



DIAMONDS4IF breakout session: key challenges for renewables in the Innovation Fund

Insights from Benjamin Fischer, RWE Offshore Wind

RWE experience with the Innovation Fund

- RWE Offshore Wind successfully participated in an early Innovation Fund call
- Positive aspects:
 - milestone-based structure
 - lump-sum payments
 - support for DEVEX, CAPEX, and OPEX
- Main challenge:
 - application process was highly complex, time-consuming, and resource-intensive
- Especially difficult to apply for SMEs with limited staff and internal capacity





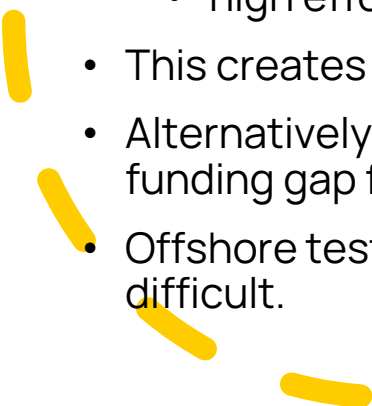
Recurring challenges for renewables in the Innovation Fund

- Market conditions have become more difficult
- Key issues include:
 - supply-side constraints
 - component shortages
 - inflation and cost escalation
- These conditions increase pressure on project economics
- As a result, companies become more risk-averse and less willing to add innovation-related risks
- This can slow down the deployment of first-of-a-kind renewable projects
- Scaling beyond pilot stage is a common barrier for renewables projects





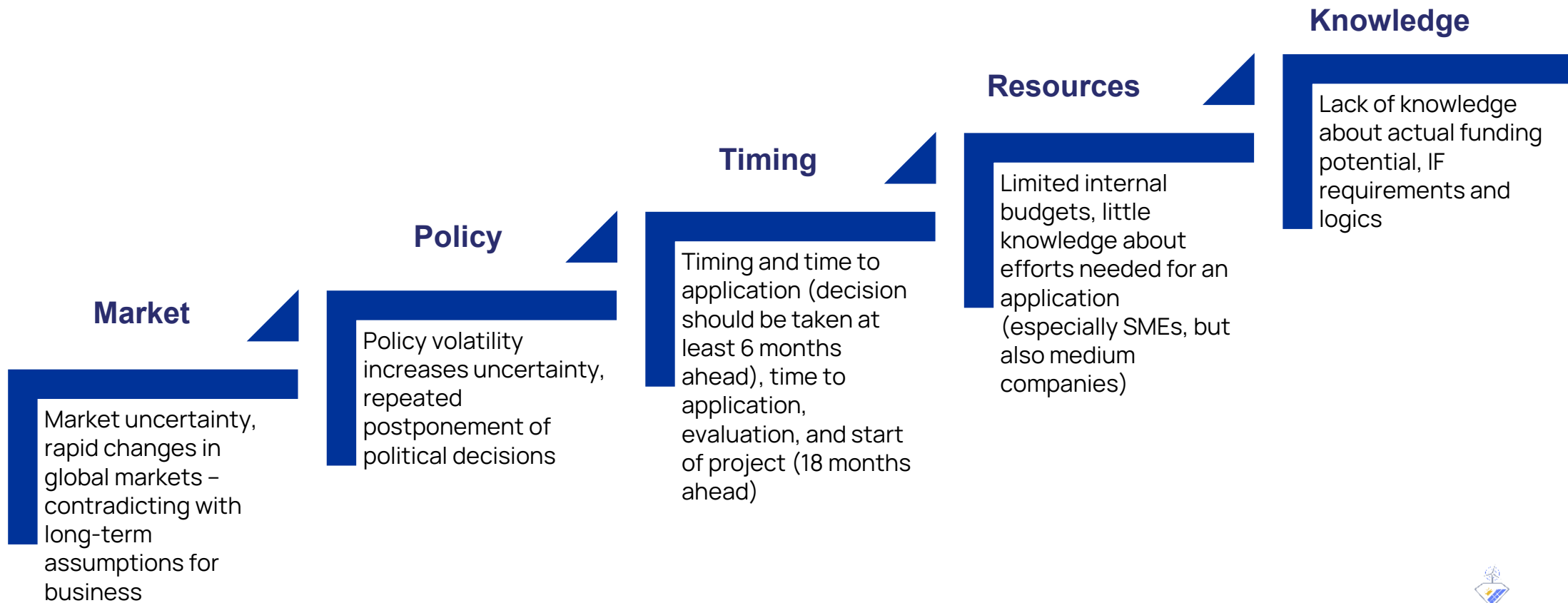
Recurring challenges for renewables in the Innovation Fund

- Current IF criteria often favour **direct CO₂ savings**, these are often too restrictive for RE-sector
 - Many important renewable enabling technologies create **indirect or system-level GHG** benefits
 - Later-stage funding such as IF remains valuable for de-risking first-of-a-kind deployment, however, **main issues reported**:
 - high complexity of requirements
 - rigid templates
 - high effort vs low success rate
 - This creates a **valley of death** between TRL 6/7 and industrial deployment (TRL 9)
 - Alternatively **new complementary funding instrument** needs to be established to bridge the funding gap for non-CO₂-related enabling key technologies for more EU competitiveness
 - Offshore tests and demonstrators are expensive, but access to suitable funding remains difficult.
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Insight from the DIAMONDS4IF project



Innovation Fund challenges: Pre-application phase



Innovation Fund challenges: Proposal preparation phase

Resources



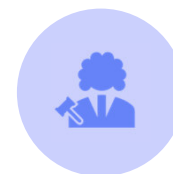
High personnel and financial effort required (several FTEs/6-8 months; 500-1000 hours for a full application). Internal alignment, resource planning, and collection of eligibility-relevant documentation often exceed 6 months of work.

Team



SMEs and even large companies struggle to mobilize the necessary internal resources and expertise (ESG, GHG/ETS, engineering, finance, permitting, etc.).

Financial capacity proof



Many applicants plan with insufficient verification of financial capacity (e.g., lack of Letters of Intent, auditor verification)

Complexity



The application process and documents are highly complex, with repetitive and overlapping requirements

Templates



Some of the templates provided by the CINEA are rigid, poorly aligned, and difficult to use

Financial model



Setting up a financial model on a high level of detail and in line with all requirements and funding logic is most difficult to most applicants



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Key challenges faced by applicants

- **Regulatory and Political Pressures**
- **High complexity** of the process and documentation requirements
- Unclear or **Over-Ambitious Criteria**
- Lack of **internal resources** to manage the application process
- Procedural and **structural limitations**
 - replication of data across templates, annexes, and portals, adding unnecessary effort.
 - Rigid Frameworks: Pre-defined templates and reporting structures lack flexibility

Most Complex Documents to Prepare :

- Business Plan
- Feasibility Study
- **Financial Model** (Relevant Cost-Model & Financial Information File - FIF):
 - Lack of clarity on how to calculate **Relevant Costs & IF funding amounts**
 - Misunderstandings regarding (no) pre-financing. → the grant will be only paid upon completion of milestones
 - Unclear “level of details” related to financing and business partnerships
 - Defining a funding strategy aligned with the requirements

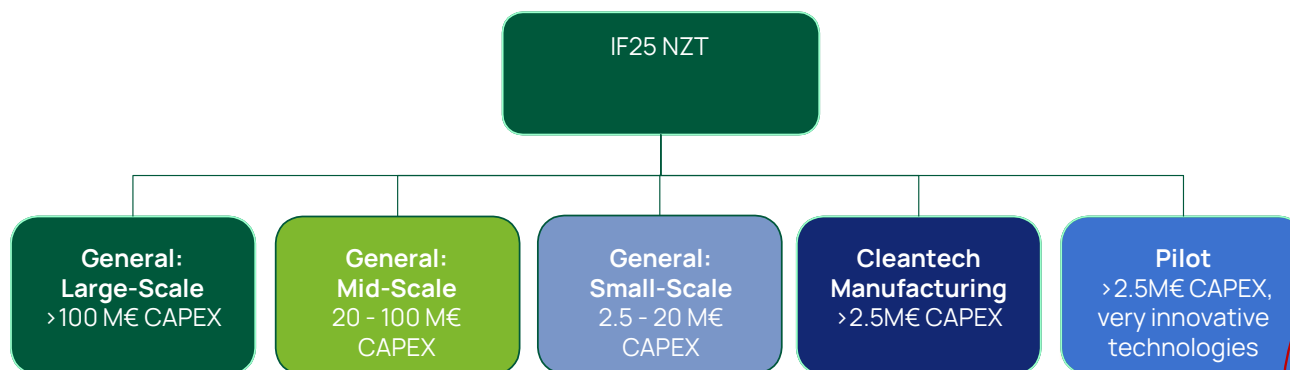
Innovation Fund 2025 Calls (Grants)

Cleantech Manufacturing is one of 5 topics in the Call. **Funded activities include production of components for**

- Renewable energy installations
- Electrolysers and fuel cells
- Energy storage solutions
- Heat pumps for various uses

Specific conditions and insights

- **Innovation AND project maturity** → reflected in evaluation scoring
- Innovation rooted in **production processes and/or components or final products**
- Projects with Financial close within 2 years (*max 4 years*) and entry into operation within 4 years get a higher score in project maturity
- **Relative GHG emission avoidance** (min 50%) → **should be >95% to be competitive**
- **Cost efficiency ratio**: max 200 €/t CO₂-eq → **should be <20 €/t CO₂-eq to be competitive**

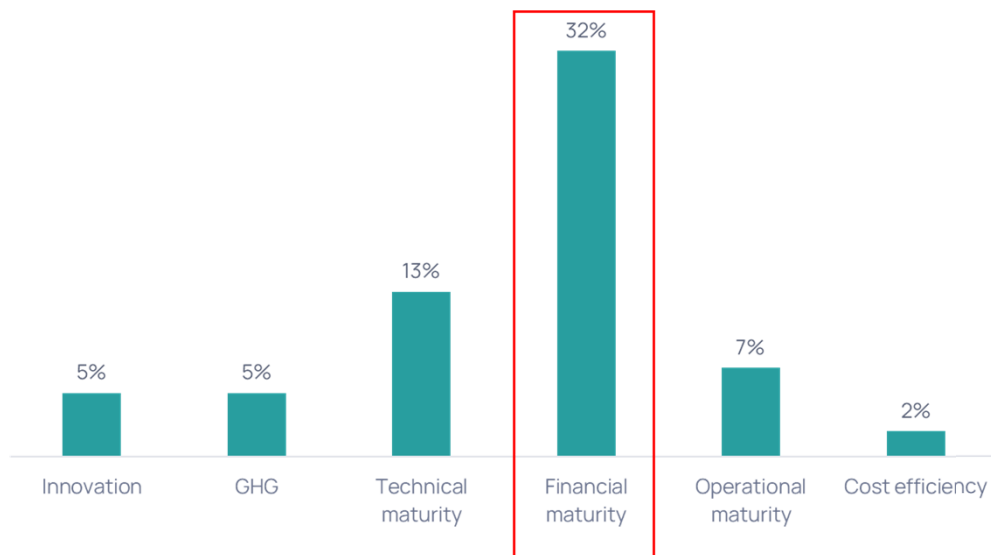


- ✓ Same award criteria for all topics of the Net Zero Technologies (NZT) call
- ✓ Scoring differs per topic

Call opening: 03.12.2025 *Deadline: 23.04.2026* *Results: Autumn 2026*

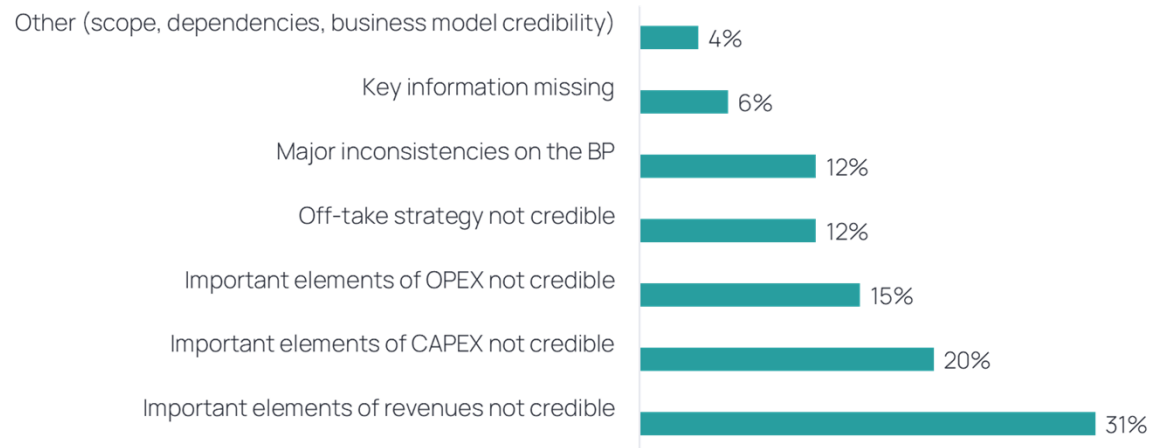
Why projects fail

Failure rate per award criterion

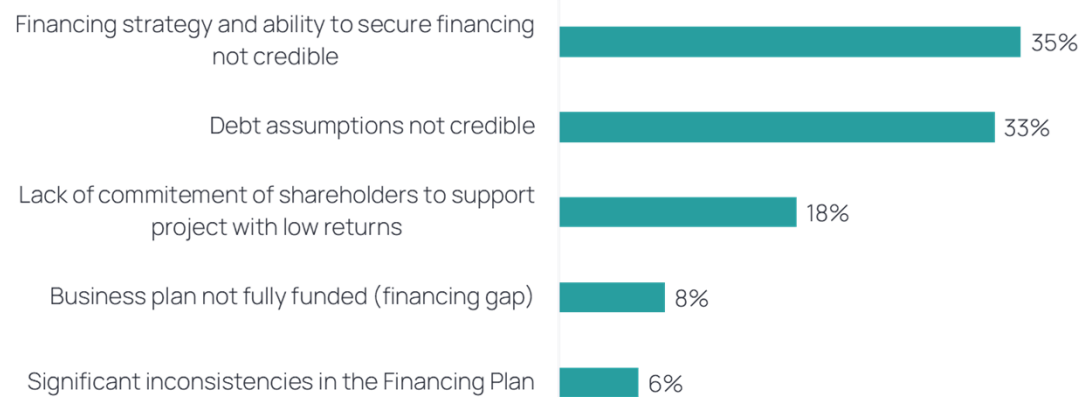


92 proposals (out of 291 proposals passing A&E) failed under Financial Maturity

Main issues with the Business Plan



Main issues with the Financing Plan



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Successful project example

- Diamonds4IF already supported a successful manufacturing project: **Next.Gen.Wind** by Flender GmbH
- IF project was, among other pre-developments, based on results of a previous H2020 project
- Flender received support during the application phase via Diamonds4IF



The image shows a project factsheet for the 'Next.Gen.Wind' project, funded by the Innovation Fund. The factsheet is divided into two main sections: a left section with a photograph of a robotic arm in a factory and a right section with a teal background and white text. The left section contains a 'Project Factsheet' header and a detailed description of the project's goals and objectives. The right section contains a table of key project details.

INNOVATION FUND
Deploying innovative net-zero technologies for climate neutrality
Next.Gen.Wind: Next Generation Wind powertrain production

The Innovation Fund is 100% funded by the EU Emissions Trading System

| Project Factsheet

The project aims to manufacture the next generation of powertrains for multi-megawatt onshore and offshore wind turbines. Powertrains convert the low-speed rotation of the turbine's rotor into electricity. The project is focused on making these components more powerful, efficient, and fully integrated. These components will be designed to be compact and reliable, which is essential for saving material resources and weight compared to direct-drive offshore turbines. The new powertrains will use significantly less critical raw materials, such as copper and rare earth minerals. The relative greenhouse gas (GHG) emissions will be reduced by 99.82% compared to the reference scenario.

With Next.Gen.Wind, Flender aims to increase the on-

COORDINATOR	FLENDER GMBH
LOCATION	Germany
CATEGORY	Renewable Energy (RES)
SECTOR	Manufacturing of components for renewable energy
AMOUNT OF INNOVATION FUND GRANT	EUR 44,323,358
EXPECTED GHG EMISSIONS AVOIDANCE	6,670,354 tonnes CO2 equivalent
STARTING DATE	01 April, 2025
FINANCIAL CLOSE DATE	30 September, 2025
ENTRY INTO OPERATION DATE	30 June, 2027
CALL NAME	

07 October 2025

Chances and Challenges in Innovation Fund for European Solar manufacturing industry

Chances

- ✓ Manufacturing sector has higher success chances than average
- ✓ 200m€ Project budget from Meyer Burger's HOPE project will potentially be released due to insolvency
- ✓ The award-decisive emission saving criterion can be derived from the capacity of the production plant (not: the emission factors of the production plant)
- ✓ Up to 4 years time to finalize investment decisions and permits after a successful application
- ✓ No more duties to sell only in Europe

Challenges

- ! Projects with a long time horizon (e.g. related to step-wise installations) may only receive funding for the first steps
- ! Cost efficiency criterion is limiting the size of funding vs. investment cost
- ! Project needs to be pre-financed, no prepayments

Key message to CINEA / European Commission

- Later-stage funding is essential, but the current programme design should be **more flexible**
- Introduce a **two-stage** application process
- **Simplify** templates and models
- The Innovation Fund for RES should better support:
 - Create **complementary instruments** for key enabling technologies
 - Broaden the **CO₂ assessment** approach to include indirect future effects
 - high-cost demonstration environments such as offshore wind
- The focus should be on **actual deployment outcomes** and long-term system value

Key message to CINEA / European Commission

Make GHG modelling reachable for renewable energy projects:

- Use simplified GHG pre-screening before full IF-style modelling
- Provide **sector-specific guidance for RES** and enabling technologies.
- Allow well-evidenced **indirect and system-level GHG** effects
- Make assumptions, baselines and reference technologies easier to interpret
- Recognise system-enabling and **indirect decarbonisation effects** where justified



Key message to CINEA / European Commission

Horizon Europe should ask projects to provide:

- A credible **permitting route** and realistic implementation **timeline**
- Milestones that show progress **towards industrial deployment**, not only TRL
- Clear evidence that the **value chain** can supply, install and operate the solution and expected EU system impact
 - Not all renewable projects are assessed in the same way
 - Strategic relevance can matter as much as visibility
- Check whether the project can be built, operated and accepted in **real conditions**
- Link technical milestones with market, regulatory and organisational milestones.

Best practices for R&I project owners



Recommendations

- Build consortia that connect research and industry. Include companies that can validate, adopt, industrialise and scale the solution.
- Define the state of the art clearly. Compare the technology with industrial benchmarks and IF-funded projects.
- Set up an internal deployment structure. Secure ownership, staff, management support and application capacity before the call starts.

Best practices for R&I project owners

- Build financial credibility **and stakeholder support** early
- Letters of support that show real commitment: amounts, timing and conditions
- Early involvement of investors, customers, suppliers and strategic partners
- A clear funding-gap logic and a **robust business case**
- Consistent assumptions across business plan, financial model and narrative



Best practices for R&I project owners

Organisational capacity is often the real dealbreaker

- Preparing a strong application requires major internal effort
- Unclear roles and weak coordination create delays
- SMEs and large companies face different bottlenecks
- Strong projects fail when teams cannot sustain the workload

Good tools improve decisions early

- Structured checks help identify weak projects early
- Avoiding the wrong application saves time and credibility
- Better decisions matter more than faster applications
- Clear no-go decisions improve future project design
- Some Renewable technologies need iteration, not acceleration

Thank you!

