

The Austrian Climate Change and Energy Fund: Promoter of Structural Change in Energy Efficiency and Climate Protection

Policy Paper

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Table of Contents

Mission Statement	3
Fundamentals and Success Criteria	3
Why Austria needs a Climate Change and Energy Fund?	3
When is the Climate Change and Energy Fund a particularly suitable partner?	3
Why is the Climate Change and Energy Fund particularly effective?	4
Principles and Temporal Perspectives	4
Principles	4
Temporal Perspectives	5
Effective short-term measures to reduce CO ₂ emissions	5
Effective medium-term measures to reduce CO ₂ emissions	5
Effective long-term measures to reduce CO ₂ emissions	5
The Funding Programmes of the Climate Change and Energy Fund	5
General characteristics of the funding programmes	5
Integrated Programmes	6
Research Programmes	6
Improvement Potential from the Perspective of the Expert Advisory Board	7

Mission Statement

The Climate Change and Energy Fund has since its inception delivered clearly visible impetuses for the Austrian Climate Policy and the restructuring of the Austrian Energy System. Among the best known original programmes of the Fund include, among others the Model Region Programme (Climate and Energy Model Regions, Electromobility Model Region), the Model Refurbishment Programme, the Smart Cities Initiative and the Austrian Climate Research Programme (ACRP). These programmes address three features at the same time:

(1) the transition to energy systems having increased energy productivity and a higher proportion of renewable energies.

(2) the transformation of society and economy towards environmentally conscious behaviour and active climate protection at the level of communities, cities and regions.

(3) the development of climate change adaptation and mitigation strategies.

The Climate Change and Energy Fund therefore creates additional value to that of other existing funding instruments.

Fundamentals and Success Criteria

Why Austria needs a Climate Change and Energy Fund?

The Climate Change and Energy Fund:

- - provides additional resources for climate protection and energy transition.
- - seeks solutions for highly topical energy and climate issues across sectors, instruments and institutions and promotes networking and coordination between different funding bodies in the area of energy and climate protection technologies.
- Promotes to a particular extent innovation and addresses cross-cutting themes more intensely than sector-based funding programmes.
- is focused on long-term effectiveness.
- is in the field of research impartial and does not prejudge the results, its programmes and processes are transparent, and the results are publicly available.
- can address issues that are not (yet) on the political agenda.
- supports and enables solutions that are economically more sustainable than CO₂ compensation payments, and promotes climate protection in our own country.

When is the Climate Change and Energy Fund a particularly suitable partner?

When it comes to dealing with cross-cutting themes and holistic considerations that go beyond institutional, legal funding and sector-based boundaries.

During the establishment of new partnerships between academia, business, government, politics and civil society (e.g. between federal level, regional and local level, and business and civil society).

Where innovation is to be developed and accompanied from its "invention" through to its "roll-out". Here, the Climate Change and Energy Fund can, due to its systemic approach and the integration of different funding guidelines in all project phases, operate as a reliable partner.

In the case where knowledge exchange, as well as a presentation-platform for initiative and innovative multipliers is needed.

As a promoter of projects that to a particular degree provide awareness of climate change and energy transition.

Why is the Climate Change and Energy Fund particularly effective?

It pursues a systemic, integrated approach by connecting programme lines in different phases of the invention and dissemination of energy-efficient and climate-friendly products and solutions. In particular it is aimed at achieving the closest possible link between research and market penetration in a cross-programme manner.

It focuses on the long-term effective, energy efficient and climate-friendly conversion of spatial and economic structures. Important contributions are achieved through coupling technological support channels with demonstration programmes of the Climate Change and Energy Fund at local and regional levels (e.g. Model Regions, Smart Cities).

It encourages and promotes good examples and best practice solutions and encourages researchers, businesses and civil society to picking up and demonstrate these solutions. It relies on multipliers, such as in the Model Region Programmes and so called "lighthouse projects" in areas like building refurbishment and e-mobility.

Through its research programmes it has intensified climate and energy-related research in Austria and contributed significantly to the building-up of the much needed scientific expertise in Austria.

By improving local energy efficiency and energy resources within the supported projects, the national energy system value creation is increased and the technology expertise of Austrian companies is also strengthened.

In the long term, the participation and co-responsibility of civil society for the energy system and the climate protection should be strengthened. The way to do this is to increase the participation of citizens in energy efficiency and energy supply projects (keywords: building renovation, citizen power plants). The issue of energy transition and climate change should especially be anchored in the minds of young people.

Principles and Temporal Perspectives

Principles

- The Climate Change and Energy Fund has a long-term perspective extending well beyond 2020.
- The Climate Change and Energy Fund focuses more on long-term effective structural changes, rather than short-term successes.
- The guiding principles for the work of the Climate Change and Energy Fund were from the beginning on: "low energy", "low carbon" and "low distance". The simultaneous consideration of these factors can not be achieved solely through technological innovation, but requires a systemic approach.

- The Climate Change and Energy Fund relies on the interaction of increased energy productivity and increasing the proportion of renewable energy sources, as well as a balanced mix of emission mitigation and climate adaptation measures.
- The foundations for the long-term systemic change are application-related research projects concerning energy systems and improved energy productivity, and climate change, as well as to an increasing extent the socio-economic transformation.

Temporal Perspectives

Pursuant to the Austrian Climate Fund Act, the Climate Change and Energy Fund is encouraged to make significant contributions to reducing greenhouse gas emissions in Austria and to promote respective projects that contribute especially to large GHG reductions. It pursues this mission by promoting measures in three temporal perspectives and sets in each case the following priorities:

Effective short-term measures to reduce CO₂ emissions

- Highest priority for efficiency and economy measures.
- Identifying and overcoming barriers to the market diffusion.

Effective medium-term measures to reduce CO₂ emissions

- Prioritization of projects that contribute to sustainable change and transformation of the energy systems.
- Testing the market viability of technologies and solutions based on demonstration projects.
- Wide dissemination of innovative concepts and solutions, as well as promoting structural and awareness change through Model Regions and Best Practice programmes.

Effective long-term measures to reduce CO₂ emissions

- Research into social transformation and application-oriented technology development aimed at achieving an environmentally and socially acceptable energy and economic system largely independent of fossil fuels.

The Funding Programmes of the Climate Change and Energy Fund

General characteristics of the funding programmes

The funding programmes set specific system-changing impetuses.

Not a "watering-can system", but rather a support of clearly defined strategic objectives and partly with multi-year funding priorities.

High priority given for exemplary, model-like, multipliable solutions: awareness raising "Lighthouses", Best Practice demonstration projects and industry solutions.

Particularly intensive networking of research, technological implementation and commercial "Roll-Out".

Provide a balanced mix of programmes having technological focus, and programmes that serve the transformation of economic policies and lifestyles.

Avoidance of rebound-effects (i.e. compensation of efficiency gains through increased consumption) and lock-in situations (i.e. investment in technologies with long service lives, which then determines the technology standards for several decades to come).

Integrated Programmes

Examples of Climate Change and Energy Fund integrated programmes are funding programmes in which local authorities (regions, cities) are involved, Lighthouse and Best Practice programmes with large consortia and multi-year duration, pilot projects having demonstration characteristics, as well as awareness programmes and training activities.

In the integrated programmes in which the connection between research and dissemination should be established, three dimensions of change are addressed:

- (1) Climate change - mitigation and adaptation.
- (2) Transition to energy systems having significantly increased energy productivity and an increased proportion of renewable energy sources.
- (3) Continuous implementation of energy-efficient and climate-friendly solutions and behaviours through socio-economic transformation.

The integrated programmes create in many cases "test-beds" for the first phase of market introduction of new technologies and solutions. They often build on successful research and technology development projects and include the identification and overcoming potential market barriers.

Research Programmes

In research policy terms, the following paths are followed by the research programmes of the Climate Change and Energy Fund:

- They relate thematically to the programmes of the EU SET-Plan, the Energy Strategy and the Austrian Climate Strategy, as well as to the Austrian Research, Technology & Innovation Strategy (FTI), and the Energy Research and Climate Change Adaptation Strategy.
- They complement existing sector-based research programmes and combine applied research, prototype development and demonstration of energy and climate protection technologies with the implementation of these technologies in operational, regional and local energy systems.
- They thereby create, to a particular degree, a link between the researcher community and the users of research results in businesses and local authorities. Stakeholders who are responsible in later stages of the innovation for the implementation of new technologies, products and solutions are increasingly being involved during the research phase in the innovation cycle. What in the classical application-oriented RTD only occurs during technology development, is in research programmes of the Climate Change and Energy Fund extended to systemic innovations that include not only technology development, but also the diffusion of new technologies and solutions in social and economic practice.

An example of the "spill-over" of technology-based research into practice is for instance, the implementation of new e-mobility technologies in specific regional mobility systems that focus on problems of the real economy (e.g. the logistics of commuting within urban areas), as well as the implementation in the form of industry solutions. A new aspect is the inclusion of particular regional and regional initiatives in the application-oriented research.

The research programmes of the Climate Change and Energy Fund:

- Are open to new methodological approaches and tackle current problems.
- Open up new fields of research in which they explore environmental, social and economic impacts of climate change and climate protection measures and also analyze "response strategies" (e.g. climate impact research in the Austrian Climate Research Programme ACRP).
- Strengthen the build-up of disciplinary and interdisciplinary research skills in Austria concerning energy and climate.
- Provides insight on opportunities and barriers to the implementation of energy efficiency and climate protection technologies and measures, and studies the conditions required to enable the necessary behavioural changes.
- Aims at a significantly high level of participation by planning and manufacturing companies, local authorities and intermediary organizations.
- Supports regions, cities and metropolitan areas in the search for organizational and technologically innovative, economically viable and socially acceptable solutions for their energy and mobility systems.

Improvement Potential from the Perspective of the Expert Advisory Board

- Focus on system-changing programmes:
According to the Expert Advisory Board, the effect of the Climate Change and Energy Fund could be increased if the proportion of system-changing funding was increased, the programme-lines better linked and new research and implementation programmes would be introduced which promote social transformation and increase the role of the younger generation.
- Expansion of the evaluation criteria:
CO₂ savings per € are short-sighted and will not do justice to the duties and performance of the Climate Change and Energy Fund. The Expert Advisory Board requests the introduction of supplementary indicators to reflect the systemic and long-term effects on households, businesses and the economy¹

Organizational arrangements:

- Extension of the policy baseline of the Climate Change and Energy Fund.
- Budgetary sovereignty for the Climate Change and Energy Fund in the sense of a real fund with independent controlling bodies.
- Increase budget funds and ensure their long-term security.
- Introduction of the multi-annual principle for programmes and budgets.

¹ e.g. Increasing regional added value, strengthening international competitiveness, improving the standard of living, reducing budget expenditures, promoting good health, prevention of forced mobility, more comprehensive scientific competence, avoiding lock-in effects, and much more.