The IED/ELVs as seen through the Eyes of a User of Combustion Plant

DISCLAIMER
“The figures in the tables should not be relied upon for investment or other decisions”,

Dr Tim Rotheray
Summary

- Introduction
- Key areas of the IED for CHP operators
- Chapter 3 – Combustion
- Emission Limit Values
- Transitional National Plan
- Limited Life Derogation
- District Heating Plants
- Conclusions
Introduction
- IED result of a 2005-7 review by the EU Commission of pollution legislation
  - Integrates 7 pollution control Directives
  - Increases compliance monitoring and enforcement
  - Addresses concerns that Large Combustion Plant were not employing BAT
- Does NOT cover CO2 (see EUETS)
- CHPA support principles of
  - Harmonising regulations
  - Ensuring BAT deployment
Key areas of IED for CHP operators

Chapter 3 - Combustion

- Applicable to most industrial CHP plant
  - Input of greater than 50MW thermal
  - Does not include combustion for direct heating
    - E.g. Kiln drying

- Aggregation Rules
  - Use of a Common Stack
Use of a common stack

- Article 29 – all plants
  - Over 15MWth
  - Using a common stack
  - OR if commissioned after 1-July 1987 could discharge thorough a common stack in the view of the competent authority (the EA)
  - Will be aggregated and considered a single plant

Comment
- Interpretation of ability to use a common stack will be key
Emission Limit Values (ELVs)

- The central issue for large combustion plant
- Article 30 –
  - Vital derogations on compliance for
    - \( \text{SO}_x \) - 6 months if no low sulphur fuel available
    - All Emissions - 10 days if gas supply interrupted for security of supply reasons

Summary Charts follow:
<table>
<thead>
<tr>
<th>Fuel &amp; Technology Type</th>
<th>Input MWth</th>
<th>NOₓ (mg/Nm³)</th>
<th>SO₂ (mg/Nm³)</th>
<th>CO (mg/Nm³)</th>
<th>Dust (mg/Nm³)</th>
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</thead>
<tbody>
<tr>
<td>Pulverised Lignite</td>
<td>50 – 100</td>
<td>450</td>
<td>400</td>
<td>30</td>
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<td>Coal and Lignite and other Solid fuels</td>
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<td>200</td>
<td>250</td>
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<td>Coal and Lignite and other Solid fuels</td>
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<td>Biomass</td>
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<tr>
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<td>350</td>
<td>100</td>
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<td>Nat. Gas (General)</td>
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<td>35</td>
<td>100</td>
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<td>Nat. Gas (G.T. not for mech. drive)¹</td>
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<td>N/A</td>
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</tbody>
</table>

Our interpretation

Annex V: part 1

plants granted a permit before 07/01/13 or applied for a permit before 07/01/13 and operating before 07/01/14.
Our interpretation

See Annex V: part 2

plants exempt under Art 4(4) of 2001/80/EC and operating after 01/01/16.

Plants not included in part 1 (see previous table)
Transitional National Plan (TNP)

- Allows for a limited NOx trading platform if Member State puts a system in place
- Applicable to plants that had been granted a permit (to generate?) before 27th November 2002 or had applied for a permit and was operational before 27 Nov 2003
- GT only covers NOx emissions
- Volumes of NOx available for trading and “price discovery” could be problematic
Limited Life Derogation

- Plant can apply via Member State Competent Authority (EA in UK)
- Max 17,500 hours operation between 1st January 2016 and 31 December 2023
- Must cease operation after 31-12-2023
- Limited applicability for industrial plant other than back-up
- May have significant impact on UK Gov designs for a capacity mechanism under the Electricity Market Reform (EMR)
District heating plants

- Where operational before 11-2003
  - With a permit before 11-2002
- With 50% useful heat to a public network
- Below $200MW_{th}$
- May be exempted from ELV and desulphurisation rates until 31st December 2022

- Exemption appropriate as DH competes directly with individual solutions
  - Costly retrofitting can increase costs of supply
Conclusions

- Operators must plan NOW for 1st Jan 2016
  - Typical lead time for new plant means project investigations and / or request for derogation must be launched very soon
- Should drive lower emissions
- Harmonisation of existing policy is welcome
- May add significant costs to some operators
  - wider energy policies are also increasing costs
- Wider UK Gov policy should be considered within the context of ALL regulations in place
Thank you

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