

Subsidizing renewable energy: German and Dutch approaches

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ECS Expert Meeting 'Trade Friendly
Promotion of Renewable Energy'

Brussels, 2 November 2004

Outline

- Why do we subsidize renewables
- Objectives in EU, D and NL
- D and NL: different systems in the past
- Results and problems
- Recent changes (convergence)
- Conclusions on 'trade-friendliness'

Why do we subsidize renewables

- To compensate for fossil fuel subsidies and non-internalisation of external costs

Why do we subsidize renewables

- To compensate for fossil fuel subsidies and non-internalisation of external costs
- To overcome 'lock in' in traditional technologies and create learning curve effects for RE technologies

Objectives (% RES in electricity supply)

	EU	D	NL
2000	17.4	8.1	4.3
2010	22.1	12.5	9.0
2020		20.0	17.0

Germany: Stromeinspeisegesetz (1991-2000)

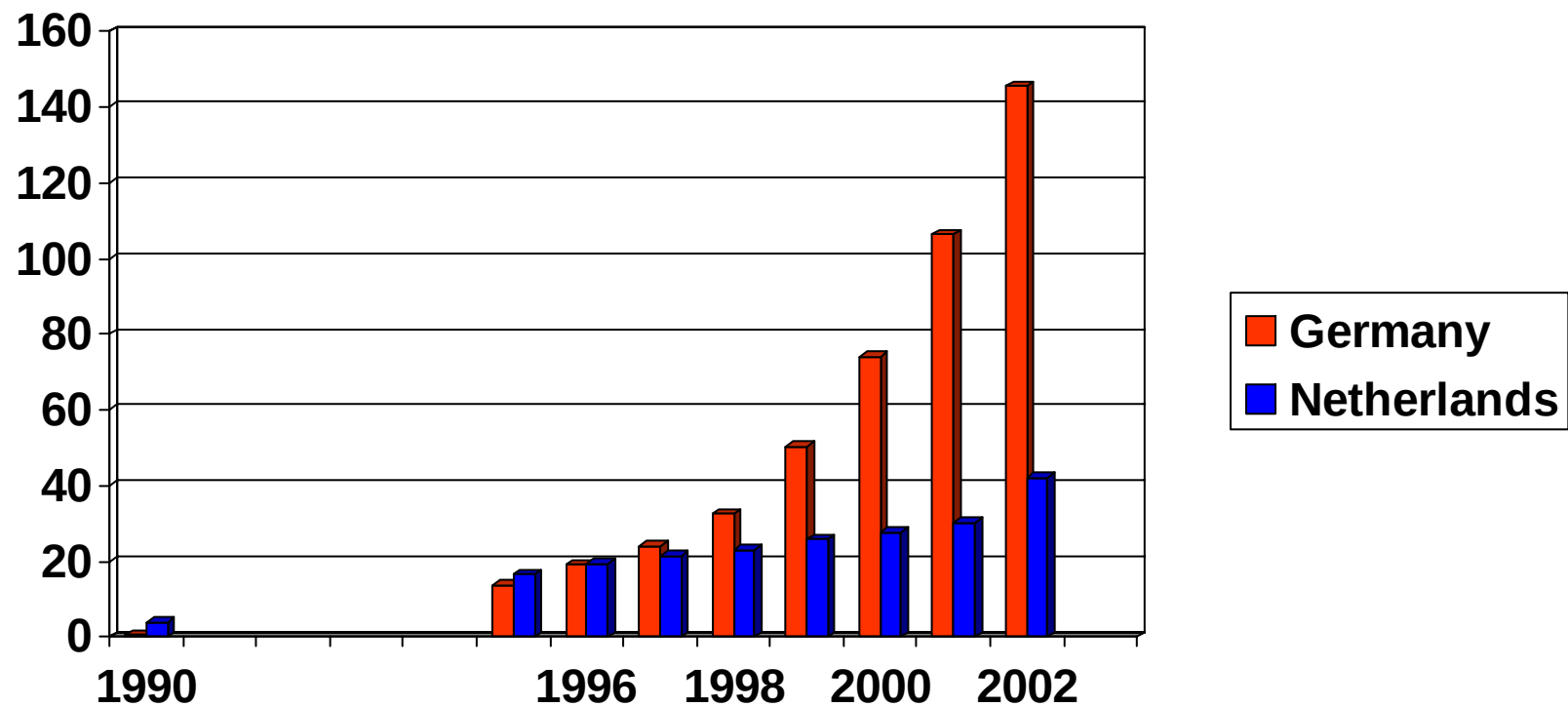
- Obligation for public utilities to purchase electricity from RES at fixed rates
- Little differentiation in rates
- $\pm$ € 400 mln per year
- Strong incentive for wind, but not for more expensive options such as PV

Netherlands: Energy tax exemption (1998-2003)

- Exemption from tax on final electricity use
- Strong incentive for small users
- No differentiation by type of RES
- € 556 mln in 2002

Growth in wind capacity (W per capita)

(calculations based on IEA data)



Problems

- NL and D: only 'cheapest' options stimulated (i.e. mainly wind)
- NL and D: overcompensation
- NL: 'leakage' of subsidy abroad due to imports

D: Erneuerbare Energien Gesetz (EEG)

- Since 2000; adapted in 2004
- Differentiation in remuneration rates
- Rate fixed for 20 years
- Regressive (later investors get lower rates)
- € 2.2 billion in 2002 (25 TWh)

NL: Milieukwaliteit Elektriciteitsproductie (MEP)

- Since 2003
- Producer subsidy; only for domestic producers
- Some differentiation by source
- Rate guaranteed for 10 years
- $\pm$ € 300 mln per year

Support for renewable electricity in 2005

(€ ct per kWh)

	D (EEG)	NL (MEP)
Hydro	3.7 - 9.7	9.7
Biomass	8.3 - 17.3	2.9 - 9.7
Wind (land)	5.4 - 8.5	7.8
Wind (offshore)	6.2 - 9.1	9.7
Solar PV	43.4 - 59.5	9.7

Concluding statements

- Differentiation in subsidy rates is needed to achieve diversity
- If RE targets are formulated in terms of domestic supply, 'trade-unfriendly' instruments are unavoidable
- Harmonisation of policies at EU level (e.g. tradable RE quota) would improve efficiency