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BELGES D'ELECTRICITE.

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GROEPERING VAN AUTOPRODUCENTEN
VAN ELEKTRICITEIT IN BELGIE.

Brussels, April, the 30th, 2009.

Subject : **Guidelines for Electricity Grid Connection and Access**

GABE answer to ERGEG Consultation

1. ANSWERS TO ERGEG QUESTIONS:

1.1. QUESTION 1:

Do you agree with the problems these GGP are trying to solve – are there other problems that should be addressed within grid connection and access not yet included in these guidelines?

We support the target to warrant grid user installations should comply with specifications needed to warrant safe comportment and operation of the grid.

The guidelines also define what are the issues to be specified.

But, because of European guidelines, these ones should establish common specifications at European level. This objective lacks.

1.2. QUESTION 2:

Do these guidelines address the problem - will they lead to more transparent, effective and non-discriminatory grid connection and access?

No, because they permit each TSO to define its own specifications, creating discriminations between generators and consumers depending on their Member States.

No, because some issues depend on the installations of both the grid and grid users. A TSO might reduce its own constrains and costs by imposing very hard specifications on the grid user installations, making the connection right ineffective and creating discriminations based on the connection point, while appearing a good TSO because of a low level tariff.

For example: the limit between the grid and the connection installations: a TSO may impose that a new user pays all the costs to be connected to the grid –connections lines up to an existing substation and the grid reinforcement beyond- so the TSO has never cost to reinforce and extend its grid !

For example: the harmonic injection thresholds to avoid excessive voltage harmonics depend on the grid short-circuit power at the connection point. Maintaining too weak grid, the TSO imposes its grid users to pay too high costs to reduce injected harmonics.

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1.3. QUESTION 3:

Please outline your views on the description of the roles and responsibilities set out in Section 3.

Because of European guidelines, it's at European level that the European TSO should jointly (ENTSO-E ?) propose the specifications and that the regulatory authorities (the Agency) should jointly adapt and approve these ones. Only the Agency might grant derogations based on local specificities (f.i.: to maintain frequency is more difficult in Rhode island as in continental West-Europe!).

Because a lot of TSO and regulatory authorities don't master the technical issues of industrial power networks and consuming equipments, they risk to impose problematic specifications.

The TSO should be obliged to negotiate the connection specifications with specialists from the grid user's and the Agency must consult the grid user's specialists before specification approval.

Please, don't forget that the fundamental objective of generation and transmission is, finally, to supply the consumers and that the objective of an industrial plant is to produce its products.

Except in critical state, no specification may impose a consumption unit to reduce its consumption or to provide the TSO with services.

But, some industrial sites may be voluntary to provide TSO with remunerated ancillary services. TSO must include voluntary consumption units when contracting ancillary services.

1.4. QUESTION 4:

Are the technical framework and general provisions for generation, consumption and DSOs relevant and practical? Is there anything else that should be included / excluded? (Sections 4&5).

1.4.1. User connection:

Should be included: When connecting a new grid user, the principles establishing the limit between

- the grid, to be reinforced by the TSO, at one's own expenses (de facto, socialized via the tariff)
- and the connection installations of the new user, that this one has to pay.

These principles should avoid to create or maintain industrially poor areas because of poorly supplied by the grid.

1.4.2. European Specifications:

The technical specifications should be European standards approved by the Agency of regulators.

Only the Agency might grant derogations based on local specificities (f.i.: to maintain frequency is more difficult in Rhode island as in continental West-Europe!).

1.4.3. Who is the Client ?

Let's remember that except, either in critical state or on voluntary contractual base, TSO may not impose consumption constrains on a consumption unit… see § 4.3.3.

1.4.4. Industrial Sites and Networks :

Is lacking…. The Industrial Site, large consumer but sometimes equipped with local generation unit(s) connected to its private power network:

Some industrial plants expended money to have their own electricity generation, sometimes for electricity price, but mainly for security reason: to have local back-up electricity source to warrant the supply of loads which are critical for security, even if the supply via the grid disappears because of a fault or grid collapse.

(NB: the internal power network is also redundant with automatic switching in case of internal fault).

That's why, the guidelines must authorize so an industrial site to disconnect, from the grid, a part of its internal network with its critical loads and its local generation as soon as either the voltage wave permits to believe that the grid might become unable to supply correctly these loads.

However, the guidelines may impose that this disconnection doesn't increase the power taken off the grid.

§ 5.2.1.6, 5.2.1.7, 5.2.1.9 and 5.2.5.5 should be modified consequently.

Because the grid sees globally the industrial site as a load, the site manager defines itself the reactive power its generation unit has to produce and the voltage control it whishes. § 5.2.2.1 and 5.2.2.3 should integrate this principle.

1.4.5. Load Shedding:

Some industrial plants may offer instantaneous load-shedding as ancillary service to save the grid.

The guidelines must distinguish between

- the load-shedding of a part of the load of voluntary consumers, as ancillary service contracted by the TSO
- the load-shedding of, progressively, all consumers, during the emergency plan.

Chapter 5.3.5 and 5.4.3 should be modified to integrate this difference.

NB: contractual load-shedding is different from "demand response" which, typically, offers less power and acts after a delay of some minutes.

1.5. QUESTION 5:

How would the implementation of these GGP affect your business / market – what would the impacts be?

If the guidelines prevent the manager of an industrial consumption unit to either design its internal power network, including its protection scheme, its automatisms, the controls of its optional local generation unit, … or their operation conditions, this manager may no more warrant the supply of its critical loads and the security.

Consumption units are directly affected by voltage quality and reliability.

Consumption units pay all the costs, either via their own connection costs or via the transmission tariff or via the energy prices of the generators supplying then which include the cost paid by generators !

Thus, the industry businesses will be very affected by these guidelines. Therefore we ask you to very deeply study the need of each specification and of its parameters.

1.6. QUESTION 6:

We note that respondents to the consultation on the Implementation of the 3rd Package asked for certain areas, such as priority access for renewables, to be dealt with by ERGEG GGP. Priority access has not been covered by these particular guidelines, however, regulators welcome further input on this and other relevant issues.

An access priority means their injections should be accepted, even if depending on the sun, the wind intensity or the steam need for a cogeneration.

But these units have to satisfy connection and access specifications, so as any other generation unit.

For example, new wind turbines should be equipped with frequency and voltage control.

If so a unit threats to generate too large and too variable loop-flows, specifications may impose either their connection to the grid in a area with large consumption or that they erect also back-up power plants,…

2. ADDITIONAL COMMENTS:

2.1. § 5.2.1.8.:

The imposition to resist to mechanical stress resulting from any fault is too hard. Let's think to pole slipping !

2.2. § 5.2.1.9:

To impose "a generation unit remains connected to the grid after a nearby network fault, as far as possible…" is abnormal because :

- if the fault tripping delay is longer as the critical time delay for transient stability, it's better to disconnect;
- if the fault clearing request to trip the power plant, it must be done by the protection relays.

2.3. § 5.2.2.2:

Why to promote switching between regulation modes instead of two control loops with very different time constants and gains ?

2.4. § 5.3.3.6:

The guidelines might authorize a TSO to immediately disconnect a user installation if and only if the no-respect of specifications implies a threat for the safe operation of either the grid or other users.

Otherwise, the TSO should provide the user with its obligation to palliate the problem before a deadline.