



Smart
Energy
Systems
ERA-Net

**EUROPEAN RESEARCH AREA NETWORK
– SMART ENERGY SYSTEMS**

CALL FOR PROPOSALS

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1 TIMELINE OF THE 2018 JOINT CALL (REGSYS)

ERA-Net Smart Energy Systems (ERA-Net SES) is a European joint programming platform of 30 national and regional funding partners. This document is an invitation to respond to the 2018 joint transnational call for Regional Energy Systems projects in Europe, the REGSYS joint call. The total available budget is 33.3 Mio € including EU co-fund contribution.

Call launch	23 May 2018
RegSys Call Launch Event	Nordic Clean Energy Week, Malmö, Sweden
Project outline deadline (mandatory)	11 September 2018, 14:00 CEST
Preliminary eligibility check	18 September 2018
Compulsory advisory period	18 September – 2 November 2018
Proposal deadline	2 November 2018, 14:00 CET
Evaluation period	2 November 2018 – 1 March 2019
Deadline funding decision feedback	8 March 2019
Expected project start	Before 15 December 2019

Project proposals must be submitted electronically. More information, about the call and the online Electronic Submission System, can be found at the ERA-Net SES website: www.eranet-smartenergysystems.eu/Calls/Regsys_Calls/RegSYS_Joint_Call_2018.

2 BACKGROUND: ERA-NET SMART ENERGY SYSTEMS

The European Energy Union stresses the need for a fundamental transformation of our energy systems towards a sustainable, low carbon and climate-friendly economy that is designed to last. Strong, innovative and competitive European companies should provide the technology and services needed to deliver energy efficiency and low carbon energy solutions inside and outside Europe. The European Union's ambition is to become a leader in renewable energy, reducing its dependency on fossil fuels, and has committed to cut CO₂ emissions by at least 40% by 2030. Consumers are at the centre of this ambition. Energy is a critical commodity and essential for full participation in modern society.

ERA-Net SES is a European joint programming platform of 30 national and regional funding partners. An overview of the ERA-Net SES partner countries and regions is given in the map below.

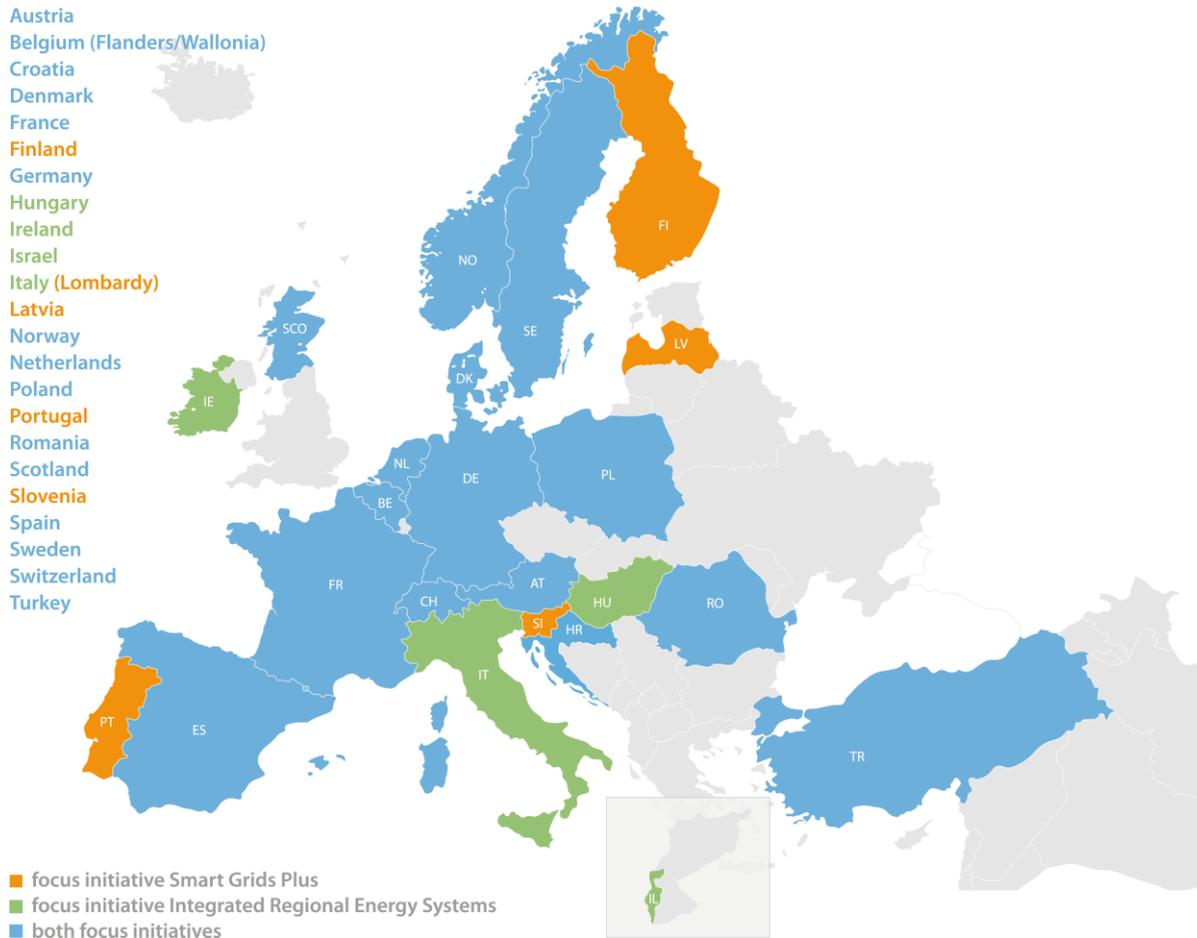


Illustration: Map of ERA-Net SES partner countries and regions

3 AIM AND SCOPE OF THE 2018 JOINT CALL (REGSYS)

The ERA-Net SES 2018 joint call focuses on the development of Integrated Local and Regional Energy Systems in accordance with the SET-Plan Action 4 Implementation Plan¹. It originates from the corresponding ERA-Net SES focus initiative² that aims at facilitating cross sectoral, holistic approaches for enabling regions and local communities to move towards a decarbonized energy system by 2030.

With this Joint Call, ERA-Net SES intends to support Research, Development and Innovation (RDI) initiatives contributing to:

“Develop Integrated Local and Regional Energy Systems. Such Systems make it possible to efficiently provide, host and utilise high shares of renewables, up to and beyond 100% in the local or regional supply by 2030. They enable regions and local communities to realise their high sustainable energy ambitions. Such systems shall provide tailor-made solutions that meet the local and regional requirements and demand. At the same time, they shall link to a secure and resilient European energy system, enabling the participation in inter-regional exchange of energy as well as in sharing responsibility to maintain the overall system, considering a sustainable use of local and global resources”. (cit.: [SET-Plan Action 4 Implementation Plan, Flagship Initiative 2](#))

¹ [SET-Plan Action 4 Implementation Plan, Flagship Initiative 2](#)

² [ERA-Net SES focus initiative “Integrated, Regional Energy Systems”, started 2018](#)

The joint call emphasises solutions answering to specific critical needs within a local/regional energy system, where a “need-owner”³ is identified and involved in the solution development. With its model of [Associated Partners](#) ERA-Net SES provides support to RDI initiatives to involve relevant stakeholders.

Regional and local energy systems and networks will have to cope with a fundamental transformation in the coming years. They will have to respond to actual drivers such as the increasing uptake of new and improved technologies for decentralised energy systems, the boosting digitalisation and associated business models as well as to current societal trends. Such systems are composed of locally and regionally available energy sources, built infrastructure, specific production and consumption characteristics as well as consumer structures from different sectors, including the transportation system. They provide appropriate services to consumers, as well as to the overall European energy system, to help ensure the security of supply, maximize the primary energy efficiency and deliver a high share of renewable energy. They are part of the living environment of citizens, including communities and regions with highly ambitious clean energy goals. The related regional and local innovation ecosystems and value chains will have an important role to play in the transition of regional and local energy systems.

4 PROPOSAL SET-UP AND PROJECT REQUIREMENTS

The motivation behind each project is to identify and address critical needs within a specific regional/local energy system. Projects are asked to involve “need-owner(s)” and relevant stakeholders from the regional innovation ecosystem in all project phases to maximise market acceptance and uptake within the development of technologies and solutions. A key element for the project proposals is the focus on excellence in collaboration with relevant “need-owners” and stakeholders in co-creating solutions.

RegSys call proposals are asked to elaborate on:

1. **Identification of needs and “need-owner(s)”**: Description of process and methodologies for identifying critical needs, in collaboration with the most significant “need-owner(s)” and other stakeholders in the local and regional energy systems (e.g. infrastructure operators, end users, communities etc.) Optimally, one or more concrete region is addressed⁴.
2. **Description of R&I activities and co-creation of solutions (main part)**:
 - Description of activities in the fields of research, development and demonstration and/or real environment testing.
 - Description of chosen processes and methods for collaboration between project partners, “need-owner(s)” and other stakeholders.
 - Description of how “need-owner(s)” and relevant stakeholders (such as technology and service providers, innovators, start-ups, end-users and communities) should participate in the planned R&D demonstration and transfer activities through the chosen collaboration processes and methods. The described processes should ensure that the viewpoints, knowledge and expertise of the “need-owner(s)” and relevant stakeholders

³ By „need-owner“ this call refers to the role of an entity (e.g. public agency, local/regional authority, energy grid manager/owner, company, building owner etc.), that seek a solution to a specified need (problem) within its area of operation. The “need-owner” has practical insights into what the actual need is and an interest to be involved in the development of a solution. This ensures the development of an optimal solution and facilitates the “need-owner(s)” acceptance and implementation of the solution. There can be more than one “need-owner” to the same need.

⁴ ERA-Net SES [Associated Partners](#) may be involved to support in this stage of the project development.

are involved in all solution development stages, from concept creation to demonstration. *This is defined as a solutions' co-creation process⁵.*

3. **Scaling up, replication and dissemination strategy:** Description of the potential for subsequent scaling up, replication and achieving market-readiness (TRL 8-9) for the solutions developed in the course of the project and reaching up to TRL 7 (see section 4.1). Description of IPR, knowledge sharing and open data strategies, including identifying solution synergies and developing next steps.

These should take into account opportunities for follow-up projects with market uptake measures (TRL 8-9) that could be supported by some ERA-Net SES funding partners or associated partners, subject to State aid rules where applicable. The opportunities for creating policy briefs and guides or other deliverables in the framework of the ERA-Net SES Knowledge Community should also be considered ([ERA-Net SES/Knowledge Community](#)). Each project is expected to actively participate in knowledge sharing and learning as organised by the ERA-Net SES Knowledge Community, together with other projects resulting from this call, additional experts and ERA-Net SES associated partners.

Sustainably successful digital services have to be customisable, scalable and replicable from a very local to an interregional and global level, leveraging synergies by building on digital platforms⁶. They require advanced ICT systems, which have to account for security, privacy requirements and trade-offs. Proposals that intend to develop digital services therefore should, as far as feasible, use existing digital platforms⁷, rather than expend project resources to develop their own⁸.

Proposals are asked to maximise synergies with other relevant national or European projects, current and concluded.

4.1 Project requirements

The following criteria apply for project proposals in the ERA-Net SES RegSys call – the projects should:

- be transnational by nature, involving at least two independent participants from two different countries (whereof at least 1 EU member state), participating in the joint call [[RegSYS Joint Call 2018](#)].
- develop energy system solutions, as well as prepare or implement demonstration projects. Projects should address solutions within Technology Readiness Level 5 – 7 (TRL - see definitions in [Annex G](#)). Activities with lower TRL levels (3-6) may be included if they contribute to the higher project goal. Projects may expand on results from and connect to ongoing or recently finished demonstration projects (utilise test infrastructure, utilise knowledge, cooperation of key demos, transfer of results, establishment of new business activity, etc.). They however must show complementary and added value, avoiding duplication. Projects should develop new solutions with the potential to become best practice by 2025.

⁵ Some of the ERA-Net SES [Associated Partners](#) are able to support such activities

⁶ [SET-Plan Action 4 Implementation Plan](#) - Innovation Action A4-IA2.3-1

⁷ E.g. data platforms, software platforms, ledger technologies, etc.

⁸ Some of the ERA-Net SES Associated Partners are able to provide such platforms. Specifications and conditions can be found on the ERA-Net SES [Associated Partners](#) website

- implement the Three-Layer Research Model encompassing *Stakeholder/Adoption, Goods and services* and *Technology* (see [Annex A](#)). This normally includes considering business models, market strategies and consumer needs and engage private and public stakeholders in co-creation eco-systems. Projects are expected to incorporate all three layers of the model. However, projects involving only one or two layers can be considered if sound arguments for doing so are presented. Generally, projects implementing all three layers will be given priority.
- address the *Three Dimensions of Integration* (see [Annex B](#)). This includes to involve stakeholders across relevant sectors, energy systems and regional innovation eco-systems. Projects have to cover at least the “Smart Energy System Integration” dimension. Projects covering additional dimensions of integration (ideally all three) will be given priority.
- address critical needs within a specific regional/local energy system. Projects should involve regional/local “need-owner(s)” and other relevant stakeholders to ensure market viable solutions based on concrete needs. At the same time, the aspects of replicability and transferability of solutions should be considered. Projects should carefully consider the requirements defined by end-users of technology and/or energy, involving specialists like marketing experts and designers to foster adoption and success of new energy solutions in society in general, and in local communities in particular.
- consider aspects of replicability and transferability of solutions. While starting from concrete needs in a specific region, projects should at the same time have markets of solutions and technologies in mind. The application sometimes has to be tailor made for a specific situation while the solution or technology behind can be much more universal. High flexibility and adaptability of developed solutions will increase the applicability on European and global markets. A specific case are digital business processes and services, which should preferably be developed by leveraging on already existing digital platforms.⁹
- show a critical mass of participants and critical size according to their subject (e. g. minimum number of involved households, involving intermediaries with large outreach potentials, connecting different types of storages, demonstrating Virtual Power Plants of a minimal size, platforms that host a minimal number of stakeholders etc.).
- consider diversity perspectives related not only to gender, but also ethnicity, age, socio-economic status, physical abilities, political beliefs, geography etc. throughout the project. Adoption and success of new energy solutions in local communities, and in society in general, requires careful consideration of the prosumer and end user’s needs. To be able to evaluate the highly variable consumer needs and to inspire the most creative and effective solutions, the composition of a successful project consortium ideally should reflect the diversity in society.

Project proposals should refer to:

- the existing European roadmaps and implementation plans, such as the SET-Plan Action 4 Implementation Plan¹⁰, the ETIP SNET R&I roadmap 2017-26¹¹ or the Cross-Cutting

⁹ [SET-Plan Action 4 Implementation Plan](#) – Innovation Action A4-IA2.3-1.

Some of the ERA-Net SES Associated Partners are able to provide such platforms. Specifications and conditions can be found on the ERA-Net SES [Associated Partners](#) website.

¹⁰ [SET-Plan Action 4 Implementation Plan](#)

¹¹ [ETIP SNET R&I roadmap 2017-26](#)

Technology Roadmap of the European Technology Platform on Renewable Heating and Cooling¹²

- existing reference architecture models and common standards¹³ as they exist as well as to relevant public documents of the ERA-Net Smart Grids Plus Knowledge Community ([ERA-Net SES/Knowledge Community](#))

National/regional eligibility criteria must be respected in addition to the ERA-Net SES RegSys project requirements.

A summary of national/regional eligibility requirements is provided under [Annex C](#). It is essential that applicants familiarise themselves with their respective funding agency's rules. It is mandatory that they contact their respective national/regional contact points during the advisory period for clarifications prior to submitting a full project proposal.

This contact may *inter alia* be important for enabling national/regional authorities to check compliance with national/regional rules adopted on the basis of EU State aid rules, such as rules implemented/to be implemented on the basis of the General Block Exemption Regulation¹⁴.

Examples of potential project types are given in [Annex E](#).

4.2 Knowledge Community – background and requirements

Applicants for this call should be aware that they will be expected to participate in the ERA-Net SES Knowledge Community (see Standard Work Package, [Annex H](#)). Cooperation and facilitation in the below-mentioned activities are mandatory for all projects funded by the ERA-Net SES. The final organisation and execution of these activities will be the result of an iterative process between the Knowledge Community Management and each funded project, as applicable. The project proposal (see section [5.5](#)) should include the mandatory work package that implements these activities (see [Annex H](#)). In the design of their own dissemination and exploitation strategies, projects should consider potential synergies with and contributions to the ERA-Net SES Knowledge Community.

4.2.1 Background

The ERA-Net SES Coordination implements advanced and innovative follow-up, monitoring and transfer activities to create an ERA-Net Smart Energy Systems Knowledge Community. It is organised by the ERA-Net SES Knowledge Community Management¹⁵.

The goal of the Knowledge Community is to enable knowledge exchange between the projects and with national and international experts to leverage synergies of efforts. The Knowledge Community aims to present state-of-the-art knowledge and discussions in the field of Smart Energy Systems to establish ERA-Net SES as a hub and voice for all information related to national/regional Smart Grids and Smart Energy RDI (Research, Development, and Innovation). To this end, the Knowledge

¹² [Cross-Cutting Technology Roadmap](#)

¹³ Including Smart Grid Architecture Model developed under standardisation mandate M/490 and follow-up activities, regulatory environment for privacy, data protection, data management and alignment of data formats (e.g. the work of the ad-hoc group on “My Energy Data” and its respective follow-up), cyber security, smart grid deployment, infrastructure and industrial policy (<http://ec.europa.eu/energy/en/topics/markets-and-consumers/smart-grids-and-meters/smart-grids-task-force>).

¹⁴ <http://eur-lex.europa.eu/eli/reg/2014/651/oj/eng>

¹⁵ http://www.eranet-smartenergysystems.eu/About/Our_Organisation

Community will link experts of ERA-Net SES¹⁶ projects and actors of other national, transnational and international smart energy projects. It will also provide connections to policy makers, stakeholder organisations, SMEs and academia from outside the ERA-Net SES community. To involve key stakeholder groups and exploit specific potentials, the Knowledge Community involves so called Associated Partners that can contribute specific knowledge, tools or means of approaching stakeholders.

The Knowledge Community refers to the European knowledge base (e.g. findings, resources and expertise from the European SET-Plan Initiative, Horizon 2020 Bridge Working Groups, ETIP SNET working groups, the European Smart Grids Taskforce, the Grid+ Storage and Intensys4EU Project, the Future Internet PPP, the SEN/CENELEC/ETSI working groups or the Council of European Energy Regulators (CEER) etc.). It will offer knowledge to aid policy makers, program managers/owners, EU level representatives and stakeholders in making strategic decisions.

The key means of managing a lively Knowledge Community are Living Documents and physical and virtual Working Groups. Cooperation and Knowledge is being managed on the comprehensive expera web-platform (www.smartgridsplus.eu).

The Knowledge Community Management will further implement an interactive, formative evaluation process where the projects' results are assessed against state-of-the-art knowledge and through which the projects get the opportunity to monitor their progress and results. The evaluation will emphasise the importance of interoperability, scalability and replicability of the results. It may also aid the deployment of the solutions on a national and European level.

The Knowledge Community is an integral part of the ERA-Net Smart Energy System concept. It is therefore important that applicants fully consider this concept and its content when formulating the project proposal.

5 GUIDANCE FOR APPLICANTS

5.1 Call procedure

The call procedure has three steps;

- the proposal phase
- the national eligibility and evaluation phase
- the selection phase

During the proposal phase, there will be a compulsory proposal outline and advisory period. The applicants are obliged to send a proposal outline for preliminary eligibility check to the respective funding agencies. During the advisory period, the project applicants are obliged to seek support and guidance from their respective agencies regarding their proposal outline. This is to ensure suitability of the projects with respect to national/regional requirements.

During the national eligibility and evaluation phase, the project proposals will be submitted to a full national/regional eligibility check and a trans-national evaluation. The project proposals have to include all necessary information and documentation, as well as any information needed to fulfil national/regional requirements. If these formal requirements are not met, the project proposal will not pass the evaluation phase. The different steps of the evaluation are described in more detail in the following sections (5.1.1–5.1.4).

The ERA-Net SES Call Management¹⁷ will facilitate the call process.

¹⁶ including the focus initiative on Smart Grids Plus

¹⁷ http://www.eranet-smartenergysystems.eu/About/Our_Organisation

Call procedure timings		
Proposal phase	RegSys call opens	23 May 2018
	Proposal outline deadline	11 September 2018, 14:00 CEST
	Preliminary eligibility check	18 September 2018
	Compulsory advisory period	18 September – 2 November 2018
National eligibility and evaluation phase	Deadline project proposal	2 November 2018, 14:00 CET
	Transnational expert evaluation and national/regional eligibility check	November 2018 – February 2019
Selection phase	Decision communicated to applicants	8 March 2019
Project phase	Project start date	Before 15 December 2019

Applications and any supporting documents must be in English and submitted via the Electronic Submission System, available on the ERA-Net Smart Energy Systems website (www.eranet-smartenergysystems.eu/Calls/Regsys_Calls/RegSYS_Joint_Call_2018). A text and page limit is set within the Electronic Submission System, and applicants are advised to include information only directly relevant to this call to preserve focus, structure and clarity in the application.

All project outlines and full proposals are managed and submitted through the central ERA-Net SES Electronic Submission System available at www.eranet-smartenergysystems.eu/Calls/Regsys_Calls/RegSYS_Joint_Call_2018, apart from specific national/regional documentation requirements (see box under section 5.1.1 and [Annex C](#)).

5.1.1 Project proposals

The project proposal phase opens on 23 May 2018. Consortia are required to submit their project outline proposals by 11 September 2018 at 14:00 CEST at the latest. The project outline proposal is a prerequisite for submitting a full project proposal. The following information will be required in the project outline ([see template](#)):

- scope of the project
- general time-line and goals
- initial project partners
- amount of funding applied for from the individual regional/national funding agencies (including intensity of support (in %)).

The extent of the project outline will be no more than 2-3 A4 pages of text. The project outline will be used as basis for assessment by the regional/national funding agencies during the Advisory period. Final funding decisions will purely be based on the full project proposal. The deadline for submission of the full project proposals via the Electronic Submission System (www.eranet-smartenergysystems.eu/Calls/Regsys_Calls/RegSYS_Joint_Call_2018) is 2 November 2018 at 14:00 CET.

Please note that some national/regional funding agencies may require additional documentation from the project partners according to national/regional regulations¹⁸. These should **not** be submitted in the central ERA-Net Smart Energy Systems Electronic Submission System, but directly to the relevant funding agency through their national/regional submission system (if applicable). Please consult your national/regional funding agency regarding this issue during the advisory

¹⁸ Including regulations adopted to implement EU State aid rules

periods. It is the responsibility of each individual project partner to ensure that all the necessary documents are submitted on time to the appropriate recipient.

5.1.2 Advisory period

There will be a compulsory advisory period during the proposal submission period, during which the applicants need to contact their national/regional funding agencies. The applicants may receive feedback on their proposal outlines from their individual national/regional funding agency in terms of scope, eligibility and desirability of the project proposal, and receive further information on the involvement of associated partners. This will give the project partners the opportunity to revise their proposal, expand or contract its scope, re-evaluate the participating partners and obtain necessary national/regional funding agency requirements information. Thereby the quality and success rate of the project proposals may be increased.

The national/regional contact point will also provide information on the national/regional requirements for the project proposals. Such a requirement may be that a relevant project partner(s) must also submit a full *national/regional* proposal (i.e. in the national/regional funding agencies' submission system and language, adhering to national/regional regulations). Each project partner is responsible for the preparation and submission of all required documents according to their respective national/regional funding agency's eligibility rules. The advice given by the funding agencies to the project partners is non-binding. The advice provided does not engage the funding agencies with respect to acceptance or rejection of the full project proposal.

Only consortia that have both submitted a proposal outline through the central portal, and contacted their respective national/regional funding agencies during the advisory period, are eligible to submit a full project proposal.

5.1.3 Evaluation and eligibility process

The evaluation criteria are built upon three main criteria:

- a. Excellence.
- b. Impact.
- c. Quality and efficiency of the implementation.

For a more detailed explanation of each criterion, please see [Annex F](#). No preference is given to projects with partners from numerous different countries/regions. Different project types require different numbers and types of partners (industry, academia etc.). The roles and activities of each partner within a project consortium should clearly add value to the objectives of the proposed project. Manageability of the consortium is key and must be demonstrated.

The evaluation and eligibility process comprises three steps, which are explained in detail below:

1. National/regional eligibility check

The projects will be considered on a national/regional basis, governed by national/regional funding agency regulations. The national/regional funding agencies will evaluate the proposal based on the project requirements (section 4) and, if necessary, the evaluation criteria ([Annex F](#)), in conjunction with specific national/regional requirements. Ineligible project proposals will not be considered for funding and will not go through to the selection phase.

2. Transnational evaluation of the project proposals

In the evaluation phase a panel of at least three independent experts will evaluate each project proposal, based solely on the evaluation criteria specific to the ERA-Net Smart Energy Systems (see [Annex F](#)). Each independent expert will first individually evaluate the assigned

project proposals. Afterwards, the experts will meet to form a consensus evaluation. This process will be overseen by an independent observer. The consensus evaluation will result in a ranked list of project proposals.

All evaluators and observers selected are required to declare their independence to the projects to avoid conflict of interest. They must adhere to the confidentiality conditions of the evaluation process.

3. ERA-Net SES selection and outcome

The final step of the evaluation process is a joint meeting of the ERA-Net SES consortium to select projects for funding according to the ranked list from the independent experts. The ranked list will not be available for the funding agencies prior to the fulfilment of the national eligibility checks. The outcome will be reported to the applicants by the 8 March 2019.

5.1.4 Confidentiality

Handling of project proposals and any information relating to them will be kept confidential in accordance with the applicable national/regional regulations. Project proposals will not be used for any purpose other than the evaluation of the applications, funding decisions, monitoring of the projects and mandatory reporting to the European Commission.

5.2 Consortia

Consortia may be made up from partners from at least two different countries of the ERA-Net SES. They have to abide by the ERA-Net SES requirements given in chapter [4.1](#) and the regional/national eligibility rules in [Annex C](#).

Partners from countries that are not members of ERA-Net SES 2018 joint call (RegSys) (see list of funding partners under section [5.3](#) 'Funding arrangements') are encouraged to join a project consortium as additional partners. However, these additional partners must finance their activities from other sources, as each ERA-Net SES RegSys funding agency will only fund partners from their own country/region.

The project partners are required to sign a consortium agreement to agree on Intellectual Property Rights (IPR) and other relevant issues dealing with responsibilities within the project and exploitation of results. They should ensure that the agreements are not in conflict with the regulations of the relevant national/regional funding agencies. Model consortium agreements can be found at <https://www.iprhelpdesk.eu/library/useful-documents>.

Associated Partners (AP), as listed on the ERA-Net SES website, could be involved in the early stages of a project to assess needs and requirements or in later stages to prepare transfer and exploitation of results. They will not receive funds, but they may participate in the activities of the ERA-Net SES Knowledge Community.

5.3 Funding arrangements

The total funding available for RegSys call projects within ERA-Net SES amounts to € 33.3 Mio, made up of national/regional budgets and European Union (EU) contribution. Always check with your national/regional funding agency to receive precise information regarding prevailing rules. Funding of eligible costs will have to be in compliance with EU/EEA State aid rules. Please, see [Annex D](#) for more information on general EU/EEA framework for state aid and eligible costs. National rules prevail when they are stricter – see [Annex C](#).

Funding partners			
Country/ region	Funding (€) (minimum regional/national funding available)	Organisation name	Acronym
Austria	2 000 000	The Austrian Research Promotion Agency	FFG
Austria	4 000 000	Climate and Energy Fund	KLIEN
Belgium - Flanders	1 000 000	Flanders Innovation and Entrepreneurship	VLAIO
Belgium - Wallonia	500 000	Public Service of Wallonia	SPW
Denmark	1 000 000	Innovation Fund Denmark	IFD
France	2 000 000	Agence de L'Environnement et de la Maitrise de L'Energie	ADEME
Germany	2 000 000	Forschungszentrum Jülich GmbH	PtJ
Hungary	300 000	Nemzeti Kutatasi Fejlesztési es Innovacios Hivatal	NKFIH
Ireland	500 000	The Sustainable Energy Authority of Ireland	SEAI
Israel	600 000	Ministry of Energy	MOE
Italy	500 000	Ministero dell'Istruzione, dell'Univerista' e della Ricerca	MIUR
Netherlands	1 600 000	The Netherlands Organisation for Scientific Research	NWO
Norway	1 100 000	Research Council of Norway	RCN
Poland	500 000	National Centre for Research and Development	NCBR
Romania	500 000	Executive Agency for Higher Education, Research, Development and Innovation Funding	UEFISCDI
Scotland (UK)	2 000 000	Scottish Enterprise	SCOTENT
Spain	700 000	Centro para el Desarrollo Tecnologico Industrial E.P.E.	CDTI
Sweden	6 000 000	Swedish Energy Agency	SWEA
Switzerland	1 000 000	Federal Department of the Environment, Transport, Energy and Communications.	DETEC-SFOE
Switzerland	1 000 000	Innosuisse – Schweizerische Agentur für Innovationsförderung	Innosuisse
Turkey	1 000 000	The Scientific and Technological Research Council of Turkey	TÜBİTAK
Total sum	29 800 000		

5.4 Project duration

Projects are required to start before 15 December 2019, and must be completed (including all reporting) by 15 December 2022. The maximum duration of a project should be 36 months (limited to national/regional specific requirements). The minimum allowed duration of a project is 24 months.

5.5 Project monitoring and expected deliverables

Each project partner will be responsible for the necessary reporting to their funding agency according to national/regional rules. Yearly reports are required to obtain and maintain funding during the lifetime of their portion of the project. Apart from the national/regional project review, the transnational cooperation aspects will be monitored on the ERA-Net Smart Energy System level. Any substantial change in an on-going project must be reported immediately to the funding agencies involved, and subsequently reported to the ERA-Net SES initiative. Project partners should be aware that changes may have implications on past, present and planned future funding.

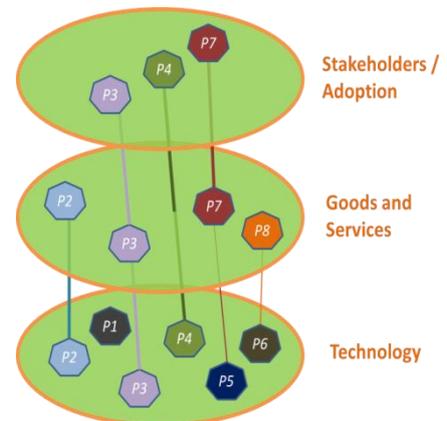
In addition to the national/regional requirements, ERA-Net Smart Energy Systems projects are required to deliver the following:

1. Participation in and presentation at meetings to report on the status of and results from the project. Detailed requirements for the contribution at these seminars will be specified in due course.
2. An annual, common interim report. This interim report will be available to the funding organisations involved, but will not be made public. Detailed requirements for this report will be specified in due course.
3. A single publishable and public final project report, which describes the activities and outcomes of the work. This should include an exploitation plan that states how the results of the project will be used. Detailed requirements for this report will be specified in due course. An abstract of the main results of the project will also be part of this report. Detailed requirements for the abstract will be specified in due course.

Applicants should be aware of the core ideas of the Knowledge Community and how the Knowledge Community Management will affect the work and composition of the projects (see [Annex H](#)). Active participation in knowledge-sharing and formative evaluation activities organised by the Knowledge Community Management must be considered (e.g. in terms of resource allocation) when planning and managing the project workplan, set-up and budget.

ANNEX A – THREE-LAYER RESEARCH MODEL

To reach the goals and desired impacts of ERA-Net SES initiative in a multi-dynamic environment, it is necessary to continue developing and introducing the right enabling technologies, develop and structure the market with new goods and services, and to learn more about how to overcome barriers built into communities and society. This indicates the need for a cross-sectoral and interdisciplinary approach, including regionally available renewable resources, system integration of technologies, services, tools, business processes, market architectures and regulatory regimes, potential synergies in infrastructures, convergence of technology and application areas as well as basic design principles (security and privacy, resilience, energy and resource efficiency of equipment and components).



The essential innovations to be achieved can be visualised in these **three layers**:

Stakeholders / Adoption – *overcoming: why do or don't we do it?*

(innovation and transition processes with stakeholders, consumer acceptance, education, policy, retail, community and society, social research, etc.)

Goods and Services – *structuring: how do we organize it?*

(business models, regulatory framework, market design with new goods and services, economic research etc.)

Technology – *enabling: which technology do we need?*

(incl.: how can we make technologies from other sector available for the energy system? - telecommunications, machine learning, cross energy carrier solutions, grid automation, technological research etc.)

Please note that the methodologies and approaches to study the layers included in the project should be clearly defined. The work plan and deliverables should reflect all included layers and the potential interconnections between them. For projects covering more than one layer, interdisciplinary teams including partners and/or experts with different backgrounds (e.g. economy, market design, management, social sciences, technology) may be of great value for the project. It is also important that the risk assessments for the projects fully consider all layers involved in the project, not only potential technological aspects.

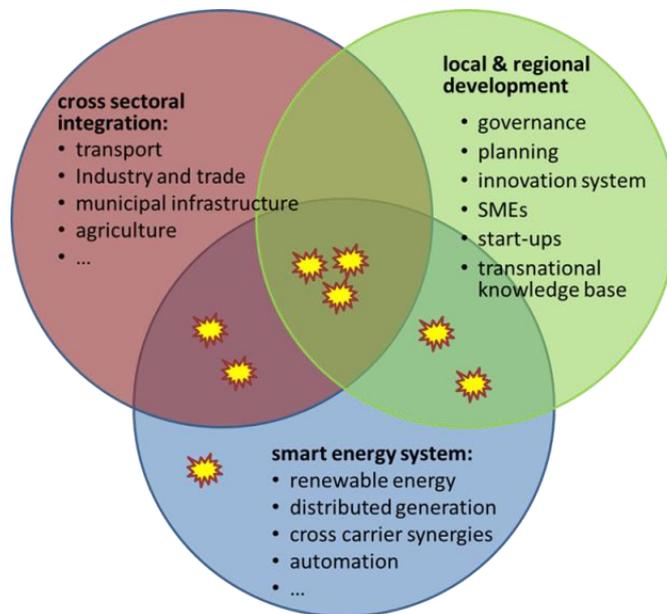
ERA-Net SES will prefer projects that cover more than one of these three research layers (ideally all three). Projects covering stakeholder/adoption and/or goods and services layers as well, will be given priority over single layer projects. Projects should therefore clearly state goals for the stakeholder/adoption and goods and services layers in relation to technological issues.

ANNEX B – THREE DIMENSIONS OF INTEGRATION

ERA-Net SES initiative shall investigate and implement an integrative approach, broadening this scope from electricity to smart energy systems and encompassing regional and cross-sectoral integration.

Smart energy system integration

 : From a technical perspective, new solutions must optimise the integration of renewable energy, provide infrastructure that can host a large number of distributed generation units, increase flexibility by efficiently integrating different energy carriers as well as utilising (local) storage, supply side coordination and demand side response. They should provide technology service systems that support highly dynamic business processes with a large number of participants. They should also enable the implementation of complex business models serving different market participants such as individual consumers and prosumers or customer groups as well as system operators, facility managers, energy suppliers, service providers and aggregators.



Integration with local and regional development   : To better understand local and regional processes and open implementation paths beyond traditional RDI, development in collaboration together with local energy and service companies, infrastructure operators, local and regional governments and public authorities, as well as SMEs, start-ups and crafts is necessary. Smaller regions, especially in a rural context, often allow for better involvement of the right stakeholders to create the necessary buy-in. The resulting ERA-Net SES RegSys funded RDD projects should involve (beyond well-established RDD stakeholders from industry, research institutes and universities) key players of the local and regional energy and innovation eco-system such as local energy and service companies, infrastructure operators, local and regional governments and public authorities, as well as SMEs and crafts. Projects could also seek integration with regional and SME support mechanisms, as well as employment programmes.

ERA-Net SES initiative aims to establish innovation ecosystems which are also attractive for start-ups and enable the involvement of globally connected entrepreneurship. Projects will also have to connect to the transnational and European knowledge base and relevant innovation initiatives. Integration of innovation ecosystems allows the funded RDD projects to be complemented by market adoption measures and business model development, resulting in more advanced RDI initiatives stimulated by the RDD projects.

Cross sectoral integration   : On a local or regional level, smart energy activities often involve multiple economic sectors. ERA-Net SES initiative aims to achieve the cross sectoral integration of smart energy systems and energy transition processes with transport (e. g. distribution grids using the storage capacities of e-mobile fleets) or industry and trade (e.g. data centres requiring electricity and providing waste heat, enterprises or stores using their large thermal stores for excess electricity and balancing the electricity grid), or municipal infrastructure (e.g. heating and cooling networks,

water supply and sanitation, public transport, buildings) or agriculture (e. g. farms as facilities to generate or store energy).

Projects have to cover at least the “Smart Energy System Integration” dimension. ERA-Net SES will prefer projects that cover more than one of these three dimensions of integration (ideally all three 🌟 🌟 🌟). Projects covering additional dimensions of integration will be given priority.

ANNEX C – NATIONAL/REGIONAL REQUIREMENTS

Austria

Funding agency name	Austrian Research Promotion Agency (FFG)
Programme name and link	Energieforschung: www.ffg.at/Energieforschung-das-Programm Stadt der Zukunft: www.ffg.at/stadt-der-zukunft-das-programm
Contact person	Urban Peyker, urban.peyker@ffg.at , +43 5 77 55 5049
Eligible applicants	- Companies, SMEs. - Research organisations (e.g. universities and other research orgs.).
Eligible costs	All project related costs (e.g. Personnel, Equipment, Consumables, Training, Travels, etc.).
Type of research funded	Applied research (Industrial research to experimental development); pre-competitive, application oriented R&D with high risk.
Require separate national/regional full application	Yes. The Project Outline needs to be uploaded through the national application system "eCall" as well.
Funding available	€ 6 000 000
Further specifications	<i>FFG will use two existing funding programmes Energieforschung (Energy and Climate Fund) and Stadt der Zukunft (Austrian Federal Ministry for Transport, Innovation and Technology) to fund relevant projects. The amount of funding requested nationally for the project is between €100,000 and €2 million. The minimum value shall be seen as a guiding value. The ceiling of €2 million is fixed and must not be exceeded.</i>

Denmark

Funding agency name	Innovation Fund Denmark (IFD)
Programme name and link	Grand Solutions – International projects
Contact person	Klaus Rosenfeldt Jakobsen klaus.jakobsen@innofond.dk +45 6190 5041
Eligible applicants	All types of partners. Public and private enterprises, universities, research organisations, knowledge institutes (incl. approved technological service institutes).
Eligible costs	All direct project-related costs. For each project participant the costs must be divided into the following categories: salaries, equipment (equipment, materials, etc.) and other project-related costs (events, transportation, travel, accommodation/catering, communication), external services (consultancy costs or services), costs, that are not included in relevant overhead calculations.
Type of research funded	Industrial research and experimental development. The maximum investment rates are:

	<p>Danish research institutes, state institutions, municipalities, regions and public hospitals in Denmark, Greenland and the Faroe Islands: 90 %</p> <p>Small and medium-sized enterprises (SMEs)</p> <ul style="list-style-type: none"> - Industrial research: 75 % - Experimental development: 50 % <p>Large enterprises</p> <ul style="list-style-type: none"> - Industrial research: 65 % - Experimental development: 40 %
Require separate national/regional full application	<p>Applicants must provide basic administrative data by submitting an administrative registration/application via the online submission system www.e-grant.dk for the same deadline as the consortium application is submitted. Please select the RegSys call 2018 when creating the administrative application.</p> <p>Projects must comply with IFD's General terms and Conditions for International Projects and the national Grand Solutions programme.</p> <p>In particular, all Danish applicants and co-applicants must be eligible for national project funding according to IFD's rules. Danish applicants who have not previously obtained a project grant from IFD are strongly recommended to contact the national contact point.</p> <p>Partners of an international project consortium located in a country of the RegSys transnational consortium cannot be funded via IFD's grants.</p> <p>Proposals with overlapping funding periods are only approved, if the research projects clearly address separate topics or pursue different goals in the context of this European programme.</p> <p>Grants will be managed according to IFD's rules for International projects and Grand Solutions; this includes one year national progress reports and reimbursement of cost after providing IFD a financial report.</p>
Funding available	€ 1 000 000
Further specifications	<i>none.</i>

Flanders (Belgium)

Funding agency name	Flanders Innovation and Entrepreneurship (VLAIO)
Programme name and link	Company R&D instrument (Knowledge intensive projects, development projects)
Contact person	Bart De Caesemaeker, bart.decaesemaeker@vlaio.be , +32 2 432 42 49
Eligible applicants	Companies
Eligible costs	Personnel costs, operating costs

Type of research funded	Research, development and (restricted amount of) demonstration
Require separate national/regional full application	The project quality will be evaluated by the ERANET, this evaluation will be used as a part of the regional evaluation. The evaluation of the project valorisation in Flanders will require a regional application. This application is only a part of a full regional application.
Funding available	€1 000 000
Further specifications	<i>none.</i>

France

Funding agency name	Agence De l'Environnement et de la Maîtrise de l'Energie (ADEME)
Programme name and link	Programme des Investissements d'Avenir (PIA) http://www.ademe.fr/recherche-innovation/programme-dinvestissements-davenir
Contact person	Abecassis Geoffrey, geoffrey.abecassis@ademe.fr , +33147652072 Greslou Olivier, olivier.greslou@ademe.fr , +33147652084
Eligible applicants	Small to large size companies Municipal energy management associations, entities Local communities / Municipalities Research centres For more information, see the national application forms.
Eligible costs	There are no requirements concerning amounts of eligible costs. Requirements only concern total costs. Funding rates are then applied (see below). Total project costs (French and others) must be at least € 1 000 000 Total costs per applicant must be at least € 300 000 For more information, see the national application forms.
Type of research funded	Territorial R&D projects that must ideally be aimed at large scale implementations. They shall therefore end up with a high potential for replicability in different local contexts. Projects necessarily fall under the scope of "Industrial Research" or "Experimental Development". Here are some examples of main project types: <ul style="list-style-type: none"> - Industrial demonstrators - City/district scale testing of new smart energy infrastructures (electric vehicle infrastructures, micro grids, new district heating systems etc.) - Energy-efficient refurbishment and modernization of existing energy

	<p>infrastructures such as district heating systems or gas networks</p> <ul style="list-style-type: none"> - New business models (energy services and contracting) - New instruments for territorial governance and planning in the energy field <p>For more information, see the national application forms.</p>
Require separate national/regional full application	Requires a separate national full application
Funding available	€ 2 000 000
Further specifications	<ul style="list-style-type: none"> - At least one applicant must be a private sector company <p>We highly recommend contacting the National Contact Point during the preparation of the project.</p> <p>For more information, see the national application forms.</p>

Germany

Funding agency name	Forschungszentrum Jülich GmbH (PtJ)
Programme name and link	<p>6th Federal Programme on Energy Research: “Research for an environmental friendly, reliable und economical feasible energy supply”</p> <p>https://www.bmwi.de/Redaktion/DE/Downloads/B/bekanntmachung-forschungsfoerderung-im-6-energieforschungsprogramm.html</p>
Contact person	Paul Kunzemann, p.kunzemann@fz-juelich.de , +49 2461-61 96998
Eligible applicants	<ul style="list-style-type: none"> • Institutions receiving institutional funding from the federal and state governments may be subject to restrictions in the level of funding. • Companies. • Research organisations. • Compound projects involving at least one industrial participant are the normal composition of the project participants. • Individual topical calls may specify further requirements depending on the nature of the topic.
Eligible costs	All project related costs (e.g. personnel, equipment, consumables, travel expenses, etc.).
Type of research funded	Focus on applied research.
Require separate national/regional full application	Yes.

Funding available	€ 2 000 000
Further specifications	<p>Project Management Jülich (PtJ) manages the majority of the application-oriented projects dealing with research and development in the area of power grids funded by the Federal Ministry for Economic Affairs and Energy (BMWi).</p> <p>BMWi funding of the call will be provided as delineated in the “Bekanntmachung zur Forschungsförderung im 6. Energieforschungsprogramm Forschung für eine umweltschonende zuverlässige und bezahlbare Energieversorgung”.</p> <p>German applicants may be asked to submit a formal national application in addition to the full proposal. For this application, it is mandatory to use the electronic application system “easy-online” (https://foerderportal.bund.de/easyonline).</p>

Hungary

Funding agency name	Nemzeti Kutatási Fejlesztési és Innovációs Hivatal (NKFI Hivatal)
Programme name and link	https://nkfi.gov.hu/palyazatok/hazai-kfi-palyazatok/nkfi-palyazatok
Contact person	Kinga Lorencz, kinga.lorencz@nkfi.gov.hu , +36 1 896 3705
Eligible applicants	Legal entities, headquarters address registered in Hungary. Entities registered in the EU with registered company site in Hungary
Eligible costs	According to the main call
Type of research funded	Applied research activities, Experimental development
Require separate national/regional full application	yes
Funding available	€300 000
Further specifications	In line with the corresponding national call

Ireland

Funding agency name	Sustainable Energy Authority of Ireland (SEAI)
Programme name and link	SEAI Research Development and Demonstration (RD&D) Funding Programme https://www.seai.ie/grants/research-funding/research-development-and-demonstration-fund/
Contact person	Lucy Corcoran, Lucy.Corcoran@seai.ie , +353 1 8082084

Eligible applicants	<p>Public and private sector organisations based in the Republic of Ireland (including Irish subsidiaries of overseas companies) who wish to carry out projects in Ireland. Applications will be accepted from Companies, Research Performing Organisations (e.g. Universities, Institutes of Technology and Publically Funded Research Institutions), Public Sector Bodies and Semi-State Bodies who are based in the Republic of Ireland.</p> <p>The above Ireland based entities should apply as a consortium with at least one other entity from the ERA-net partner countries based outside of the Republic of Ireland.</p> <p>It is strongly recommended that interested applicants contact the Irish National Contact Person (Lucy.Corcoran@seai.ie) in the early stages of project proposal preparation.</p>
Eligible costs	<p>Eligible costs are those actual, necessary and economic costs that are incurred during the project timeframe.</p> <p>Only costs directly associated with delivery of a project are considered eligible costs. Value for money must always be sought and achieved by applicants/grantees, and where relevant, public procurement procedures must be observed.</p> <p>Eligible costs must be recorded in the grantee organisation's accounts and be maintained throughout the duration of the project. The SEAI RD&D funding programme funds on the basis of costs incurred (on a reimbursement basis).</p> <p>Applications should detail all costs that are wholly and exclusively necessary for carrying out the project in order to ensure eligibility during the active grant phase.</p> <p>Max grant available for Irish partners per project of €200 000.</p>
Type of research funded	<p>EU state aid rules stipulate what types of research activities are eligible for support, which costs relating to these activities may be covered in part or in full (ranging from 25% up to 100%), and the maximum aid intensity that may be granted for the various activities. Applicants should refer to the SEAI RD&D Budget Policy for additional information in relation to which category their project falls under.</p>
Require separate national/regional full application	<p>Yes. Please contact the National Contact Person for further details of application process.</p>
Funding available	<p>€500 000 (not including EC co-funding)</p>
Further specifications	<p><i>Min. project duration: 24 months</i></p> <p><i>Max. project duration: 36 months</i></p>

Israel

Funding agency name	Ministry of Energy (MOE)
Programme name and link	Academic Support program/Start-ups support program/Pilot and Demonstration Support Program Ministry link: https://www.gov.il/he/Departments/ministry_of_energy
Contact person	Gideon Friedmann, gideonf@energy.gov.il , +972-2-5316020 or mobile: +972-585337565
Eligible applicants	Academic Institutions, Residents, Companies, Municipalities
Eligible costs	All costs related to a development project, except overhead type of costs (e.g. office lease, insurance, office supplies), which are already covered as overhead
Type of research funded	<ol style="list-style-type: none"> 1. Academic 2. Early stage (proof of concept, prototype). (TRL 2-4) 3. Pilot stage (TRL 5+) <p>In the areas of interest of the Ministry, for example:</p> <ul style="list-style-type: none"> • Renewable energy • Energy efficiency • Fuel cells • Hydrogen • Energy storage • Electricity and smart networks • Alternative Fuels • Electric vehicles • Energy in the water sector • Minerals • Earthquakes • Waste and energy • Emergency Infrastructure
Require separate national/ regional full application	Yes
Funding available	€500 000
Further specifications	

Italy*

**Please note that the national requirements for Italy were modified on 17 July 2018 and have been changed in this annex accordingly. The changes are highlighted below.*

Funding agency name	Ministry of Education, Universities and Research (MIUR)
Programme name and link	<p>FIRST (Fondo per gli Investimenti nella Ricerca Scientifica e Tecnologica) and IGRUE account for the EU cofunding.</p> <p>Applicable laws and rules:</p> <ul style="list-style-type: none"> – Decreto legge n. 83/2012 – Decreto Ministeriale n. 593 del 26 luglio 2016 – Linee guida al D.M. del 26 luglio 2016 n. 593 – Procedure operative per il finanziamento dei progetti internazionali ex art. 18 D.M. del 26 luglio 2016 n. 593 <p>The criteria and provisions provided herewith are intended only for informative purposes. The complete list of criteria and provisions legally valid, which must be respected by all the Italian participants, is included in the “Avviso integrativo nazionale”, published on the dedicated web page on MIUR website (http://www.ricercainternazionale.miur.it/era/eranet-cofund-(h2020)/en-gplusregsys.aspx) and in the applicable Italian laws.</p>
Contact person	<ul style="list-style-type: none"> – Giorgio Carpino, giorgio.carpino@miur.it, +39 06 5849 7147 – Aldo Covello, aldo.covello@miur.it, +39 06 5849 6465
Eligible applicants	<p>The following entities are eligible, providing that they have stable organization in Italy: enterprises, universities, research institutions, research organizations in accordance with EU Reg. n. 651/2014 of the European Commission - June 17, 2014.</p> <p>Any participant, in order to be eligible, must comply with the eligibility criteria listed in the art. 2.4 of the “Linee guida al DM 593/2016”.</p>
Eligible costs	<p>All activities classifiable as Basic research, Industrial research and Experimental research are eligible for funding. Furthermore, Basic Research and Industrial research activities must be predominant with respect to Experimental research activities (in terms of costs).</p> <p>All costs incurred during the lifetime of the project under the following categories are eligible: Personnel, Equipment, Consulting and equivalent services, Consumables and Overheads.</p> <p>Overheads (“Spese generali”) shall be calculated as a percentage of the personnel costs and cannot be higher than 50% of them. Travel expenses, dissemination and coordination costs are to be included in the overheads.</p>
Type of research funded	<p>The following types of research are funded: Basic research, Industrial Research and Experimental Research.</p> <p>The amount of funding which can be granted to each beneficiary is calculated multiplying the eligible costs for the funding rate listed in the following table:</p>

		Funding Rates					
		Enterprises and private research bodies (which do not meet the requirements of research organization under EU Reg. no. 651/2014 of the Commission - June 17, 2014)			Universities, public research institutions, research organizations (public and private) in accordance with Reg. EU n. 651/2014 of the Commission - June 17, 2014)		
Activity typology	Applicant typology	Small Enterprises	Medium Enterprises	Big Enterprises			
		Basic Research	grant	40%	30%	20%	70%
		Industrial Research	grant	40%	30%	20%	50%
		Experimental Research	grant	30%	20%	10%	25%
		<p>On request of applicants a pre-payment may be done. The amount of the pre-payment is defined in the “Avviso integrativo nazionale”. The remaining part of contribute will be paid in instalments after each financial and progress reporting period.</p>					
Require separate national/ regional full application		<p>In addition to the project proposal, which shall be submitted at European level, the Italian participants are requested to submit further documentation to MIUR, through the national web platform, available at the following link: http://banditransnazionali-miur.cineca.it</p> <p>These national additional documents must be submitted by the same deadline established for the pre-proposal phase submission as defined in the international joint call.</p> <p>Any participant who does not submit its national documents by the deadline of the pre-proposal phase, will be considered not eligible for funding.</p> <p>MIUR will require to all Italian participants admitted for funding some additional documents describing more in detail the participant and its research activities within the project.</p> <p>It is strongly recommended to contact the National Contact Persons already in early stage of project preparation.</p> <p>The admission for funding is subject to the adoption of the necessary accounting and administrative measures for the allocation of the resources.</p>					

	Funded participants will be requested to submit financial and scientific reports to MIUR.
Funding available	€ 500.000,00 Max grant per project: € 150.000,00 (even if it includes more than one Italian participant)
Further specifications	<p>Min. project duration: 24 months</p> <p>Max. project duration: 36 months</p> <p>A maximum of two Italian participants per project proposal, requesting funding to MIUR, is admitted.</p> <p>A Principal Investigator can participate (either as coordinator or as partner) in only one project proposal, requesting funding to MIUR, independently from the call topics.</p> <p>Useful links:</p> <ul style="list-style-type: none"> – http://www.ricercainternazionale.miur.it/era.aspx – http://www.ricercainternazionale.miur.it/era/eranet-cofund-(h2020)/en-sgplusregsys.aspx – http://banditransnazionali-miur.cineca.it – http://www.ricercainternazionale.miur.it/evidenza/normativa-prog-internazionali.aspx

The Netherlands

Funding agency name	Netherlands Organisation for Scientific Research (NWO)
Programme name and link	<ul style="list-style-type: none"> - NWO supports research in Smart Grids based on its own strategic theme <i>sustainable energy</i>, and based on its support for the government's <i>Topsector Energy Policy</i>, in which Smart Grids play an important role. - The Topsector Energy is divided into several consortia (<i>Topconsortia for knowledge and Innovation</i>, or TKI) for public-private partnerships in research and innovation - The TKI Urban Energy and NWO together provide the funding for participation in this call - NWO has several running research programmes, including <i>Smart Energy Systems</i>, <i>Uncertainty Reduction in Smart Energy Systems</i>, and <i>Energy System Integration</i>.
Contact person	Dr. Mark van Assem, era-net-regsys@nwo.nl , +31 70 344 0915
Eligible applicants	<ul style="list-style-type: none"> - NWO funding rules are applicable to all (co-) applicants who perform their research activities in the Netherlands. - NWO funding rules are defined here: https://www.nwo.nl/en/documents/nwo/legal/nwo-grant-rules-1-may-2017 - All researchers of Dutch universities and selected Dutch institutes under the standard NWO Domain Science rules are eligible to apply, as described in the NWO Regulation on Granting.

	<ul style="list-style-type: none"> - TO2 institutes and universities of applied sciences – “HBO-instellingen” – (if paid in accordance with Article 8.1 of the law on higher education and scientific research and a member of the Vereniging Hogescholen) may act as (co-) applicant, in addition to the organisations as identified in the NWO Regulation on Granting, Article 1.1.1. - For all applications involving Dutch applicants, the involvement of a Dutch university or institute as (co-)applicant (as identified in the NWO Regulation on Granting, Article 1.1.1) is required. This means that TO2 institutes and universities of applied science cannot apply on their own. - TO2 institutes and universities of applied sciences can also receive (part of) the grant applied for (see section 1.1.3 NWO Regulation on Granting). - On behalf of a university of applied sciences (HBO-instelling) the lector acts as (co-)applicant and can apply for temporary positions in salary scales 10 or 11. - (Co-)Applicants should have an employment contract for at least the duration of the application procedure and the duration of the research the grant is applied for. Exceptions to the required employment duration can be made for main applicants holding a “tenure track” position that covers at least half the duration required and for co-applicants if they prove by means of a letter that adequate supervision of all researchers for whom funding is applied for, can be guaranteed for the full duration of the grant. An exception can also be made if the applicant proves by means of a letter that, in the event that the application is successful, the employment contract will be extended for the duration of the project. This guarantee should be signed by the dean, the operations manager, the head of the department, or the head of the institute. - Companies and industrial partners from the Netherlands are encouraged to participate in the consortium and contribute to the project, in the form of in-kind or cash contributions. However, they cannot receive funding in this call.
Eligible costs	<p>The grant can be used for:</p> <ul style="list-style-type: none"> - temporary personnel costs; - equipment related to the research proposal; - travel, accommodation and meeting costs. <p>In accordance with the NWO-VSNU agreement, the non-staff costs exclude infrastructure costs (accommodation, office automation, books, i.e. costs of facilities which can be regarded as part of the normal infrastructure for the discipline concerned) and overheads.</p> <p>For all eligible applicants the VSNU standard tariffs for personnel costs apply (see https://www.nwo.nl/financiering/hoewerktdat/salaristabellen).</p> <p>The maximum total amount applied for by Dutch applicants is k€ 800 per proposal. Please note: if the Dutch subproject involves more than one party, the total of k€ 800 per proposal applies to the total</p>

	<p>joint budget applied for by all Dutch parties involved in the subproject. I.e., the joint budget applied for by Dutch applicants cannot exceed the k€ 800 per proposal.</p> <p>At most 10% of the budget can be spent on eligible costs other than temporary personnel costs (equipment related to the proposal, travel, accommodation and meeting costs). A higher amount of this budget category is only possible if permission is first granted by NWO. All budget items need to be properly motivated.</p> <p>A project can request one or more of the following positions:</p> <ul style="list-style-type: none"> - PhD student (4 years, but funded for maximum 36 months, see below) - temporary postdoc 2 years - temporary postdoc 3 years - similar function (in terms of tasks and grading) at an institute or HBO-instelling, with a maximum funding of 36 months. <p>Additionally, a project may request one non-scientific personnel position ('NWP') for the duration of the project (maximum 36 months). This can be a student-assistant or programmer hired for activities directly related to the research which cannot fall under the category 'overhead' (such as secretarial duties). Duration, size of contract in terms of FTE, and level (MBO/HBO) of the position must be motivated in the proposal. A maximum duration of 36 months also applies here.</p> <p>Because projects in this ERA-Net run no longer than 36 months, NWO will only fund at maximum 36 months of a 4 year PhD student or other 4 year position. The applicants need to indicate and guarantee a separate funding source for the 4th year of the position. They also need to indicate in their planning how the 4 year term of a PhD student/other position is incorporated in the planning of the project. Any project results that are to be produced by the 4-year position need to be planned and delivered in the project period, including all relevant reports to the ERA-Net. The project is administrated at NWO for the normal term of the position (4 years). As such the applicant needs to provide NWO with the standard NWO project reports after the 4-year term is completed.</p> <p>Indemnification shall be in accordance with the standard costs in the NWO-VSNU agreement on the funding of scientific research. For details and tariffs: https://www.nwo.nl/financiering/hoewerkt-dat/salaristabellen. Tariffs are indexed annually in July; a correction to the budget needs to be made if the tariffs change during the course of the call.</p> <p>A separate Dutch application must be submitted together with the ERA-Net application before the deadline of the call. Please contact the national contact point for instructions and format of the Dutch application. ERA-Net applications submitted without a Dutch application are not eligible.</p>
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Type of research funded	<p>Fundamental and applied research – TRL 3-6 (for activities of Dutch partners).</p> <p>The part of the project that Dutch partner(s) perform should fit in programme line 4 (flexible energy infrastructure) or 5 (energy management systems and services) of the Knowledge and Innovation Agenda (KIA) of the TKI Urban Energy.</p> <p>The KIA programme lines 4 and 5 describe research mainly in the “technical” disciplines such as mathematics, computer science and electrical engineering. However, research in the social sciences (e.g. law, regulation, economics) are essential to successfully implement technology. Applicants are therefore encouraged to (also) address social science aspects of the topics described in the KIA programme lines 4 and 5.</p>
Require separate national/regional full application	<p>Yes.</p> <p>A separate Dutch application must be submitted together with the ERA-Net application before the deadline of the call. Please contact the national contact point for instructions and format of the Dutch application. ERA-Net applications submitted without a Dutch application are not eligible.</p>
Funding available	€1 600 000
Further specifications	<i>none.</i>

Norway

Funding agency name	Research Council of Norway (RCN)
Programme name and link	ENERGIX https://www.forskingsradet.no/prognnett-energix/Forside/1253980140037
Contact person	Erland Staal Eggen, ese@rcn.no , 0047 915 14 529
Eligible applicants	Norwegian companies and research institutions
Eligible costs	https://www.forskingsradet.no/en/Project_budgets-/1254007196371
Type of research funded	Industrial research and experimental development
Require separate national/regional full application	No
Funding available	€1 100 000
Further specifications	<i>none.</i>

Poland

Funding agency name	National Centre for Research and Development (NCBR)
Programme name and link	<p>ERA-Net SG+ RegSys (Co-funded Call)</p> <p>http://www.ncbr.gov.pl/programy-miedzynarodowe/era-net/era-net-sg-regsys/</p>

Contact person	Jolanta Drożdż, jolanta.drozd@ncbr.gov.pl , +48 22 39 07 106											
Eligible applicants	Enterprises (micro, small or medium); Scientific consortia (consisting of min. one research entity and min. one enterprise: micro, small or medium)											
Eligible costs	<ol style="list-style-type: none"> 1. Personnel costs (W) 2. Costs of instruments and equipment, technical knowledge and patents (A) 3. Purchase of land and real estate (G) 4. Costs of subcontracting (E) 5. Other costs including travel costs (Op) 6. Overheads (O) [O = (W + A + G + Op) x max. 25%] 											
Type of research funded	Industrial research Experimental development											
Require separate national/regional full application	Yes, after selection of projects to be funded											
Funding available (incl. EC co-funding)	€ 500 000 (= € 500 000 NCBR's budget + € 60 149 possible EC co-funding)											
Further specifications	<p>After international evaluation of full proposals and the selection of projects to be funded, Polish participants will be invited to submit a National Application Form (NAF). The NAFs will be examined for the appropriateness of funding requested.</p> <p>The Polish participants are obliged to use the rate of exchange of the European Central Bank dated on the day of opening of the call.</p> <p>Types of research funded including the maximum state aid intensity for enterprises:</p> <table border="1" data-bbox="555 1294 1388 1619"> <thead> <tr> <th rowspan="2">Type of Applicant</th> <th colspan="2">Type of research funded</th> </tr> <tr> <th>Industrial research</th> <th>Experimental development</th> </tr> </thead> <tbody> <tr> <td>Micro/Small enterprise</td> <td>50+20+15 (max 80%)</td> <td>25+20+15 (max 60%)</td> </tr> <tr> <td>Medium enterprise</td> <td>50+10+15 (max 75%)</td> <td>25+10+15 (max 50%)</td> </tr> </tbody> </table> <p>All detailed information about financial rules and national procedure is available on the NCBR's homepage: http://www.ncbr.gov.pl/programy-miedzynarodowe/era-net/era-net-sg-regsys/</p>	Type of Applicant	Type of research funded		Industrial research	Experimental development	Micro/Small enterprise	50+20+15 (max 80%)	25+20+15 (max 60%)	Medium enterprise	50+10+15 (max 75%)	25+10+15 (max 50%)
Type of Applicant	Type of research funded											
	Industrial research	Experimental development										
Micro/Small enterprise	50+20+15 (max 80%)	25+20+15 (max 60%)										
Medium enterprise	50+10+15 (max 75%)	25+10+15 (max 50%)										

Romania

Funding agency name	Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI)
Programme name and link	https://uefiscdi.ro/p3-cooperare-europeana-si-internationala Program 3 – International and European Cooperation / Programul 3 – Cooperare europeană și internațională

	Subprogram 3.2 – Horizon 2020 / Subprogramul 3.2 – Orizont 2020 (integral)
Contact person	Elena Simion, elena.simion@uefiscdi.ro , +4021.307.19.93
Eligible applicants	- Companies. - Research organisations.
Eligible costs	Personnel, travel, equipment, materials and consumables, indirect costs (overhead).
Type of research funded	Applied research
Require separate national/ regional full application	No
Funding available	€500 000
Further specifications	<i>none.</i>

Scotland (UK)

Funding agency name	Scottish Enterprise (SCOTENT)
Programme name and link	Smart Grids Plus Reg Sys Co Fund
Contact person	Morag Clark morag.clark@scotent.co.uk +44 (0) 141 951 3043
Eligible applicants	SMEs (EU definition) Universities (in a consortium led by a company, having at least two companies, and with at least one of these being Scottish-based and undertaking R&D in Scotland and limit of one research organisation)
Eligible costs	Project-specific costs including salaries, overheads, equipment, IT, consultancy, training, materials, trials, IP, and certificates, in whole or in part as per pre-defined criteria available on request.
Type of research funded	Industrial research/Experimental development (EU definitions) aimed at the creation of new products, processes, or services in achieving business growth.
Require separate national/ regional full application	Yes
Funding available	€2 000 000
Further specifications	Co-funding rate of 35-50% of eligible costs and subject to Scottish Enterprise policy and procedures and EU State Aid Regulation with preference to proposals with the greatest economic impact against the requested co-financing rate.

Spain

Funding agency name	Centro para el Desarrollo Tecnológico Industrial, E.P.E.(CDTI)
Programme name and link	Relevant information can be found at the following link: “Financiación CDTI para Proyectos Transnacionales en el marco de acciones ERA-NET”

	http://www.cdti.es/index.asp?MP=101&MS=831&MN=2
Contact person	NCP for Call promotion issues: Gabriel Barthelemy gabriel.barthelemy@cdti.es ; dptoetfsd@cdti.es Tfno. (+34) 91 581 0707
Eligible applicants	The eligible institutions must be for-profit enterprises (being Large companies or SME), established and carrying out RTDI activities in Spain. Other entities such as Universities, Public Research Institutions, Technological Centres, and other non-profit private institutions could participate under subcontracting by Spanish companies (subcontracting cannot exceed the 50% of the national project budget).
Eligible costs	Eligible activities: technology-based activities within industrial research and/or experimental development projects (in accordance with the definitions of the General Block Exemption Regulation, EC Regulation nº651/2014) representing outstanding scientific-technical quality and high innovative potential. The Spanish part of the proposed work plan must be developed in Spain. Please note that non-technological activities, particularly those related to business models/processes, are excluded for CDTI funding. The eligible costs include: <ul style="list-style-type: none"> ▪ Personnel costs, to the extent employed on the research project. ▪ Instrument and equipment costs, to the extent and during the period in which they are used for the project. ▪ Contractual research costs, technical knowledge and patents bought or licensed from outside sources at market prices, as well as costs of consulting services intended exclusively for the research project. ▪ Other costs (operating expenses) including materials, supplies and similar products, exclusively used for the research project. Audit costs for the national reporting of the project (when applicable). ▪ Additional general expenses (indirect costs, as a percentage of personnel costs). <p>Please note that management and dissemination costs <u>are not eligible for funding</u>.</p> <p>Project duration: 12 to 36 months.</p> <p>Minimum eligible budget: € 150,000 (this amount applies to the project budget per partner, not the requested funding).</p> <p>Project transnationality: projects should be transnational by nature, therefore, each country/ region will be responsible for no more than 70% of the total budget project costs.</p>

	Applicants <u>must check the detailed description</u> of the eligible costs published on CDTI website.
Type of research funded	Technology-based activities within Industrial Research and/or Experimental Development Projects (TRL up to 8)
Require separate national/regional full application	Additionally to the international application process, those applicants requesting funding from CDTI must submit a formal application by way of CDTI electronic submission system (https://sede.cdti.gob.es) . The application must include a detailed description, in Spanish Language, of the activities to be undertaken by the company and the respective budget. Applicants must indicate their VAT (CIF) number in all their respective applications (both international and national). Further guidance will be published on CDTI website.
Funding available	€ 700 000
Further specifications	<p>CDTI funding will be based on grants, which will be calculated as a percentage of the eligible costs, up to a maximum aid intensity of 60 % for small enterprises, 50 % for medium enterprises and 40% for large enterprises, according to the General Block Exemption Regulation (EC Regulation nº651/2014).</p> <p>Specific financial conditions for ensuring the beneficiary's solvency could be required according to CDTI funding rules. CDTI will avoid double funding, and will not finance projects, or parts of projects, which have been already, funded through other national, transnational or EU calls. CDTI will be responsible for making the final decision regarding the awarding of funds, taking fully into account the transnational evaluation of the collaborative project, the previous funds received by the participants for other related projects, the fulfilment of eligibility and funding rules, and the financial resources available.</p> <p>Applicants are strongly advised to check the detailed information available on CDTI website and to contact the NCP for getting advice about national funding rules before submitting a proposal.</p> <p>Please check the complete National Funding Rules on: "<i>Financiación CDTI para Proyectos de Investigación y Desarrollo</i>" http://www.cdti.es/index.asp?MP=100&MS=802&MN=2</p> <p>For further information, please contact the NCP or visit CDTI website: https://www.cdti.es/</p>

Sweden

Funding agency name	Swedish Energy Agency (SWEA)
Programme name and link	National Energy Research and Innovation programme.
Contact person	Fredrik Lundström, fredrik.lundstrom@energimyndigheten.se , +46165442112

Eligible applicants	<p>Public and private entities e.g.:</p> <ul style="list-style-type: none"> - Universities - Research institutes - Companies - Municipalities <p>Decisions on funding research, development and innovation in the energy area are taken according to the ordinance SFS 2008:761 in the Swedish Code of Statutes.</p>
Eligible costs	Personnel, travel costs, consultancy, material costs, laboratory costs, equipment costs, patent, indirect costs (only academia).
Type of research funded	Basic research, industrial research, experimental development.
Require separate national/regional full application	Yes, full national application is required. For more information see http://www.energimyndigheten.se/forskning-och-innovation/forskning/soka-stod-och-rapportera/ .
Funding available	€6 000 000
Further specifications	SWEA also provides practical assistance and, in some cases, support for the applications to the various energy programmes.

Switzerland

Funding agency name	Federal Department of the Environment, Transport, Energy and Communications. Swiss Federal Office of Energy (DETEC-SFOE)
Programme name and link	Pilot, demonstration and flagships program http://www.bfe.admin.ch/cleantech/06561/
Contact person	Dr. Yasmine Calisesi, Program manager, yasmine.calisesi@bfe.admin.ch , +41 58 462 53 21
Eligible applicants	Private and public sector entities (e.g., companies, research institutes, municipalities, or communities consisting of several of the former).
Eligible costs	<p>Funding of Swiss participants is limited to 40% of the eligible project costs. Eligible projects costs (hardware, labour) are defined as the additional* project costs that cannot be amortized over the expected lifetime of the developed installation or solution.</p> <p>* compared to the costs of implementing an equivalent, conventional technology or solution</p>
Type of research funded	Pilot and demonstration
Require separate national/regional full application	A separate national full application has to be submitted by the same deadline according to the application procedure published under http://www.bfe.admin.ch/cleantech/06561/06568/
Funding available	€ 1 000 000
Further specifications	<p>Admission criteria include:</p> <ol style="list-style-type: none"> 1. Project topic contributes to increasing energy efficiency or use of renewable energy;

	<p>2. High application and success potential;</p> <p>3. Project topic in line with the Swiss energy policy;</p> <p>4. Gathered results are publicly accessible and disseminated among interested circles.</p> <p>Expected deliverables of pilot- and demonstration programme projects include:</p> <ol style="list-style-type: none"> 1. Proof of concept of facilities, systems and proposed solutions; 2. Intermediate and final reports of individual projects providing details on technical feasibility; 3. Operational achievements and project economics (particularly related to innovative energy technologies and installations) and 4. Demonstrated knowledge transfer to target community providing details on individual measures that have been implemented. <p>SFOE does not claim any IPR. It is explicitly allowed to protect intellectual property as far as this does not block the dissemination of the results.</p>
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Funding agency name	Innosuisse - Swiss Innovation Agency (SIA)
Programme name and link	Innovation project https://www.innosuisse.ch/inno/en/home/start-your-innovation-project/innovationsprojekte.html
Contact person	Alain Dietrich, alain.dietrich@innosuisse.ch , +41 58 464 92 87
Eligible applicants	At least one Swiss implementation partner and one Swiss noncommercial research institution or higher education research center (e.g. university, Federal Institute of Technology, University of Applied Sciences) must be involved in a Innosuisse funded R&D project.
Eligible costs	Project related costs (please refer to the national Innosuisse rules)
Type of research funded	Applied research and innovation
Require separate national/ regional full application	yes
Funding available	€ 1 000 000
Further specifications	National application to Innosuisse with cut-off date: 24 September 2018

Turkey

Funding agency name	The Scientific and Technological Research Council of Turkey (TÜBİTAK)
Programme name and link	1509-International Industrial R&D Projects Grant Programme, http://www.tubitak.gov.tr/tr/destekler/sanayi/uluslararasi-ortakli-destek-programlari/icerik-1509-tubitak-uluslararasi-sanayi-ar-ge-projeleri-destekleme-programi
Contact person	Önder Zor, onder.zor@tubitak.gov.tr , +90 312 298 9456
Eligible applicants	SMEs and large companies settled in Turkey.
Eligible costs	Personnel, travel, equipment/tool/software, R&D services from domestic RTOs, consultancy/other services, material costs.
Type of research funded	Applied research, experimental development.
Require separate national/regional full application	Yes.
Funding available	€1 000 000
Further specifications	<ul style="list-style-type: none"> • Project application to TÜBİTAK's 1509 Programme is mandatory. • A call announcement (which will also include deadline for national application) will be made on TÜBİTAK's website. The Turkish partners in projects must follow this call announcement for further information about the national regulations and the call. • Universities and research institutes are not eligible, but can benefit from the programme as subcontractors. • The national project cannot start before the ERA-Net SES RegSys joint project. • If there is more than one Turkish partner in a project, they should make a joint project application to 1509 Programme.

Wallonia (Belgium)

Funding agency name	Service Public de Wallonie (SPW)
Programme name and link	ERA-NET SES Reg Sys https://energie.wallonie.be/fr/index.html?IDC=6018
Contact person	Gilles Tihon, gilles.tihon@spw.wallonie.be , +32 81 48 63 53 Laurence Polain (alternate), laurence.polain@spw.wallonie.be , +32 81 48 63 42
Eligible applicants	Universities, Research Centres, SME, large companies settled in Wallonia
Eligible costs	Funding vary according to TRL and type of supports (see available link above) Participation of a private company is mandatory (minimum 40% of total Walloon budget).
Type of research funded	-Industrial Researches (TRL 3 to 5)

	-Experimental Development (TRL 6 to 7 (8)): only SMEs and large companies
Require separate national/ regional full application	Yes.
Funding available	€500 000
Further specifications	<p>Eligibility criteria:</p> <ul style="list-style-type: none"> - The project cannot receive double funding; - The budget for the Walloon partners should follow the SPW-DGO6 cost model; - The funding rate will be the maximum allowed by the decree of the 3rd of July 2008, modified; - The beneficiary must have a stable financial situation; A financial viability check has to be carried out before being recommended for full proposal. - The beneficiary must have Operational offices in the Walloon Region; - The project must add benefit to the regional economy; - All information needed for evaluation should be available; - A Walloon complementary funding request's form must be submitted to the SPW-DGO4 for full proposal within five working days after the call deadline

ANNEX D – KEY PROVISIONS OF THE GENERAL EU/EEA FRAMEWORK FOR STATE AID AND ELIGIBLE COSTS

Normally, only the following costs can be claimed as **eligible costs** for co-fund from the European commission¹⁹ (national rules prevail when they are stricter – see [Annex C](#)). Please, always check with your national/regional funding agency to receive precise information regarding prevailing rules.

The eligible costs of research and development projects shall be allocated to a specific category of research and development and shall be the following²⁰:

- (a) personnel costs: researchers, technicians and other supporting staff to the extent employed on the project;
- (b) costs of instruments and equipment to the extent and for the period used for the project. Where such instruments and equipment are not used for their full life for the project, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible.
- (c) Costs for of buildings and land, to the extent and for the duration period used for the project. With regard to buildings, only the depreciation costs corresponding to the life of the project, as calculated on the basis of generally accepted accounting principles are considered as eligible. For land, costs of commercial transfer or actually incurred capital costs are eligible.
- (d) costs of contractual research, knowledge and patents bought or licensed from outside sources at arm's length conditions, as well as costs of consultancy and equivalent services used exclusively for the project;
- (e) additional overheads and other operating expenses, including costs of materials, supplies and similar products, incurred directly as a result of the project;

'Aid intensity' means the gross aid amount expressed as a percentage of the eligible costs, before any deduction of tax or other charge and normally should be limited²¹. Without prejudice to further restrictions which may be imposed by the participating countries/regions²² the maximum aid intensity that can be claimed is:

- 40% of the eligible costs for large companies; 50% for Medium-sized companies; 60 % small enterprises²³ in case of **experimental development** (TRL 5-8).
- 65 % of the eligible costs for large companies; 75% medium-sized enterprise; 80% small enterprises in case of **industrial research** (TRL 3-4)

This maximum amount is conditional on the project involving effective collaboration:

¹⁹ Unless de minimis aid rules would apply: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2013.352.01.0001.01.ENG

²⁰ See R&I aid rules in the General Block Exemption Regulation <http://eur-lex.europa.eu/eli/reg/2014/651/oj/eng>

²¹ Unless de minimis aid rules would apply: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2013.352.01.0001.01.ENG

²² For EU/ EEA MS - to be reflected in the national measures adopted and communicated on the basis of the General Block Exemption Regulation <http://eur-lex.europa.eu/eli/reg/2014/651/oj/eng>

²³ See definition of SMES at http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

- between undertakings among which at least one is an SME, or is carried out in the context of cross-border co-operation (including at least 2 EU/EEA Member States²⁴) and no single undertaking bears more than 70 % of the eligible costs, or
 - between an undertaking and one or more research and knowledge-dissemination organisations, where the latter bear at least 10 % of the eligible costs and have the right to publish their own research results
- Otherwise 15 percentage points reduction should be applied.

Education and research organisations may receive support at least at the same level as companies. Unless national rules are stricter, higher level of support (going up to 100%), may be applicable only if a legal/economic situation of a specific organisation justifies it²⁵.

The consortia will have to explain in their bids how relevant limitations will be observed. This is without prejudice to the responsibility of EU/EEA Member States authorities to ensure detailed verification of compliance with EU/EEA State aid rules.

²⁴ and at least one of the two being EU Member State

²⁵ e.g. research organisations in situation where conditions of point 20 of R&I aid framework would be satisfied (http://ec.europa.eu/competition/state_aid/modernisation/rdi_framework_en.pdf); or in cases de minimis aid rules would apply: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2013.352.01.0001.01.ENG

ANNEX E – EXAMPLES OF POTENTIAL PROJECT TYPES

Following are some examples of potential project types. Please note that these examples are only constructed as guidance to applicants and do not exclude other project concepts. They do neither constitute eligibility nor evaluation criteria.

1. **Developing digital technology service concepts for sustainable local/regional energy services**

Projects may develop new technology service concepts, leveraging on smart and digital technologies according to local/regional needs, through co-creation with local/regional “need-owner(s)” and other stakeholders. “Need-owner(s)” can be, but are not limited to, local grid owners, property owners, local SMEs, local communities, municipalities etc. Projects can include the development of market concepts and business models in order to build up regional and local value chains.

Projects should consider systems and consumer needs of the future regional/local area and engage private and public stakeholders in co-creation eco-systems. The co-creation may improve innovation and accelerate implementation of new smart technology services solutions, and stimulate European green economy development and competitiveness. Due to the exponential growth in number of users and active participants in the current energy system, their integration is a key requirement in the design of future energy systems. Potential buyers, developers and providers should work together in a co-creation process to develop attractive technology service solutions for the “need-owner(s)” in the system. Models should include participants such as citizens, communities, energy regions and peer groups.

Example topics: Projects may include, but are not limited to, demand and generation side management, including development of daily price profile, communication and cooperation with consumers, technical solutions for energy management in homes, time-control for home appliances, integration of home charging of EVs, time-control for EV charging, new means of cooperation in local or regional energy communities, regional marketplaces for the exchange of energy related goods and services, advanced planning methodologies for local and regional energy transition etc.

2. **Demonstration and field testing of new concepts for technology services**

Projects may present a wholly new demonstration or may build on other existing demonstration projects, i.e. development, validation and demonstration in a new demonstration environment and/or site. Development of new modes for operational excellence and consumer services may make a valuable contribution to a holistic project approach. Projects should install effective feedback-loops, ensuring that experiences and results from pilot participants will impact the ensuing development of the tested subject.

Example topics: Projects may include, but are not limited to, areas such as local heating/cooling systems, local energy resources, heat recovery, cogeneration with cooling and waste water facilities, excess energy from wind and solar electricity production, inter-regional exchanges of energy, sustainable transportation, and solutions-coupling of cross energy carrier solutions such as Power-to-Gas, Power-to-Heat, Vehicle-to-Grid and Vehicle-to-Home (integration of electrical vehicles to smart grids).

3. **Systems/solution synergies and interactions – concept development and demonstration**

Projects may develop and demonstrate new concepts and solutions based on interaction and harmonisation between different energy systems and infrastructures. This may enable the harnessing of benefits from positive synergy effects. Several mix-scenarios solutions may be demonstrated in the same local or regional environment.

Example topics: can include, but is not limited to, digitalisation, ensuring high flexibility and adaptability of developed solutions, new technology for facilitating compatibility between systems, mixing multiple low carbon solutions (e.g. wind, solar, renewable heat production) and energy storage, combined with considerations on relevant sectors such as smart grids, heating and cooling, and transport. This can be performed by comparing and analysing the different mixed energy solutions or concepts with respect to economic, technical, scaling-up, replication, and user-acceptance aspects.

4. Large scale testing in real operational environments

Projects may develop and implement new living labs²⁶ for testing or connecting existing living labs, developing and validating new business models, technologies and/or services in a real operational environment with critical number of relevant participants. Living labs shall be developed and implemented in collaboration with local/regional needs-owners and other relevant stakeholders, and should involve actors such as relevant crafts persons, industry actors, SMEs, start-ups and users/user-groups. Living Labs shall install effective feedback-loops, ensuring that experiences and results from participants will impact the ensuing adjustments of the tested subject or their implementations. Living labs in different regions and countries could work together, highlighting the influence of different technical, regulatory, market and cultural environments.

Example topics: Implementation labs, which bring new solutions into people's lives and help to identify general and specific success factors of implementation, scaling-up and replication of solutions.

It is crucial for applicants to ensure eligibility and available funding schemes for the different activities and partners with the respective national/regional funding agencies (see [Annex C](#) for contact information and a brief overview of requirements).

Project volumes are individual for each unique project proposal, and should be relevant to the proposed action and specific project demands. The expected (typical) volume of total costs for projects is between €1 000 000 to €5 000 000, but this does not exclude smaller/larger projects.

²⁶ Definition for the purposes of this call: A **living lab** is a research concept. A **living lab** is a user-centred, open-innovation ecosystem, often operating in a territorial context (e.g. city, agglomeration, region), integrating concurrent research and innovation processes within a public-private-people partnership.

ANNEX F – EVALUATION CRITERIA

Evaluation criteria	
Scores 0 – 5 (0 = Fail/Not applicable; 1 = Poor; 2 = Fair; 3 = Good; 4 = Very good; 5 = Excellent)	
(a) Excellence	
<p>1. Relevance to the call</p> <ul style="list-style-type: none"> - Proposed piloting, validation and demonstration fit the call aim. - Proposed project is clearly based on a specific need, involving (a) specific “need-owner(s)” or clearly demonstrates engagement with relevant stakeholder 	Score 0-5
<p>2. Degree of innovation and innovative content</p> <ul style="list-style-type: none"> - Project represents something genuinely innovative and/or is a significant improvement on current knowledge and expertise. - Feasibility of innovation and innovative content as a whole. 	Score 0-5
<p>3. State-of-the-art and transnational value</p> <ul style="list-style-type: none"> - Clear description of state-of-the-art within the project’s field. - Clear positioning of the project in relation to the described state-of-the-art. - Added value of the project being transnational (as opposed to being only national). - Benefits and relevance of the project internationally. 	Score 0-5
<p>4. Working methods and models</p> <ul style="list-style-type: none"> - <u>Excellence in collaboration:</u> <ul style="list-style-type: none"> ➤ Approaches and methods for collaboration, enabling relevant stakeholders to participate in co-creation of solutions are clearly defined ➤ Diversity perspectives are considered - Proposed project covers call requirements: <ul style="list-style-type: none"> • three-layer research model: <ul style="list-style-type: none"> ➤ more than one layer covered ➤ Concrete methodological approach to the three-layer model (if only a single layer project, the reasons for this must be clearly explained and justified). ➤ Specific adoption/market challenges related to technology development are addressed ➤ Theories and methods behind social or market assumptions are relevant and clearly explained. ➤ If market/social research or interventions are to be performed the methodologies should identify which kind of data to collect, how to collect it, and how to analyse it. • three dimensions of integration model: <ul style="list-style-type: none"> ➤ More than one dimension is covered. ➤ Concrete methodological approach to the three dimensions of integration model in project content ➤ Concrete considerations of the tree dimensions of integration in consortium setup 	Score 0-5

(b) Impact	
<p>1. Expected impacts</p> <ul style="list-style-type: none"> - Expected impacts are feasible and desirable, and include consideration of societal, environmental and sustainability impacts. - Short-term and long-term impacts contribute to the call's aim. - Implementation contributes to the expected impacts. 	Score 0-5
<p>2. Scaling-up, reproducibility, replicability and interoperability potential</p> <ul style="list-style-type: none"> - High scaling-up potential. - High reproducibility/replicability potential. - High interoperability potential. 	Score 0-5
<p>3. Link and contribution to past and ongoing relevant European initiatives in smart grids and the European Knowledge Base</p> <ul style="list-style-type: none"> - Project builds on relevant European initiatives, knowledge and systematics (e.g. findings of the Working Groups of the Smart Grids Taskforce, SGAM Model, etc.). - High contribution to fulfilling European smart grids initiatives' and SET-Plan objectives. 	Score 0-5
<p>4. Appropriateness of measures for dissemination, exploitation and IPR</p> <ul style="list-style-type: none"> - Target audience identified, clearly stating why they are important for the project and how they will be involved. - Suggested communication activities appropriate and related with identified stakeholders. - Means of dissemination and exploitation of results. - IPRs described and handled appropriately (licenses, patents etc.). 	Score 0-5
(c) Quality and efficiency of the implementation	
<p>1. Quality and relevant experience of project team</p> <ul style="list-style-type: none"> - Experience, specific expert experience (CVs). - Relevant interdisciplinary experience (complimentary expertise). - Beneficial team composition (national and competence diversity – skills shall match the working areas identified in the project). 	Score 0-5
<p>2. Appropriateness of the management structure and resource allocation</p> <ul style="list-style-type: none"> - Management structure (roles) clearly defined and appropriate. - Manageability of consortium (number of partners, key players etc.). - Resources are allocated suitably depending on specific expert competencies. 	Score 0-5
<p>3. Work plan/implementation feasibility and manageability</p> <ul style="list-style-type: none"> - Detailed, clear and logical work/implementation plan. - Feasibility of deliverables and milestones. - Project delivers results efficiently in relation to the project budget. 	Score 0-5
<p>4. Risk identification, analysis and preventive measures</p> <ul style="list-style-type: none"> - Risks appropriately identified. 	Score 0-5

<ul style="list-style-type: none"> - Risk analysis is clear, coherent and logical. It should be applied to the work packages and the investigation approach used in the projects. - Preventive/remedial measures are proposed, and measures seem feasible and valid. 	
Total maximum score sum	60

Please note! Projects that achieve a total score of less than 30 points by the expert evaluation panel or a score of 0 on relevance to the call ((a) Excellence, section 1) will not be forwarded to the selection phase by the experts.

ANNEX G – TECHNOLOGY READINESS LEVELS

The following definitions apply to TRLs:

TRL 1 – basic principles observed.

TRL 2 – technology concept formulated.

TRL 3 – experimental proof of concept.

TRL 4 – technology validated in lab.

TRL 5 – technology validated in relevant environment.

TRL 6 – technology demonstrated in relevant environment.

TRL 7 – system prototype demonstration in operational environment.

TRL 8 – system complete and qualified.

TRL 9 – actual system proven in operational environment.

ANNEX H – KNOWLEDGE COMMUNITY STANDARD WORK PACKAGE

Knowledge Community Standard Work Package

Please insert the tasks below into your overall Work Plan as appropriate, and allocate the resources needed in the project budget (see budgeting estimation below). Task 1 and 2 are organised by the ERA-Net SES Knowledge Community Management in cooperation with the funded projects. Task 3 will be organised by the ERA-Net SES funding partners with involvement of the ERA-Net SES Knowledge Community Management.

Task 1. Involvement in formative evaluation

Task 1.1 – Profiling

- Participate in an online survey per year on project experiences and deliverables related to topics of the ERA-Net Energy Systems Knowledge Community. The Project will answer about 25 questions about scope, targets and results of the projects in an online tool according to an “evaluation and profiling”-manual that will be handed out to the projects at their start.

Task 1.2 –Feedback

- Receive written feedback and consider recommendations of evaluators
- Review results of survey, partly in face-to-face or virtual meetings with the evaluating experts.
- Participate in the annual 2-day ERA-Net SES joint project event including a feedback meeting with experts and key project members (can partially be a *virtual meeting*).

Task 1 resource requirement estimation: 15 – 20 days/year/project.

Task 2. Crosscutting Knowledge Community activities

Task 2.1 – Working Groups

- Participate in, prepare for and follow-up 6 working groups:
 - System Architecture & Modelling
 - Regulatory & Market Development
 - Consumer & Citizen Involvement
 - Storage and Cross Energy Solutions
 - Interoperability & Standardisation
 - Regional Value Chains

in physical and web based meetings. For every working group *projects are expected to participate in a minimum of 1 physical and 2 virtual working group meetings per year*).

Task 2.2 – Living documents

- Work with the Knowledge Sharing Platform experts, mainly contributing to the development of 6 living documents (related to the topics of the abovementioned working groups). Consortium members will contribute own and other project results, e.g. clarify conclusions, give feedback, provide examples etc.

Task 2.3 – Cooperation on communication and dissemination activities

- Participate in teleconferences and workshops to detect synergies between the projects, and support and improve (joint) communication and dissemination activities.
- Participate in a minimum of 1 joint project presentation activities (e.g. European Utilities Week) organized by ERA-Net SES Knowledge Community.

Task 2 resource requirement estimation: 25 – 40 days/year/project.

Task 3. Deliverables to the ERA-Net Smart Energy System (in addition to national/regional funding agency requirements, if applicable).

- Task 3.1 – Annual reporting (in 2019, 2020 and 2021)
- Task 3.2 – Final reporting (2021-2022, depending on project end date)
- Task 3.3 – Annual project event
- Task 3.4 – Final ERA-Net SES event
- Task 3.5 – Abstract of the main results for reporting to the European Commission

Task 3 resource requirement estimation: 15 days/year/project.

Budgeting of resources for the abovementioned tasks

The exact amount of resources to be committed depends on the project length, size, consortium composition and specific project focus. The final organisation and execution of the abovementioned tasks will be the result of an iterative process between the ERA-Net SES Knowledge Community Management and each funded project as applicable. The estimated resources required for Task 1, 2 and 3 are:

- i. 50 – 70 days/year/project.
- ii. €7 000 – €10 000/year/project for travel, accommodation and related expenses.

The advised minimum total resource allocation is €70 000 regardless of project duration.

ERA-Net SES funding partners



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