



Green Electricity Support in Austria and the Czech Republic

Expectations and Facts

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Content

- General problems
- RES-E in AUT and CZ
- Support instruments and their implementation in AUT and CZ
- Problems and success conditions

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General Problems

- **Growing Electricity Demand**
 - **Dependence on core technology**
 - Austria and hydro
 - Czech Republic and coal
- ▶ **Both countries have to look now for alternatives/ diversification!!**

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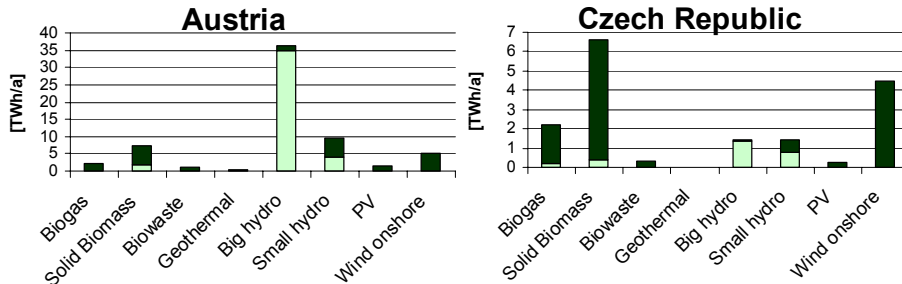
RES-E: definition and reasons

- **Renewable Energy Sources for Electricity (RES-E) are:**
 - Renewable (no fossil, nuclear)
- **and can help**
 - diversification and security of electricity supply
 - environmental protection and sustainable development
 - social and economic cohesion (e.g. new local employment)

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RES-E in AUT and CZ/1

○ RES-E potential



Light: already used **Dark:** additional mid-term potential

Source: EU Commission Report, May 2004

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RES-E in AUT and CZ/2

- EU Renewable Electricity Directive 2001/77/EC
- National targets, current and state estimated share

	Austria		Czech Republic	
	2002	2010	2002	2010
Target 2010	78.1%		8%	
Sum RES-E	68%	78%	3.9%	12.1%
Big Hydro	57.5%	62%	2.3%	-
Small Hydro	6.9%	9%	1.3%	1.4%
Wind	0.3%	2%	0.0%	1.3%
Solid Biomass	0.6%		0.7%	
Biogas	0.4%	2%	0.2%	6.7%
Photovoltaic	0.0%	0.0%	0.0%	-

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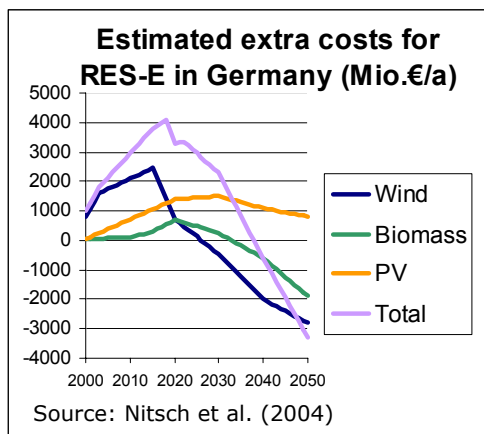
Why public RES-E support?

- New technologies cause
 - High R&D costs
 - High risk
- Learning curves
 - For PV, Wind power: 18% cheaper per doubling capacity
- Inertia of established companies
- SMEs with low capital structure
- Social, ecological and economic benefits

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Support budget

- At first high support budget needed
- Learning curve effect



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Support Scheme/1

- **Feed-in Tariff**
 - Guaranteed tariff per kWh
 - For a defined period (e.g. 10 years)
 - Purchase obligation for utilities
- **Quota Scheme**
 - RES-E Quota obligation for consumers (in GWh)
 - Green Electricity is sold under market conditions
 - Consumers have to buy Green Certificates

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Support Scheme/2

	Feed-in Tariff	Quota Scheme
Price	Political decision	Market prices
Quantity	Investment decision	Political decision
Investment Decision	Independent from other suppliers	Dependent from other suppliers
Technology Differentiation	Possible, different tariffs	Not possible
Used	in 16 EU countries	in 5 EU countries
Main Problems	O Cost efficiency O Budget calculation	O Investment security O Administrative costs

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Main Actors/1

- **Investors: decision dimension**
 - Support system risk
 - High for Quota Scheme
 - Low for Feed-in tariffs
 - Return on investment
 - Easy calculation with guaranteed tariffs
 - Estimation about certificate price

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Main actors/2

- **Politicians: decision dimension**
 - RES-E share
 - Success stories with Feed-in Tariffs
 - Low RES-E growth with Quota Scheme
 - Cost efficiency
 - Feed-in Tariffs: no prioritization of cheapest projects
 - No political price decision, Green Certificate price under competition

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Support Scheme in AUT/1

- **Feed in Tariffs since 2003**
 - Fixed for currently 13 years
 - Tariffs set by ministries and provinces
 - Paid by utilities and consumers
 - 15 MW limit for PV
 - Budget limit in terms of costs/kWh of total consumption
 - Variety of other support instruments
- **Results**
 - From 400 GWh in 2002 to 2,250 GWh in 2005 (excl. hydro)
 - Main technology: wind power (1,500 GWh)

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Support Scheme in AUT/2

- **Political Problems**
 - Complicated tariff and consumer fee setting
 - Budget limitation
 - Short-term costs discussion
 - JI and CDM cheaper for Kyoto Fulfillment
- **Investor's problems**
 - No long-term perspective
 - No clear signal about future support

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Support Scheme in CZ/1

- **Feed in Tariffs since 2002**
 - Set annually by Energy Regulatory Office
- **Results:**
 - From 950 in 2002 to 1,550 GWh in 2004
 - Main technologies: small hydro (low growth) and biomass co-firing (high growth)
- **Proposal**
 - Feed-in Tariffs for PV and projects < 0.2 MW
 - Regulated Green certificate for the rest
 - Monetary quota obligation
 - Minimum certificate prices for different RES-E
 - Certificates for 15 years

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Support in CZ/2

- **Political problems**
 - High energy cost share of salary
 - Coordination between MPO and MZP
 - Lack of Czech capital
- **Investor's problems**
 - Annually adjusted tariffs
 - Unclear legal role of ERU
 - No purchase guarantee in new support
 - Construction problems (public opposition against wind power, procedures for building permission)

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Conclusion/1

- **First general questions:**
 - What shall be the “system target” of the support?
 - Interrelations with other important political and economic sectors?
 - Do I want to achieve sustainable energy self sufficiency or just fulfill EU targets?
- **Decision of support scheme depending on**
 - Technologies’ stage of development
 - Regional potential of the different RES-E
 - Political and financial situation

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Conclusion/2

- **Success conditions**
 - Feed-in Tariffs work best
 - Clear political signals
 - Transparent legal framework and subsidies
 - Public discussion about long-term benefits

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Děkuji za pozornost!

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