

Austria`s engagement in the IEA

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Federal Ministry for Transport, Innovation and Technology

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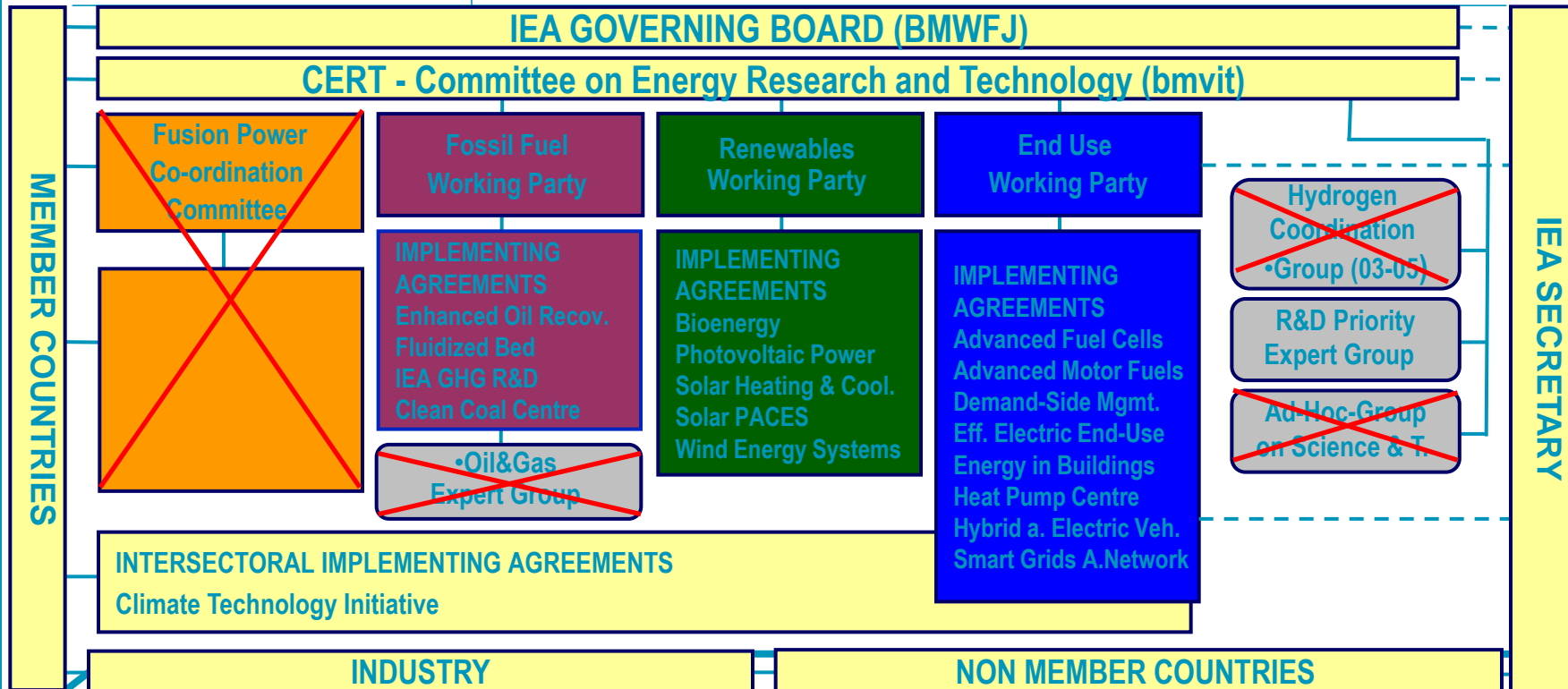
Austria in the IEA (I)

- 17 Implementing Agreements in 3 Working Parties, 1 expert group EGRD (R&D Priority Setting and Evaluation)
- around 55 projects (tasks /annexes) with Austrian participation in the Renewable Energy Working Party and the End-Use Working Party
- 4 cost shared – Implementing Agreements in the Fossil Fuel Working Party

Austria in the IEA (II)

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Fossil Fuel Working Party

- Enhanced Oil Recovery
- Fluidized Bed Conversion
- Greenhouse Gas R&D Programme
- Clean Coal Centre



Renewable Energy Working Party

- Bioenergy
- Photovoltaic Power Systems
- Solar Paces
- Solar Heating and Cooling
- Wind Energy Systems



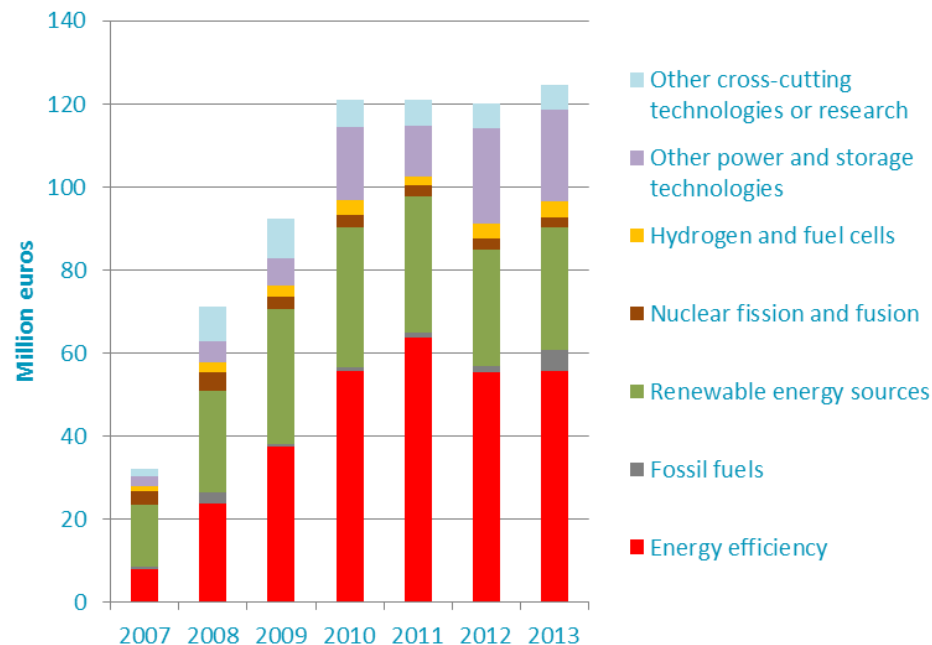
End-Use Working Party

- Demand Side Management
 - Advanced Fuel Cells
 - Advanced Motor Fuels
 - Hybrid and Electric Vehicles
 - Energy Conservation in Buildings and Community Systems
 - Heat Pump Programme
 - Efficient Electrical End-Use Equipment
 - International Smart Grids Action Network
- Annex 31: Polymer Electrolyte Fuel Cells*
Annex 33: Stationary Applications
Annex 34: Transport Applications
Annex 35: Portable Applications



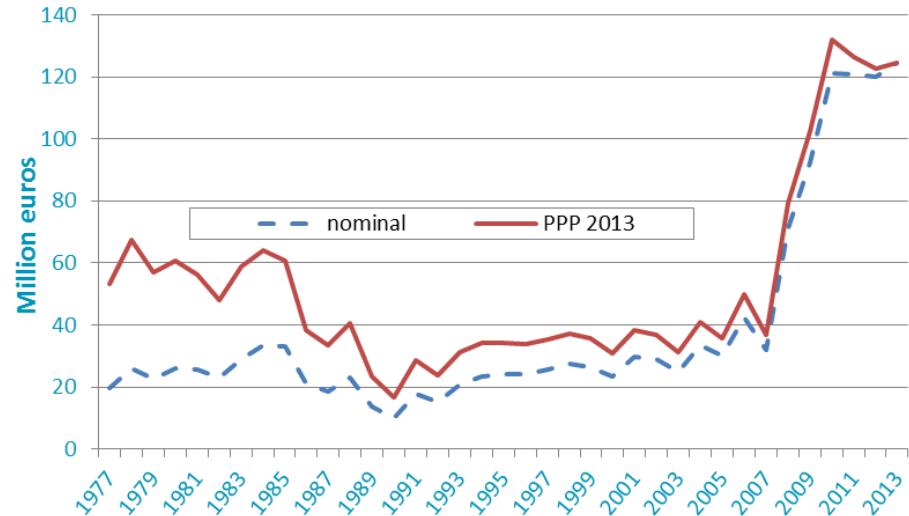
Public R&D expenditure

- In 2013, Austria's public expenditure for energy-related research and development amounted to 124,545,848 euros, increasing the expenditures of 2012 by 3.7%
- The research areas of energy efficiency, renewables, smart grids and storage define the priorities of the publicly financed energy research within Austria
- Survey carried out by the Austrian Energy Agency on behalf of the Federal Ministry of Transport, Innovation and Technology



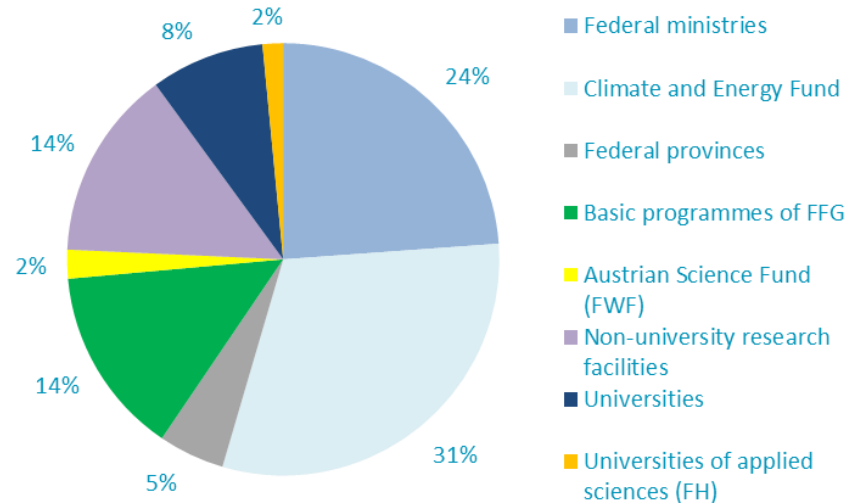
Public energy R&D expenditure in Austria 1977–2013

- During the last years, the high levels of R&D expenditure as experienced in the 1970s in consequence of the oil crises have (inflation-adjusted) again been reached and were even doubled since 2010



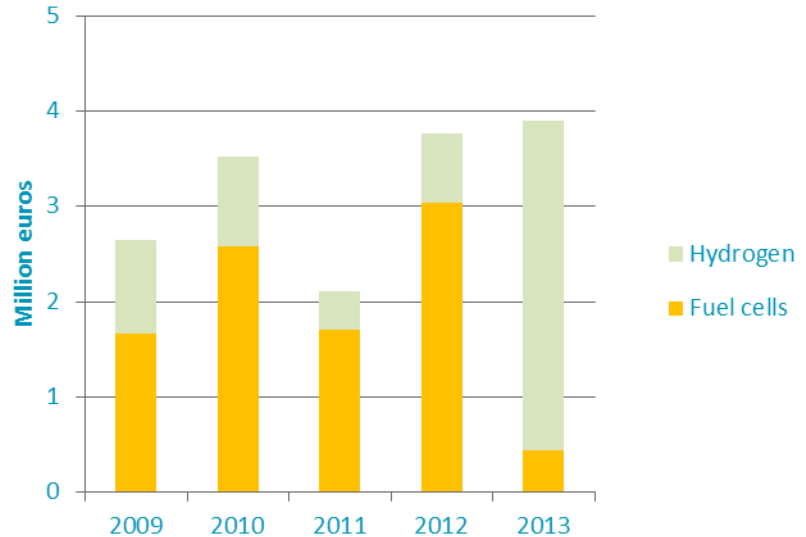
Who was financing?

- About three quarters of this expenditure were provided by governmental authorities (federal, regional, funding organizations)
- The remaining part came from (publicly funded) research institutions and universities provided in equity capital
- ✗ - No third party financing or EU projects were covered in this survey



Hydrogen and fuel cells

- 2012: RD&D focussing on fuel cells
- 2013: RD&D focus on production of hydrogen (primarily financed by the Climate and Energy Funds)



BMVIT research and innovation programme

“City of Tomorrow”

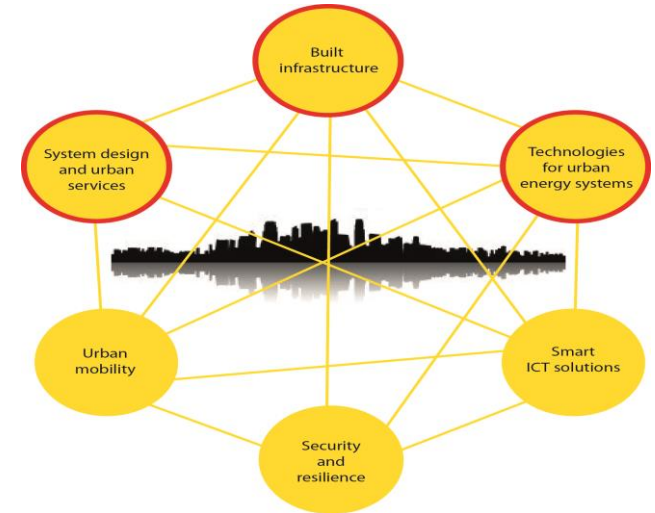
- Development of resilient cities and districts with high resource and energy efficiency, increased use of renewable energy and high quality of life
- Optimisation and adaptation of the urban infrastructure and extension of urban services
- Strengthening Austrian technology leadership and international competitiveness

Special features of the programme

- Focus on neighbourhoods, districts and cities
- Strategic choice of key areas and topics
- Technologies and parts of technological systems
- Development of contributions to planning and processes
- Interdisciplinary methods and ways of working
- Connectivity: national (Climate and Energy Fund, aws,...), international (SET-Plan, JPI Urban Europe,...), thematic (mobility, ICT, ...)

Topics

- Multitude of topics for the city of tomorrow
- System technologies and necessity of development in regard to energy
- 3 thematic areas for 1st call:
 - **System design and urban services**
 - **Built infrastructure**
 - **Technologies for urban energy systems**
- Participation and inclusion of residents and users



Energy research programme 2015

- **35 million EUR budget** according to the annual programme
 - 3 million EUR for emerging technologies (basic research)
- **Start of the programme:** May 2015
- **Submission deadlines** (12 h via <https://ecall.ffg.at>):
 - **2015-09-23:** requested funding max. 2 million EUR
 - **2016-02-25:** lead projects (requested funding >2 million EUR)

Focus FC/H₂

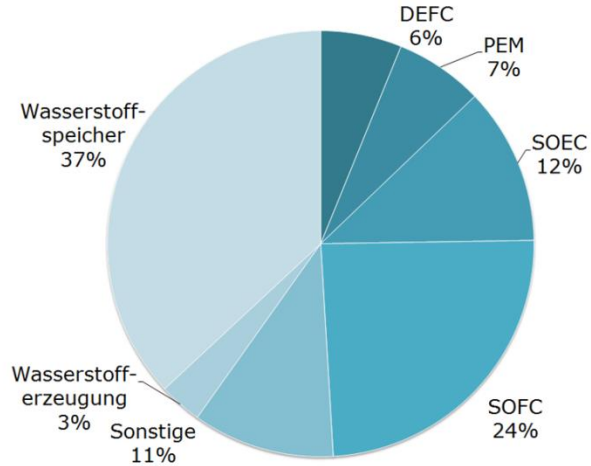
- Objectives:

- Reduction of the production costs by increasing the power density and life span
- System optimisation and optimised production of H₂/CH₄ along the entire chain

- Funding topics:

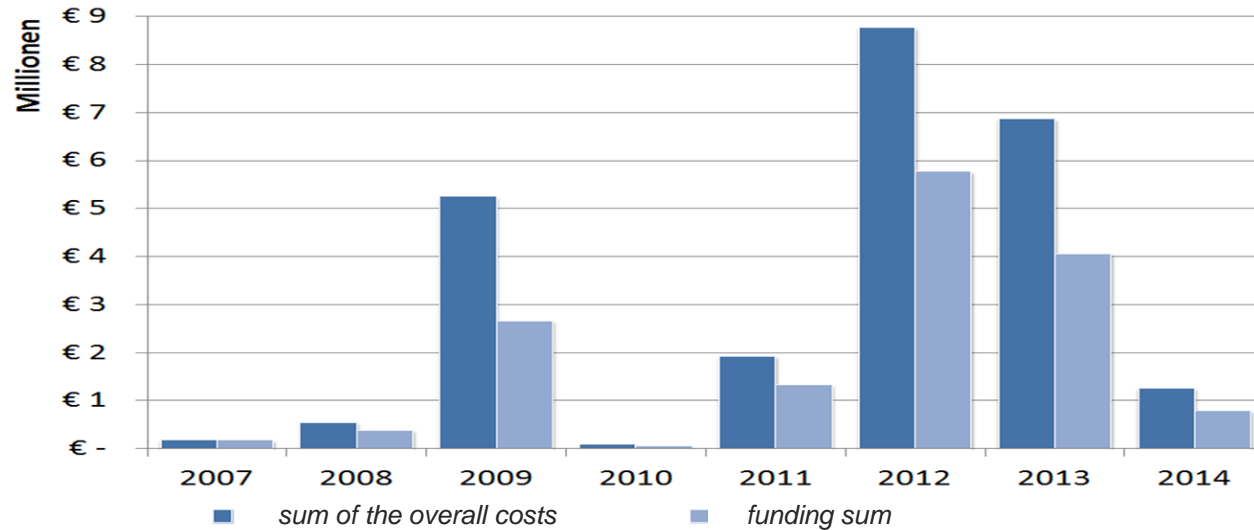
- new materials,
- efficient and flexible electrolysers,
- fuel cell components (e.g. stacks, electrolytes, membranes, sensors),
- simulation tools,
- measuring and test systems,
- (high dynamic) test rigs and
- accelerated aging tests

FC/H₂ – research at a glance (I)



- 22 projects
- 15 million EUR funding
- 25 million EUR overall costs
- 692,000 EUR average funding
- 1.2 million EUR average overall costs

FC/H₂ – research at a glance (II)



Further information

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www.smartcities.at

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