Country Inputs
Austria
“Micro-CHP, Electric Vehicles”

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Content

- 1. Micro CHP
  - 1. Installed capacity until 2004
  - 2. Micro-CHP shares per application field
  - 3. Micro-CHP and CHP policy in Austria
  - 4. Possible control/use DSM
- 2. Electric vehicles
  - 1. Technologies used in Austria and actual situation
  - 2. EV Policies in Austria
  - 3. Experiences derived in Austrian fleet tests
  - 4. Technology development initiatives

1. Micro- CHP

1.1 Installed capacity until 2004 (Source: Preiner, 2007)

High shares of micro-CHP plants

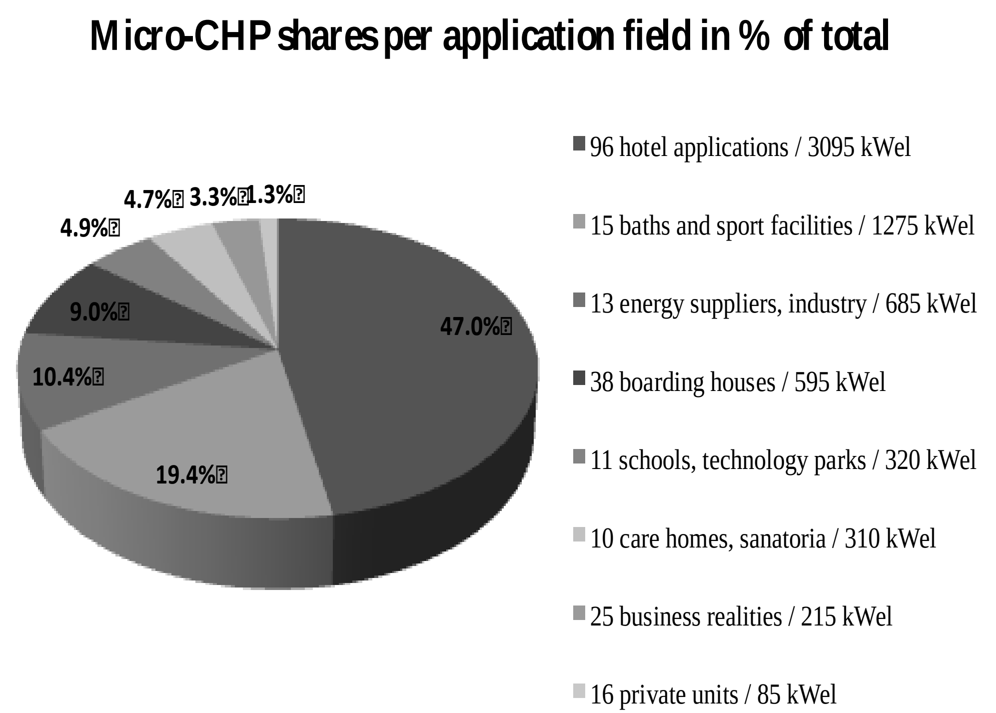
Rarely installed

Nominal power	Number of CHP-plants	Share in % of total plants	Total kW_{el} installed	Share in % of total kW_{el}
5 kW_{el}	305	78.6%	1525	23.2%
20 kW_{el}	8	2.1%	160	2.4%
30 kW_{el}	5	1.3%	150	2.3%
35 kW_{el}	3	0.8%	105	1.6%
40 kW_{el}	5	1.3%	200	3.0%
50 kW_{el}	3	0.8%	150	2.3%
60 kW_{el}	27	7.0%	1620	24.6%
70 kW_{el}	12	3.1%	840	12.8%
90 kW_{el}	17	4.4%	1530	23.3%
100 kW_{el}	3	0.8%	300	4.6%
TOTAL	388	100%	6580	100%

is installed frequently representing higher heat demands especially in tourism, trade and industry sectors

1. Micro- CHP

1.2 Micro CHP shares per application fields(Source: Preiner, 2007)



1. Micro- CHP

1.3 Micro-CHP and CHP policy in Austria

- On national level highly efficient micro-CHP generation units < 2 MW_{el} using natural gas or LNG (liquid natural gas) are applicable for subsidies of up to 25% of environmentally related investment costs.
  - Constrains: In general, the application for investment subsidies has to be initiated before the construction of the generation units begins.
  - Investment costs > 10,000€
  - Electrical usage factor >= 25%
  - Yearly Energetic usage factor >= 75%

- Generation technologies with renewable fuel sources are applicable for renewable energy Feed-In-Tariffs (depending on the fuel type and plant size).
  - 15 years grant for a Feed-In-Tariff of 7.8 c€/kWh can be achieved for biogas plants (agricultural by products) if the generation unit qualifies for an efficient cogeneration plant design.
- >2 MW_{el}
  - Max 10% of total investments (for sewage up to 30 %)
  - Units up to 100 MW_{el}: 100 €/kW_{el} (for sewage up to 300 €/kW_{el})
  - 100 to 400 MW_{el}: 60 €/kW_{el} (for sewage up to 180 €/kW_{el})
  - Units bigger than 400 MW_{el}: max. 40 €/kW_{el} (for sewage up to 120 €/kW_{el})

1. Micro- CHP

1.4 Possible control/use DSM

- Results from a national project micro CHP-Grid
- Aims: improve the economics of micro-CHP plants through innovative operation strategies (related to demand for heat), Analyze their effects on the low voltage grid and related cost savings.
- Operation Strategies:
  - Heat-driven operation
  - Power-driven operation
  - Network-driven operation
    - Management of generation in relation to local demand
    - peak load reduction of the local power transformer

1. Micro- CHP

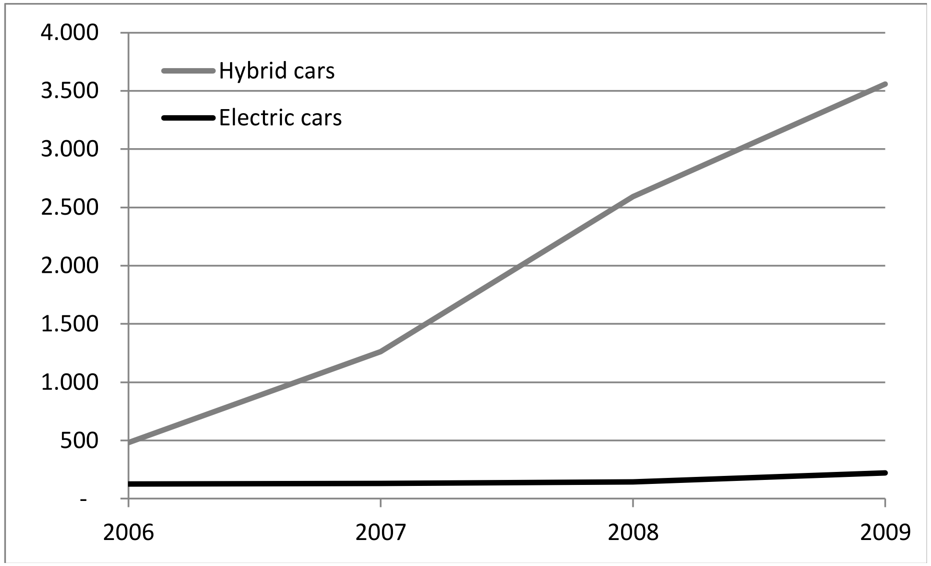
1.4 Possible control/use DSM

- The need for system maintenance is relatively high, which means high specific costs due to the small plant size (experience in plant operation).
- Micro-CHP units in the analysed power range (from 4.7 to 30 kWel) cannot be operated economically under current support conditions in Austria. (The result of the economic evaluation)
- Increased revenue from power sales (power-driven operation) in the range of 3.8% to 6.0% can be realized. As the cost for a larger buffer exceeds additional revenues, the power-driven operation for this plant is currently not economically feasible.
- Network cost savings due to grid loss and peak load reduction are significantly lower than net grid tariff savings (for customers).
- As shown in the project, a flexible CHP operation is possible in the summer and during the transitional period

2. Electric Vehicles

2.1 Technologies used in Austria and present situation

	2006	2007	2008	2009
Passenger cars	4,204,969	4,245,583	4,284,919	4,359,944
Hybrid cars	481	1,264	2,592	3,559
Electric cars	127	131	146	223



Source: Statistics Austria, 2010

2. Electric Vehicles

2.2 Subsidies

- One nation wide subsidy program that supports the acquisition of electric vehicles for commercial fleets of up to 10 cars or light-duty vehicles (with curb weight lower than 3.5 t) with 2500 € respectively 5000 € in the case that renewable electricity is used.

- Subsidies for the acquisition of electric cars in three of the nine federal states: up to 5000 € in Lower Austria, 1500 € in Styria, 750 € in Burgenland.

2. Electric Vehicles

2.3 Experiences derived in Austrian fleet tests

- ***VLOTTE* (western Austria);** The VLOTTE model region is one of Europe's biggest model region. The second phase of the implemented business concept towards e-mobility will address EV renting stations for customers. www.vlotte.at

- ***Electrodrive Salzburg (central Austria);*** *The special design of the Electrodrive initiative offers e-mobility leasing models directly to customers.* http://www.electrodrive-salzburg.at/

- ***Model region e-mobility on demand in Vienna (eastern Austria);*** *This model region will initiate publicly available e-mobility and charging infrastructure until 2012 via an e-mobility card in combination with Viennese public transport.*

- ***E-mobility Graz* (southern Austria);** In Graz the introduction of EVs and charging infrastructure will be done from a mobility system perspective. Above all, the utilization of EVs and public transport should become more attractive within the city of Graz. http://emobility-graz.at/

- ***Model region Eisenstadt* (eastern Austria);** In this model region the introduction of electrified taxis in combination with car sharing and car pooling is foreseen.

2. Electric Vehicles

2.4 Technology development initiatives

- ***EmporA;*** *EV development, system integration and future business and marketing models www.austrian-mobil-power.at*

- ***Clean Motion Oberösterreich;*** *improving of innovating competences and market situation of Austrian business in the car production sector*

Thank you for your attention

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