

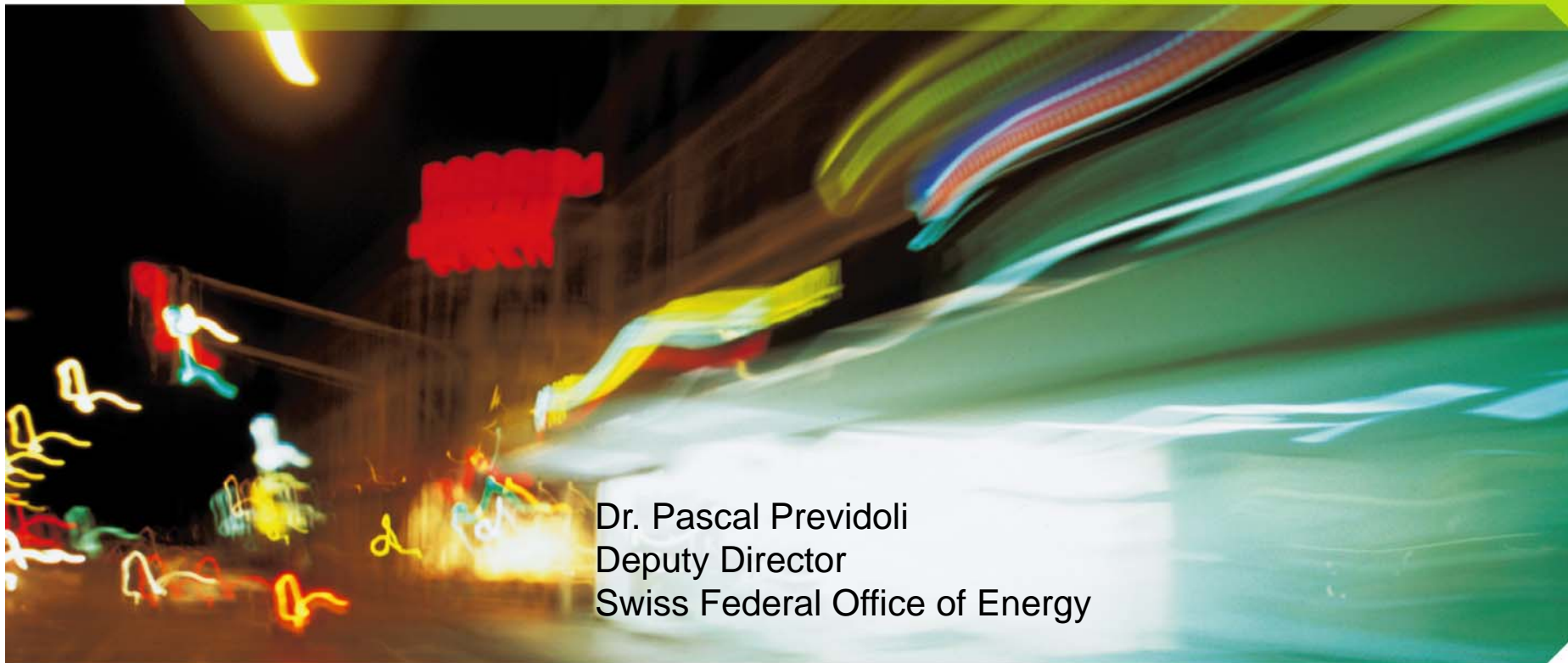


Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizra
Confederaziun svizra

Bundesamt für Energie BFE
Office fédéral de l'énergie OFEN
Ufficio federale dell'energia UFE
Swiss Federal Office of Energy SFOE

Efficient Use of Electricity

Swiss Energy Policy Agenda

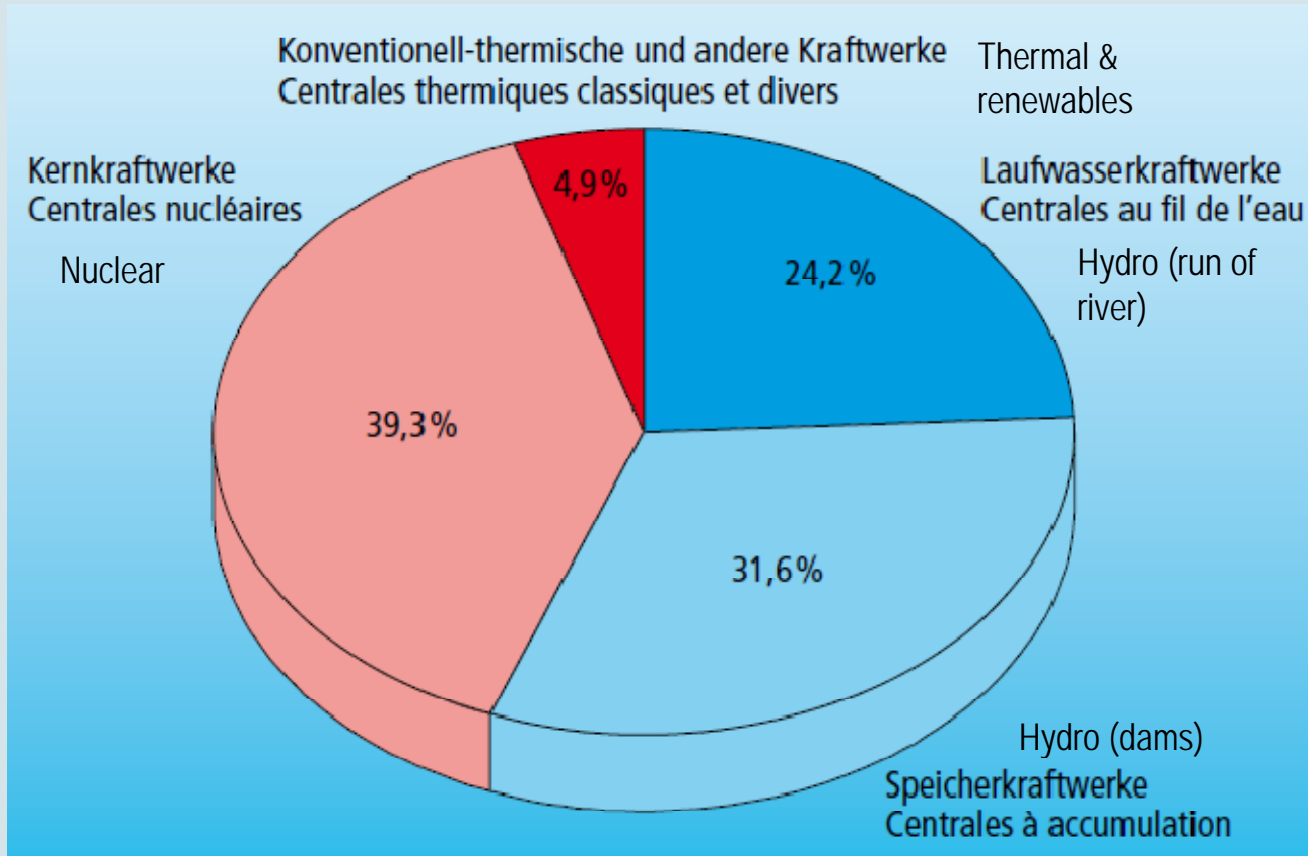


Dr. Pascal Previdoli
Deputy Director
Swiss Federal Office of Energy

Wednesday, 27th October 2010

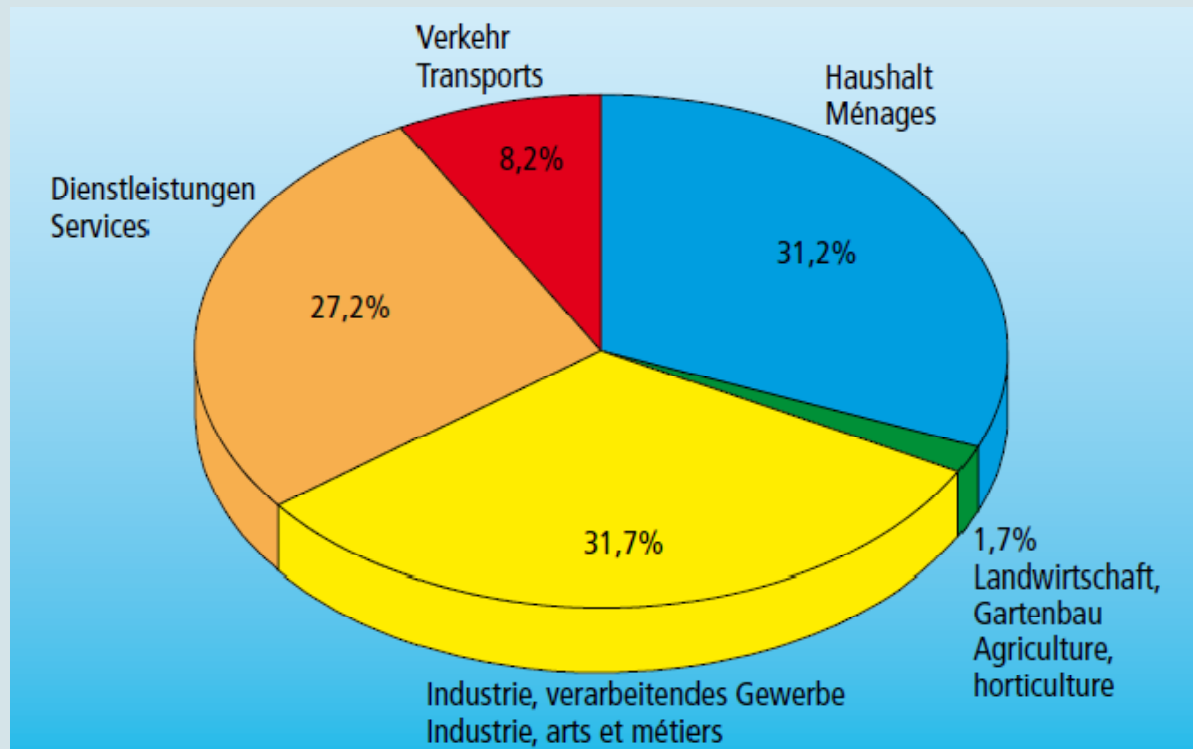


Electricity Generation (2009)



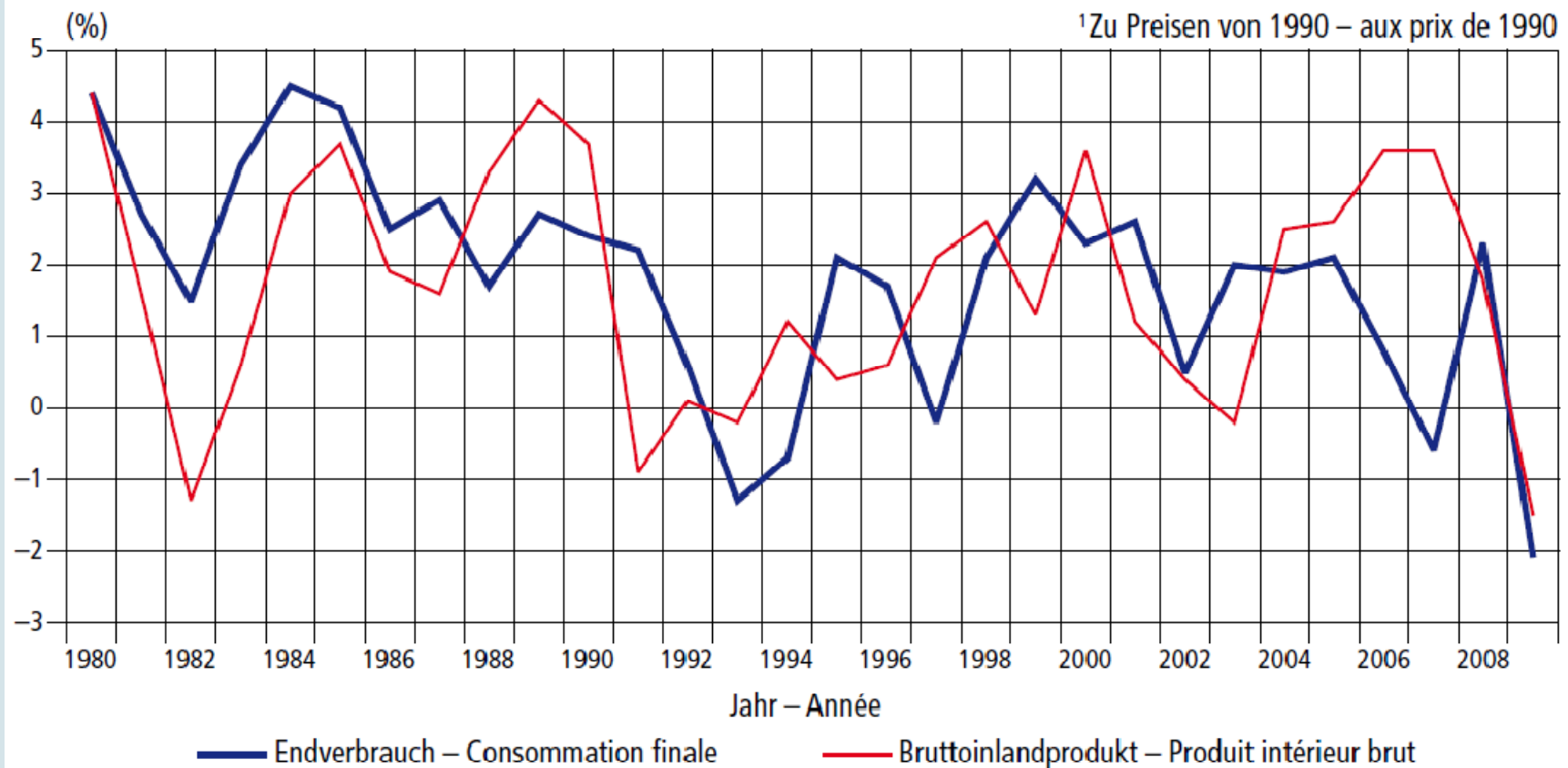


Electricity Consumption by Sector (2009)



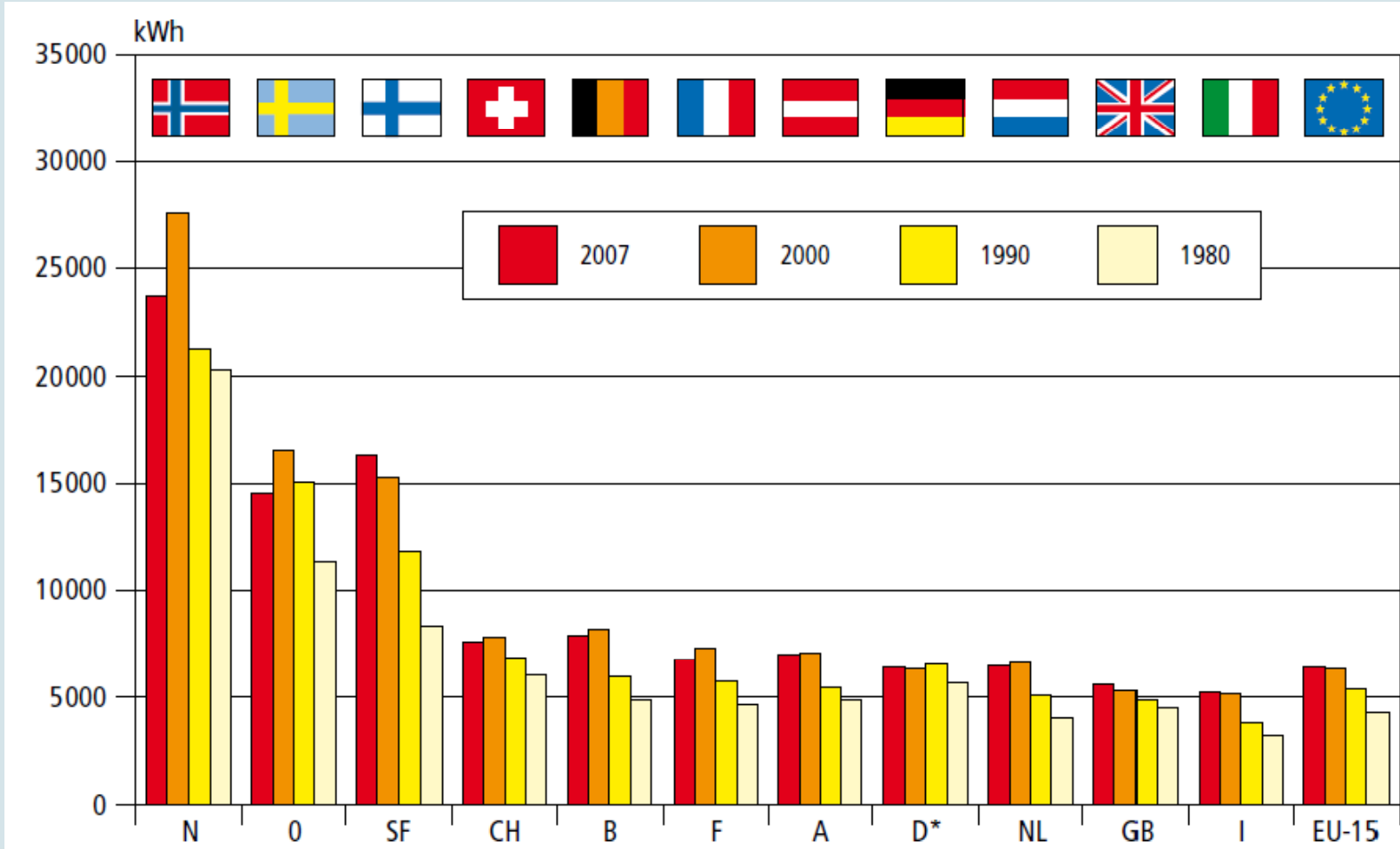


Uncurbed Electricity Demand?





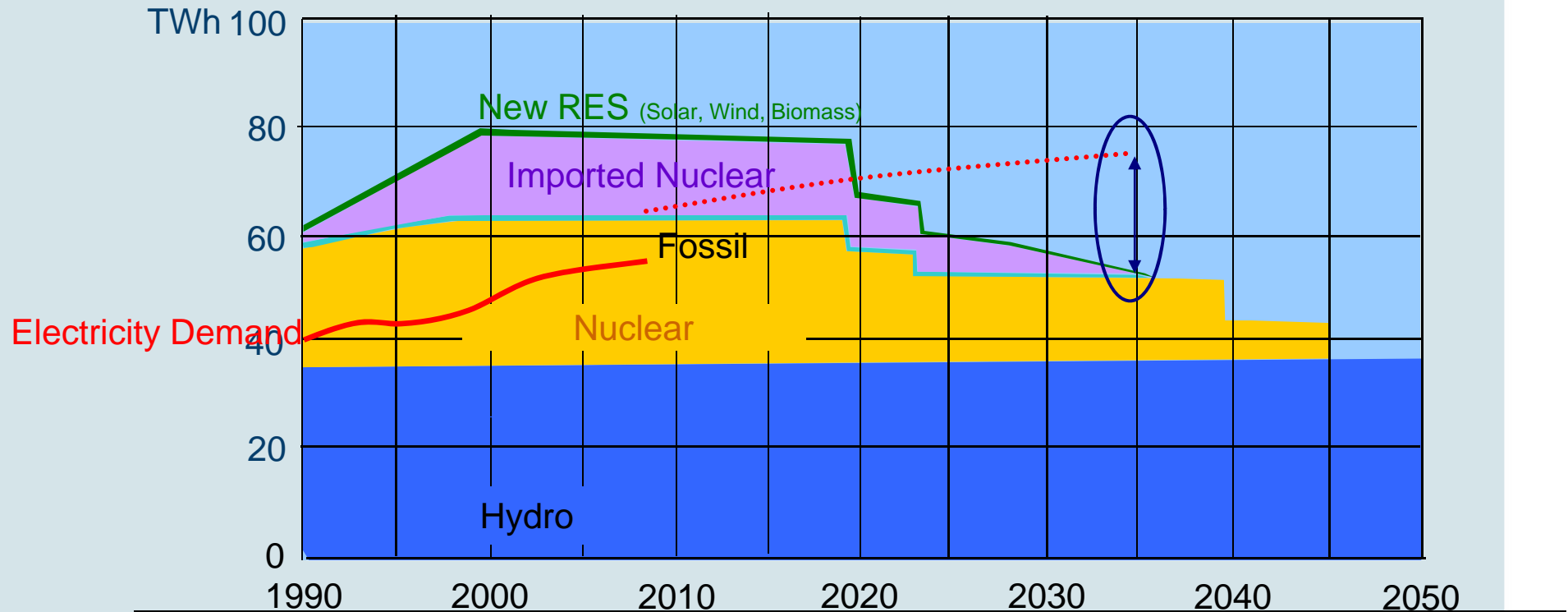
High Per-capita Consumption





Energy Policy Challenges

Looming Electricity Supply Gap





Energy Policy

Three Guiding Principles

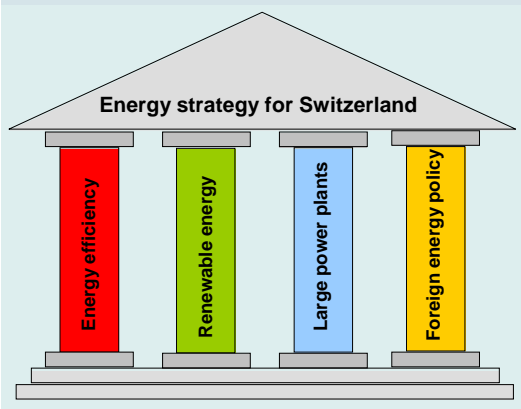
1. Federalism

- Swiss Constitution, Energy Law (1999)
 - Art. 89 Constitution: “domestic and renewable energy... economising and rational use of energy...”
 - Federal State: appliances, vehicles, installations
 - Cantons: buildings
- **“Subsidiarity”**: i.e. voluntary action and self-regulation first, state regulation as last resort if voluntary action fails
- **Direct democracy**: Referendum and Popular Initiative
 - 7 votes at federal level since 2000:
 - 2000: rejection of 3 proposals for promotion of renewables
 - 2001: rejection of energy “incentive” tax/ecological tax reform
 - 2002: rejection of Electricity Market Law
 - 2003: rejection of two nuclear phase-out proposals
 - 2011?: climate policy, SUV ban
 - 2013/14?: new nuclear plant



Energy Strategy of Federal Council (adopted February 2007)

Four pillars



1. Renewable energies

- Electricity Supply Law: Feed-in tariffs as from 2009
- Action Plan (February 2008)

2. Energy efficiency

- Action Plan (February 2008)

3. Large power plants inevitable, i.e. gas and/or nuclear

- Speedier permitting (mainly power lines)
- Gas-power plants: full CO₂ compensation, 70% domestic (EU ETS-compatibility?)
- 3 nuclear power plant applications filed in 2008: likely referendum in 2013/14

4. International Energy Relations

- EU main partner. Electricity negotiations since end 2007

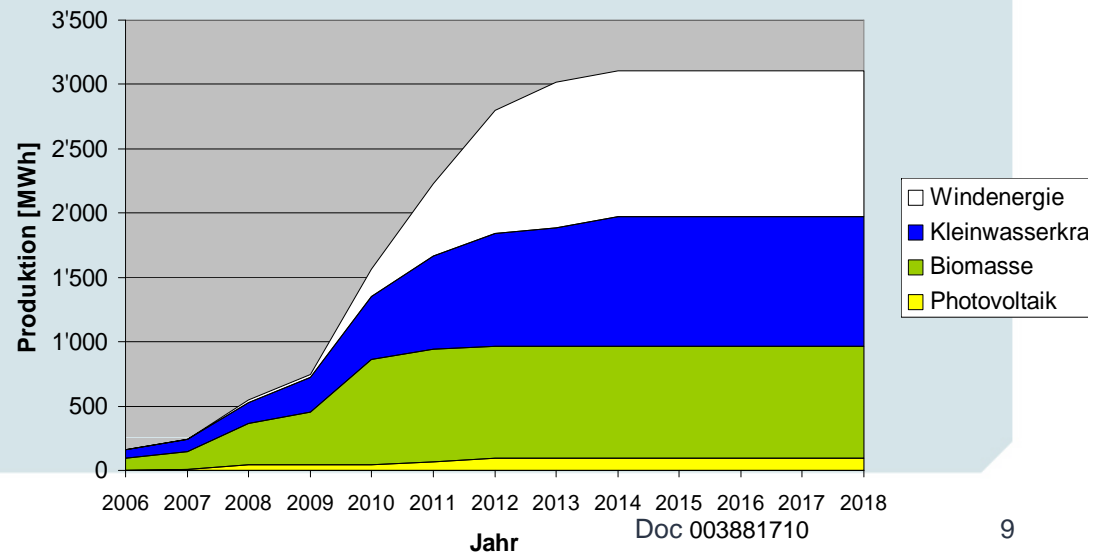
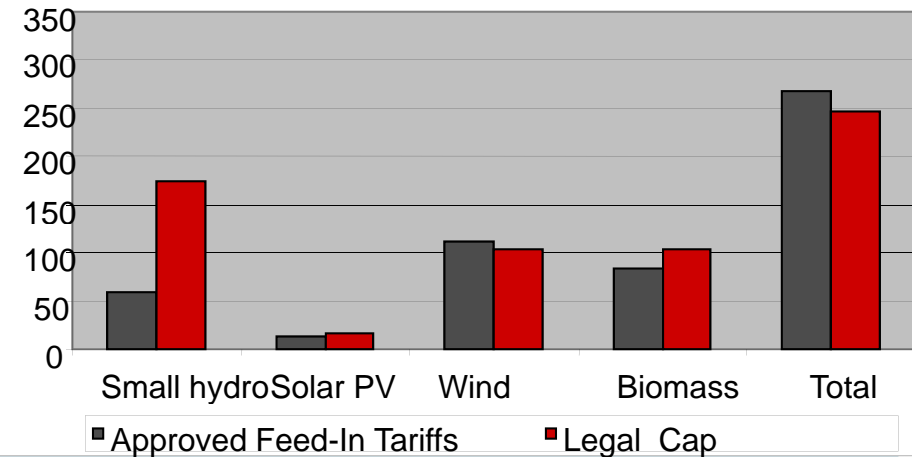


Renewable Energy: Electricity

Electricity Supply Law (2007)

- Target: +5.4 TWh p.a. by 2030
- Cost-covering feed-in tariffs
- Financed through 0.45 cent/kWh grid levy (legal cap at 0.6 cent/kWh, to be lifted to 0.9 cent/kWh from 2013)
- Twelve-fold increase of feed-in tariffs as from 2009
- Technology-specific caps

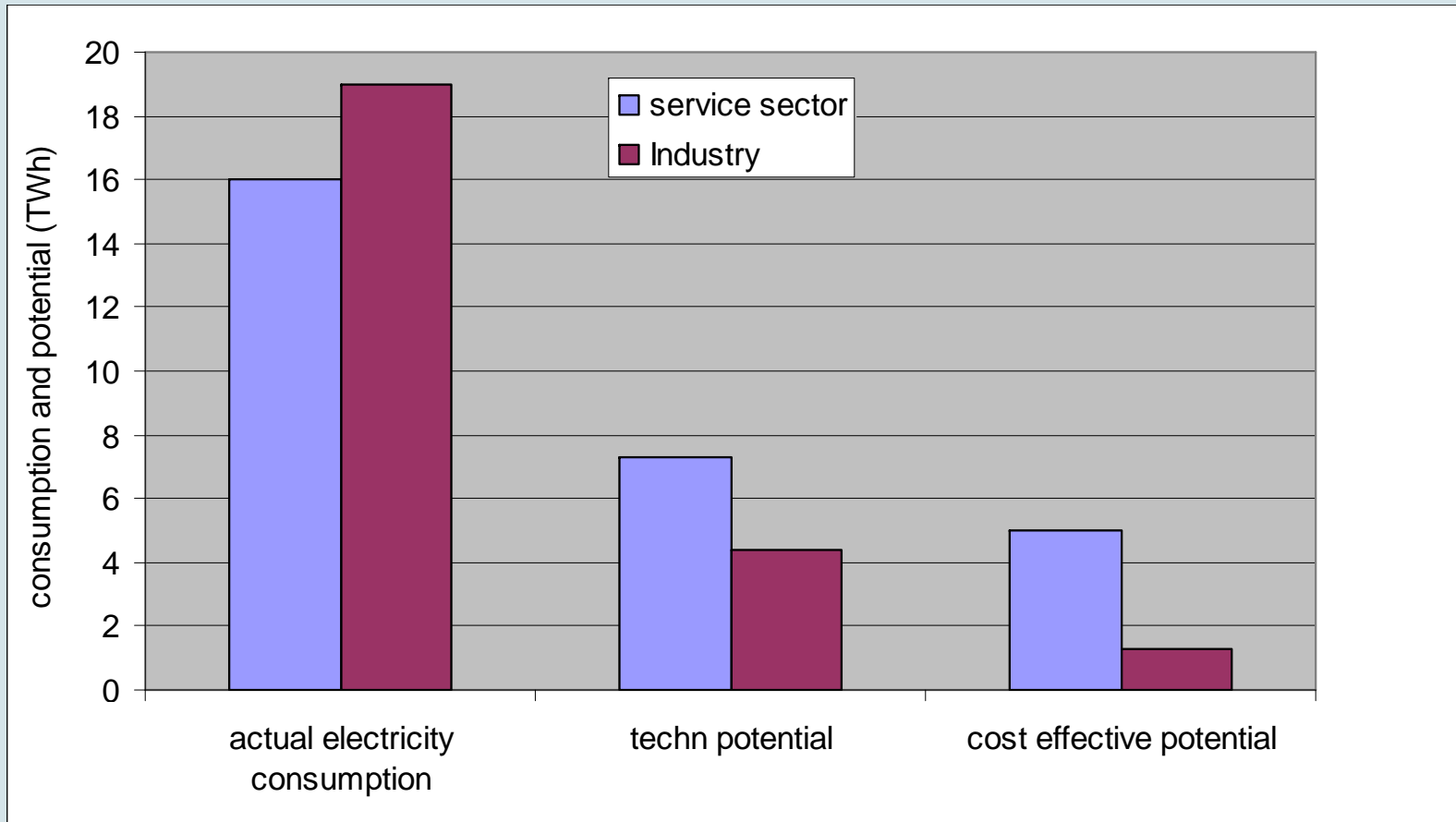
Million CHF



Doc 003881710



Electricity Savings Potential in Industry & Services





Existing Energy Efficiency Policies (I) CO2-Law and “SwissEnergy” Programme

CO2-law (2000)

- Minus 10% CO2 emissions
- 2 sub-targets: **Stationary** emissions: -15%, **transport** emissions: -8%

- **Transport** sector: Privately-run “Climate Cent” since 2005
1.5 CH¢/liter → CHF 100M fund per year: 0.4Mt/y domestic reduction; 2 Mt/y CDM

- **Stationary** sector:
 - Industry under cap & trade, exempted from CHF 36t/tCO2 tax if fulfilling agreed target
 - Until 2009: revenues fully recycled
 - As from 2010: part of revenues (CHF 200M out of CHF 650M p.a. earmarked for building refurbishment)

“SwissEnergy” (2001-2010)

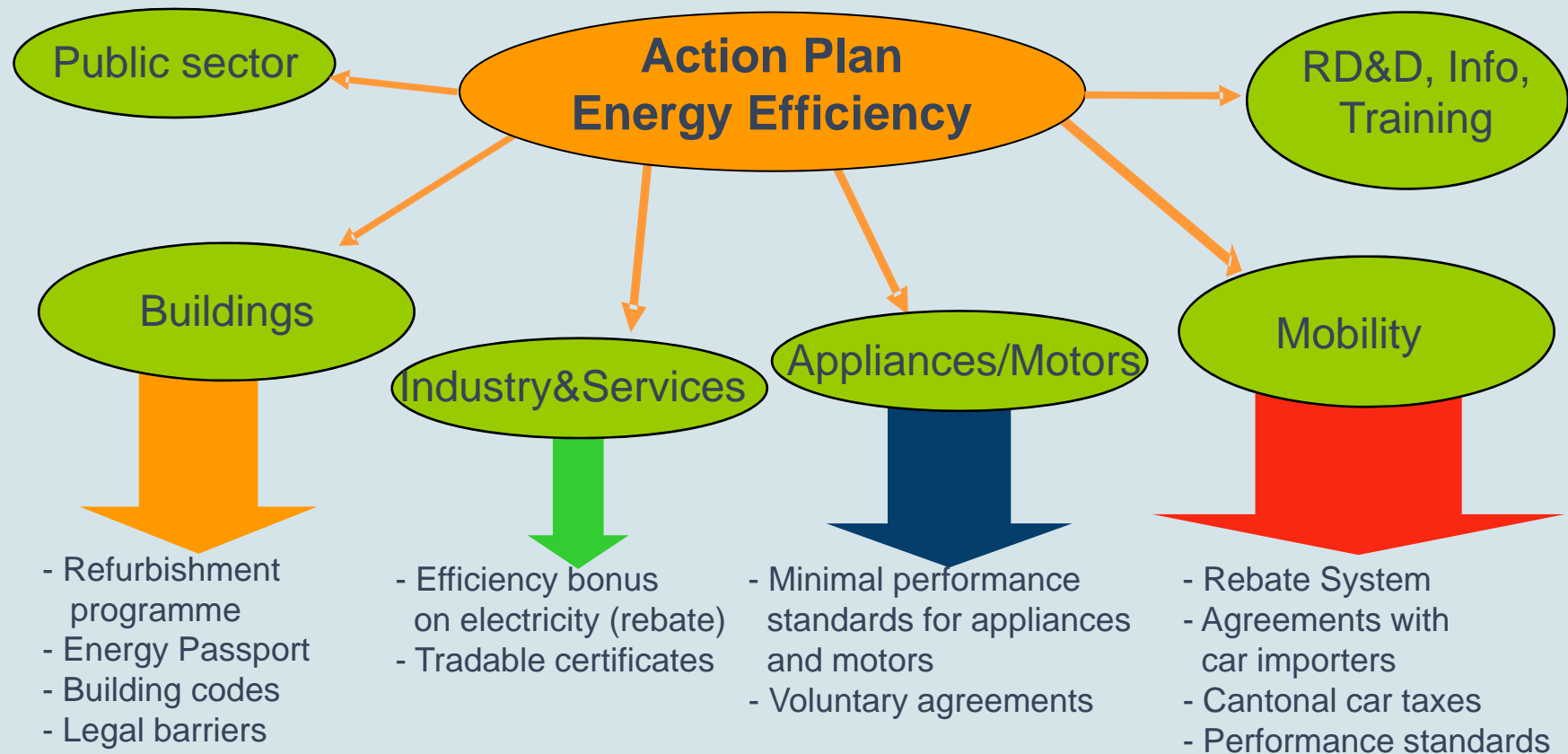
- Cap electricity demand growth at 5% during 2001-2010: + 9.8% 2009 vs 2000!



Energy Efficiency Policies (II)

Energy Efficiency Action Plan (2008)

15 measures





Energy Efficiency Policies (III)

Minimal Energy Performance Standards

(Revision of Energy Ordinance in force since January 2010)

- Household appliances: same regulation as EU or more ambitious!
- Electric Motors: same regulation as EU
- Lighting: same regulation as EU
- Home electronics: same regulation as EU
- Office IT: same regulation as EU

=> Electricity savings: approx. 300 GWh per year



Energy Efficiency Policies (IV)

Instruments targeting Electricity

- Electricity saving project tenders (CHF 9 Mio. p.a.)
- „Electric energy in office buildings“ standard; implemented by Cantons
- Performance mandates between Cantons and utilities; provision in the actual electricity market Act, but not implemented yet.

Planned Efficiency Bonus

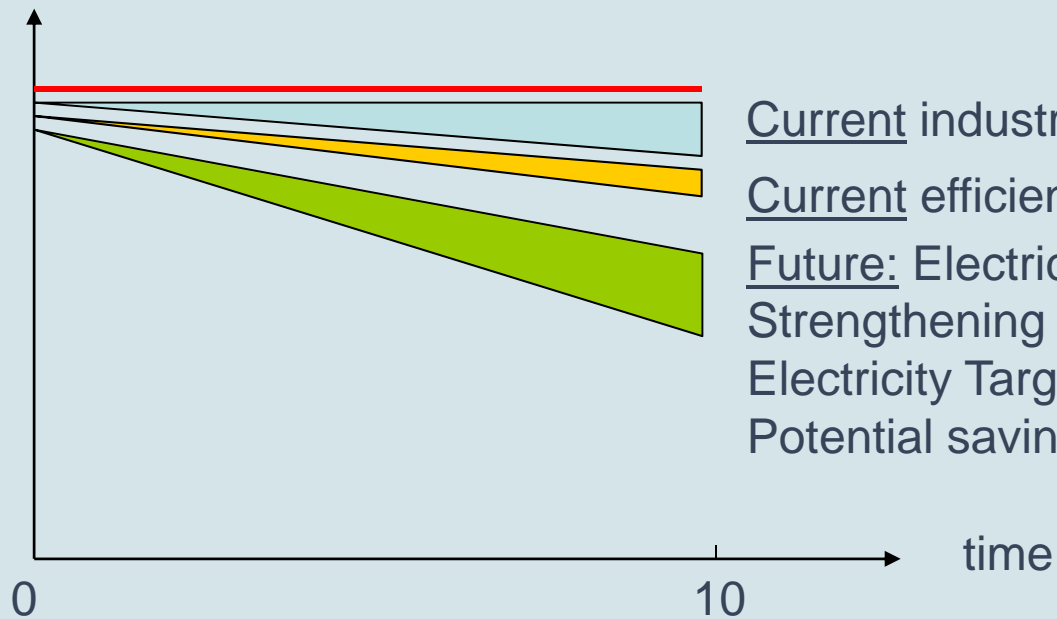
- Implementation of an electricity efficiency bonus to strengthen existing instruments (additional savings!)
- Bonus receives higher political acceptance than “incentive” tax



Additional Electricity Savings from New Instruments compared to minimal energy performance standards

Electricity consumption

Electricity savings after 10 years



Current industry agreements: 800 GWh

Current efficiency tenders: ca. 200 GWh

Future: Electricity Savings bonus?

Strengthening of Cantonal target agreement?

Electricity Target agreement with industry?

Potential savings: 1 bis 2 TWh

Goal: harvest economic and additional savings potential in existing installations;
New installations are assumed to be efficient; no need for „growth correction“



Thanks

Thank you for your attention