

# European Funding landscape for Biofuels - the ETS Innovation Fund

5<sup>th</sup> European Conference

Future of Biofuels

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# AGENDA

1. Our company, services and track record
2. EU funding programmes for biofuel projects
3. Today's Focus: The ETS Innovation Fund

# Our Company, services and track record

# European leader in innovation & funding

Created in 1985, PNO is a high-growth knowledge-intensive company specialised in Grants Consultancy and Innovation Management, providing support services to private and public organisations. It proposes a unique combination of services, based on a profound insight in investment and innovation funding strategies, up-to-date knowledge and over **35 years of hands-on expertise** in more than **500 funding programs** in most EU countries.

1. **Structured analysis and benchmarking of** corporate R&D and innovation processes to spot strengths and opportunities for improvement
2. **Scoping RD&I strategy** with recent insights in technology, market and policy trends
3. **Facilitate access to new partners and technologies**, by tapping into external knowledge and innovation and a wide partner network
4. **Structuring, funding & realising projects** through project management, business modelling, planning and access to funding



**35+**  
years of  
experience



**9**  
countries  
with offices



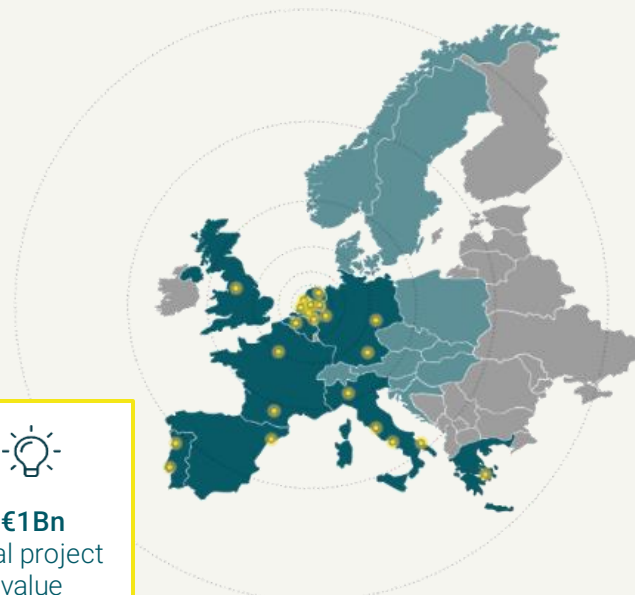
**2K+**  
organisations  
supported



**10K+**  
parties in  
network

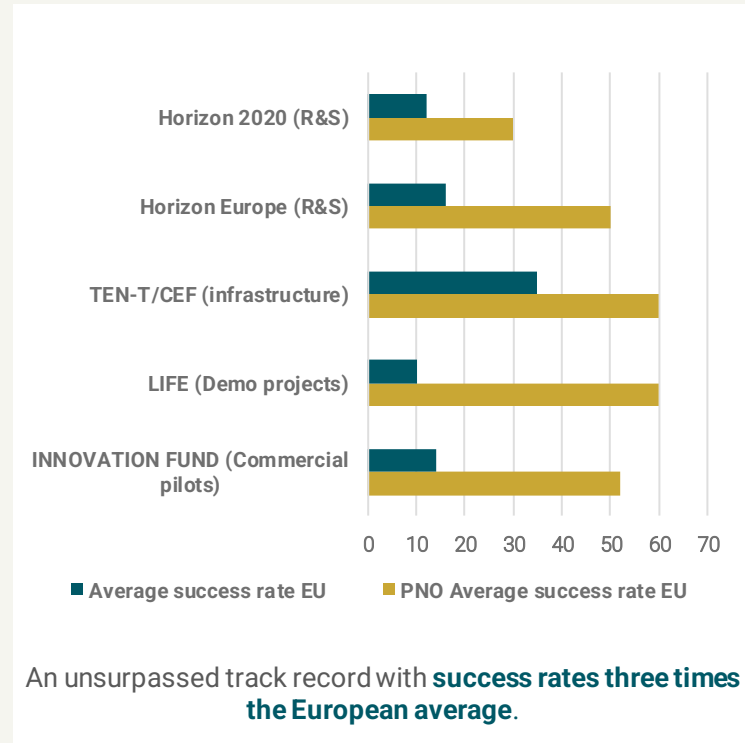


**€1Bn**  
total project  
value



# PNO'S unique assets

- **+ 450 high quality specialists with a practical, hands-on attitude**, sector knowledge, funding expertise **and a scientific and financial background**. Several PNO employees regularly **act as evaluators for EC grant programs**.
- Participating as a **partner in + 100 R&D and innovation projects** in Europe in multiple sectors.
- Unmatched grant application volumes with over **115,000 national & regional grant applications and over 2,200 EU grant applications** successfully prepared and submitted by PNO since 2015.
- **Frequent and intensive contact with both national and EC grant providers and policy makers**. PNO is contracted as a consultant by both the European Commission and the EC Joint Research Centre.



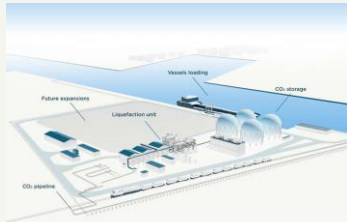
# Our CEF track record



60% success rate

- **A unique European track record:** over 40 projects prepared in the last 10 years.
- **Extensive international experience** assisting multiple organizations across the EU, Norway and the UK in developing CEF projects, writing applications and providing project management support.
- **Extensive experience** with various CEF call priorities (Wind, Gas, Carbon Capture Transport and Storage, Urban nodes, Safe & Secure Infrastructure, etc).

## Success stories in the CEF programme



### Antwerp@C CO<sub>2</sub> Export Hub – CEF Studies + CEF Works

- Presented by Air Liquide, Port of Antwerp-Bruges, TotalEnergies and Fluxys
- Realisation of a CO<sub>2</sub> export terminal in the port of Antwerp, including a CO<sub>2</sub> backbone, liquefaction/compression units, temporary storage and ship loading facilities.

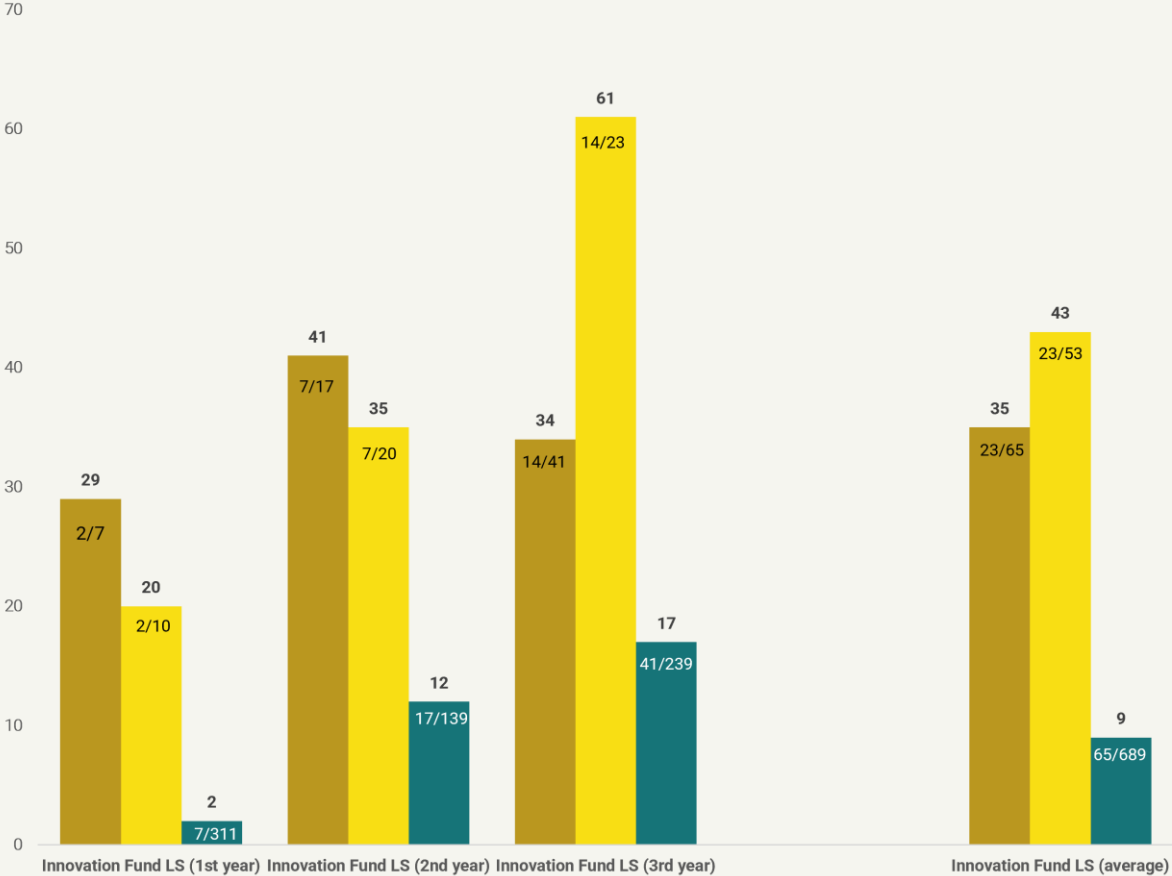
*PNO supported the applicant during the application process and in receiving grants of CEF study (2020, ~€3,2Mln) and subsequent CEF works (2022, €144,6Mln)*

### Ghent Carbon Hub – CEF studies

- Presented by Fluxys, Arcelor Mittal and North Sea Port Flanders
- Realisation of an open-access infrastructure including a CO<sub>2</sub> pipeline network, a dedicated CO<sub>2</sub> terminal and a set of ship loading facilities.

*PNO supported the applicant during the application process and in receiving grants of CEF study (2022, €9,6Mln)*

# Excellent Innovation Fund track record



# Unique success in the Innovation Fund



Emission avoidance  
in 10y (Mt)



Grant (€M)

## ANRAV - Heidelberg Materials

The first complete carbon capture, utilisation and storage (CCUS) value chain project in Eastern Europe linking CO<sub>2</sub> capture facilities with CO<sub>2</sub> storage in the Black Sea.

## GO4ECOPLANET - Lafarge Poland

The project will implement a full CCS value chain from their kujawy cement plant to final storage in north sea basin.

## ReLieVe - Eramet

The first battery recycling project of the Innovation Fund, to be deployed in Dunkirk, with a grant of 67M€, allowing the treatment of 50Kt of end-of-life Li-ion batteries per year.

## Kairos@C - Air Liquide and BASF

The project will develop a complete carbon, capture and storage (CCS) value chain that will initiate a cross-border CCS value chain and kick-start the Antwerp@C project, which is developing a multi-modal transport infrastructure for CO<sub>2</sub> in the port of Antwerp.

## K6 - EQIOM

The project will maximise the usage of biomass-containing and other alternative fuels at the Lumbres cement plant through a novel industrial-scale combination of an oxy-fuel kiln with carbon capture and subsequent permanent storage or utilization in products of concrete.

## ELYgator - Air Liquide

It involves the realisation of a large-scale 'next generation' renewable hydrogen production facility, with a production capacity of 200 megawatts.

8

189

10

228

4.2

67

14.2

365

8.1

153

3.3

99



# What our clients say about us

“Writing a proposal for the **EU Innovation Fund**, especially when it is the first application, is a demanding exercise. It can only be successful if both the Consultant and the Proponent team are working hand-in-hand to get it done.

“**PNO has been essential in the timely and high-quality work for the application.** PNO has shown to be able to keep a holistic view, yet to combine this with pragmatic, down to earth work which is necessary for a winning proposal.”



**Jan Theulen**

Director Technologies & Partnerships / Lead CCUS, Heidelberg Cement

“PNO consultants support has been fundamental in shaping and co-developing our **successful CEF Energy applications** for the Antwerp Liquid CO<sub>2</sub> export terminal studies and works proposal.

With their constant high-level advice, hands-on approach and professional support, **PNO Consultants helped us to prepare a top-quality application that was very well received by the CEF evaluators, resulting very high in the final ranking.**”



**Hanna Van Kraaij**

Funding Desk Manager, Port of Antwerp  
Lead WG Funding, Antwerp@C

“PNO consultants support has been crucial in shaping and co-developing our two **CEF Energy proposals** under the Northern Lights project. By bringing in their experience and insights from previous projects, as well as through their constant support in all aspects related to the proposal management and submission, **PNO Consultants has helped us to prepare two top-quality proposals** that will also help us, and our consortium partners, to achieve our goals in the innovation-driven CCS domain”



**Per Sandberg**

Senior advisor, Business Development at Equinor and BD leader for the Northern Lights project

# EU funding programmes for biofuel projects

# European funding - Grants

EU funding comes in many different forms...

**Multiannual Financial Framework (MFF)**  
The EU's 7-year budget

€1.211  
trillion

Total  
€2.018 trillion



€806.9  
billion

**NextGenerationEU**  
COVID-19 recovery package  
**Recovery and Resilience Facility** €723.8  
billion to grants and loans  
**NextGenerationEU contribution to other  
programmes** €83.1 billion

## Grants

partly funded by the EU and partly from other sources that usually follow public calls for proposals

## Subsidies

managed by national and regional authorities

## Loans, guarantees and equity

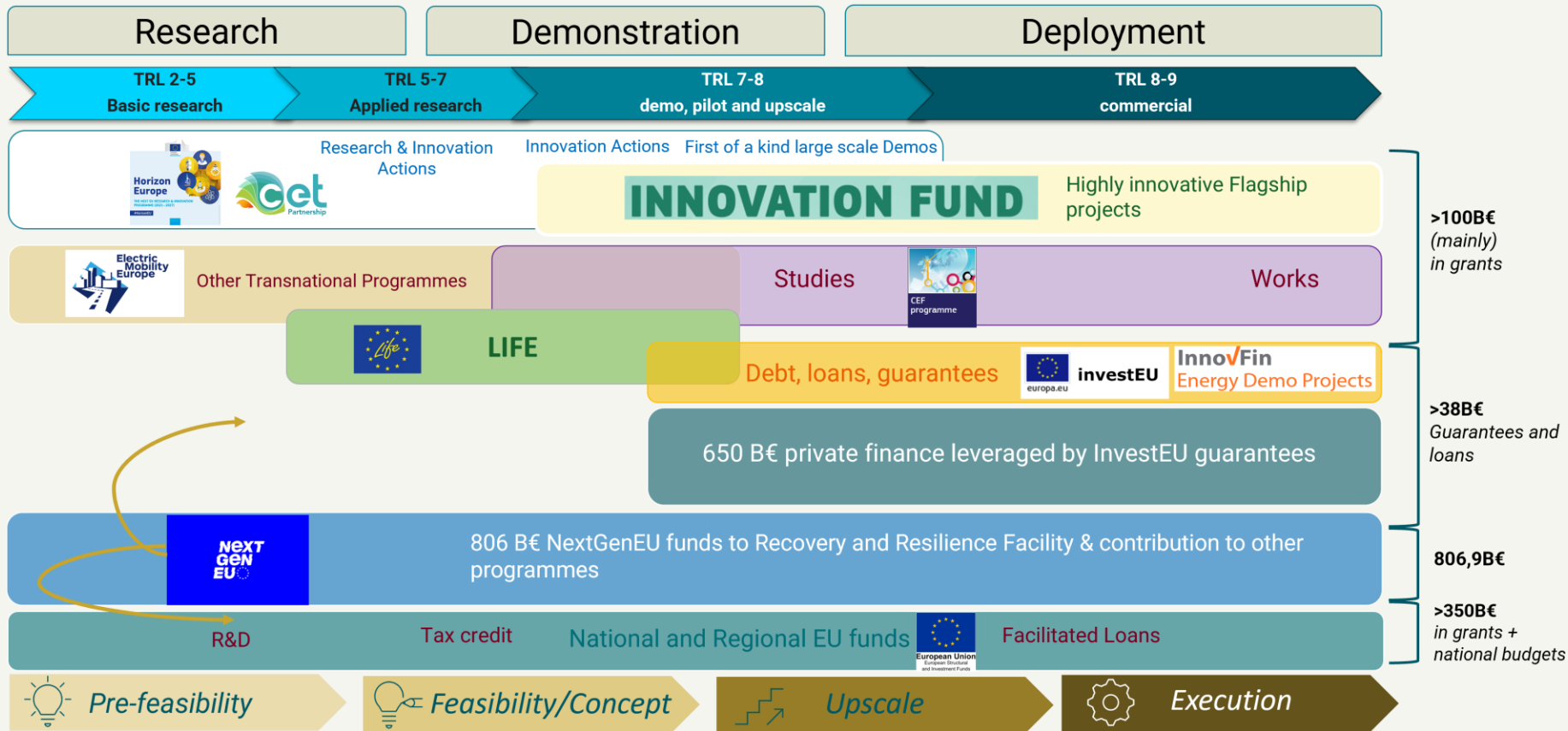
as forms of financial assistance to support EU policies and programmes

- Each program has specific agenda and objectives
- Calls sets the conditions of application indicating the starting date and deadline for submission, the budget, the award criteria, the conditions for eligibility and admissibility, etc.
- In most cases application templates are also provided

Some programmes such as the **Innovation Fund**, are funded outside of the MFF budget. The EU Innovation Fund is funded through the auctioning of emissions allowances under the EU Emissions Trading System (EU ETS).



# EU Funding Landscape\*



\*\* Budgets cover the 7 year period of the EU's Multi-annual Financial Framework (MFF)

\* PNO proprietary scheme - Not to be used without the prior written consent of PNO

# European funding - Biofuels



TRL 2-7

EU's main funding programme for research and innovation. Cluster 5 'Climate, energy and mobility' under Pillar II – Destination Sustainable, secure and competitive energy supply includes activities in the areas of renewable energy, energy system, grids and storage.



Various TRL

European Structural and Investment Funds (ERDF, ESF, Cohesion Fund, EAFRD, EMFF) allocated to Member States and delivered through nationally co-financed multiannual programmes.

TRL 1-8



CET Partnership for national and regional research (co-funded by the European Union under the Horizon Europe Partnership scheme) aiming to accelerate the energy transition and to support the implementation of the European Strategic Energy Technology Plan (SET Plan). Call modules: "Hydrogen and renewable fuels" and "Integrated industrial energy systems".

TRL 5-7



LIFE subprogramme Climate Change Mitigation and Adaptation with actions including the increase, generation and use of renewable energy and improvement of energy efficiency.

TRL 7-9



The largest EU funding programme for the commercial demonstration of innovative low-carbon technologies aiming to bring to the market industrial solutions to decarbonise Europe and support its transition to climate neutrality.

TRL 8-9

**InnovFin**  
Energy Demo Projects

InnovFin Energy Demonstration Projects (EDP) facility for loans, guarantees or equity type investments managed by the European Investment Bank (EIB).

# The ETS Innovation Fund

# Innovation fund - Overview



The aim of the funding is to share the risk with promoters of first-of-a-kind highly innovative projects.



EU member States + EEA

EU geographical and sectorial balance expected in selection of projects



Single applicants (companies) or consortia



Managed by CINEA + EIB (Project Development Assistance)



Audit of costs and monitoring of results

No prepayment – but up to 40% of funding before construction and operation



Up to 3 years preparation + 3-10 years operations

TRL8-9

Sufficiently mature in terms of planning, business model and financial and legal structure



**First-of-a-kind highly innovative projects** with a negative business case – long projects with commercial roll-out and significant emission reduction

Supply-chain and business case defined

Pre-commercial or commercial scale



Lump sum contribution - Payments depend on achievement of the results and completion of WPs

Budget from ETS (auctioning of 530 mln ETS allowances from 2020 to 2030): €40billion, depending on carbon price

Funding 60% of Relevant Costs

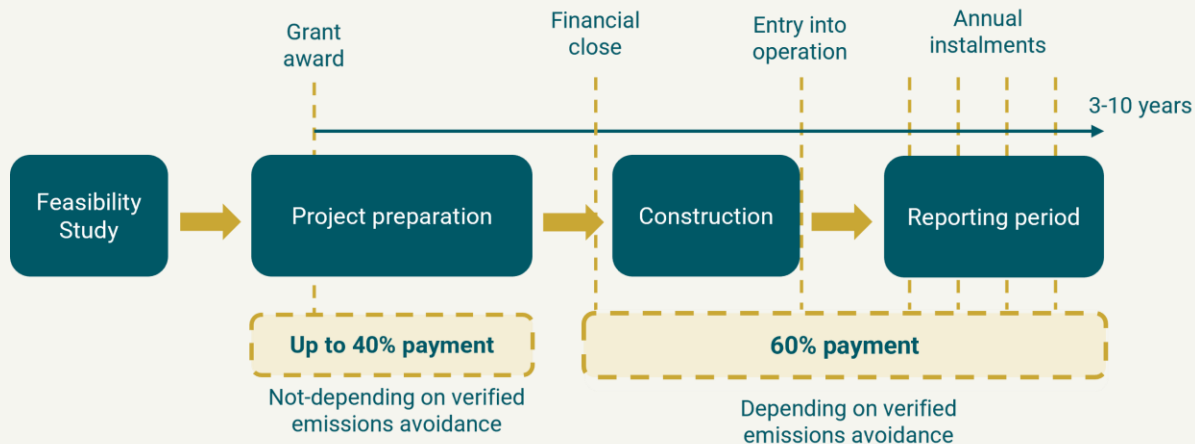
75% threshold of the total amount of GHG emission planned to be avoided over the entire project duration

**Large Scale:** >100mln

**Small Scale:** up to 20mln

**Mid-scale:** >20mln and up to 100mln

# Innovation fund - Overview



## Sectors



- ✓ Energy Intensive Industries (EII)
- ✓ Energy Intensive Industries (EII) where CCS is the main aim of the project
- ✓ Renewable energy
- ✓ Energy storage
- ✓ *NEW SECTORS expected in the 2023 call (Maritime, Aviation)*

## Topics

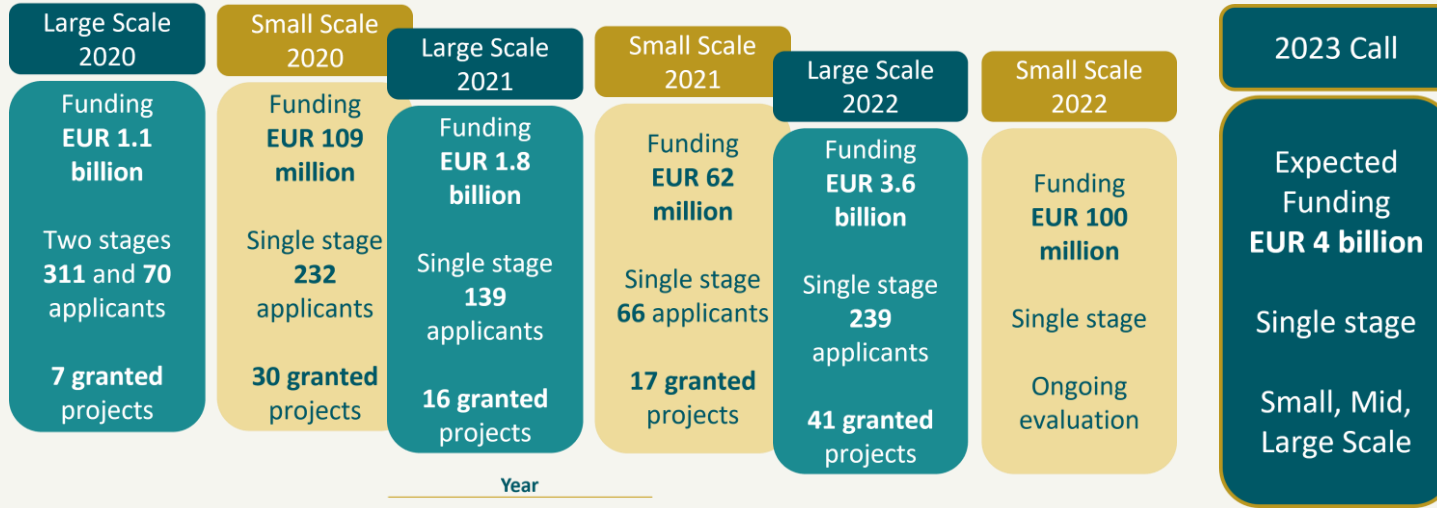
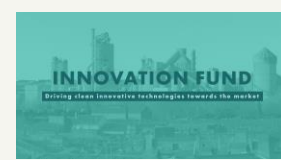
- ✓ General large-scale
- ✓ General medium-scale
- ✓ General small-scale
- ✓ Cleantech manufacturing
- ✓ Pilots



Auctions  
for H<sub>2</sub>  
RFNBO -  
800mIn

Expected  
opening 23<sup>rd</sup> of  
November with  
deadline 9<sup>th</sup> of  
April 2024.



# Innovation Fund Calls – Main figures



	Year		
	1	2	3
<b>Projects submitted</b>			
 Average budget (mEUR)	70	87,6	75,3
Average GHG (mtCO2e)	3,86	5,16	10
Cost efficiency (EUR/tCO2e)	18	16,9	7,5
<b>Projects selected</b>			
 Average budget (mEUR)	157	106	87,8
Average GHG (mtCO2e)	10,4	8	5,4
Cost efficiency (EUR/tCO2e)	15,1	13,2	16,3

## Large Scale

- ✓ Number of applications increased over the years (many resubmissions which are encouraged)
- ✓ Funding amount increased
- ✓ Success rate increased – good chance of success if project meets criteria
- ✓ Lower average budget in the third call since more projects were granted
- ✓ Higher cost efficiency in the third call since mid-sized pilots were included for the first time (higher cost)

# Innovation Fund - Award criteria and important provisions



Degree of Innovation	GHG emissions avoidance	Project maturity	Replicability	Cost efficiency
Beyond state-of-the-art (including scaling up of innovative technologies)	Absolute emissions avoidance Relative emissions avoidance Quality of calculation Overall climate impact	Technical maturity Operational maturity Financial maturity	Market potential at: - proposal & regional level - sector level - economy level Resilience of EU value chains Multiple environmental impacts	EU contribution requested per tCO <sub>2</sub> avoided

**Overall quality of the laureates:** high and homogenous quality levels and high scores on every criterion.

**Financial maturity:** challenging point, over 40% of eligible proposals failed



Award criteria evaluated in cascade (if all requirements are not met or score is below threshold, the evaluation is stopped):

1. Eligibility and admissibility (no score, just assessment that all requirements indicated in the call text are met)
2. **Degree of Innovation**
3. **GHG Emissions avoidance and Project Maturity**
4. **Scalability and Cost Efficiency**



The 5 existing award criteria will be kept but adjusted to accommodate new requirements:

- ✓ possibility to apply an additional award criterion in the context of sector-specific call or topic
- ✓ potential to reduce overall climate impact and contribution to circularity and zero pollution objective will be evaluated (not only GHG avoidance potential)
- ✓ scaling-up projects may be considered as “innovative”
- ✓ wording for cost-efficiency will be simplified
- ✓ update of definition and simplification of the guidance on Relevant Costs

# Innovation Fund - Application documents and tips



Some tips...



## Application documents

- ✓ Application Form Part A (administrative information about the applicant organisations)
- ✓ Application Form Part B (technical content of the proposal)
- ✓ Application Form Part C (additional project data)
- ✓ Mandatory annexes & supporting documents
  - Detailed budget table/relevant cost calculator
  - Participant information
  - Timetable/Gantt chart
  - GHG emissions calculator
  - Feasibility study
  - Business plan
  - Detailed financial model sheets
  - Audit statement on relevant costs
  - Knowledge sharing plan
- ✓ Other annexes (optional)
  - Support to project
  - Terms of supply
  - Due diligence reports
  - Permits, licences, authorisations
  - Other



The total required documentation ranges between 300 – 500 pages – demanding application process



Maturity is split across three demanding sub criteria, each of which requires extensive documentation



Ensure an internal process management with adequate milestones set, regular meetings and clear objectives



Allocate resources to each project part (technical, financial, business, permitting etc.) early in the process and ensure everyone is in line with the proposal requirements and concept



Assign a Project Manager that supervises the process, ensures consistency of information and main claims across all documents and clear cross-reference to the annexes



Get board/CEO approval early on and ensure a smooth decision-making process



Have an external reviewer check your application and supporting documents at least once during the process



Make sure that parties relevant for project implementation are fully in line with the proposal and provide explicit support

# Innovation Fund – The 2023 implementation timeline



Remember...



Start preparing your application early!



Check whether your project fulfils all the requirements of the call



Perform a Viability Check to see if you need to redefine project concept, modify battery limits etc.



# Thank you

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## EXPERIENCED EU GRANT PROPOSAL SPECIALISTS

In order to support your Green Deal projects from conception through to realisation PNO can construct multidisciplinary project team composed of experienced EU grants specialists with backgrounds in energy, CCUS, recycling and resource recovery.