Response of Österreichische Elektrizitätswirtschafts-Aktiengesellschaft (Verbund)

to the CEER Call for Evidence on Generation Adequacy Treatment in Electricity

Verbund is the largest producer and transporter of electricity in Austria and one of the leading hydropower producers in Europe. With approximately 2,800 employees the company generates annual sales of more than 3,5 billion Euro. Verbund is active along the entire electrical value chain from the turbine to the power outlet. More than 90% of Verbund's generation originates from renewable energy sources. Besides water, wind is Verbund's second most important renewable energy source.

In this context, Verbund appreciates the possibility to respond to the CEER Call for Evidence on Generation Adequacy Treatment in Electricity, in particular to the three questions outlined below.

1. What are the key elements for ensuring generation adequacy in the competitive electricity market in EU MS and the EU as a whole?

Verbund is of the opinion that generation adequacy is best achieved through a balanced generation mix in a well functioning electricity market without regulatory mechanisms influencing generation adequacy.

Due to the rapid expansion of generation from New Renewable Energy Sources (RES), their share in the total generation mix will increase. As a consequence, the operating hours of conventional power plants will decrease. Therefore investments in conventional generation technology will become less profitable and increasingly unattractive. The increased use of RES, however, will require substantial backup and storage capacity, such as modern combined cycle gas turbine (CCGT) plants and pump storage plants in order to manage the highly intermittent nature of wind and solar generation and to secure a stable and reliable electricity supply.

Subsidies for renewable energy generation should be carefully harmonized and brought into accordance with national renewable targets. Badly calculated feed-in tariffs could lead to a disadvantageous generation mix and thus have a distorting impact on generation adequacy. Market rules should thus be harmonised and subsidy regimes be coordinated between the Member States and different RES technologies.

Verbund is of the opinion that distortions such as price caps or price floors in wholesale markets should be removed, as these regulatory interventions artificially limit price signals for investment and thus lead to distortions in the generation mix. Also in the context of energy efficiency, it will be increasingly necessary to ensure the existence of correct price signals so

that consumers can adjust their consumption behaviour according to the actual prices. This will lead to a smoothening of demand peaks.

2. Do you observe any barriers for investing in new generation capacity?

A very general barrier for investment is the lack of adequate transmission network capacity. Not sufficient grid-capacity is available for balancing wind and solar generation and to cope with the capacity demands of pump storage plants in times of electricity over- or under-supply. The transmission network capacity barriers are crucial because areas with flexible hydro generation do not coincide with wind and solar generation areas. So lacking investments in the transmission network will in future put the current high level of security of electricity supply under enormous risk. In connection to this, it will also be necessary that European regulation makes an effort to open the national control energy markets.

In addition, it gets more and more difficult to meet the strict legal requirements on EU Level. For the expansion of hydropower, in particular regulations such as the Water Framework Directive lead to difficult approval processes and additional expenses (such as environmental measures concerning residual flow, fishways and hydromorphological restructuring) for new and existing projects. The intention of the European Commission to implement preplanning mechanisms (in particular to create Go or No-Go areas for new hydropower facilities) are not conducive to develop potential new hydropower resources in the European Union.

Another aspect is of particular importance for CCGT plants. The increasing share of intermittent RES generation will lead to very volatile prices. The subsequent price peaks are not sufficient to cover the fixed cost of the peak plants needed for generation adequacy. Assuming 5000 hours of activity a year, CCGT plants need around 12 EUR/MWh to cover their fixed costs. Intermittent RES generation will reduce the number of running hours to approx. 2500 hours per year. This implies that the contribution margin has to double in order to continue to cover the fixed costs. Otherwise, there is no incentive to build CCGT plants in the future.

3. In case of additional measures for ensuring generation adequacy, what would be the key issues to take into account?

Verbund considers the upgrading of the transmission network essential for the exploitation of possible new generation sites as well as for guaranteeing load balancing between areas of exceeding production and areas with energy reservoirs (pump storage hydropower plants). Stability in environmental standards and requirements, such as practical standards for fishways and residual flow, is crucial in order to provide potential investors with planning reliability.

Generally, it seems crucial to ensure not only the provision of peak generation, but also to provide enough back up capacities (and its financing) in order to guarantee the security of supply with electricity. If sufficient revenues cannot be generated on the energy market in order to achieve generation adequacy, a fall back system with capacity remuneration mechanisms might be considered.

Additional remark:

Under 4.3. the CEER report discusses the possibility of a fuel switch in thermal power plants from gas to other fuels such as oil as a measure to ensure a stable electricity supply during a potential gas crisis. Verbund would like to draw attention to the fact, that modern gas plants are technically not equipped for such a fuel switch. In addition to that, both the storage and the use of oil is very expensive and also subject to a range of specific legislation (e.g. Seveso II – Directive). It would be extremely expensive to ensure security of electricity supply by technically equipping gas plants for a potential fuel switch. Instead, we believe that the expansion of gas storage facilities in Europe is the right way forward to ensure the electricity supply in Europe.

Contact: Vienna, April 2010

Roland Langthaler
Österreichische Elektrizitätswirtschafts-AG (VERBUND)
Am Hof 6 a, 1010 Vienna
Tel: +43 (0)50313-53116
e-mail: roland.langthaler@verbund.at
www.verbund.at