Norway:
The NOx tax scheme

Eli Marie Åsen, Ministry of the Environment, Norway
(ema@md.dep.no)
Geneva, 1 May 2013
A package of policy instruments to reduce emissions of NOx

- A tax on emissions of NOx

and

- An agreement between the Norwegian State and 14 business organisations (2008-2010)

- A new agreement between the Norwegian State and 15 business organisations (2011-2017)
Why new NOx policy instruments?

• The NOx emission ceiling set by Gothenburg Protocol (156,000 tonnes)
• ELVs of the Protocol and EU legislation (the EEA Agreement) have been implemented
• 26 per cent of 2011 NOx emissions were from ships and fishing vessels (33 per cent in 1999)
• IMO/Marpol standards have been implemented
• Internationally agreed instruments not sufficient to comply with the NOx emission ceiling
The tax on emissions of NOx

- Implemented 1 January 2007
- 2007: 15.00 NOK (~2€) per kg of NOx emitted
- 2013: 17.01 NOK per kg of NOx emitted
- Applies to about 55 per cent of total national emissions of NOx
Liable to the NOx tax is energy production delivery from:

- In principle **all sectors**, but some **capacity limits**

- **Propulsion machinery** with a total installed capacity of more than 750 kW
  - about 1,500 ships in domestic shipping (of all flags)
  - about 250 fishing vessels
  - aircrafts and trains

- **Motors, boilers and turbines** with a total installed capacity of more than 10 MW, and

- **Flares** on offshore installations and facilities on land
In the case of ships and vessels tax applies to:

- Emissions from traffic within **Norwegian territorial waters** (includes cruise ships)
- Emissions from **domestic traffic** even if parts of the traffic takes place outside Norwegian waters
- In the case of Norwegian registered vessels, liability for tax applies in the case of emissions in **near waters** (applies to fishing vessels)
Exemption from the tax for emissions from:

- Ships in traffic between Norwegian and foreign ports, or aircrafts in traffic between Norwegian and foreign airfields
- Emission sources encompassed by environmental agreements with the State concerning the implementation of measures to reduce NOx emissions in accordance with a predetermined environmental target
Calculation of the tax

• On the basis of actual emissions of NOx, calculated as NO$_2$-equivalents

• Three options:
  1) Emissions determined by measurement according to standard methods
  2) Emissions calculated on the basis of a source-specific emission factor and the quantity of energy consumed. The emission factor is determined by a competent authority.
  3) Emissions calculated on the basis of standard emission factors as set by the Regulations on Special Taxes
Do polluters pay the NOx tax?

- At the moment – just a few (< 10% of emissions liable to the tax)

- Why?

Exempted from the tax are:

- *Emission sources encompassed by environmental agreements with the State concerning the implementation of measures to reduce NOx emissions in accordance with a predetermined environmental target*
The NOx Agreement 2008-2010 (of 14 May 2008)

- **Negotiated** between the Norwegian State (Ministry of the Environment) and 14 Business Organisations

- **Individual enterprises** affiliate themselves with the agreement and receive the rights and obligations that are set forth in the main agreement and in a Participant Agreement

- The agreement applies to emission **sources liable to the tax** on emissions of NOx and NOx emissions from **industrial processes**
Objectives, obligations and benefits

• The overall objective of the agreement was to reduce emissions from these sources to an annual maximum of 98,000 tonnes.

• Obligation to implementing abatement measures reducing annual emissions by:
  o 2008: 2,000 tonnes
  o 2009: 4,000 tonnes
  o 2010: 12,000 tonnes of which 7,000 tonnes might be fully implemented during 2011

• Enterprises that have affiliated themselves with the agreement were granted exempt from the NOx tax for the years 2008, 2009 and 2010.
The NOx Agreement 2011-2017 (of 14 December 2010)

- Based on the **same principles** as the first one
- **Exempt from the NOx tax** may be granted for the years 2011-2017
- **Reductions in annual emissions** by a total of 16,000 tonnes by implementing **abatement measures**:
  - 2011: 3,000 tonnes
  - 2012: 2,000 tonnes
  - 2013-14: 4,000 tonnes
  - 2015-16: 4,000 tonnes
  - 2017: 3,000 tonnes
- The **obligations** to reduce emissions **may be revised**
The Business Sector’s NOx Fund

- Set up by the Business Organisations as their means to fulfil the organisation’s obligations under the NOx agreements
- **Enterprises** that have affiliated themselves with the Environmental Agreement must also **affiliate themselves with the NOx Fund**
- Enterprises pay 4 NOK (11 NOK for the petroleum industry) per kg of NOx emitted to the Fund
- The Fund offers **financial support** to enterprises that implement NOx emission **abatement measures** and for **measurements** in order to define **source-specific emission factors**
- Annual **income** for the Fund: about **0.6 billion NOK** (~ 80 million €)
Control and sanctions

- **Reporting** obligations for the organisations and the enterprises
- **Control** by the Climate and Pollution Agency of the emission reduction effect of the single abatement measure being implemented, based on evaluation by DNV (Det Norske Veritas)
- **If lack of fulfilment** of the emission reduction obligation (less than 90 per cent) – all enterprises will **have to pay tax** for the relevant year
- If the Business Organisations fulfil e.g. 60 per cent of their obligation, the **enterprises must pay** 40 per cent of the ordinary NOx tax rate for that year (or correspondingly 70/30 per cent)