Innovation Fund 2024 EV Batteries Call
Info Day

The event will start at 09:30 CET

Join us on Slido

#IF24Call

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The recording of this Info Day as well as the presentation support materials, are made public to provide potential applicants with general guidance in order to help them complete their proposals.

If there is any conflict between:

- the information provided during the Info Day session itself, its recording, the Financial Information File tutorial recording, and the presentation support materials on the one hand, and
- the provisions set out in the official Innovation Fund call text as well as the related FAQ posted on the Funding and Tender portal on the other,

- ***the latter two documents take precedence over the materials from the Info Day and act as the text of reference for the Innovation Fund Battery Call 2024***

Welcome

Maria ALFAYATE, *Deputy Head of Unit*
CINEA - Innovation Fund Unit

European Commission

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Agenda – 18 December 2024

- 09:30 Introduction & IF 24 Battery call features
- 09:55 Award criteria for IF24 Battery call & lessons learned (1)
- 10:45 Q&A
- 11:15 Award criteria for IF24 Battery call & lessons learned (2)
- 12:20 Q&A
- 12:45 Award criteria for IF24 Battery call & lessons learned (3)
- 13:15 Q&A
- 13:25 Closing

Recordings will be available on CINEA website

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How to use Slido

- During the event you can submit comments and questions through Slido.
- To join:
  - Take out your smartphone, tablet or computer and open your browser.
  - Go to **Slido.com** and enter the event code **#IF24Call**.
  - You can now post comments and questions.

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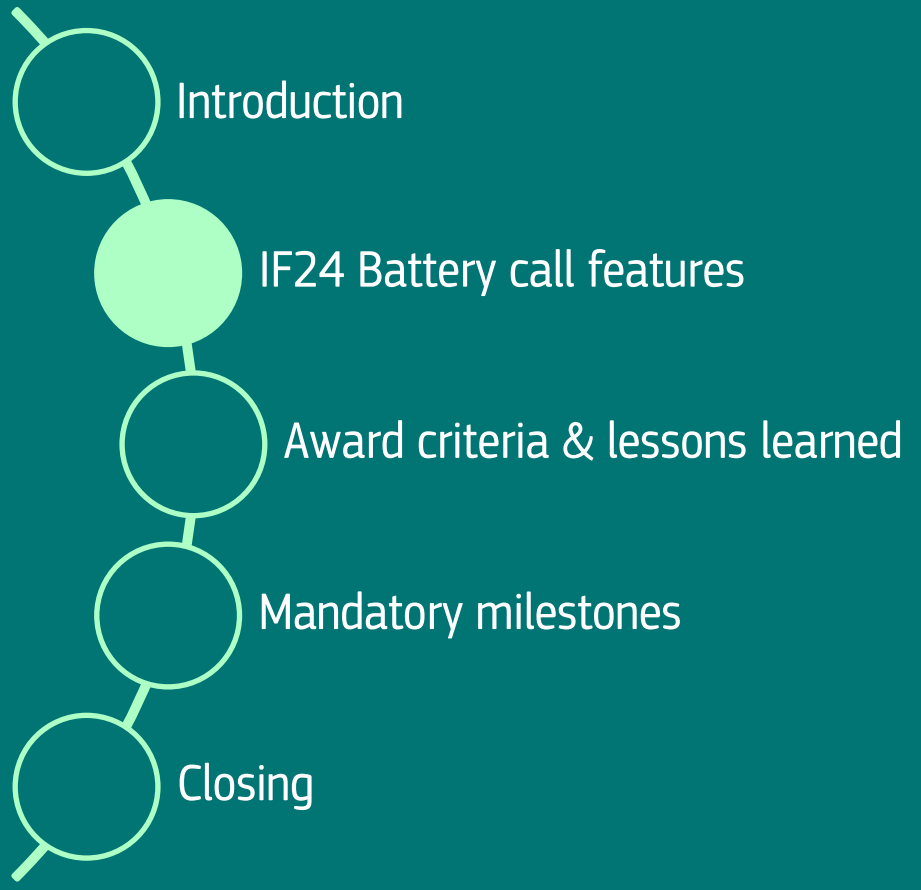
IF24 Battery call features

Johanna SCHIELE, ***Policy Officer***
DG CLIMA - Low Carbon Solutions (II):
Research & Low Carbon Technology Deployment



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Calls launched on 3 December

1

Regular call for proposals:

- Call size: **€2,4 billion**
- Includes dedicated topic & budget envelope for manufacturing of Clean-tech components
- Any upstream battery components manufacturing (precursor materials, CAM, AAM, anodes, cathodes, electrolyte…), cell manufacturing & pack assembly can be funded
- 5 classic Innovation Fund evaluation criteria

2

New, dedicated EV battery cell manufacturing call:

- Call size: **€1 billion**
- Only project including EV cell manufacturing can be funded
- Upstream component manufacturing can be included as part of the project
- New, additional award criteria focusing on manufacturing carbon footprint and resilience of supply chains

2nd EU H2 Bank auction:

- Auction budget size: **€1.2 billion.**
- Not relevant for batteries.

3

Additional **€200 million** Invest EU top-up (= loan guarantee from the Innovation Fund to Invest EU) planned to enable further lending/venture debt to battery value chain projects

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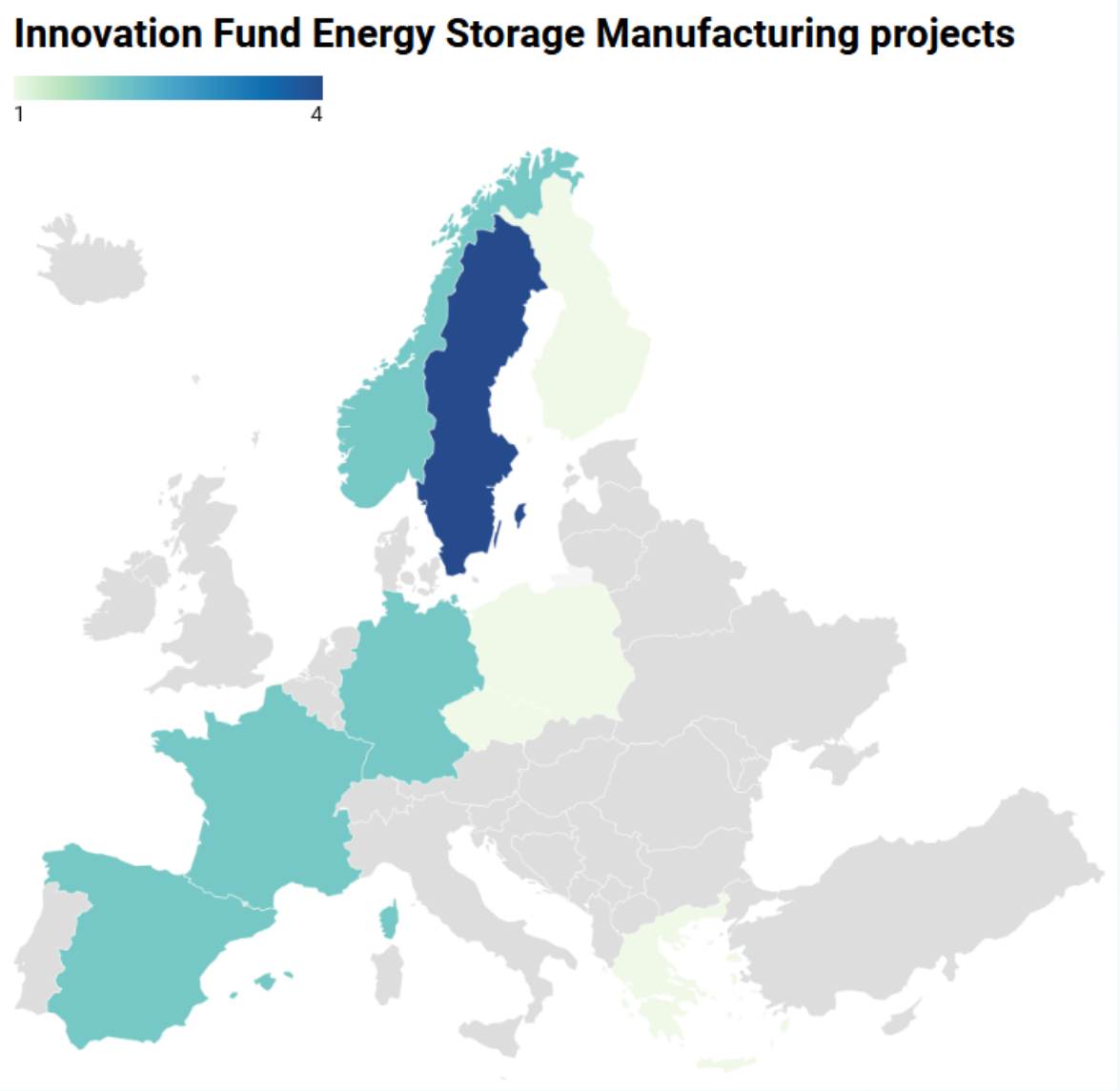
Portfolio of energy storage projects

Already has an impressive portfolio of energy storage projects

- 9 Energy Storage manufacturing projects part of the IF portfolio
- 7 selected in the IF23 call and preparing grant agreements
- Projects in Czechia, Finland, France, German, Greece, Norway, Poland, Spain and Sweden



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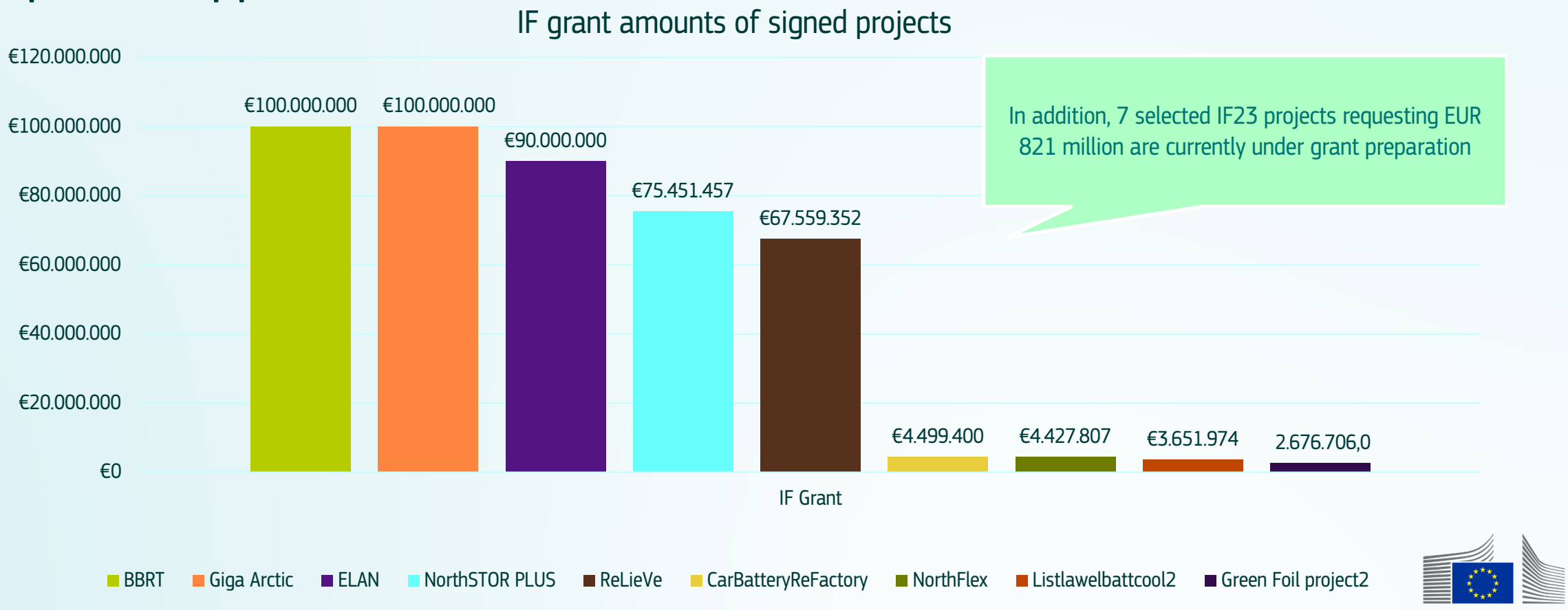
Energy storage manufacturing projects

16 energy storage manufacturing projects requesting EUR 1.27bn of public support in total



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Political context

- The Commission will support manufacturing of the “most sustainable [EV] batteries” through “a dedicated instrument under the Innovation Fund […]” with “up to € 3 billion for the next three years”*
- **Difficult situation** of the battery manufacturing sector in Europe and **risk of dependency** on foreign imports
- Implementation of the **Battery Regulation**
- Stakeholders largely in favour of “regular” grants with more flexible payment schedule & possibility of combined support

**EVP Šefčovič announcement relating the EU-UK Trade and Cooperation Agreement), Dec 2023*

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Scope and budget

- **EV batteries cell manufacturing (cells <u>can</u> be used in EVs)**
  - V **Possibility of integrated projects** (cell manufacturing incl. upstream components manufacturing or recycling but not exceeding 100% of the project's cell production capacity)
  - X Pure assembly projects (e.g., battery pack or module assembly), as well as EV manufacturing & other battery applications excluded
  - X Remaining value chain will remain eligible in the IF24 Call
- **Budget: €1 billion for the dedicated call for proposals in 2024 (IF24 Battery)**

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EV batteries definition

The Battery Regulation [Article 3(1)14] defines EV batteries as follows:

"'electric vehicle battery' means a battery that is specifically designed to provide electric power for traction in hybrid or electric vehicles of category L as provided for in Regulation (EU) No 168/2013, that weighs more than 25 kg, or a battery that is specifically designed to provide electric power for traction in hybrid or electric vehicles of categories M, N or O as provided for in Regulation (EU) 2018/858"

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Project Maturity and disbursement schedule

Eligibility conditions:

- Only projects that have not yet reached Financial Close at the time of grant application can be funded
  - No costs can be reimbursed for activities that took place before the project starting date/proposal submission
- Modular scale-up possible; project scope has to be defined accordingly

Project Maturity requirements:

- Demonstrated shorter time to Financial Close and Entry into Operation rewarded (provided that all other aspects of the project maturity criterion are addressed).

Payment schedule:

- Projects can receive up to 40% of payments before financial close and up to 90% before EiO if well justified / needed
- 60% of payments have to be linked to actual GHG emissions reduced

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Demarcation between IF24 Call and IF24 Battery

Battery Call (IF24 Battery)

V Battery cell manufacturing
V Battery cell manufacturing including production of upstream components(*)
V Battery cell manufacturing including recycling activities(*)

X Batteries for stationary storage
X Batteries applications (e.g., EV production)
X Assembly projects (e.g., battery packs or modules)
X (standalone) Batteries components manufacturing
X (standalone) Batteries recycling activities
X Mining activities

Net Zero Technologies Call (IF24 Call)

X Battery cell manufacturing
X Battery cell manufacturing including production of upstream components(*)
X Battery cell manufacturing including recycling activities (*)

V Batteries for stationary storage
V Batteries applications (e.g., EV production)
V Assembly projects (e.g., battery packs or modules)
V (standalone) Batteries components manufacturing
V (standalone) Batteries Recycling activities
X Mining activities

(*) not exceeding 100% of cell production output

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Award criteria

1) Degree of Innovation

Beyond state-of-the art (including scaling up of innovative technologies)

2) GHG emissions avoidance

Absolute emissions avoidance

Relative emissions avoidance (with min thresholds)

Quality of calculation

4) Project maturity

Technical maturity

Financial maturity

Operational maturity

5) Replicability

Efficiency gains and multiple environmental impacts

Further deployment potential and technology transfer

Europe's industrial leadership and competitiveness

7) Cost efficiency

Cost efficiency ratio (different formula for Pilot projects)

Quality of the relevant cost calculation and minimum requirements

New

Specific for batteries call

3) Manufacturing carbon footprint reduction

New

6) Security of supply and countering dependency

Scoring table

		Min. pass score	Max. score	Weight	
1	**DoI**	6	10	1	9%
2	**GHG emission avoidance potential**				
	Absolute	n/a	2	1	11%
	Relative	n/a	5	1	
	Quality	3	5	1	
	Total	n/a	12	n/a	
3	**Manufacturing carbon footprint**	n/a	15	1	14%
4	**Project maturity**				28%
	Technical	3	5	2	
	Financial	3	5	2	
	Operational	3	5	2	
	Total	n/a	30	n/a	

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Scoring table

	Min. pass score	Max. score	Weight	
5 **Replicability**				19%
Eff. gains & multiple env. Benefits	n/a	5	1	
Further deployment	n/a	5	1	
EU industrial leadership & comp.	n/a	5	2	
Total	n/a	20		
6 **Security of supply & countering overreliance**	n/a	15	1	14%
7 **Cost efficiency (CE)**				6%
CE Ratio	n/a	3	1	
Quality	1.5	3	1	
Total	n/a	6	1	
TOTAL	n/a	108	n/a	

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Degree of Innovation: scale-up challenges

- Scaling-up of existing technologies explicitly encouraged:
- Lower scoring weight on DoI than in NZT call
- Cell manufacturing does not need to be “first-of-a-kind”
- Range of options to show innovation beyond new battery chemistries, e.g.:
  - Product performance
  - Manufacturing process
  - Reduced use of raw materials / increased circularity

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Additional award criterion

Looking at the carbon footprint of the manufacturing process

- In the regular IF24 Call, the GHG methodology for manufacturing projects only captures the emission avoidance from the *use phase* of the manufactured component(s)
- The new batteries call will also evaluate the *manufacturing carbon footprint*

Award Criterion 2:

Absolute and relative GHG emission avoidance

Project scenario: EV use case and manufacturing emissions includes:

- Pack production
- EV use phase
- EoL treatment

Manufacturing carbon footprint, includes:

- Raw materials,
- Component production,
- Cell production

←→

Reference scenario includes:

- Fuel production
- Internal combustion engine (ICE) use phase

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Additional award criterion

Award Criterion 3: Manufacturing carbon footprint reduction

- **Manufacturing carbon footprint** includes:
- Raw materials (BoM)
- Component manufacturing
- Cell manufacturing

←→

Reference scenario includes:

- Raw materials
- Component production
- Cell production

Resilience requirements

(both in NZT Call and in Battery Call) under "Replicability criterion": the dedicated sub-criterion: **"Contribution to EU industrial leadership and competitiveness"**

Battery Call also includes a new award criterion: **"Security of supply and countering dependency"**, aiming to reduce sourcing of anode and cathode active material from China.

Requirement on patents: New patents originating from the project*, during the project's duration must be registered in an EU Member State or EEA country

** i.e. results within the meaning of Article 16 of the Grant Agreement*

Reporting requirements at Financial Close, at Entry into Operation, in annual reports and reporting at the end of the monitoring period. **Penalties** apply if requirements are not fulfilled.

Award criteria
Best practices

European Commission

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The award criteria and lessons learned

- Degree of innovation
- GHG emission avoidance
- Manufacturing carbon footprint
- Project maturity
- Replicability
- Security of supply and countering dependency
- Mandatory milestones and deliverables

Degree of Innovation

Uwe LÜTZEN, *Head of Sector*
CINEA - Innovation Fund Unit

European Commission

Degree of Innovation

- **Application form, Part B:**
  - Section 1: Degree of innovation
    - Innovation **in relation to the state of the art**
    - Innovation **beyond the state of the art**
- Feasibility study (mandatory annex)
- Any due diligence report (if any)

A template for the Feasibility study is available in the Submission System (under "Part B templates").

Feasibility study is mandatory – if template not used, provide at least the same level detail and information to ensure a proper assessment

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Degree of Innovation

- Innovation Fund aims at supporting projects beyond incremental innovation on a scale from intermediate to breakthrough, including scaling-up, considering the European level as reference point

Very low / incremental innovation → Intermediate or strong → Very strong or breakthrough

Incremental innovation: minor changes or improvements to existing products, processes or business models; implies limited new knowledge / technology; such projects **will not be retained.**

Intermediate or strong: new or considerably changed technologies or processes or business models; novel combinations of mature technologies; scale-up of innovative technologies

Very strong or breakthrough: completely new technologies or processes or business models; innovations leading to significant changes that transforms entire markets or industries or creates new ones

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Degree of Innovation: types of innovative actions

Innovation Fund aims at supporting technologies, business models and processes:

- **First-of-a-kind commercialisation** or **large-scale commercial size demonstration** of technologies, processes or business models previously proven at pilot or smaller scale, or large-scale demonstration plants
- A **second or more of a kind commercialisation**, under certain conditions. In particular, where the relevant costs remain a significant share of total costs that prohibit commercialisation without further public support. Innovation beyond incremental must still be demonstrated
- **Innovative smaller demonstrations or pilot plants**, especially if this is the right scale at which technology needs to be proven before moving to a larger scale demonstration
- Projects aimed at demonstrated **scaling up** of innovative techniques, processes and technologies for their broad roll-out, which contribute significantly to the decarbonisation of the IF sectors

Degree of Innovation

Innovation in battery cell manufacturing can be demonstrated in:

Final product performance, e.g., in terms of:

- Energy density
- Expected storage performance over lifetime
- Fast charging
- Long cycle life
- Reduced use of raw materials
- Circularity
- Uniqueness of technology

Battery manufacturing process, e.g., in terms of:

- Innovative and more efficient process techniques
- Application of innovative digital technologies
- Integration of recycling of materials

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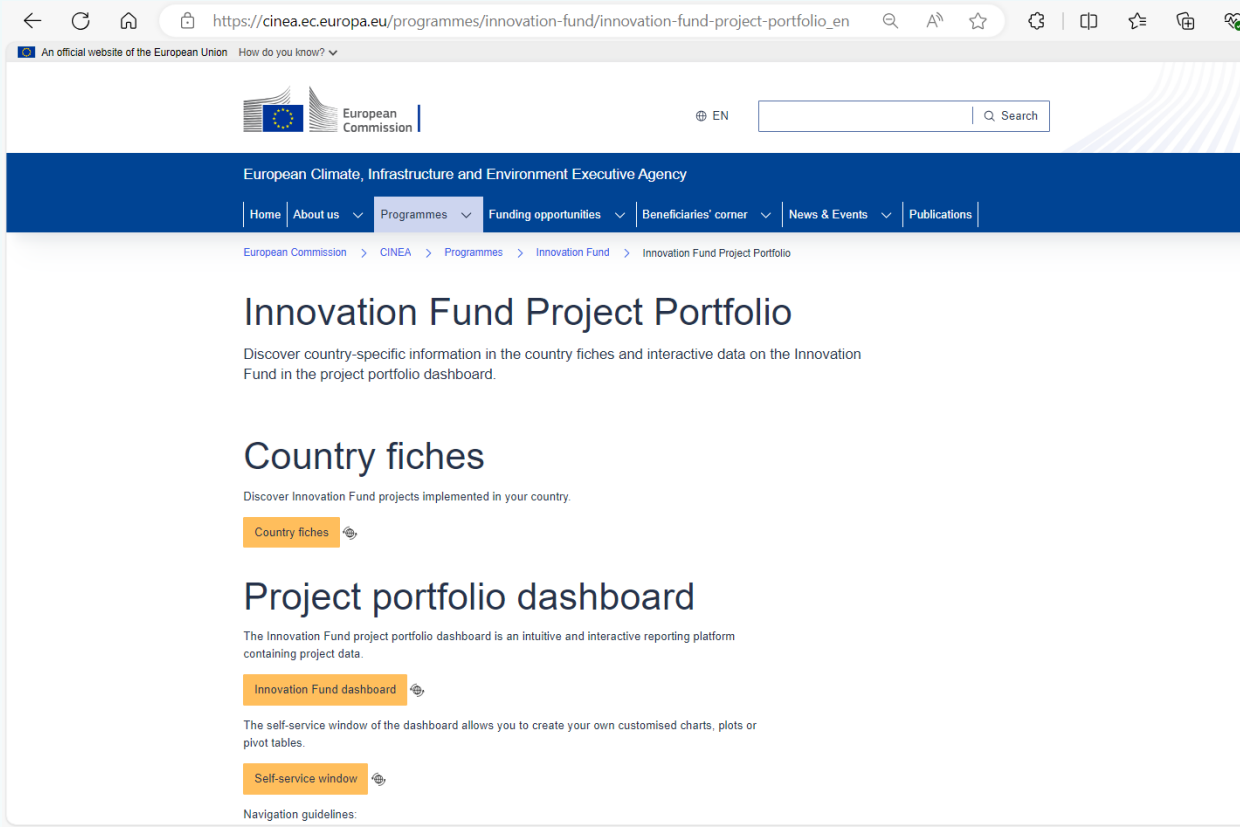
References to Innovation Fund projects

- Proposals focusing on innovations similar to the ones of ongoing Innovation Fund projects, must clearly justify where the new innovative elements lie
- Such projects may receive a lower score
- Consult the list of funded Innovation Fund projects (Innovation Fund Project Portfolio Dashboard)



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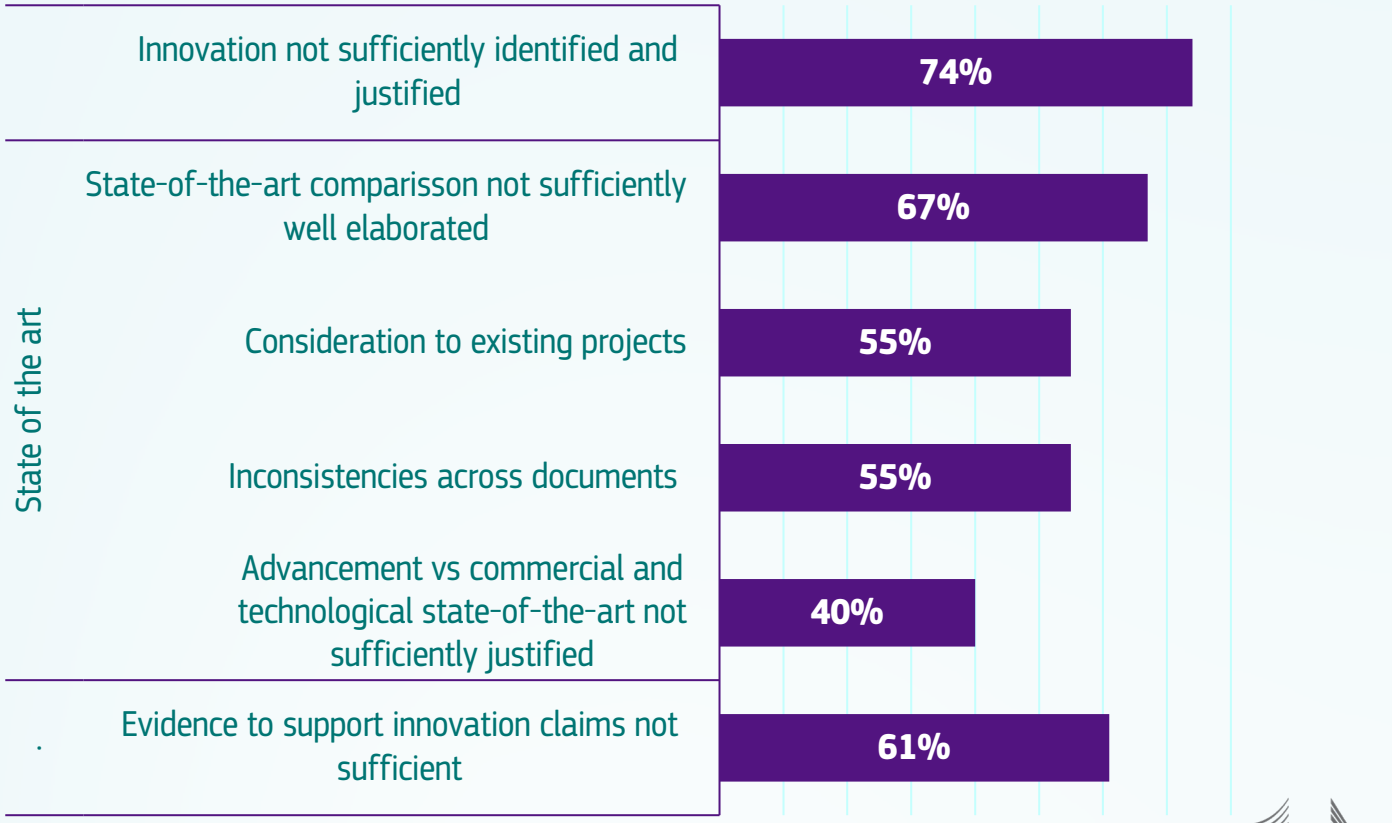
Degree of Innovation: Lessons Learned IF23 Call

Key reasons for failure:

- Innovation not sufficiently identified and justified with credible evidence
- State of the art not sufficiently well elaborated
- Inconsistencies across documents

Out of 12 proposals failing under Degree of Innovation, the main reasons are:



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Best practice - Degree of Innovation

- Check thoroughly **Annex 1** (*Innovation in relation to the state of the art*) in call text
- Be clear, exhaustive and transparent
- Provide convincing and substantial **evidence for your claims**
- Make clear references to the feasibility study, where relevant

Best practice - Degree of Innovation (cont.)

1 Describe

- Describe relevant state of the art
  - Include both technological & commercial aspects
- Provide quantitative inputs and evidence for:
  - Costs
  - Technical characteristics & performance
  - TRL/SRL

2 Identify

- How does your innovation go beyond state of the art?
  - Compare with previous & ongoing EU and IF projects
  - Provide geographical reference point
- Consider barriers: for scaling up & for technology integration

3 Provide evidence ->Feasibility study, GHG calc., other

- Compare key performance data vs state of the art
  - Relevant parameters
  - Consider also energy efficiency and circularity
- Provide patent data (when relevant)
- Consider how will the innovation be implemented or integrated?

GHG emission avoidance potential

Uwe LÜTZEN, *Head of Sector*
CINEA - Innovation Fund Unit
and
Johannes ECKSTEIN/Christoph NEEF, Fraunhofer ISI

European Commission

Greenhouse gases (GHG) methodology

Johannes ECKSTEIN
Fraunhofer ISI

European Commission

Manufacturing carbon footprint

Sofia RIANO, *Project Adviser*
CINEA - Innovation Fund Unit

Johannes Eckstein/Christoph Neef, Fraunhofer ISI

European Commission

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Manufacturing carbon footprint

A measure of the total amount of greenhouse gas (GHG) emissions associated with manufacturing processes

- Energy related emissions
- Emissions related to upstream components
- Raw material emissions

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Manufacturing carbon footprint

Why is it important?

- Policy priority to reward sustainable manufacturing processes
- Represents a significant portion of the overall carbon footprint of a process or product
- Helps manufacturers identify areas for improvement and reduce their environmental impact
- Helps identify opportunities for innovation
- It has an impact on business reputation and customer trust
- Helps manufacturers comply with emerging climate policies and regulations

Manufacturing carbon footprint

Methodology for GHG emission avoidance calculation for projects applying under the INNOVFUND-2024-BATT CALL

Absolute and relative GHG emission avoidance

+

Manufacturing carbon footprint reduction

- Standardised battery manufacturing **reference**
- **Project's** manufacturing emissions

Considering emissions from raw materials to battery cell production

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Manufacturing carbon footprint

Included in the methodology for GHG emission avoidance calculation

Mandatory project scope

EV battery cells production

Optional additional project scope

Upstream component production*

Battery or battery recycling material*

Outside project scope

Mining, processing and refining

Upstream components imported into the project

Battery module and pack production

Battery application production

Not included in the methodology for GHG emission avoidance calculation

Outside project scope

Upstream component production // battery or battery recycling material exceeding 100% of the project's battery cell production capacity

*Not exceeding 100% of the project's battery cell production capacity

Manufacturing carbon footprint

System boundaries (steps within project scope)

- Includes manufacturing steps of battery cells that will be used in electric vehicles
- The manufacturing steps are defined on the basis of inputs and outputs
- Besides the battery cell production, certain upstream steps can also be part of the project's GHG avoidance claims, **provided their outputs serve as input for the project's battery cell production**
- The battery cell production inputs can also be supplied by external suppliers (project's own upstream outputs < 100% battery cell production inputs)

Manufacturing carbon footprint

System boundaries (steps within project scope)

- **Battery cell production**
  - Includes electrode production and electrode and cell assembly.
  - Does not include any further processing battery cells to modules or battery packs.

Optional:

- Battery cathode active material (CAM) production
- Precursor battery cathode active material (pCAM) production
- Anode active material (AAM) production
- Separator production
- Electrolyte production

Manufacturing carbon footprint

System boundaries (steps outside the project scope) but within the manufacturing carbon footprint calculations

- Raw material extraction and refining
  - Bill of materials, raw materials and share of recycled raw materials is considered in the calculation
  - Production of Cu-current collector and Al-current collector

Manufacturing carbon footprint

Alternative battery systems

- Select a system boundary for cell production that is as comparable as possible to the one of the lithium-ion battery production process
- Include all processes and components necessary for a functional electrochemical unit

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Manufacturing carbon footprint

Customised emission factors for components

- If upstream components are not produced within the project boundary, default emission values are used unless evidence justifies a divergence
- Default emission factors are assumed for externally sourced upstream components
  - Projects can customize default emission factors if they provide evidence of a lower GHG footprint for imported components
- Customized emission factors must be based on predefined manufacturing steps and cover the full scope of inputs to outputs

Customised emission factors for imported energy

- Default emission factors for imported energy can be customized with a MoU or proof of renewable energy purchase (see call text)

Provide adequate evidence at application stage and during project implementation

EV Battery Cell Manufacturing – GHG Methodology for Manufacturing Carbon Footprint

Christoph NEEF
Fraunhofer ISI

European Commission

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Q&A session

Go to Slido.com

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Ask your question or vote for an existing one!

Or scan me

Recording will be available on CINEA website

Break

10 minutes

European Commission

Project Maturity:

Technical maturity
Financial maturity
Operational maturity

European Commission

Technical Maturity

Uwe LÜTZEN, *Head of Sector*
CINEA - Innovation Fund Unit

European Commission

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Technical Maturity

- **Application form, Part B, sections:**
  - Section 0: technical characteristics and scope / technology scope
  - 4.1 (technical maturity)
  - 4.4 (risk management)
- Feasibility study (mandatory annex)
- Any due diligence report (if any)

Technical Maturity: technical feasibility

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- Explain the degree of technology readiness of the proposed solution and the technical feasibility of delivering the expected output (e.g., in terms of volume of the products):
  - Has the technology already been proven in a pilot scale demonstration?
  - Are the characteristics of the proposed plant credible and in line with basic engineering principles?
  - Are the technical assumptions realistic and conform with the state of technology development?
  - Provide robust and credible assumptions used for operational characteristics of the plant and estimation of the expected outputs
  - Provide clear reference to relevant parts of the Feasibility study and other supporting documents

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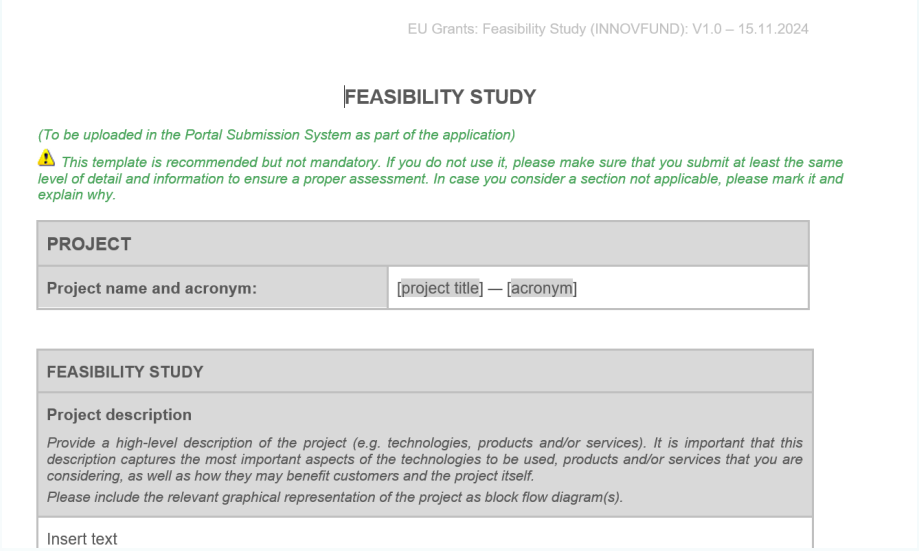
Feasibility study

New

- Template available in the Submission System (under "Part B templates")
- If the template is not used make sure that you submit at least the same level of detail and information to ensure a proper assessment.
- The feasibility study should include:
  - Project description
  - Background information (existing situation)
  - Location analysis and strategic approach
  - Objectives
  - Resources and feedstock availability
  - Technical assessment
  - Expected project output
  - Techno-economic analysis



EU Grants: Feasibility Study (INNOVFUND): V1.0 – 15.11.2024

FEASIBILITY STUDY

(To be uploaded in the Portal Submission System as part of the application)

This template is recommended but not mandatory. If you do not use it, please make sure that you submit at least the same level of detail and information to ensure a proper assessment. In case you consider a section not applicable, please mark it and explain why.

PROJECT	
Project name and acronym:	[project title] — [acronym]

FEASIBILITY STUDY
Project description *Provide a high-level description of the project (e.g. technologies, products and/or services). It is important that this description captures the most important aspects of the technologies to be used, products and/or services that you are considering, as well as how they may benefit customers and the project itself.* *Please include the relevant graphical representation of the project as block flow diagram(s).*
Insert text

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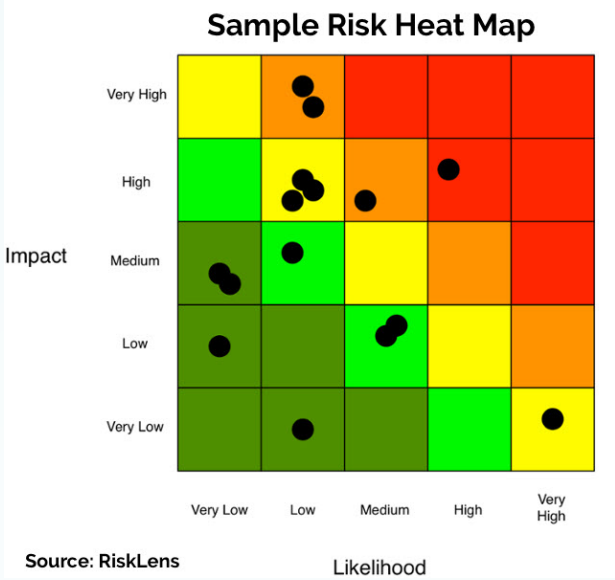
Risk analysis and management

New

Risks are included **only** in the Feasibility Study (mandatory annex) which must:

- Describe key risks that could impact the technical feasibility of the proposed technology/process
- Describe the impact if the risk materializes and the proposed risk mitigation measures and explain why they are suitable
- Summarize your analysis in a table (see template)
- Provide a risk heat map



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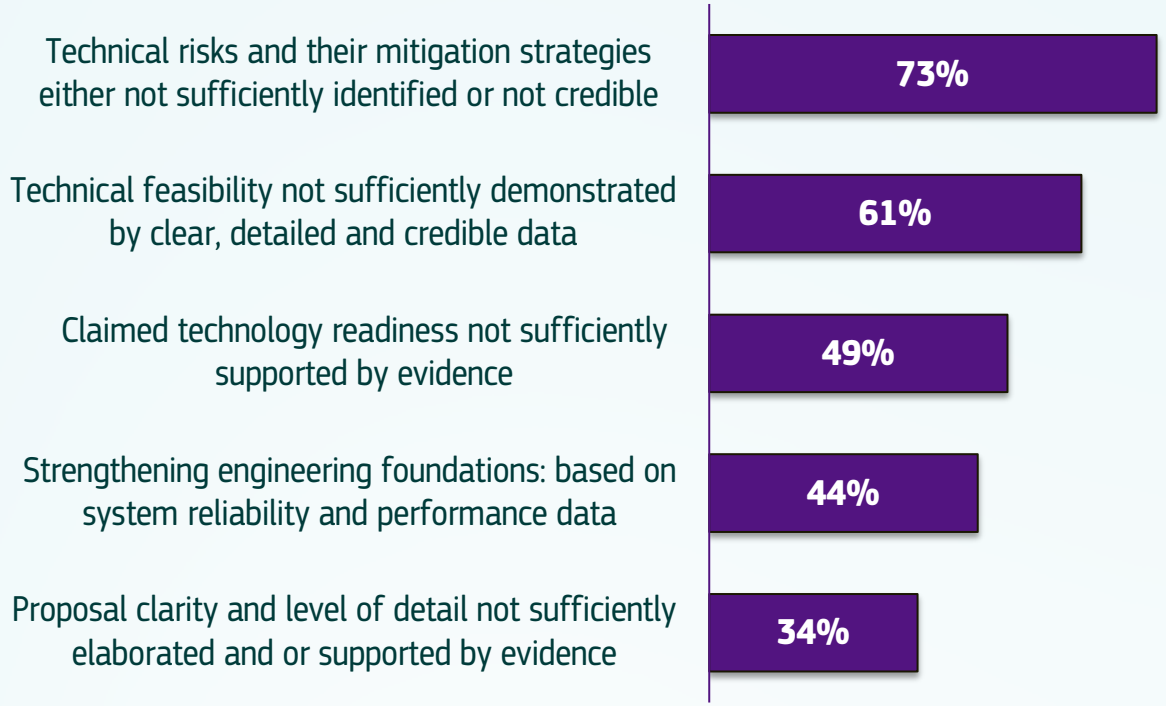
Technical Maturity: Lessons Learned IF23 Call

Key reasons for failure:

Technical feasibility claims not sufficiently supported by:

- Proper identification of risks and mitigation measures
- Credible data and evidence
- Detailed strategies to achieve targets

Out of 29 proposals failing technical maturity, the main reasons are:



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Best practice – Technical Maturity

1 Describe readiness level

Describe actual readiness level of your technology based on credible data:

- Be concise
- Be realistic
- Provide **key facts and figures**

2 Identify

- Relevant data – from your previous stages: pilots / projects
- Include all relevant critical **risks** and **mitigation** strategies

3 Provide evidence ->Feasibility study, GHG calc., other

- Due diligence report
- Procurement quotes
- MoU
- Signed letters of intents/ support

Ensure **full consistency** between documents:
Feasibility study, business plan, GHG calculations

Resubmissions are welcome, especially when TRL is improving

Financial Maturity

Maria Jesus BAEZ, *Senior Financial Engineering Manager*
CINEA - Financial Engineering, Business Intelligence & IT Unit

European Commission

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Financial Maturity: Key points

Objective: assess the project's ability to reach Financial Close as soon as possible and within 4 years*

Project business plan and profitability

Soundness of the financing plan

Commitment of project funders

Understanding of project business and financial risks

* The project's demonstrated ability to **reach financial close within 12 months** will be considered as advantageous grounds resulting in a higher score, provided that all other aspects of the project maturity criterion are addressed

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Financial Maturity: Key points

Objective: ability to reach Financial Close within 4 years

New

Business plan (mandatory annex)

New template to be used: available in the Submission System (under "Part B templates")

If not used, provide the same level detail and information

Simplified

Application Form Part B

Financial maturity (section 4.2): **summary of information submitted in the business plan annex**

Risk management (section 4.4): **leave blank** as information is already filled in business plan annex

Work packages, activities, resources and timing (section 9.2)

Financial Information File ('FIF') / detailed financial model

To be filled completely - includes the Relevant cost calculator, the financial model Summary Sheet, the grant drawdown schedule and the cost efficiency calculation, Applicant's Financial Model (xls)

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Financial Maturity: Key points

Objective: ability to reach Financial Close within 4 years

New

Project shareholders' financial resources

Financial statements of project shareholders over last 3 years (if available)

Project funding support (supporting documents)

Minimum requirements in call text Annex 3

Confirmation of funding support is essential for proposals with low profitability

New

Project contract terms (supporting documents)

Minimum requirements in call text Annex 3

Any existing due diligence report (optional)

Business plan template:

PROJECT BUSINESS PLAN

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Financial Maturity

Business model/concept => Business plan

- Credibility of the business model and business plan:
  - Describe the proposed project business model, including the project competitive advantage, targeted market(s) and products, barriers to entry and how it addresses market gaps.
  - Fully describe and substantiate the main revenues and cost assumptions (CAPEX and OPEX). Include a detailed breakdown and description of prices and volumes assumed (attach any available due diligence).
  - Describe the strategy to secure key contracts with off-takers, key suppliers, construction contractors. Where available, provide contractual evidence for example letters of support, indicative terms from MoU's or LoI's (see call text Annex 3)
  - Justify the contingencies (CAPEX and OPEX) used and ensure that they are in line with market practice in your sector.

Business plan template:

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DETAILED CASH FLOW PROJECTIONS AND PROJECT PROFITABILITY

Financial Maturity

Business Plan => Financial model

- Robustness of the cash flow projections and project profitability
  - Ensure that the financial projections are coherent with the assumptions of the business plan and across the other application documents
  - Fill in the Financial Model Input Sheet in the Financial Information File and make sure the data are coherent with your own detailed financial model
  - Describe project returns over the entire project lifetime with the grant and compare it to the WACC
  - Ensure that assumptions used for WACC adequately reflect the project risks

Business plan template:

FINANCING PLAN

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Financial Maturity

Soundness of financing plan

- Project Financial Close must be reached latest 4 years after signing of the Grant Agreement

  ⇒ Justify the planned date for Financial Close, clearly describe the work packages, milestones and deliverables up to that date

- Demonstrate financial viability of your project. Does the financing plan cover construction costs and potential negative operational cash flows?

- If your financing plan includes external debt, justify the key terms and show they are in line with market standards. Ensure that the level of debt assumed is supported by stable cash flows and reinforced with long-term off-take contracts. If possible, letters from banks substantiating the conditions and letters of potential off-takers are always a plus (see call text Annex 3)

- Describe the funding structure in the organizational chart highlighting the main legal entities and where the debt (if any) will be raised (will it be recourse/non-recourse?)

- Make sure that grant disbursement is in line with the call text requirements

Business plan template:

PROJECT FUNDERS AND INVESTORS COMMITMENT

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Financial Maturity

Commitment of project funders

- Describe the state-of-play, nature, level and conditions of support provided by project funders.
- Provide corresponding evidence like letters of interest/support, letters of approval from funders/shareholders or board confirming the support of the financing plan. This will be even more crucial for unprofitable projects (pilots or others). Also describe the necessary internal approval process. Do not forget to attach financial statements of project funders.
- Support from other sources including market mechanisms, support from Member States and status/planning for State aid clearance where relevant (provide evidence if you have, do not just mention it).

Business plan template:

RISK ANALYSIS AND MANAGEMENT

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Financial Maturity

Business and financial risks

- Provide a description of the main business and financial risks with the appropriate mitigation measures
- Underpin your analysis with the business plan and provide a risk heat map
- Describe contingency planning and/or contingency funding to cover downside scenarios like lower, sales growth or lower than anticipated, price increase, higher construction cost, absence of additional grant (if any)
- Fill in the risk tables and risk heat map of the business plan template and leave blank application form part B – risk management (section 4.4)

Main issues with the Business Plan credibility

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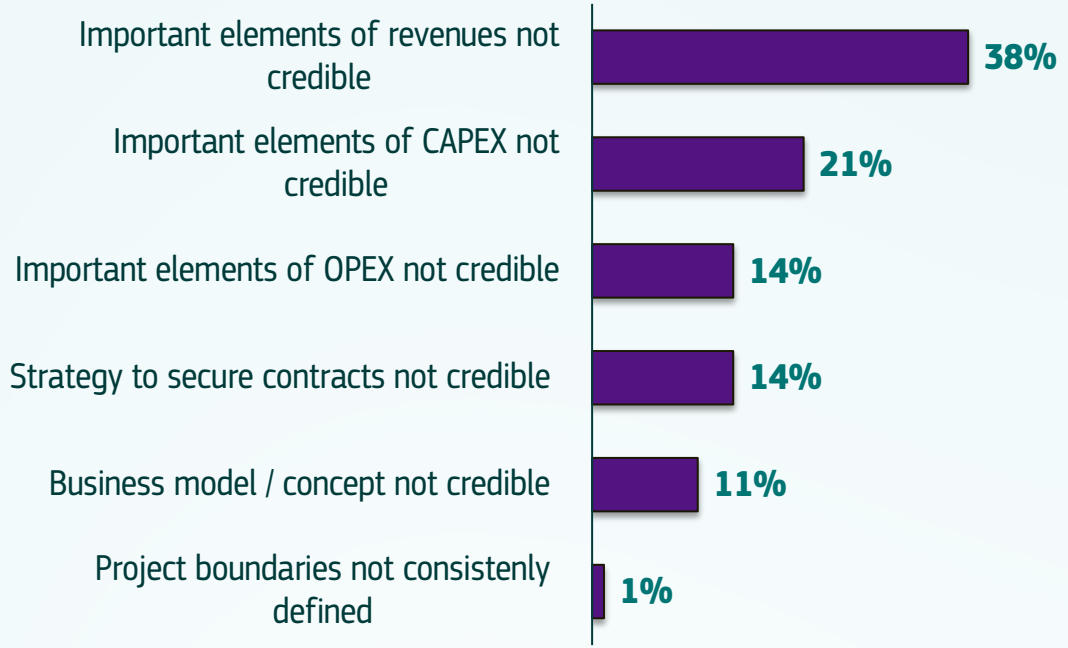
Lessons Learned IF23 Call

Most issues related to **business plan** refer to:

- **Revenues:** credibility and justification of prices, volumes
- **CAPEX:**
  - Justification missing,
  - No detailed breakdown,
  - Lack of evidence (including quotes from engineering and construction contractors)

Out of 84 proposals, the main issues with the business plan are:



- Fully **describe, substantiate and evidence the main revenues, CAPEX and OPEX assumptions** and include a **detailed breakdown** and description of prices and volumes
- See Annex 3 of call text for minimum requirements on project contract terms

Main issues with the Financing Plan credibility

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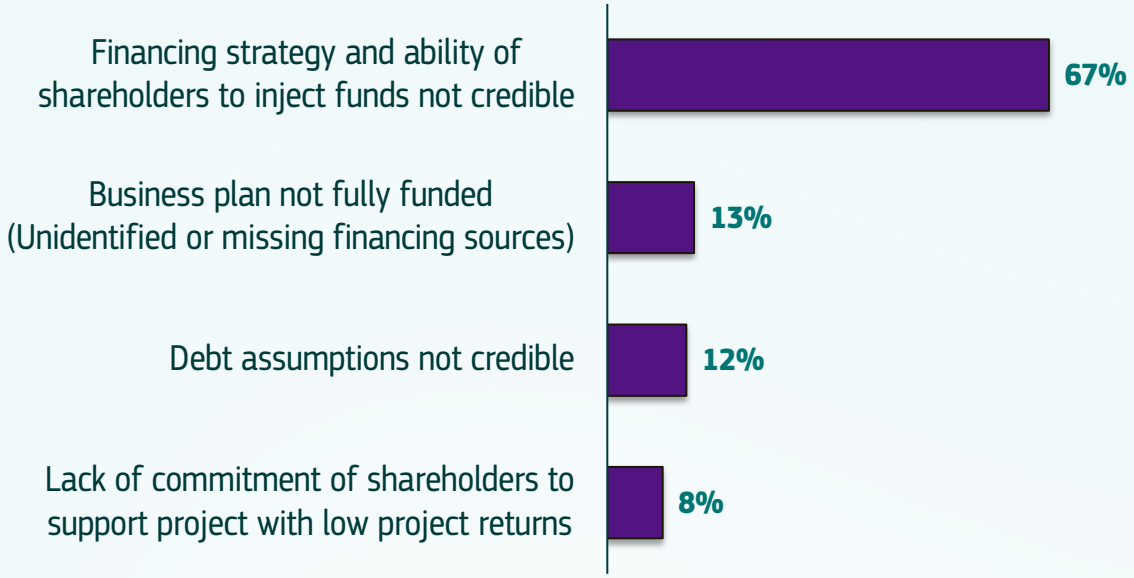
Lessons learned IF23 Call

Main issues with **financing plan**

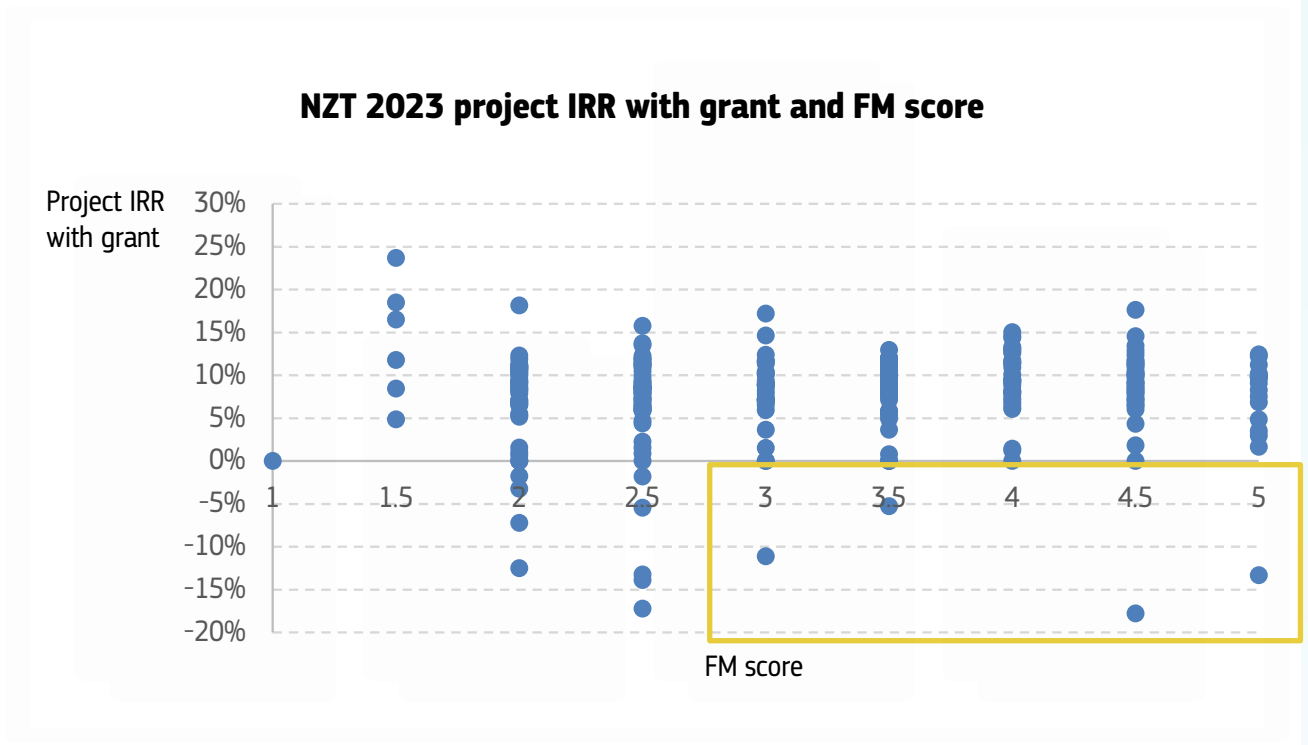
- Ability to secure the required funding
- Commitment of shareholders
- Expected timing
- Steps to reach final investment decision
- Other issues related to **debt assumptions** (for instance debt repayment capacity)
- **Unidentified or missing funding sources**

Out of 84 proposals, the main issues with the financing plan are:



- Clearly **identify all funding sources** with their terms and conditions and the progress made in defining and/or negotiating them with funding counterparts.
- Provide financial statements of the shareholder entities
- See Annex 3 of call text for minimum requirements on project funding support

Funders commitment is important



Even projects with negative or low IRR can pass the Financial maturity sub criteria thanks to the **solid letters of commitment** from the project sponsors/shareholders => make sure the commitment letters recognize the issue of project profitability and confirm the willingness to implement the project.

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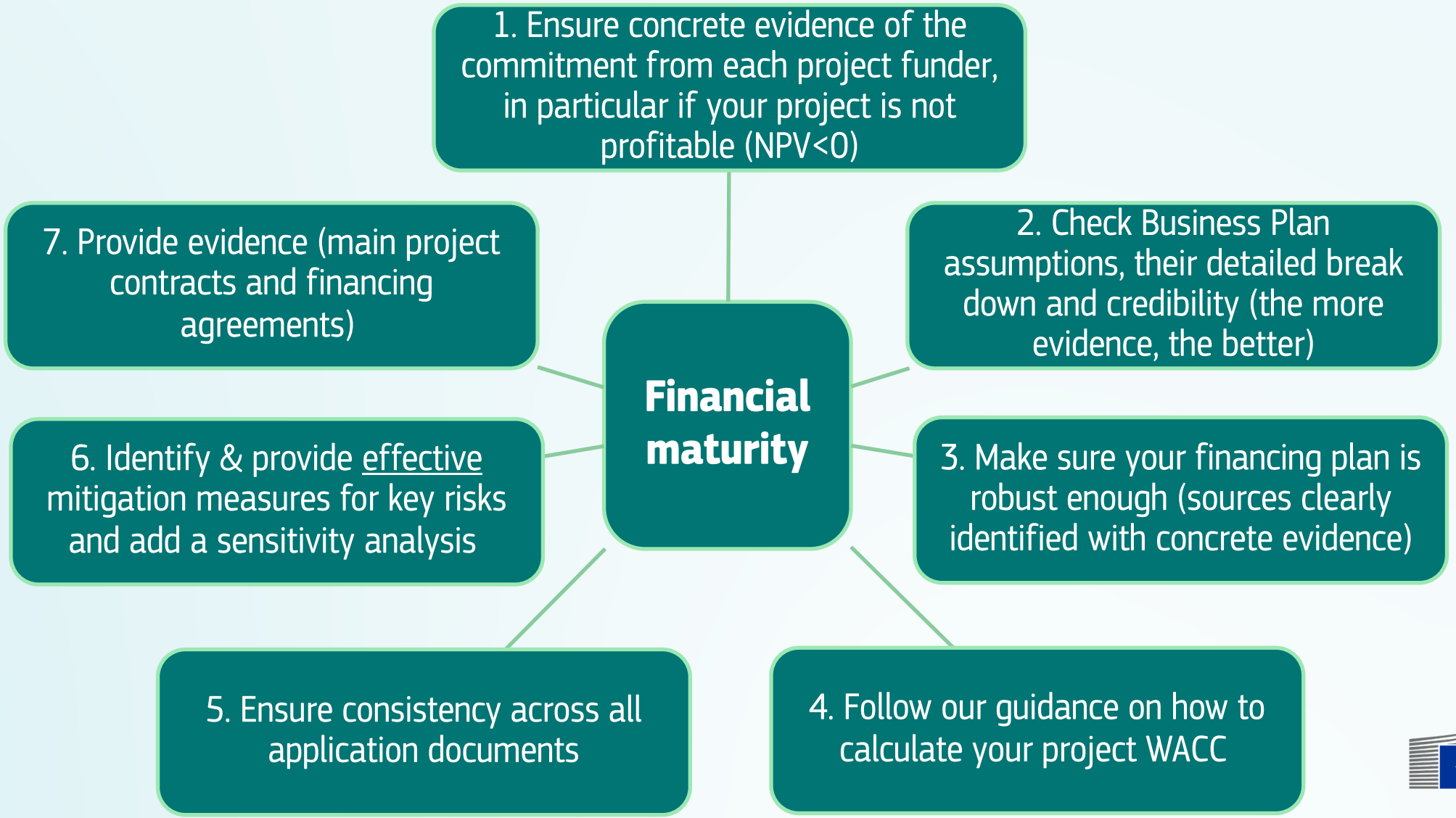
7 Golden Rules of Financial Maturity



Cost efficiency

Maria Jesus BAEZ, *Senior Financial Engineering Manager*
CINEA - Financial Engineering, Business Intelligence & IT Unit

European Commission

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Cost efficiency– key points

Objective: assess the quality of the grant calculation and CE ratio

Application Form Part B

Relevant cost and cost efficiency ratio (section 7.1)

Financial Information File ('FIF') / detailed financial model

To be filled completely - includes the Relevant cost calculator, the financial model Summary Sheet, the grant drawdown schedule **and the cost efficiency calculation**, Applicant's Financial Model (xls)

Other annexes (see page 9 of call text)

Only for projects using 'reference plant' calculation methodology for relevant costs

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Cost efficiency– key points

- **Cost efficiency is split in two sub-criteria:**
  - Cost efficiency ratio – based automatic score
  - Qualitative assessment on how the computation of Cost Efficiency ratio was made
- **Cost efficiency ratio level has minimum requirement:**
  - If cost efficiency ratio is *lower than or equal to* €200/tCO_2eq, score will be based on formula **3 – (3 x (cost efficiency ratio/200)**
  - If cost efficiency ratio is *higher than* €200/tCO_2eq, **proposal will be rejected (i.e. not considered for funding)**

Cost efficiency

$$\text{Cost efficiency} = \frac{\text{Requested Innovation Fund grant + other public support (*)}}{\text{Absolute GHG emission avoidance}}$$

During 10 years after entry into operation

Maximum requested IF grant is 60% of total relevant costs

Applicants choosing not to apply for the maximum grant will be more competitive when ranked against other applicants in 'cost per unit performance' metric.

(*)

- If other public support is included in the **project's financial model**, it must be added in the **numerator of the Cost efficiency** formula. Public support already secured must be included. Public support that is not secured – up to the applicant if it is included in the financial model/CE.
- For public support received during operation, the rule is to add the undiscounted amount that will be obtained the first ten years of operation.
- Some forms of State aid such as taxes or tariff reductions can only be reflected in the Relevant Costs

Operational Maturity

Uwe LÜTZEN, *Head of Sector*
CINEA - Innovation Fund Unit

European Commission

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Project Maturity : Operational Maturity

- **Application form, Part B, sections:**
  - 4.3 - Operational maturity
  - 4.4 – Risk management
  - 9.1 - Work Plan
  - 9.2 – Work Packages, activities, resources and timing
- **Timetable-Gantt chart (mandatory document)**
- **Participant information (including CVs and previous projects, if any)**
  - Any due diligence report (if any)

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Operational Maturity

Credibility and a level of detail of project implementation plan covering all project milestones & related deliverables

- Project milestones must include at least financial close, entry into operation and annual reporting after the entry into operation (guidance provided in the call text and application form).
- Provide timeline from signature of the grant up to the end of the operation period; ensure consistency with timetable provided as annex.
- Key aspects: strategy to reach milestones of financial close and entry into operation; ensure timing of planned activities during plant construction; regular operation of the technology during operation period.
- Implementation planning consistent with work packages, milestones and deliverables described in section 9 of Part B.
- Ability to reach entry into operation in line with market standards in the sector or faster

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Operational Maturity

State of play and credibility of the plan for obtaining required permits, IPR or licences and other regulatory procedures

- Key aspects to be covered: detailed analysis of the regulatory framework; any intellectual property rights or licence; other relevant regulatory procedures; relevant permitting processes needed (including permits related to environmental impacts)
- State of play: description of permits already obtained and still needed and the plan for obtaining them, including timeline indicating the relevant permit application dates, expected reception dates and measures planned to ensure timely granting

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Operational Maturity

Soundness of the public acceptance strategy

- Detailed description of all environmental impacts expected throughout the whole project life-cycle (from construction to operation to decommissioning), and associated mitigation measures.
- Degree of public acceptance of the technology and the project.
- Clear and specific strategy on how public acceptance will be ensured (please do not limit to generic explanations of the issue).

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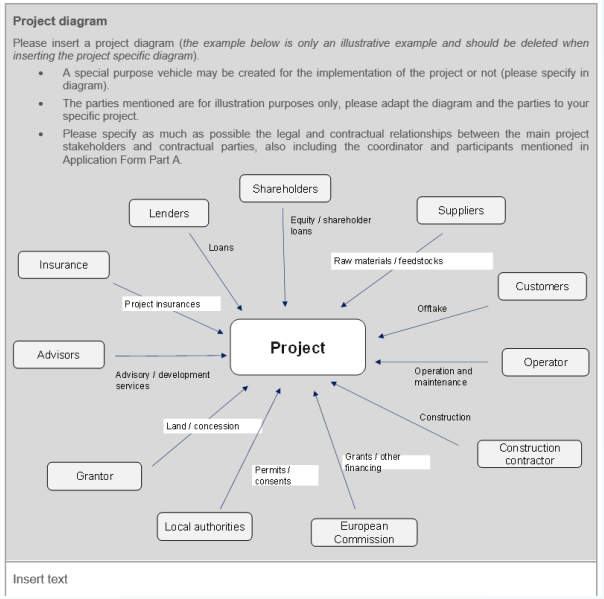
Operational Maturity

Relevance & track record of project management/team and soundness of the project organisation

- Project management team, e.g.: key qualifications and track record; sufficient coverage of all necessary skills; provide justifications on the need for additional outside resources.
- Project organisation, e.g. project management structure; governance, responsibilities and decision-making mechanisms and processes within the consortium; quality management, health and safety.
- Provide a project diagram visualising the involved actors and organisation of the project.



Operational Maturity

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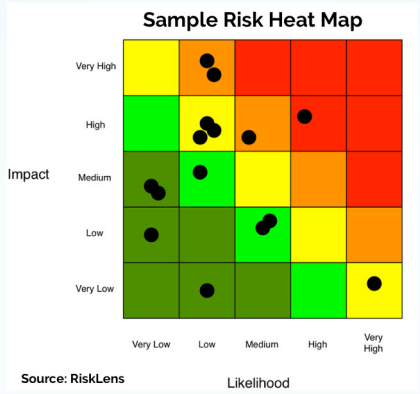
Operational risks and credibility of proposed mitigation measures

New

Risks are included **only** in the Feasibility Study and Business Plan (mandatory documents) which must:

- Describe the main operational risks associated with the construction (for example timing), project design, operation (for example weather conditions) and decommissioning, or risks stemming from dependencies from other projects relevant to the project
- Describe the impact if the risk materializes and the proposed risk mitigation measures and explain why they are suitable
- Summarize your analysis in a table (see template)
- Include a Risk heat map



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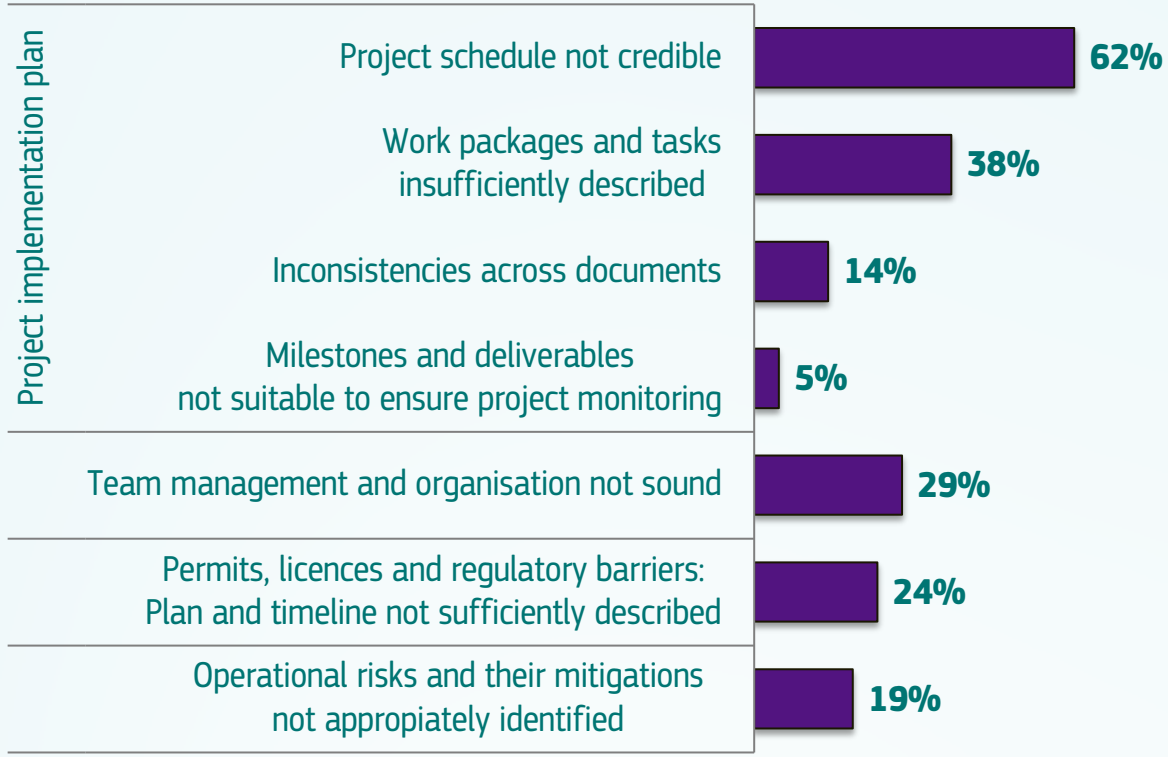
Operational Maturity: Lessons Learned IF23 Call

Key reasons for failure:

- Project implementation plan not credible
- Team management and organisation not sound
- Permitting and licences plan and timeline not sufficiently elaborated
- Operational risks and their mitigation strategies not adequate

Out of 21 proposals failing operational maturity, the main reasons are:



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Best practice – Operational Maturity

Operations

- Define solid **Work Packages** and **tasks**
- Set clear and realistic **deliverables**, **milestones** and **means of verification**
- Include relevant **operational risk** assessment in the Feasibility Study
- Ensure availability of necessary know-how in the team

Timeline

- Ensure consistency between **Gantt** & tasks/ WPs (interdependencies)/ FiF
- Consider realistic timing for:
  - Construction and supply
  - Obtaining permits, rights and licences
  - Ensuring public acceptance
  - Potential delays

Clear strategy

- Clearly identify project parties and responsibilities
- Clear **Role distribution**
- **Link Work Packages** and corresponding **financial costs**
- Set a clear strategy for:
  - Construction, considering targets/ deadlines & needs
  - Obtaining permits, rights and licenses for a defined location
  - Ensuring public acceptance

- **Provide contractual evidence**
- For example: letters of support, MoUs, indicative terms of agreement for off-take agreements, key suppliers, quotes from vendors, EPC parties

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Q&A session

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Ask your question or vote for an existing one!

Or scan me

Recording will be available on CINEA website

Replicability

Uwe LÜTZEN, *Head of Sector*
CINEA - Innovation Fund Unit

European Commission

Replicability

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- **Application form, Part B, sections:**
  - 5.1 - Replicability
  - 5.2 - Knowledge sharing — Communication, dissemination and visibility

The project proposals will be assessed based on quality, soundness and reliability of the information provided

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Efficiency gains & multiple environmental impacts

- Explain how the project addresses possible resource constraints through:
  - efficient use of resources
  - reduction in consumption of critical raw materials
  - sustainable biomass and other scarce resources
  - or other ways to address resource constraints in terms of efficiency, circularity, recycling and recyclability of such resources
- Describe the potential or the proposed solution to address multiple environmental impacts (for example, increasing biodiversity protection, reducing land, air and water pollution)

Further deployment

Updated

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- Describe the potential of the proposed solution to be replicated in **other sites**:
  - Plans of transfer to other sites, regionally or across the EU/EEA economy or globally where relevant.
  - Potential transfer beyond the sector, where relevant.

  ➡ Substantiate the claimed potential, by providing data estimations on locations, budget allocation, products & production capacities, potential commercial activities and market share opportunities, sector coupling, cooperation with other actors of the regional economy and/or beyond.
- Provide an estimation of the related expected **contribution to emissions avoidance**
  - For example, number of potential replicable installations and resulting emissions avoidance; underpin your estimations with reliable and well substantiated assumptions.
- **Knowledge Sharing plan outline**

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Contribution to EU leadership and competitiveness

- **Supporting the European batteries ecosystem** (components, including cathodes and anodes, from EU/EEA suppliers, machinery/manufacturing equipment from EU/EEA suppliers);
- **Creation of IP rights (patents)** registered in Europe in the past five years or demonstrating **batteries research activities** in the EU/EEA, e.g. through on-going cooperation programmes with EU/EEA universities or research institutes).
- **Reduction of consumption of critical raw materials**, use of secondary raw materials, recycling or other strategies helping to reduce dependencies on critical raw materials;
- **Jobs created, trainings** or other actions to develop **know-how in Europe**;

Supporting the European batteries ecosystem and creation of IP rights or demonstrating batteries research in EU/EEA have higher importance.
Claims have to be underpinned by evidence

Contribution to Europe's industrial leadership and competitiveness - examples

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New

Good practice - evidence

V Project will work with EU/EEA components suppliers – evidenced by a MoU/LoI already signed

V Suppliers are named in the application

V Partnership with university will be put in place – evidenced by a MoU/LoI already signed

V Consortium member(s) have registered patents (those patents are briefly described in the application)

V Consortium member(s) have scholarship or thesis programme for students

Ambiguous claims - to avoid

X "Project aims to work with local suppliers and can mobilise new partnerships."

X Project does not name suppliers in the application

X "Project aims to support R&D in the sector and will invest part of its profits into technology development."

Contribution to Europe's industrial leadership and competitiveness - examples

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Good practice - evidence

V In addition to production plant, an R&D center or test center will be built

V Project has signed a MoU with a recycling partner – evidenced by an MoU

V Project will pursue an approach to minimize scrap with dedicated measurements and process control

V Clearly described training programme for workers is a dedicated work-package

V Training programme for workers will be put in place providing certification scheme (scheme is briefly described in the application)

Ambiguous claims - to avoid

X "Project will create many jobs for running the installation."

X Standard battery cell production processes, reduction of waste not mentioned.

X "Project will provide training opportunities for the employees."

X "Project will contribute to Net Zero Industry Act benchmarks for clean-tech."

Knowledge sharing — Communication, dissemination and visibility

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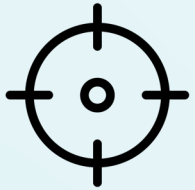
New

Knowledge sharing plan no longer mandatory annex, outline mandatory in Application Form Part B (5.2).



Knowledge sharing goals:

- De-risking innovative low-carbon technologies with regard to wide-scale commercialisation
- Acceleration of deployment
- Increasing the undertaking of, and confidence in these technologies by the wider public
- Maintenance of a competitive market for the post-demonstration deployment of the technologies

Guideline:

- Check thoroughly **Annex 2** in call document
- Please refer to the "**Knowledge Sharing report template**" available on the Funding & Tenders portal **for information only at submission stage** to better understand the information to be provided during project implementation
- Confidentiality will be ensured!

Knowledge sharing

Communication, dissemination and visibility

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- Outline activities, content, tools, channels and target groups for knowledge-sharing that go beyond the mandatory knowledge-sharing requirements (such as reporting and participation in knowledge-sharing events organised by the granting authority). For example:
  - participation and organisation of technical and scientific events, trainings, lectures
  - participation in working groups and discussion forums
  - organisation of site visits, construction of a visitors centre, etc.
- Describe how the visibility of EU funding will be ensured
- Quality, soundness and reliability of the information should be provided

NOTE: For successful projects, a detailed knowledge sharing plan has to be provided as deliverable in month 1 (see section 10 of the Call document)

Resilience requirements

Ewelina DANIEL, *Policy Officer*
DG CLIMA - Low Carbon Solutions (II):
Research & Low Carbon Technology Deployment

European Commission

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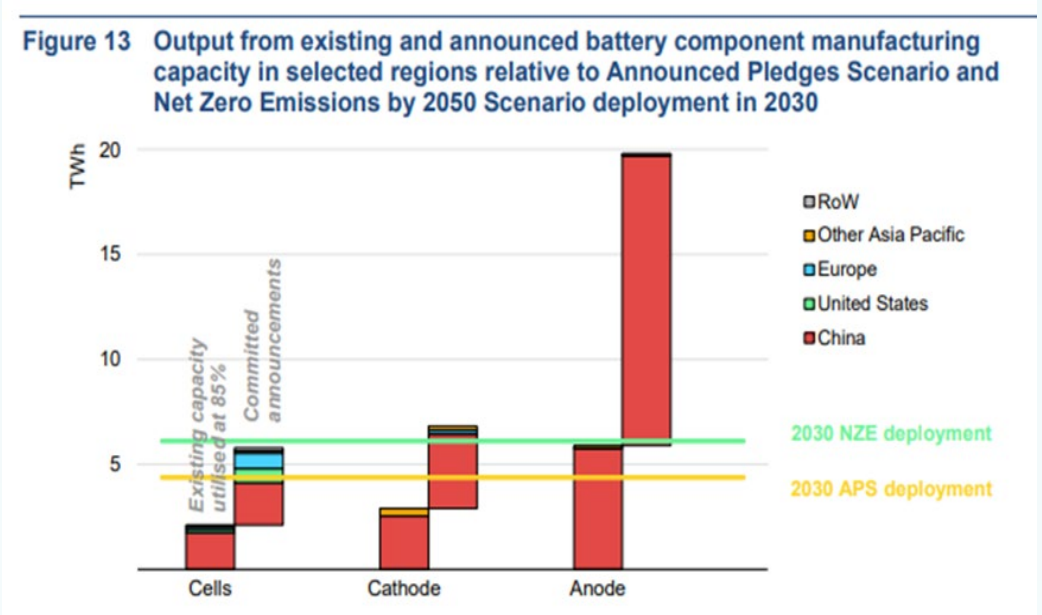
Resilience requirements: rationale

- Announcement of EVP Šefčovič: *This new instrument will (…) create important spill-over effects on the entire value chain, including its upstream segment.*
- Resilience is a key priority for the EU, in line with **Open Strategic Autonomy/Economic Security** of the EU
  - put in practice with **NZIA Regulation** (resilience requirements in national public procurement and auctions).
- Since ETS Directive revision, "resilience" criterion has been added to the IF "regular" calls for proposals under "Replicability criterion" but now has been strengthened to reflect the **EU value added** of the project.
- **Risk of dependency** of the EU on cathode and anode active material imported from China, issues of security of supply.



Source: IEA

Resilience requirements

(both in NZT Call and in Battery Call) under "Replicability criterion": the dedicated sub-criterion: **"Contribution to EU industrial leadership and competitiveness"**

Battery Call also includes a new award criterion: **"Security of supply and countering dependency"**, aiming to reduce sourcing of anode and cathode active material from China.

Requirement on patents: New patents originating from the project*, during the project's duration must be registered in an EU Member State or EEA country

** i.e., results within the meaning of Article 16 of the Grant Agreement*

Reporting requirements at Financial Close, at Entry into Operation, in annual reports and reporting at the end of the monitoring period. **Penalties** apply if requirements are not fulfilled.

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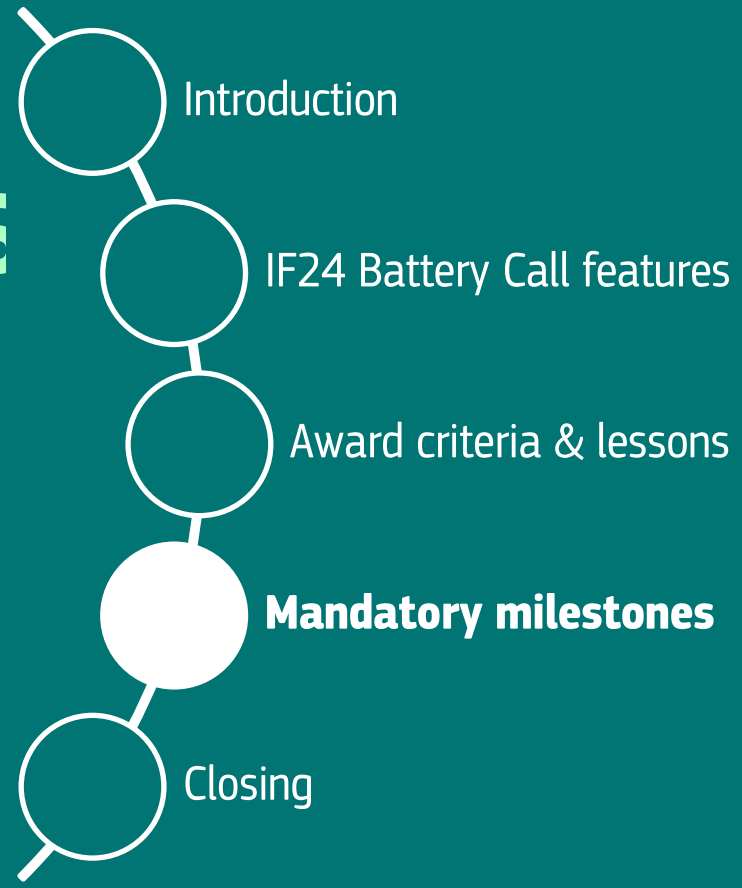
Security of supply and countering dependency

- Degree of diversification of the **supply of cathode active materials (CAM) and anode active materials (AAM) from China** during the project's monitoring period.
- **The less CAM and AAM the project will source from China, the better it can score.**
- Projects that aim at expanding or converting existing facilities must demonstrate diversification of CAM and AAM sourcing from China, compared to existing operations over the last 2 years.

Only CAM and AAM concerned
Only imports from China are concerned
No hard thresholds applied
Claims have to be underpinned by evidence

Mandatory milestones and deliverables

Uwe LÜTZEN, *Head of Sector*
CINEA - Innovation Fund Unit



European Commission

Mandatory milestones and deliverables

- **Application form, Part B, sections:**
  - 9.1 - Work Plan
  - 9.2 – Work Packages, activities, resources and timing
- **Timetable-Gantt chart (mandatory document)**

Work plan (overview of work packages, milestones and deliverables)

Provide a brief description of the overall structure of the work plan (list of work packages or graphical presentation (Pert chart or similar)).

List the work packages, their duration (from Month YX to month YX, relative to the starting date of the InnovFund project, e.g., Month 01 is the starting month of the project, etc.), and related deliverables and milestones for each work package below.

Work package	Duration	Deliverable (continuous numbering linked to WP)	Milestones (continuous numbering not linked to WP) and their means of their verification
Work package 1: [name of the work package]	YX - YX	D1.1, D1.2 ….	MS1, MS2 ……
		…	
Work package 2: [name of the work package]	YX - YX	D2.1, D2.2 …..	MSX, MSX+1 …….
…			

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Work Package 1: Up to Financial Close

Milestones	**Deliverables** (mandatory)	**Timeline**
• Milestone 1: Project planning approved (indicative) • Milestone 2: Project authorisation granted, including permits (indicative) • Milestone 3: Main project contracting closed (indicative) • Milestone 4: Project financing means granted and available (indicative) • Milestone 4: **Financial Close** (**mandatory**)	Detailed project management plan	Month 1
	Final version of the financial model	Month 1
	Knowledge sharing plan	Month 1
	Knowledge sharing report	Month 1
	Updated knowledge sharing report	At financial close
	Progress reports	Every 6 months, except when there is an interim payment
	First update to the detailed project management plan	At financial close
	All key documents necessary to verify achievement of financial close	At the latest at financial close
	Evidence supporting the claims made under the criteria 'Contribution to Europe's industrial leadership and competitiveness', 'Security of supply and countering dependency', Manufacturing carbon footprint reduction'	At financial close
	Evidence on low-or zero carbon energy consumed and additionality	At financial close

Work Package 2:
From Financial Close to Entry into Operation

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Milestones	**Deliverables** (mandatory)	**Timeline**
Milestone 4: Site preparation (indicative) Milestone 5: Construction (indicative) Milestone 6: Pre-commissioning (indicative) Milestone 7: Signing of operation and maintenance agreements (indicative) Milestone 8: Commissioning, start-up and testing (indicative) Milestone 9: **Entry into Operation** (**mandatory**)	Annual progress reports	Every year, except when there is an interim payment
	Statement by independent auditor on correctness of the relevant cost calculation	At least 2 months before entry into operation
	Operational readiness and completion certificate	At entry into operation
	Updated knowledge sharing report	At entry into operation
	Updated knowledge sharing plan	At entry into operation
	GHG monitoring plan	At entry into operation
	Second update to the detailed project management plan	At entry into operation
	self-declaration from the supplier on origin of production machinery/manufacturing equipment (according to claims made under the criterion 'Contribution to Europe's industrial leadership and competitiveness')	At entry into operation
	evidence supporting the claims made under the sub-criterion 'Contribution to Europe's industrial leadership and competitiveness' (e.g., contracts showing cooperation with research body, description of activities reducing consumption of critical raw materials, trainings to be launched, etc)	At entry into operation

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Work Packages after Entry into Operation

Milestones	**Deliverables** (mandatory)	**Timeline**
	WP 3: Year 1 of Operation	
Milestone 10: **End of first year of operation (mandatory)**	• Annual GHG emissions report (including manufacturing carbon footprint reduction) • Annual report on battery cell output (in kWh) and in terms of quantity and key performance parameters (including on their EU/EEA-originating content) • Self-declarations from the suppliers on the origin of cathode and anode active materials (including which parts, if any, comes from China)	At the end of each year of operation
	• Updated Knowledge sharing plan at operational year X • Updated Knowledge sharing report at operational year X	At the end of 1st year of operation and then every two years
	WP 4: Year 2 of Operation	
Milestone 11: **End of second year of operation (mandatory)**	Same than for WP3	At the end of each year of operation

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Work Packages after Entry into Operation

Milestones	**Deliverables** (mandatory)	**Timeline**
	WP N: Last year of operation	
Milestone 12: **End of last year of operation (mandatory)**	• Annual GHG emissions report (including manufacturing carbon footprint reduction) • Annual report on battery cell output (in kWh) and in terms of quantity and key performance parameters (including on their EU/EEA-originating content) • Self-declarations from the suppliers on the origin of cathode and anode active materials (including which parts, if any, comes from China) • Verified GHG emissions report covering the entire monitoring period • Verified manufacturing carbon footprint reduction GHG report over the entire monitoring period • Updated Knowledge sharing plan and Knowledge sharing report • Final report on the fulfillment of 'Degree of Innovation', 'Replicability', 'Securing of supply and countering dependency' claims, EU/EEA patent registration requirement	At the end of last year of operation

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Q&A session

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Closing remarks

Maria ALFAYATE, *Deputy Head of Unit*
CINEA - Innovation Fund Unit

European Commission

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Join as project evaluator for Innovation Fund

- Technical expert
- Financial expert
- GHG expert
- Rapporteur

Sign up as an Expert (europa.eu)

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More information

All (past) call documents available on the Funding and Tenders Portal including:

- ✓ Guidance and calculation tools on GHG emissions and relevant costs
- ✓ Frequently asked questions

https://europa.eu/!QB67by

Further info, planning of new calls, recorded webinars and videos available on the IF Website:

https://cinea.ec.europa.eu/programmes/innovation-fund_en

And more videos available on YouTube:

https://youtube.com/playlist?list=PLrp3luGqStFA2fAgz86AsmVp8dXp5kPIG&si=h2W68TyCZJKemcjH

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Thank you