

EURACOAL Response to Public Consultation

on State aid to secure electricity supplies: *keeping the lights on*

Executive Summary

In light of the debate on State aid to secure electricity supplies, EURACOAL welcomes the Commission's openness to consultation and notes the working group meetings held in January, April and June 2015, as well as the interim report of the sector inquiry on capacity mechanisms and the related staff working document (SWD(2016) 119).

EURACOAL considers that an internal energy market is the best way forward and supports the Commission's legislative efforts towards this objective. A functioning internal energy market will increase European competitiveness and will benefit consumers. The development of connecting infrastructure, such as energy interconnectors, is a step in the right direction wherever these are built in response to market demand.

The interim report released in April 2016 correctly notes that flexible power plants will continue to be needed to back up intermittent renewable generation from wind and solar. The Commission should be aware of the recent progress with coal-fired power plant flexibility which can match the flexibility of gas-fired power plants (Figures 1 and 2).

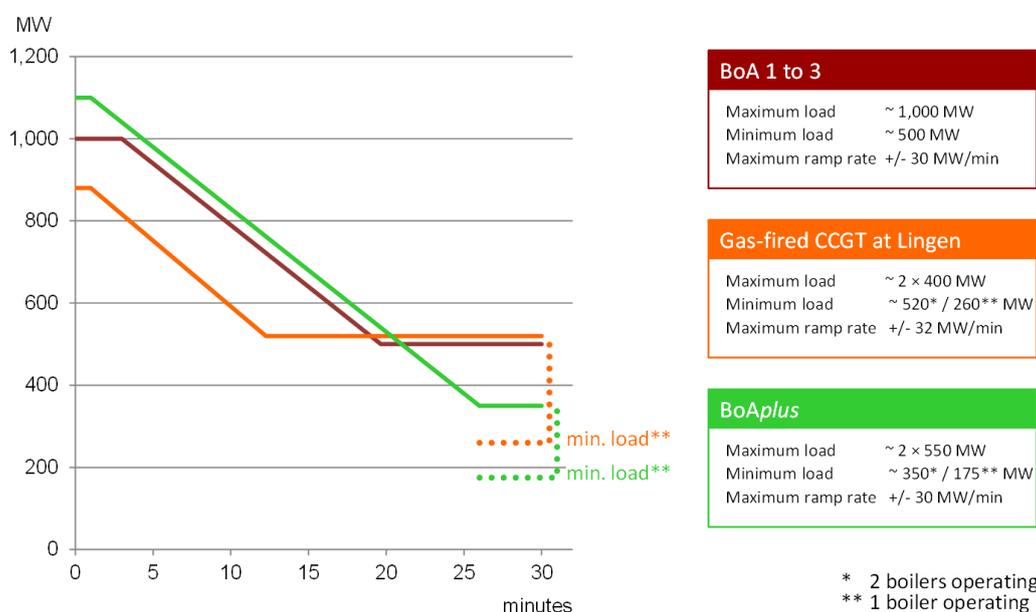


Figure 1 – Flexibility of conventional power plants: coal-fired power plants are every bit as flexible as gas-fired power plants – the latest plants can ramp up or down at a rate of 30 MW every minute over a range of 500 MW or more

Source: RWE

Change in net load in „Kondbetrieb“

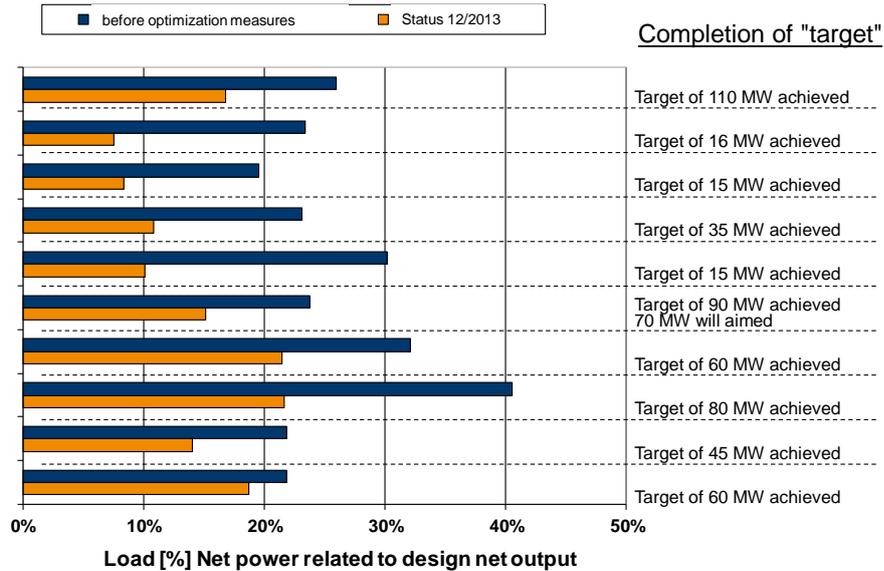


Figure 2 – Minimum load of power plants: operating at lower minimum loads allows coal-fired power plants to quickly deliver more power when needed

Source: Dr. Hans Wolf von Koeller, STEAG, presentation at the 10th EURACOAL-European Commission Coal Dialogue, June 2014

In reply to the current consultation, EURACOAL has several recommendations, namely: a common European methodology based on a “de-rated capacity margin”; capacity mechanisms to secure electricity supply; long-term contracts for power plants; no national taxes or levies on wholesale electricity; renewable operators should have the same balancing responsibilities as other operators; no obligatory demand-side management measures; and, finally, fair treatment of self-generation.

Introduction

EURACOAL – the European Association for Coal and Lignite – is the umbrella organisation of the European coal industry. Its mission is to highlight the importance of coal within the EU to security of energy supply, to energy price stability, to economic added value and to environmental protection. EURACOAL seeks to be an active communicator, with the aim of creating an appropriate framework within which the European coal industry and coal consumers can operate.

Current status

When it comes to the production of electricity, the EU has a balanced mix of primary energy sources (Figure 3). However, individual Member States have preferences for different generation technologies, based on their available natural resources and public acceptance. The clearest example is nuclear, with France fully embracing the technology while its neighbour, Germany, is phasing it out.

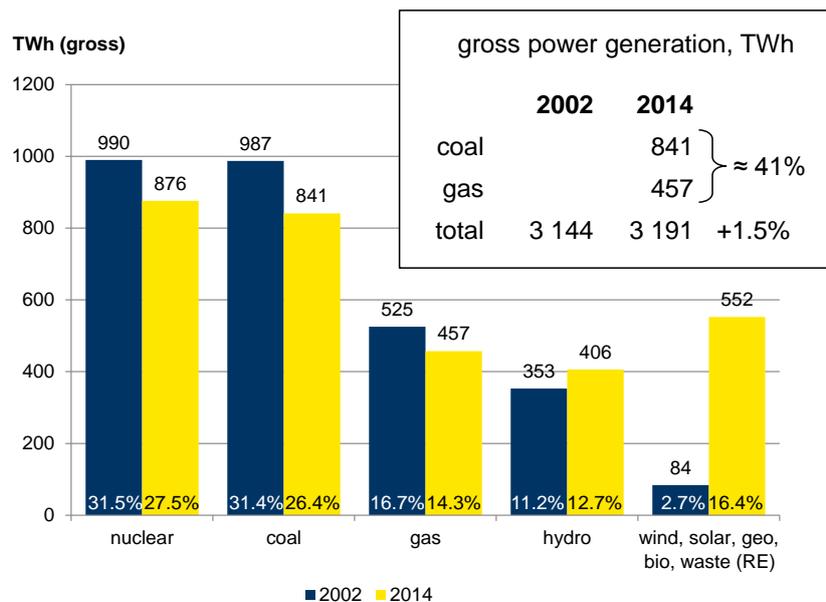


Figure 3 – Comparison of the electricity generation mix for EU28 Member States in 2002 & 2014

Source: Supply, transformation and consumption of electricity – annual data, Database nrg_105a, Eurostat (last updated 28 January 2016)

There is a similar situation with coal; some Member States are embracing clean coal technologies, while others are phasing out of coal. The reasons for phasing out of coal and nuclear are similar: fear of catastrophic events that could jeopardise an entire country or even the world. However, the nuclear phase out in Germany is not creating pressure for a nuclear phase-out in France, although an accident in France would certainly affect Germany.

Therefore, the Commission and other Member States should not pressure those Member States who rely on coal. Even though EU policy is not anti-coal *per se*, there is now a clear presumption against coal. The result is an increasing polarisation of public opinion and a perceptible alienation between some Member States and the EU institutions.

EURACOAL recommendations

Assessing power system adequacy

EURACOAL supports a common European methodology to assess power system adequacy to ensure an acceptable level of security of supply is achieved in all EU Member States. The introduction of legally binding supply standards creates a common yardstick against which society’s expectations towards supply security can be measured. Given the importance of electricity and the disruption caused if electricity supply is interrupted, it is recommended that the “de-rated” capacity margin for power generation in Member States is used, this being a measure of the amount of excess supply above peak demand, expressed as a percentage:

$$\text{de-rated capacity margin (\%)} = \frac{\text{total available de-rated capacity} - \text{peak demand}}{\text{peak demand}} \times 100$$

“De-rating” means that the capacity figure is adjusted to reflect the availability of particular types of power plants. Thus, it gives an indication of the output from a particular source that is likely to be technically available at times of peak demand. For example, a coal-fired power plant might be assumed to be available for 85% of the time, whereas a wind turbine might be available for 17-24% of the time, depending on its location.

Attention should be given to interconnections that cannot always cover generation inadequacy if neighbouring countries do not have excess reliable available capacity. Weather conditions determine peak load and often coincide in neighbouring countries. For this reason, the shares of indigenous energy in Member States are an important measure of energy security. The following performance measure is proposed which includes the security benefit of holding energy stocks (*e.g.* oil, gas or coal), expressed as a percentage:

$$\frac{\sum \text{indigenous energy production} + \sum \text{energy stocks}}{\sum \text{indigenous energy production} + \sum \text{energy imports} - \sum \text{energy exports}} \times 100$$

Where indigenous energy production relates to the production of electricity (*e.g.* from hydro, nuclear or renewable sources), then a multiplier should be applied to reflect the higher value of electrical energy. Similarly, where electrical energy is stored, it should be given a higher weighting than fossil fuel stocks.

EURACOAL Recommendation

A common European methodology based on a “de-rated capacity margin” to assess power system adequacy to ensure an acceptable level of security of supply is achieved in all EU Member States.

Securing electricity supply

As presented in the preamble of the consultation, Article 194 TFEU states that the aim of EU energy policy is to ensure security of energy supply in the Union. With this objective in mind, the analysis from ENTSO-E Yearly Statistics & Adequacy Retrospect 2013 shows that non-usable capacity (that has unintentional temporary limitations for various reasons, *e.g.* the availability of primary energy sources, including wind and solar) is increasingly affecting Net Generating Capacity for TSOs.

In October 2013, the highest-ever level of non-usable capacity was registered, both in absolute values (252.9 GW) and as a share of Net Generation Capacity (25.5%).

Furthermore, peak loads happen around the same weeks in neighbouring countries (*e.g.* France, Netherlands and Belgium shared 17 January 2013 as the year’s peak load; UK peak load was just a day earlier, on 16 January 2013). Relying on electricity imports from neighbouring countries should be considered carefully and not only as a mathematical summation of the available capacity of interconnectors.

More recently, in the winter of 2015/2016 in Romania, low temperatures led to a significant increase of energy consumption. Coal-fired power plants managed to stabilise the grid by promptly increasing their output. However, the same coal-fired units might be shut down because they are not profitable at low load factors, leaving the electricity system vulnerable in case of a similar meteorological situation.

Therefore, the need for a mechanism to secure electricity supply becomes a necessity for many national authorities responsible for grid stability.

EURACOAL Recommendation

While encouraging the interconnection of energy infrastructure, allow capacity mechanisms to secure electricity supply.

Addressing the current underinvestment in conventional generation

Some alignment of balancing markets would be appreciated, thus allowing a more competitive market and rewarding companies that better serve consumers. So far, most markets are connected on an intraday basis only. However, any legal or other interventions need to address long-term grid development and not simply respond to current shortcomings.

A market player needs certainty that price peaks will not be capped by political interventions when investing in new generation capacity. The current underinvestment in conventional generation, which is indispensable to secure energy supply, is a consequence of repeated political interventions in the energy market to support particular outcomes. Heavily subsidising particular renewable technologies has distorted the energy market so much that almost all other energy sources are at a disadvantage.

Although not essential, long-term contracts should be allowed for the life-time of a power plant, hence providing investment certainty for new generation capacity.

EURACOAL Recommendation

Allow long-term contracts for power plants.

Electricity taxation

There should be no national taxes or levies on wholesale electricity as they directly affect investment decisions and/or hamper the free flow of energy across borders. Investments into generation capacity are not particularly influenced by taxes and charges levied on retail electricity sales, because unsubsidised generators take their revenues from the wholesale market.

EURACOAL Recommendation

No national taxes or levies on wholesale electricity.

Operators' responsibility

Operators of renewable energy sources should have the same balancing responsibilities as any other generator. There are no obstacles, in principle, to integrating renewables into the market; balancing responsibility could be imposed quickly. Integration of renewables has to be through a mechanism that rewards kWh generated to meet actual demand.

An important note here is related to output versus capacity. Between 2000 and 2012, EU electricity generation increased by 9%. In contrast to the modest increase in output – averaging 0.7% each year – generation capacity increased by 41% over the same period. Europe is in fact building a second system that relies on conventional plants on still nights and at many other times. Whereas nuclear plants produce around 80% of their maximum possible output and fossil plants can run with similar reliability, wind turbines produce barely more than 20% and solar PV panels generate not much more than 10% of their rated full-load output.

EURACOAL Recommendation

Operators of renewable energy sources (RES) should have the same balancing responsibilities as other operators.

Demand-side measures

Customers should have the possibility to participate in the balancing market through demand-side response only if they fulfil two essential conditions: they offer it based on an economic motivation and they bear the costs of implementation.

Costs of demand-side response measures should not be borne by distributors but by beneficiaries *i.e.* demand response providers. Adding the cost of demand-side response measures to the price of electricity would create an extra cost for consumers that do not want or cannot afford the additional cost. It is important to note that the response is unpredictable. Some consumers may manage their energy use, while others are uninterested in demand-side management (DSM).

Note that too much focus on demand reduction can hinder economic and industrial growth as it can easily turn into demand destruction. For example, the owner of an aluminium smelter can offer to reduce electricity consumption, but then the smelter is no longer in the business of aluminium production and risks jeopardising its own future. DSM is opportunistic and not a long-term business model for any industrial plant or economy. Furthermore, DSM creates further uncertainties for an electricity grid that already has many unknowns due to the increased capacity of intermittent renewables. Finally, wholesale price spikes are a natural

and the least distortive way of promoting demand response. Therefore, price spikes should not be regulated.

EURACOAL Recommendation

No obligatory demand-side management measures because they could jeopardise economic growth.

Self-generation

Self-generation of electricity remains an important component of the energy system, providing efficient, secure and competitive supply to many industrial users. This form of electricity generation can continue to contribute to the overall stability of the grid providing that it is not in any way penalised.

EURACOAL Recommendation

Recognise the unique benefits of self-generation and avoid rule changes that result in discrimination against self-generation.

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