

# Experiences with EFR in Europe

Seminar “More gain than pain: Carbon/energy pricing for closing public deficits”  
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Kai Schlegelmilch

Vice President of *GreenBudgetEurope*

[Kai.Schlegelmilch@green-budget.eu](mailto:Kai.Schlegelmilch@green-budget.eu)

[www.green-budget.eu](http://www.green-budget.eu)



# Structure of presentation

- **Green Budget Europe**
- **Energy and Climate Policy Background**
- **Energy taxation in Germany, Sweden, Denmark, Finland, Greece, Ireland, United Kingdom, Slovenia, Estonia, and the European Union**
- **Initiatives in Asia**
- **Use of Revenues**
- **Summary**

# Green Budget Europe

- **Think Tank and Non-Profit Non-Governmental Organization**

- Green Budget Germany (GBG) founded in 1994, as think tank and NGO
- Green Budget Europe (GBE) started as GBG-project in 2008, a European platform on market based instruments and Environmental Fiscal Reform (MBI/EFR)

- **Fields of expertise**

Commitment to Market-Based Instruments in environmental policy such as:

- Environmental Fiscal/Tax Reform: Taxes/Charges on energy and resources
- Cutting of environmentally harmful subsidies
- Emissions Trading System

- **Main activities**

- Studies and Newsletters, Lobbying, Conferences and Trainings
- **Last GBE-Conferences in Copenhagen (2011) and Budapest (2010), see [www.green-budget.eu](http://www.green-budget.eu), forthcoming in Paris end October/early November 2012**
- Organisation of the Global Conference on Environmental Taxation in 2007 in Munich



# Policy background

- **March 2007 European Council conclusions on energy and climate topics and targets with several legislations following.**
- **EU climate and energy strategy (2013-2020):**
  - ✓ 20% cut in emissions,
  - ✓ 20% improvement in energy efficiency against business-as-usual
  - ✓ 20% share of renewables by 2020
- **Crisis exit strategy:** Austerity packages and *quality* of revenue
- **Europe 2020 Strategy:** sustainable growth for a more resource efficient, greener and more competitive economy, demand for an ETR/tax shift

# Two policy areas

- 20% cut in emissions by 2020 (30% in case of international agreement reached)
- division into two areas:

## Emission Trading System:

- EU cap
- single instrument
- uniform price signal

## „Effort-sharing“:

- national reduction objectives, taking GDP into account
- Transferable!
- **Energy taxation**, partly EU-harmonised, but still many national features.

# Germany: EFR elements Implemented

## 1999-2003 (Social Democrats and Greens)

- Social security contributions were reduced
- Transport/heating fuel taxes were increased
- An electricity tax was introduced between

## 2011 (Conservatives and Liberals)

- Ticket fees on air transport
- Tax on nuclear fuel
- Heavy goods vehicle toll extended
- Reduction of industrial exemptions from the energy tax
- Financial transaction tax (generally adopted, started as a banking charge)
- Not (yet?) implemented: Base company car taxation on CO<sub>2</sub>-emissions

**GBG proposed all these elements and most were implemented:**

[http://www.foes.de/pdf/2010-10-HBF\\_GreeningTheBudget.pdf](http://www.foes.de/pdf/2010-10-HBF_GreeningTheBudget.pdf)

→ Environmental Fiscal Reform is now a cross-party consensus

# Germany: Direct impacts of ETR only in 2003

**Less**

- **CO<sub>2</sub>-emissions (2-3%)**
- **Tax on 'goods': Pension costs (-16 bn € or -1.7%)**
- **Costs for industry (-€1 bn)**

+

- **Partly also the impacts shown on the previous slide**

**More**

- **Tax on environmental 'bads': energy taxes (+€18.7 bn)**
- **Employment (+250,000 jobs)**
- **Pensions (+1.2%)**

+

- **Partly also the impacts shown on the previous slide**

Source: Green Budget Germany calculations

# Germany: Overall impacts of energy price increases (including ETR) in 2003

- **Fuel consumption (-17%)**
- **Unloaded truck mileage**  
(- 2%-points between 1998-2000)
- **Fossil fuel imports (-13%)**
- **Overall tax burden (-4 %)**

**Less**

**More**

- **Car sharing (+70%)**
- **Public transport (+5%)**
- **Energy saving technologies**
- **Energy efficiency**
- **Gas-powered cars (x10)**
- **Biofuel cars (x2)**
- **Renewable energies**

Source: Green Budget Germany calculations

# Sweden

- **Energy Tax** (implemented in 1950s) on electricity, gas, fuel oil, coal und coke
- **CO<sub>2</sub> –Tax** (implemented in 1991, gradual increases since) on CO<sub>2</sub> content of petroleum products, natural gas ,coal, and coke
- → Only households are taxed fully with CO<sub>2</sub>–tax and energy tax (industry is broadly exempt from the energy tax)

## Effects:

- → **CO<sub>2</sub> emissions were reduced by 9%** between 1990 and 2007, while economic growth amounted to 48% in the same period (Source: Ministry of Finance, SWE)
- **Secrets of success:** All political parties are willing to implement elements of EFR. This was achieved, in part, by granting reduced CO<sub>2</sub> tax rates (50%) and imposing no energy tax for industrial consumers, in order to prevent the loss of a competitive edge (OECD 2000)

- 1. CO<sub>2</sub> tax from 1991, first on business only, from 1992 also on private households**
  - CO<sub>2</sub> emissions were **reduced by 24%** against a business-as-usual scenario between 1990-2001 (Source: Speck et al. 2005).
- 2. Sulphur tax: introduced in 1996 and levied on all fossil fuels with a sulphur content exceeding 0.05% (based on weight). The rate was set at €2.7/kg of sulphur in energy products, or at about €1.3/kg of sulphur dioxide (SO<sub>2</sub>) emissions**
  - Sulphur tax resulted in **84% reductions** in sulphur emissions between 1995 to 2004. Denmark now has the lowest SO<sub>2</sub>-intensity per unit of GDP in the OECD.
- 3. A major tax reform is being phased in from 2010 to 2019 with the aim of reducing the fiscal burden on personal income in order to stimulate labour supply in the long term**
  - Financing is partly provided by higher energy, transport and environmental taxes; energy taxes on business and households – except for petrol and diesel - are increased by 15%
  - Potentially negative effects on household with a low disposable income, a lump-sum transfer ('green check') will be granted to adults and children

# Finland

1. Offsetting tax revenue losses due to the **abolition of the national pension contribution for employers.**
2. Changes of the structure of energy taxes on fuel for transport and heat and power plants since 2011. The tax structure is now based on **energy content, carbon dioxide emissions and local/particle emissions** that have adverse health effects.
3. In 2011, **additional Euro 730 million** were collected in taxes on fuel for heat and power plants and energy taxes on electricity, mainly used for fiscal consolidation

# Greece

- Fiscal crisis and deficit forced the government to also take some positive decisions regarding EFR: transport fuel taxes were increased very substantially:

**2008-11: petrol +91%, diesel +40%**

# Ireland

- Also here the fiscal crisis helped EFR-elements to be implemented: Increase in excise taxes levied on transport fuels (**2008-2011: +30%**)
- Introduction of a CO<sub>2</sub> tax (15 Euro/ton CO<sub>2</sub>) on all energy products and further increases (doubling) as part of the National Recovery Plan 2011-2014 (**part of the fiscal consolidation process**)

# United Kingdom

- 1. The Climate Change Levy (CCL): introduced 2001**, is levied on natural gas, coal and electricity, applies to industrial and commercial energy use. Revenues recycled to companies - reduced social security payments. Rates equivalent to €27 (coal) – €51 (natural gas, electricity) per tonne CO<sub>2</sub>
  - Energy demand decreased by 2.3% p.a. until 2010 (against 2001). Trade and the public sector accounted for the largest part of the reductions.
  - CCL led to the introduction of energy management departments in most of the affected companies
- 2. Fuel Duty Escalator: 1993-1999**, road fuel duties increased by 5% p.a. in real terms (= above inflation)
  - traffic levels remained same 1998-2000, good revenue raiser
- 3. UK introduced an aggregates levy in 1996 which led to substantial increase of the use of recycled aggregates.**

# CEEC: Slovenia and Estonia

## Slovenia

- **1998 as first CEEC: CO<sub>2</sub>-tax introduced and extended several times until 2004**

## Estonia

- **Comprehensive ETR implemented in several steps between 2002-2010:**  
The financing of several reductions of the income tax was ensured via several increases of energy and car taxation

## Positive impacts:

- Increased competitiveness due to reduced labour costs
- Increased energy efficiency
- Increased use of renewable energies

# All EU countries have some kind of green taxes

	Belgium	Denmark	Finland	France	Germany	Italy	Holland	Norway	Sweden	UK
<b>Taxes</b>										
CO2										
SO2										
NOx										
Fuels										
S in fuels										
Car sales and use										
Diff. annual car tax										
Water effluents										
Waste-end										
Dangerous waste										
Aviation noise										
Tyres										
Beverage cont.										
Packaging										
Bags										
Pesticides										
CFCs										
Batteries										
Light bulbs										
PVC/phtalates										
Lubrication oil										
Fertilisers										
Paper, board										
Solvents										
Raw materials										
INTRODUCED:	1996		2000		2004					

1. Witness of EU-Creativity!
2. Many roads to Brussels!
3. Autonomy from neighbours!
4. Similar situation in new MS

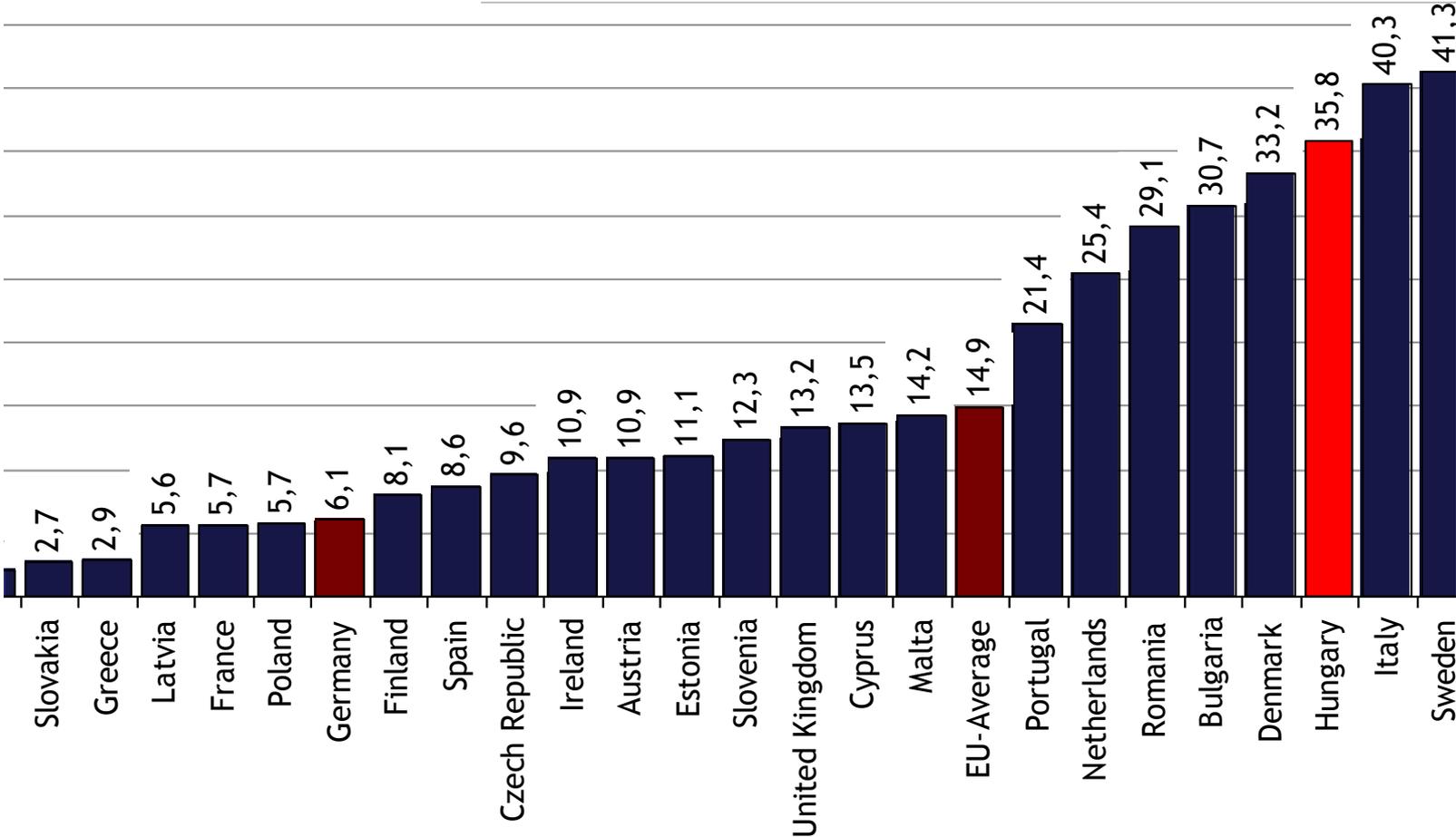
Examples from EEA 2005

# Energy taxation on EU-level (I)

On the one (more negative) hand:

- Legal requirement for unanimity voting makes progress very difficult.
- Progress is very slow, steps so far:
  - 1993: Minimum tax rates for all oil products were introduced when the internal market came into force
  - 2004: Broadening this principle of minimum tax rates to all other energy products whilst increasing the minimum rate for mineral oil taxes (EU-energy tax directive)

# EFR-Elements: Taxes on light heating fuel in the EU (€-Cent/liter): Very low level in Germany, while Hungary has a high level!



# Energy taxation on EU-level (II)

On the other (more positive) hand:

- The EU is the first and only region which requires an energy taxation from all Member States. Several Member States made positive experiences with ETR/EFR, hence this potential should be further exploited.
- On 13.04.2011, the European Commission published its proposal for a revision of the Energy Tax Directive which is currently discussed in the Council and deserves support:

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/468&format=HTML&aged=0&language=en&guiLanguage=en>

# Link to Emission Trading System

Framework for CO2 taxation as complement to the EU emission trading scheme

- no double burden or regulation for business
- Level playing field for the sectors exposed to carbon leakage
- no overlap CO2 tax with ETS: CO2 tax complements ETS with alternative market-based instrument for small installations excluded from the EU ETS

- **Many Asian countries** are about to introduce broad energy taxes, often in the context of an Environmental Tax/Fiscal Reform (ETR/EFR) like **China, Thailand, Indonesia, Vietnam**
- **China** announced introducing a carbon tax for 2015
- **Thailand** considers several fiscal instruments within a framework law on market based instruments
- **Indonesia** started phasing out fossil fuel subsidies
- **Vietnam** applies broad energy taxation, from 2012, no exemptions for industry, but including shipping/aviation. Additionally plastic bag and pesticides tax

## Use of revenues

- All these economic instruments have the **great advantage and attraction that they do NOT cost money**, but quite the opposite: They do also **raise revenues for the government**.
- The revenues should generally be used in a way to **achieve political majorities**.
- Hence, the **bulk of revenues could be used for fiscal consolidation** as it has one of the highest priorities in many countries.
- Yet, in most EFR-packages, there are minor packages for **financing energy efficiency and renewable energies** which is though often very substantial for these two areas.

# Summary

- **Several European countries** implemented Environmental Tax and Fiscal Reforms (ETR/EFR) **successfully, EU-progress is rather slow, still Europe is the only region with prescribed minimum energy tax rates for all. Asian countries currently explore using this instrument**
- Main concerns are often **distributional and competitive aspects**, but there are various tools available to overcome such potential barriers by the right tax design and compensation measures
- There is **no “one size fits all”** for implementing ETR/EFR-approaches, but national circumstances have to be taken account of.
- The road of **“getting prices right”** is explored, but many further steps still need to be taken to move towards a green economy and to implement Europe 2020 strategy.
- **Carbon/energy taxation/pricing offers a unique opportunity for fiscal consolidation** with least compromising economic growth

# Thank you for your attention!

**Kai Schlegelmilch**

Vice President of

*GreenBudgetEurope*

[www.green-budget.eu](http://www.green-budget.eu)

[Kai.Schlegelmilch@green-budget.eu](mailto:Kai.Schlegelmilch@green-budget.eu)