

The EU Framework Program for Research and Innovation **HORIZON 2020** (2014-2020)

Horizon 2020, EU Program for Research & Innovation: opportunities for Moldova-EU cooperation in energy efficiency and renewable energy sector

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Secure, Clean and Efficient Energy makes part of the Societal Challenges defined in Horizon-2020 (H2020) Program.

Horizon-2020 Program covers the period of time 2014-2020.

Secure, Clean and Efficient Energy deals with the following main areas:

- Energy efficiency (EE)
- Competitive Low-Carbon Energy (LCE)
- Smart cities and communities (SCC)
- SMEs and Fast Track to Innovation for Energy
- Other actions



Energy efficiency (EE) calls deal with issues of: A - Buildings and consumers,

B - Heating and cooling,

C - Industry and products,

D - Finance for sustainable energy.

Competitive Low-Carbon Energy (LCE) calls cover issues of:

- New knowledge and technologies;
- Renewable electricity and heating/cooling;
- Modernising the European electricity grid;
- Providing the energy system with flexibility through enhanced energy storage technologies;
- Sustainable biofuels and alternative fuels for the European transport fuel mix;
- Enabling the decarbonisation of the use of fossil fuels during the transition to a lowcarbon economy;
- Supporting the development of a European research area in the field of energy;
- Social, environmental and economic aspects of the energy system; Cross-cutting issues.
 Smart cities and communities (SCC) and SMEs and Fast Track to Innovation for Energy deal with priority issues of cities/communities and SME's as defined in H2020 work program and objectives.

Other actions



Other actions (some topics):

B.1. Energy efficiency

Support to policy development and implementation of the Energy Efficiency relevant Directives and Regulations, namely Energy Performance of Buildings Directive (EPBD) and Energy Efficiency Directive (EED).

B.2.: Competitive low-carbon energy technologies

- B.2.1.: Support to policy development and implementation of the Renewable Energy Directive
- B.2.2.: Coordination of Renewable Energy policies development and implementation through concerted actions
- B.2.3.: Support to Research and Innovation Policy in the areas of Renewable Energy, Carbon Capture and Storage and Clean Coal
- B.2.6.: Realization of a reliable and stable energy supply systems integrating increasing share of variable renewable energy and storage
- B.2.10.: Innovative Financial Instruments for First-of-a-kind Commercial Demonstration Projects in the field of Energy
- B.2.12.: Studies to support the Internal Energy Market

B.3. Smart Cities and Communities

- B.3.1.: Studies to support Smart Cities and Communities
- B.3.2.: Support Services for the Covenant of Mayors Initiative

Note: in R. Moldova for today there are **22 signatories** of the Covenant of Mayors Initiative

B.3.3.: Support the coordination of cities' activities via the Green Digital Charter

B.4. Cross-cutting issues

B.4.2: Modeling and analysing energy policy, system transformation and climate change measures, etc.



First H2020 calls for 2014-2015 were published on December 11, 2013.

The majority of calls for 2015 are published on **December 10, 2014**. Except Energy efficiency - PPP EEB and SPIRE topics (EE02 and EE18) for which the opening date was **September 30, 2014**, and few other calls

The list of the calls for 2015, sorted by deadlines, is presented herein below.

Total budget foreseen for Secure, Clean and Efficient Energy is of:

5.93 billion euro for **2014-2020**

including 676.92 million euro for 2015



Dead-line: | March 03, 2015 (I)

Competitive Low-Carbon Energy (LCE) topics:

Renewable electricity and heating/cooling

LCE 3 – 2014/2015: Demonstration of renewable electricity and heating/cooling technologies

LCE 4 – 2014/2015: Market uptake of existing and emerging renewable electricity, heating and cooling technologies

Modernising the European electricity grid

LCE 5 – 2015: Innovation and technologies for the deployment of meshed off-shore grids

LCE 6 – 2015: Transmission grid and wholesale market

Providing the energy system with flexibility through enhanced energy storage technologies

LCE 9 – 2015: Large scale energy storage

Enabling the decarbonisation of the use of fossil fuels during the transition to a lowcarbon economy

LCE 12 - 2014/2015: Demonstrating advanced biofuel technologies

Sustainable biofuels and alternative fuels for the European transport fuel mix

LCE 14 – 2014/2015: Market uptake of existing and emerging sustainable bioenergy

Supporting the development of a European research area in the field of energy

LCE 19 – 2014/2015: Supporting coordination of national R&D activities

Social, environmental and economic aspects of the energy system

LCE 21 – 2015: Modelling and analysing the energy system, its transformation and impacts



Dead-line: | March 03, 2015 (II)

Smart Cities and Communities (SCC) topics:

SCC 1 – 2014/2015: Smart Cities and Communities solutions integrating energy, transport, ICT sectors through lighthouse (large scale demonstration - first of the kind) projects

SCC 3 – 2015: Development of system standards for smart cities and communities solutions

Dead-line: | March 18, 2015 (two stage projects)

SMEs and Fast Track to Innovation for Energy

SIE 1 – 2014/2015: Stimulating the innovation potential of SMEs for a low carbon and efficient energy system

Dead-line: April 28, 2015

Competitive Low-Carbon Energy:

Supporting the development of a European research area in the field of energy

LCE 18 – 2014/2015: Supporting Joint Actions on demonstration and validation of innovative energy solutions

Dead-line: May 05, 2015

Competitive Low-Carbon Energy:

Sustainable biofuels and alternative fuels for the European transport fuel mix

LCE 13 - 2015: Partnering with Brazil on advanced biofuels



Dead-line: June 10, 2015

Energy Efficiency (EE) topics:

A – Buildings and consumers

EE 5 - **2014**/ $\overline{2015}$: Increasing energy performance of existing buildings through process and organization innovations and creating a market for deep renovation

EE 6 – 2015: Demand response in blocks of buildings

EE 7 – 2014/2015: Enhancing the capacity of public authorities to plan and implement sustainable energy policies and measures

EE 9 - **2014/2015**: Empowering stakeholders to assist public authorities in the definition and implementation of sustainable energy policies and measures

EE 10 – 2014/2015: Consumer engagement for sustainable energy

EE 11 – 2014/2015: New ICT-based solutions for energy efficiency

B - Heating and cooling

EE 13 - 2014/2015: Technology for district heating and cooling

EE 14 – 2014/2015: Removing market barriers to the uptake of efficient heating and cooling solutions

C - Industry and products

EE 15 – 2014/2015: Ensuring effective implementation of EU product efficiency legislation

EE 16 – 2014/2015: Organisational innovation to increase energy efficiency in industry

EE 17 – 2015: Driving energy innovation through large buyer groups

D - Finance for sustainable energy

EE 19 – 2014/2015: Improving the financeability and attractiveness of sustainable energy investments

EE 20 – 2014/2015: Project development assistance for innovative bankable and aggregated sustainable energy investment schemes and projects

EE 21 – 2014/2015: Development and market roll-out of innovative energy services and financial schemes for sustainable energy



Dead-lines: June 17, September 17, December 16, 2015 (two stage projects)

SMEs and Fast Track to Innovation for Energy

SIE 1 – 2014/2015: Stimulating the innovation potential of SMEs for a low carbon and efficient energy system

Dead-lines: | different for each topic

Other actions (listed before)



Opening dates, deadlines and indicative budgets: summary

Energy efficiency calls (EE), all single stage:

Opening dates:

30 September 2014 for 2015 topics **EE2, EE18**

10 December 2014 for 2015 topics except EE2 and EE18

Deadlines:

04/02/2015 Topics **EE 2, 18**

04/06/2015 Topics **EE 5-7, 9-11, 13-17, 19-21**

Indicative budget: EUR 98.15 million from the 2015 budget

Topics **EE 1** and **EE 2** (implemented under EeB PPP) **EUR 9 million**

Topic **EE 18** (implemented under SPIRE PPP) **EUR 8 million**

Topics **EE 6**; **12**; and **13 EUR 13.35 million**

Topic EE 11 EUR 8.5 million

Topics **EE 4**, **5**, **7-10**, **14-17 EUR 32.8 million**

Topics EE 19-21 EUR 26.5 million



Opening dates, deadlines and indicative budgets: summary

Competitive Low-Carbon Energy (LCE):

Opening dates:

9 June 2014 for 2015 topics LCE2, LCE11, LCE15 and LCE1710 December 2014 for 2015 topics (except for the 2nd stage of topics LCE2, LCE11, LCE15 and LCE17)

Deadlines and indicative budgets:







Topic	Deadlines		
	2015		
LCE 1			
	02/02/2011	0.510.515.01.5	
LCE 2, LCE	03/09/2014	05/05/2015 (stage	
11	(stage 1)	2)	
LCE 3, 12	05/05/2015		
LCE 4, 14	05/05/2015		
LCE 5, 6	05/05/2015		
LCE 7			
LCE 8, 10			
LCE 9	05/05/2015		
LCE 15, 16			
LCE 15, 17	03/09/2014	05/05/2015 (stage	
	(stage 1)	2)	
LCE 18 [ERA-	05/05/2015		
NET]			
LCE 19	05/05/2015		
LCE 20			
LCE 21	05/05/2015		
LCE 22			
LCE 23	05/05/2015		

Competitive Low-Carbon Energy (LCE)

indicative budgets:				
	2015 EUR million			
LCE 1		Two stage evaluation		
LCE 2, LCE 11	60	All two stage evaluation		
LCE 3, 12	80	All single stage evaluation		
LCE 4, 14	20	All single stage evaluation		
LCE 5, 6	71.48	All single stage evaluation		
LCE 7		Single stage evaluation		
LCE 8, 10		All single stage evaluation		
LCE 9	36.34	Single stage evaluation		
LCE 15, 16, 17	35	All two stage evaluation		
LCE 18 [ERA-NET]	61.25	Single stage evaluation		
LCE 19	3	Single stage evaluation		
LCE 20		Single stage evaluation		
LCE 21	10	Single stage evaluation		
LCE 22		Single stage evaluation		
LCE 23	0.4	Single stage evaluation		



Opening dates, deadlines and indicative budgets: summary

Smart Cities and Communities (SCC), single stage projects:

Opening dates: 10 December 2014 for 2015 topics

Deadlines: SCC 1, SCC 3 05/05/2015

Indicative budget: EUR 107.18 million from the 2015 budget

Topic SCC 1 EUR 106.18 million

Topic SCC 3 EUR 1 million



Opening dates, deadlines and indicative budgets: summary

SMEs and Fast Track to Innovation for energy:

Opening dates:

18/12/2014 for 2015 topics for phase 1 and phase 2 of the SME instrument

Deadlines:

Topic	Deadlines		
	2015		
SIE 1	Phase 1	Phase 2	
[SME]	18/03/2015	18/03/2015	
Open call cut- off dates	17/06/2015	17/06/2015	
	17/09/2015	17/09/2015	
	16/12/2015	16/12/2015	

Indicative budget: EUR 34.76 million from the 2015 budget

out of which 3.48 for phase 1,

30.58 for phase **2**,

0.70 for mentoring & coaching support and phase 3



Opening dates, deadlines and indicative budgets:

Other actions:

Opening dates & deadlines:

different for each topic

Indicative budget:



Other Actions	2015 ¹⁵⁷ Budget EUR million		
Experts (expert evaluators, experts groups, monitors)	6.80 of which 3.00 from 32.040301 and 3.80 from 08.020303		
Subscription – implementing agreements of the International Energy Agency and contribution to the International Renewable Energy Agency	1.03 of which 0.82 from 32.040301 and 0.21 from 08.020303		
Grants to identified beneficiaries	13.76 of which 8.50 from 32.040301 and 5.26 from 08.020303		
Public procurement – Support actions	23.85 of which 17.60 from 32.040301 and 6.25 from 08.020303		
Provision of technical/scientific services by the EC Joint Research Centre (JRC)	0.10 of which 0.10 from 32.040301		
Delegation agreement/FAFA – the ELENA Facility	15.00 from 32.040301		

Source: Work Program 2014-2015, pp. 133-134



Secure, Clean and Efficient Energy – calls 2015: concluding summary

Deadlines:

Energy Efficiency	/ - PPP EeB and SPIRE top	oics 04/02/2015
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Call for competitive low-carbon energy	03/	03	/2015
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Call for competitive low-carbon energy 05/05/2015

Energy Efficiency - Market Uptake PDA 10/06/2015

Energy Efficiency - Market Uptake 10/06/2015

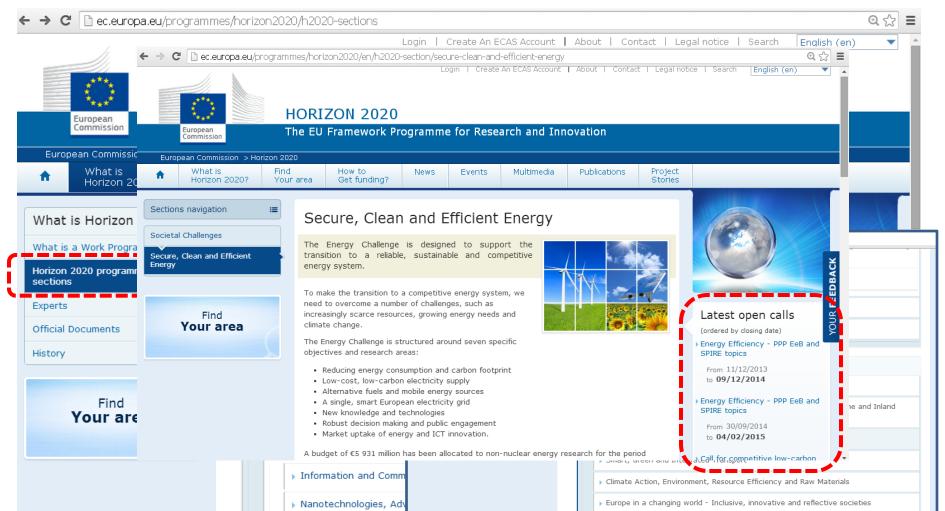
Energy Efficiency Research & Innovation 10/06/2015

SMEs and Fast Track to Innovation for energy: 18/03, 17/06, 17/09, 16/12/2015

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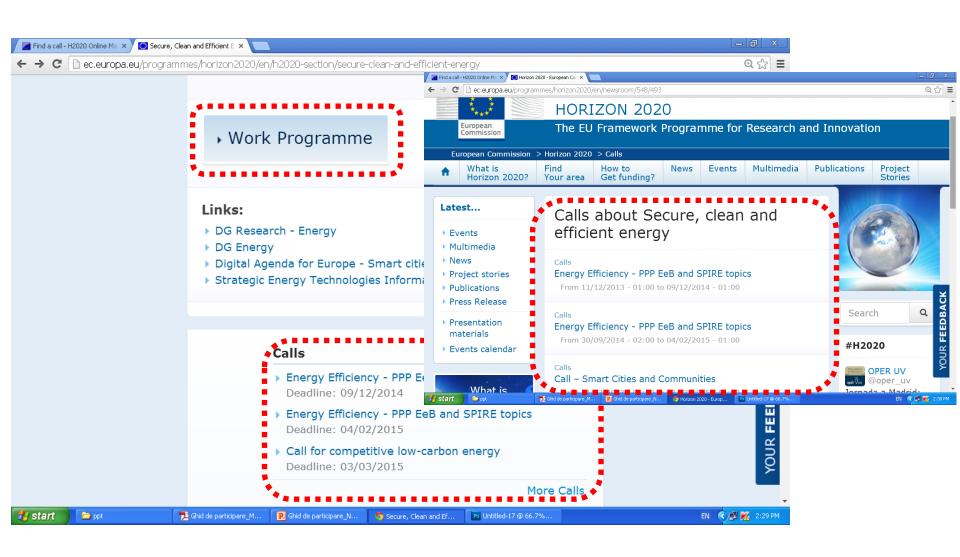
Secure, Clean and Efficient Energy Where to find call info?

http://ec.europa.eu/programmes/horizon2020/h2020-sections http://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-clean-and-efficient-energy





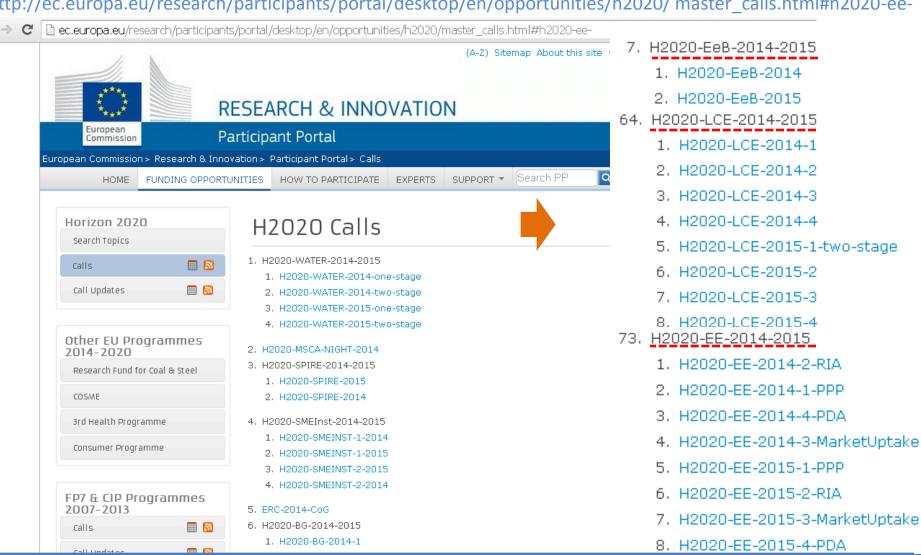
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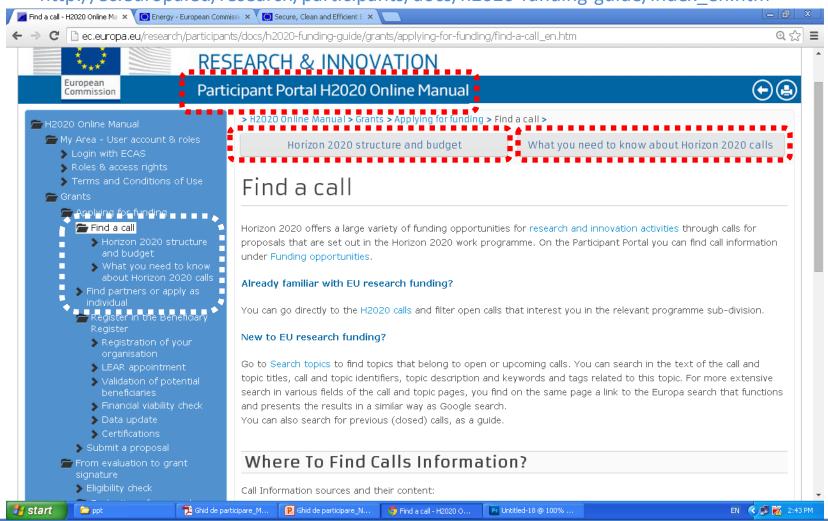
http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/ master calls.html#h2020-ee-



Furonean Research Area

What you need to know about Horizon 2020 calls?

http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index en.htm





What you need to know about Horizon 2020 calls?

Horizon 2020 calls can have different types of action (funding schemes)

The type of action specifies:

- the scope of what is funded
- the reimbursement rate
- specific evaluation criteria to qualify for funding

Types of Actions:

Research & Innovation Actions

EU funding rate - 100%

Activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution.

Innovation Actions

EU funding rate – 70% (except non-profit, which are still funded 100%)

Activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services.

Coordination & Support Actions

Accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies.



For more information and updates please consult:

- MD-H2020: http://www.h2020.md/
- Horizon 2020 Work Program 2014-2015 in the area of 'Secure, Clean and Efficient Energy': http://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/main/h2020-wp1415-energy_en.pdf
- Calls about Secure, clean and efficient energy:

 http://ec.europa.eu/programmes/horizon2020/en/newsroom/548/493
- H2020 Calls: http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/master_calls.html#h2020-ee-2014-2015
- **H2020 Official Documents:** http://ec.europa.eu/programmes/horizon2020/en/official-documents
- **Ghid de participare la Programul Cadru al UE de cercetare-inovare "ORIZONT 2020"** (2014-2020): http://www.h2020.md/en/ghid-de-participare-la-programul-cadru-al-ue-de-cercetare-inovare-%E2%80%9Corizont-2020%E2%80%9D-2014-2020
- Participant Portal H2020 Online Manual: http://ec.europa.eu/research/participants/portal/desktop/en/funding/guide.html http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm
- H2020 Calls:
 http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/master_calls.html#h2020-ee-
- European Commission alphabetic index from A to Z: http://ec.europa.eu/atoz_en.htm

Thank you for your kind attention