Schweizerische Eidgenossenschaft
Confédération suisse
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Swiss Confederation

Federal Department of the Environment,
Transport, Energy and Communications DETEC

Swiss Federal Office of Energy SFOE
Energy Research and Cleantech

Research Programme Wind Energy and Energy-Economy-Society Combined Call 2024 for Research Proposals

The overarching aim of the Research Programme Wind Energy is to support the expansion of wind energy in Switzerland. It also aims to further develop the use of existing technologies in wind energy parks in the megawatt range for Switzerland. The Research Programme Wind Energy can elaborate specific calls to fund innovative technical research projects.

The Energy – Economy – Society (EES) research programme promotes application-oriented research in the field of energy policy. To this end the EES focuses on economic, social, psychological and political issues throughout the energy sector supply chain. EES elaborates calls to fund innovative socio-economic research projects that address relevant energy-policy questions for Switzerland.

In line with the Federal Energy Research Masterplan for the period from 2021 to 2024 and with the Energy research Masterplan of the Swiss Federal Office of Energy, as well as the following Federal Energy Research Masterplan for the period from 2025 to 2028, Research Programmes define research priorities through calls.

For this call, the Directive on the submission and evaluation of applications for financial support of energy research, pilot and demonstration projects applies.

Scope

Switzerland has set ambitious renewable energy goals, aiming for 35 TWh of renewable energy production (excluding hydro) by 2035. This significant increase is possible domestically, with a recent study by the Swiss Federal Office of Energy (SFOE) identifying 30 TWh of wind energy potential despite existing planning constraints. The main challenge lies in efficiently deploying this potential involving planning authorities and local communities.

One unique aspect of Switzerland's situation is the pronounced seasonal imbalance between summer and winter electricity production. A large share of planned production occurs during the summer months, creating a specific need for winter energy. To address this, an additional ~6 TWh of energy production during winter is required, necessitating large-scale infrastructure development beyond rooftop solar installations. The new legal context creates several potential new incentives.

The energy transition also faces a divide between urban centres and rural areas. Larger cities benefit from dense infrastructure, enabling energy efficiency through public transportation, district heating, and local services. However, these urban areas lack sufficient winter renewable energy potential to achieve the transition independently. In contrast, rural regions rely more heavily on energy-intensive transportation and services but have the space to capture new energy production potential, positioning them as potential "energy-positive" territories.

Switzerland has a positive tradition of energy-positive municipalities benefiting from water levy taxes. However, this mechanism isn't directly applicable to other energy sources. Neuchâtel proposed a wind levy tax, but it was rejected after legal scrutiny[1]. Creating a legal compensation mechanism remains challenging, especially for public authorities. Some cantons explore taxes based on land valuation. In

[1] 08175 (ne.ch)

2025, energy communities (LEG) will be introduced to enhance the value of energy-positive territories, promoting stable competitive renewable energy prices.

The planning process in Switzerland promotes significant local actor involvement but can take up to 25 years. Urgently, more efficient processes are needed, involving strong local community engagement. Prioritizing renewable energy could be a solution, although acceptance must be evaluated.

Many international research has been made in the field of social acceptance of renewable energy. The IEA Wind Task 28 “Social Acceptance of Wind Energy Projects” has a summary of recent social acceptance studies for wind energy[2]. Given the specific challenges of Switzerland, but also the opportunities of the new regulatory framework, a dedicated call for research has been opened to address the mentioned challenges.

Research Topic

Researchers are invited to submit research proposals on the following topic. The focus is primarily on socio-economical aspects. The projects must be strongly related to Switzerland. Projects can concentrate on one or several aspects and do not have to treat all sub-points and research questions listed.

Local stakeholder engagement to foster the deployment of wind energy in Switzerland accounting for evolutions in the regulatory framework conditions

The following research questions (not exhaustive) are of interest:

- How can the positive impact of wind energy for local economies be maximised? What processes can help to integrate environmental, social, and economic benefits from wind energy in addition to various renewable energy sources to enhance local economies? How can mutually value enhancing outcomes for various local economic sectors (agriculture, tourism), the local population and energy production be reached?
- How can monetary participation foster local community support? What are the most effective monetary participation schemes for wind energy in the context of the green energy transition? What are the advantages and disadvantages notably in terms of governance, preferences of the local population, effectiveness and efficiency of monetary participation schemes? In particular, how do schemes based on reduced electricity prices, participation to infrastructure through shared funding schemes, participation to production via a newly defined wind fee (inspired by water fees in hydro energy) or redistribution of taxes on value-added of electricity production, participation build on compensation measures or alternative/new compensation schemes compare?
- What are the opportunities resulting from Local Energy Communities (Lokale Elektrizitätsgemeinschaften LEG), and under what conditions are they particularly promising to foster the deployment of wind energy? How can the regulatory framework be adapted to support engagement?

Call Specifications

The call is addressed to universities (including ETH-domain), universities of applied science, further research organizations and the private sector. The participation of young scientists and PhD students in the research teams is encouraged. Researchers in the public and private sector can apply for remuneration of the personnel costs according to the maximum rates provided in the Directive on the submission and evaluation of applications for financial support of energy research, pilot and demonstration projects. The Research Programme does not pay any contribution to overhead costs.

Universities, universities of applied sciences, further research organizations and the private sector based outside Switzerland are welcome to apply. They however have to do so in a consortium with at least one Swiss partner and work on research questions relevant for Switzerland. The Swiss partner

[2] Task 28 Publications | IEA Wind TCP (iea-wind.org)

has to provide a substantial contribution to the research work performed in the project and be listed as the main partner in the application.

Wherever possible and reasonable, the participation of stakeholders is recommended to ensure the relevance of the research to the needs of society. Furthermore, cooperation and exchange with already ongoing projects or consortia (e.g. SWEET programme) in this topical field funded by SFOE or other funding bodies is highly appreciated.

A share of own and third-party contributions (in-kind and/or cash) is welcomed and has to be formally confirmed at the proposal submission.

Supported projects typically receive public funding between 100–300 kCHF and have a duration between 24 and 36 months. However, there are no formal limits. The indicative call budget is in the range of 0.6–0.9 MCHF and finally depends on the requested distribution of the payments over the fiscal years and on the availability of annual federal budgets and the duration of selected projects and annual budgets of the research programme.

Applicants must comply with the conditions set out in the Directive on the submission and evaluation of applications for financial support of energy research, pilot and demonstration projects.

Application procedure

The call follows a one-stage submission and evaluation procedure which means that full proposals have to be submitted (approximately 20 pages, see full proposal template).

The main project partner (= coordinator) prepares a full proposal using the template published with the call. Please be aware that the required enclosures (e.g. financial spreadsheet) are listed in the forms. Only research & development proposals (no pilot & demonstration or sandbox projects) are eligible.

The following points should be noted for project proposals:

- The detailed topics and guiding questions proposed in the topic outlines are indications that do not have to be fully reflected in the project proposals
- The list of detailed topics and guiding questions is not exhaustive. Further research ideas can be submitted that fit the focus
- The projects will be assessed on the basis of the evaluation published with the call (see Appendix 2).

The full-proposals have to be submitted as one single PDF file (including all enclosures) by e-mail (subject: “Wind-ESS energy Call 2024”) to energieforschung@bfe.admin.ch

by 12 September 2024.

The receipt of the full proposal will be confirmed in due time. If you do not receive confirmation of your full proposal submission by 12 September 2024, please contact Lionel Perret (see below).

Approval

The SFOE strictly approves the full proposals according to the ranking and the available budget. Per main project partner (responsible person) a maximum of two full proposals can be submitted. Some proposals may have substantial overlap in the proposed themes. In these cases, only the best ranked full proposal can be approved. Only the best ranked projects that do meet funding criteria will be attributed funding.

Tentative timeline

18 July 2024	Launch of the call
16 August 2024	Deadline for questions regarding the call
12 September 2024	Deadline for submission of full proposals
October 2024	Notification of approved proposals
November 2024 - January 2025	Launch of approved projects

Contact information

If you have any questions regarding the call, please do not hesitate to contact:

Lionel Perret
Tel. 024 566 5202; lionel.perret@planair.ch

The deadline for questions is 16 August 2024. Answers to questions of general interest and relevance will be published on the Research Programme Wind Energy and Energy-Economy-Society websites. No extension of the deadline will be granted.

Appendix 1
Remuneration of personnel expenses in research and P+D projects

Principle

The determination of the own personnel costs of the project partners is based on the actual hours worked and the actual gross salaries paid to the employees plus the following supplements:

▪ Employer contributions according to AHVG / IVG / EOG, BVG, AVIG and UVG.

▪ Opportunity costs due to incomplete productive utilization of employees, e.g. due to vacations, training, internal administrative work, order acquisition etc.

▪ In the case of private companies, additional opportunity costs in connection with loss of revenue and profits due to development activities.

The defined maximum hourly rates merely specify the upper limit of the allowable project costs. In case of doubt, the declared hourly rates and expenses must be substantiated. Self-employed persons who do not pay themselves a salary may declare gross salaries customary in the market for an equivalent position without a management function. The following rule of thumb can be used to roughly estimate the permissible hourly rate: The employee's gross salary divided by the regular yearly working hours and multiplied by a supplement factor. This factor is 1.5 for universities and public research institutions and 2.0 for private companies.

Functional categories

The eligibility of hourly rates depends, among other things, on the function and, in a broader sense, on the education and training of the employee:

Category	Universities & public research institutions	Private companies
A[19]	Professor	Upper management/ Head of company or division
B	Senior scientist (min. 5 years experience after graduation/PhD)	Middle management/ Head of business unit or team
C	Post-doc (max. 5 years of experience after graduation/PhD)	Expert with high education and/or min. 5 years of relevant work experience
D	PhD student or technical/scientific staff member	Expert with low education and/or max. 5 years of relevant work experience

[19] For category A, a maximum of 200 hours per year and employee may be declared. This limit may only be exceeded if it is proven that the increased cooperation of these persons is indispensable for the implementation of the project.

Maximum hourly rates:

For the defined organization types and function categories, the following maximum hourly rates apply. Calculation examples: According to the rule of thumb, an hourly rate of 115 CHF/h in a university corresponds approximately to a gross salary of CHF 161,000. An hourly rate of 135 CHF/h in a private company corresponds approximately to a gross salary of CHF 142'000.-.

Category	Universities & public research institutions	Private companies
A	135 CHF/h	170 CHF/h
B	115 CHF/h	135 CHF/h
C	80 CHF/h	115 CHF/h
D	50 CHF/h	90 CHF/h

Appendix 2

Evaluation criteria

The project has to fulfil **all** eligibility criteria to be evaluated.

Eligibility criteria

Formal criteria:

Criteria		
F1	Is the application complete (does the proposal include all information requested in the call)?	☐ yes ☐ no
F2	Are the objectives of the research project clear and is the research proposal well structured?	☐ yes ☐ no
F3	Was the application submitted in time?	☐ yes ☐ no
F4	In the case of scientific publications: Is Open Access granted?	☐ yes ☐ no

Content related criteria:

Criteria		
C1	Do the research questions to be addressed fit the call, and do they fall into the competence of the SFOE?	☐ yes ☐ no
C2	May the findings of the project be made accessible to the public? (See provisions on monitoring and open access in the Directive on the submission and evaluation of applications for financial support of energy research, pilot and demonstration projects)	☐ yes ☐ no

Qualitative Criteria

Each of the sub-criteria will be scored on a scale from 1 to 5. The 1–5 scoring system for each sub-criterion indicates the following assessment:
1 – Poor: The sub-criterion is inadequately addressed or there are serious inherent weaknesses.
2 – Unsatisfactory: The sub-criterion is broadly addressed but there are significant weaknesses.
3 – Satisfactory: The sub- criterion is addressed but with a number of shortcomings.
4 – Good: The sub-criterion is well addressed but with a number of shortcomings.
5 – Very Good: All relevant aspects of the sub-criterion are addressed; any shortcomings are minor.

For a project to qualify for funding, each qualitative criterion (Q1 to Q5) has to obtain a minimum score listed in the table. Some sub-criteria are also subject to a minimum score. The score for each qualitative criterion (Q1 to Q5) is the average of the listed sub-criteria. The criteria are weighted as indicated below.

Criterion		Minimum evaluation
Q1	**Organisation** (weight: 1.0)	**ø 3**
	Competencies, organisation, responsibility Are all the competencies crucial to the project covered? Has a clear project organisation been established? Are the responsibilities laid down clearly?	At least 3
	Schedule and milestones Is the proposed schedule realistic and efficiently drawn up? Have clearly measurable milestones been stipulated (stage-gate targets)?	
	Cost-benefit ratio, subsidiarity Does a project hold out the prospect of significant benefits in relationship to the costs involved? Have sufficient in-kind contributions and third-party funds been promised?	

Criterion		Minimum evaluation
Q2	**Excellence** (weight: 1.0)	**ø 3**
	Preliminary work, suitability, expertise Can the project team build on previous work? Does the project team have the expertise required (suitability)?	
	Academic record, recognition Does the project team have broad experience (academic record) or are they recognised specialists in their field?	
	Teams' potential for success Is clear potential for success discernible in this project team?	
Q3	**Content of project** (weight: 2.0)	**ø 3**
	Relevance, national and international cooperation Is the project scientifically, politically and strategically relevant and does the content contribute to a research priority set out in the call? Is it part of an international cooperation within the IEA3 or the EU research programme, or is it part of other national or international collaboration schemes (e.g. DACH)?	At least 3
	Value creation, innovative content Do the findings lead us to expect high value creation for Switzerland - in an economic or scientific respect? Does the project build up a large body of knowledge or know-how and/or does it pursue an innovative or novel approach?	
	Approach, methodology and data Is the proposed approach suitable to deal with the issue? Is the methodology adequate to solve the issue? Is access to the data required guaranteed/has the strategy to compile data been clearly defined?	At least 3

[3] The most important aspect here is that the project is scientifically, politically and strategically relevant and that the content contributes to a research priority set out in the call. A national or international cooperation would be viewed positively, but is not a necessity.

Q4	**Opportunities, risks** (weight: 1.0)	**ø 3**
	Energy potential Does the project contribute to a safe, sustainable and economical energy provision or to a lower and rational energy consumption?	
	Discussion in public or before a professional audience Are the research findings of interest to the general public? Do the findings constitute a useful foundation for the opinion building and decision-making processes among informed people?	
	Sustainability Will the findings contribute to sustainable development in all three dimensions (ecological, economic and social) at national or global level?	
Q5	**Monitoring, dissemination, and educational effects** (weight: 1.0)	**None**
	Monitoring Is a monitoring or other accompanying activity such as workshops or a monitoring group planned?	
	Knowledge transfer Are knowledge transfer and publications planned? Is an open access / data / model strategy included?	
	Promotion of PhD candidates Are PhD candidates working on the project?	