

Project Maturity:

- Technical maturity
- Financial maturity
- Operational maturity

Technical Maturity

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

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

- 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





Feasibility study

- 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]

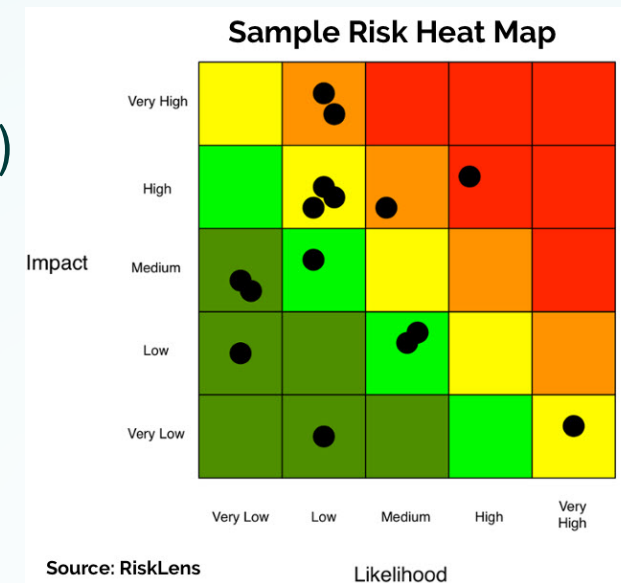
FEASIBILITY STUDY
Project description
<i>Provide a high-level description of the project (e.g. technologies, products and/or services). It is important that this description captures the most important aspects of the technologies to be used, products and/or services that you are considering, as well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

Risk analysis and management



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



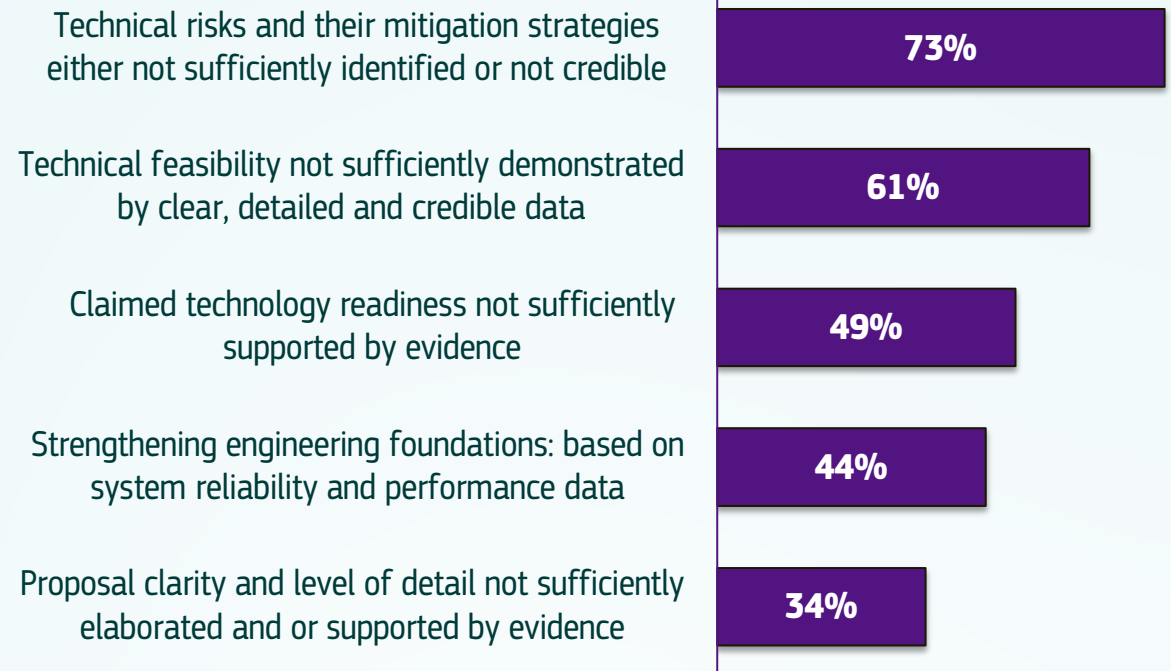
Technical Maturity: Lessons Learned IF23 Call

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

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



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

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



Financial Maturity: Key points

Objective: ability to reach Financial Close within 4 years

Business plan (mandatory annex)

New

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

If not used, provide the same level detail and information

Application Form Part B

Simplified

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)



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)

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 Lol'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.



Financial Maturity

Business Plan => Financial model

DETAILED CASH FLOW PROJECTIONS AND PROJECT PROFITABILITY

- 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



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



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).



Financial Maturity

Business and financial risks

RISK ANALYSIS AND MANAGEMENT

- 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

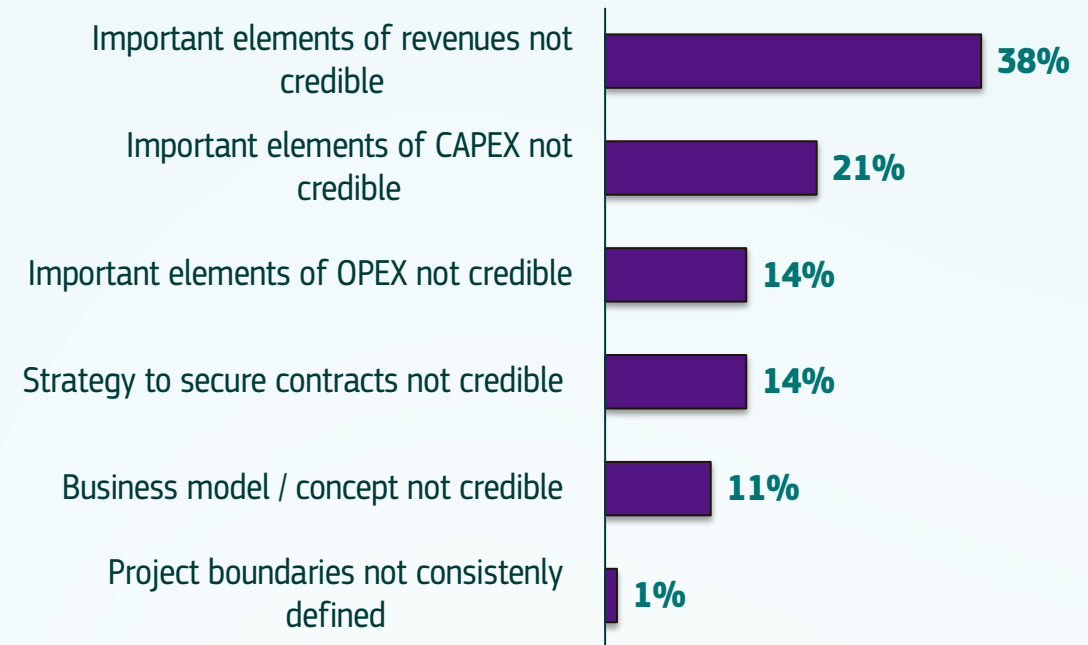
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Lessons Learned IF23 Call

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

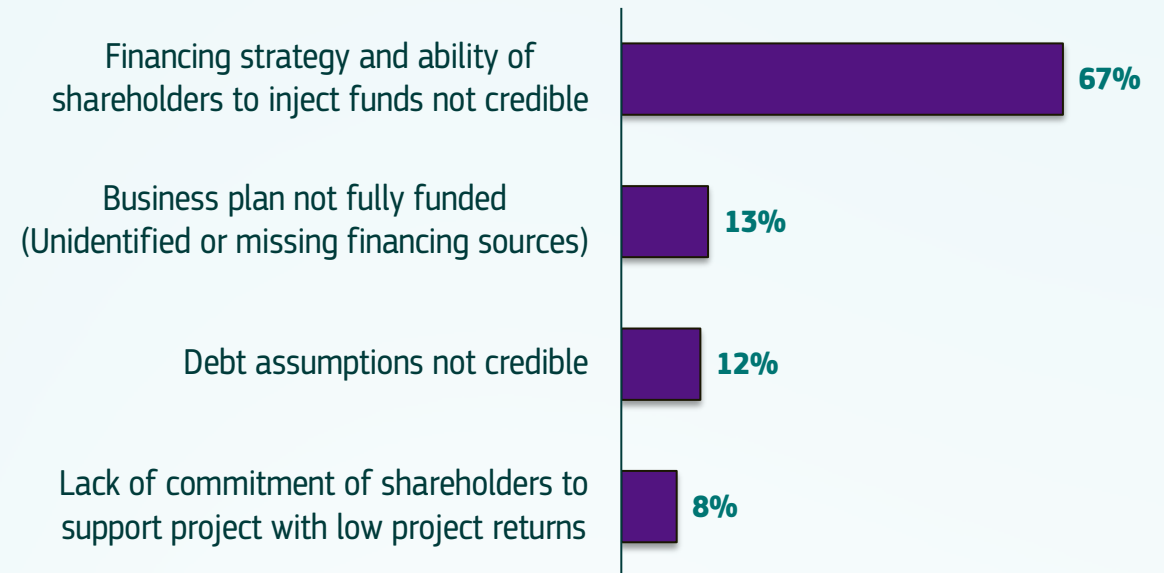
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Lessons learned IF23 Call

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**

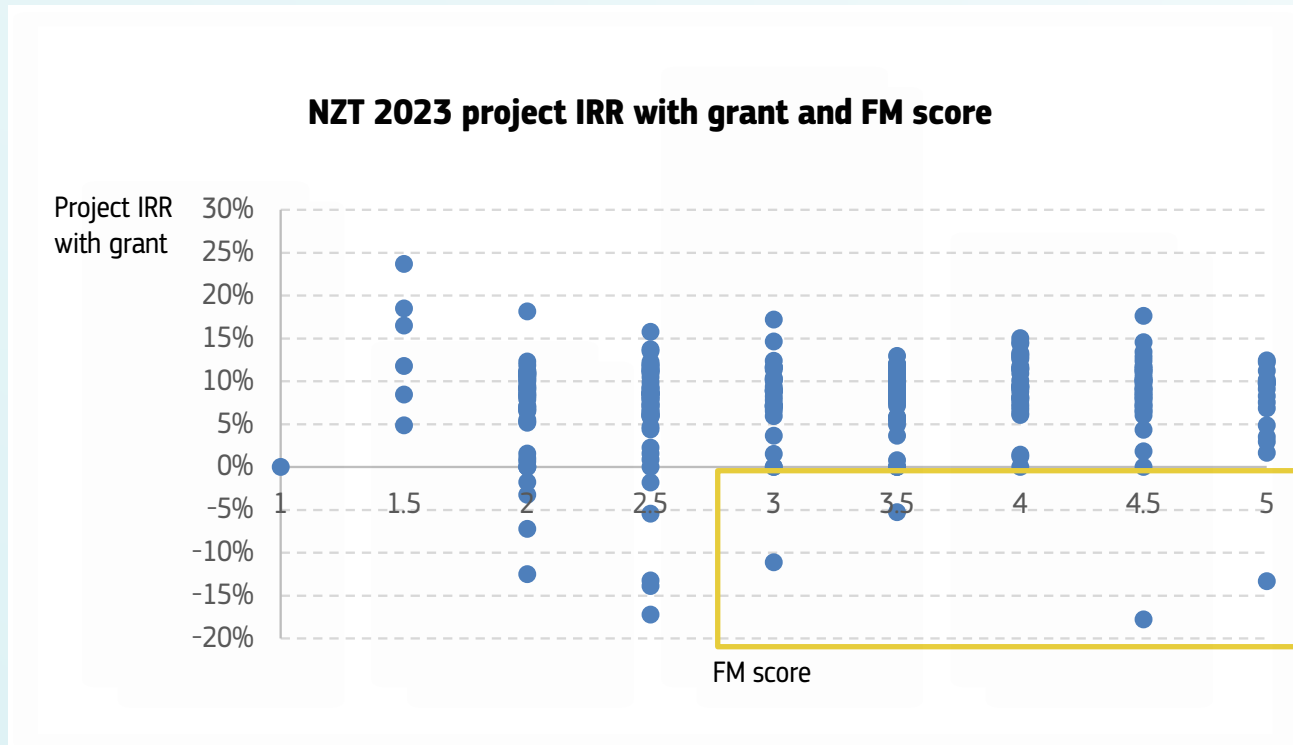
Out of 84 proposals, the main issues with the financing plan are:



- 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

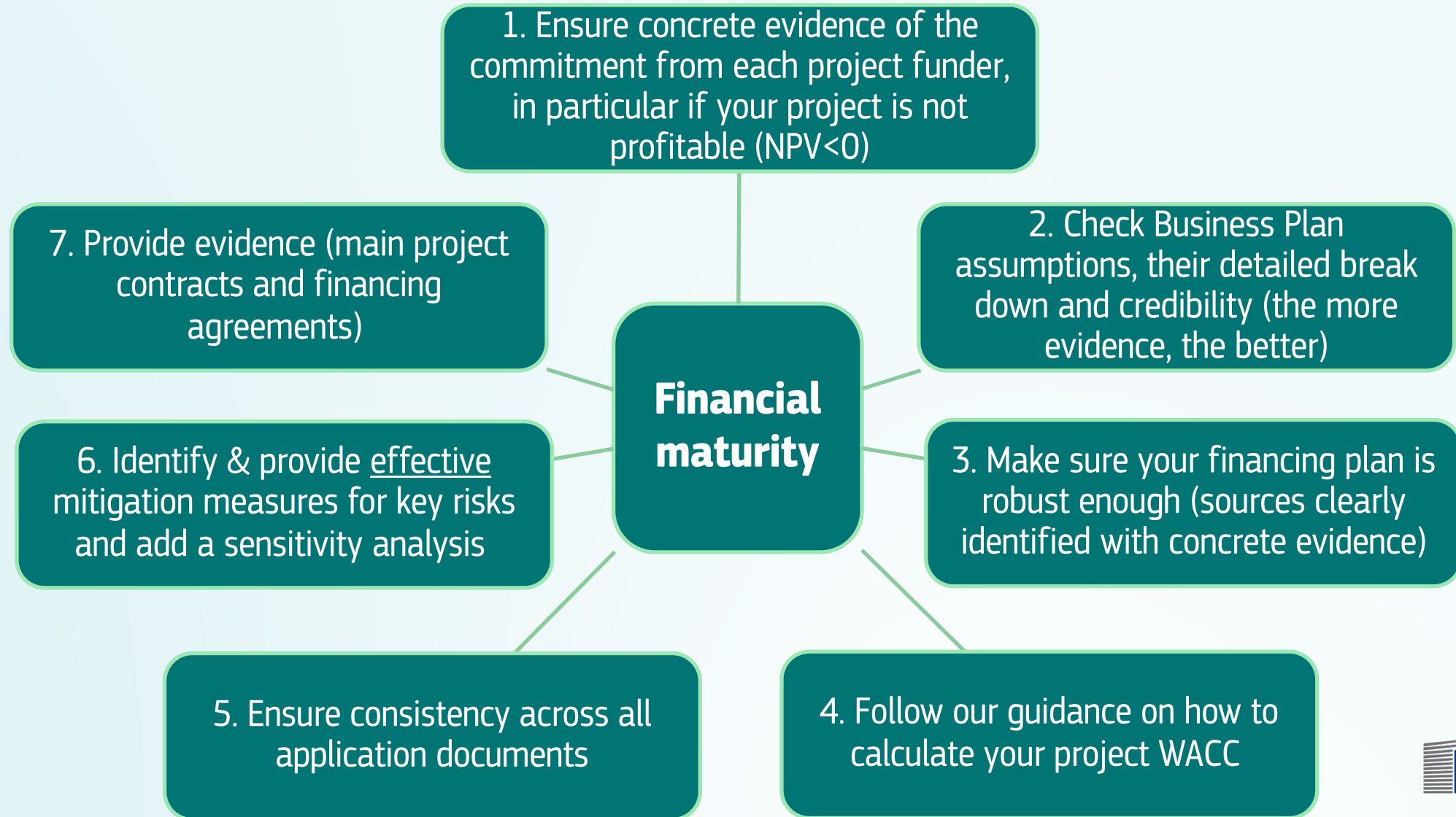


Funders commitment is important



- ! 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.

7 Golden Rules of Financial Maturity



Cost efficiency

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

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



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/tCO₂eq, score will be based on formula **3 – (3 x (cost efficiency ratio/200))**
 - If cost efficiency ratio is *higher than* €200/tCO₂eq, **proposal will be rejected (i.e. not considered for funding)**



Cost efficiency

Requested Innovation Fund grant
+ other public support (*)

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

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)



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



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



Operational Maturity

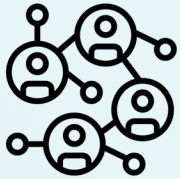


Soundness of the public acceptance strategy

- 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).

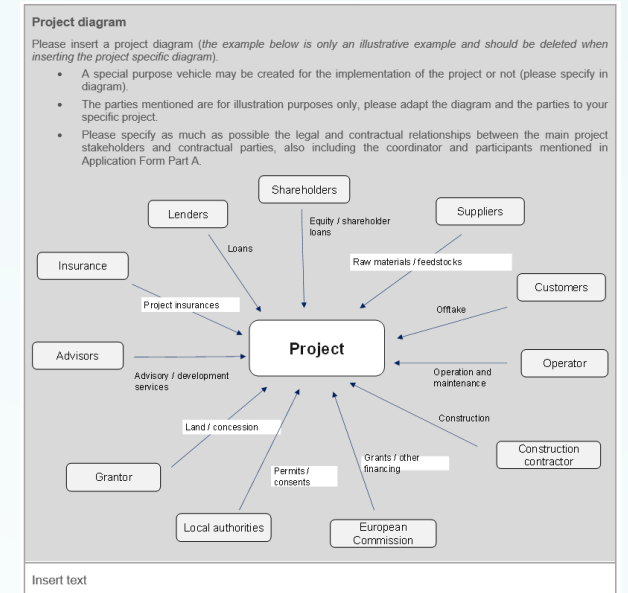


Operational Maturity

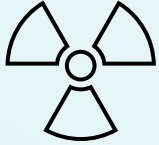


Relevance & track record of project management/team and soundness of the project organisation

- 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

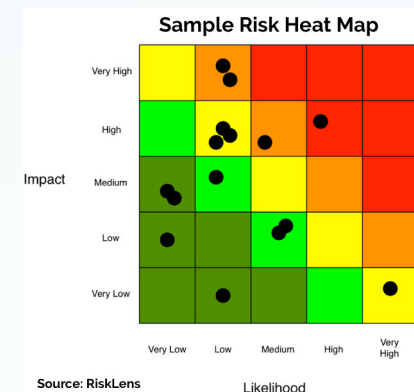


Operational risks and credibility of proposed mitigation measures



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

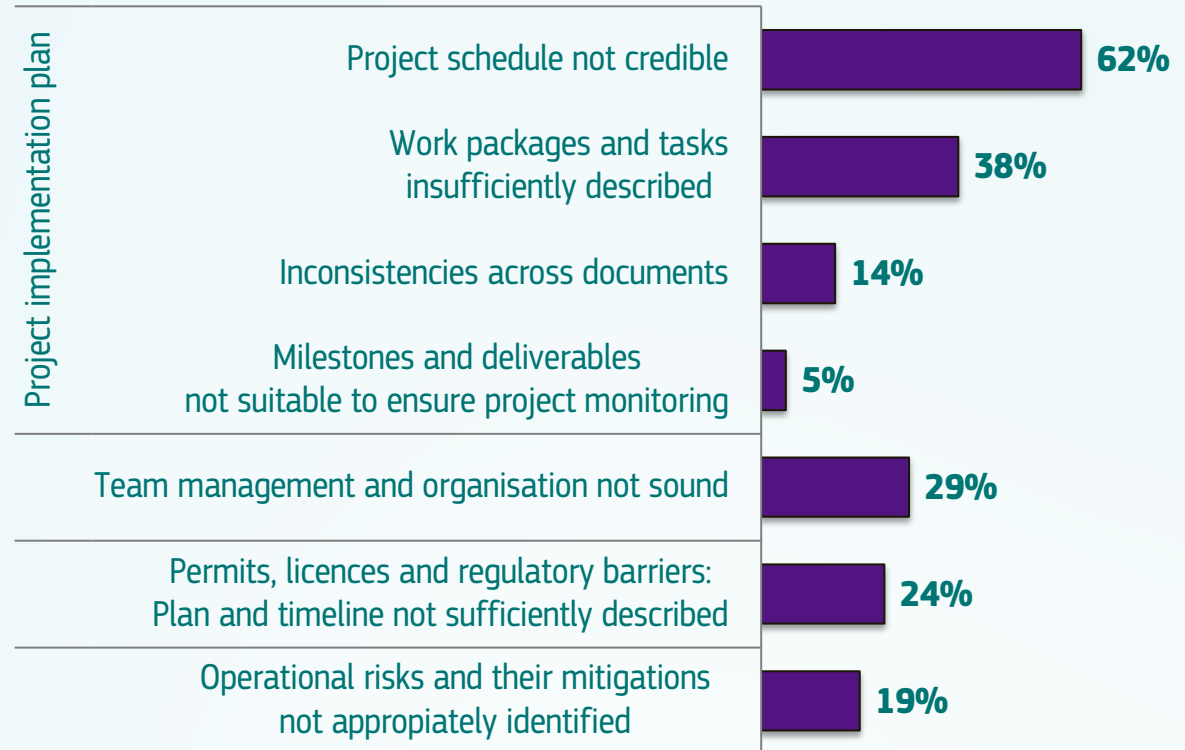


Operational Maturity: Lessons Learned IF23 Call

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

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



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



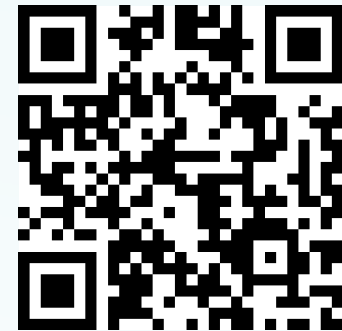
Q&A session

Go to [Slido.com](https://www.slido.com)

Enter the code [#IF24Call](#)

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



Replicability



- **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



Efficiency gains & multiple environmental impacts



Updated

- 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)



Updated

Further deployment

- 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**



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

- ✓ Project will work with EU/EEA components suppliers – evidenced by a MoU/LoI already signed
- ✓ Suppliers are named in the application
- ✓ Partnership with university will be put in place – evidenced by a MoU/LoI already signed
- ✓ Consortium member(s) have registered patents (those patents are briefly described in the application)
- ✓ Consortium member(s) have scholarship or thesis programme for students

Ambiguous claims - to avoid

- ✗ “Project aims to work with local suppliers and can mobilise new partnerships.”
- ✗ Project does not name suppliers in the application
- ✗ “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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New

Good practice - evidence

- ✓ In addition to production plant, an R&D center or test center will be built
- ✓ Project has signed a MoU with a recycling partner – evidenced by an MoU
- ✓ Project will pursue an approach to minimize scrap with dedicated measurements and process control
- ✓ Clearly described training programme for workers is a dedicated work-package
- ✓ Training programme for workers will be put in place providing certification scheme (scheme is briefly described in the application)

Ambiguous claims - to avoid

- ✗ “Project will create many jobs for running the installation.”
- ✗ Standard battery cell production processes, reduction of waste not mentioned.
- ✗ “Project will provide training opportunities for the employees.”
- ✗ “Project will contribute to Net Zero Industry Act benchmarks for clean-tech.”

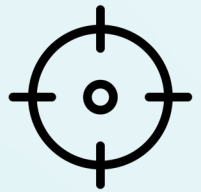


Knowledge sharing — Communication, dissemination and visibility

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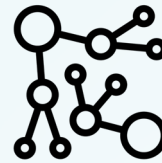


Knowledge sharing plan no longer mandatory annex, outline mandatory in Application Form Part B (5.2).



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*

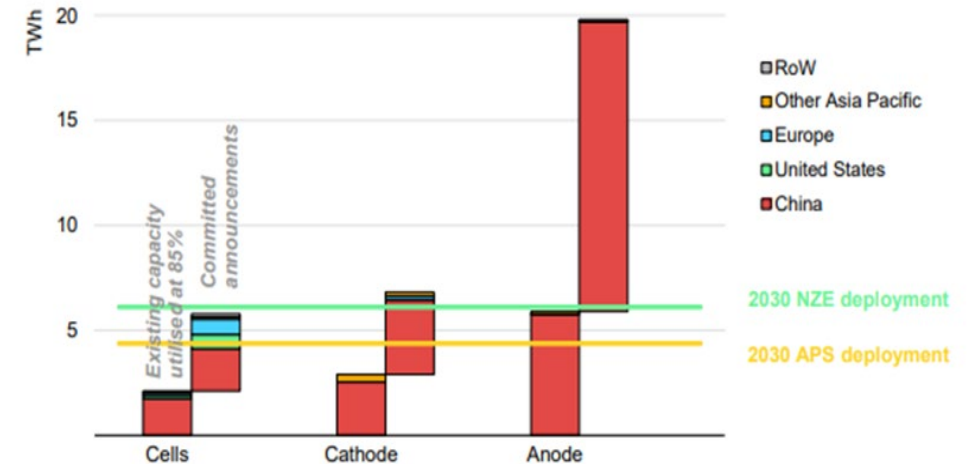
DG CLIMA - Low Carbon Solutions (II):

Research & Low Carbon Technology Deployment

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.

Figure 13 Output from existing and announced battery component manufacturing capacity in selected regions relative to Announced Pledges Scenario and Net Zero Emissions by 2050 Scenario deployment in 2030



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.



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

