



Swiss Federal Office of Energy SFOE



# 1<sup>st</sup> SmartGrids ERA-Net Call for applied research proposals

**Application deadline: 15.03.2010, 17:00 hours CET**



## Involved funding agencies:

- The Research Council of Norway
- Energinet.dk
- The Swiss Federal Office of Energy
- The Basque Government
- The Estonian Science Foundation
- The Federal Ministry of Transport, Innovation and Technology in Austria
- ADEME in France
- Latvian Academy of Sciences
- VITO Belgium<sup>1</sup>
- Nordic Energy Research

<sup>1</sup> In case of Belgium: VITO and IBBT (Institute for Broadband Technology) will co-operate through a common engagement of own research funding into the joint call. This means that proposals for the joint call with Belgium will require a co-operation with the VITO and IBBT research groups on pre-defined priority smart grid topics.

## **1. The objectives of the SmartGrids ERA-Net**

The SmartGrids ERA-Net aims at developing transnational research activities to speed up the development of a Smart European Electrical Infrastructure. The latter is regarded as a necessity for a successful realisation of the European Action Plan "Energy Policy for Europe".

The SmartGrids ERA-Net provides co-ordination of the related research activities within the national and regional public (co)funded RTD. The SmartGrids ERA-Net creates a network of programme managers, closely connected to policy makers and industry that undertakes joint activities.

The objectives of the SmartGrids ERA-Net are to:

- Network and integrate national R&D activities by establishing a durable European Research Area in the area which will last beyond the project period.
- Create an internal market for research and development through harmonisation and mutual opening of national research programmes.
- Achieve a concerted European strategy for international co-operation.
- Link governmental and private sector activities.

## **2. General information about the 1<sup>st</sup> SmartGrids ERA-Net call**

### **2.1 The aims of the call for research proposals on SmartGrids**

The purpose of this 1<sup>st</sup> SmartGrids ERA-Net call is to generate joint European relevant applied research activities on SmartGrids ERA-Net related issues and to:

- Create added value in national and regional R&D activities in the field of SmartGrids through planned trans-national cooperation for the benefit of scientists, public funding agencies and industry.
- Bring together different national research communities to create a critical mass for cross-disciplinary research.
- Complement R&D activities in FP7.

### **2.2 Preferred focus areas and scientific content**

The 1<sup>st</sup> SmartGrids ERA-Net call is open for project proposals which fit into the generic definition of SmartGrids according to the Strategic Deployment Document (SDD) of the SmartGrids Technology Platform<sup>2</sup>:

*A SmartGrid is an electricity network that can intelligently integrate the actions of all users connected to it - generators, consumers and those that do both – in order to efficiently deliver sustainable, economic and secure electricity supplies.*

*A SmartGrid employs innovative products and services together with intelligent monitoring, control, communication, and self-healing technologies to:*

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<sup>2</sup> [http://www.smartgrids.eu/documents/3rdGA/SmartGrids\\_SDD\\_Draft\\_25\\_sept\\_2008.zip](http://www.smartgrids.eu/documents/3rdGA/SmartGrids_SDD_Draft_25_sept_2008.zip)

- *better facilitate the connection and operation of generators of all sizes and technologies;*
- *allow consumers to play a part in optimizing the operation of the system;*
- *provide consumers with greater information and choice of supply;*
- *significantly reduce the environmental impact of the whole electricity supply system;*
- *deliver enhanced levels of reliability and security of supply.*

*SmartGrids deployment must include not only technology, market and commercial considerations, environmental impact, regulatory framework, standardization usage, ICT (Information & Communication Technology) and migration strategy but also societal requirements and governmental edicts.*

For example, the scientific research, development and deployment proposals could focus on (but are not restricted to) the following thematic areas:

- European super grid.
- Intelligent metering solutions (including consumer involvement).
- Balancing (load management / demand side management / grid operation/control).
- Cross borders distributed generation.
- Design of market places (Ancillary Services / data management/handling legal / technical aspects).
- Robust self healing/configuring networks.
- Multi energy carrier systems.
- Combining electricity transport and distribution with other energy carriers.
- Design and operation of stand-alone systems in SmartGrids and the integration into the high-voltage grid/system and related markets.
- Vehicle to grid (V2G).
- Grid technology (interfaces, additional benefits etc.).
- Optimal standards and pre-normative research.
- ICT infrastructure for SmartGrids.
- Non-technological issues such as economic and legal aspects, user acceptance, regulations and ethical aspects.
- Energy storage.
- Possible benefits from distributed generation and virtual power plants.
- Automation of LV (low voltage) and MV (medium voltage) grids.
- Integration of renewable energy sources in the SmartGrids.
- Distribution control centres.

Proposing teams are free to choose other topics which fit to the above SmartGrids definition.

### **2.3 Involved countries/regions and programmes**

The countries/regions participating in this 1<sup>st</sup> SmartGrids ERA-Net are: Norway (with the *RENERGI programme*), Denmark (with the *ForskEL programme*), Switzerland (with the research programme "*Grids*"), The Basque Country (with the *GAITEK programme*), Estonia (with the *Energy Technology Programme*), Austria (with the focus area *Energy Systems, Grids and End-Use*), France (with ADEME Programme prioritaire de recherche N°6: Réseaux intelligents et stockage), Latvia (with the National Energy Research Programme), and Belgium (with the *VITO and IBBT research programmes*).

## **2.4 Funding arrangements**

Research will be funded from national and regional sources and will be subject to national and regional funding rules. Each participating funding agency has made separate arrangements for funding the national/regional participants. The public funding available for the individual projects funded in the frame of this call follows the national/regional rules. Additional co-financing from stakeholders is expected following national and European rules for R&D funding. The total funding budget is limited. For detail please contact your national/regional agency, see page 8-9 in this document.

Funding will be available from national/regional funding organisations (see the table below). Projects in the 1<sup>st</sup> SmartGrids ERA-Net can be funded for a maximum of 3 years.

Public funding from the SmartGrids partners will be provided as shown in table 1.

Funding bodies	Country /region	Approx. 1 <sup>st</sup> Call funding in €	Link to relevant funding programmes
Research Council of Norway	Norway	1 000 000	<a href="http://www.forskingsradet.no/servlet/Satellite?c=Page&amp;pagename=renergi%2FHovedsidemal&amp;cid=1226993846874">http://www.forskingsradet.no/servlet/Satellite?c=Page&amp;pagename=renergi%2FHovedsidemal&amp;cid=1226993846874</a>
Energinet.dk	Denmark	500 000	<a href="http://www.energinet.dk">http://www.energinet.dk</a>
Swiss Federal Office of Energy	Switzerland	500 000	<a href="http://www.bfe.admin.ch/forschungnetze/">http://www.bfe.admin.ch/forschungnetze/</a>
The Basque Government	Basque Country, Spain	800 000	<a href="http://www.euskadi.net/r33-2695/es/contenidos/ayuda_subvencion/gaitek_2005/es_8857/es_gaitek.html">http://www.euskadi.net/r33-2695/es/contenidos/ayuda_subvencion/gaitek_2005/es_8857/es_gaitek.html</a> <a href="http://www.euskadi.net/bopv2/datos/2009/12/0906799a.pdf">http://www.euskadi.net/bopv2/datos/2009/12/0906799a.pdf</a>
Estonian Science Foundation	Estonia	150 000	<a href="http://www.etf.ee">http://www.etf.ee</a>
Federal Ministry of Transport, Innovation and Technology	Austria	500 000	<a href="http://www.energiesystemederzukunft.at/english.htm">http://www.energiesystemederzukunft.at/english.htm</a>
ADEME	France	1 000 000	<a href="http://www2.ademe.fr/servlet/getDoc?cid=96&amp;m=3&amp;id=63256&amp;p1=1">http://www2.ademe.fr/servlet/getDoc?cid=96&amp;m=3&amp;id=63256&amp;p1=1</a>
Latvian Academy of Sciences	Latvia	300 000	<a href="http://www.lzp.lv/index.php?option=com_content&amp;task=view&amp;id=187&amp;Itemid=108">http://www.lzp.lv/index.php?option=com_content&amp;task=view&amp;id=187&amp;Itemid=108</a>
VITO and IBBT	Flandern, Belgium	500 000	<a href="http://www.vito.be/SmartGrids_ERA-Net/">http://www.vito.be/SmartGrids_ERA-Net/</a>

Table 1: The countries/regions and links to the programmes participating in the 1<sup>st</sup> SmartGrids ERA-Net call

### 3. Type of project proposals & consortia - requirements

#### 3.1 Type of project proposals

The 1<sup>st</sup> SmartGrids ERA-Net call invites proposals for applied research within the field of smart grids. Projects should last maximum 3 years and involve actual cooperation/task sharing between the project partners.

#### 3.2 Consortium composition – who can apply?

Within the framework of the national/regional limitations the 1<sup>st</sup> SmartGrids ERA-Net call is open to any resident researcher/eligible institution/business within the participating countries/regions shown in table 1 –complying in each case with the national/regional regulations on public funding, unless specified otherwise by the specific programme<sup>3</sup>.

The consortia of this 1<sup>st</sup> SmartGrids ERA-Net call should include partners from at least three of the countries/regions participating in this call.

<sup>3</sup> Proposals including Belgium should involve a co-operation with both VITO/IBBT research groups

## 4. Submitting project proposals

### 4.1 Submitting procedure

The 1<sup>st</sup> SmartGrids ERA-Net call is structured as a two-stage process.

**Stage 1:** Each consortium submits a pre-proposal. These will be evaluated by experts in the funding bodies or involved programmes.

**Stage 2:** Pre-proposals will be selected for the second stage according to the evaluation criteria in section 5. The chosen consortia are then asked to write full proposals. Full proposals will be selected by the processes described in section 5. The chosen projects can begin after national/regional funding decisions.

Stage 1	Publication date – invitation for pre-proposals	15 January 2010
	Deadline for submitting pre-proposals	15 March 2010, 17 hours C.E.T
	Selection of pre-proposals to be invited to submit full proposals	15 April 2010
Stage 2	Deadline for submitting invited full proposals	10 June 2010
	Deadline peer evaluation of full proposals	30 June 2010
	Deadline national/regional funding decisions	2 July 2010
Project	Start of first projects	From Autumn 2010

Table 2: The timeline for the 1<sup>st</sup> SmartGrids ERA-Net call procedure

### 4.2 Application forms and languages

The pre-proposals and the full applications are to be written in English. See the list of suggested topics in 2.2 for thematic guidance.

The pre-proposals have to be submitted via an electronic form, which will be available on the website of the SmartGrids ERA-Net [www.eranet-smartgrids.eu](http://www.eranet-smartgrids.eu). The submitters are asked to give brief descriptions of the following:

- Problem description.
- Objectives.
- Expected project results and impacts.
- Participants.
- Method, work plan and milestones.
- Expected costs.
- Possible sources and amount of co-financing.

For the invited full applications in the 1<sup>st</sup> SmartGrids ERA-Net call another electronic form available on the homepage of the SmartGrids ERA-Net has to be used. This form can be saved and edited until submission.

Pre-proposals and full project proposals will be rejected if they have not been submitted within time limits and with a properly filled-in electronic form.

## **5. Evaluation of projects proposals**

### **5.1 The evaluation procedure and timelines**

The pre-proposals of the 1<sup>st</sup> SmartGrids ERA-Net will be evaluated by experts in the funding bodies or involved programmes. Full proposals of the 1<sup>st</sup> SmartGrids ERA-Net will be evaluated by independent international experts (peers). The final decisions on what projects to support will be made by the involved funding bodies based on evaluations from the international experts (peers), national/regional priorities and funding criteria and European collaboration perspectives.

### **5.2 Evaluation criteria**

There will be complementary evaluation criteria for pre-proposals in the first stage and the full proposals in the second stage.

#### **Evaluation criteria for pre-proposals:**

- Relevance to the scope and objectives of the call.
- Feasibility of the project plan.
- Contribution to a reliable, sustainable and affordable energy supply.
- Quality of international collaboration and chance of project success.
- Possible impact on society.
- Degree of novelty and applicability.
- Conformity to national/regional funding programmes, their objectives and criteria.

#### **Evaluation criteria for full proposals:**

- Scientific quality.
- Feasibility of the research and budget plan.
- Actual task sharing.
- Competence and expertise of the applicant/research team/consortium.
- International contact networks of the applicants/consortia
- Added value generated by the consortium (transnational, multi- or interdisciplinary).
- Knowledge reinforcement and dissemination.
- Strategic vision.
- Costs and co-financing.
- Conformity to national/regional funding programmes, their objectives and criteria.

### **5.3 Communication of project evaluation decisions**

The outcome of the evaluation of the pre-proposals and the full proposals will be communicated to applicants. Brief feedback from the international experts' (peers) evaluation will be given to the submitters of full proposals.

### **5.4 Management of the decision process and the start of projects**

The formal funding decisions will be taken by the funding agencies after the full proposals have been evaluated by the international experts (peers). Accepted projects will be funded by the involved funding bodies of the respective countries/regions. Each country/region will fund its own researchers.

When final decisions have been conveyed to project participants, successful applicants must enter into individual contractual agreements with their

national/regional funding agencies. A consortium agreement must be concluded between the project participants to inter alia regulate intellectual property rights (IPR) issues. A template consortium agreement will be made available. Both the consortium agreement and the above mentioned individual contractual agreements are prerequisites for the first payments made to the project participants from the regional/national funding agencies. The involved funding agencies will monitor and supervise the funded projects (reporting).

## 6. National/regional contact persons

The following persons are contact persons for the call in the involved countries/regions:

### **Research Council of Norway, [www.rcn.no](http://www.rcn.no)**

- Mr. Frank Nilsen, Tel. +47 90 91 15 50, e-mail: [frank.nilsen@energiconsult.com](mailto:frank.nilsen@energiconsult.com)

### **Energinet.dk, [www.energinet.dk](http://www.energinet.dk)**

- Ms. Jeanette Møller Jørgensen, Tel. +45 7622 4417, e-mail: [jmj@energinet.dk](mailto:jmj@energinet.dk)

### **Swiss Federal Office of Energy, [www.bfe.admin.ch](http://www.bfe.admin.ch)**

- Mr. Michael Moser, Tel. +41 31 325 36 23, e-mail: [michael.moser@bfe.admin.ch](mailto:michael.moser@bfe.admin.ch)

### **Basque Government ([www.euskadi.net](http://www.euskadi.net)) / Innobasque ([www.innobasque.com](http://www.innobasque.com))**

- Ms Oihana Blanco, Tel. +34 94 420 9488, e-mail: [oblanco@innobasque.com](mailto:oblanco@innobasque.com)

### **Estonian Science Foundation, [www.etf.ee](http://www.etf.ee)**

- Mr. Aare Ignat, Tel. +372 699 62 16, e-mail: [aare@etf.ee](mailto:aare@etf.ee)

### **Austrian Federal Ministry of Transport, Innovation and Technology, <http://www.bmvit.gv.at>**

- Mr. Michael Hübner, Tel. +43 1 7116 2922, e-mail: [michael.huebner@bmvit.gv.at](mailto:michael.huebner@bmvit.gv.at)

### **France, ADEME, [www.ademe.fr](http://www.ademe.fr)**

- Mr. Stephane Biscaglia, Tel. +33 (0) 493 95 79 81, e-mail: [stephane.biscaglia@ademe.fr](mailto:stephane.biscaglia@ademe.fr)

### **Latvian Academy of Sciences, [www.lza.lv](http://www.lza.lv)**

- Ms. Gunta Shlihta, Tel. + 371 67 55 86 80, e-mail: [fei@edi.lv](mailto:fei@edi.lv)

### **VITO and IBBT, [www.vito.be](http://www.vito.be), [www.ibbt.be](http://www.ibbt.be)**

- Ms. Kris Kessels, Tel. +32 14 33 59 35, e-mail: [kris.kessels@vito.be](mailto:kris.kessels@vito.be)
- Mr. Guy Vekemans, Tel. +32 14 33 58 40, e-mail: [guy.vekemans@vito.be](mailto:guy.vekemans@vito.be)

**For overall call management: Nordic Energy Research, [www.nordicenergy.net](http://www.nordicenergy.net)**

- Ms. Lise Jørstad, Tel. +47 92 43 58 88, e-mail: [lj@nordicenergy.net](mailto:lj@nordicenergy.net)
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