Transport and Emission Trading in Switzerland

Dr. Jürg M. Grütter
jgruetter@transport-ghg.com
www.transport-ghg.com

matching transport with carbon finance
Company Background

- Design, planning and implementation of GHG transport projects worldwide since 1992
- Development, negotiation and monitoring of the first GHG reduction sales agreement of transport companies in Europe
- 1\textsuperscript{st} approved CDM transport methodology, 1\textsuperscript{st} registered CDM transport project, 1\textsuperscript{st} registered VCS transport project
- Author of >50\% of all approved CDM transport methodologies, plus only VCS transport methodologies, plus GHG transport methodologies for Canada and Switzerland
- Author of > 80\% of all CDM and VCS registered transport projects
- Offices in Switzerland, China, India, Colombia, Bolivia and partner offices in Mexico, Brasil, South Corea and VietNam
Background I:
GHG Emissions of Switzerland

2010 GHG Emissions

- Transport: 32%
- Households: 21%
- Industry: 17%
- Services: 9%
- Waste: 6%
- Other Gases (non-CO2): 15%
Background II
Growth of Transport Emissions

[Graph showing the growth of transport emissions from 1990 to 2011, with MtCO2 on the y-axis and years on the x-axis.]
Background III:

- Fuel producers and distributors have limited influence on GHG emissions.
- With GHG revenues various measures in the transport sector can be initiated.
- Paying per tCO$_2$ reduced is a more efficient means to reduce GHG in transport than subsidizing projects or programs.

An emission trading market can be an efficient solution to reduce GHG transport emissions.
Swiss Experience 2006-12: General Aspects

- 10/2005 a voluntary charge on transport fuels was levied by the Swiss Association of fuel importers (USD 0.015 per liter of fuel)
- The «voluntary charge» was levied due to a political agreement to avoid a carbon fuel tax
- The fuel association signed with the government a legal obligation to compensate a part of transport emissions and could do this through domestic and international ET
- The charge was used to acquire 17 million tCO₂ offsets, 20% of which domestic, thus creating a domestic emission market
- Domestic reductions follow national and international guidelines
Swiss Experience 2006-12: Transport

- >80 transport projects have sold since 2006 ER in the domestic ET market
- Projects have been grouped basically to reduce transaction costs (similar to POAs)
- Majority freight companies but also car fleets, building machines, alternative fuel projects and singular measures
- Baseline and monitoring methodology was established already 2004 and was approved by Swiss government
Swiss Experience 2006-12: Transport Measures

- Measures implemented by companies which received credits include:
  - Efficiency measures of vehicles e.g. EcoDrive, aerodynamic improvements of trucks
  - Efficiency measures per unit transported e.g. improved load factors, usage of larger trucks
  - Mode switch e.g. road-to-rail, conveyer belts
  - Trip avoidance or trip reduction measures e.g. improved logistics, construction of tunnel
Example: Galliker Logistics
Example Galliker

- Logistics Company with around 450 trucks
- Baseline emissions 2010 21,500 tCO₂
- Emission reduction 2010 4,500 tCO₂
- Emission intensity dropped from 33 gCO₂/tkm to 27 gCO₂/tkm (-18%)
- Measures taken:
  - Increased transport by train
  - Efficiency improvement of trucks (extra-wide tyres, aerodynamics, low viscosity oils etc)
  - Increase of average truck size from 26t to 27t whilst keeping average load factor
- Income from sale of ERs: around 4 million USD
Swiss Proposal 2013-20: General

- Carbon tax on non-transport fuels
- Importers of transport fuels must compensate 10% of transport emissions (future thermal power plants also have compensation obligations)
- Only domestic measures but maximum price increase due to compensation of 5 USD cents per liter of fuel (gives a maximum of around 200 USD per tCO₂ avoided)
- Projects must prove environmental and financial additionallity with a procedure very similar to the CDM
- In principle very similar to Phase I: tax instead of «voluntary charge», domestic reductions based on ET, demand from fuel importers, managed by «same entity» with a new name
Swiss Proposal 2013-20: Transport

- Compensation projects e.g. in transport sector
- Currently a new methodological approach is being prepared for transport
- Basically a refined approach based on experience since 2006
- Projects potentially in public transport, freight and passenger car fleets (Mobility, taxis, rental car fleets)
Conclusions: It Can Be Done

- Transport can be integrated in domestic emissions trading
- Role of transport is basically credit provider
- Credit demand originates from companies with reduction obligations, fuel importers with commitments or a fuel tax
Conclusions: It Should Be Done

- Integrating transport in domestic emission trading is an efficient and cost-effective solution to reduce transport based GHG emissions
- Additional transport projects thus have an incentive to be implemented
- Important to have simple solutions which allow for grouping and standardization to reduce transaction costs and allow for smaller projects
Conclusions: It Has Been Done

- Methodological solutions exist and have been proven to work
- Switzerland has implemented a domestic ET system including transport since 2006 with more than 80 domestic transport projects trading their credits
- Transport GHG emission reductions cost in general more than reductions in other areas: earmarking a percentage of compensation projects/reductions to transport is recommended
More Information

Swiss Federal Office for the Environment FOEN:

Climate Cent Foundation:

Foundation for Climate Protection and Carbon Offset KliK:

Grütter Consulting AG:
www.transport-ghg.com
jgruetter@ransport-ghg.com