

NOx emission trading
in the Netherlands
Lessons learned

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Policy background NOx reductions

- Acidification + air quality (smog + health risks) → Required NOx reductions:
 - - 50% overall in 2010 (relative to 1995)
 - - 55% for power and industry in 2010 (relative to 1995)
- Instruments:
 - EU regulations:
 - EU NEC directive (National Emission Ceiling, setting national cap)
 - EU Large Combustion Plants Directive
 - EU IED (Industrial Emissions Directive) → BAT Reference (BREF) documents
 - EU motor car exhaust standards
 - National Standards for stationary sources → Command & Control
 - National Emissions Decree for large combustion plants
 - National emission standards for other industries (BAT)
 - Voluntary industry covenants
- Up hill battle → NOx targets were first not achieved

Alternatives for NO_x reductions of stationary sources

- NO_x taxation → revenues used by government to build de-NO_x at inter alia coal fired power plants
- or
- NO_x emission trading for power plants and large industries
- Both options kept under discussion
→ best guarantee to assess real level of emissions:
 - NO_x tax: tendency to suggest low emissions
 - NO_x trading: tendency to suggest high emissions

Development of NO_x emission trading

- Start development of NO_x trading in 1997
- Legally effective as from 2005
- About 300 industrial facilities > 20 MWth involved
- Targeting fuel consumption: power sector + large industries
- Based on decreasing relative Performance Standard Rate (PSR) expressed as grams NO_x/ Giga Joule
- PSR 2005 (68 g NO_x/GJ): actual emissions/fuel use
- PSR 2010 (32 g NO_x/GJ): based on absolute reduction target (ktonnes NO_x) and projected fuel use (including assumed economic growth)

What happened in reality

- Risky elements:
 - Projected fuel use
 - Projected economic growth
 - Interfering EU + national requirements
 - Attempt to combine NO_x and CO₂ trading (ETS)
- EU IED (BAT) requirements translated in permits
 - ongoing NO_x reductions
 - reductions achieved anyhow and NO_x market price close to zero
- It is now considered to stop NO_x emissions trading, because of low price

Lessons learned

- Combining CO₂ and NO_x trading adds to complexity
- Combining too many policy instruments is complex and not effective
- Voluntary covenants effective for low hanging fruit, but not for stringent targets with high costs
- BAT based command & control measures and costs not evenly spread over industry
- Emissions trading:
 - is more fair and cost effective
 - needs sufficient large market (without power exports)
 - is complete departure from BAT based command & control
- Difficult to achieve goal through a relative PSR → absolute caps provide certainty