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3rd ACER Gas Target Model Workshop

3rd ACER GTM workshop, Brussels, 15 May 2014

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8. Role of gas-fired power plants in low carbon electricity markets

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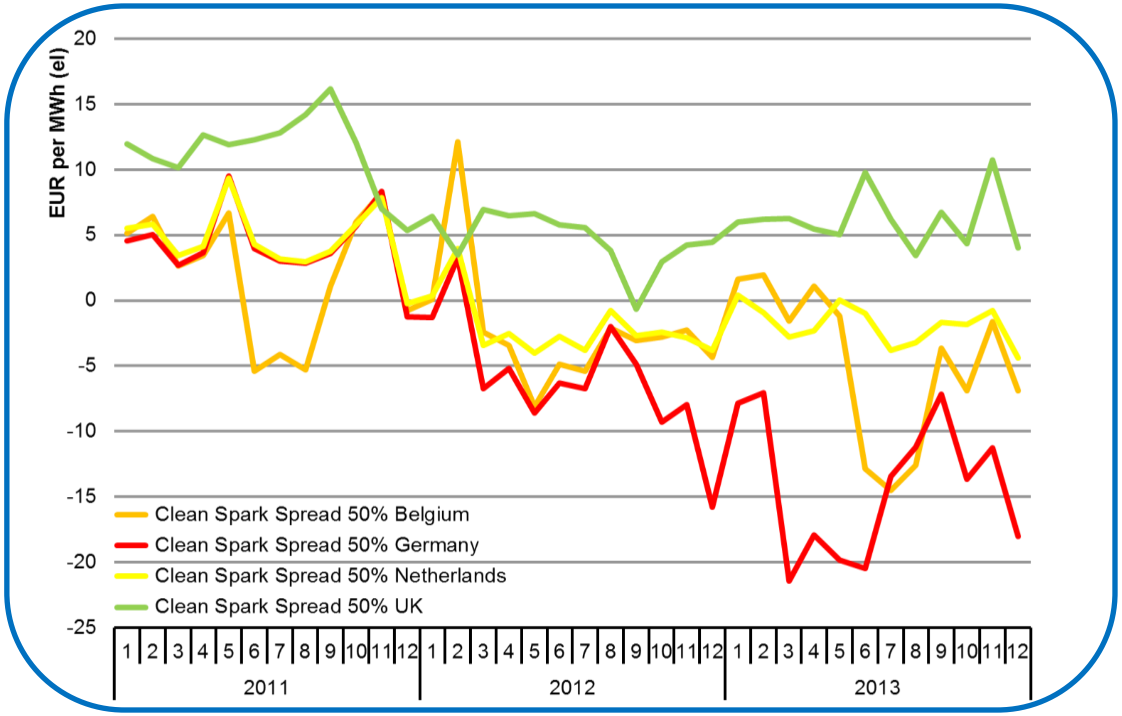
Profitability of gas fire power plants

- Low CO_2 and coal prices
- Low electricity demand during economic crises
- Rapid expansion of renewables

- Decline in profitability
- Some countries have negative spark spreads



Problem is worst in NW Europe but by no means limited to this region

*Graph based on data from Platts

Decline in use of CCGTs

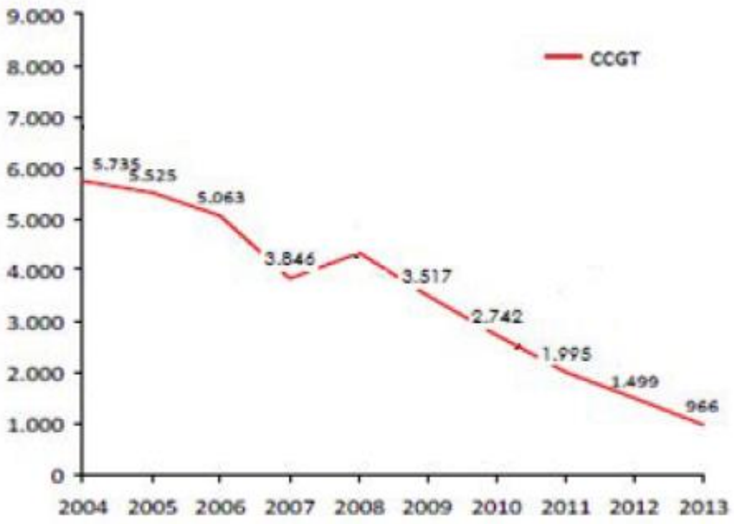


Figure 2 – Spanish CCGT plants operating hours (Source REE)

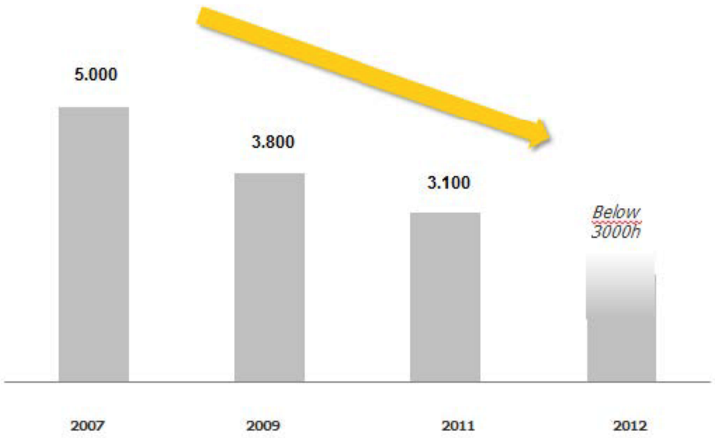


Figure 3 – Italian CCGT plants operating hours (Source: Edison - based on Terna data)

Figures reproduced from 'Flexible Gas Markets for Variable Renewable Generation' Eurelectric , May 2014

Plant closures and lack of investment create SoS concerns

➔ MSs are considering implementing, or are already implementing, capacity mechanisms.

Role of gas sector regulatory/market arrangements

Gas sector has a duty to make sure that gas fired plant can make its full cost effective contribution to sustainable energy

‘Duty’

Gas sector has a self interest in not losing a major source of revenue for gas TSOs

Vicious circle

Self interest

The issue is not one of special subsidies for gas fired generation but of ensuring that monopoly elements of the gas sector are as responsive as possible to the needs of a major customer group

Potential initiatives (1)

Timeline coordination

Misalignment of gas and electricity market:
Gas day 06.00- 06.00 , electricity 00.00 -24.00
Harmonisation may have been very efficient for the gas markets, but…
…complicates electricity-gas coordination.

Clearing

Clearing of electricity markets
Gas fired power stations that offer reserve capacity have to procure gas and transport capacities for gas.
A risk arises because offering capacity in the electricity market and the procurement of transport and gas capacities are not simultaneous
Improved coordination of bidding procedures could potentially allocate transport capacities for the gas grid and electricity products in a combined procedure.

But any harmonisation needs to be subject to a CBA

Potential initiatives (2)

Information sharing

Information sharing and transparency
Electricity TSOs could provide information on likelihood of dispatching gas-fired power plants contracted as reserve.
Information should not only be shared between TSOs, but also with operators.
Information about the state and capability of the gas network are important to plant operators and shippers in the gas market

Access to storage

Access to storage is not always flexible
Storage products are sometimes bundled in ways that are not helpful. Unbundled products would allow bespoke use for generators who need to manage short term fluctuations

Additional issues for discussion

Optimal balancing period ?

Focus has been on making life easier for shippers –hence move to 24 hrs
This is Eurelectric’s preference.
However, this leads to linepack becoming a free resource for all - is this the optimal way to use a system’s linepack capacity or would generators, if properly remunerated value it more?

Capacity tariffs

Capacity tariffs can discourage efficient use of gas plant
What if anything should be done to maximise the extent to which gas plant operates, while not disadvantaging other gas consumers?

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Thank you for your attention !