
# CARBON PRICING in the Netherlands

symposium “Coordinating the next wave of EU climate policies”

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# Carbon pricing

- Economists always know better
  - Presentation is a perfect illustration: just weigh goals and instruments in a grand CBA and we all know what to d
- Do we?
  - Real world copes with yellow jackets, climate skeptics and what else?
- Simple solution!
  - You know what, just put a price on carbon and return the revenue!
- Is it that simple?

# Careful design of additional carbon pricing is necessary

- Additional uniform *taxes* in Europe may exacerbate inefficiency
  - Cap and trade already exists in ETS sectors
    - Additional tax crowds out cap-and-trade
  - Existing implicit taxes (usually in non-ETS sectors) may already be too high
- Uniform *prices* helpful only if they take stock of existing role of ETS and the role of other externalities
  - Hybrid schemes: ETS vs taxes in non-ETS
- Additional *unilateral* pricing may undermine EU cooperation

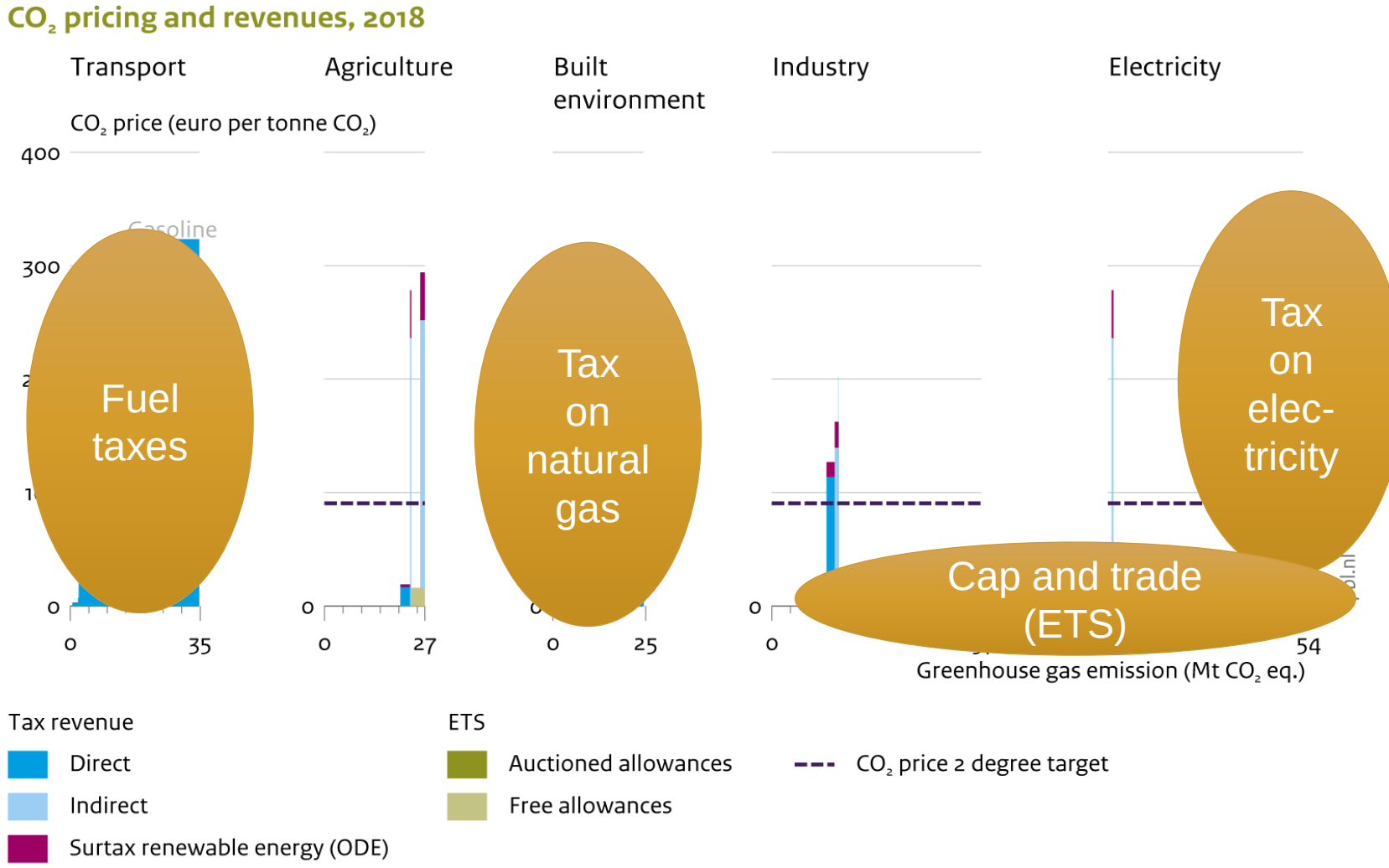
# Additional unilateral policy in the Netherlands

- ‘Climate tables’ with stakeholders:
  - Negotiate GHG emission reduction in 2030 minus 49% and even 55% in a coalition
  - Five tables: transport, agriculture, industry, electricity sector, built environment
  - Timeline 2017-2019; response by Dutch government in summer ‘19

- Urgenda:
  - Law suit by NGO against Dutch Stae
  - Ruling by Dutch High Court in june 2019: Dutch State liable for responsible care in case of climate change (through its commitments under Kyoto protocol)
  - Implication is that Netherlands should comply with Kyoto requirements: -25% GHG emissions relative to 1990

# Carbon pricing in practice: the Netherlands

- Use effective carbon taxes and prices for proper picture
  - Explicit prices through cap-and-trade (ETS)
  - Implicit prices through existing excises: mainly non-ETS; coordinated by EU minimum taxes

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# Additional unilateral policy in the Netherlands

- Measures ETS:
  - Electricity:
    - Closure of five existing coal power plants by 2030 (5 GW)
    - Subsidy scheme renewables including biomass production
    - Gradual abolishment of subsidy scheme after 2025
    - Pricing: carbon floor price electricity; increasing from €12 (2020) to €32/ton (2030)
  - Industry:
    - New subsidy instrument for innovative carbon abatement options
    - Pricing: plant-specific marginal tax above linear declining threshold after 2021

# Addtional unilateral policy: the Netherlands

- Measures non-ETS:
  - Agriculture:
    - Subsidy on abatement options (PM Nitrogen crisis)
  - Built environment:
    - District specific heating policy aiming at substitution away from natural gas
    - Subsidies for households to prevent net income losses by households
    - Pricing: xecise tax swap; lower tax on electricity combined with higher tax on gas
  - Transport (PM EU policy standards)
    - Additional obligation for biofuels
    - Subsidy for electric cars until 2023 (PM km pricing afterwards)
    - Pricing: Vignet for trucks

# Evaluation unilateral pricing in the Netherlands

- Observation:
  - Non-uniform additional pricing
  - Unilateral action within ETS sectors

- Analysis
  - Alternative policy package based on additional local uniform carbon pricing vs additional industry pricing
  - Taking stock of other existing externalities
    - e.g. abolish tax on electricity; lower tax on natural gas; on top of existing fuel taxes (air quality and other externalities transport);
  - Computation of emission and welfare impacts using CGE model

  See: https://www.pbl.nl/publicaties/economische-effecten-van-co2-beprijzing-varianten-vergeleken

# Evaluation unilateral pricing in the Netherlands

| | | Uniform A | Uniform B | Industry A | Industry B |
|---|---|---|---|---|---|
| **Revenu recycling** | | lump sum households | industry SDE++ | lump sum households | industry SDE++ |
| **$CO_2$-emission in Netherlands** | Mton $CO_2$ | | | | |
| **-ETS – industry** | | 1,7 | -8,5 | -3,8 | -3,5 |
| **-ETS – elektricity** | | -11,0 | -5,4 | 0,6 | 0,4 |
| **-non-ETS** | | 9,2 | 13,9 | 3,1 | 3,1 |
| | | | | | |
| **$CO_2$-leakage** | Mton $CO_2$ | | | | |
| **- $CO_2$-emission World (excl. NL)** | | 8,1 | -1,2 | 3,7 | 0,7 |
| **wv $CO_2$-em wihtin EU (excl. NL)** | | 6,1 | 4,2 | 0,5 | 0,3 |
| **wv $CO_2$-em outside EU** | | 2,0 | -5,4 | 3,2 | 0,4 |
| | | | | | |
| **Welfare** | | | | | |
| **- GDP** | % | 0,1 | 0,2 | -0,2 | -0,1 |
| **- Consumer welfare (HEV)[b]** | % | 0,4 | 0,4 | 0,1 | 0,0 |

# Carbon pricing in a complex world

- Economist should be careful with their policy advice on carbon taxation

- A problem of messing up goals and instruments
  - EU ETS caps emissions and does deliver for the ETS sectors,
    - MSR adaptation renders minimum price schemes redundant in the short run ….
    - but cap is still too lose from Paris perspective
  - Also outside ETS more effort needed but pleas for uniform carbon pricing may backfire
    - Example of uniform carbon taxation in NL

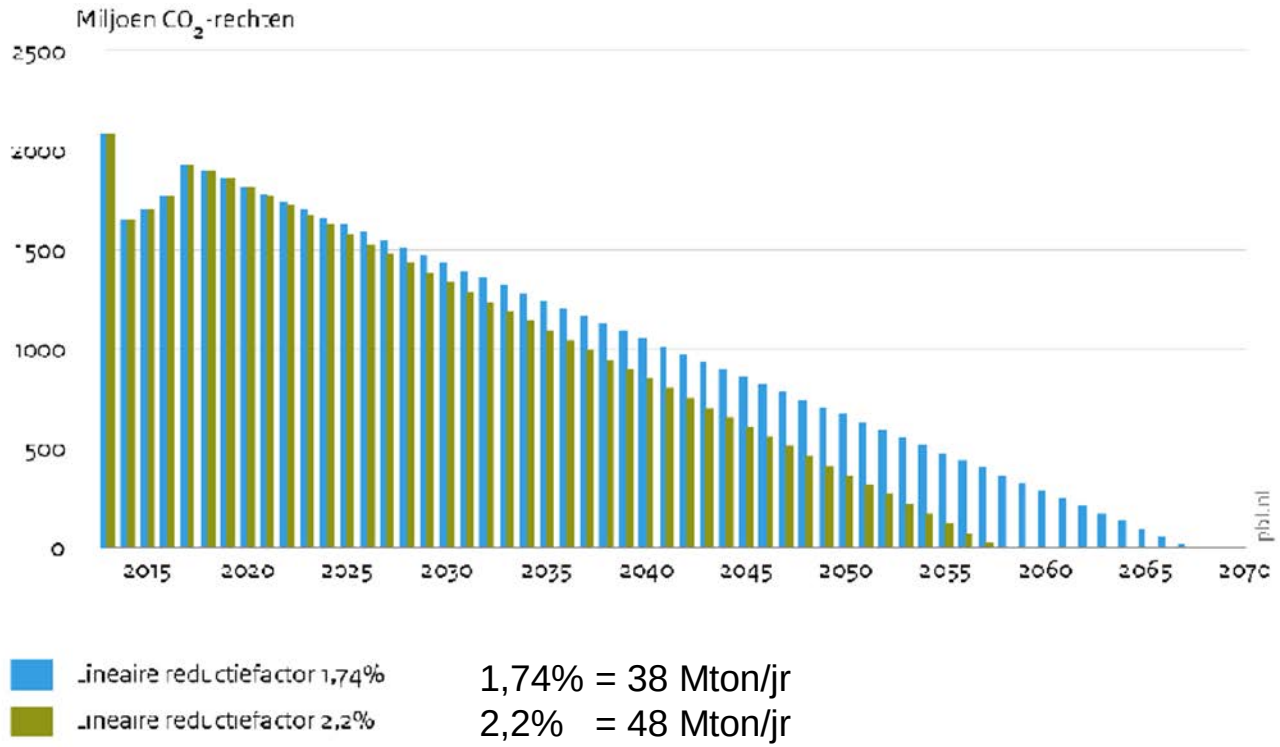
- Additional local carbon pricing
  - Requires careful design
  - Uniform taxes are a bad idea and uniform prices only if other externalities are included
  - Proper additional pricing in the industry would work better in a two-speed coalition

# Explicit pricing: EU ETS

- Emission cap from -1,74 to -2,2% each year from 2021

**Figuur 1**

**Jaarlijks aanbod van emissierechten in het EU ETS vanaf 2013**

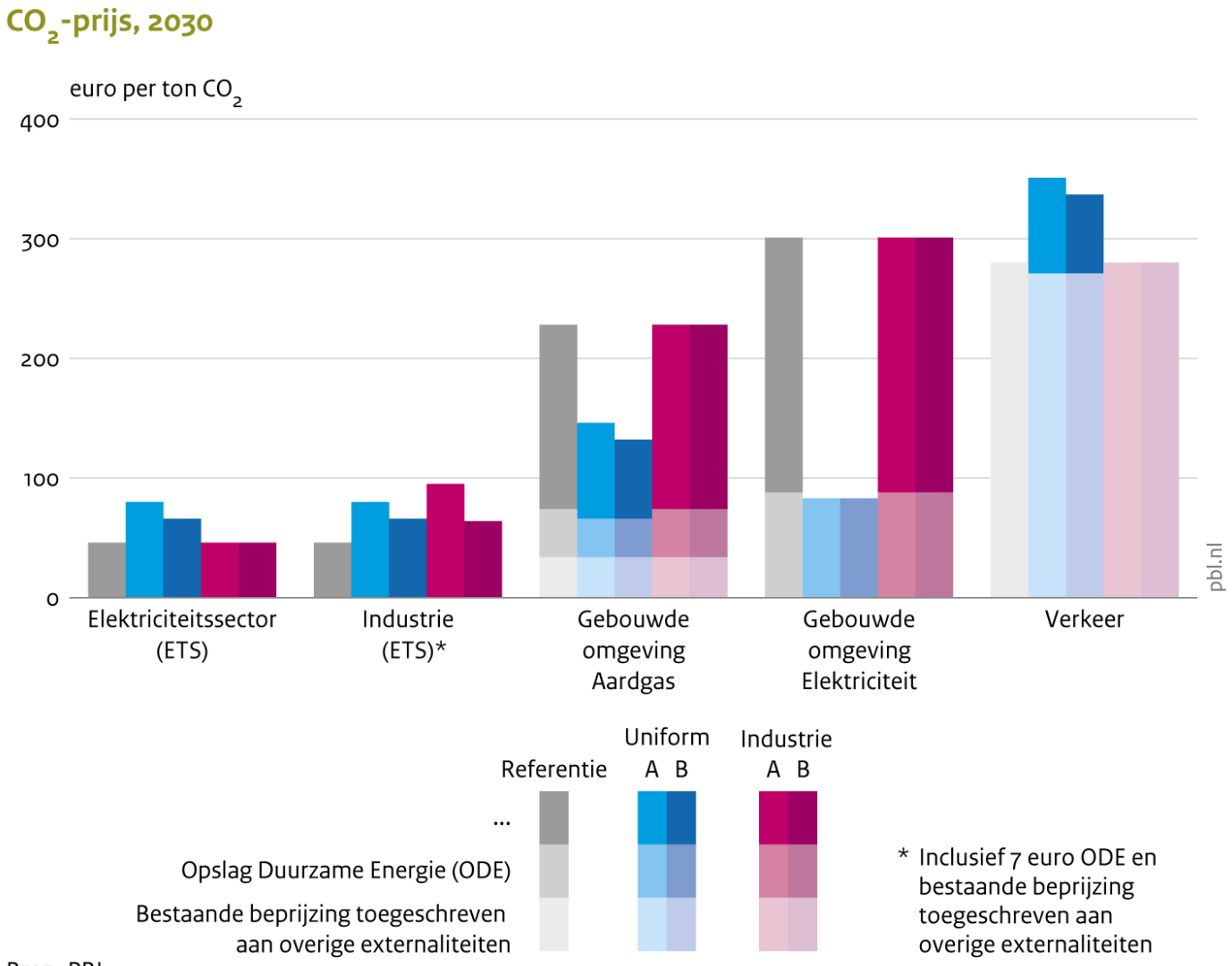



1,74% = 38 Mton/jr
2,2% = 48 Mton/jr

# Explicit pricing: EU ETS

- Introduction of latest Market Stability Rules (MSR):
  - restricts the ‘bank’ and endogenizes the cap by cancellation of allowances
  - waterbedeffect temporarily punctured
- Emission price up from 5 to 20-25 euro per ton

# Carbon price Netherlands




Bron: PBL

# Implicit pricing: carbon taxation in the Netherlands

- The real world consists of multiple externalities and not always multiple instruments