction of balancing markets” and “coordinated use of phase shifting” in this topic. They are already today part of system operation and do not require special consideration. Hence, they should not be dealt with as part of these FGs. Anyway, the FGs should be formulated in a technically neutral way in order not to hinder the integration of any new application and to keep flexibility for new developments.

Redispatch

Other than in extreme situations the guidelines should not undermine the principle of self-dispatch by market participants.

Redispatch measures can be an important tool for system stability and congestion management. Thus, we propose a cross-reference to the Framework Guidelines on Capacity Allocation and Congestion Management for Electricity (see also our position paper dated Juni 10, 2011).

In addition, we refer to the German approach to deal with system stability and an increasing number of decentralised production sites as an example (see BDEW’s position paper on BNetzA-Festlegungsverfahren “Standardisierung vertraglicher Rahmenbedingungen für Eingriffsmöglichkeiten der Übertragungsnetzbetreiber in die Fahrweise von Erzeugungsanlagen”)

3. Are the proposed levels of harmonisation sufficient to solve these challenges?

We generally agree with the levels of harmonisation as proposed in the draft FGs (table 1, p. 6) especially with regard to inter TSO-cooperation.

As harmonisation is not to be understood as a goal in itself any measure in this context should be based on clearly proofed benefits. It should be scrutinised thoroughly, if different rules set by different national regulators really pose a problem for the secure operation of the system on European level. Therefore, national or regional differences have to be taken into account. Alternatively, the principle of subsidiarity should be applied. It should be ascertained that network codes, prepared by the ENTSO-E, do not replace national network codes or other national rulings for non-cross-border issues.¹ This has to be reviewed in a separate chapter/document in the consultation process.

We understand that the definition of a significant user is an instrument to focus European wide harmonisation of rules to grid users where there is really a benefit.

¹ See Article 8 (7) REGULATION (EC) No 714/2009

We support this differentiation, however, clear and consistent criteria definition of the term “significant user” and the process for decision has to be provided for in the FG. In a consequent hierarchy, any definition and decision on significant users in the field of Grid Connection has to be based on a proven requirement for System Operation.

Of the four objectives identified in the document, the second (“to apply same principles for different systems”) is unclear and poorly justified. The text on page 6 is preferable and objective 2 should be modified as follows:

“To deliver benefits to customers by supporting the functioning of the competitive market for electricity, especially in relation to the development of liquid and competitive day-ahead, intraday and balancing markets.”

This still provides a strong justification for the levels of harmonisation being suggested since system operation actions inevitably have an impact on wholesale markets and cross border trade.

4. Should the Framework Guidelines be more specific with regard to areas that need to be harmonised, both across and within synchronous areas?

The Framework Guidelines should give clear guidelines how to define the necessary harmonisation within synchronous areas and clearly state the need of cost benefit analysis and how this cost benefit analysis has to be structured.

Within synchronous areas there should be a higher degree of harmonisation than it is currently the case, to the extent it affects on wholesale markets (e.g. distortions to market prices from different rules should be avoided).

There is also a need for greater transparency and a clarification of the contractual arrangements between system operators and providers of ancillary services.

However, regarding inter-TSO issues harmonisation across synchronous areas should be limited and should not request changes for DSOs and grid users.

Short term congestion management is dealt differently throughout the EU. The FG has to state that the NC shall develop one way to handle the congestion management for each synchronous area, such as the old UCTE, the NORDEL, etc. The requirements depend on the quality of the system stability. Generally, big systems need fewer requirements than smaller ones.

5. Should the Framework Guidelines require the development of common rules for System Operation between synchronous areas?

Rules for System Operation inside the ENTSO-E area already exist. Thus, these provisions should be part of the NCs in order to ensure convergence of the rules. There should be no additional burden or cost for DSOs and grid users resulting from such rules.

Nevertheless, the FG shall develop common rules for operating the interconnection lines (HVDC), such as scheduling, emergency reserve, etc.

6. Considering the current arrangements of the system operation rules and procedures throughout the EU, what would be an appropriate level of detail for the Network Code(s) on System Operation?

Harmonisation should be kept to the minimum necessary for the secure operation of the interconnected grid. Established rules, e.g. EN, IEC, (UCTE) Handbooks and relevant national rules have to be taken into consideration. Every definition on European level has to be essential and proportionate. For examples, please see our remark on question 2. However, any provision for harmonisation must be clear and justified: Hence, the network Code should be relatively detailed (e.g. harmonised definitions of reserve products, how they are used, procured and dispatched across borders). If there are any new requirements for DSOs and generators, any additionally arising costs have to be fully recovered through grid fees without any time-lag.

Moreover, it shall be mentioned more explicitly that

- The procurement of ancillary services, such as reactive power management and black start capacities shall be adequately remunerated because they lead towards higher expenses due to lower total output.
- Planned outages (both of the grid and of the power stations) shall be coordinated between the grid operator and grid users; forced sudden changes in the plan shall be adequately compensated by the grid operator (a good example for this is the working outage planning in Germany). (see the BDEW position paper on BNetzA-Festlegungsverfahren “Standardisierung vertraglicher Rahmenbedingungen für Eingriffsmöglichkeiten der Übertragungsnetzbetreiber in die Fahrweise von Erzeugungsanlagen”)
- Prequalification rules for grid connection and ancillary services have to be coordinated.

7. What key benefits and types of cost would you expect for compliance with these requirements? Please quantify from your point of view.

From our point of view, the secure operation of the power system and the maintenance of its stability - taking into consideration new challenges like the integration of RES or the implantation of the EU-wide integrated power market - are the basic intentions of the FG. The benefits from a harmonised approach to system operation would come from minimising potential market distortions from real time system operator actions, better structured remedial actions which avoid ad hoc interventions in the market, more efficient procurement of reserves and ancillary services and in general more secure grid operation. Already today the standard of system stability is high. Following the principle of proportionality, any harmonisation across borders should be limited to the areas where it is beneficial and changes should be limited to the extent necessary.

From the perspective of DSOs and grid users, the costs for information exchange between grid users and the costs for compliance monitoring expectedly would be the most relevant cost drivers. As stated above, especially for the provision of information exchange but also for compliance issues, the issues of cost economy and technical feasibility should be reviewed before setting finally the rules in the FG.

In our understanding it would be appropriate and beneficial, if the functional requirements are discussed in time with the relevant bodies of CEN/CENELEC/ETSI working under Mandate 490, to review existing and needed standards for smart grids, especially when it is about the TSO-DSO relation and the relation with the final grid users.

Any new rule causing additional costs for existing or future investments should only be set after a clear proof of the efficiency of the measure and a cost-benefit analysis. For DSOs cost recovery through regulated grid fees has to be secured.

Also, it is very important that system operation enables generators to schedule their power plants purely market-oriented, without any possible restrictions because of system management or grid capacities.

If the future network codes provide for higher requirements on cold start capability, reactive power, load frequency control etc., the operators of existing power plants will see significant investment costs. The allocation of these costs needs to be clarified.

System frequency deviations shall be ruled in a market-oriented way. BDEW does not see that frequency deviations on the change of hours are caused by increased trading activities. A liquid market could also provide the necessary energy products, to minimize the effects of frequency deviation. If any change in market rules is considered, it is essential to fully involve the market participants. Furthermore, BDEW would like so see a publication of frequency deviation and intraday power flows. This would help to provide a better understanding of the phenomenon of frequency deviation

8. Should the Framework Guidelines be more precise on organisational aspects of operational security, in particular with regard to security assessment?

The FG should state standard methodologies with respect to security assessment. This would prevent, for example, different approaches to reliability margins and should result in better estimates of the amount of cross border capacity which can be made available (for further details on the use and allocation of this capacity please refer to the BDEW paper “CWE electricity markets: further developing cross-border intraday markets in Central Western Europe”). In addition, common rules in this respect would ensure that system operators consider a range of different remedial actions for dealing with problem situations rather than, for example, simply curtailing cross border capacity.

The methodology has to be made in a transparent way and must be discussed with market parties. The FG should define rules for setting the reliability margin at the appropriate level, so that the maximum of capacity can be allocated to the market while complying with safety standards of secure network operation (Article 16.3 of Regulation (EC) 714/2009).

There has to be a clear assignment of roles and responsibilities of TSOs and DSOs based on the Network Operators’ relationships.

Furthermore, the term “security assessments” needs to be specified. “Security” could be broken down into secure infrastructure, data security etc. BDEW proposes that the Framework Guidelines deal with how Minimum Security Criteria should be defined. This should not just be left to the Network Code.

It has to be ensured that all technical standards, rules and information requirements are consistent and clear to the affected market participants. Every responsibility has to be clearly linked with the power for enforcement.

Specific Issues

9. Are the implications for *significant grid users* clear and relevant?

The definition and the process for the identification of *significant grid users* have to be fully consistent over all related FGs and NCs, especially between System Operation and Grid Connection. The FG on Grid Connection has already been published. Currently we don’t see the definition of significant grid users correctly adopted to the IIA (see also pt. 3). We would like to see a clearer definition of “significant grid users”.

10. Are the roles and responsibilities sufficiently addressed?

See also question 8 with our consideration for the need of a clear assignment of TSO- and DSO-business and responsibility in the FG, and a clearer definition of the scope of harmonisation at the TSO-DSO interface with final grid users including limitation to the necessary extent. It would be better to have a specific section of the framework guideline that sets out the relevant requirements separately. BDEW proposes that a mechanism for coordination between TSOs and DSOs should be added to the Framework Guidelines. This is especially necessary in cases where DSOs should comply with requirements set by TSOs.

Also, as stated above, there is the need for a fundamental check and review of the approach for information exchange. In our opinion the provisions are currently too generic and not specific enough. This causes the risk of massive problems in data security and the handling of enormous amounts of information.

It has also to be ensured that requirements set by TSOs have to taken into account DSOs and generators needs. In addition to that, a mechanism for compensation of damages resulting from breach of agreement should be established as well. This applies also for necessary data exchanges, where DSOs are required “to execute the instructions given by the TSO.” (p. 15 Draft Framework Guidelines) and load shedding procedures.

Furthermore new market roles (e.g. aggregators, VPP) and their definitions in line with a secure operation of the grid also need to be taken into consideration.

11. Are the individual provisions under Scope & Objectives, Criteria, Methodology & Tools, Roles & Responsibilities, Information Exchange and Implementation Issues, associated to the particular topic, adequate? Should there be any additional elements?

Please see our comments in the questions above, particularly question 2 on aspects which ought to be further detailed.

Care has to be taken that no unnecessarily additional tasks and costs emerge.

Operational Planning and scheduling

Planned outages and maintenance works have to be agreed on not only among the affected TSOs but also with the concerned DSOs (p. 19 Draft Framework Guidelines). Coordination has not only to take place bilaterally between one TSO and one DSO, but depending on the situation, also between two TSOs and several DSOs e.g. to avoid maintenance works of two TSOs at the same time.

Integration of DSOs in the topic “Scheduling” should be clearly limited to the extent where DSOs installation play a role in cross border exchange which is normally not the case.

Load and frequency control

With regard to requirements on DSO level, e.g. implementation of controllable load and demand side management, the FG should clearly request the participation of DSOs in the elaboration of the NC. With regard to the definition of significant user, we refer to our answer to question 3.

We are also interested in receiving more information on system planning and available grid connection capacities.

Emergency and restoration

There should be a common definition of operating states across the EU. The definitions of what is meant by different operating states is of major importance and should come first (it currently presents the fourth bullet). In any case, how are bullet 4 and bullet 1 different?

The FG should specify all remedial actions and not just discuss examples. There must be a discussion, of when and how reserve is used and its interaction with intraday and balancing markets. The same applies for demand control and load shedding. Pricing of reserve is important but not adequately dealt with in these guidelines and needs to be addressed in balancing market guidelines. This section should encompass the use of so-called “strategic reserve” as used/proposed in several Member States.

There should be a better distinction between “balancing” and “reserves” in the definitions. Balancing relates to an entire settlement period, reserves are dispatched in real time i.e. within settlement periods.

There should be discussion of voltage reduction as a load shedding procedure as opposed to rota cuts and again how this is priced into the imbalance market.

The draft talks about “TSOs shall enforce orders”. This should be a last resort. In general, TSOs should take remedial action by dispatching reserve on the basis of contractual arrangements with generators.

New applications

It is correct to define the command of the English language and simulator trainings as requirements for TSOs, but there is no necessity for the DSO grid operators as they are not involved in cross border grid operation.

The necessity to set up methodologies and tools for staff training and certification ought to be reassessed. The Quality of the staff needs no regulation, as the market will determine on the training and certification, which is necessary for the completion of the respective duties and tasks. Harmonisation and audit of training and certificates is cost-intensive and should be proportionate to the effects.

12. Could you foresee any other relevant New Applications which should be mentioned in these Framework Guidelines?

As stated above, in our opinion some of the issues mentioned are already today part of our daily business and should therefore be included in technology neutrally defined NCs. We do not see further topics already obvious today.

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