The European Network Codes:  
a major concern for all generating companies

An irreversible ongoing process …

Until 2009, the grid connection and system operation rules were defined at national level. Since the  
Third Energy Package, the level of decisions has been moved to a European level. The European Commission (EC)  
asked ENTSO-E to draft grid codes to define European rules for grid connection, system operation and market  
activities. Additional codes might be drafted in a near future.

… where only pan-European associations are recognized.

The Third Energy Package required the creation of European associations for Transmission System Operators and  
for regulators (respectively ENTSO-E and ACER). In this context, the stakeholders (generators, manufacturers,  
consumers…) can only contribute to the debates via their own pan-European associations.

In this situation, VGB is the only pan-European generators association which can provide technical expertise  
on all categories of power plants.

Similar to EURELECTRIC members, VGB members have power plants in most European countries and their portfolios include conventional as well as renewable facilities. Since 2009, VGB is working together with EURELECTRIC  
on European grid code topics: VGB is in charge of the technical and operational codes and EURELECTRIC of the  
market codes. Both associations are necessary.

Their complementary actions have been recognized by the EC and ACER since both associations got seats  
when the EC created the grid connection and system operation European Stakeholder Committees (ESC).

Significant advances have been achieved during the drafting stage …

From the generators point of view, the joint actions of VGB and EURELECTRIC have led to important  
improvements. During discussions with EC and with ACER we achieved:

| The application scope is now limited to new power plants and to substantially modified large scale existing  
ones (rules for the modifications at small scale power plants have to be described at national level).  
| Any retrofit requested by a TSO, must be justified by significant factual changes endangering the security  
of supply and by a Cost Benefit Analyse (CBA). A description of those changes is not added in the code.  
| Less constraining technical requirements (voltage range).  
| Involvement of generators for the implementation stage by the means of both European stakeholders committees.

… even if we are not really satisfied with the results.

The codes are now published, but several risks remain  
for the implementation in each member state.
The TSOs didn’t succeed to converge during the drafting phase and a lot of parameters will be decided at national level or after studies carried out by ENTSO-E or an individual TSO. The discussion on several non-exhaustive parameters is ongoing in each member state at this moment.

The application of parts of the “connection code for generators” to existing power plants can be revised every 3 years and particularly when the TSOs expect that the security of supply would decrease significantly.

If the generators associations don’t remain actively involved in the ESC, manufacturers, Distribution System Operators (DSOs) and TSOs will decide on the new requirements and costs and risks will be shifted towards the generators!

**VGB, due to the expertise and overview capability of its members, is able to prevent these risks and to obtain:**

- Fair competition throughout Europe;
- Securing that generators constraints and costs will be taken into account;
- Only justified new requirements;
- General derogations for some technologies that can’t be compliant (e.g. new hydro bulb turbines);
- Overview of all solutions, including those leading to grid investments.

**There is still a long way to go. By the way, immediate threats have already been identified by VGB as:**

- Existing power plants could be excluded from the primary reserve market due to the newly imposed ramping rate; ENTSO-E tried to impose the new frequency requirements also to existing plants supplying primary reserves. Only due to the protest of VGB, ENTSO-E had to withdraw this proposal;
- The power of some hydro power plants (and batteries) could be reduced to 50% of the current value depending of the result of ENTSO-E’s study about the duration of providing primary reserve (currently 15 min/maybe 30 min in the future);
- The generator’s interests when defining the CBA methodologies and the rules for derogations;
- How will the grid’s operating parameters evolve? Will the safety/stability level be maintained?
- Stringent requirements for the ramping rates of active power under market conditions;
- Settlement rules during restoration (no markets operational) have to be defined before the end of 2018. The financial implications for generators can be huge during long lasting absence of markets.

Additional work is already announced in the Clean Energy Package (new codes about transmission tariffs, non-frequency ancillary services, cybersecurity…), with major concern for the generators.

**Conclusion: if we, generators, want to influence each issue, resources are necessary now and in the future:**

- To exchange our national experiences in order to have the largest overview throughout Europe.
- To deliver and bring in convincing technical arguments thanks to our experts.
- To share the workload (analysis of the texts, amending proposals, producing arguments, searching for alternative solutions, attending meetings) in order to be more efficient and productive.

In the European context of persistently low electricity prices, all what we can do is limiting the TSO’s requirements and thus our costs. So we will help our companies to continue and develop their activities.

That’s why we are convinced it’s absolutely necessary to strengthen the work in the VGB Technical Group “Network Codes” and to give it sufficient resources to carry out its tasks in order to remain a strong and worthy opponent for ENTSO-E defending our interests at ACER and at the European Commission.