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Swiss Confederation

Federal Department of the Environment,
Transport, Energy and Communications DETEC

Federal Office for the Environment FOEN

Climate Division

Switzerland's experience with carbon pricing

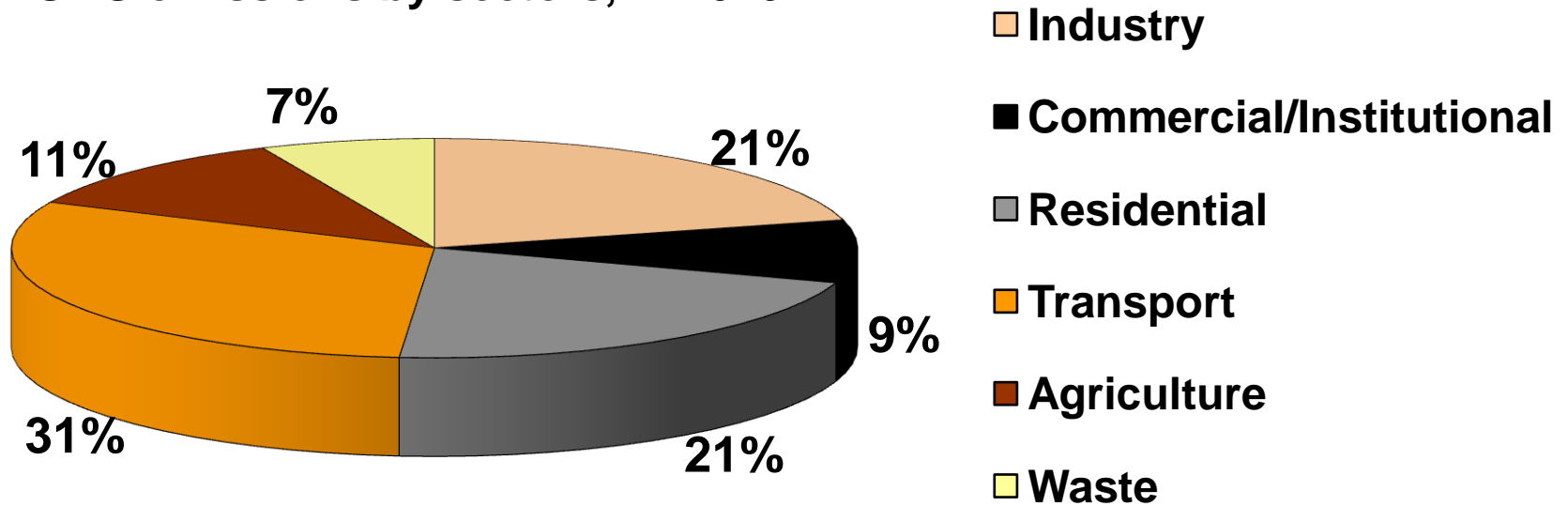
International Energy Agency

Laurence Mortier, 18.03.2013



GHG emissions in Switzerland

GHG emissions by sectors, in 2010:



Few GHG emissions resulting from electricity production

Electricity production (2011):

- 53.7% hydropower
- 40.7% nuclear power
- 5.6% fossil power plants



Swiss Climate and Energy Policy

Two main legal instruments:

1) Federal Energy Act (entry into force in 1999, partially revised several times, full revision underway with Energy Strategy 2050)

- Aims at ensuring sufficient, safe, diversified and environment-friendly supply of energy

2) CO₂ Act (entry into force in 2000, partially revised, full revision in force since 01.01.2013)

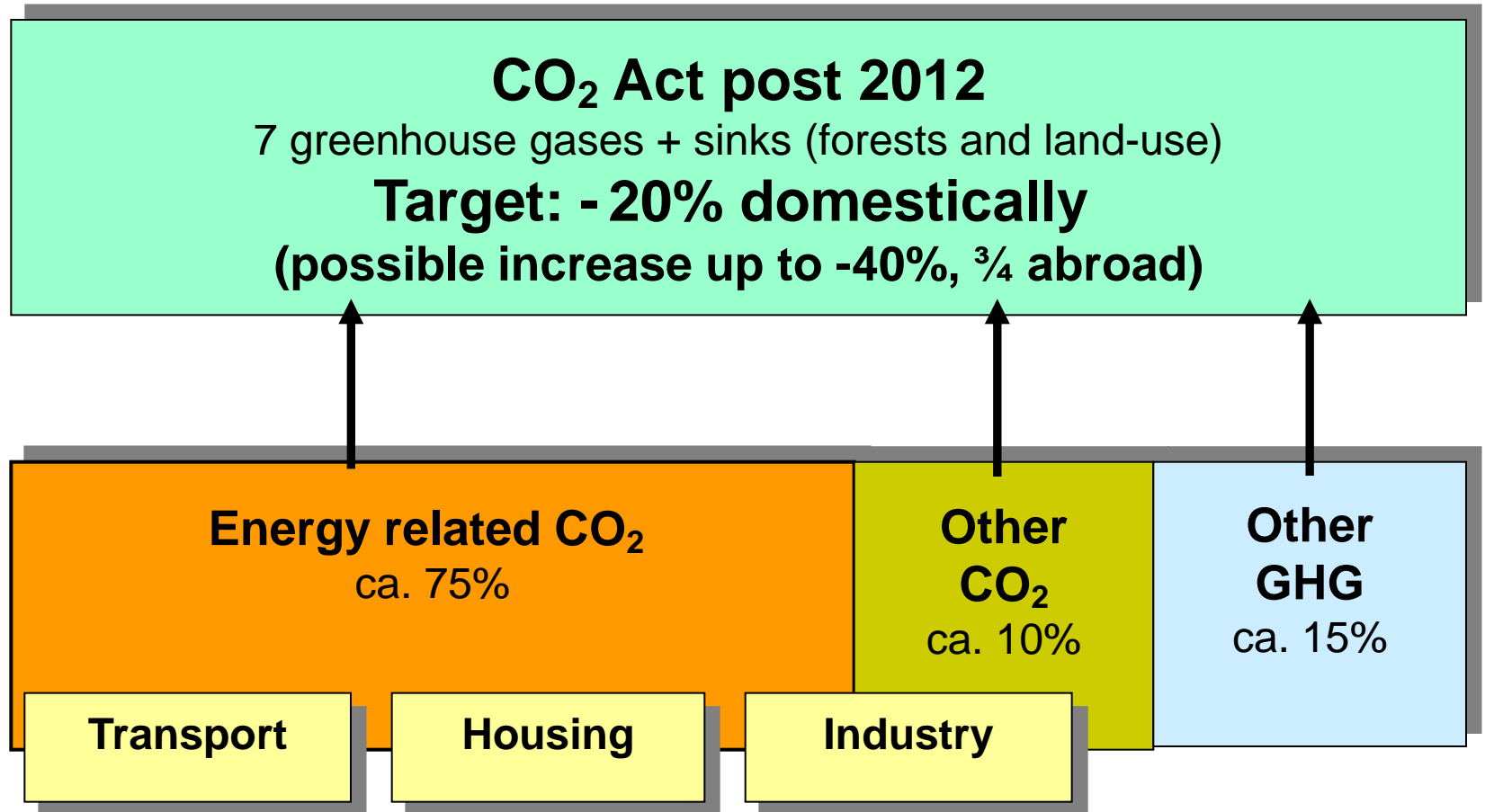
- Defines binding targets for the reduction of CO₂ emissions
- Defines instruments and measures

Other instruments

- Building codes, energy labels for cars, performance-related heavy vehicle fee, etc.



Reduction target until 2020





The CO₂ Act (2013-2020)

- **Transport:**
 - Emission limits for new passenger cars
 - Obligation for motor fuels importers to domestically offset CO₂ emitted by the transport sector (5-40%)
- **Buildings:**
 - CO₂ levy on fossil heating fuels
 - Earmarking of the CO₂ levy for the national buildings programme (financing the renovation of buildings)
 - Technical prescriptions for buildings
- **Industry:**
 - CO₂ levy on heating and process fuels
 - Emissions Trading Scheme (possible linking to EU ETS)
 - Possibility of CO₂ levy exemption for some companies



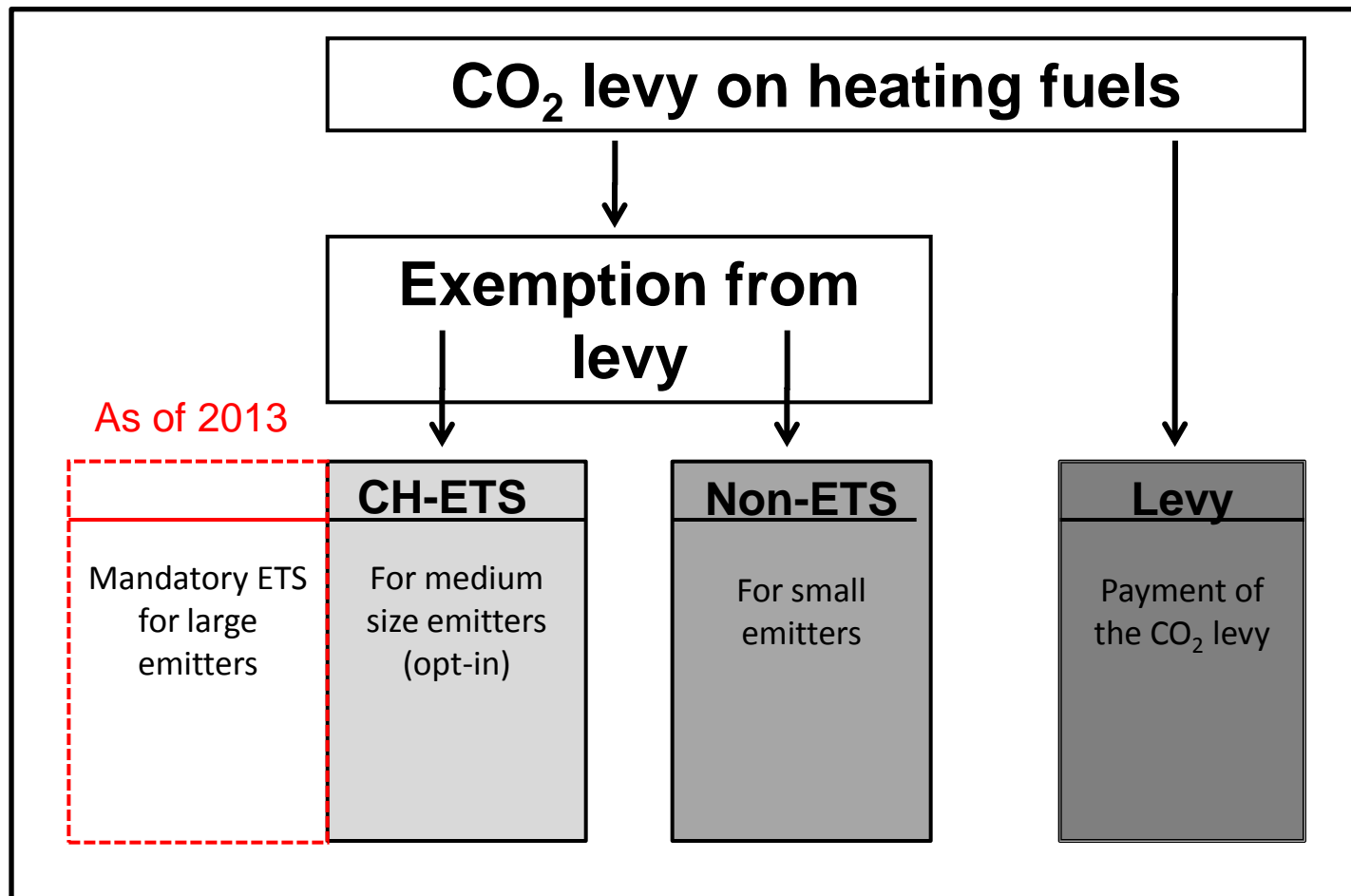
CO₂ levy on heating and process fuels

- Since 2008: 3 ct. / l (12 CHF/ t CO₂)
- Since 2010: **9 ct. / l (36 CHF/ t CO₂ ~ 38 USD / t CO₂)**
- As of 2014: **further increases** up to 30 ct./ l (120 CHF / t CO₂) if predefined intermediate objectives for the emission reduction pathway until 2020 are not met
- **Incentive** for energy efficiency and renewables
- Revenue (approx. 600 mio CHF/year since 2010):
 - **redistributed** to population and the economy
 - partially used for the **buildings programme** (1/3, max. 300 mio per year)
- **BUT: Possibility for exemption** for companies with binding agreements to reduce their energy-related CO₂ emissions



CO₂ levy on heating and process fuels and the Swiss ETS

Business choice: CO₂ levy or exemption with binding agreement





The Swiss ETS post-2012 (I)

- **Continuation and further development** of the Swiss ETS (in place since 2008) in a direction that allows for a **linking with the EU ETS**
- Cap and trade system with **absolute** emissions reduction objectives
- Total amount of emission allowances is **determined ex ante** for 2013-20
- **Reduction of allowances** by 1.74% each year over the scheme
- Use of the **flexible mechanisms** up to a certain amount and if quality criteria are met
- All effective emissions must imply a **surrender** of the corresponding emission credits
- **Sanction:** 125 CHF for each tCO₂ not covered by a credit + obligation to surrender the missing emission credits the following year

The Swiss ETS post-2012 (II)

Emission allocation:

- Free allocation up to an efficiency benchmark for carbon leakage sectors (EU benchmarks)
- Linear decrease of free allocation for non-carbon leakage sectors
- Auctioning of allowances

Sectors:

- Energy supply, processing of mineral oil, production and processing of metals, glass, ceramic, cement, production of paper, production of chemical products, among others

Size:

- Compulsory for large emitters ($> 25'000 \text{ tCO}_2/\text{year}$)
- Voluntary opt-in for medium size emitters (above 10 MW)
- Expected 30-40 companies, 4-5 MtCO_2



The Swiss ETS post-2012 (III)

Currently lack of market activity:

- Size of the market, low market liquidity, many small emitters with few emission allowances
- Over allocation of emission allowances
- No price formation (lack of demand)
- Uncertainty about the economic growth
- Preference for “banking” of allowances

Linking of Swiss and EU ETS:

- Price formation and stability
- Larger market & liquidity
- Flexibility for Swiss companies (access to market)
- Comparable situations for CH and EU companies
- Cost efficiency

Requires a bilateral agreement on the reciprocal recognition of emission allowances



Obligation to domestically offset CO₂

- Obligation to **motor fuels importers** to partially offset CO₂ emitted by the transport sector with domestic measures (10% in 2020, i.e. 1,5 mio. tCO₂)
- Obligation to **fossil (gas) power plants** to fully offset their emissions (min. 50% domestically, max. 50% abroad)
- **Domestic offset scheme** (emission reduction projects in Switzerland)
- This new domestic market is currently under development



Future developments of the Swiss Climate and Energy Policy

Energy Strategy 2050

- to phase out nuclear power
- proposed objectives and instruments currently under discussion

1st step - Transforming energy production and consumption:

- Encouraging energy efficiency and promoting renewable energies
- Reducing energy use per capita by 35% in 2035 compared to 2000
- Stabilizing electricity use by 2020

2nd step – Post-2020 ecological tax reform:

- Merging of CO₂ levy and feed-in tariffs into one single levy
- Levy related both to energy content and GHG emissions
- Applicable to heating/process fuels, motor fuels and electricity
- Revenues partially for encouraging further measures and partially redistributed
- Possibility of exemption for large companies



Information and contact

Information

- www.bafu.admin.ch/climate
- www.bafu.admin.ch/co2-tax
- www.bafu.admin.ch/emissionstrading

Contact

- climate@bafu.admin.ch