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D7.9 Joint selection list & report of the projects to be funded of second co-funded call

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LEAP-RE

Long-Term Joint EU-AU Research
and Innovation Partnership on Renewable Energy

Research & Innovation Action

August 2023

D7.9 Joint selection list and report of the projects to be funded (2nd co-funded call)



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Abbreviations and Acronyms

Acronym	Description
WP	Work Package
IRP	Independent Review Panel
CSC	Joint Call Steering Committee
JCS	Joint Call Secretariat
MARs	Multiannual Roadmaps
PMB	Programme Management Board
EC	European commission
RE	Renewable Energy

Keywords

Full-proposal ranking; International Review Panel



1. Introduction

The Long-term AU-EU Partnership on Renewable Energy (LEAP-RE) program co-funded by the European Commission under Horizon 2020 aims to increase the use of renewable energy via a well-balanced set of research, demonstration, and technology transfer projects in both continents.

This program is led by a consortium of 83 partners from European and African countries.

The whole budget of the program is around 32 Million Euros, including 15 Million from the EC.

LEAP-RE is structured around three Pillars: Pillar1, the focus of this call, comprises the implementation of transnational proposals for research, innovation and capacity building, funded by national/regional funding agencies and by the European Commission; Pillar2, is a cluster of individual R&I and capacity building projects implemented by members of the consortium, whilst Pillar3 focuses on program management and the design of a long term AU - EU strategic partnership on renewable energy.

Bringing together 9 African and European funding agency members of the consortium, LEAP-RE Pillar1 is devoted to the preparation and implementation of transnational joint calls for proposals co-funded by European and African national research funding agencies, with an additional EC top up. The projects funded under the calls focused on achieving goals of mutual benefit based on a balanced and cooperative approach. Particular attention is given to strengthening the impact of R&I supported activities for the well-being of society in Europe and in Africa.

Each project consortium that applies for funding under Pillar 1 consisted of research teams from a minimum of four countries from the two continents, with at least 2 from European countries and at least 2 from African countries including a private partner in each consortium in the second co-funded call.

Scope of the Call and priority Areas for Collaboration: The range of activities recommended for collaboration under LEAP-RE, focused on the 6 identified multi-annual roadmaps (MARs) presented in the Call:

- MAR1: Mapping RE joint research and innovation
- MAR2: End of life of RE components
- MAR3: Smart stand-alone systems
- MAR4: Smart grids
- MAR5: Productive uses of energy,
- MAR6: Domestic uses of energy.

These Multi-Annual Roadmaps are part of the Roadmap for a jointly funded AU-EU research & innovation partnership on Climate Change and Sustainable Energy (CCSE) established under the UE-AU High Level Policy Dialogue (HLPD) on Science, Technology and Innovation, which prioritizes:

- Development and integration of renewable energy in the energy system
- Planning and modeling future sustainable energy systems
- Including society as an important stakeholder
- Market, pricing and business models for future sustainable energy systems
- Strengthening basic research and technology development



The LEAP-RE Joint Call 2022 can fund basic research, applied research and experimental development projects that are 12-24 months long.

2. Evaluation of the pre-proposals and full-proposals

All the documents (call text, guidelines, templates...) for the call were available at the following link: <http://www.leap-re.eu/leap-re-call/>

The evaluation criteria and the transnational and national regulations were presented on the call text. The evaluation was done by an international review panel (IRP).

The eligibility check was done by all the funding agencies as a first step.

Then, 18 experts evaluated the pre-proposals. For the IRP composition of the second step, the Joint Call Secretariat proceed to the revision of the composition of the International Review Panel considering the feed-back of the funding organisations. For the full proposal stage, the eligibility check was also done by the funding agencies before the evaluation of the IRP.

The International Review Panel (IRP) was chaired by Mrs Gundula WEBER from AIT / Omnisolar e.U. Mrs WEBER was chosen as a chair woman because:
She does not have conflict of interest in any of the projects evaluated in the second step;
-She has good knowledge of the 6 Multi-Annual roadmaps of the call
-She already chaired panels.

Her gender was also taken into consideration.

The IRP of the full proposal evaluation includes 6 women (including the chair-woman) and 8 men. 6 members are working in Africa and 8 in Europe.

A ranking list was done during the meeting by the IRP (see deliverable 7.8).

The CSC was then help in order to decide the proposals selected for funding. Among the 24 projects, 10 projects were selected.





3. Selection of full-proposals for funding

The LEAP-RE Expert panel meeting chaired by Mrs. Gundula WEBER has been held between 08 and 09 March 2023 in a hybrid format with the chair, 6 experts and the independent observer in Paris and the other experts through a Cisco WebEx Meetings session.

A CSC meeting in order to do the selection of projects to be funded was held online on March 23rd.

Online: ANR, MESRS, LGI, MENFPESRS, DSI, FRS-FNRS, FFG, FZj-RtJ, MUR, UEFISCDI.

Different scenarios were presented during the CSC. The first scenario including the 8 best ranked projects (SWITCH, SmartAPV-Fruit, OPTiMG, D3T4H2S, MiDiNA, BIOTHEREP, Vil2Bio, REPTES) was validated without any discussion.

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8.3. Selection procedures and feedback to applicants

The CSC will strive to ensure that the top-ranked full-proposals are funded to the maximum extent possible. The selection of full-proposals will be based on the ranking list of eligible full-proposals provided by the IRP meeting as recommendation and the available national/regional budgets until exhaustion of public funds (EU contribution included). A CSC consensus meeting will be organised to finalise Stage 2 and to elaborate the "joint selection list" of projects recommended for funding. All coordinators will receive feedback on the results of the evaluation process after both Stage 1 and Stage 2, including the Evaluation Summary Reports. The coordinators will be instructed to communicate the decisions to the consortium partners. The final decision of funding will be validated by each funding organisation.

Consortium agreement (p.172-172):

"Ranking List Based on the ranking by the International Review Panel, and taking into account the available budgets of the Funding Organisations and the EU co-financing funding, the Joint Call Secretariat will propose a funding recommendation to the Network Steering Committee, taking into account that it is a recommendation of the Pillar 1 Cofund-Action to follow the ranking list as suggested. The ranking list could include projects noted ex aequo since several projects may have the same ranking note. The Network Steering Committee shall agree on the list of Transnational Projects selected for funding. Transnational Projects with scores below the thresholds given in the Call Text will not be funded even if there is national/regional funding available."



**Reminder of Table 1 (D7.8): Ranking list of full-proposals and process of final selection**

	Acronym	Consensus score of IRP	Rank
1	SWITCH	13,33333333	1
2	SmartAPV-Fruit	13	2
3	OPTiMG	12,66666667	3
4	D3T4H2S	12,33333333	4
5	MiDiNA	12,33333333	4
6	BIOHEREP	12	6
7	Vii2Bio	12	6
8	REPTES	11,66666667	7
9	CombiBioEnergy	11,5	8
10	TerraCooltech	11,33333333	9
11	RCLIB	11,25	10
12	DISH-mGC	11,25	10
13	SolDryPro	10,33333333	11
14	SUNRISSE	10,33333333	11
15	SHE	10,33333333	11

Different scenarios were tested then to select projects in the 6 MARs and to maximize the number of projects funded. The 8 best ranked projects were selected at first using Gap Filling mainly to compensate the exhaustion of MENFPSESRS budget. The projects CombiBioEnergy, TerraCooltech, DISH-mGC, SolDryPro and SUNRISSE were skipped despite their note above 10 (threshold) since they require budget from MENFPSEERS. The projects RCLIB and SHE (not involving Moroccan teams) were selected allowing FFG (Austria) to fund a project.

List of projects selected for funding:

- 1) **BIOHEREP:** Hybrid Biochemical and Thermochemical conversion of Slaughterhouse biowaste for Renewable Energy production.

Project coordinator : Lamfeddal KOUISNI, Mohammed VI Polytechnic University.

Countries in partnership (in bold coordinating country): **Morocco**, Algeria, South Africa, Italy, Germany, France.

- 2) **D3T4H2S:** A data driven digital twin for improved hydrogen storage vessels towards challenges for energy transition

Project coordinator : Mourad NACHTANE, S VERTICAL

Countries in partnership (in bold coordinating country): **France**, South Africa, Morocco, Romania.





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- 3) **MiDiNA:** A comprehensive methodological approach on the development potential of microgrids and the integration of renewable energies in North Africa.

Project coordinator : Azeddine HOUARI, INSTITUT DE RECHERCHE EN ENERGIE ELECTRIQUE DE NANTES ATLANTIQUE.

Countries in partnership (in bold coordinating country): **France**, Algeria, Morocco, Romania.

- 4) **OPTiMG:** Optimizing integrated mini grids for water-energy-food

Project coordinator : Philipp BLECHINGER, Reiner Lemoine Institut

Countries in partnership (in bold coordinating country): **Germany**, South Africa, Italy, Morocco,

- 5) **RCLIB:** Recycling of the cathodes, based on carbon nanotubes and conducting polymers, from spent rechargeable Li batteries

Project coordinator : Mihaela BAIBARAC, National Institute of Materials Physics

Countries in partnership (in bold coordinating country): **Romania**, Algeria, Italy, Morocco.

- 6) **REPTES:** "Renewable plants integrated with pumped thermal energy storage for sustainable satisfaction of energy and agricultural needs of African communities"

Project coordinator : Mario PETROLLESE, University of Cagliari

Countries in partnership (in bold coordinating country):

- 7) **SHE:** Smart Home Energy: Development of an integrated and mobile solution for low-cost cooking and power generation

Project coordinator : Robert SCHARLER, Graz University of Technology, Institute of Thermal Engineering

Countries in partnership (in bold coordinating country): **Austria**, France South Africa, Uganda.

- 8) **SmartAPV-Fruit:** Smart Agrivoltaic Systems for Fruits

Project coordinator : Maximilian TROMMSDORFF, Fraunhofer Institute for Solar Energy Systems

Countries in partnership (in bold coordinating country): **Germany**, Morocco, France, South Africa

- 9) **SWITCH:** Stabilizing weak grids through machine learning: empowering farmers in end-of-line communities in North Africa through artificial neural networks





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Project coordinator : Wilfried ZOERNER, Technische Hochschule Ingolstadt

Countries in partnership (in bold coordinating country): **Germany**, Algeria, Italy, Morocco.

- 10) **Vil2Bio:** "Combining village-scale biogas production with pyrolysis in biomass stoves for off-grid sustainable clean cooking and cold production."

Project coordinator : Pascale GILLON, LABORATOIRE DE GENIE DES PROCÉDES - ENVIRONNEMENT - AGROALIMENTAIRE

Countries in partnership (in bold coordinating country): **France**, Algeria, Morocco, Germany, Kenya.



4. Conclusion

The LEAP-RE second call of proposals was a two-step evaluation process done by an IRP and observed, in particular for the second step, by an independent observer. The process led to the selection of 10 projects for funding. The independent observer's report summarized the main stages of the process and highlighted the way that led to the final ranking.



Appendix 1: Ranking list of full-proposals

Acronym	Consensus score of IRP	Rank
SWITCH	13,33333333	1
SmartAPV-Fruit	13	2
OPTIMG	12,66666667	3
D3T4H2S	12,33333333	4
MiDiNA	12,33333333	4
BIOOTHEREP	12	6
Vil2Bio	12	6
REPTES	11,66666667	7
CombiBioEnergy	11,5	8
TerraCooltech	11,33333333	9
RCLIB	11,25	10
DISH-mGC	11,25	10
SolDryPro	10,33333333	11
SUNRISE	10,33333333	11
SHE	10,33333333	11
Agri-solar H2	10,33333333	11
PVH2SYSTEM	10,33333333	11
SSG RemPop	10	16
TRIGGER	10	16
OSER	9,33333333	18
SBC4SA	9,33333333	18
EXBIOM	9	20
INTEGRATOR	9	20
SmartSolAccess	7,33333333	24



Appendix 2: Budget & funding

	Total	Total (eligible agencies)	FFG	F.R.S.-FNRS	ANR	FZJ-PtJ	MUR	UEFISCDI	MESRS	MENFPESRS	DSI	LGI
National budget	4733000	4 733 000 €	300 000 €	200 000 €	650 000 €	1 150 000 €	600 000 €	500 000 €	300 000 €	500 000 €	533 000 €	0 €
Total initial demand	13315076	13 315 076 €	513 118 €	120 000 €	2 070 279 €	2 978 294 €	1 252 512 €	2 038 580 €	699 900 €	1 612 547 €	1 111 124 €	918 722 €
Budgets needed by the selected projects	5874657	5 874 657 €	236 945 €	120 000 €	1 006 383 €	1 310 181 €	739 955 €	639 800 €	250 000 €	865 397 €	421 074 €	284 922 €
Total national budget + just retour		4 983 965 €	312 862 €	206 514 €	687 310 €	1 216 010 €	634 440 €	528 700 €	313 571 €	528 700 €	555 858 €	0 €
Top-up received in total (just retour + gap filling)		1 502 443 €	12 862 €	6 514 €	356 383 €	160 181 €	139 955 €	139 800 €	13 571 €	365 397 €	22 858 €	284 922 €
Juste retour (virtual common pot)		250 965 €	12 862 €	6 514 €	37 310 €	66 010 €	34 440 €	28 700 €	13 571 €	28 700 €	22 858 €	0 €
Gap-filling needed (real common pot)		1 251 478 €	0 €	0 €	319 073 €	94 171 €	105 515 €	111 100 €	0 €	336 697 €	0 €	284 922 €
National budgets spent by the funding agencies		4 372 214 €	224 083 €	113 486 €	650 000 €	1 150 000 €	600 000 €	500 000 €	236 429 €	500 000 €	398 216 €	0 €
Part of the national budget spent		0,92	0,75	0,57	1,00	1,00	1,00	1,00	0,79	1,00	0,75	1
Top up received / national budget spent		34,36%	5,74%	5,74%	54,83%	13,93%	23,33%	27,96%	5,74%	73,08%	5,74%	2849219999
Top-up received exceeding the national commitment												284922,00
Number of funded projects		10	1	1	6	5	5	4	5	9	5	3
Number of pre-proposals		24	3	1	13	12	9	12	14	18	12	10
Success rate		41,67%	33,33%	100,00%	46,15%	41,67%	55,56%	33,33%	35,71%	50,00%	41,67%	30,00%





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				Austria	Belgium	France	Germany	Italy	Romania	Algeria	Morocco	South of Africa	Other African partners
Title	Funding YES/NO	Project cost	Project cost generating top up	FFG	F.R.S.-FNRS	ANR	FZJ-PtJ	MUR	UEFISCDI	MESRS	MENFPESRS	DSI	LGI
SWITCH	yes	649 993 €	649 993 €				299 996 €	200 000 €		50 000 €	99 997 €		
D3T4H2S	yes	390 604 €	390 604 €			197 130 €			55 000 €		45 400 €	93 074 €	
OPTiMG	yes	520 886 €	520 886 €				250 931 €	69 955 €			100 000 €	100 000 €	
SmartAPV-Fruit	yes	560 000 €	560 000 €			120 000 €	300 000 €				100 000 €	40 000 €	
MiDiNA	yes	549 787 €	549 787 €			199 987 €			199 800 €	50 000 €	100 000 €		
BIOTHEREP	yes	692 798 €	692 798 €			139 982 €	209 816 €	70 000 €		50 000 €	120 000 €	103 000 €	
Vil2Bio	yes	678 373 €	678 373 €			199 340 €	249 438 €			50 000 €	100 000 €		79 595 €
REPTES	yes	688 650 €	688 650 €		120 000 €			200 000 €	135 000 €		100 000 €		133 650 €
RCLIB	yes	600 000 €	600 000 €					200 000 €	250 000 €	50 000 €	100 000 €		
SHE	yes	543 566 €	543 566 €	236 945 €		149 944 €						85 000 €	71 677 €