

Guide for Proposers Zero Emission Mobility

2020 Programme

A funding initiative of the Climate and Energy Fund in support of implementing the Integrated National Energy and Climate Plan for Austria and achieving climate neutrality by 2040



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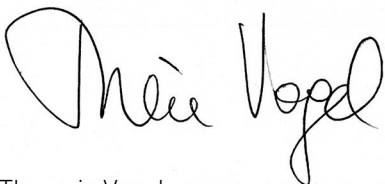
Preface

Phasing out the use of fossil fuels in mobility is a key factor in achieving Austrian and European climate goals. At the same time, the automotive sector – so important for Austria – is going through a period of upheaval as well as having to manage the Corona crisis, both of which represent a major challenge for an industry with a global focus. In response, a whole series of public support measures have been made available. A key instrument in this respect is the Zero Emission Mobility programme, which provides the research and innovation framework for implementing the Austrian Federal Government's e-mobility initiative.

Zero emission technologies are extremely important to the Austrian economy. For that reason, the programme focuses on involving small and medium-sized enterprises, actively encouraging the integration of start-ups and the establishment of new businesses. The 3rd Call focuses on the target of 100 % electrification (batteries, fuel cells, high-performance capacitors) for vehicles, the development and testing of intelligent charging infrastructure as well as zero emission logistics and zero emission mobility solutions. The Call places a focus on systemic solutions with clear prospects of relatively rapid implementation but also provides funding for more research-oriented projects. All near-market projects must therefore include both a research and a demonstration phase.

The topics cover both vehicles, addressing all classes of vehicles as well as new vehicle concepts, and infrastructure, with a particular emphasis on sector integration. A further focus is zero emission freight logistics, as well as electrified, public access mobility solutions for both urban and rural transport. Furthermore, the Call includes an R&D service focusing on the electrification of road freight transport on Austria's motorway and expressway network by 2040.

We cordially invite you to submit your innovative project proposal and would be delighted if it serves the further development of electric mobility, bringing it closer to the market and thus strengthening Austria as a technology hub.



Theresia Vogel
Managing Director Climate and Energy Fund



Ingmar Höbarth
Managing Director Climate and Energy Fund

1.0 Key Items at a Glance

Zero emission technologies offer the opportunity to substantially reduce greenhouse gas emissions from transport, and to create a sustainable, interoperable mobility system. The Climate and Energy Fund supports technology and implementation-oriented electric mobility projects designed to integrate components, systems and services into a comprehensive mobility system.

The present call is embedded in a long-term strategy of the funding programme (see Chapter 2).

An amount of EUR 8 million in funding is available for the 3rd Zero Emission Mobility Call.

These funds are intended to support flagship projects and cooperative R&D projects. The projects should promote 100 % electrification of vehicles and enable the development and testing of intelligent e-mobility and hydrogen infrastructure and their integration into publicly accessible mobility systems and logistics solutions.

The call additionally includes an R&D service designed to explore the electrification of road freight transport on Austria's motorway and expressway network by 2040.

The project proposals must be submitted via eCall (<https://ecall.ffg.at>) by the submission deadline of **13 November 2020, 12:00**.

Zero Emission Mobility is a funding initiative of the Climate and Energy Fund in support of implementing the Integrated National Energy and Climate Plan for Austria and achieving climate neutrality by 2040.

PLEASE NOTE:

If the application does not meet the formal requirements for project submissions in accordance with the conditions and criteria of the relevant funding instrument and the call, and if the deficiencies are not rectifiable, the application will be excluded from the further procedure and will be formally rejected without exception in accordance with the principle of equal treatment of applications. The FFG's eCall system provides support in this respect, but the ultimate responsibility for compliance with the formal requirements still rests with the applicants. A detailed check list specifying the conditions and criteria of the relevant funding instrument and the call can be found at the beginning of the relevant application forms (Project Description).

Funding may only be granted if it has an incentive effect. The new RTI Guidelines (Thematic RTI Guideline), therefore, require all project partners to declare via eCall whether the funding leads to a change in their behaviour.

Projects that fall exclusively into the research category "Industrial Research" are not eligible for funding under the Funding Guidelines for Environmental Assistance in Austria (UFI).

Call overview – topics and instruments

| Topics and financing instrument | Flagship Project Large-scale research and demonstration project | Cooperative R&D Project Cooperative research and development project | R&D Service Specified R&D content |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------|
| Topic 1: Zero Emission Vehicles | Applicable | Applicable | Not applicable |
| Topic 2: Zero Emission Infrastructure | Applicable | Applicable | Not applicable |
| Topic 3: Zero Emission Logistics and Zero Emission Mobility Solutions | Applicable | Applicable | Not applicable |
| R&D Service: Electrification of road freight transport on Austria's motorway and expressway network by 2040 | Not applicable | Not applicable | Applicable |

Instruments

| Information | Flagship Project Large-scale research and demonstration project | Cooperative R&D Project Cooperative research and development project | R&D Service Specified R&D content |
|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------|
| Research category | Industrial Research and/or Experimental Development Both research categories can be included in one project; Industrial Research must not exceed 30 % of overall project costs. If both research categories are included, the individual Work Packages (WP) must be assigned to the corresponding research categories. If this assignment is not provided, funding will only be granted for Experimental Development. | Industrial Research or Experimental Development | Not relevant |
| Min. funding amount requested for R&D part of the project | EUR 2 million | None | None |
| Max. funding amount for R&D part of the project | None | EUR 1 million | EUR 240,000 plus VAT |
| Funding rate | Max. 85 %, depending on research category and type of organisation. For details, see Technical Guidelines. | Max. 85 %, depending on research category and type of organisation. For details, see Technical Guidelines. | No funding rate. 100 % financing |
| Project duration | 2 to 4 years | 1 to 3 years | max. 24 months |
| Cooperation required | Yes | Yes | No |

Budget, deadlines, contacts and further information

| Further information | Details |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Available call budget | EUR 8 million |
| Obligatory preliminary meeting | A preliminary meeting until 16 October 2020 is obligatory for flagship projects and voluntary for cooperative R&D projects (see Chapter 4.2). |
| Submission deadline | 13 November 2020, 12:00 |
| Language | English |
| Contact | DI Dagmar Weigel, MSc Telephone: +43 5 7755-5045 Email: dagmar.weigel@ffg.at zero-emission-mobility@ffg.at |
| Information on the Web | www.ffg.at/zero-emission-mobility/3.Ausschreibung |

2.0 The Funding Programme

2.1 Long-term orientation 2018–2022

Previous calls and the predecessor programme, Austrian Electric Mobility Flagship Projects, have already provided funding for numerous innovative projects resulting in the successful development of future-oriented solutions (see www.klimafonds.gv.at/wp-content/uploads/sites/6/20200127_ZEM_Borschure_final_version_elmotion3.pdf).

In line with the #mission2030 Climate and Energy Strategy, the programme focus was adjusted in 2018 with the aim of enabling **long-term projectability** for funding recipients. The Zero Emission Mobility programme forms the research core for implementing the e-mobility initiative as part of #mission2030.

The clear focus of the programme is thus on **zero emission mobility** in road transport with a special emphasis on near-market research consortium projects with integrated demonstration and a clear implementation perspective. The calls are mission-oriented and technology neutral and focus on the three pillars, **vehicle – infrastructure – user**. These three thematic pillars will be addressed in the next few years. The concrete call topics will be defined annually to account for current technology trends and the changing environment, which in turn interacts with the zero emission technology system.

The research programme takes a **systemic perspective** – projects should not primarily focus on individual aspects but address the **system integration** of the technologies developed or entire value chains. They should also demonstrate Austrian technology expertise and innovative system design strengths in the field of electric mobility by drawing on the expertise of complementary partners.

The perspective of the R&D services included in the calls may extend beyond road transport to include other means of transport as well as new technologies and economic aspects.

2.2 Strategic goals of the programme

In Austria, zero emission technologies are embedded in an **intermodal mobility system** made up of trains, electric utility vehicles, buses and cars as well as electric scooters and (e-)bikes on the basis of smart grids and the necessary fuelling and charging infrastructures. The Zero Emission Mobility programme aims to support the development of solutions for the creation of an affordable, environmentally-friendly and efficient mobility system. Relevant project results include both innovative technology developments and integrated mobility solutions offering perspectives of short-term implementation and value creation for Austria.

The aim is to contribute to the goals specified in the Government Programme 2020-2024 such as achieving climate neutrality by 2040 and associated decarbonisation of road transport. The programme also provides a contribution to the Strategic Action Plan for Batteries of the European Commission and to Mission Innovation.

In order to achieve sustainable development, framework conditions must be established for a mobility transition which creates a decarbonised, service-oriented transport system. In line with ensuring the Climate and Energy Fund's policy of achieving greatest possible relevance in terms of climate protection, the programme follows the decarbonisation pathway by setting a **technology neutral** focus on locally emission-free vehicles (BEV, FCHEV¹). The drive energy must be produced in a climate-neutral manner in accordance with the zero emission principle.

¹ BEV = Battery electric vehicle, FCHEV = Fuel cell hybrid electric vehicle

Zero emission technologies are also of high economic relevance for Austria. Electric mobility alone is expected to create added value of EUR 3.1 billion and around 34,000 jobs until 2030². Realising this potential requires a fast and targeted transformation of the (automotive supply) industry. The most effective way to do this is to coordinate with international suppliers and clients. Another focus of the programme is therefore on the **international relevance** and **exploitation potential** of the technologies developed. With Austria's economic structure in mind, the programme places strong emphasis on the involvement of **small and medium-sized enterprises and actively promotes the integration of start-ups and the establishment of new businesses.**

2.3 Interaction with other funding programmes

Distinction from thematically relevant programmes

Funding for research and development projects involving components and parts of conventional vehicles is granted under the General Programmes of the Austrian Research Promotion Agency (FFG).

The “Mobility of the Future” programme (research theme “Vehicle Technologies”) supports the development of components for alternative drive systems, lightweight components and vehicles as well as automotive electronics and connected/automated vehicles, but the focus is not on e-mobility infrastructure or demonstration projects.

Relationship to the calls “Smart Cities Initiative”, the “Energy Research Programme 2020 of the Climate and Energy Fund” and the “Electric Mobility Initiative”

- The Smart Cities Initiative supports practical solutions for sustainable urban development. Innovative products, services and processes are demonstrated in real-life urban environments and subsequently rolled out on a broad scale in order to create local added value and a positive climate impact on Austrian cities and communities.
- The Energy Research Programme 2020 of the Climate and Energy Fund supports research and development of energy technologies and their integration into the energy system.

- The Electric Mobility Initiative sponsored by the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) in cooperation with the automotive and two-wheeler industry and the sports retail sector seeks to accelerate the market introduction of electric mobility in Austria through several funding programmes. Infrastructure and vehicles which are not part of research and development should primarily receive funding under the Electric Mobility Initiative. Applications are to be submitted directly to Kommunalkredit Public Consulting (KPC). An exception are demonstration facilities (within the meaning of Environmental Assistance in Austria – UFI). These demonstration facilities can be submitted to the present call provided that they are directly related to research and development activities (for more information, see Chapter 4.4).
- **The Zero Emission Mobility Implementation programme is aimed at implementing larger scale system solutions at TRL 7–9. It represents the next link in the innovation chain following the Zero Emission Mobility programme.**
- Co-financing within the framework of the CEF Transport Blending Facility; this EU programme is planned to accept grant applications for alternative fuelled vehicles and infrastructures until March 2021 (for further information see: <https://ec.europa.eu/inea/en/connecting-europe-facility/cef-transport/apply-funding/blending-facility>). This financing option may be combined with national funding programmes in compliance with the relevant statutory provisions and funding limits.

Potential applicants are encouraged to examine the programmes and initiatives listed above and to organise a meeting with the relevant project managers in good time.

² www.klimafonds.gv.at/wp-content/uploads/sites/6/E-MAPPStudie.pdf

3.0 The Call

3.1 Call objectives for research projects

The 3rd Zero Emission Mobility Call focuses on 100% electrification (batteries, fuel cells, high-performance capacitors) of vehicles and the development and testing of intelligent charging infrastructure. A focus is on the integration of electrified, automated public access mobility services in urban and rural transport as well as solutions for zero emission logistics. Another focus is placed on sector integration, experimental spaces and the testing of new structures, business fields and solutions.

The projects are also designed to focus on innovative technologies, business models and solutions which, although they cannot be implemented within the current legal framework, could be tested within potential future experimental spaces. However, the overall success of the project must not depend on such special permissions being granted.

Relevant project results include both innovative systemic technology developments and integrated mobility solutions providing value creation perspectives for Austria. Special emphasis is placed on the scalability of solutions and the integration of existing components into novel zero emission developments.

The call focuses on 3 thematic areas to obtain these results:

- a. Zero-Emission Vehicles
- b. Zero-Emission Infrastructure
- c. Zero-Emission Logistics & Mobility Solutions

In order to achieve high practical relevance and fast implementation of research results on the market, **partners from industry should be encouraged to participate in the consortia.** A further objective of the call is to involve small and medium-sized enterprises (SMEs) or start-ups in the projects as well as including international partners and/or networking with major existing initiatives and projects, where feasible (see also Chapter 2.3).

Project proposals must present

- a thorough analysis of the international state of the art,
- a clear, quantified starting basis for the planned developments, based on the international state of knowledge and technology (indicators on current technologies, costs, emission levels, technology readiness levels etc.) and
- clear, quantified project goals (planned technology indicators, costs, emission levels, technology readiness levels etc.) including a market introduction strategy.

3.2 Call topics for research projects

Project proposals must address at least one of the following topics and may include a **combination of several topics. It is recommended that cooperative R&D projects should focus on only one topic.**

The applications must fulfil the requirements described below.

3.2.1 CALL TOPIC 1: Zero Emission Vehicles

While zero emission technologies are penetrating the passenger car market at increasing speed, many other vehicle classes and areas of application still offer potential for development. In principle, this includes all vehicles specified in Sec. 3 of the Motor Vehicles Act (§3 KFG), such as vehicles used in:

- the logistics sector
- road-based passenger transport including new needs-based mobility services
- the agriculture and the tourism sector
- the municipal sector
- airports and railway stations
- the industrial sector

and selected vehicles not covered by §3 KFG, including special-purpose vehicles and vehicles for special applications in the construction, mining or tourism industries or similar.

The development of new vehicle concepts and e-bikes, for example offering particularly attractive pricing or for a specific use, is also eligible for funding.

This thematic area, therefore, calls for the submission of projects which (further) develop locally emission-free vehicles that are fully electrically powered by batteries, fuel cells or high-performance capacitors. Projects must consider the vehicle as a whole and, where necessary, take account of special fuelling or charging infrastructure (in combination with thematic area 3.2.2 – Zero Emission Infrastructure). Flagship projects and cooperative R&D projects of the research category “Experimental Development” must include a demonstration phase in order to prepare a successful market launch and to demonstrate operational capability within the overall system of vehicles and infrastructure.

(Further) development should focus in particular on the potential to reduce costs and increase the efficiency of the system as a whole. Project proposals may also address production aspects in preparation for serial production of batteries and other components in order to enable the efficient and cost-effective scaling up of production.

3.2.2 CALL TOPIC 2: Zero Emission Infrastructure

The availability of suitable fuelling and charging infrastructure is a key prerequisite for the spread of zero emission technologies. In addition to the availability of appropriate charging capacity, the focus is primarily on cost-efficient installation, intelligent integration into the energy system and operation of the infrastructure.

Consequently, this thematic area calls for project proposals which either develop novel infrastructure systems or enhance existing solutions to integrate them in new infrastructure systems. The focus should be on the development of hardware solutions, but may also include associated software aspects.

Particular attention is paid to **sector integration**, i.e. the networking of transport components with other sectors such as energy supply. This integration is essential for developing the most economically efficient solutions. In addition to the development and testing of technical solutions the call encourages the **integration of organisational issues and new business models**.

Planning and implementation must, therefore, take into account the availability of the required energy (including hydrogen, stationary storage and second-life applications) as well as considering potential scalability at a later stage. Integration into a comprehensive solution (e.g. including photovoltaics and storage system) is welcomed. The economic sustainability of the development, and the option to transfer to regular operations, must be demonstrated at the end of the project period.³

The involvement of grid operators is desired, e.g. in order to be able to simulate or test charging management systems and grid-friendly charging under real-world conditions.

3.2.3 CALL TOPIC 3: Zero Emission Logistics and Zero Emission Mobility Solutions

Sub-Topic 1: Zero Emission Logistics

The logistics sector accounts for a significant proportion of emissions in road transport. In addition, with increasingly strict international regulations on greenhouse gas, pollutant and noise emissions, zero emission technologies are particularly suited to applications in the logistics sector. Potential project ideas may be designed for both urban and rural areas.

³ Publicly accessible charging infrastructure must meet the requirements of the Federal Act establishing uniform standards for the deployment of alternative fuels infrastructure.

Funding is available for the development and demonstration of zero emission freight logistics scenarios, including the use of zero emission vehicles and integration of appropriate charging infrastructure solutions. Operational demonstration is crucial in this context (for flagship projects and cooperative R&D projects of the research category “Experimental Development”). The economic sustainability of the development, as well as the option to transfer to regular operations, must be demonstrated at the end of the project period.

Sub-Topic 2: Zero Emission Mobility Solutions

Incorporating zero emission technologies into an integrated mobility system, which subsequently enables a range of purposeful and targeted services (e.g. micro public transport or e-car sharing) to be developed, is a significant challenge. A core element in this process lies in extending the range of ecomobility offerings through the addition of various clean, public access mobility solutions. Meeting this demand requires the development and integration of precisely planned and coordinated infrastructures, vehicles suited to a variety of uses (e.g. zero emission busses), modular service components, and diversified business models.

The implementation of social and organisational innovations is relevant, while a technical innovation component must also be included. Applicants are required to ensure a strong involvement of partners from practice and describe and substantiate the implementation perspective of the planned innovations in the proposal.

The integration of connected and automated vehicles in the form of scalable, needs-oriented and shared fleet solutions which function as integrative components in future “Mobility as a Service” approaches (“MaaS made in Austria”) is also relevant, especially in areas adjacent to urban centres and in rural areas.

Such fleet solutions rely on actively promoting open interfaces (APIs) and linking zero emission services. Furthermore, new mobility options will have to be analysed in terms of their environmental impact and user acceptance, enabling the new mobility options to be scaled up and embedded into a future mode mix, especially in peripheral areas.

The project can be connected across the transport network or to one or more mobility hubs (bus stops, railway stations, airports etc.). The development, integration and testing of suitable fuelling and charging infrastructure solutions as well as operational demonstration are also crucial for flagship projects and cooperative R&D projects of the research category “Experimental Development”.

The economic sustainability of the development, and the option to transfer to regular operations, must be demonstrated at the end of the project period.

The involvement of public transport providers or mobility services is welcomed.

3.3 General requirements for research projects

The proposal must specify the measurable and quantifiable targets to be met by the end of the project.

In addition, **ecodesign principles** must be applied when further developing vehicle and/or infrastructure components. The environmental impacts must be taken into account across the entire product life cycle (from design and use through to recycling, reuse, disposal etc.) and minimised as far as possible. This approach must be applied to the main components of the cooperative R&D projects and flagship projects submitted.

The cooperative R&D projects of the research category “Experimental Development” and flagship projects submitted are required to complement the research and development work with a **demonstration component**. The project developments (prototypes, systems, etc.) must be tested under real-life operating conditions during a demonstration phase running over a period of at least **6 months**. A monitoring system must be established to determine whether the prototypes achieve the target values and to identify areas offering potential for further improvement. Possibilities for transition to regular operation should also be presented.

The fuelling and charging infrastructure installed should, as far as possible, be made accessible to other transport infrastructure users during the demonstration phase.

SMEs should be included in the project consortium in order to involve them as potential technology providers. Therefore, project proposals should demonstrate the inclusion of innovative SMEs or start-ups, to an extent over and above the formal requirements of the funding instruments (indicators: number of SMEs, SME share in project costs, knowledge transfer to SMEs).

3.4 R&D service

Electrification of road freight transport on Austria’s motorway and expressway network by 2040

Objectives

The Federal Government has set itself the target of achieving climate neutrality by 2040 at the latest, and seeks to establish Austria as a pioneer in European climate protection. This objective is particularly challenging for the mobility sector as, despite the goals of reducing traffic and shifting freight from road to rail, over the past years it has not been possible to reduce traffic volumes and decouple them from economic growth. Therefore it is all the more important to make the shift from road freight to rail an overriding priority, and to ensure true cost pricing by means of a fair toll system based on the “polluter pays” principle.

However, in order for Austria to achieve full climate neutrality by 2040, the remaining road freight transport must be CO₂ neutral. This study is designed to provide important findings required to establish the framework conditions needed to achieve this goal.

The 1st and 2nd calls of the Zero Emission Mobility programme focused on R&D services designed to explore the deployment of drive technologies of differing levels of efficiency in the relevant vehicle categories and modes of transport and the technological options available to develop decarbonised freight transport in an economically optimal way. Based on the results of preliminary studies, this study is designed to examine the feasibility of creating electrification infrastructure on motorways and expressways, especially for freight transport. The starting point is the share of freight traffic volume on Austria’s motorways and expressways which cannot be shifted to rail by 2040. The study will focus on electrification infrastructure including solutions for overhead lines and induction systems, as well as the necessary complementary infrastructures such as rapid charging points at service stations. Alternative systems including e-fuels and hydrogen-based solutions will be considered for the purposes of comparison.

Expected results

- What types of electrification infrastructure are available for recharging (especially during a journey) on motorways and expressways? What are the strengths and weaknesses of the various systems? What developments are vehicle manufacturers currently undertaking in this sector?
- What vehicle ranges will be necessary for journeys outside the motorway and expressway network? What additional charging capacity must be available in the motorway and expressway network in order to provide the energy required for these external routes?
- What proportion of the routes within the motorway and expressway network cannot be equipped with electrification infrastructure due to obstacles such as tunnels or viaducts?
- What are the capacity and/or energy requirements for the electrification infrastructure, also taking into account the obstacles noted above?

- How much additional energy is required for the various penetration rates of overhead line trucks, and how much additional renewable energy is needed to achieve the goal of 100 % green electricity?
- How compatible is the expected electrical load profile with the quantities of electricity generated from 100 % renewable sources by 2030?
- Are there unused areas along the motorway and expressway network, how large are they, and can they make an appreciable contribution to supplying power for the electrification infrastructure?
- How much additional high-power charging infrastructure (e.g. at service stations or parking areas) will be necessary in the motorway and expressway network for freight transport in the future, to support and/or render feasible the electrification infrastructure investigated?
- What are the potential synergies between the charging infrastructure required for private and freight transport in the motorway and expressway network in the future and the electrification infrastructure?
- What degree of electrification in the motorway and expressway network is necessary to enable zero emission freight transport on these routes by 2040?
- What are the total costs of the various systems for the infrastructure investigated over the entire life cycle (construction, maintenance, operation)? Which revenue model might be selected to refinance the overall costs? What are the costs to transport companies for transitioning to suitable vehicles?
- What are the potential operator models for the necessary electrification infrastructure?
- What economic effects can be expected as a result of electrifying road freight transport in the motorway and expressway network?
- What are the possible solutions to potential problems such as landing rescue helicopters, special transports, roadworks, grass cutting and snow clearance, vehicle fires, slip roads to and from motorways and expressways, and similar?
- Does the availability of skilled workers, vehicles and infrastructure components make the roll-out of the electrification infrastructure investigated feasible by 2040? Which bottlenecks require particular consideration in this context?
- What are the potential energy and CO₂ savings achieved as a result of expanding the electrification infrastructure compared to those generated using alternative technologies such as diesel, hydrogen, biofuels or synthetic fuels?

The study should consider the assessments offered by the relevant industries (e.g. vehicle manufacturers, forwarding agents, infrastructure providers, ...), research institutions and other stakeholders. The tenderer must subsequently ensure close cooperation with ASFINAG (Austrian Motorway and Expressway Network Operator). Tenderers are expected to engage in exchanges with the relevant stakeholder groups and expert organisations during the process of undertaking the study and also take into account European developments, given Austria's special geographical situation as a transit country. This includes in particular the German research projects eWayBW in Baden-Württemberg and ELISA in Hesse, which are currently conducting field tests on overhead line infrastructure, and the Swedish research project Smart Road Gotland, which aims at demonstrating the use of inductive systems. Findings from scientific studies conducted in Austria and Europe (e.g. results of the research projects StartON⁴ or Roadmap OH-Lkw⁵) must be included to facilitate a comparative assessment.

Project duration: max. 24 months

Project costs: max. EUR 240,000 plus VAT

⁴ www.oeko.de/fileadmin/oekodoc/StratON-0-Lkw-Endbericht.pdf

⁵ www.ifeu.de/projekt/roadmap-oh-lkw

4.0 Administrative Information

4.1 Call documents

Projects may only be submitted electronically via eCall at <https://ecall.ffg.at>

The proposal consists of:

- Online cost plan – enter directly in eCall
- Project description – upload in eCall (PDF)

Please use the templates and call documents provided in the Download Center:

www.ffg.at/zero-emission-mobility/3.AS_downloadcenter

Special attention should be paid to quantifying the project objectives. Please do not exceed the maximum number of pages per chapter specified in the application forms.

The funding conditions, application procedure and funding criteria are described in the relevant **Technical Guidelines**.

Call documents

| | |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flagship Project | Technical Guidelines for Flagship Projects (PDF) Project Description for Flagship Projects (WORD) Declaration of SME status (if required)* (PDF) |
| Cooperative R&D Project | Technical Guidelines for Cooperative R&D Projects (PDF) Project Description for Cooperative R&D Projects (WORD) Declaration of SME status (if required)* (PDF) |
| General Cost Regulations | Cost Guidelines 2.1 (Guidelines for the Accounting of Project Costs) (PDF) |
| R&D Service | Technical Guidelines for R&D Services (PDF) Tender (WORD) Affidavit (eCall) Declaration of Commitment (eCall) Model Contract (PDF) |

* **Please note:** A Declaration of SME Status is required for associations, sole proprietorships and foreign companies. In the template provided, applicants must (as far as possible) categorise their business for the last three years according to the SME definition.

4.2 Obligatory preliminary meeting for all flagship projects

In order to clarify stipulations and requirements, the submission of a flagship project requires an obligatory preliminary meeting with the Climate and Energy Fund, the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) and the Austrian Research Promotion Agency (FFG) **by 16 October 2020 at the latest**. Applicants are requested to contact the FFG in due time to arrange a date for the meeting. The preliminary meeting is necessary to provide optimal support to the applicants in preparing their project proposals. Preliminary meetings are therefore also recommended for cooperative projects. **Applications for flagship projects submitted without having conducted a preliminary meeting will be rejected for formal reasons.** If the proposal also includes an application for funding according to Chapter 4.4, the meeting will also be attended by Kommunalkredit Public Consulting (KPC), or a separate meeting must be arranged with KPC (see Chapter 4.4).

4.3 R&D service

Please note that the procurement of research and development services (R&D Services instrument) is exempted from the Public Procurement Act (BvergG 2018) as specified in Sec. 9 (12) and is thus subject to a tendering process. The Climate and Energy Fund is the contracting entity for the R&D Services instrument. The FFG funding agency acts in the name and for the account of the Climate and Energy Fund.

By submitting a tender, the tenderer accepts the content of the present Guide and all other relevant call documents in their entirety.

If a (sub-)contractor is mentioned in several tenders, the respective tenders will be excluded from the tendering process if it can be assumed that this multiple participation leads to a restriction or distortion of competition.

Supplementary information

Requests for supplementary information about the R&D service tendered shall be sent exclusively by e-mail to the FFG (dagmar.weigel@ffg.at) at the latest 21 days prior to the submission deadline, specifying the sender address (e-mail). The questions will be collected and answered in an anonymised form at the latest 11 days prior to the submission deadline. To ensure equal treatment, the FFG asks inquirers to formulate their questions in such a manner that no conclusions can be drawn as to their identity. The questions and answers will be published on the websites of the Climate and Energy Fund and the FFG. Requests for information cannot be sent after this date. The Climate and Energy Fund and the FFG will not comment on the evaluation of the tenders submitted during the tendering process.

4.4 Environmental funding managed by Kommunalkredit Public Consulting (KPC)

Projects that receive funding from the Climate and Energy Fund and include at least one Work Package qualifying as experimental development can also be managed by FFG in cooperation with Kommunalkredit Public Consulting (KPC). In this case, research activities receive funding from the FFG, while investments in demonstration facilities are supported by KPC based on the Funding Guidelines for Environmental Assistance in Austria (UFI). Both funding components are covered by the present programme. Demonstration facilities submitted for additional environmental funding under the Zero Emission Mobility programme must be of key importance to the relevant research project. The research and development activities must constitute the prerequisite for the investment for which environmental funding is sought.

Demonstration facilities as specified in the Funding Guidelines for Environmental Assistance in Austria go beyond standard technologies. They serve to test and introduce new or substantially improved technologies and must be based on the research activities. The environmental effect expected (reduction in air emissions, noise or hazardous waste, reduction in energy consumption, innovative supply of renewable energy) must be able to be assessed and quantified as a prerequisite for funding. Funding can only be granted for the share of the investment which is directly necessary for, and contributes to, achieving the environmental effect. Costs that are not or only indirectly related to the environmental effect are not eligible for funding.

Funding is based on the environmentally relevant additional investment costs (eligible costs less any reference costs if the demonstration facility can be compared with a standard facility) according to the Funding Guidelines for Environmental Assistance in Austria. Later submission to other funding programmes and other funding agencies (business development funding – Austrian federal development and financing bank AWS; environmental funding – KPC) is possible subject to the relevant funding conditions if the project submitted to the present programme does not involve application for or granting of funding for demonstration facilities.

Obligatory preliminary meeting with KPC

If a project proposal also involves funding of a demonstration facility in accordance with the Funding Guidelines for Environmental Assistance in Austria, a mandatory advisory meeting with experts from FFG and KPC must be held **by 16 October 2020 at the latest**, unless KPC has already participated in the preliminary meeting mentioned in Chapter 4.2. Applicants are requested to contact the FFG to arrange a date for the meeting. The advisory meeting helps KPC experts to assess whether the planned investment is eligible for funding as a demonstration facility in the respective call. Environmental funding will not be granted if such an advisory meeting has not been held.

Application

Application shall be in the form of ONE project application which must be submitted to the FFG as follows:

- The planned demonstration parts to be funded by KPC need to be listed in detail in the annex to the Project Description of the R&D part (PDF file). The additional specifications are designed to enable KPC to assess the demonstration parts and the expected environmental effects.
- A Cost Plan (Excel file) for the demonstration part must be uploaded via eCall in addition to the Project Description (PDF file) and other annexes.

The following supplementary information is required:

- Cost of facility broken down into trades/items, assembly costs, planning costs.
- Quotations must be provided for third-party services (must be available by the date of the final accounts at the latest).
- Clearly comprehensible description and quantitative prediction of the environmental effect; the environmental effect is shown by comparing the demonstration facility to the status quo or a reference plant producing the same output using conventional technologies (example: comparison of energy consumption [MWh/a] by energy source before and after the implementation of the demonstration facility).
- Presentation of the feasibility and market potential of the demonstration plant.
- Feasibility analysis with operating costs and profits of the demonstration facility in comparison to the status quo or a reference plant.

If no information on the environmental effect and the costs of the demonstration facility is available on submission of the proposal, the applicant must provide reasonably substantiated estimates.

Procedure after project submission

Please consult the relevant Technical Guidelines (see Chapter 4.1) for more information about the project selection procedure following submission of the application. Projects involving applications for both R&D funding and environmental funding will additionally be sent to Kommunalkredit Public Consulting GmbH (KPC) for further processing. Experts from KPC will check compliance with the funding requirements and prepare a funding proposal for the investment cost portion.

If necessary, the relevant funding agency may contact applicants directly to request additional information.

If the project receives additional funding from KPC, two funding contracts will be drawn up:

- FFG funding contract for R&D-related costs
- KPC funding contract for investment costs in accordance with the Guidelines for Environmental Assistance in Austria

For further information regarding environmental funding see:

www.umweltfoerderung.at/betriebe/sonstige-umweltschutzmassnahmen-laermschutz-demonstrationsanlagen

and

www.umweltfoerderung.at/betriebe

Eligible costs

| Industrial Research FFG | Experimental Development FFG | Demonstration Facility KPC |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>“Industrial Research” denotes planned research or critical investigation to acquire new knowledge and abilities. The aim is to develop new products, procedures or services or to effect significant improvements to existing products, procedures or services. This includes the creation of parts of complex systems necessary for industrial research and in particular for the validation of technological fundamentals.</p> | <p>“Experimental Development” denotes the acquisition, combination, formation and use of existing scientific, technical, economic and other relevant knowledge and abilities in the development of plans or concepts for new, modified or improved products, procedures or services. It also includes, for example, other activities for the definition, planning and documentation of new products, procedures and services as well as the preparation of drafts, sketches, plans and other documentation, provided these are not intended for commercial purposes.</p> | <p>“Demonstration Facilities” as specified in the Funding Guidelines for Environmental Assistance in Austria (UFI) are of a highly innovative character. They go beyond standard technologies and serve to demonstrate and introduce new or substantially improved technologies. Demonstration facilities can only be funded by KPC under the Zero Emission Mobility programme if they are directly based on the research activities carried out as part of the project submitted. The expected environmental effect can be assessed and quantified. Investments immediately required for achieving the environmental effect are eligible for funding.</p> |

If the funded measure qualifies as an energy-saving measure in terms of end consumption according to the Federal Energy Efficiency Act (EEffG), it will be credited to the Climate and Energy Fund as a strategic measure according to Sec. 5 (1) 17 of the EEffG in proportion to the funding granted. Obligated third parties may claim the eligible measures (in whole or in part) only for the

part of the project costs exceeding the funding granted by the Climate and Energy Fund. This applies in particular if the measures are transferred by the funding recipient to the third party for the purpose of allowing them to fulfil individual obligations according to Sec. 10 EEffG.

5.0 Legal Aspects

5.1 Data protection and confidentiality

The FFG is under a legal obligation to maintain secrecy concerning company and project information pursuant to Sec. 9 (4) of the Austrian Research Promotion Agency Act (FFG-G, Federal Law Gazette BGBl. I No. 73/2004). External experts who are involved in the assessment of projects as well as Kommunalkredit Public Consulting GmbH (KPC) are also subject to confidentiality obligations with respect to company and project information.

Personal data will be processed pursuant to Art. 6 et seq. of the General Data Protection Regulation (EU) 2016/679:

- for compliance with legal obligations to which the FFG, KPC and the Climate Fund are subject (Art. 6 (1) (c) GDPR),
- if no legal obligation exists, for the purposes of the legitimate interests pursued by the FFG, KPC and the Climate Fund (Art. 6 (1) (f) GDPR), namely conclusion and processing of the funding contract and for control purposes.

This use may mean that the data must be transferred or disclosed in particular to bodies and authorised representatives of the Court of Audit, the Federal Ministry of Finance and the EU. There is also the possibility to obtain information from the transparency portal according to Sec. 32 (5) of the Transparency Database Act (TDBG 2012).

All project applications submitted will only be forwarded to the persons responsible for the management of this RTI Initiative as well as to the programme owner. All persons involved are bound by strict confidentiality rules.

5.2 Legal basis

The following guidelines provide the legal basis for this Call:

- Guideline for the Promotion of Industrial/Technical Research, Technology Development and Innovation (RTI Guideline 2015), Thematic RTI Guideline;
- Funding Guidelines for Environmental Assistance in Austria (UFI) as amended.

The company size shall be established in accordance with the corresponding SME definition specified in EU competition law. More detailed information about the SME definition can be found at:

www.ffg.at/recht-finanzen/rechtliches_service_KMU

All EU provisions shall be applicable as amended.

Research and development services shall be subject to the exemption provision of Sec 9 (12) of the Public Procurement Act (BVerG 2018).

5.3 Publication of funding decision

In the event of a positive funding decision, the Climate and Energy Fund reserves the right to publish the name of the funding applicants, the funding decision, the rate and amount of funding granted as well as the title and a brief description of the project in order to pursue the Climate and Energy Fund's legitimate interests to ensure funding transparency (Art. 6 (1) (f) GDPR).

5.4 Open access – notes on publication

The projects funded under this Call and their results will be made available to the public in line with the general objectives and tasks of the Climate and Energy Fund as defined in Sec. 1 and Sec. 3 of the Climate and Energy Fund Act (KLI.EN-FondsG) and the special characteristics of the funding programme, which is specifically aimed at publishing project and contact data for the dissemination of project results, as well as the Recommendation of the European Commission (2012/417/EU) on Open Access. The open access provisions do not apply to confidential information (e.g. related to patent applications). The funding recipient is obliged to ensure that the reports submitted to the Climate and Energy Fund for publication do not contain any sensitive data (Art. 9 GDPR) or personal data about criminal convictions and offences (Art. 10 GDPR). The funding recipient is also obliged to obtain all other approvals and consents from third parties (including but not limited to image rights) that are required for lawful publication by the Climate and Energy Fund and to indemnify and hold harmless the Climate and Energy Fund in this respect.

Since the dissemination of the project results is an essential purpose of this funding programme, the Climate and Energy Fund will publish these project results and project information in order to pursue its legitimate interest to ensure funding transparency and to fulfil the objectives of the Climate and Energy Fund (Sec. 1 and Sec. 3 of the Climate and Energy Fund Act, KLI.EN-FondsG) (Art. 6 (1) (f) GDPR).

Visibility and easy availability of innovative results are essential to increase the impact of the programme. Where possible, all project results achieved under this RTI Initiative will thus be published and made available by the Climate and Energy Fund in accordance with the principle of open access. To be able to present the project results in a clear and comprehensible manner, instructions for public relations on projects funded under the call are made available in a "Guide for Project Reporting and Public Relations", which also forms an integral part of the agreement.

6.0 Contact

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Further funding opportunities:

Energy and Environmental Research

[www.ffg.at/themenschwerpunkt/
umwelt-energie-nationales-angebot](http://www.ffg.at/themenschwerpunkt/umwelt-energie-nationales-angebot)

Mobility of the Future

www.ffg.at/mobilitaetderzukunft

Energy Research

[www.ffg.at/programm/
energieforschung-das-programm](http://www.ffg.at/programm/energieforschung-das-programm)

Smart Cities Demo

www.ffg.at/smart-cities

Funding agency for investment costs

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www.public-consulting.at

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