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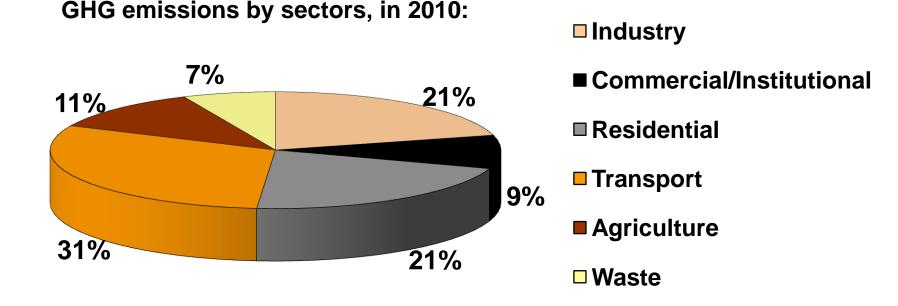
Climate Division

## Switzerland's experience with carbon pricing

**International Energy Agency** 

Laurence Mortier, 18.03.2013

## GHG emissions in Switzerland



#### 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

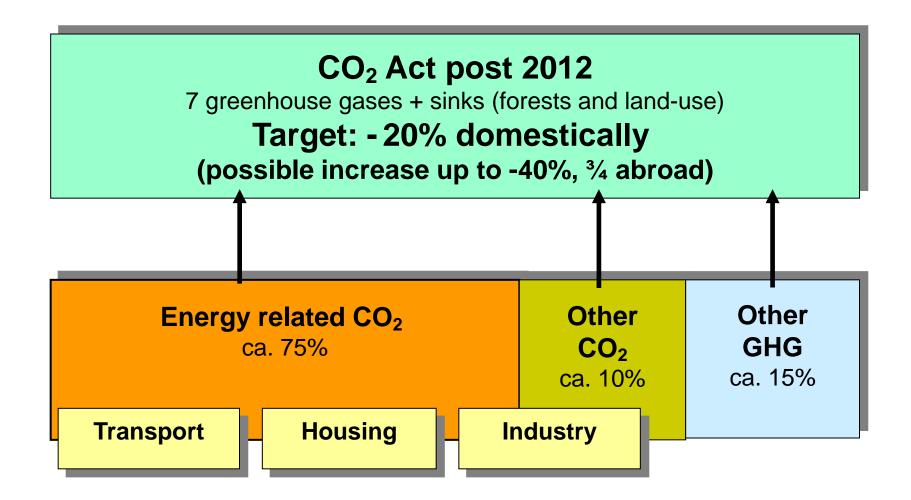
Two main legal instruments:

- 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 environmentfriendly supply of energy
- 2) CO<sub>2</sub> Act (entry into force in 2000, partially revised, full revision in force since 01.01.2013)
  - Defines binding targets for the reduction of CO<sub>2</sub> emissions
  - Defines instruments and measures

#### **Other instruments**

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

### Reduction target until 2020



## **The CO<sub>2</sub> Act (2013-2020)**

#### Transport:

- Emission limits for new passenger cars
- Obligation for motor fuels importers to domestically offset CO<sub>2</sub> emitted by the transport sector (5-40%)

#### Buildings:

- > CO<sub>2</sub> levy on fossil heating fuels
- Earmarking of the CO<sub>2</sub> levy for the national buildings programme (financing the renovation of buildings)
- Technical prescriptions for buildings
- Industry:
  - > CO<sub>2</sub> levy on heating and process fuels
  - Emissions Trading Scheme (possible linking to EU ETS)
  - > Possibility of  $CO_2$  levy exemption for some companies

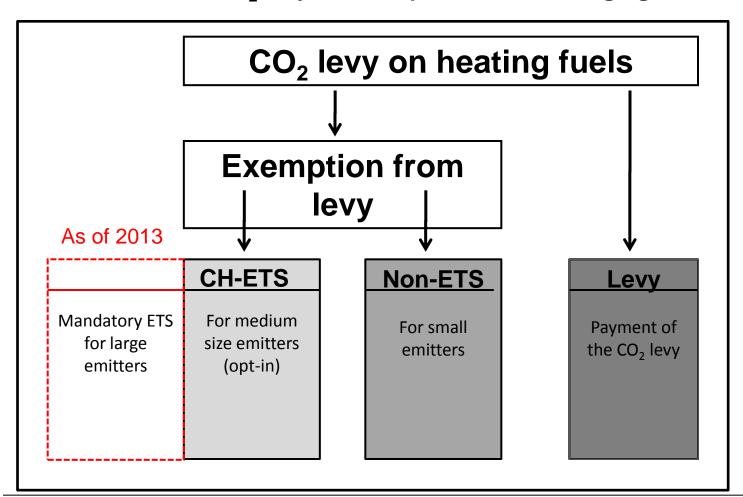
## CO<sub>2</sub> levy on heating and process fuels

- Since 2008: 3 ct. / I (12 CHF/ t CO<sub>2</sub>)
- Since 2010: 9 ct. / I (36 CHF/ t CO<sub>2</sub> ~ 38 USD / t CO<sub>2</sub>)
- As of 2014: further increases up to 30 ct./I (120 CHF / t CO<sub>2</sub>) 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 CO<sub>2</sub> emissions

# CO<sub>2</sub> levy on heating and process fuels and the Swiss ETS

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Business choice: CO<sub>2</sub> 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 tCO<sub>2</sub>/year)
- Voluntary opt-in for medium size emitters (above 10 MW)
- Expected 30-40 companies, 4-5 MtCO<sub>2</sub>

## 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 CO<sub>2</sub>

- Obligation to motor fuels importers to partially offset CO<sub>2</sub> emitted by the transport sector with domestic measures (10% in 2020, i.e. 1,5 mio. tCO<sub>2</sub>)
- 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

#### 1<sup>st</sup> 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

#### 2<sup>nd</sup> step – Post-2020 ecological tax reform:

- Merging of CO<sub>2</sub> 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