Guide for proposers for the 2nd call: Electromobility's Technical beacons

Vienna, March 2010

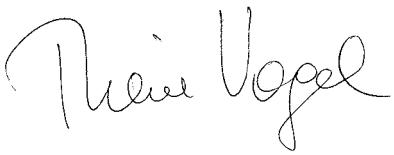
Version 1.0

Electromobility's Technical Beacons is the research and demonstration programme of the Climate and Energy Fund in the area of sustained mobility and energy supply, and takes into account the special strategic concerns and focus areas of the Climate and Energy Fund. The second call for „Electromobility's Technical Beacons" addresses the focus „Beacon initiative for alternative drive systems - Vehicles with electric primary engines and energy supply infrastructure" of the 2010 annual programme of the Climate and Energy Fund.
The grant programme therefore supplements the ongoing calls for issues of electric mobility in BMVIT (in particular A3plus) and the Climate and Energy Fund (New Energies 2020), and draws a line to the development, presentation and visibility of Austrian technical innovations in the area of electric mobility that are close to market.

Table of Contents

Introduction

The first call of the programme "Electromobility's Technical Beacons" already garnered considerable interest last year. The beacon projects which the jury considered as eligible for assistance truly deserved the distinction of "beacon" and were widely discussed in the public. It also showed the ability of the Climate and Energy Fund to pick up on a timely topic: electric mobility is here to stay.
The future belongs to electric vehicles. Soon they will be part of everyday life. By the year 2020, it is expected that several hundred thousand electric vehicles which are charged via the electric grid, and so-called plug-in hybrid vehicles, will be driving on Austria's roads. To achieve this scenario, a number of initiatives have been created to ensure that Austria becomes a leading market for electric mobility in the coming years. This strengthens Austria's global competitive position and at the same time promotes climate protection.
In combination with electricity from renewable energy sources, electric vehicles ensure modern and climate-compatible mobility that also relieves the stress on resources. The only way an electric vehicle can become a true zero-emissions vehicle is through the use of green electricity. Both future technologies are part and parcel of the same concept, since the batteries of parked electric vehicles will in the future be connected to the electricity grid and therefore serve as buffer storage for the fluctuating electricity yields provided by wind power turbines and solar power plants.
The potential offered by electric mobility can only be fully exploited with an accelerated market introduction. At the forefront of this development are new types of cooperation, such as those between vehicle manufacturers and energy suppliers, the development of legislative requirements as well as new technical standards for vehicles and charging stations, along with future-oriented regional and urban planning, or the testing of new business models.
The call Electromobility's Technical Beacon in/from Austria is meant to provide an important impulse in this regard. This grant programme supports the close-to-market development and demonstration of such innovative and trendsetting projects. In this vein, the Climate and Energy Fund picks up from existing programs for energy and transportation research. Furthermore, joint efforts by industry and governments are designed to implement measures to promote innovation, linkages with renewable energy sources, increasing user acceptance as well as the market preparation and market introduction of electric vehicles.
In this context I cordially invite you to submit your future-oriented pilot and demonstration projects and wish you all the best with your submission!



DI Theresia Vogel
General Manager, Climate and Energy Fund

DI Ingmar Höbarth
General Manager, Climate and Energy Fund

01. Key items at a glance

The Climate and Energy Fund supports technology-oriented beacon projects on e-mobility issues in Austria (technological beacons). Eligible for participation are companies based in Austria, research institutions and public administrations, which form project consortia consisting of at least two participants.

Cooperative relationships, the use of synergies, and the creation of linkages with other projects from the Climate and Energy Fund programmes - such as e-mobility model regions, New Energies 2020 and Electromobility's Technical Beacons (1st call) - are in particular demand. To fully address the concept of a beacon, particular emphasis has been placed on large volume project submissions (minimum project volume of EUR 2 million).

The topics consist of technical innovations in the following areas:

- Vehicle technologies (including electricity storage)
- Infrastructure technologies (intelligent charging stations, integration into the grid and similar)
- Applications and users (integration into transportation system and similar)

Submissions must address all three main topics, but are not required to implement each of the technological component according to chapters 3.1 to 3.3. EUR 7.7 million in grants have been made available for the call.

The call "Electromobility's Technical Beacons" is open from 22 March 2010 to 27 July 2010.

Complete applications must be submitted to the FFG via eCall by 27 July 2010, at noon, https://ecall.ffg.at/ Forschungsförderungsgesellschaft (FFG), Thematic programmes section Sensengasse 1, 1090 Vienna

Due to the possibility that technical problems may arise shortly before the submission deadline, it is recommended that you do not wait until the last 24 hours to file your submission. Advance registrations for obtaining Climate and Energy Fund project numbers (obligatory) can be found on the homepage of the Climate and Energy Fund www.klimafonds.gv.at

1.1 Submission forms and language

The forms available on the FFG homepage must be used for submission purposes: www.leuchttuerme-e-mobilitaet.at.
The submissions must be prepared in English.

1.2 Information and advice

Österreichische Forschungsförderungsgesellschaft (FFG) (The Austrian Research Promotion Agency)
E-Mail: leuchttuerme-e-mobilitaet@ffg.at
www.leuchttuerme-e-mobilitaet.at

1.3 Process and judging

Submitted project applications will be formally reviewed by the FFG. Projects containing an investment cost portion will also be reviewed by Kommunalkredit Public Consulting (KPC). Reviewing as regards technical aspects and contents will be carried out by independent national and international experts, whereby all persons involved in the evaluation procedure or jury meetings will be committed to secrecy with regard to information that will be made available in line with performing their functions in this regard. In line with the reviewing process, applicants will be invited to a hearing with the programme committee, consisting of the jurors, BMVIT, the Climate and Energy Fund, and the FFG and KPC. Furthermore, internal FFG experts will also review the applications with regard to the economic feasibility (financial strength) of the participating companies.

Boundary to the programmes "Model Region Electric Mobility" and "New Energies 2020"
While the progamme "Electromobility's Technical Beacons" intends to assist Austrian technologies on their way to final market readiness, the progamme "Model Region Electric Mobility" consists of market-ready and mature technologies with new business models that are introduced to a broader public. The aim should also be to achieve synergies and linkages between projects from both programmes. The integration of technological beacons into existing or evolving model regions for electric mobility is not a prerequisite for receiving grant funds.

Thematic boundaries to the programme New Energies 2020
(www.neue-energien-2020.at) are achieved by the fact that calls for New Energies 2020 involve the optimisation of conventional drive technologies and drive sections for energy efficiency and emission reduction, and are limited to micro- and mild-hybrids with regard to the electrification chain of vehicles.

02. Direction and objectives of the programme

2.1 Starting situation

The technological trend in the passenger car segment displays a clear trend towards the electrification of the drive section. Many large and also smaller vehicle manufacturers are undertaking research programmes to develop technologies intended to provide more sustainable mobility in the future. Both traditional and newer automotive supplier industry are working on new solutions. Energy supply companies are also rethinking their role, and are working on innovative infrastructure and business models. In short: many new and traditional players are investing a large portion of their research budgets in technological innovations.

At the same time, a considerable gap still exists between consumer demand and technological supply. In particular topics such as driving range and battery performance are still considered some of the greatest challenges to closing this gap. Therefore there exists a great need to accompany future-oriented technologies one step closer towards reaching the market. Technological beacon projects support this strategy by combining innovative technologies into (part) systems on an application- and user-oriented basis. The challenge of combining (integrating) and coordinating (adapting) different technical components in complex functional systems requires intensive research and development activities, which form the last technological development phase before industrial production and market introduction.

2.2 Visions and goals

The future belongs to electric vehicles. "Electromobility's Technical Beacons" secure the R&D competence field of electrified Austrian drive technologies, prepare the Austrian production location for technological change and ensure that innovations become visible and can be experienced in daily life.

The objective of Electromobility's Technical Beacons is to achieve national and international attention for Austrian technologies. They are designed to prove that these technologies can be used in everyday life in Austria. At the same time, this programme sends out an important signal to global partners and customers of Austrian research and industry.

2.3 Programme direction

The grant programme for "Electromobility's Technical Beacons" was initiated on the premise that a changed energy system plays a key role in the ability to solve energy consumption problems. It builds on the results and experiences gained in the progamme "A3plus" and "New Energies 2020" and also takes into account the special concerns and focus points of the Climate and Energy Fund.

The programme is oriented along three basic lines:

Efficient use of energy
Because of their higher efficiency as compared to conventional vehicles, electric vehicles also feature a much more efficient drive section. Electric mobility also requires the efficient use of energy. This relates to the efficient conversion of electric energy from the grid through the battery to mobility with as little loss as possible. On the other hand, efficient energy and resource use must also be considered for the production or recycling of technologies (life cycle costs). Energy is also used efficiently if new mobility models are able to avoid, reduce or replace routes in an energy-efficient manner (e.g. electric scooters instead of cars).

Intelligent energy systems
Intelligent energy systems are able to achieve an optimal balance between supply and demand. Excess capacities are avoided, and a better integration of renewable energies can be achieved. Supply and demand are influenced by information and communication systems with "price" as the information carrier. Intelligent "Vehicle to Grid" solutions, which use "Smart Meter" and „Smart Billing" applications, represent classic examples for future-oriented efficient and intelligent energy systems.

Systematic solution approaches ranging from energy production, through infrastructure to energy consumption in the vehicle are indispensable items for intelligently coordinated mobility models.

Renewable energies
Although electric mobility, even with the use of fossil energy in Austria, features specific advantages over conventional mobility with regard to pollutant emissions, it is the consistent use of renewable energies for electricity supplies that really highlights the advantages of electric mobility as compared to fossil mobility. The only way to reduce CO_2 emissions towards zero is to use renewable energies.

In addition, other pollutants such as NO_X and particular matter can also be completely avoided. Volatile renewable energies - such as sun and wind power - can be stored in batteries and are therefore available for a larger range of applications.

Renewable energy and electric mobility will enter into a symbiosis in the future, and will also strengthen each other based on this mutual dependence.

2.4 Programme strategy

The intention of this programme is to combine technical innovations and long-term perspective into convincing systems and lead them closer towards the market. In this vein, the focus will be on application- and user-oriented technological system solutions in and from Austria, i.e. transportation- and mobility-relevant projects which are becoming particularly visible due to their technical and organisational system view, degree of innovation, scope of innovation integration or competitive advantage.

The technological representation and testing of the technical applications should mainly be carried out in Austria, however, global application-oriented cooperative projects are particularly sought after if they feature an advanced level of maturity. (For eligibility details, please see 4.3.3)

Regional economic players and public consumers are to be actively involved. A willingness to cooperate with already existing or new consumer-oriented "Model Regions for Electric Mobility" is a given.

The technical innovations should provide multiplicable results which are profitable in the sense that they secure workplaces and provide new green jobs. The basis for this should be provided by new Austrian electric drive technologies with considerable unit volumes. The trust of future consumers into the future capabilities of new Austrian drive technologies are to be created in the public's mind. The programme aims to initiate at least two "Electromobility's Technical Beacons" in Austria.

2.5 Programme goals

To achieve the superordinate goals of the Climate and Energy Fund, several individual goals have been defined in line with the programme's orientation.

1. Energy-strategic objectives

1.1 Safeguarding the sustainability criteria: sustainable on an economic, ecological and social level

1.2 Increase in resources and energy efficiency

1.3 Reduction in import dependence for energy carriers

1.4 Reduction in energy requirements through measures taken by consumers

1.5 Development and ascertainment of regional and economic structures which protect the climate in the long term

1.6 Improving the knowledge of long-term developments, their costs and effects

2. System-related objectives

2.1 Reduction in the consumption of fossil and nuclear energy carriers

2.2 Development of resources re: renewable energy carriers

2.3 Improving conversion efficiencies

2.4 Development of key technologies

2.5 Development of a diversity of options as regards technologies and energy carriers

2.6 Multiplier effects, leverage and signal effects

2.7 (Cost) efficiencies of greenhouse gas reductions: EUR per tonne CO_2 equivalent per year, beyond Kyoto period and technical-economic useful life of the investment

3. Technological-strategic objectives

3.1 Support innovation claims (e.g. "Factor 10 Technologies")

3.2 Increase domestic value-added share in the energy system

3.3 Driving forward cooperation and partnerships between research and industry

3.4 Strengthen interdisciplinary cooperation and system thought

3.5 Increase competitiveness through improved resource efficiencies

3.6 Strengthen international cooperation and expansion of international leadership role

3.7 Promotion of qualifications in the energy and climate protection area, and expansion of research location

3.8 Strengthen the technological and climate competence of Austrian companies

3.9 Generate secondary benefits or spin-offs based on a technology

Abb: 2.1

03. Call topics

As part of this "Electromobility's Technical Beacons" call for calls, the Climate and Energy Fund promotes the further development of existing and the development of newly required technological components in vehicles and infrastructure, and directly connected investments, with the objective of producing application- and user-appropriate integrated system solutions during the pilot and implementation phase.

Call topics consist of technological innovations in the following areas:

1. Vehicle technologies (including electricity storage)
The electrification of the drive section requires the use of new technological components for vehicles with two or more wheels. The complex interaction of these components in the vehicle itself, but also with new infrastructure technologies, poses a great challenge for vehicle development and requires intensive cooperation on the part of different players and industries. This will inevitably result in a more efficient use of energy for the cars of the future. Electric drive forms offer a great potential in this regard. New innovative vehicle concepts and uses (two and more wheels) are being developed. The substitution of driving activities involving passenger cars with new attractive electrified products seems possible. Pollutants and noise - the current problems for transportation - will be virtually eliminated. Urban areas, but also indoor applications, benefit from the local freedom of emissions by using electrified vehicles.

2. Infrastructure technologies (intelligent charging stations, network integration and similar)
Electric mobility poses different and new challenges to existing infrastructures, and requires new and intelligent solutions. This includes changes in the "hardware", i.e. transportation system, particularly in the area of resting traffic and the production and distribution of renewable energies. New requirements apply with regard to communication and the interfaces between vehicle and infrastructure (innovative charging, communication and billing interface technologies). Intelligent infrastructure systems are able to optimally coordinate supply and demand, and prevent bottlenecks related to the use of charge infrastructures or excess capacities in energy production. The use of renewable energies is a basic prerequisite for sustained electric mobility. New infrastructure technologies allow for the integration of renewable energies.

3. Applications and users (integration into transportation system and similar)
Electric mobility is stimulated by user-appropriate applications in different vehicle categories and performance classes. There is a need for innovative products that address the mobility and transportation requirements of private and commercial users, whether for motorised individual and recreational transportation or the requirements of fleet and logistics operators. Mobility concepts with the ability to integrate will start to play an even more important role in bringing about synergies between new technologies and multi-modal transportation and use concepts. For this reason, user requirements must be the focus of development activities for new mobility applications from the beginning. This applies to mobility and transportation applications in

cities and urban regions, as well as goods transport and logistics applications of the future.

The three following themes are essential to an integrated examination in the respective project phases (R&D start and pilot phase, R&D implementation phase), and for this reason each beacon project will be required to look at each of the three thematic issues (possible to create key focus areas):

3.1 Vehicle technologies (including energy storage)

- Electrical drive systems which are based on new technological possibilities, materials and production and manufacturing methods (in particular demand: extreme light weight construction, polymers for storage as well as for other vehicle components, and new materials in order to achieve Factor 10 effects).
- Integration and optimisation of technological individual components into the vehicle (e.g. innovative hybrid concepts, range extender concepts such as the combustion engine module and fuel cells which use renewable energy (e.g. PEMFC, SOFC, etc.) for electrified thrust, vehicle electronics for energy-efficient steering, improvements to controls and system management)
- Technological innovations for energy storage (batteries, high-performance condensers, flywheels), fuel cells and renewable energy carriers used for the same (including tank technologies)
- Further development and new approaches for integrating electric motors, batteries and performance electronics (incl. generator units, storage, operating and charge strategies and optional independence from the grid (extensive charge performance) in view of the improvements to range and driving performance)
- Development and optimisation of electrical and electronic components (including ancillary power trains) and their integration into the vehicle
- Optimisation of materials and manufacturing processes to lower the costs of batteries (incl. increase in specific energy and performance as well as energy and performance density, increase in the life cycle and cycle stability, further development in view of rapid charge patterns for Plug-in and EV batteries, improvement to safety features, increase in effective storage volume and extending temperature range at market-compatible costs)
- Development of electric vehicles (electric drive) as prototypes
- Development of vehicles and components for series production of electric vehicles, taking into account product life cycle (production, repairs, recycling etc.)
- Monitoring to assess wear and tear characteristics and reliability of technological components

3.2 Infrastructure technologies (intelligent charging stations, grid integration and similar)

- Development, testing and market introduction of system components from existing and new technological components for charging or filling of vehicles along concrete specifications (roadmap) for public areas or commercial and private use
- Concepts, simulations, development and demonstration for supplying electric vehicles with electricity (charge and discharge) from fluctuating renewable sources (wind, solar) as well as renewable energy carriers (hydrogen) from central and decentralised energy productions and storage.
- Charge control strategies and charge concepts for optimising grid capacities or an optimised adaptation to production peaks
- Development of concepts and technologies for feeding electricity back into the grid, as well as using electric vehicles to stabilise the electricity grid
- Development of concepts, technologies and standards for rapidly charging electric vehicles in reference to international developments and characteristics for electric vehicles which are shortly before market introduction
- Development, installation and system testing of charge and fill installations with innovative data, communication and billing technologies (incl. definition and establishment of interfaces and communication protocols) to avoid peak charging times, control and billing systems for small customers
- Tests and simulations regarding safety requirements and integration into the grid
- Development of integrated recycling and subsequent use concepts for storage batteries

- Development of tools to forecast mobility patterns and driving plan management with regard to decentralised storage (portfolios) for renewable energies
- Illustration of scenarios for domain-spanning data modelling on the basis of developed interfaces
- Development and demonstration of cross-border capable infrastructure systems (hardware, standards)
- Training of operators and employees for handling and maintenance purposes

3.3 Applications and users (integration into transportation system and similar)

- R&D solutions for the integration of innovative two- and multi-wheeled electric vehicles and vehicle components into the transportation system (incl. options for transport organisation for transportation operators)
- Development of intermodal transport simulations and concepts to integrate new electric vehicles into the overall transportation system, as well as for the assessment of the interplays in the system (society - co-modal transportation - economy - ecology).
- New forms of mobility management and the integration of electric mobility into the overall transportation system using coupled IT systems
- Development of technological solutions for specific application and user behaviour regarding energy requirements over time
- R&D regarding requirements and acceptance of new technologies and developed business/billing models by private and company users.
- Analysis and development of business models for the introduction of electric mobility with "Made in Austria" technologies, with regard to national general conditions (logistics and control), cross-border markets and V2G technologies.
- Investigation of user behaviour in existing Austrian and international model projects, and use of thus recorded user and customer requirements for implementing Austrian series production (units > 5,000), based on technological mobility solutions developed in Austria
- Study of general conditions required to effect a rapid introduction of electric mobility, from the view of users (infrastructure, vehicle prices (battery leasing), subsidies, taxes and fees, conditions of use etc.)
- Study of user behaviour and requirements for normal and rapid charging, as well as V2G (Vehicle to Grid) applications
- Qualification and continuing training for practical handling of new drives
- Conception and development of new job profiles, courses and training in the area of electric mobility
- Implementation of approval and certification procedures
- Use of regional linkage points in the electric mobility value chain
- Transferability based on regionally and supra-regionally coordinated concepts
- Inclusion of motivated regional players (avoidance of „insular solutions")
- Consideration of different requirements ("subsidiarity")
- Using the creativity of regional initiatives
- Consideration of urban planning and urban construction aspects

Furthermore, the beacon projects may also provide optional project-supplementing concepts, roadmaps and recommendations regarding the sustainable utilisation of project results, transfer to series production and market introduction as an integrating project component (or accompanying measures).

- Development of technological roadmaps and recommendations for the system architecture in the area of electric mobility
- Development of roadmaps for market introduction regarding customer segments and vehicle types
- Development of policy recommendations for achieving the ecological and site-specific objectives and objectives related to technology policy in the area of electric mobility.
- Development of concepts to network and connect existing regional initiatives and to avoid insular solutions

04. Administrative notices

4.1 Eligible applicants

- Industrial economy companies: industry, large companies, small and medium-sized companies, consulting companies, service providers, trading companies, operating companies
- Scientific institutions: institutes of universities and applied science universities as well as research facilities outside of university. Private universities which have been accredited according to the federal law on the accreditation of educational institutions as private universities (University Accreditation Law - UniAKKG) may not receive any cash-equivalent benefits from the federal government pursuant to Section 8 of the UniAKKG. Accordingly, these private universities are not eligible to participate.
- Other scientifically oriented organisations such as competence centres, clusters, associations
- Public administrations at all administrative levels in line with their administrative and organisational responsibilities for national framework conditions, and in their role as vehicle and infrastructure operators (investment costs for demonstration facilities are only eligible for this group of applicants if it concerns operations with market-determined activities)

As regards this call, scientific institutions as well as other scientifically oriented organisations may appear as project partners, i.e. companies are not required to include the same into the consortium via a subcontract. International project partners may only be co-financed with grant or financing from their respective country of origin.
Cooperation, the use of synergies and the creation of linkages with other projects from the Climate and Energy Fund programmes - such as e-mobility model regions, New Energies 2020 and Electromobility's Technical Beacons (1st call) - are particularly sought out. In general, the project application must describe any cooperative relationships, and must make provisions for the corresponding interfaces to coordinate the cooperation for the projects.

4.1.1 Project volume

To fully address the concept of a beacon, there is particular emphasis on large volume project submissions (min. total project costs of EUR 2 million).

4.2 Budget

EUR 7.7 million in grants have been made available for the second call.

4.3 Project types and general terms

Definition of a beacon project
In line with this call, a beacon project denotes a cooperative R&D project that aims to combine new and existing technologies for vehicles and infrastructures into functional systems in an application- and user-appropriate manner. For this reason, the focus is on outstanding projects that use an interdisciplinary approach and are carried by the companies, with the support of research institutions and other scientifically oriented organisations and public administrations (e.g. communities), in order to demonstrate examples of new developments and system solutions based on an integrated approach.

Grant period for a beacon project
This call covers a project period of three years. The detailed project description and calculation of the project submission must include the R&D start and pilot phase, as well as the implementation phase during a maximum time period of three years. Any additional descriptions and cost assessments for the market (transfer) phase do not form a part of the call but should still be included in the project schedule.

4.3.1 Cooperative projects
As part of the second call for the Electromobility's Technical Beacons, only cooperative projects may be submitted.

Cooperation is deemed to exist when one organisation is the project applicant ("coordinator"), and at least one other project partner is involved in the project at a minimum level (defined below).

The cooperation criterion is deemed to be fulfilled if
- the project involves effective collaboration between at least two undertakings which are independent of each other and the following conditions are fulfilled:
  - no single undertaking must bear more than 70% of the eligible costs of the collaboration project;
  - the project must involve collaboration with at least one SME or be cross-border, that is to say, the research and development activities are carried out in at least two different Member States.

or
- the project involves effective collaboration between an undertaking and a research organisation, particularly in the context of co-ordination of national R&D policies, and the following conditions are fulfilled:
  - the research organisation bears at least 10 % of the eligible project costs;
  - the research organisation has the right to publish the results of the research projects insofar as they stem from research implemented by that organisation.

The "applicant" (project coordinator) maintains contact with the funding agency, submits the proposal and manages the payment transactions. Furthermore, the applicant is responsible for coordinating the contents of the work and for reporting to the FFG.

4.3.2 Consortium agreement
Successful applicants will be required to set out the rights to intellectual property and the procedure for the publication of results with all project partners as part of a consortium agreement, prior to concluding the grant agreement. The conclusion of such a consortium agreement is a necessary requirement for establishing the grant, and is also a requirement for the payment of the first grant instalment.

While the exact details of such agreements remain at the discretion of the project partners, the Climate and Energy Fund and FFG emphasises that the rights of individual project partners are to be maintained. This must be judged on a case-by-case basis, but it may mean avoiding constructs that set out an exclusivity clause for rights of use which only apply to companies. At minimum, the research institution should have the right to further use the results for research purposes or for use in markets in which the involved companies are not active.

The conclusion of a corresponding consortium agreement thereby sets out the rights and obligations of the partners and highlights the cooperative and non-discriminatory character of the joint work undertaken. A copy of the consortium agreement must be submitted to the FFG.

A sample consortium agreement which can be used as a tool for successful project cooperation can be found at: http://www.ffg.at/konsortialvertrag.

4.3.3 Notices regarding international project cooperation

Trend-setting beacon projects will be expected to be able to conform to international standards. In line with beacon projects, cooperation and coordination costs related to achieving a stronger international integration are eligible for grant purposes.

Furthermore, it is principally possible to enter into international project cooperative relationships. The submitting party and main contract carrier must be companies, research institutions or universities domiciled in Austria. However, costs related to the foreign project partners may be co-financed by subsidies or financing from their respective countries of origin. Applications for co-financing of this type must be submitted separately in the respective countries. There are existing cooperation agreements with several European countries, which facilitate the joint project evaluation and financing of costs for project partners from these countries.

4.3.4 Project types and financing intensities

Beacon project applications may consist of a pure research portion or a research and investment portion. The amount of the grant will be governed by the eligible costs on the basis of the FTE guideline for the research portion or the UFI guideline for the investment portion.

R&D projects / Project type

"Experimental development" means the acquiring, combining, shaping and using of existing scientific, technological, business and other relevant knowledge and skills for the purpose of producing plans and arrangements or designs for new, altered or improved products, processes or services. These may also include, for example, other activities aiming at the conceptual definition, planning and documentation of new products, processes and services. The activities may comprise producing drafts, drawings, plans and other documentation, provided that they are not intended for commercial use.

The development of commercially usable prototypes and pilot projects is also included where the prototype is necessarily the final commercial product and where it is too expensive to produce for it to be used only for demonstration and validation purposes. In case of a subsequent commercial use of demonstration or pilot projects, any revenue generated from such use must be deducted from the eligible costs. The experimental production and testing of products, processes and services are also eligible, provided that these cannot be used or transformed to be used in industrial applications or commercially. Experimental development does not include the routine or periodic changes made to products, production lines, manufacturing processes, existing services and other operations in progress, even if such changes may represent improvements;

FTE guideline: Cooperative experimental development is eligible for grants covering a maximum of 40% - 60% of allowable project costs (depending on the participating partners).

Fact Box "Experimental Development"

Project form	Only cooperative projects
Reference value for the project term	3 years
max. grant intensity of companies Research institutions Other	 small 60%; medium 50%; large 40% 60% 50%
Allowable costs	• Labour costs • Overhead • FTE investments and depreciation • Travel costs, material costs • Subcontractor (see www.ffg.at/Kostenleitfaden)
Exploitation rights	Are the responsibility of the grant recipient or project consortium and must also be set out in the consortium agreement

Table 4.1

Fact Box "Investment portion"	
Project form	Only cooperative projects
Reference value for project term	3 years
max. grant intensity of environment-relevant additional investment costs (KPC „Domestic Environmental Subsidy")	max. 40% of environment-relevant additional investment costs, but never more than 30% of environment-relevant investment costs
Allowable costs	Investments in line with „Guideline for domestic environmental subsidy" – are such which relate to transportation measures and facilities tied to a particular location and include in particular transport methods. Facilities and equipment goods, services such as construction work, installation, planning services.

Table 4.2

Investment portion
UFI Guideline: Investment costs are eligible for grants covering up to 40 % of environment-relevant additional investment costs, but never more than 30 % of environment-relevant investment costs.

4.4 Eligible Cost

Beacon projects are eligible for grants as part of the Electromobility's Technical Beacons programme. They may consist of both an R&D relevant portion (FFG grant) as well as an investment portion (KPC grant). Allowable costs to this end have been defined in accordance with the guidelines of the FFG and KPC funding agencies. For questions, please contact the persons listed under Contacts (Section 7).

4.4.1 Allowable R&D relevant costs (FFG grant)
Information on eligible costs and special billing requirements by cost type can be found in "Guideline for handling project costs related to grant applications and reports". (ww.ffg.at/Kostenleitfaden)

4.4.2 Allowable investment costs (KPC grant)
Investments in line with the guidelines for "Umweltförderung im Inland" (UFI) are such which relate to company transportation measures and facilities tied to a particular place, and in particular include transportation means. Facilities and equipment goods, services such as building works, installation, planning services.

In accordance with the guidelines of "Umweltförderung im Inland" which is managed by the KPC, the Climate and Energy Fund provides grant for investment costs related to demonstration facilities with a non-repayable capital grant, as long as a direct ecological benefit (climate protection effect, keeping air clean) can be provided.
The following costs are not eligible, in addition to the generally non-allowable costs (see UFI guideline):

- Land costs
- Services or deliveries which have been provided or received prior to the application being received by the funding agency KPC except advance performance.
- Administrative fees, court or Notary fees, as well as connection fees
- Financing costs
- Investments pursuant to Section 4 Z 1, which merely result in a relocation but not a reduction in emissions or waste

For additional information regarding the grant area investment cost, please see the grant guidelines for environmental grants in Austria, which can be obtained at the following link:
www.public-consulting.at

4.4.3 Funding agencies
The programme is managed as part of a cooperation between the Österreichische Forschungsförderungsgesellschaft (FFG; Austrian Research Promotion Agency) and Kommunalkredit Public Consulting GmbH (KPC).

The application is submitted in the form of a project application, which must be submitted to the FFG via eCall. Prior to doing this, interested parties must register at the home page of the Climate and Energy Fund (www.klimafonds.gv.at). Coordination with regard to the grant portion which is determined by KPC is carried out automatically via the funding agencies. If required, the respective agency may contact applicants to submit additional information.

In the case of additional grants for investment costs offered by the KPC, two grant agreements will be prepared:

- FFG grant agreement for R&D relevant costs
- KPC grant agreement for investment costs

4.5 Exploitation rights

The exploitation rights for the project results of beacon projects rest with the applicant consortium.

4.6 Assessment criteria

1. Relevance of the project to the programme (30%)

- Programme objectives and topics (15%)
  - Contribution of the project to achieve the objectives of the programme
  - Topic priority pursuant to the project submission guide, Section 3
- Ecological effect (15%)
  - Potential to reduce climate polluting and greenhouse gases such as e.g. carbon dioxide, by reducing the use of fossil energy carriers (e.g. the use of renewable energies)
  - Energy efficiency and reduction of primary energy consumption along the entire value chain
- Cooperation with model regions

2. Quality of the project (25%)

- Innovation and quality (15%)
  - Innovation content
  - Scientific quality and methodology
  - Quality of planning
- Alignment to international standards (10%)

3. Suitability of grant applicant / Parties involved in the project (15%)

- Scientific-technical competence
- Potential of consortium to implement the project

4. Economic potential and utilisation (30%)

- Market and utilisation (15%)
  - Cost/Benefit ratio of project
  - Market potential of results
  - Utilisation and dissemination plan
- Proportion of Austrian added value (15%)

4.7 Legal principles and EU conformity

The FTE guidelines pursuant to Section 11 Z 1 to 5 of the Forschungs- und Technologieförderungsgesetz (FTFG; Research and Technology Promotion Law) of the Federal Minister for Transportation, Innovation and Technology, in its most recent valid version of 19 November 2007 (GZ BMVIT -609.986/0011-III/I2/2007). form the legal basis for the experimental development project type.

In the case of demonstration projects, the FTE guidelines pursuant to Section 11 Z 1 to 5 of the FTFG of the Federal Minister for Transportation, Innovation and Technology, in its most recent valid version of 19 November 2007 (GZ BMVIT - 609.986/0011-III/I2/2007, shall apply in part. These projects are also eligible for grants on the basis of the guideline for domestic environmental grants (Federal Gazette Nr. 185/1993) in the applicable version of 11 January 2008.

05. Process

5.1 Submission and consultation

This guide forms the basis for submitting project applications. The Climate and Energy Fund has commissioned the Österreichische Forschungsförderungsgesellschaft (FFG) to fill the role of the funding agency. Investment portions for demonstration projects are managed by Kommunalkredit Public Consulting GmbH.

Only the forms which have been specified for project applications (Part A and B) may be used for submitting project applications. The guide and forms for project applications can be obtained from the download centre at www.leuchttuerme-e-mobilitaet.at.

All grant applicants are invited to take advantage of the pre-proposal check offered by the FFG and the Climate and Energy Fund prior to submitting their applications.

The deadline for submissions is Tuesday, 27 July 2010, at noon, and must be received by the FFG (submission agent) via eCall.

Following the submission, a written confirmation of receipt will be sent to the applicant.

5.2 Project selection

Grant applications are evaluated in two steps:

5.2.1 Formal check

As part of a first step, the FFG checks submissions for formal correctness and completeness. Formal criteria which will result in a formal rejection of the application are as follows:

- grant applications was not received by the indicated date
- General non-compliance with the form of the grant application
- General non-compliance with the required criteria specific to the project

5.2.2 Evaluation

Applications which have passed the formal review will be subject to the actual technical and content-related reviewing process, which also includes a hearing with the applicant. This process is carried out by independent national and international experts, whereby all persons involved in the evaluation procedure or jury meetings will be committed to secrecy with regard to information that will be made available as part of carrying out their functions in this regard.

Furthermore, internal FFG experts will also review the applications with regard to the economic feasibility (financial strength) of the participating companies. If required, the funding agency may also obtain further explanations regarding the application. KPC experts will review the grant criteria and prepare a grant recommendation for the investment cost portion.

Following the completion of the technical-scientific reviewing process, the projects will be decided upon in the committees of the Climate and Energy Fund. The Fund reserves the right to combine projects which overlap as regards contents, and to formulate the corresponding requirements.

The final grant decision is made by the executive committee of the Climate and Energy Fund.

5.3 Drafting the agreement

Projects recommended for grants or financing by the executive committee will receive a grant proposal from the Climate and Energy fund, which is valid for one month. Once the grant proposal has been accepted, an agreement between the applicant and the grant agency will be drafted (grant agreement). Requirements outlined in the evaluation must be taken into account.

In the event of the loss of one of the project partners following a commitment to provide a grant / start of the project, the consortium must prove that the competencies required to execute the project are sufficiently covered by the remaining project partners; otherwise a new project partner must be included in the consortium. In any case, the partnership structure of the consortium may not be changed without the prior approval of the FFG.

5.4 Payment modalities and reporting

Along with returning the signed agreement between the Climate and Energy Fund and the applicant, and meeting all requirements (if applicable), an extra copy of the consortium agreement must also be sent to the FFG. The next step involves the payment of the first grant instalment (starting instalment).

The payment mode will depend on the term of the project, whereby technical and financial reports which correspond with the project milestones, and which must be submitted at least once per year, will be required; the next grant instalment will be paid out following a positive appraisal and approbation of the report by the FFG.

The final key items of the reporting obligations will be defined in the grant agreement.

A comprehensive final report (both from technical and financial point of view) must be submitted at the end of the project.

However, the last instalment will only be paid following a discharge by the FFG audit department, based on a positive evaluation of the final report.

Grants for the investment portion of demonstration facilities will be paid out following the implementation of the project and the submission of the final statement. Partial instalments are possible depending on the progress of the project.

Payment of grant instalments

Project term	1st max. grant instalment (Starting instalment)	2nd max. grant instalment (% of TGS)	3rd max. grant instalment (% of TGS)	4th max. grant instalment (% of TGS)	5th max. grant instalment (% of TGS) – Final report	Max. final instalment (% of TGS) – Audit
up to 1 year	40	–	–	–	40	20
> 1 year < 2 years	40	20	–	–	20	20
> 2 years < 3 years	40	20	20	–	–	20
> 3 years < 4 years	40	15	15	10	–	20

GGS: Total grant sum

Table 5.1

06. Data protection and publication of the grant commitment

In the case of a positive grant decision, the information contained in the grant application may be used to prepare grant reports, and for statistical analysis purposes. Furthermore, the Climate and Energy Fund reserves the right to publish the name of the applicant, the fact that grant was granted, the the grant intensity as a percentage of total cost, the total amount of grant and the title of the project, along with a short description of the extent of the reduction in environmental pollution that is intended by the grant, following the approval of the grant.

All submitted project applications will only be submitted to the programme owner and agencies entrusted with the excecution of the call for inspection purposes. All involved persons will be committed to confidentiality.

07. Contacts

7.1 Programme mandate and responsibility

Klima- und Energiefonds
Gumpendorfer Straße 5/22, 1060 Vienna
Phone: +43/1/5850390-0
Fax: +43/1/5850390-11
E-Mail: office @klimafonds.gv.at
www.klimafonds.gv.at

7.2 Programme execution

Österreichische Forschungsförderungs-gesellschaft (FFG),
Bereich Thematische Programme
Sensengasse 1, 1090 Vienna
www.leuchttuerme-e-mobilitaet.at
www.ffg.at

7.3 Information and consultation

DI (FH) Katrin Saam
Phone: +43/57755 - 5041
Fax: +43/57755 - 95040
E-Mail: katrin.saam@ffg.at

Documents and other required documents for the call
General information regarding the application guide and application forms can be obtained at:
www.leuchttuerme-e-mobilitaet.at

The following application forms are available:
Application form for beacon projects (Part A and B)

Funding agency for investment projects
Kommunalkredit Public Consulting GmbH
Türkenstrasse 9, 1092 Vienna
www.public-consulting.at

Contact and advice
DI Wolfgang Löffler, MSc
Phone: +43/1/31 6 31 - 220
E-Mail: w.loeffler@kommunalkredit.at

08. Annex

Definition of small to medium-sized companies
With regard to company size, the applicable definition of small to medium-sized companies as per EU competition law shall be authoritative. (Definition of small and medium-sized companies as per the recommendation of 2003/361/EC of the Commission dated 6 May 2003, (ABl. L 124 of 20 May 2003, p 36-41))
http://ec.europa.eu/enterprise/enterprise_policy/sme_defnition/index_de

Payment of grant instalments

Company category	Number of employees	Revenues	or balance sheet sum
Medium size	< 250	≤ EUR 50 million	≤ EUR 43 million
Small	< 50	≤ EUR 10 million	≤ EUR 10 million
Micro	< 10	≤ EUR 2 million	≤ EUR 2 million

Table 8.1

Legal Notice:
Owner, Publisher and Owner of Media:
Klima- und Energiefonds
Gumpendorfer Str. 5/22, 1060 Vienna
Editor: Gernot Wörther
Design: ZS communication + art GmbH
Programme execution:
Kommunalkredit Public Consulting GmbH (KPC)
Türkenstraße 9, 1092 Vienna, www.publicconsulting.at
Österreichische Forschungsförderungsgesellschaft (FFG),
Bereich Thematische Programme, Sensengasse 1, 1090 Vienna
www.leuchttuerme-e-mobilitaet.at, www.ffg.at

Print: gugler* cross media (Melk/Donau). Production processes carried out with green electricity fulfil both the requirements of the Austrian Environmental Mark as well as the strict eco guidelines of greenprint*. All emissions that are generated during the production process are neutralised in terms of a climate-neutral print production process. One hundred percent of total amounts thus obtained is added to a climate protection project in Karnataka/India (uploads/myclimate_portfolio.pdf).

FSC
Mixed Sources
Product group from well-managed forests and other controlled sources
Cert no. HCA-COC-100008
www.fsc.org
© 1996 Forest Stewardship Council

greenprint*
Climate-neutral print.

Paper: Olin

Production site: Vienna, March 2010

In the interest of the text flow and reading ease, neutral gender terminology has been used where possible. All descriptions always also include the female gender.

Foto: flickr©Nicki Dugan

www.klimafonds.gv.at