Orgalime presentation: ENTSO-E Demand Connection Code

ACER workshop on DCC_Orgalime presentation

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39 Member associations, 23 countries

130,000 companies, €1,666 billion of annual output, 10.2 million people employed

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1. Potential impacts for installed and new equipment in the power grid (1/3)

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"The European Engineering Industries are particularly concerned about potentially increasing risk and violation of existing European and global standards. There is a critical issue of extending the requirements beyond existing standards by the suggested draft network code. This in fact could lead to severe failure risks to the power supply system."

Orgalime Position Paper, 28 September 2012

General comments

- Ageing effects for equipment may increase if temporary over voltages (TOV) occur more frequently, due to more frequent switching operations. Therefore, detailed monitoring/statistics are recommended.
- Partial discharges may occur more frequently and will be maintained more frequently if overlaying TOV (e.g. switching OV, earth faults) is adding onto increased level of actual (temporary) operating voltage.

1. Potential impacts for installed and new equipment in the power grid (2/3)

- **HV and MV switchgear**

The highest rated voltage of equipment may cover the extended operating voltage demands. However, the overall isolation coordination should be carefully re-examined for the installed base and also for projecting new MV and LV switchgear taking into account the occurring transformer ratios HV/MV and MV/LV. This applies especially for the extended voltage ranges >1.15 p.u.

For HV and MV circuit breakers, switching performance capability must be re-examined with special emphasis to demanding switching operations, for example switching off capacitor banks or back-to-back switching operation of capacitor banks.

In case of doubt, equipment with the next higher rated voltage should be taken into account.

1. Potential impacts for installed and new equipment in the power grid (3/3)

- Transformers

The draft DCC interferes with existing product standards: Existing standards must be reflected for the application of the network code. Other terminology and/or parameters and definitions need to be reflected on product specifications and tests especially for “installed base” in order to avoid excessive cost.

The draft DCC results in details of implementation: It defines the basic requirements; but details need to be further developed through the standardisation process open to all stakeholders.

Flexibility and future proof concept: The draft DCC is developed to minimize the security risk for the European Synchronous Areas, but automatic frequency disconnection settings need to be reflected on specifications and existing standards with focus on installed base.

2. Demand Side Response (DSR) Delivering System Frequency Control

Rewarding the participation of all actors according to the value created

- The final Demand Connection Code should ensure a proper sharing of the value across the chain.
- The analysis of the whole created-value by the D/R mechanisms has to lead to a fair reward for all involved parties

Preservation of end-customer processes and assets

- The electrical systems at end-customer side have been designed for a specific use (e.g. hospitals, high-cost assets) and such a use cannot be modified without a case by case analysis
- The different scenarios involving end-customers have to be discussed and analysed with them.

3. Storage

Orgalime objects to the definition that a storage system is generally defined as a demand unit.

Storage has to be defined as having two roles:

- A demand system, in case of power consumption and
- As a generator, in case of power in-feed to the network.

Any kind of storage should be accepted like pump storage power plants.

Storage is defined only as variable load, remotely to be shut-off, thus not accepted as a feed-in source

Further remarks

- Automated under-frequency shutting off loads spoils demand management value proposition of smart grid solution and smart metering functions → negative effect on smart grid business model development
- Extended temporary power frequency voltage ranges exceed standardised values
- The positive contribution of any demand side resource to grid balancing is not sufficiently acknowledged in the current draft DCC, therefore we suggest to take into account that:

"Supply- and demand-side flexibility can and should be rewarded on the basis of market-based price signals (short-, medium- and long-term) to encourage the energy-efficient production and use of electricity"

COM (2012) 633 Communication 'Making the internal energy market work'

Orgalime Actions since April 2012

- 19/04 - 1st stakeholder user group
- 08/05 - Orgalime letter to ENTSO-E
- 13/06 - ENTSO-E response to Orgalime letter
- 05/07 - 2nd stakeholder user group
- 20/07 - Letter CECED, ESMIG, GEODE, EURELECTRIC, Consumer Focus, SEDC, EU.bac to ENTSO-E
- 09/08 - Workshop
- 12/09 - Public Consultation on ENTSO-E DCC
- 18/09 - User group
- 13/11 - User group