NOx emission trading in the Netherlands
Lessons learned

Lex de Jonge

Ministry of Infrastructure and the Environment
Policy background NOx reductions

• Acidification + air quality (smog + health risks) $\rightarrow$
  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) $\rightarrow$ BAT Reference (BREF) documents
    • EU motor car exhaust standards
  – National Standards for stationary sources $\rightarrow$ Command & Control
    • National Emissions Decree for large combustion plants
    • National emission standards for other industries (BAT)
  – Voluntary industry covenants

• Up hill battle $\rightarrow$ NOx targets were first not achieved
Alternatives for NOx reductions of stationary sources

• NOx taxation ➔ revenues used by government to build de-NOx at inter alia coal fired power plants or

• NOx emission trading for power plants and large industries

• Both options kept under discussion ➔ best guarantee to assess real level of emissions:
  – NOx tax: tendency to suggest low emissions
  – NOx trading: tendency to suggest high emissions
Development of NOx emission trading

• Start development of NOx 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 NOx/ Giga Joule
  • PSR 2005 (68 g NOx/GJ): actual emissions/fuel use
  • PSR 2010 (32 g NOx/GJ): based on absolute reduction target (ktonnes NOx) 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 NOx and CO2 trading (ETS)

- EU IED (BAT) requirements translated in permits
  - ongoing NOx reductions
  - reductions achieved anyhow and NOx market price close to zero

- It is now considered to stop NOx emissions trading, because of low price
Lessons learned

• Combining CO2 and NOx 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