

September 2011

## **Response to the ACER consultation Framework Guidelines on System Operation**

### **General**

1. The framework guidelines seem sufficiently wide to create the framework for Network Codes to ensure the secure operation of the European power system.
2. However, IFIEC has identified a number of factors where clarification is needed:
  - 2.1. That relationships between TSOs and significant consumers need to be made clearer;
  - 2.2. that TSOs (ENTSO-e) should be required to work with experts from significant consumers to draft the requirements concerning those consumers;
  - 2.3. to remove possibilities where these guidelines could constrain market zones;
  - 2.4. over three additional problems that the Network Codes need to deal with.

### **Network Codes Requirements for Significant Consumers**

3. Significant Consumers may contribute in several ways:
  - 3.1. An industrial site may modulate its consumption between peak and off-peak hours, to benefit from a lower energy price during off-peak hours. This is typically called “demand-side answer to the market”. This cost optimization is only possible during periods when the plant must not be working at 100% capacity and is a market issue, not a subject for a Network Code.
  - 3.2. An industrial site may provide the TSO with ancillary services on a contractual basis, so as by providing tertiary reserve by load-shedding of a part of its load. Some industries are studying the possibility to provide primary reserve by real-time load modulation. These issues concern the Network Codes, but should only be mandatory for consumers which conclude contracts with the TSOs on a voluntary basis.
  - 3.3. Finally, the “Emergency Plan” may impose the load-shedding by all consumers. This issue concerns the Network Codes and all consumers.
4. Therefore, IFIEC requests ACER to adapt the guidelines so that:
  - 4.1. The “General System Operation Characteristics” (p.15) requires the Network Codes to define roles, responsibilities of and coordination with significant grid users on the base of the ancillary services contracted with the TSO (and not to be the same for all users);
  - 4.2. The “Operational Security” (p.17 & 18) requires the Network Codes to define information to be provided and instructions to be executed by significant grid users on the base of the ancillary services contracted with the TSO (and not to be the same for all users);
  - 4.3. The “Operational Planning and Scheduling” (p.19) and the “Load-Frequency-Control” require the Network Code to include large consumers in their procedures when contracting any ancillary service;
  - 4.4. The “Emergency and Restoration” (p.25-26) requires the Network Codes to specify that TSO must contract voluntary load-shedding of significant consumers as power reserve and that, in emergency condition, TSOs must first disconnect this contractual reserve and, only if this one is insufficient, order the general load-shedding.
5. Like the guidelines asks TSOs to agree some issues with DSOs (p15), IFIEC requests that similar requirements are placed on TSOs to agree / negotiate grid user specifications with technical experts from Significant Users.

6. Please note that a lot of significant consumers are also “Closed Distribution System” operators, thus, like DSOs.

**Additional Issues to be integrated:**

**Minimum Standards for System Operation (your §3):**

7. IFIEC asks that “voltage stability” and “fault clearing” (duration, protection requirements, ...) are added to the guidelines.

**Major incident with Network Split**

8. Multiple incidents are always possible. As an example, if two incidents result in the shut-down of lines between two neighbouring areas interconnected by several lines carrying large power flows between them the others may be overloaded and progressively disconnected by the protection system. Then, the power will flow via further afield, overloading and disconnecting more and more lines, splitting more and more of Europe in two parts. The line shut-down increases the impedance between the two parts of Europe up to transient angle instability between the two areas, creating intense currents and quickly tripping the remaining lines. (as happened in November 2006).
9. The GL should deal with this problem by considering including requirements in Network Codes:
  - 9.1. to limit power flows between areas, relative to installed generation capacity;
  - 9.2. to implement alarms on voltage phase differential;
  - 9.3. to define specifications concerning the impedance protection during pole-slipping.