Overview of the Medium Combustion Plant Directive

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Air Quality & Emissions Show
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Why a Medium Combustion Plant Directive?

Assessment of the need for MCP controls was required by the Industrial Emissions Directive (IED)

Recital (28): **The combustion of fuel in installations with a total rated thermal input below 50 MW contributes significantly to emissions of pollutants into the air…**

Article 73(2) **The Commission shall review the need to control emissions from the combustion of fuels in installations with a total rated thermal input below 50 MW…**

Why a Medium Combustion Plant Directive?

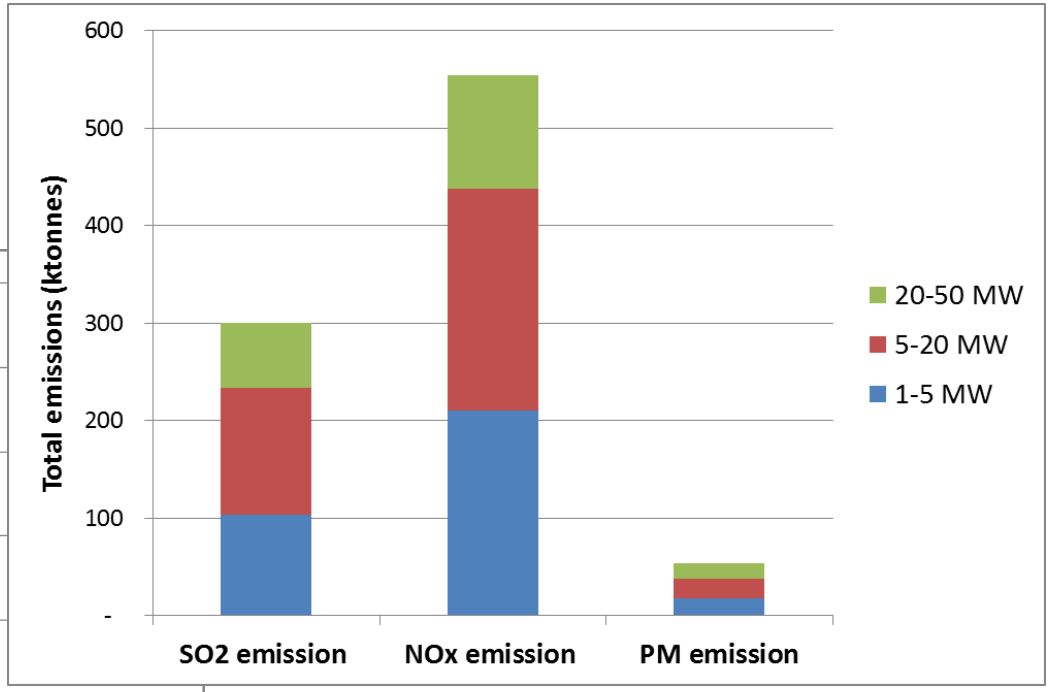
REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL [COM(2013) 286 final]

- Emissions of the key atmospheric pollutants from combustion installations below 50 MW can be controlled and substantially reduced at EU level in such a way that the environmental and health benefits outweigh the compliance costs for operators
- Care needs to be taken in assessing potential options for a regulatory approach in order to avoid excessive administrative costs
- The most promising options for controlling emissions from combustion installations between 1 and 50 MW will be undertaken in the context of the air pollution policy review

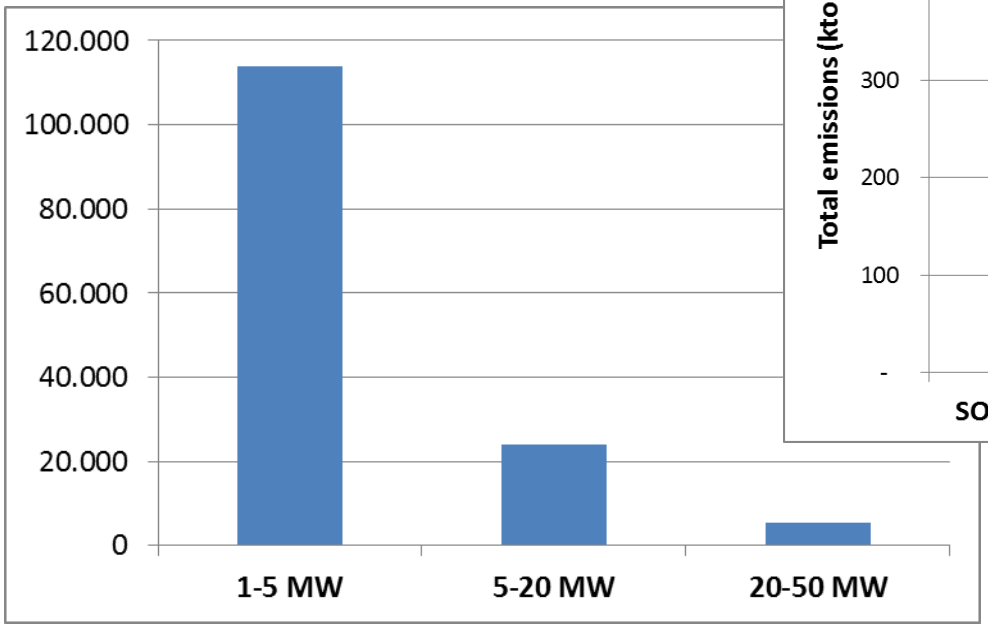
Why a Medium Combustion Plant Directive?

Environmental Impacts: EU 27 in 2010

Emissions



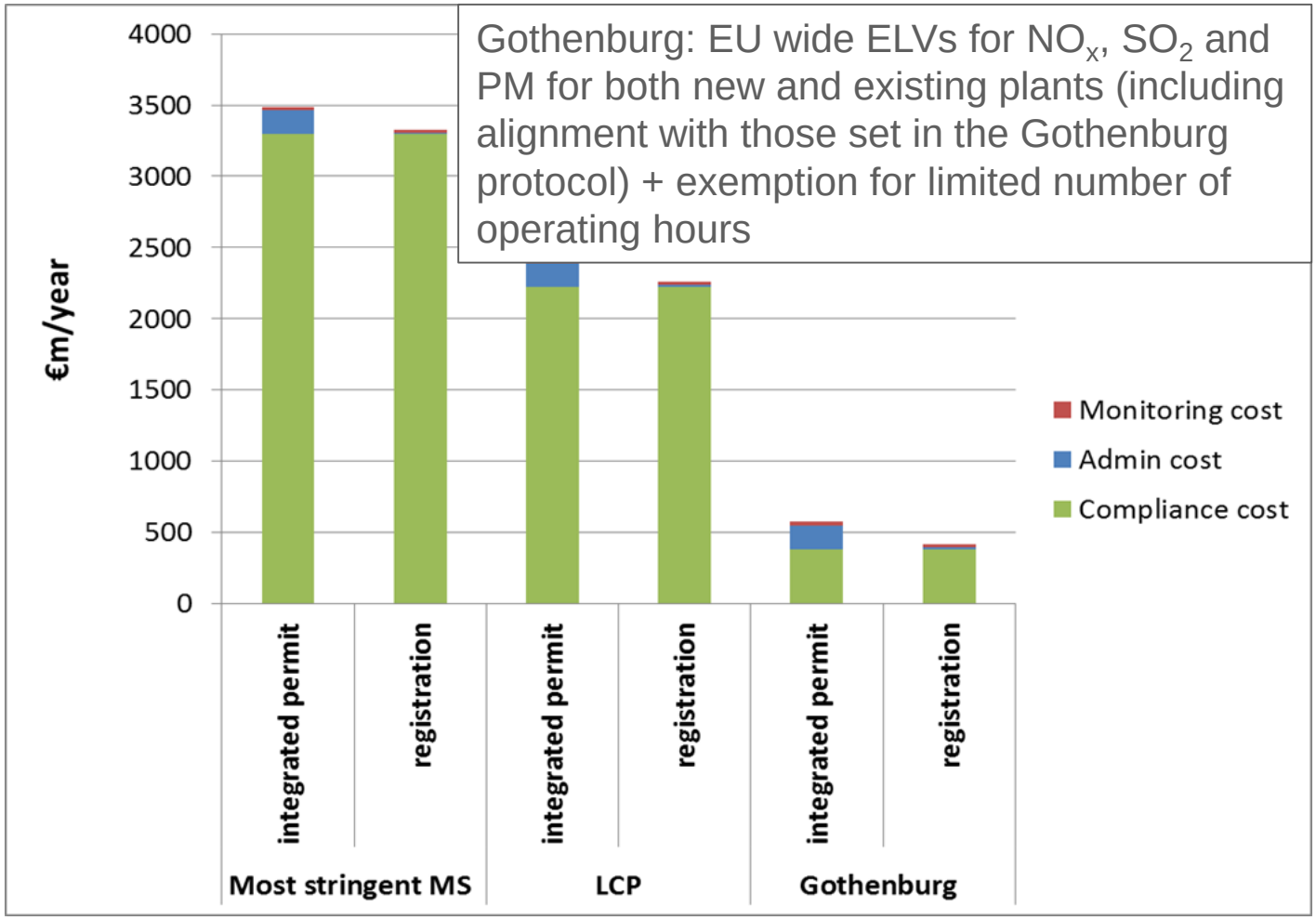
Number of plants



Source: Environment Working Party, Proposal for Medium Combustion Plants (MCP) directive: An Overview, European Commission DG ENV.C.3 Air & Industrial Emissions, 31 January 2014.

Why a Medium Combustion Plant Directive?

Total annualised costs for operators (2025)



Source: Environment Working Party, Proposal for Medium Combustion Plants (MCP) directive: An Overview, European Commission DG ENV.C.3 Air & Industrial Emissions, 31 January 2014.

What is the Medium Combustion Plant Directive?

- New European Directive to control emissions from Medium Combustion Plants (≥ 1MW_{th} to < 50MW_{th})
- Entered into force on 19 Dec 2015
- Transposed into Member State law by 19 Dec 2017
- Sets Emission Limit Values (ELVs) for:
  - New combustion plants ≥ 1MW_{th} (aggregated) from the start of operations (post 20 Dec 2018)
  - Existing combustion plants of >5MW_{th} to < 50MW_{th} from 1 January 2025 (individual units)
  - Existing combustion plants of ≥ 1MW_{th} to 5MW_{th} from 1 January 2030 (individual units)
- Out of scope: IED Ch III (LCP) and Ch IV (WI); directly fired plants; propulsion (vehicles); Non-Road Mobile Machinery; research, development and testing activities

MCP Registration/Permitting (Annex I)

Operators must provide the following information when registering

- Rated thermal input (MW) of the MCP
- Type of MCP: diesel engine; gas turbine; dual fuel engine; other engine or other medium combustion plant
- Type and share of fuels used by fuel category: solid biomass; other solid fuels; gas oil; other liquid fuels; natural gas; other gaseous fuels
- Date of the start of the operation
- Activity sector of the MCP or the facility in which it is applied (NACE code)

https://siccode.com/en/pages/what-is-a-nace-code

- Expected number of annual operating hours and average load in use
- Signed declaration that the MCP will not be operated > 500h/a (as applicable)
- Name and registered office of the operator and the address where the plant is located.

Emission Limit Values (Annex II)

- The MCPD sets out ELVs for SO_2, NO_x and Dust
- ELVs are defined by technology, thermal rating and fuel type
- For boilers, ELV tables are split into 1 - 5MW_{th} and 5 - 50MW_{th} size ranges for existing plants only
- For engines and gas turbines a single ELV table applies for 1 - 50MW_{th}
- Footnotes set different ELVs under specific circumstances, e.g., sub-categories of fuels, sub-size ranges….
- Stricter ELVs may be set when air quality limit values are exceeded

Emission Limit Value - optional derogations

- The following plants can be excluded from ELV compliance:
  - Existing MCPs which do not operate more than 500 hours per year as a 5 year rolling average (a Dust ELV still applies for biomass and other solid fuels)
  - New MCPs which do not operate more than 500 hours per year as a 3 year rolling average (a dust ELV still applies for biomass and other solid fuels)
- Temporary derogation from ELV compliance may be granted:
  - For up to 6 months where an MCP using low sulphur fuel cannot comply with the SO_2 ELV due to an interruption in supply resulting from a serious shortage
  - For up to 10 days where an MCP using gaseous fuels has to resort exceptionally to the use of other fuels due to a sudden interruption in supply

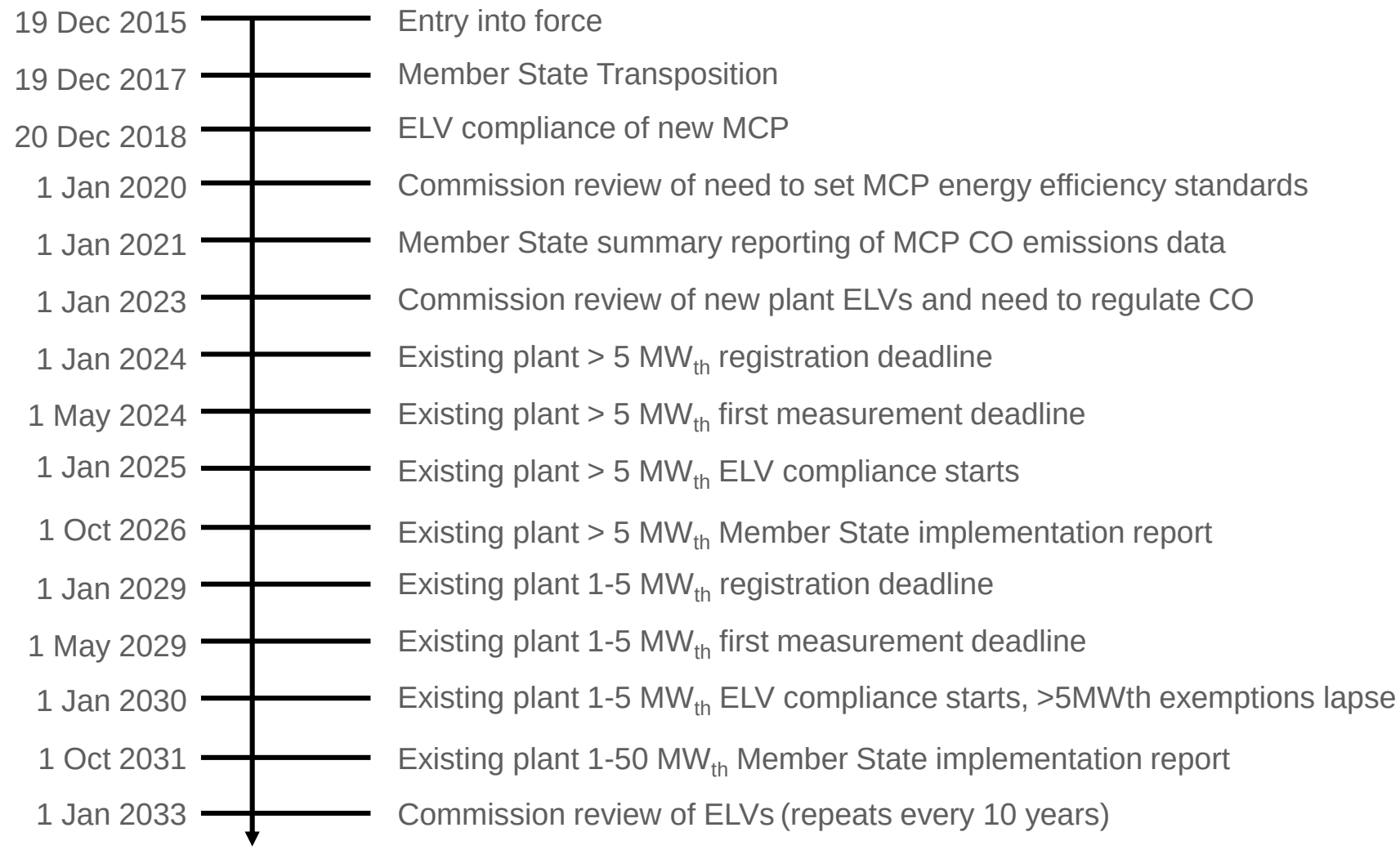
Monitoring Requirements (Annex III)

- Periodic manual monitoring - annual or 3-yearly
- Existing plants - first measurement within 4 months of permit/registration
- New plants - first measurement must be carried out within 4 months of the start of operations
- Every 3 years for 1 - 20MW_{th}
- Every year for >20MW_{th}
- For all pollutants for which an ELV is set out by the MCPD and for CO
- For plants utilising the 500 hour exemptions, alternative frequencies may be applied
- Periodic measurements must not exceed the ELV in order to demonstrate compliance

Monitoring Requirements (Annex III)

- Monitoring methods must enable reliable, representative and comparable results –harmonised EN standards are presumed to meet this requirement
- The plant must be operating under stable conditions at a representative even load (excluding start-up and shut-down)
- Other procedures verified and approved by the Competent Authority may be used to determine SO_2 emissions (*e.g. calculations based on fuel sulphur content)*
- In the event of non-compliance, operators must ensure that compliance is restored within the shortest possible time
- Where non-compliance causes a significant degradation of local air quality, operation must be suspended

Key Dates – future timeline



Conclusions

- MCPD is a new European directive requiring emissions compliance with ELVs for NO_x, SO_2 and dust for plants with combustion units in the size range ≥1 to 50 MW_{th}
- Medium Combustion Plants with limited annual operation are largely exempt from ELVs (< 500 operating hours/year)
- Overlap with legislation affecting large sites regulated under the IED (see AQE presentation - Graham & Griffiths))
- Periodic monitoring is required (also for CO) within 4 months of permitting/registration → possible scheduling difficulties
- Later guidance needed for permitting, monitoring and compliance assessment (see AQE presentation - Henderson)

Any Questions?

If you have any further questions regarding compliance with the MCPD or specified generator requirements, including

- Permit applications
- Air Quality Modelling
- Stack Emission Monitoring

Please visit us on Stand 80

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Thank you!

If you need any further information, please contact:

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