

SCOUTING DEI BANDI
INTERNAZIONALI, NAZIONALI
E REGIONALI PER
OPPORTUNITÀ DI
FINANZIAMENTO DI
PROGETTI INTEGRATI SULLE
MICROALGHE

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AGENDA

1. Introduction to Nextchem
2. Algae value chain
3. Opportunity in EU
4. Opportunity in Italy
5. Further actions



INTRODUCTION TO NEXTCHEM (1/2)

NextChem, former Processi Innovativi, is part of the Maire Tecnimont Group.

High expertise in the chemical, petrochemical, oleo chemical, oil & gas, environmental and energy industry processes, providing the following services to our clients:

- ✓ Feasibility studies;
- ✓ Basic Engineering Packages;
- ✓ Front End Engineering Design;
- ✓ EP projects;
- ✓ EPC projects (directly or through KT).

R&D is also one of main issue for NC, active in different areas:

- ✓ **Hydrogen** and **syngas** production
- ✓ **Environmental** engineering (waste pyrolysis and gasification)
- ✓ High temperature technologies (process furnaces, chemical reactors, incinerators)
- ✓ Second generation **Biofuels**
- ✓ **Green chemicals**, especially for what concerns oleo chemicals and glycerol
- ✓ **CO₂ removal**
- ✓ **Solar** energy application especially for what concern CSP and other technologies
- ✓ **Water** desalination.

INTRODUCTION TO NEXTCHEM (2/2)

Ongoing EU Financed Projects: NextChem as Coordinator

MEWLIFE

MicroalgaE biomass from phototrophic-heterotrophic cultivation using olive oil Wastewaters



LIFE PROGRAMME 2017

6 PARTNERS

Project value: 1,8 M€

DEMETO

Modular, scalable and high-performance DE-polymerization by MicrowavE TechnolOgy



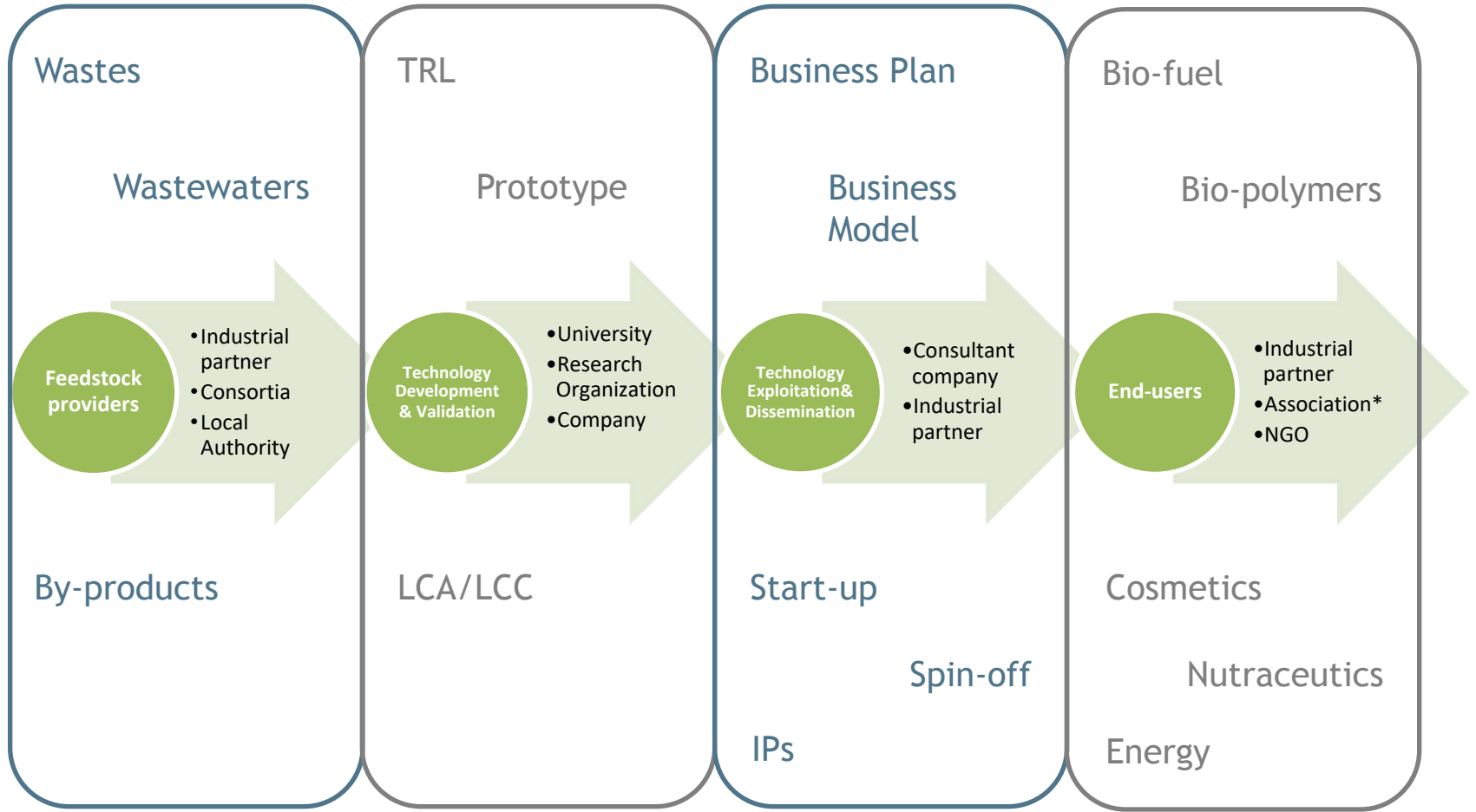
H2020 - SPIRE

14 PARTNERS

Project value: 9,9 M€

ALGAE VALUE CHAIN

Potential partners / raw materials / products



* Representing the interests of a specific industry or of consumers' group.



OVERVIEW OF EU AND NATIONAL OPPORTUNITIES



- H2020
- LIFE 2014-2020



- POR FESR 2014-2020
- Bando CARIPLO 2019



OPPORTUNITIES IN EU - H2020

TYPE OF ACTIONS & FUNDING RATE

WHO?

- Consortia of partners from different countries, industry and academia.
- Min. 3 legal entities established in 3 Member States or Associated Countries.

WHAT?

- Research and Innovation Actions (RIA):** Funding available for collaborative research projects tackling clearly defined challenges which can lead to the development of new knowledge or new technology.
- Innovation Actions (IA):** Funding available for closer-to-the-market activities including prototyping, testing, demonstrating, piloting, scaling-up etc. for new or improved products, processes or services.

FUNDING RATES

- Research and Innovation Actions (RIA):**
 - 100% direct costs + 25% indirect costs.
- Innovation Actions (IA):**
 - For non-profit organisations: 100% direct costs + 25% indirect costs.
 - For profit making entities: 70% direct costs + 25% indirect costs.

TYPICAL DURATION / EC CONTRIBUTION

- Research and Innovation Actions (RIA):** 36-48 months / €2 - 5 Million.
- Innovation Actions (IA):** 30-36 months / €2 - 5 Million.

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2020/main/h2020-wp1820-energy_en.pdf



OPPORTUNITIES IN EU - H2020

2019 CALL (1/2)

Work Programme: H2020 2018-2020 - Secure, Clean and Efficient Energy

Call: Building a low-carbon, climate resilient future: secure, clean and efficient energy

Topic: LC-SC3-RES-23-2019: Development of next generation biofuel and alternative renewable fuel technologies for aviation and shipping

Type of Action: Research and Innovation Action (RIA)

Planned Opening date: 7 May 2019

Deadline model: Single-stage

Deadline date: 27 August 2019 17:00 Brussels time

Specific Challenge: Decarbonising the aviation and shipping transport sectors, which are expanding fast and increasing the overall fossil fuel consumption, relies on biofuel and renewable fuels. The specific challenge is to increase the competitiveness of next generation biofuel and renewable fuel technologies in aviation and shipping, compared to fossil fuel alternatives.

Scope: Proposals will develop next generation non-food/feed drop-in biofuel and alternative renewable fuel technologies for aviation and shipping transport, which improve substantially beyond the state-of-the-art the performance regarding conversion efficiency, cost and feedstock supply by addressing:

- liquid jet-like biofuels and alternative renewable fuels from biogenic residues and wastes through chemical, biochemical and thermochemical pathways, or a combination of them;
- bunker fuel-like biofuels for shipping uses.

Expected impact: The supported projects are expected to reduce costs and improve performance of renewable fuels for aviation and shipping regarding the efficiency, the environment and society. The proposed solution is expected to contribute to achieving European leadership in this area.

Project Budget: 3-5 Million €

TRL: From 3 up to 5



OPPORTUNITIES IN EU - H2020

2019 CALL (2/2)

Work Programme: H2020 2018-2020 - Secure, Clean and Efficient Energy

Call: Building a low-carbon, climate resilient future: secure, clean and efficient energy

Topic: LC-SC3-RES-16-2019: Development of solutions based on renewable sources that provide flexibility to the energy system

Type of Action: Research and Innovation Action (RIA)

Planned Opening date: 7 May 2019

Deadline model: Single-stage

Deadline date: 27 August 2019 17:00 Brussels time

Specific Challenge: Supporting the balancing of the power grid and increasing the flexibility of the energy system is possible through dispatchable renewable energy sources, such as for example bioenergy and hydropower. The specific challenge is to increase the potential and performance of dispatchable technologies to provide flexibility services to the energy system by improving their technological characteristics.

Scope: Proposals will address one of the following sub-topics:

- Bioenergy carriers: Development of intermediate bioenergy carriers for energy and transport from biogenic residues and wastes and energy crops from marginal lands not applicable to food or feed production through feedstock flexible technologies at a conversion cost reduced by at least 25% from the state-of-the-art, excluding the feedstock cost, and with increased energy density, storage and trade characteristics, where relevant, and improved GHG performance. The state-of the art for conversion costs per technology will be clearly presented in the proposal with cost figures and versatility of use where appropriate.

Expected impact: The increased flexibility of the energy system will allow the penetration of a higher share of variable output renewables in the energy mix without affecting system stability.

Project Budget: 3-5 Million €

TRL: From 3-4 up to 4-5



OPPORTUNITIES IN EU - H2020

2020 CALL

Work Programme: H2020 2018-2020 - Secure, Clean and Efficient Energy

Call: Building a low-carbon, climate resilient future: secure, clean and efficient energy

Topic: LC-SC3-RES-27-2020: Demonstration of advanced biofuels production from aquatic biomass

Type of Action: Innovation Action (IA)

Planned Opening date: To be defined

Deadline model: To be defined

Deadline date: To be defined

Call status: Forthcoming



OPPORTUNITIES IN EU H2020 - BBI JU

CALL MANAGEMENT RULES

- ❑ The BBI JU operates under the Horizon 2020 Rules for Participation.
- ❑ Derogation: Research & Innovation Actions (RIAs) and Coordination & Support Actions (CSAs), only the following are eligible for funding: SMEs; secondary and higher education establishments; non-profit legal entities, including those carrying out research or technological development as one of their main objectives; the JRC; and international European interest organisations.

WHAT?

- ❑ **Innovation Actions (IA):** Innovation Actions should address the whole value chain from feedstock sourcing to the market applications. A '**demonstration**' action moreover shall include the establishment of a demo-scale production facility in Europe, being it a new installation, substantial modification of an existing facility, or use of existing demo facilities. Proposals should clearly state the starting and target TRLs. For Demonstration projects, the TRL at the end of the project should be in the range of 6 to 7 (specified per topic). This requires that access to European biomass is ensured. It also means that they need to include an exploitation plan, sustainability assessment and to address consumer engagement. Related costs at the level of the action are eligible for Horizon 2020 funding only within the limits of the applicable Horizon 2020 rules for innovation actions.

<https://www.bbi-europe.eu/participate/call-proposals-2019>



OPPORTUNITIES IN EU - BBIJU - 2019 CALL

Work Programme: H2020-BBI-JTI-2019

Strategic orientation 1: FOSTER SUPPLY OF SUSTAINABLE BIOMASS FEEDSTOCK TO FEED BOTH EXISTING AND NEW VALUE CHAINS - Improve the utilisation of existing feedstock sources

Topic: BBI2019.SO1.D2 - Produce components for various materials, including for food and feed, from microalgae

Type of Action: Innovation actions - demonstration actions

Planned Opening date: 4 April 2019

Deadline model: Single-stage

Deadline date: 4 September 2019 17:00 Brussels time

Indicative proposal evaluation results: December 2019

Specific Challenge: The specific challenge is to scale up and lower the costs of microalgae cultivation combined with downstream processing towards commercial valorisation of marketable products.

Scope: Demonstrate the efficient and sustainable cultivation, recovery and processing of microalgae and downstream production of high-value chemicals and/or materials including food and feed ingredients. The scope of this topic excludes energy carriers (such as liquid fuels or hydrogen) as the main products. Proposals should aim for large-scale continuous cultivation and recovery of microalgae, as well as separation and purification of the targeted products. Proposals should also aim at reducing inputs for microalgae cultivation such as energy, water, nutrients and CO₂ (or other carbon sources in case heterotrophic microalgae are envisaged). Proposals should valorise as many as possible of the valuable compounds contained in the microalgae through a cascading approach. Proposals should demonstrate that the quality of the obtained products meets the requirements of specific market applications.

Expected impacts: increase the overall resource efficiency; reduce energy consumption and greenhouse gas emissions linked to microalgae cultivation, harvesting and downstream processing compared to the state of the art; achieve at least a comparable, or lower, production cost (including extraction and purification cost) as compared with the state-of-the-art production route of the targeted product; increase income and business opportunities for stakeholders and actors (including primary producers) in the bio-based sectors, in particular in the microalgae cultivation and conversion value chains; create new job opportunities in the bio-based sector, particularly the coastal and/or inland areas.

Project Budget: 7 Million € max

TRL: up to 6-7



OPPORTUNITIES IN EU - LIFE 2018-2020

TYPE OF ACTIONS & FUNDING RATE

WHO?

- Public body, private commercial organization, private non-commercial organization registered in the European Union.

WHAT?

- The Commission publishes calls for proposals based on the LIFE multiannual work programmes.

FUNDING RATES

- Traditional projects under the sub-programme *Environment* receive a *co-funding of up to 55%* of the total eligible costs.

<https://ec.europa.eu/easme/en/life>



OPPORTUNITIES IN EU - LIFE 2018-2020

2019 CALL

Work Programme: LIFE 2019

Sub-programme: Environment

Priority area: Environment and resource efficiency traditional projects

Planned Opening date: 4 April 2019

Deadline model: Two-stage

Deadline date for submitting a concept note (10 pages): 17 June 2019 16:00 CET

Deadline date for submitting the full proposal: 11 February 2020 16:00 CET

Timeline for grant signature: June 2020

LIFE co-finances projects in the environmental sector in particular in the areas of air, chemicals, green and circular economy, industrial accidents, marine and coastal management, noise, soil, waste, water, and the urban environment. The programme provides action grants for pilot and demonstration projects to develop, test and demonstrate policy or management approaches. It also covers the development and demonstration of innovative technologies, implementation, monitoring and evaluation of EU environmental policy and law, as well as best practices and solutions. The European Commission is particularly looking for technologies and solutions that are ready to be implemented in close-to-market conditions, at industrial or commercial scale, during the project duration.

Thematic priorities for Resource Efficiency, including soil and forests, and green and circular economy regard among others the implementation of the circular economy concept targeting at least one of the priority sectors of the EU Action Plan for the Circular Economy (1) and ensuring the use of high quality secondary resources, scrap materials and/or wastes within a value chain or different value chains

Project duration: The increased flexibility of the energy system will allow the penetration of a higher share of variable output renewables in the energy mix without affecting system stability.

Project duration: 3-5 years depending from priority area

Optimal project Budget: 1-3 Million €



OPPORTUNITIES IN EU

2019-2020 CALL SUMMARY

EU FUNDING PROGRAMME	CALL OPENING	CALL REFERENCE	DEADLINE MODEL	DEADLINE FOR SUBMISSION	TOPIC	FUNDING RATE
H2020-BBIJU	4 April 2019	BBI2019.SO1.D2 Innovation action	1-stage	4 September 2019	High-value products from microalgae (no fuel)	100% no-profit 70% profit
LIFE	4 April 2019	Environment and resource efficiency traditional projects	2-Stage	17 June 2019 11 February 2020	Green&Circular economy	up to 55%
H2020	7 May 2019	LC-SC3-RES-16-2019 RIA LC-SC3-RES-23-2019 RIA	1-stage	27 August 2019	Bioenergy Biofuel for aviation and shipping	100% for all
H2020	2020	LC-SC3-RES-27-2020 IA	tbd	tbd	Biofuel	100% no-profit 70% profit



OPPORTUNITIES IN ITALY

FONDAZIONE CARIPLO 2019

WHO?

- No-profit organizations.
- Leading host institution located within the geographical area of interest of Cariplo Foundation (Lombardia plus Novara and Verbania districts). This requirement does not pertain potential partners.

WHAT?

- Call: *Circular Economy for a sustainable future.*
- Research area: *Foster the use of organic and inorganic waste as well as their transformation in products characterized by high added value, including energy production.*
- Deadline full proposal: *April 16th , 2019.*

FUNDING RATES

- 100% of eligible costs.
- Project budget: 100 k€ min - 300 k€ max.

<http://www.fondazionecariplo.it/it/bandi/index.html>

OPPORTUNITIES IN ITALY

POR FESR 2014-2020



WHO?

- ❑ Small-medium enterprises (SMEs) / Large enterprises.

WHAT?

- ❑ Asse prioritario 1: Ricerca, Sviluppo Tecnologico e Innovazione
- ❑ Azione 1.1.1: *Sostegno a progetti di ricerca delle imprese che prevedano l'impiego di ricercatori (dottori di ricerca e laureati magistrali con profili tecnico-scientifici) presso le imprese stesse*
- ❑ Azione 1.1.4: *Sostegno alle attività collaborative di R&S per lo sviluppo di nuove tecnologie sostenibili, di nuovi prodotti e servizi*
- ❑ Azione 1.4.1: *Sostegno alla creazione e al consolidamento di start-up innovative ad alta intensità di applicazione di conoscenza e alle iniziative di spin-off della ricerca*

OPPORTUNITIES IN ITALY



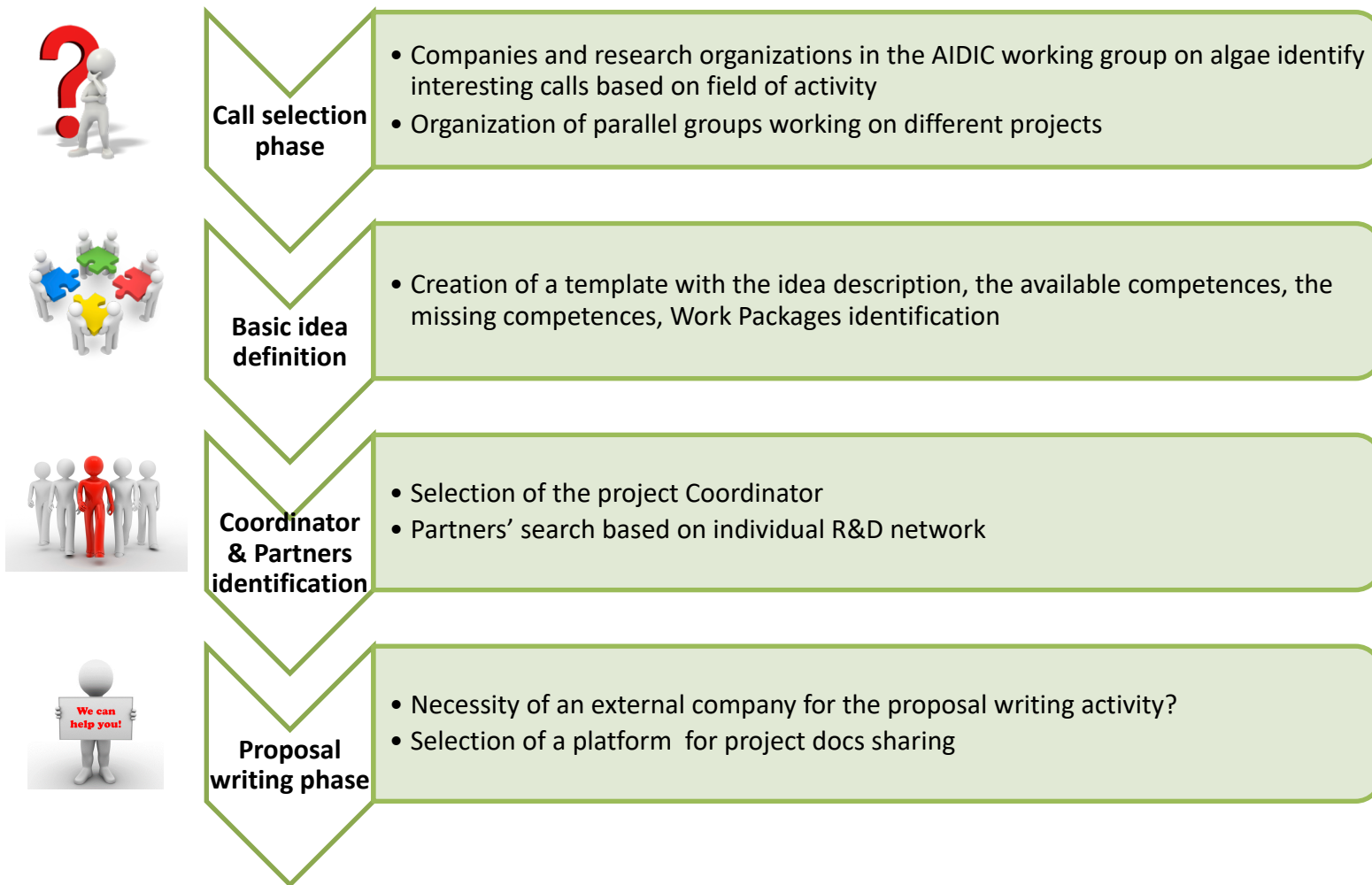
POR FESR 2014-2020 - OPEN AND FURTHCOMING CALL

REGION	CALL REFERENCE	CALL OPENING AND DEADLINE	TOPIC	FUNDING RATE
Emilia-Romagna	Azione 1.1.1	1° FINESTRA 25/03/2019 - 30/04/2019	<ul style="list-style-type: none"> Interventi di Ricerca Industriale e Sviluppo Sperimentale Interventi di investimento nella tutela dell'ambiente (produzione di energia da fonti rinnovabili, interventi per il riciclo e il riutilizzo dei rifiuti) 	Attività Ricerca e Sviluppo: <ul style="list-style-type: none"> Ricerca industriale: fino al 50% dei costi ammissibili Sviluppo sperimentale: fino al 25% dei costi ammissibili Contributo: max 1,5 M€ per progetto
	Azione 1.1.4	2° FINESTRA 01/10/2019 - 06-11-2019		
Veneto	Azione 1.1.1	III Bando: I semestre 2019	tbd	tbd
	Azione 1.1.4	II Bando: I semestre 2019 (aggregazioni) II Bando: II semestre 2019 (distretti e reti)		
	Azione 1.4.1	III Bando: II semestre 2019		

<https://fesr.regione.emilia-romagna.it/opportunita/2019/promozione-investimenti/presentazione-domanda/bando-e-modulistica/view>

<http://www.regione.veneto.it/web/programmi-comunitari/fesr-2014-2020>

FURTHER ACTIONS





FURTHER ACTIONS

CALL SELECTION

EU FUNDING PROGRAMME	CALL OPENING	CALL REFERENCE	DEADLINE MODEL	DEADLINE FOR SUBMISSION	TOPIC	FUNDING RATE
H2020-BBIJU	4 April 2019	BBI2019.SO1.D2 Innovation action	1-stage	4 September 2019	High-value products from microalgae (no fuel)	100% no-profit 70% profit
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H2020	2020	LC-SC3-RES-27-2020 IA	tbd	tbd	Biofuel	100% no-profit 70% profit

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