Challenges for the EU fossil fuel fleet

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IEA ESAP Conference 17th Oct. 2016 - Paris
Agenda

1. The current role of fossil fuels and plant profitability

2. Factors determining future use in the face of weak economics

3. Possible outcomes to 2030, challenges for operators / governments and conclusion
1. Fossil fuels – 42% of EU generation mix (2014)

% of TWh generation
Source: IEA Balances
Seven EU states account for 80% of fossil fuel generation (also for 60% of total generation)
Coal is used mainly in electric plants, whilst nearly 50% of gas is used in CHP plants (2014)
Plant utilisation 2014 – coal > 50% in most countries, but gas in the doldrums
Gas and coal spreads based on year-ahead prices and compared with fixed annual costs

CSS = clean spark spread (peak load electricity price minus natural gas and CO₂ price determined for the year that follows)
CDS = clean dark spread (base load electricity price minus hard coal and CO₂ price determined for the year that follows)
2. Factors determining future use in face of weak economics

Factors leading to plant closures

1. Short-term economic factors
   - Low wholesale price / utilisation = low margin / MW

2. Investment needs to remain compliant / reliable
   - Various emissions directives
   - Refurbishment costs, partly driven by environmental requirements

3. Other national policies
   - National CO₂ targets beyond the EU ETS
   - Reduced acceptance for coal plant
   - Rising local air quality requirements, besides CO₂ emissions

Factors militating against closure

1. Supply security or basic capacity needs
   - E.g. due to closure of nuclear plants
   - Regulators put plants into strategic reserves
   - Capacity markets

2. Use in CHP plants when the heat is needed
   - Countries e.g. Poland refuse to buy cheap electricity (from GY)

3. Reluctance of operators to cover high closure costs
   - Will increase debt and may lead to rating problems
   - Prospects of plants being needed in future
Policies affecting future of fossil-fuel plants
(Air quality issues beyond CO₂ and IED may lead to further closures)

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<th>CO₂ policy</th>
<th>Other Emissions</th>
<th>Nat. coal closure policies</th>
<th>Strategic reserves</th>
<th>Capacity markets</th>
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* UK has carbon price floor and 5-yr budgets
3. Potential outcomes to 2050 – EU Scenarios

Power generation mix and shares

Net power investment (MWh) over 5-year periods
The challenges for operators and governments

For the operators

• Continued cost-cutting without sacrificing reliability and safety
• Flexibility to respond to hourly prices
• Environmental compliance – whether it’s worth investing for only limited future periods of operation
• Making the call – whether to continue operation, mothball or close
• Managing / financing the closures, including the social side
• Whether to invest in new plants against capacity prices, but limited life

For the governments

• How to manage the energy trilemma
• If capacity will become tight, whether to make concessions on environmental requirements

Conclusion

• Operators face little financial upside and must operate to cover at least the annual fixed cash costs – or swallow the closure costs
• Governments need to recognise the medium-term role of fossil fuel plants and avoid unnecessarily costly policies
THANK YOU FOR YOUR ATTENTION

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