

# Energy Strategy Austria

## 1.) Framework:

EU's Climate and Energy Policy 20/20/20 Targets:

- a reduction in greenhouse gas emissions of at least 20% below 1990 levels
- 20% of energy consumption to come from renewable resources
- an increase in energy efficiency by 20 % by 2020 as opposed to a business-as-usual scenario
- Austria's 2020 Targets:
  - 34% share of renewable energy
  - 16% reduction of GHG emissions in non-ETS sectors

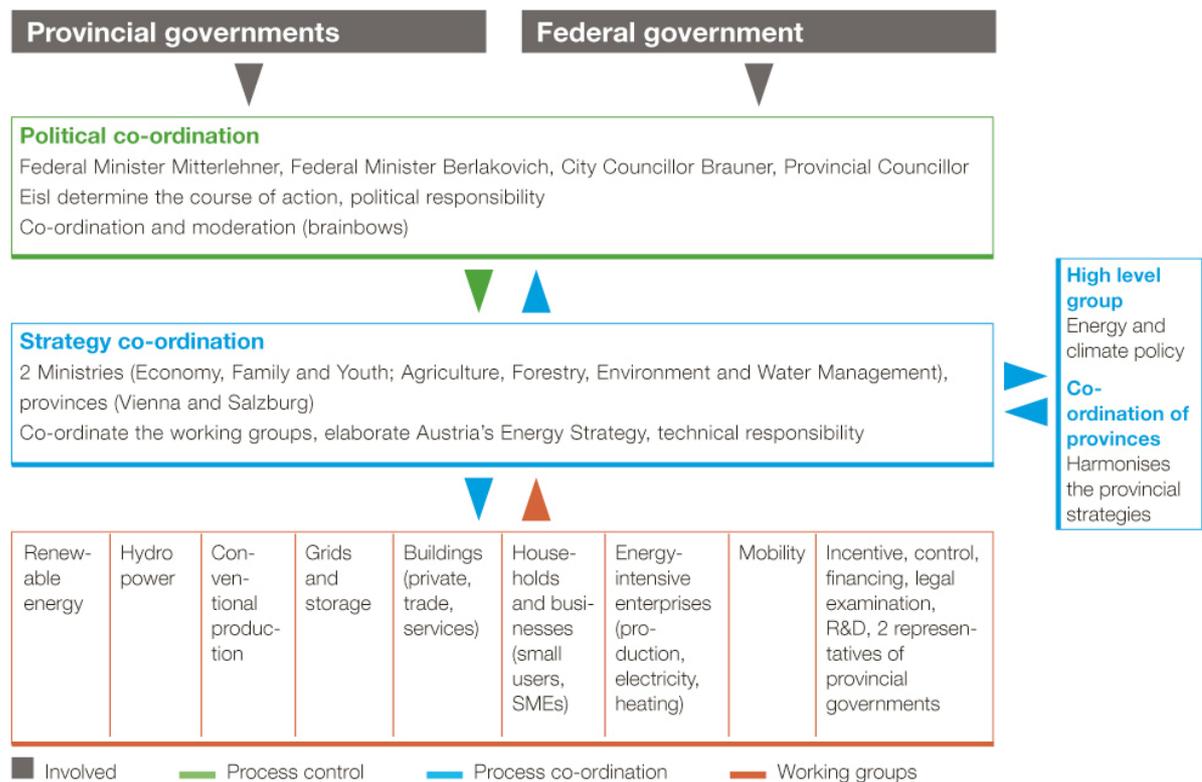
This legal, economic and ecological context makes the need for action clear. An energy strategy for Austria must therefore ensure that these objectives are reached by 2020 and set the agenda beyond 2020, thereby covering the entire energy system as well as incorporating international markets and availability of resources.

## 2.) Objective:

The objective of the Austrian Energy Strategy is to develop a sustainable energy system which makes energy services available for private consumption as well as for businesses in the future whilst implementing EU rules. Security of supply, environmental compatibility, cost effectiveness, social compatibility and competitiveness have been fixed as core objectives in the Austrian Energy Strategy.

### 3.) Stakeholder Process:

- *The Federal Minister of Agriculture, Forestry, Environment and Water Management and the Federal Minister of Economy, Family and Youth launched a comprehensive stakeholder process in April 2009.*
- *180 experts from the federal administration, Bundesländer, scientists, business, social partners, special interest groups and NGO discussed in nine thematic working groups and developed 370 recommendations for measures which were clustered into 42 measures by the strategy coordination group.*



Source: brainbows

### 4.) Structure:

*The strategy's three pillars:*

- *energy efficiency*: an improvement in energy efficiency at all stages of the provision and use of energy (e.g. new and refurbished buildings, sustainable mobility, implementation of energy management systems, spatial planning, etc.)
- *renewable energy*: focus on hydro power (including pump storage), wind power, biomass and photovoltaic
- *security of supply*: to be increased and aimed at the highest possible degree of cost effectiveness (e.g. district heating and cooling, new transmission networks, diversification of supply sources and routes, gas storage, smart grids and smart metering)

*Important element: **Stabilising the final energy consumption***

- *In order that the demand for services can be met in a way that is compatible with EU objectives, it is necessary to combat the trend of steadily increasing energy consumption. It was therefore essential to fix a target for final energy consumption in 2020.*
- *Based on current studies, research projects and scenario simulations, Austrian specialist institutions the Austrian Energy Agency, the national regulator E-Control and the Federal Environmental Agency have jointly recommended a target for 2020. To achieve the objectives of the Austrian Energy Strategy the specialist institutions regarded a stabilisation of final energy consumption on the basis of consumption in 2005 to be an indispensable basis.*
- *Hence, for 2020 the following objective was formulated: **The target for final energy consumption in Austria in 2020 is 1,100 PJ.** The Energy Strategy Austria which was presented to the public in March 2010 contains a comprehensive set of measures aiming to achieve this ambitious energy efficiency and saving target in all relevant sectors (see below).*

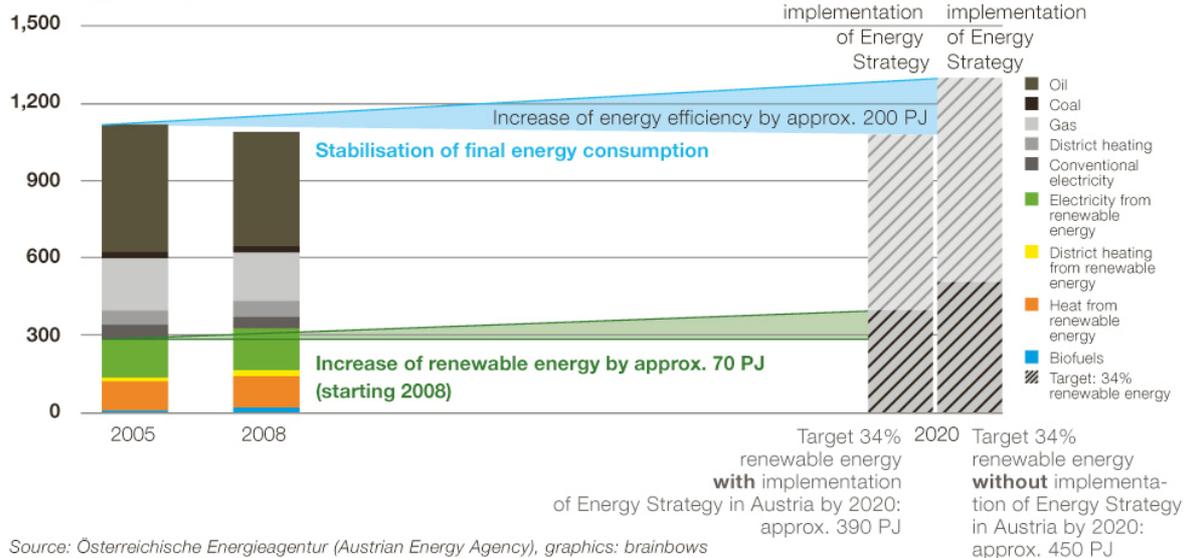
**Energy Strategy targets by sector**

		2005	Targets by sector	2020
		PJ	Percent	PJ
<b>Buildings</b>	space heating & cooling in residential buildings, offices and factories	337	-10%	303
<b>Residential buildings, factories, offices, farms, small users</b>	excluding space heating and off-road mobility	206	+10%	227
<b>Energy-intensive enterprises</b>	comprises iron & steel, chemical, non-ferrous metals, stone & soil, glass, paper and printing, wood industries (excluding space heating)	178	+15%	205
<b>Mobility</b>	including off-road vehicles	385	-5%	366
		<b>1106</b>		<b>1100</b>

Source: Austrian Energy Agency, Energie Control GmbH, Environment Agency Austria

**Energy Strategy model**

Final energy consumption in PJ



Source: Österreichische Energieagentur (Austrian Energy Agency), graphics: rainbows

- The diagram depicts the two scenarios "final energy consumption by 2020 **with** implementation of Energy Strategy" and "**without** implementation of the Energy Strategy. Stabilising the final energy consumption at 1.100 PJ corresponds to an increase of energy efficiency by approx. 200 PJ.
- The 34% renewable energy target can be achieved in 2020 if the Energy Strategy is fully implemented. This share would correspond to a final energy consumption of 390 PJ renewable energy by 2020, so an increase of renewable energy by approx. 70 PJ will be required in this scenario.

**The Energy Strategy in numbers (in PJ)**

	<b>2005</b>	<b>2008</b>	<b>2020</b>
<b>Oil</b>	496.0	444.2	362.3
<b>Coal</b>	24.8	24.3	27.3
<b>Natural gas</b>	202.7	187.8	191.2
<b>District heating</b>	55.1	62.2	59.0
<b>Conventional electricity</b>	57.7	44.1	42.9
<b>Electricity from renewable energy</b>	147.8	163.0	179.9
<b>District heating from renewable energy</b>	14.9	23.5	38.2
<b>Heating from renewable energy</b>	117.0	121.6	143.4
<b>Biofuels</b>	2.3	17.9	34.0
<b>Total renewable energy</b>	<b>282.0</b>	<b>326.0</b>	<b>395.6</b>
<b>Total final energy consumption</b>	<b>1,118.4</b>	<b>1,088.5</b>	<b>1,078.3</b>
<b>Consumption by energy industry and electricity/district heating losses</b>	37.7	43.2	36.6
<b>Gross final energy consumption*</b>	<b>1,156.0</b>	<b>1,131.8</b>	<b>1,114.9</b>
<b>Renewable energy share of gross final energy consumption</b>	<b>24.40%</b>	<b>28.80%</b>	<b>35.48%</b>

\* Final energy consumption + consumption by energy industry & electricity/district heating losses. Calculation basis for share of renewable energy according to EU guidelines  
Source: Austrian Energy Agency

- *The table "Energy Strategy in numbers" shows the development of final energy consumption in Austria (2005, 2008 and 2020) for conventional energy sources (oil, coal, natural gas, district heating and conventional electricity) as well as renewable energy sources (electricity from RES, district heating from RES, heating from RES and biofuels).*

**4.) Effects:**

- *80,000 workplaces are expected to be secured/created through the implementation of the Energy Strategy Austria*
  - *of which 40,000 through the measures in the field of building refurbishment*
  - *the other 40,000 through measures in the fields of production and services in industry and business, mobility, energy supply and energy security*

- *additional 31,000 workplaces are secured/created through measures for extension of high-level public transport infrastructure (Austrian Institute for Economic Research)*

## **5.) Summary:**

- *Overall, the Energy Strategy Austria does not only provide a realistic opportunity for reaching energy and emission reduction targets adopted on the EU level, but also provide a strong stimulus for the country's economy. It should thus secure and create "green jobs".*
- *The Energy Strategy Austria should be regarded as a long-term process. A controlling mechanism will be set up in order to evaluate the effects of implemented measures and adapt them if necessary.*