Innovation Fund Closed-door Knowledge Sharing Workshop on Permitting

7 May 2025

Overview of the IF portfolio and results from permitting survey

Ugo MIRETTI – Project Adviser, Innovation Fund, CINEA

European Commission

Welcome to CINEA

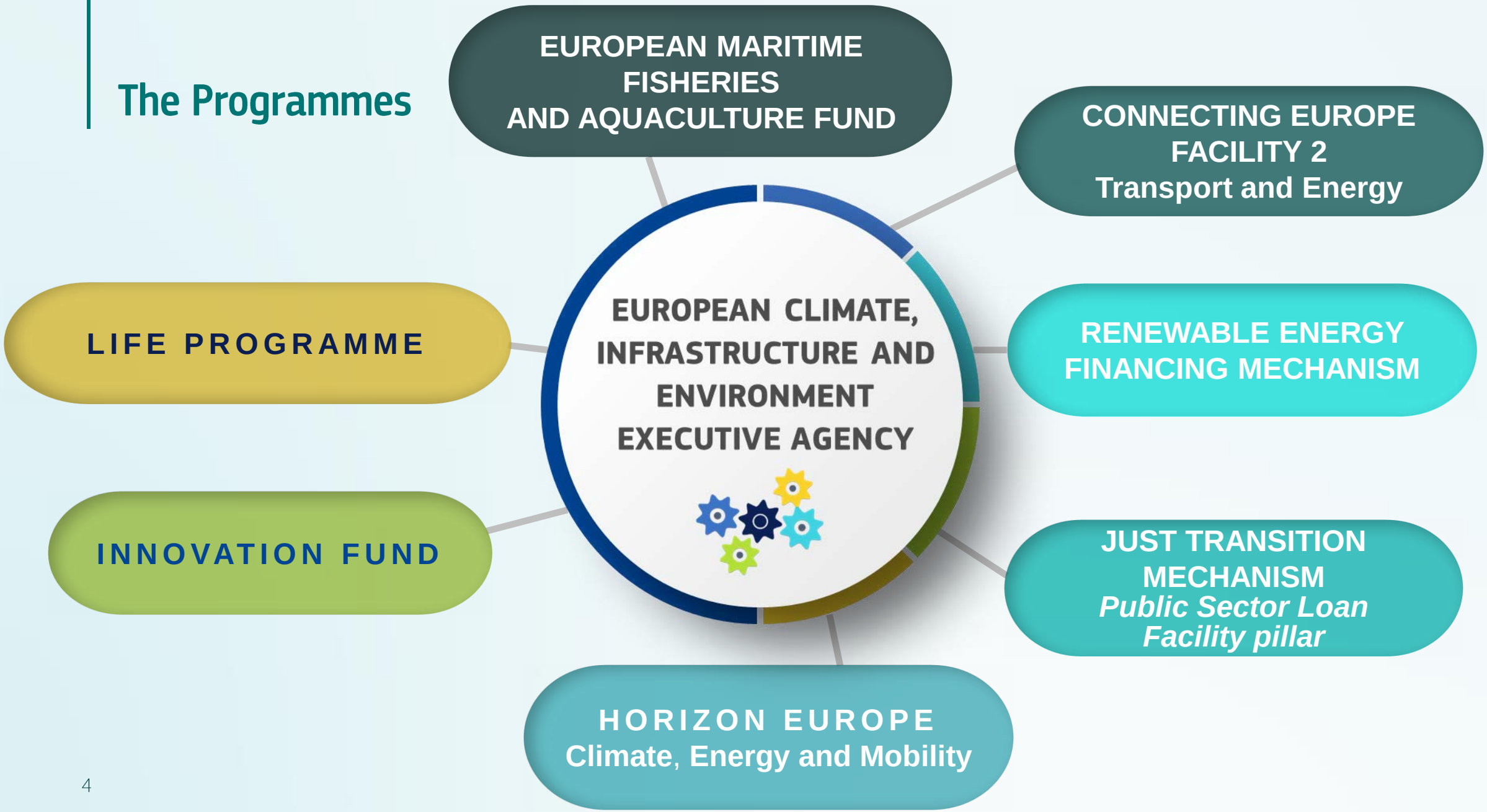
> 65 billion 2021-2027

> 600 staff by 2027

> 4000+ projects by 2027

Funding a green future for Europe

The Programmes



INNOVATION FUND

Funded by the EU Emissions Trading System

Deploying innovative net-zero technologies for climate neutrality

€40 billion* available between 2020-2030

grants awarded through regular calls and auctions

avoid GHG emissions, boost competitiveness

supporting innovation in:

Energy-intensive industries

Renewable energy

Energy storage

Carbon capture, use and storage

Net-zero mobility and buildings

*based on a carbon price of €75/tonne

Innovation Fund in a nutshell

Projects granted + under GAP*

~ 200 projects

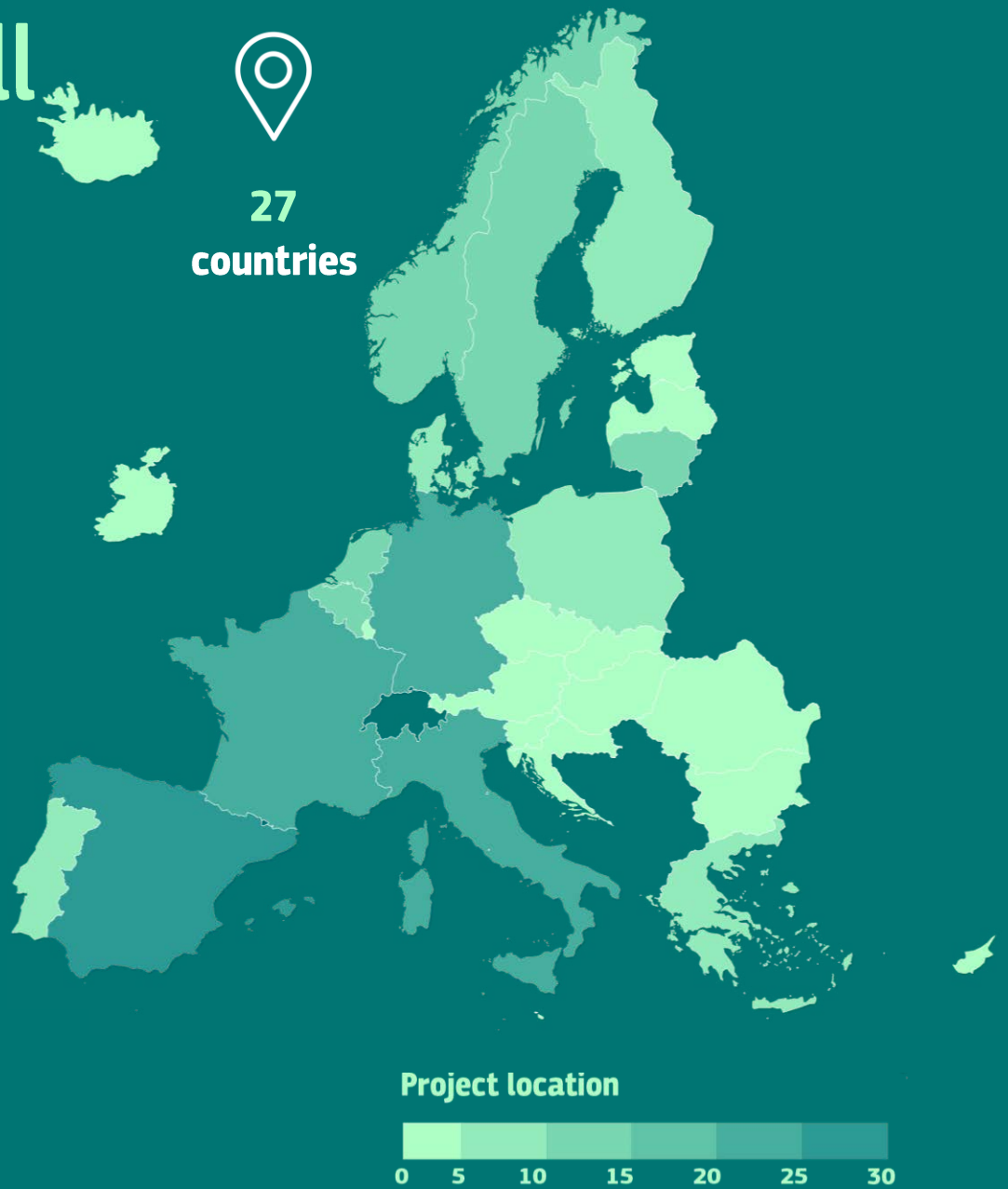
~ €12 billion

~865 Mt CO_2e
to be avoided**

Over 1 500 proposals received

**Grant Agreement Preparation*
***estimated based on 10 years of operations*

27
countries



Data as of 17/03/2025

The Permitting Survey

A Survey on Permitting among IF projects was launched in late 2024 for two reasons:

Bottom up, IF projects reported difficulties with permits.

Top down, the EU Net Zero Industry Act aimed to simplify permitting processes.

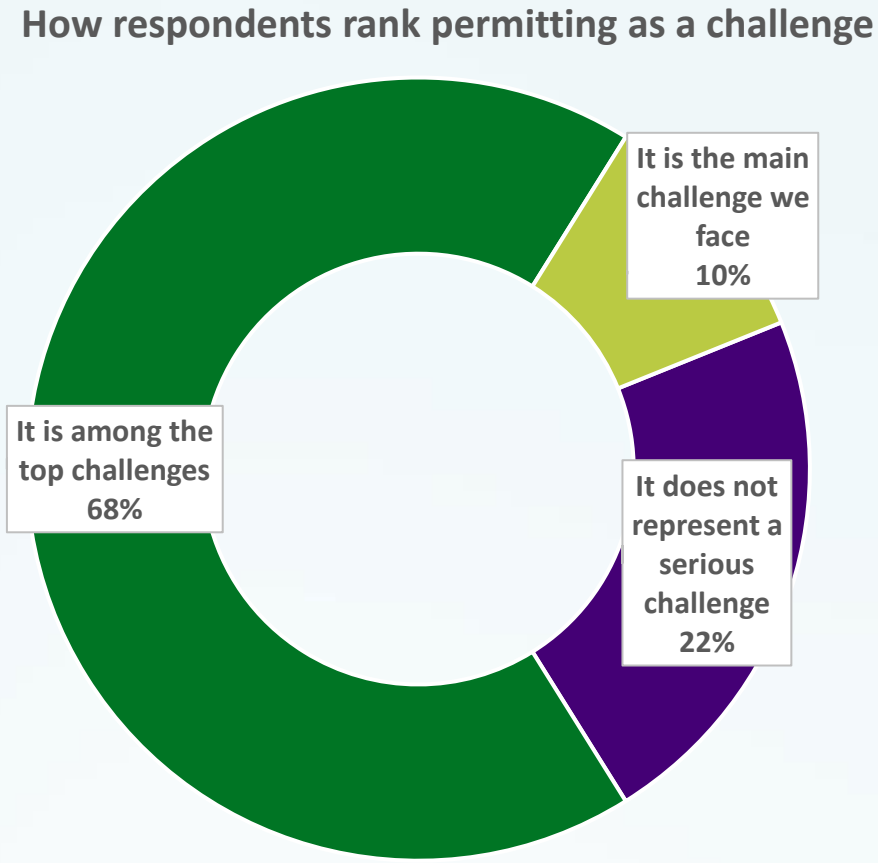
The results of the Survey will:

- Be included (succinctly) in the annual Innovation Fund Knowledge Sharing Report.
- Constitute the main input, together with this workshop, for a dedicated report.
- Inform relevant EU policy initiatives.

The Permitting Survey

The Survey collected **90 replies** from a total of 120 projects;
A very high coverage as some could not reply (e.g., being at too early a stage).

In General, the results suggest that permitting is a very important issue for low-carbon projects.

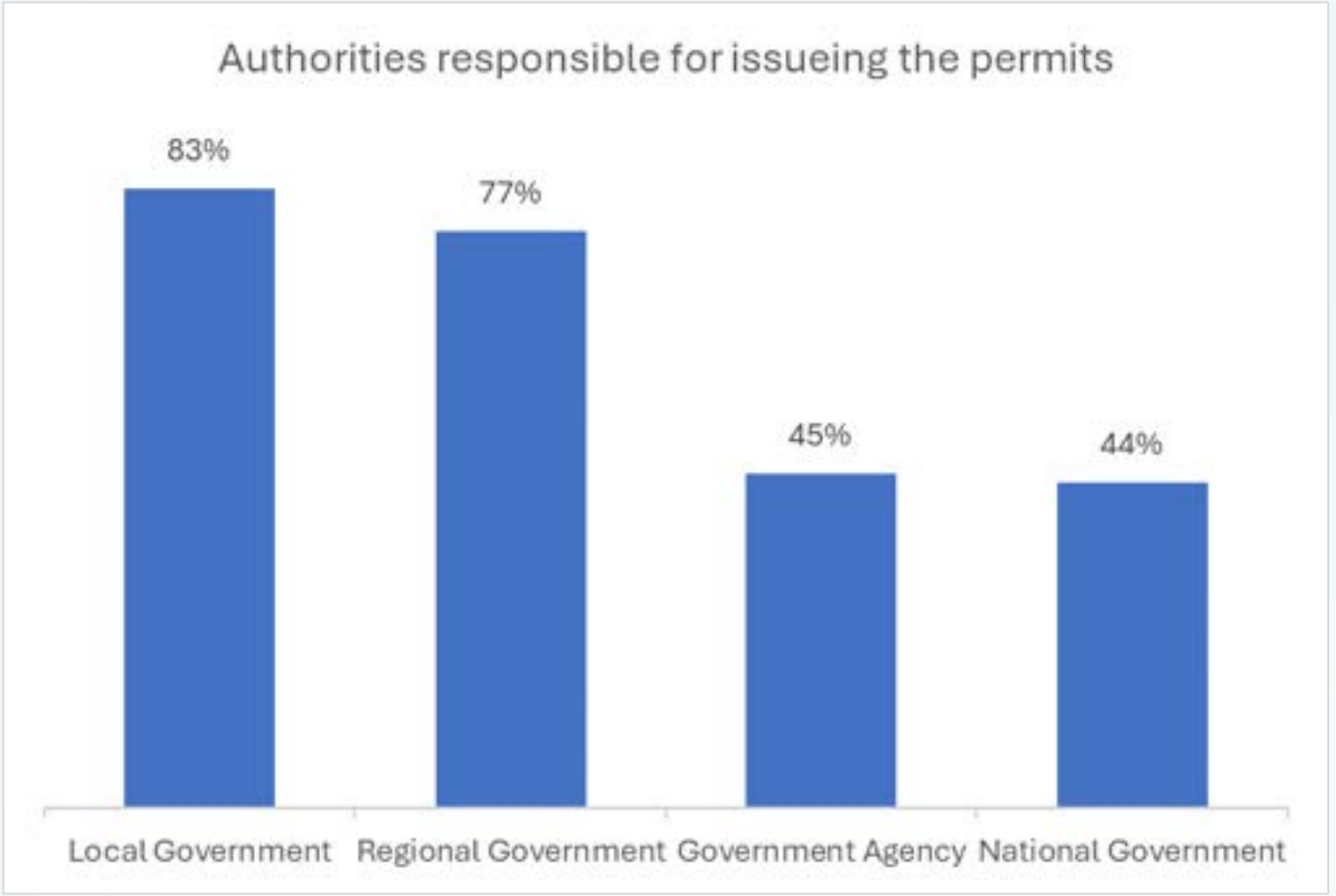


European Commission

The Authorities

A large majority of the projects interacts with the **local government** (83%) and/or the **regional government** (73%).

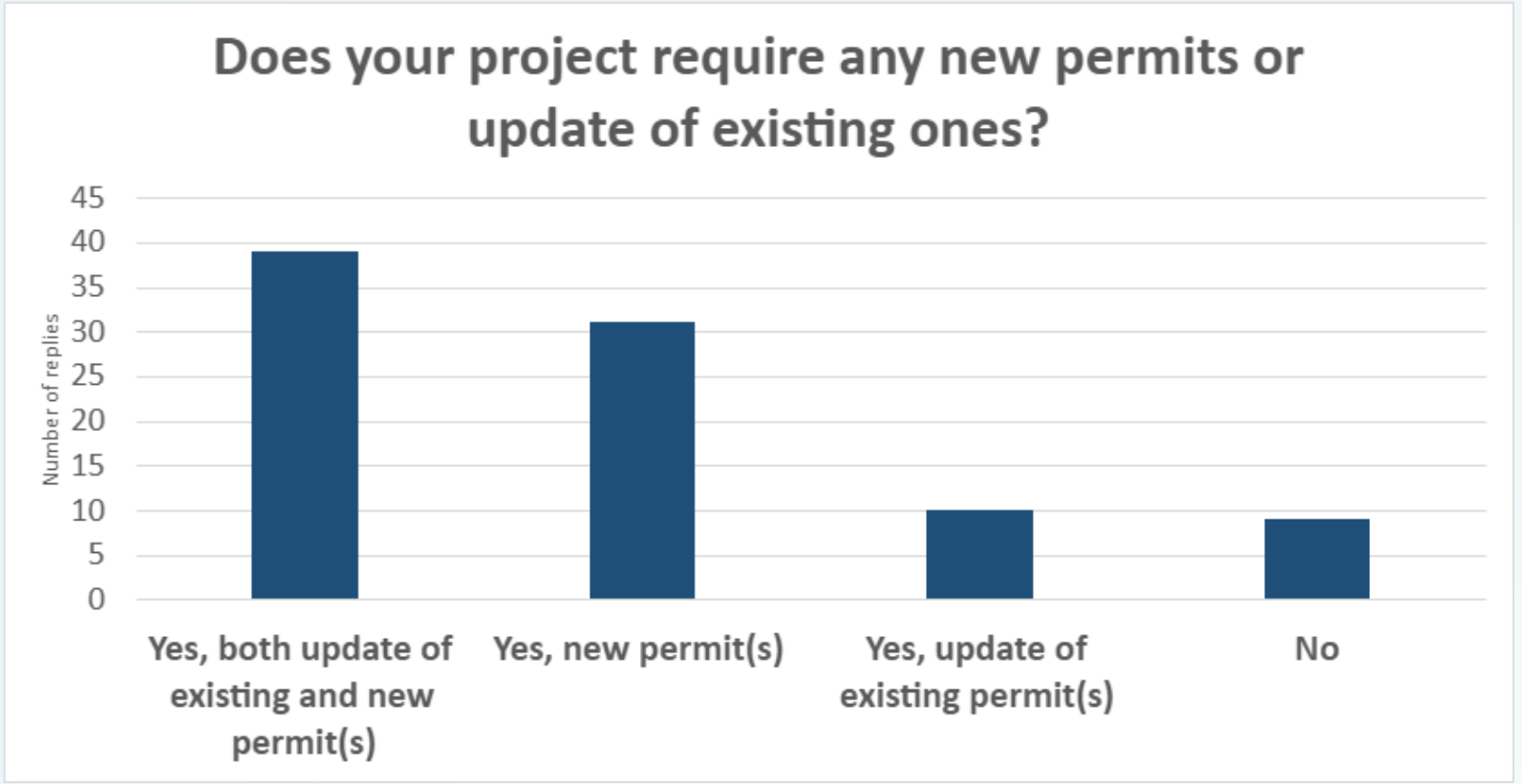
Government agencies (e.g., water authorities) and **national governments** are involved in almost half of the projects.



European Commission

How many permits

- **Most Innovation Fund projects** require new permits or updates.
- Implementing the 90 projects requires the management of over **700 distinct permits**, an average of more than 7 per project.

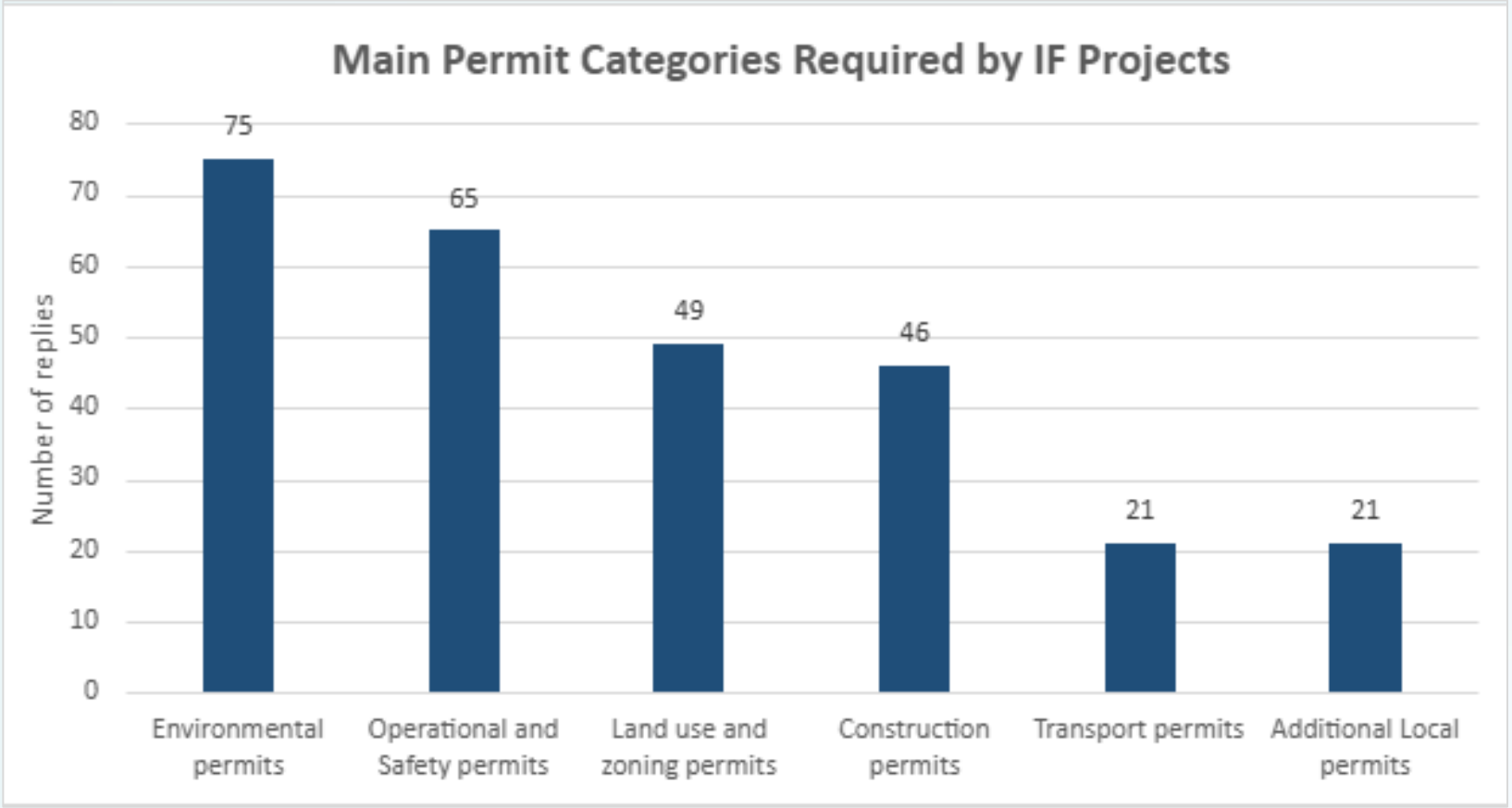


European Commission

Which permits

The most required permits fall into four main categories:

- **environmental**
- **land use**
- **operational**
- **construction**



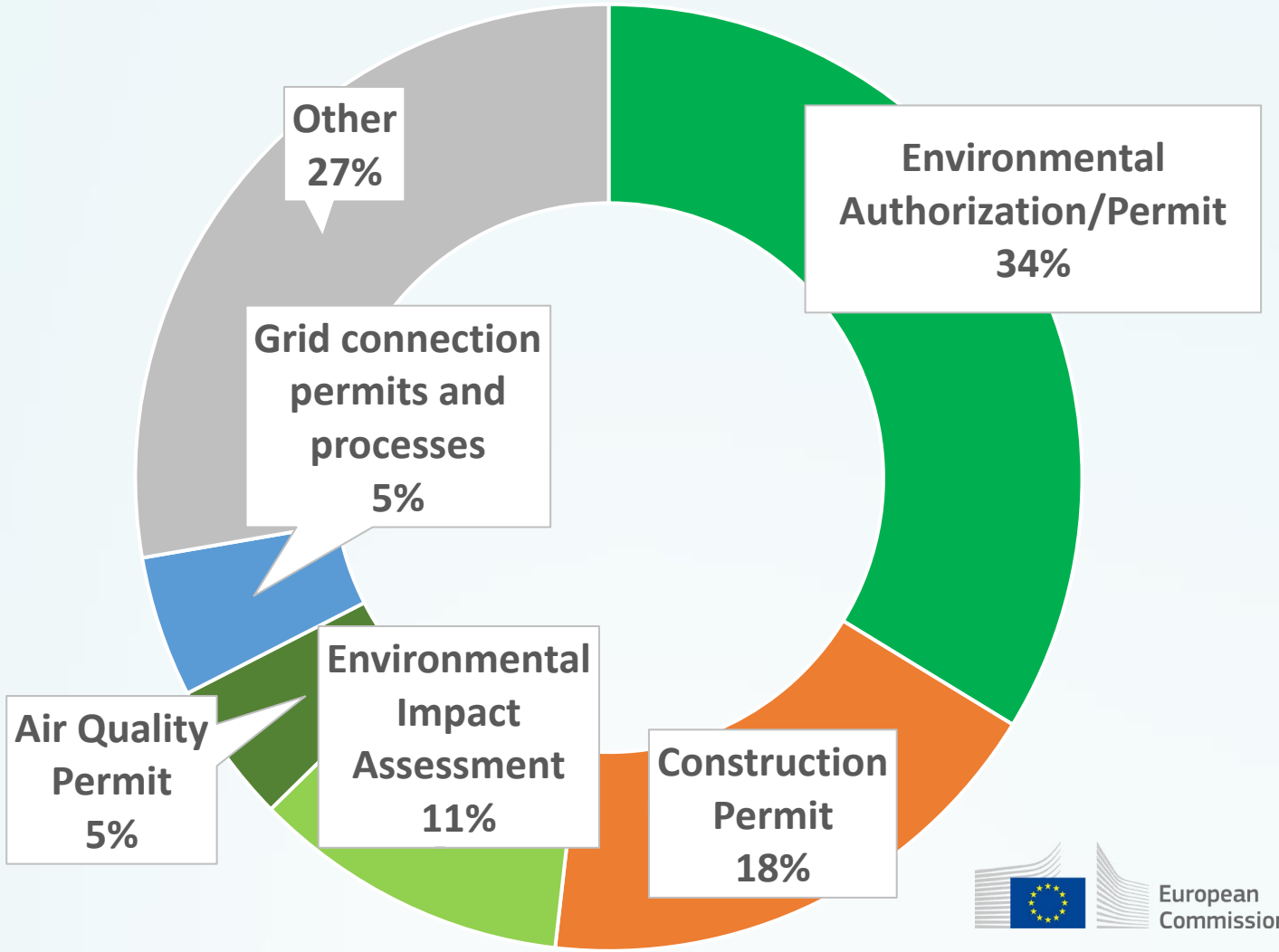
The figure shows the number of respondents that need at least one permit in each of the main categories.

European Commission

The permits considered most burdensome / time consuming

Environmental permits are identified as the most burdensome to obtain, followed by construction.

But the results vary substantially by sector and location.



European Commission

What causes issues I

The replies suggest that:

- **The scale of the effort itself** is an issue (number of permits, authorities involved, documents needed; amount of time, with 16 months needed to file; complexity of tasks; etc.)
- **Interdependency** also emerges (a permit may be needed before applying for another, and work has often to be sequential)
- Dependency on permits **outside of the project scope** can have serious impacts (47% affected) (e.g., infrastructure such as pipeline or power lines)
- Also **underestimation** of the time and effort required plays a role (15 out of 28 projects which finalised permitting took over a year longer than expected)

What causes issues II

Most importantly:

Many issues are due to the **novelty of the solution** (64% of the projects are first-of-a-kind)

- **Permitting procedures** are often designed for existing technologies
- The **lack of harmonised standards** or **specific legislation** hampers projects introducing new processes
- **Capacity constraints** in the authorities are more serious for first of a kind projects (which deemed their capacity as low/very low in 27% of cases)

How projects reacted

- **Strengthened interaction** with the authorities (in terms of frequency, depth, proactivity, coordination)
- **Increased workforce** (internal or external, i.e. hiring specialists: technical but also legal, communication and permitting experts)
- **Revised** approach (e.g., choosing a different framework)
- **Liaised** with similar projects to share information and best practices
- Collected **additional data and measurements** (especially in the case of new solutions; effective but costly)

What projects suggest

- Increase the **capacity** of the permitting authorities with more resources (personnel, expertise)
- **Special regime** for projects which are either pilot projects or key/strategic projects for decarbonization (e.g., regulatory sandbox and priority system respectively)
- **Simplify** the interaction with the authorities (e.g., better coordination among them via one stop shop or focal office)
- Increase **flexibility** (allowing limited design changes, parallel procedures, early start)
- Deepen **digitalization** (60% report full digital submission already, right way to go)

More detailed results will be available in the full report to be published in the summer

Outcome EIIs Workshop

A closed-door IF Workshop on Energy Intensive Industries was held on April 9, 2025.

Main Message:
Navigating the challenges of complex permitting processes can pose significant hurdles for innovative projects. However, IF projects can also show how to overcome them and succeed.

Challenges:

- **Metrics** (such as BATs) are based on the old technology
- End of waste/by product **rules applied differently** even regionally
- Lack of **standards** and **certification** impairs commercialization

Solutions and Suggestions:

- Allow **regulatory flexibility** for first-of-a-kind facilities
- Establish early **formal discussions** between authorities and project
- Consider **self-declaration** sufficient to start working in some cases (such as minor construction works, technical trials)
- **Tacit approval** rules would give certainty
- **Pilot facilities** can be very useful to demonstrate innovative processes and gain stakeholder buy-in /acceptance

Policy update

Slavitza DOBREVA DE SCHIETERE – DG ENVIRONMENT
Toon SMETS – DG ENVIRONMENT
Daniel GERBER – DG GROW
Vera KISSLER – DG ENERGY

European Commission

Policy update

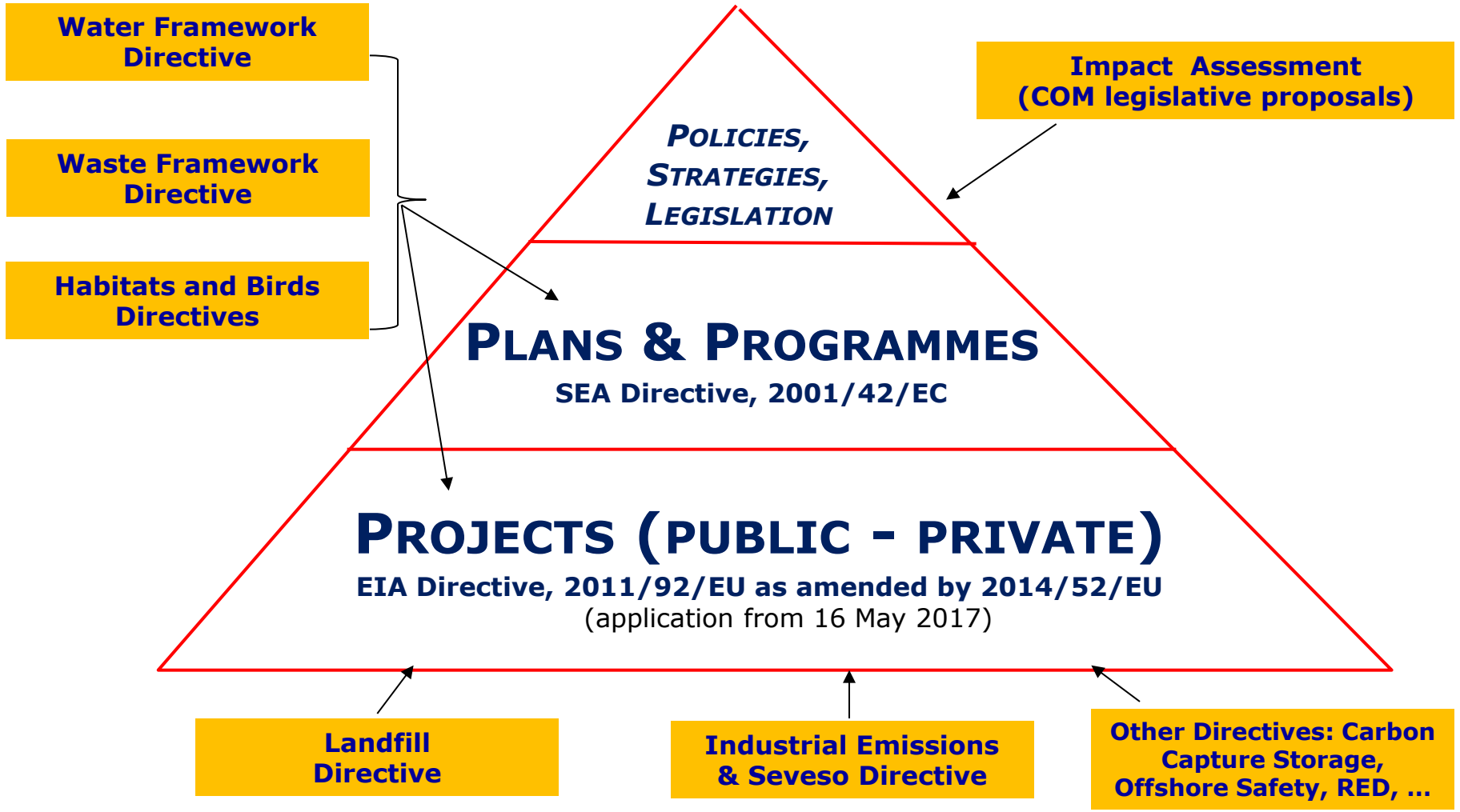
Slavitza DOBREVA DE SCHIETERE – DG ENVIRONMENT

European Commission

Environmental Impact Assessment (EIA) Directive

Slavitza Dobreva
Environmental Rule of Law and Governance Unit
DG ENVIRONMENT

Environmental Assessments at EU level



The EIA Directive (2011/92/EU as amended)

- In force since 1985
- One of the most cross-cutting environmental pieces of legislation – ensures minimum principles for the assessment of more than 200 project categories
- At the same time - highly flexible and allows Member States to organize their permitting processes effectively
- Ensures public participation in decision-making and thereby strengthens the quality of decisions
- Guiding principle: projects which are likely to have significant effects on the environment are subject to an assessment

'Project' - Art 1(2)(a)

- Construction **works and physical interventions**

  (* includes demolition works)
- More than 200 different project categories of public and private projects covered by the Directive
- Projects likely to have significant effects on the environment:
  - **Annex I projects – presumption -> EIA**
  - **Annex II projects - screening to determine -> EIA or no EIA**
- **Exemptions** (Articles 1(3), 2(4), 2(5)):
  - ✓ projects or parts of projects, having defence as their **sole** purpose;
  - ✓ projects having the response to civil emergencies as their **sole** purpose;
  - ✓ Exceptional cases when the application of the Directive could adversely affect the purpose of the project;
  - ✓ projects approved in detail by law: exempted only as regards public consultation requirements.

Examples of projects concerned

ANNEX I

Thermal power stations and other combustion installations with a heat output of 300 MW or more

Long-distance railway lines

Airports with a basic runway length ≥ 2100 m

Motorways, express roads, roads of four lanes or more of at least 10 Km

Waste disposal installations for hazardous waste/for non-hazardous waste (above 100 tonnes/day)

Waste water treatment plants (above 150.000 p.e.)

ANNEX II (screening)

Waste disposal installations and waste water treatment plants not included in Annex I

Installation for harnessing of wind power for energy production (wind farms)

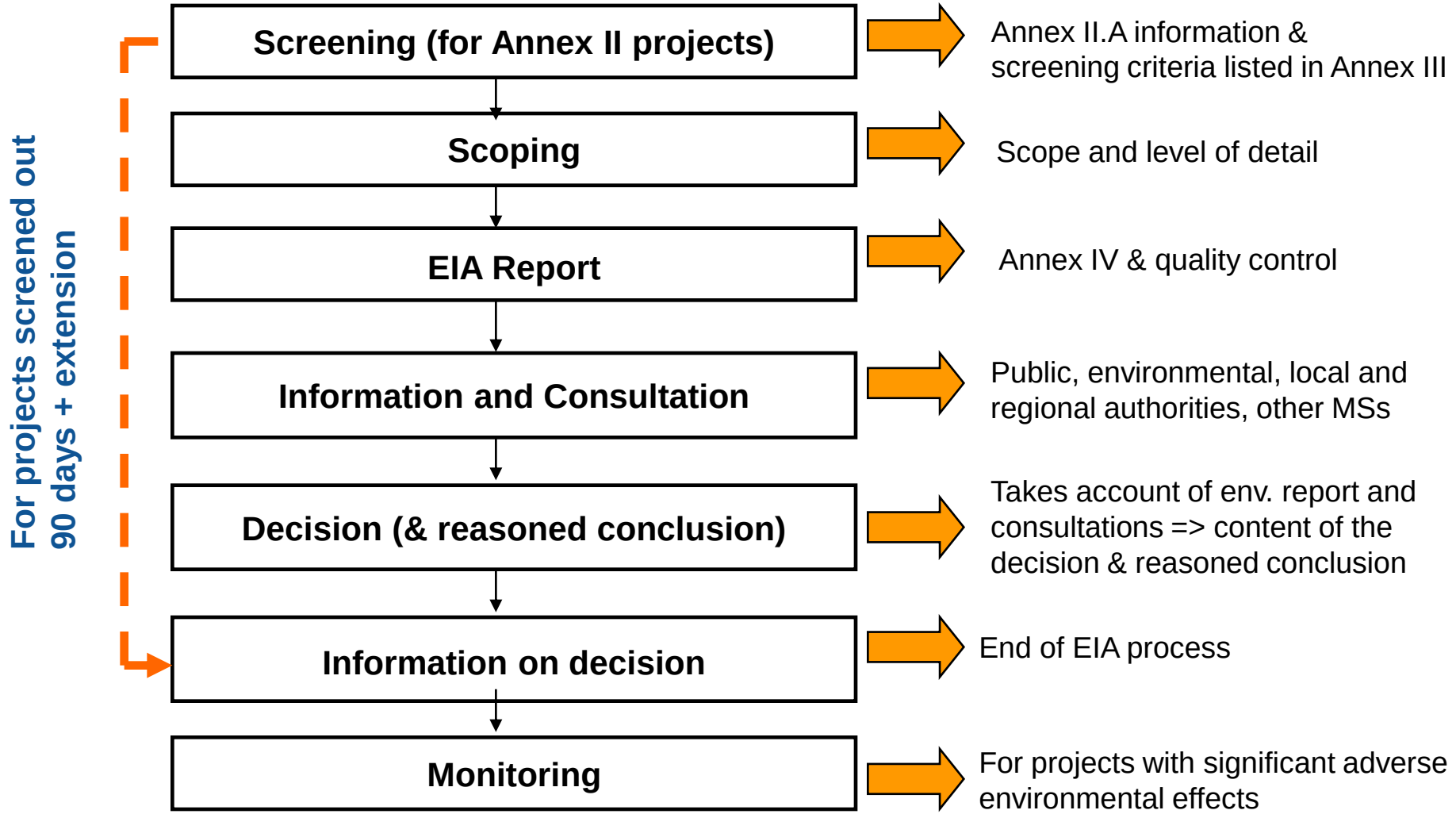
Installations for hydroelectric energy production

Holiday villages and hotel complexes

Inland waterways, flood-relief works and canalization

Changes or extensions of Annex I and II projects that may have adverse environmental effects

The EIA Procedure



Why are environmental assessments important?

- Direct environmental benefits (including assessment of climate change and disaster risks, impacts on human health, etc.)
- Useful and unified framework for the project developers and policy makers when it comes to the consideration of alternatives, including cost
- Increase of social acceptance, as public consultation is an important part of the process
- Ensure a good use of EU financial support for relevant areas (e.g. cohesion, transport, energy, agriculture and fisheries, etc.)
- If correctly implemented, EIA/SEA can have positive impact on lowering of administrative burden

Thank you!

Environmental assessments - European Commission (europa.eu)

Policy update

Toon SMETS – DG ENVIRONMENT

European Commission

Industrial Emissions Directive: streamlined and integrated permitting of large industrial installation

Closed-door Knowledge Sharing
Workshop on Permitting

7 May 2025

European Commission (DG ENV)
Dir B - Competitive Circular Economy & Clean Industrial Policy
Industrial Emissions & Safety (Unit B2)

European Commission

Presentation outline

- What is the Industrial Emissions Directive?
- Promoting innovation and transformation
- Permitting first-of-a-kind processes

Industrial Emissions Directive (IED)

The IED lays down rules on **integrated prevention and control of pollution** arising from industrial activities. It aims to achieve a high level of protection of human health and the environment taken as a whole.

How does the IED work?

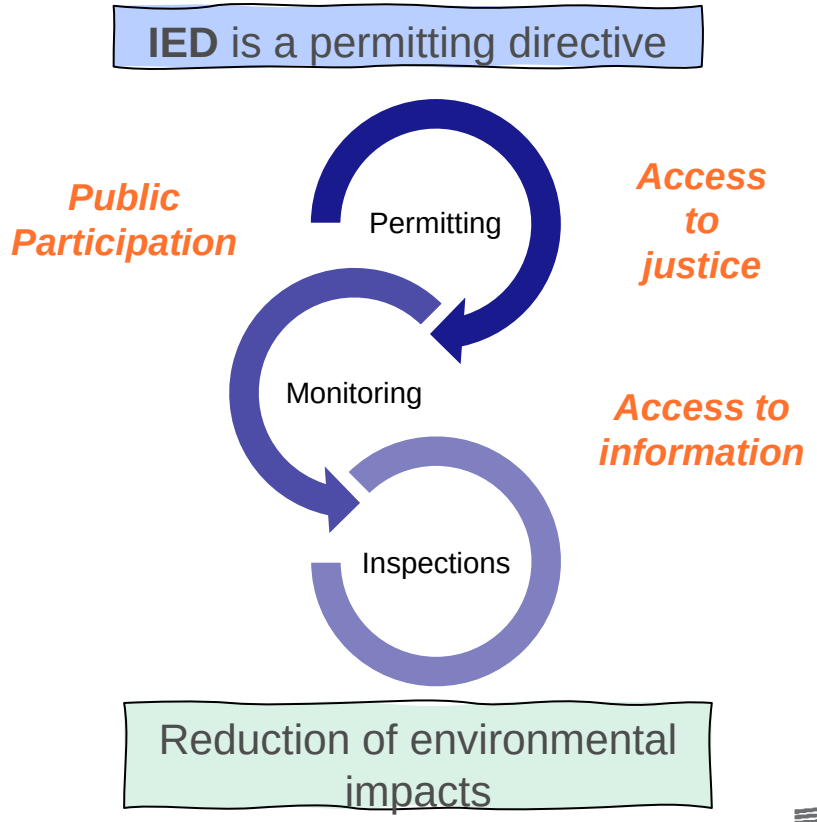
Environmental permits are granted to the installations and farms by national permitting authorities.

Best available techniques (BAT) play a key role. Adopted as Commission implementing decisions, BAT conclusions are the basis for drafting permit conditions.

Harmonised **environmental inspections** on site at least every one to three years by competent authorities.

37,000 industrial installations

38,500 pig & poultry farms



How does the IED 2.0 work?

20+ years ‘Sevilla process’

> *The collaborative process to develop BREFs and identify BAT has been effective […]. By involving experts from Member States, industry and environmental NGOs, it has resulted in a high degree of consensus on the measures adopted.*

(IED Evaluation)

Experts from industry, Member States, NGOs, Commission

BREFs with the Best Available Techniques (BAT)

BAT Conclusions
→ **Norms**

Industrial and Livestock Rearing Emissions Directive (IED 2.0)

Official Journal of the European Union

EN
L series

2024/1785

15.7.2024

DIRECTIVE (EU) 2024/1785 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 24 April 2024

amending Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) and Council Directive 1999/31/EC on the landfill of waste

IED 2.0: Industrial and Livestock Rearing Emissions Directive
https://environment.ec.europa.eu/topics/industrial-emissions-and-safety/industrial-and-livestock-rearing-emissions-directive-ied-20_en

IED 2.0 story: protecting human health and the environment
https://ec.europa.eu/environment/stories/industrial-emissions/

IED 2.0 tools promoting innovation

The IED 2.0 will **spur innovation**, **reward frontrunners**, help level the playing field on the EU market, and increase long-term **investment certainty** for industry:

- ✓ **INCITE**: Innovation Centre for Industrial Transformation and Emissions
- ✓ **Permitting flexibilities** for emerging techniques and deep industrial transformation
- ✓ **Permitting support:** Exchange of best permitting practice, e-permitting, adopting BAT requirements

INCITE

IED 2.0
CHAPTER IIA: ENABLING AND PROMOTING INNOVATION

Article 27a Innovation centre for industrial transformation and emissions

1. *The Commission shall establish and operate an innovation centre for industrial transformation and emissions (the "centre" or "Incite").*

…

INCITE will **promote innovation** and accelerate the **uptake of green emerging techniques**:

- Integrated approach: decarbonisation, resource efficiency, depollution & circular economy
- Initial focus on **Energy Intensive Industries** (EII), later expand to all IED sectors.

EMAIL: JRC-INCITE@ec.europa.eu

WEB: https://innovation-centre-for-industrial-transformation.ec.europa.eu/

FAQs: https://innovation-centre-for-industrial-transformation.ec.europa.eu/FAQ

Permitting flexibilities

IED 2.0 provides targeted flexibilities to promote deep industrial transformation and the testing and deployment of emerging techniques (ETs):

- ✓ **Testing of ETs:** temporary derogations up to 30 months
- ✓ **Implementation of ETs:** 6 years (instead of 4) after publication of BAT Conclusions to comply with emission levels associated with ET
- ✓ **Deep industrial transformation (DIT):**
  - Major change or replacement of an installation leading to extremely substantial reduction of GHG emissions
  - up to a total of 8 years to comply with BAT Conclusions

Permitting first of a kind processes

! **BAT conclusions** adopted under the IED assist Member States to **deliver permits more rapidly** by relying on agreed EU minimum requirements and enhance the level playing field

? However, there are faster emerging processes, facilitating industry transformation, for which there are no BAT conclusions available

Since BATs are not yet developed for these processes, setting permit conditions could be more challenging

Permitting first-of-a-kind processes

Support project 2024-2026:

Exchanging experience and practices on permitting ‘first-of-a-kind’ processes will **support competent authorities** and ultimately facilitate industry transformation

Processes include:

- ✓ Thermo-chemical recycling of plastics
- ✓ Cement with carbon capture techniques
- ✓ + 2 other processes to be confirmed

Thank you

Email: ENV-IED@ec.europa.eu

DG ENV - Industrial emissions and safety: https://environment.ec.europa.eu/topics/industrial-emissions-and-safety_en

Policy update

Daniel GERBER – DG GROW

European Commission

Net-Zero Industry Act

CINEA Knowledge Sharing workshop on Permitting

Daniel Gerber, DG GROW

7. Mai 2025

The next decades will see the greatest industrial transformation of our times – maybe of any times. And those who develop and manufacture the technology that will be the foundation of tomorrow's economy will have the greatest competitive edge.

Ursula von der Leyen

President of the European Commission

Before we look into the Net-Zero Industry Act – what is the status quo?

European Commission

Key facts on EU's clean industry

Clean technologies face mixed situations

SOLAR PHOTOVOLTAICS

- In 2024, the EU was the second-largest installer of solar PV capacity, after China.
- The EU still heavily relies on imports.

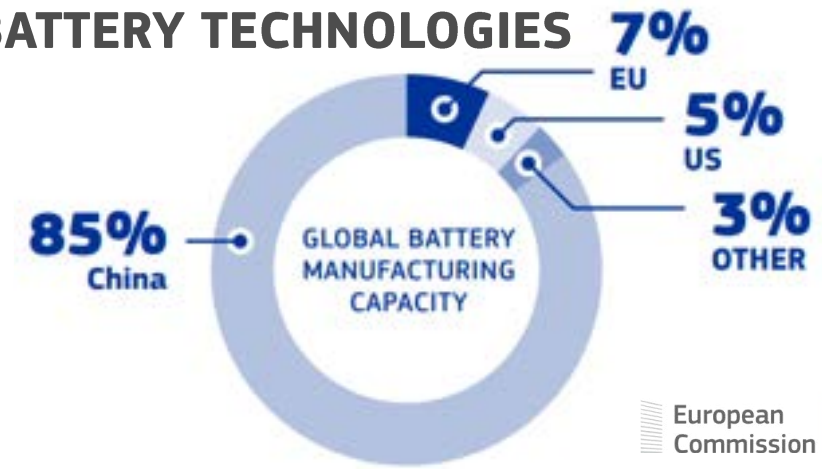
ONSHORE AND OFFSHORE WIND

- The EU remains highly competitive in wind power, but EU companies are under increasing pressure, notably by cheaper products from China.

HEAT PUMP TECHNOLOGIES

- The sector needs new momentum as sales in Europe fell by 31% in 2024, continuing the downward trend from 2023.

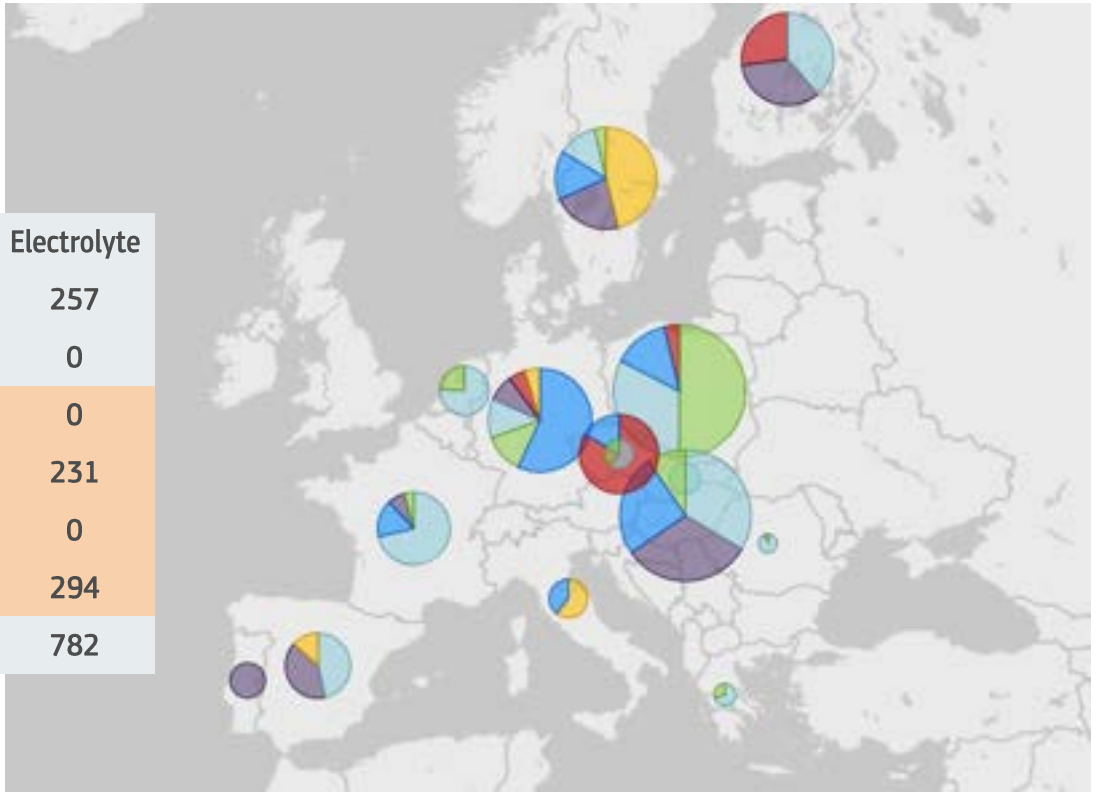
BATTERY TECHNOLOGIES



European Commission

Example: Batteries project pipeline (2025)

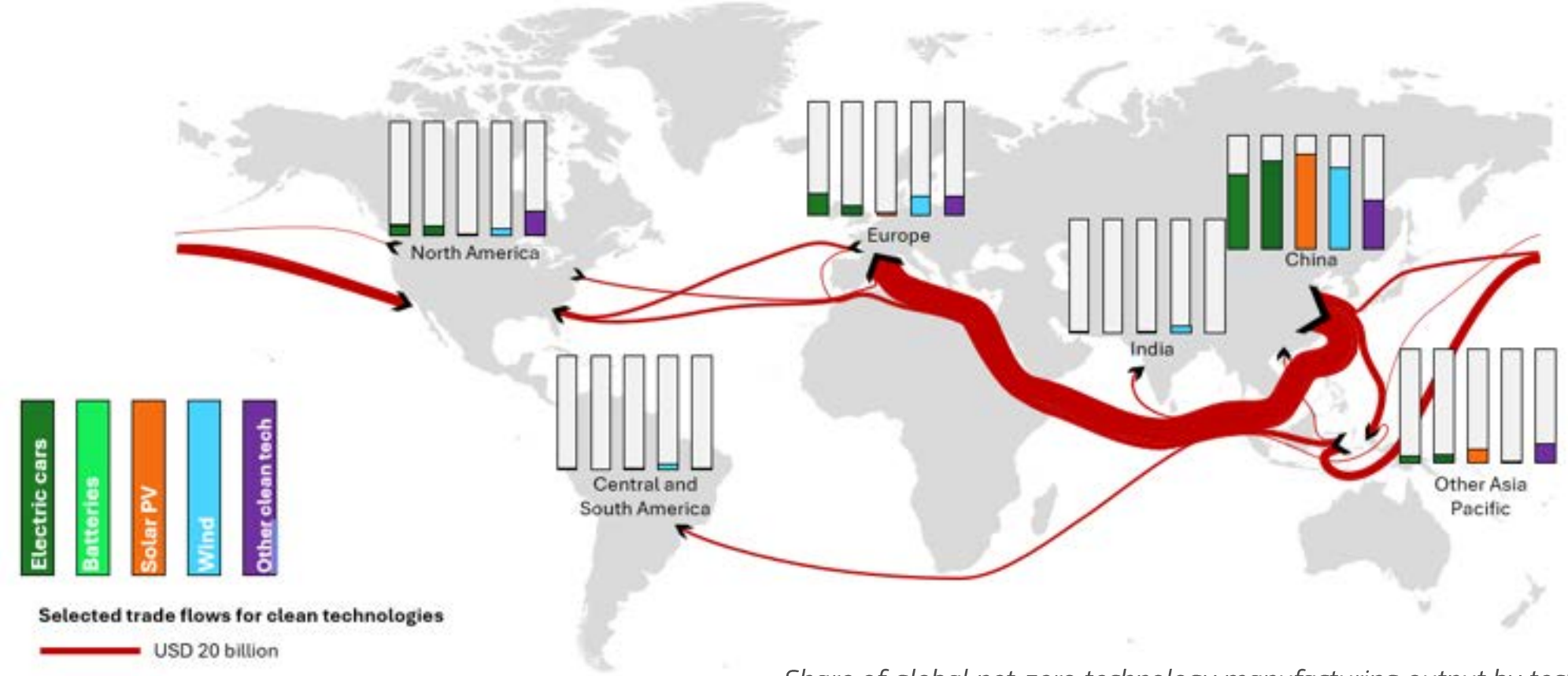
	Cell	CAM	AAM	Separator	Electrolyte
Operational	202	88	31	159	257
On Track	536	216	272	329	0
Delayed	111	203	123	334	0
Unclear	307	355	22	0	231
Paused	110	257	0	0	0
Cancelled	30	122	0	0	294
Total	1297	1240	448	822	782



EU manufacturing capacity projected to grow significantly by 2030 but numerous cancelled/delayed projects require attention!

European Commission

China accounts for more than 70% of all global net-zero technology manufacturing.



Share of global net-zero technology manufacturing output by technology, IEA 2023

Our strategic dependency remains in place

Let’s take a look at the Net-Zero Industry Act

European Commission

Net-Zero Industry Act

> **Establishing a regulatory framework to ensure the Union's access to a secure and sustainable supply of net-zero technologies including by scaling up the manufacturing capacity of net-zero technologies and their supply chains.**

It's an EU Regulation - In force since 29 June 2024

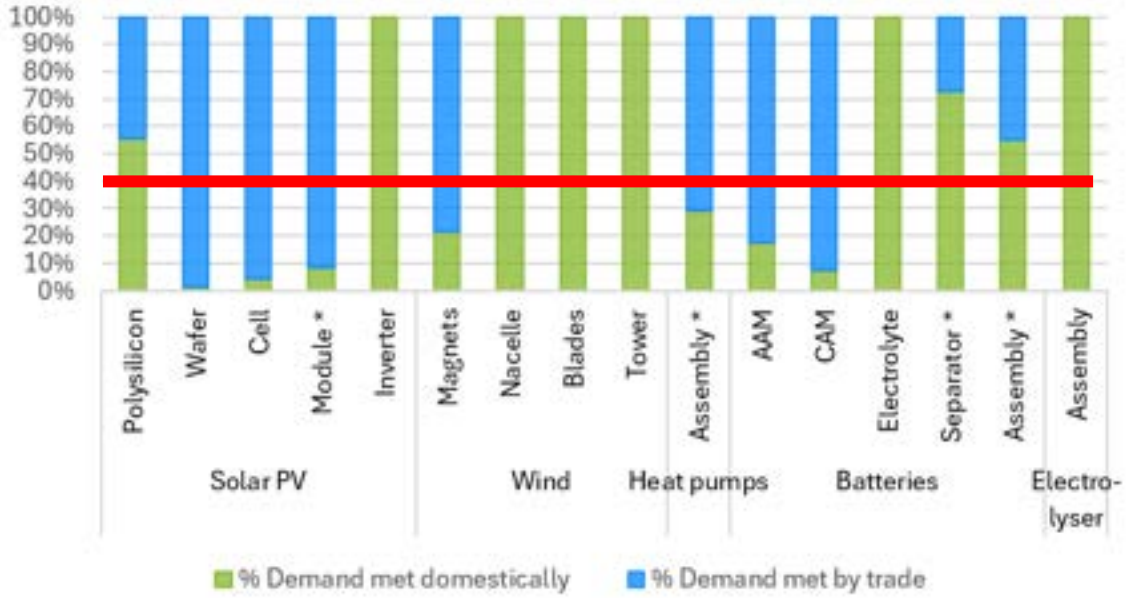
European Commission

Net-Zero Industry Act

> **“Establishing a regulatory framework to ensure the Union’s access to a secure and sustainable supply of net-zero technologies including by scaling up the manufacturing capacity of net-zero technologies and their supply chains.**

Political benchmark

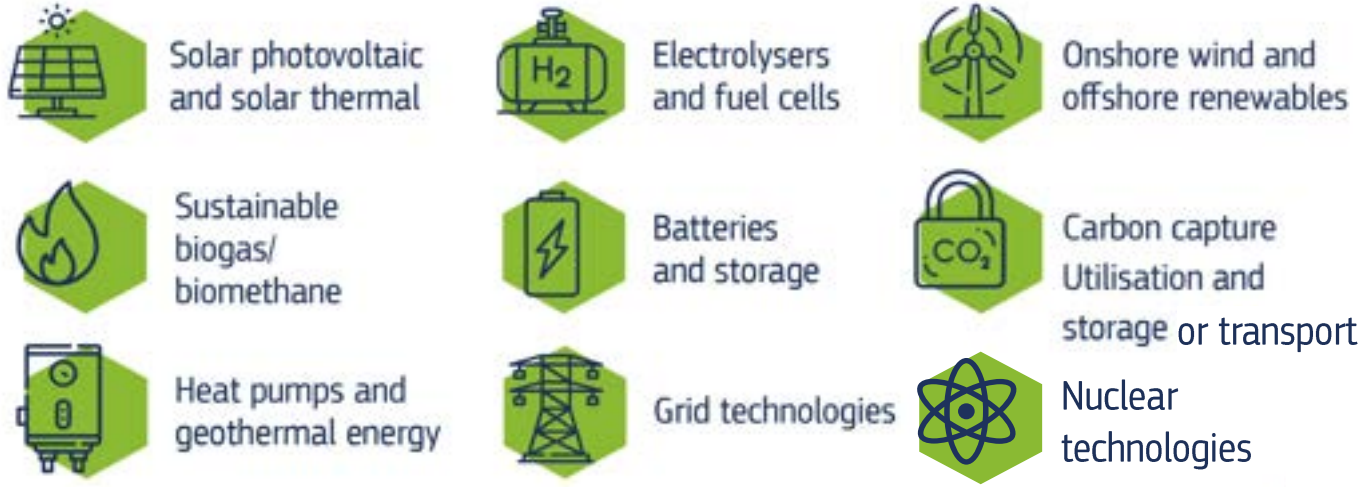
Commission & EU countries shall support net-zero manufacturing to ensure that at least **40%** of EU annual deployment needs for the corresponding technologies are produced in the EU by 2030.



Scope: what type of projects are covered

1. **Projects for new/expansion of manufacturing facilities** across full supply chain of any of the 19 net-zero technologies covered.
2. **Projects for new/expansion/conversion of energy intensive industry facilities** under condition that they decarbonise and are relevant for net-zero supply chains.

Technologies covered:



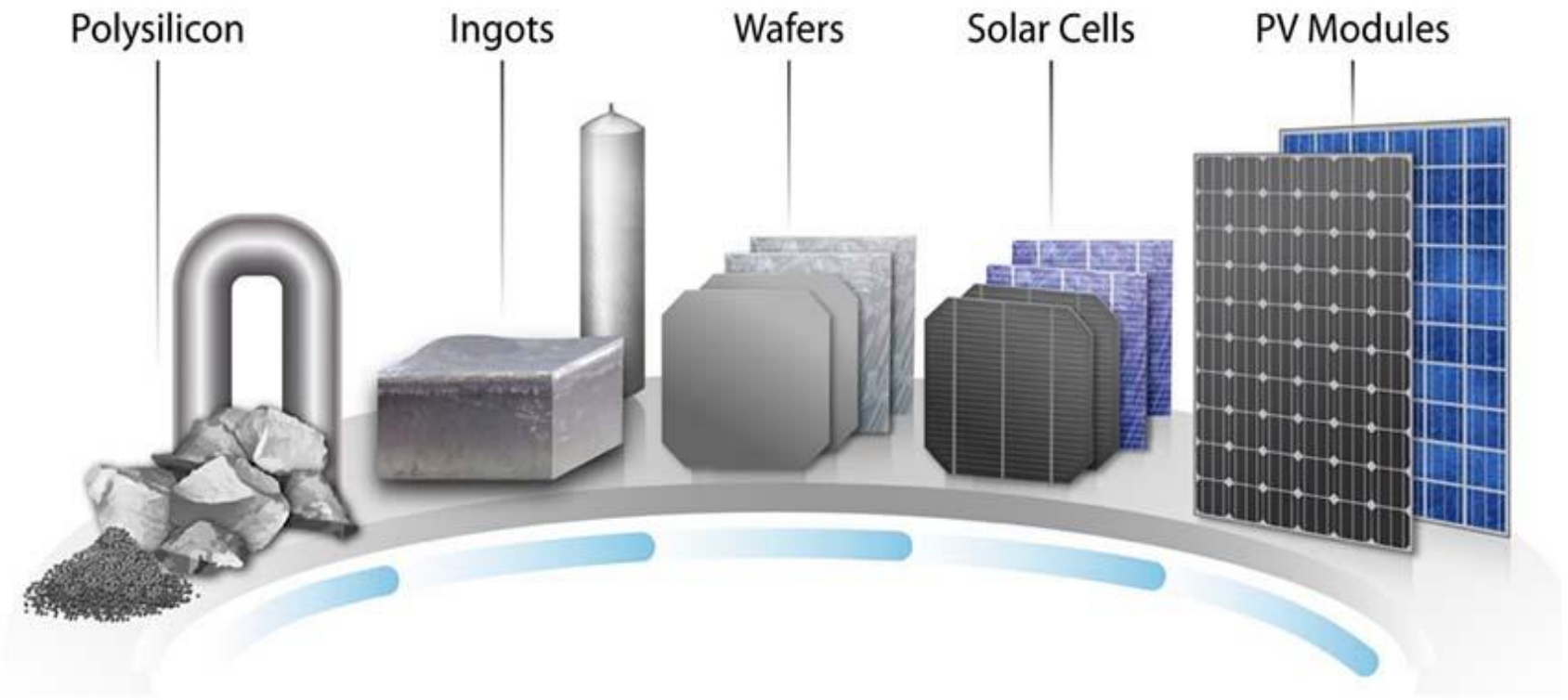
As well as:

- Transformative industrial technologies for decarbonisation
- Sustainable alternative fuels technologies;
- Energy system-related energy efficiency technologies, including heat grid technologies
- Renewable fuels of non-biological origin technologies
- Other renewable energy technologies
- Biotech climate and energy solutions
- Hydropower technologies.

European Commission

Scope: what type of projects are covered

"Final products, specific components and machinery, primarily used for the production of net-zero technologies"



European Commission

What is in the Net-Zero Industry Act?

European Commission

To stimulate investment into net-zero technologies, the Net-Zero Industry Act focuses on:

Permitting

Single Points of Contact with responsibility over entire process

Streamlined procedures and transparent information on process

Binding time-limits

Strategic Projects

Application process on COM website

Priority status at national level for all administrative processes

Net-Zero Europe Platform to advice on financing needs

Access to Markets

Mandatory non-price criteria in renewable energy auctions, public procurement & public support measures

Skills & Innovation

Skills for quality jobs through Net-Zero Industry Academies & credentials for skills transparency

Innovative companies to benefit from Regulatory Sandboxes to test new net-zero technologies

Governance

Net-Zero Europe Platform oversees implementation & monitors progress

Net-Zero Acceleration Valleys

European Commission

Permitting

European Commission

Permitting in NZIA

Article 3
Definitions

Article 6
Single Point of Contact

Article 7
Online accessibility of information

Article 8
Accelerating implementation

Articles 9 + 16
Duration of the permit-granting process

Article 10
Environmental assessments and authorisation

Articles 11 + 12
Planning & Applicability of UNECE conventions

Article 15
Priority status of net-zero strategic projects

Permitting in NZIA

Article 3
Definitions

‘permit-granting process’ means a process that covers all relevant permits to build, expand, convert and operate net-zero technology manufacturing projects and net-zero strategic projects,

including building, chemical and grid connection permits, and environmental assessments and authorisations where required, and

encompassing all applications and procedures from the acknowledgement that the application is complete to the notification of the comprehensive decision on the outcome of the procedure by the single point of contact concerned,

European Commission

Permitting in NZIA

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Permitting in NZIA

Article 6
Single Point of Contact

Article 6 requires Member States to designate one or more Single points of contact (SPOCs) by 30 December 2024.

Role of SPOCs

- Responsible for *facilitating and coordinating entire permit-granting process* for NZIA projects.
- Provide information on streamlining administrative processes in line with Article 7.
- Act as *sole point of contact* for the project, facilitates and coordinates submission of all relevant documents and notifies project of the outcome of the comprehensive decision.
- SPOC and other competent authorities have to accept documents in *electronic format* and take into account relevant pre-existing studies, permits or authorisations.
- Have a sufficient number of qualified staff and sufficient resources.

Permitting in NZIA

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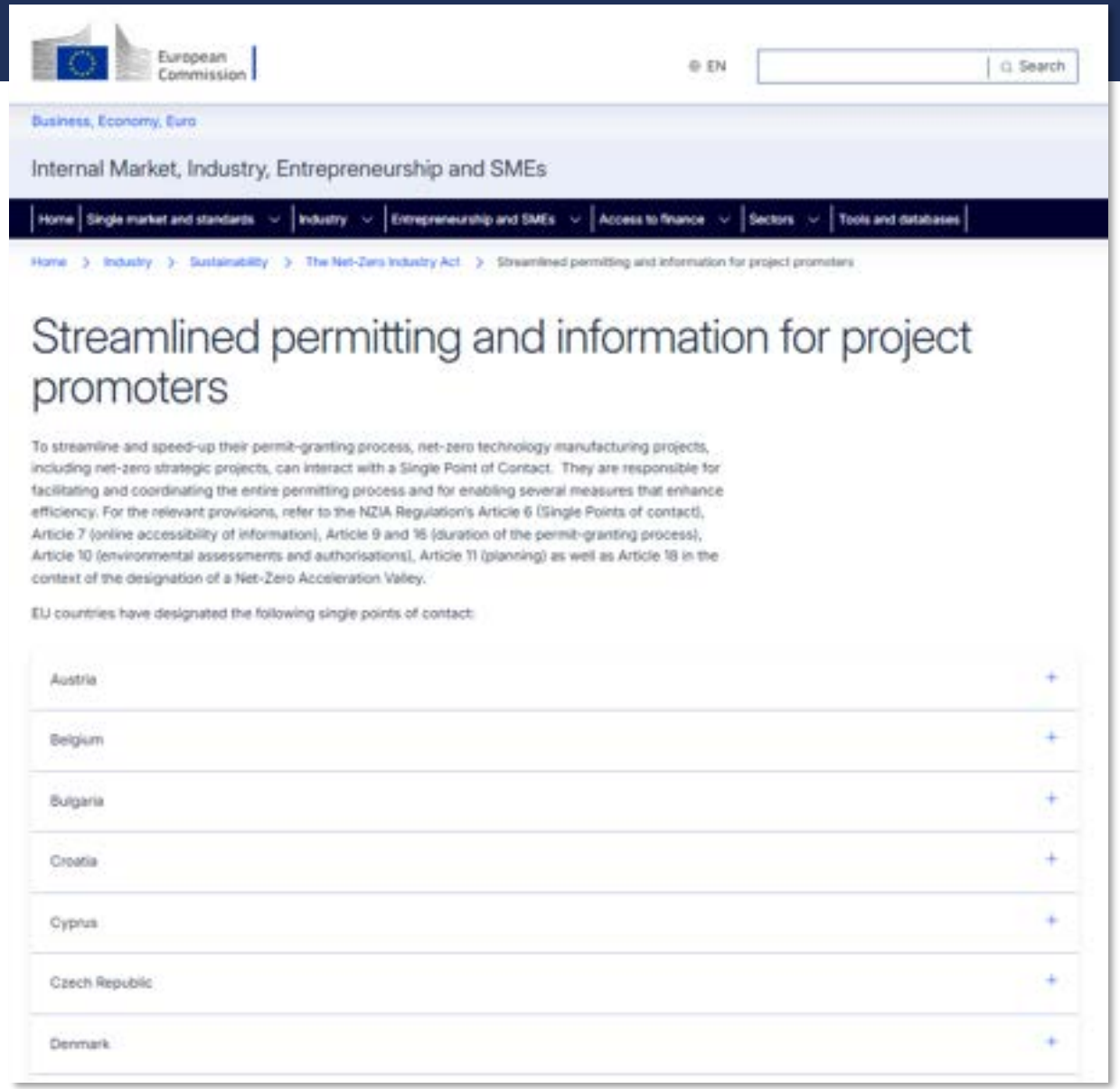
Permitting in NZIA

Article 7
Online accessibility of information

Article 7 requires Member States to provide access to information on the Single points of contact online and in a centralised and easily accessible manner

The Commission centralized the SPOC provided by the Member states on the DG GROW website

So far, **19 out of 27** MS have provided the information on Single points of contact.



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Permitting in NZIA

Article 8
Accelerating implementation

Member States shall provide administrative support to net-zero technology manufacturing projects located on their territory, to facilitate their timely and effective implementation, paying particular attention to SMEs involved in the projects, including by providing (…) **assistance to project promoters along the permit-granting process, in particular for SMEs.**

European Commission

Permitting in NZIA

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Permitting in NZIA

Articles 9 + 16
Duration of the permit-granting process

NZIA sets the following legally binding maximum time-limits:

- 12 months for NZ manufacturing projects below 1 GW, and 18 months for those of 1 GW or more.
- 9 months for strategic projects below 1 GW capacity, 12 months if the capacity is 1 GW or more.
- Where GW metric not relevant: 18 months for NZ manufacturing projects and 12 months for strategic.

- In exceptional cases, Member State can extend the time-limits.

European Commission

Permitting in NZIA

Articles 9 + 16
Duration of the permit-granting process

- The start of the permit-granting process is determined by the **completeness of an application, which** SPOC shall confirm **within 45 days** of receiving the application.
- Where environmental assessments are required, the **EIA study is not part of the time-limit.**
- No later than 2 months from receipt of application, **SPOC** shall draw up in close cooperation with other authorities concerned, **a detailed schedule** of the permit-granting process.

European Commission

Permitting in NZIA

Article 3
Definitions

Article 6
Single Point of Contact

Article 7
Online accessibility of information

Article 8
Accelerating implementation

Articles 9 + 16
Duration of the permit-granting process

Article 10
Environmental assessments and authorisation

Articles 11 + 12
Planning & Applicability of UNECE conventions

Article 15
Priority status of net-zero strategic projects

Permitting in NZIA

Article 10
Environmental assessments and authorisation

- Within 45 days of a request, MS need to provide **a *scoping study*** that outlines what is expected as part of the EIA so as to avoid lengthy back and forth.
- Where several EU law related environmental assessments are performed, Member States *shall ensure* ***coordinated or joint procedures*** to speed up the process.
- The reasoned conclusion of the competent authority on the *EIA to be delivered* ***within 90 days***.
- The timeframe for **consulting the public on the EIA report** is set at a minimum 30 and maximum 85 days, in cases of exceptional risks it may be extended to 90 days.

Permitting in NZIA

Article 3
Definitions

Article 6
Single Point of Contact

Article 7
Online accessibility of information

Article 8
Accelerating implementation

Articles 9 + 16
Duration of the permit-granting process

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Article 15
Priority status of net-zero strategic projects

Permitting in NZIA

Articles 11 + 12
Planning & Applicability of UNECE conventions

- Authorities responsible for preparing **zoning, spatial plans and land use plans** shall consider including provisions for the development of net-zero technology manufacturing projects, and net-zero industry acceleration valleys. Priority shall be given to artificial and built surfaces, industrial sites and brownfield sites.
- This Regulation is without prejudice to the obligations under the United Nations Economic Commission for **Europe (UNECE) Convention** on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters..

Permitting in NZIA

Article 3
Definitions

Article 6
Single Point of Contact

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Articles 11 + 12
Planning & Applicability of UNECE conventions

Article 15
Priority status of net-zero strategic projects

Permitting in NZIA

Article 15
Priority status of net-zero strategic projects

- Project promoters and all authorities concerned shall ensure that for net-zero strategic projects the relevant processes are treated in the most rapid way possible in accordance with Union and national law.
- Where a project is recognised as strategic, it is granted the status of the highest national significance, where such a status exists in national law, and shall be treated accordingly in **the permit-granting processes**, including those relating to environmental assessments and, where data is available, to spatial planning.

Permitting in NZIA

Article 3
Definitions

Article 6
Single Point of Contact

Article 7
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Articles 9 + 16
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Article 10
Environmental assessments and authorisation

Articles 11 + 12
Planning & Applicability of UNECE conventions

Article 15
Priority status of net-zero strategic projects

Thank you

Get in touch!

European Commission
DG GROW

[Net Zero Industry Act - Website]

European Commission

Policy update

Vera KISSLER – DG ENERGY

European Commission

Permitting for renewable energy projects

Vera Kissler
Unit on Renewables and Energy System Integration Policy
Directorate-General for Energy

EU RES permitting instruments

Emergency Regulation and **revised RED**

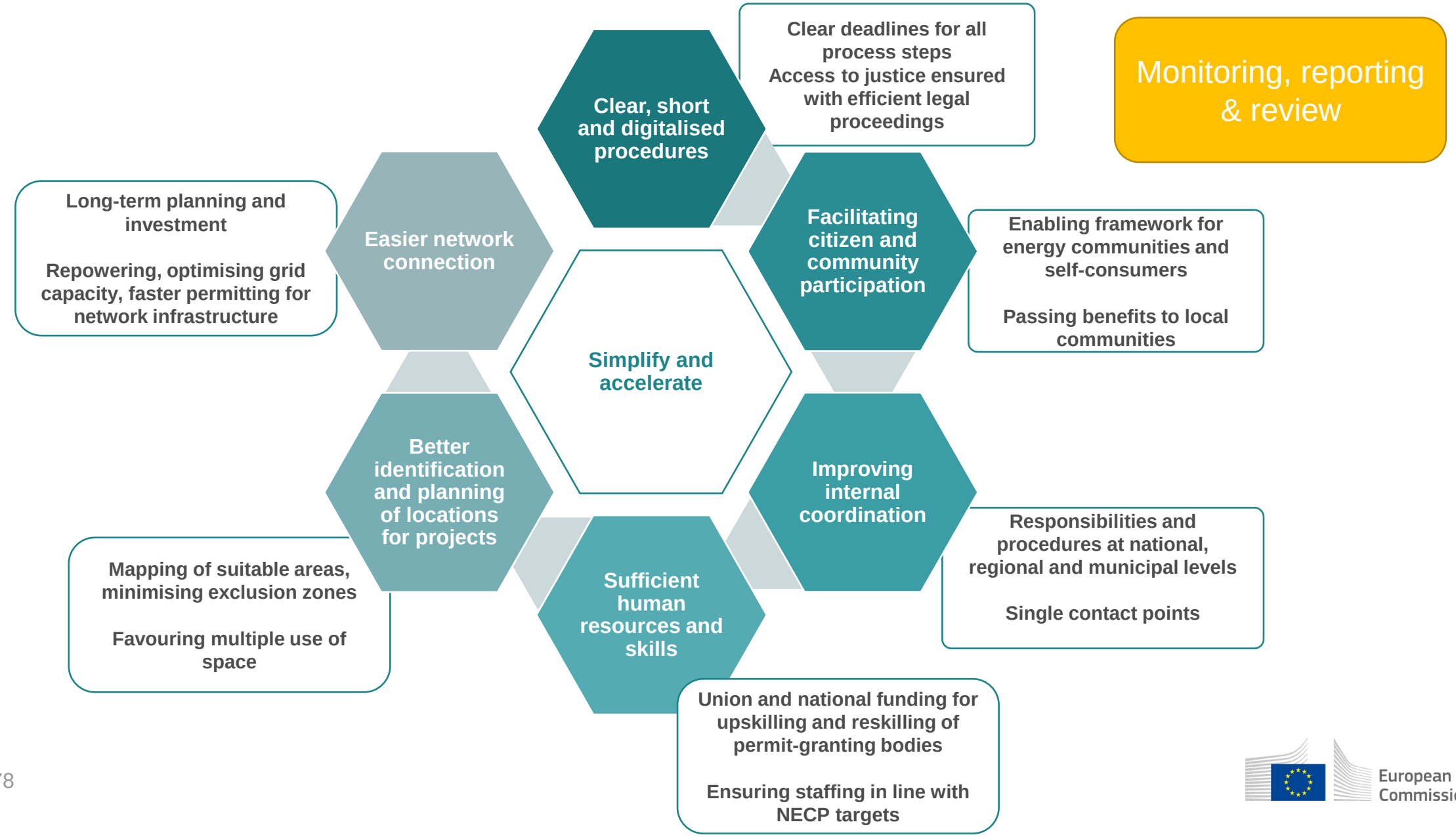
Recommendation on **speeding up permit-granting procedures**

Guidance on good practices

Guidance on Renewable Acceleration Areas

European Commission

Key areas of EU action



Revision of the Renewable Energy Directive

European Commission

Revision of REDII: ***new*** elements in existing provisions

REDII (Articles 16 and 17)	Revised REDII
Single contact point: - Shall guide applicant throughout procedure - Manual of procedures - Digital communication allowed	Maintained with ***new elements***: - Guide also on environmental assessments - Shall ensure fulfilment of deadlines - Transition to electronic communication only
Maximum **deadlines**: 2 years - Environmental assessments excluded	Maximum **deadlines**: - Shorter in renewables acceleration areas (RAA) - 2 years outside RAA - Where required, environmental assessments *included* in maximum deadlines
Simple notification for grid connections (Article 17)	Maintained

Simpler and faster permitting procedures

- For the **majority of the territory (outside RAAs)**, simpler and faster procedures; environmental impact assessment (EIA) remains

New projects: 2 years (3 years for offshore)
Repowering: 1 year (2 offshore)

- **"Renewables acceleration areas":** particularly short deadlines and streamlined environmental assessments:
  - Plan subject to SEA
  - EIA replaced by short environmental screening (45 days) for most projects:
    - If projects comply with the rules and measures identified by the MS and do not raise any unforeseen adverse effects, exemption from EIA.
    - If screening identifies that a project highly likely to give rise to unforeseen adverse effects, EIA is required. For wind and solar PV projects, MS may exempt them from EIA, provided that they adopt mitigation or if not available compensation measures to address negative effects

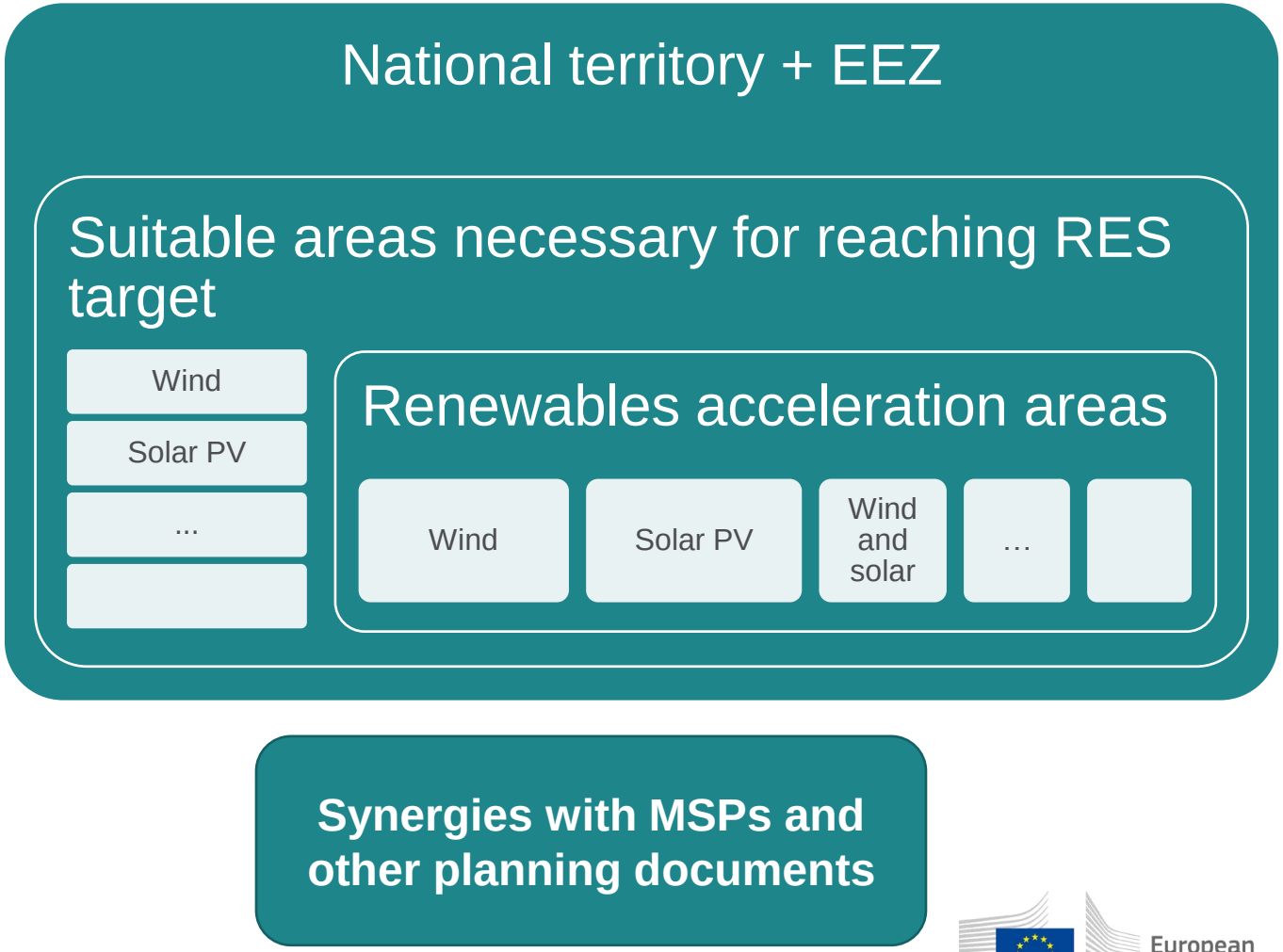
New projects: 1 year (2 years for offshore)
Repowering: 6 months (1 year offshore)

Positive silence

- **Targeted permitting procedures** for solar installations on artificial structures, heat pumps, repowering; overriding public interest presumption

New provisions in revised RED: spatial planning

- Mapping of **NECP areas** (focus on RES potential) → by May 2025 (Art. 15b)
- Designation of "**renewable acceleration areas**" (focus on low env. impacts) → by February 2026 (Art. 15c)
- Option for MS to designate **grid and storage infrastructure** areas to integrate RES into electricity system



Mapping the potential of renewable energy production

- **Article 15b** – identification of areas for reaching RES targets
- Coordinated exercise – Participation of relevant stakeholders
- Build upon existing mapping
- No prescribed approach

New: Renewables acceleration areas

1. **Identification of areas** where RES projects are not expected to have significant environmental impacts:

   - Priority to artificial and built surfaces
   - Exclusion of Natura 2000 sites, national protection schemes, major bird and marine mammal routes), with exceptions (i.e. artificial and built surfaces)
   - Appropriate and proportionate mapping tools
   - Possibility to build on existing planning including MSPs

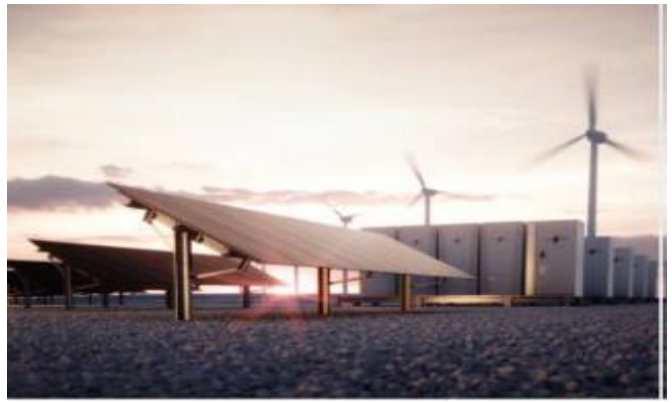
New: Renewables acceleration areas

2. **Mitigation rulebook**

Establish appropriate rules including effective **mitigation measures**

3. **Strategic Environmental Assessment**

Plan must be subject to SEA, public and reviewed periodically



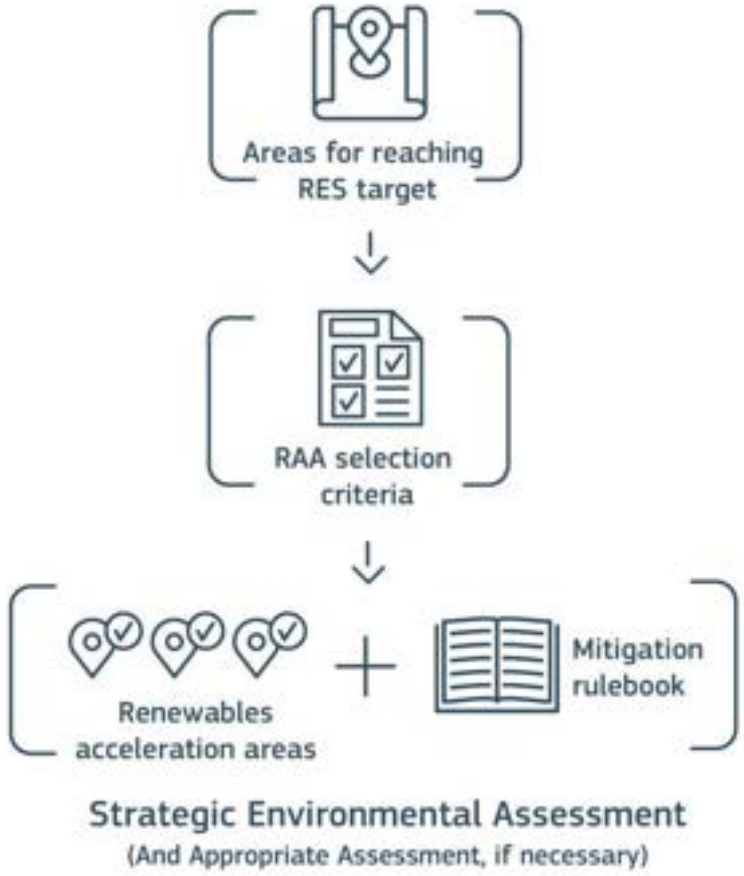
European Commission

Guidance on designating renewables acceleration areas

European Commission

Supporting Member States in designating Renewable Acceleration Areas

- Overview of **mapping, planning and digital tools** to support the identification of priority areas for accelerated deployment
- **Best practice** examples
- Main environmental impacts of wind and solar energy technologies and **mitigation rulebook**
- Stakeholder **engagement and consultation, and participation** of local communities



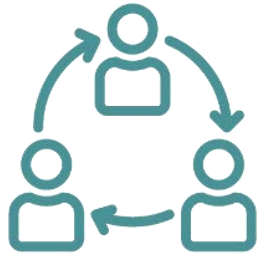
Updated Recommendation and guidance

European Commission

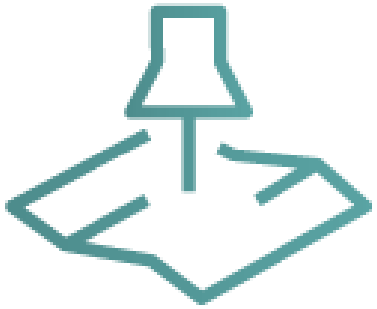
Recommendation and guidance

Faster and simpler permit-granting procedures

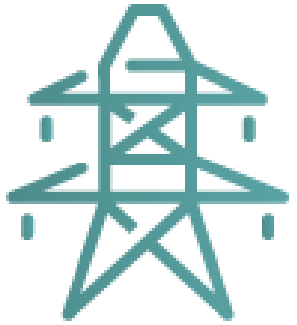
Community participation



Human resources and skills



Improve site selection procedures



Easing network connection of renewables

European Commission

What is new in the 2024 update?

- More focus on related infrastructure projects
- Recommendations adjusted to the revised RED
- Dedicated / more detailed recommendations on
  - small-scale renewables and self-consumers
  - stakeholder engagement practices
  - role of the single contact points
  - making the most of digitalised permit-granting procedures
  - capacity building
  - sharing of data from environmental assessments and monitoring activities
  - carrying out regular audits of the national permit-granting procedures

What is next?

- Support to Member States in implementing the new framework
- Guidance on innovative forms of RES deployment (Q2 2025)
- Guidance on „dedicated grid and storage areas“ (Q2 2025)
- Further legal amendments via the Grids Package (Q4 2025)

Links

- **Commission Recommendation and guidance:**

Commission Recommendation C (2024) 2660 final : Link

Guidance to Member States on good practices to speed up permit-granting procedures for renewable energy and related infrastructure projects, SWD (2024) 124: Link

Guidance on designating renewables acceleration areas, SWD (2024) 333: Link

- **Council Regulation (EU) 2022/2577 of 18 December 2022:** Link
- **Council Regulation (EU) 2024/223 of 22 December 2023**: Link
- **Consolidated version of Directive (EU) 2018/2001**: Link

Thank you

Slide 11: photo, source: Unsplash (Stefan Stefancik), Slide 12: photo, source: Unsplash (Antenna), Slide 13: photo, source: Unsplash (Kenny Eliason)

European Commission

Renewables Grid Initiative

Alexandros FAKAS KAKOURIS – Senior Manager, Policy and Energy Systems

European Commission

CHALLENGES & OPPORTUNITIES FOR DEVELOPING

electricity grids

AN RGI PERSPECTIVE

Renewables Grid Initiative

Co-funded by the European Union

7 May, Brussels
Knowledge Sharing Workshop on Permitting

Alexandros Fakas Kakouris
Senior Manager – Policy and Energy Systems

Renewables Grid Initiative

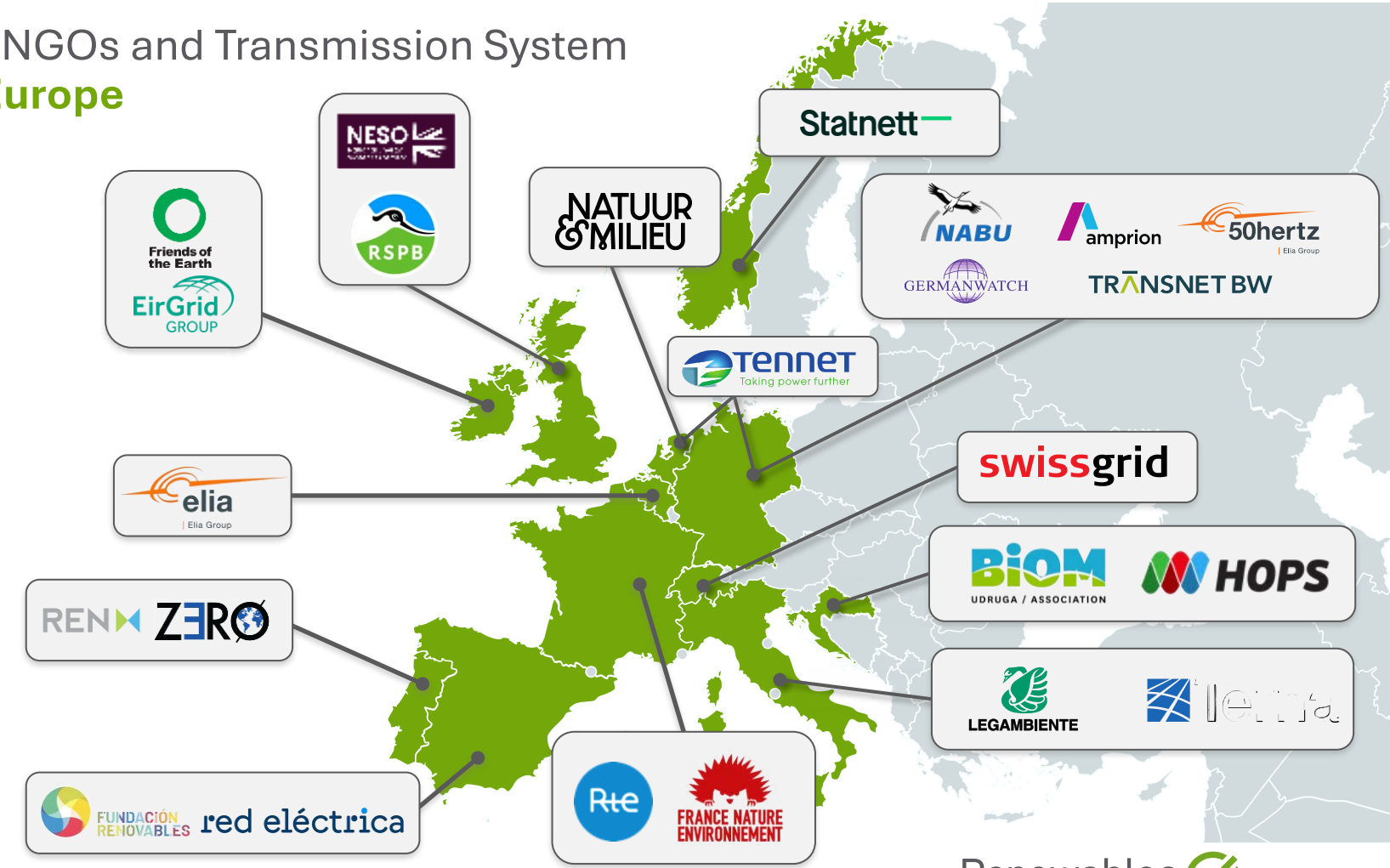
RGI is a unique collaboration of NGOs and Transmission System Operators (TSOs) from **across Europe**

EUROPEAN ORGANISATIONS

CAN Europe · WWF · BirdLife International / BirdLife Europe · Bellona Europa · EMBER

SUPPORTING MEMBERS

Europacable – Try life without us · IUCN · T&D europe



Renewables Grid Initiative

How is our work structured?

We foster knowledge exchange, discussions on the grid infrastructure needs, and the implementation of best practices within **three dimensions:**

GRIDS & ENERGY SYSTEMS

We enable discussions on how to **model, plan and implement** decarbonised and optimised clean energy systems, including different voices in the process.

ENERGY & NATURE

We ensure energy systems both onshore and offshore are developed in **coherence with nature and biodiversity**, promoting mitigation, enhancement and restoration measures.

ENERGY & SOCIETY

We include and engage **citizens, civil society and policymakers** on strategies towards full decarbonisation, building capacity on the role of grids within the energy transition.

Renewables Grid Initiative

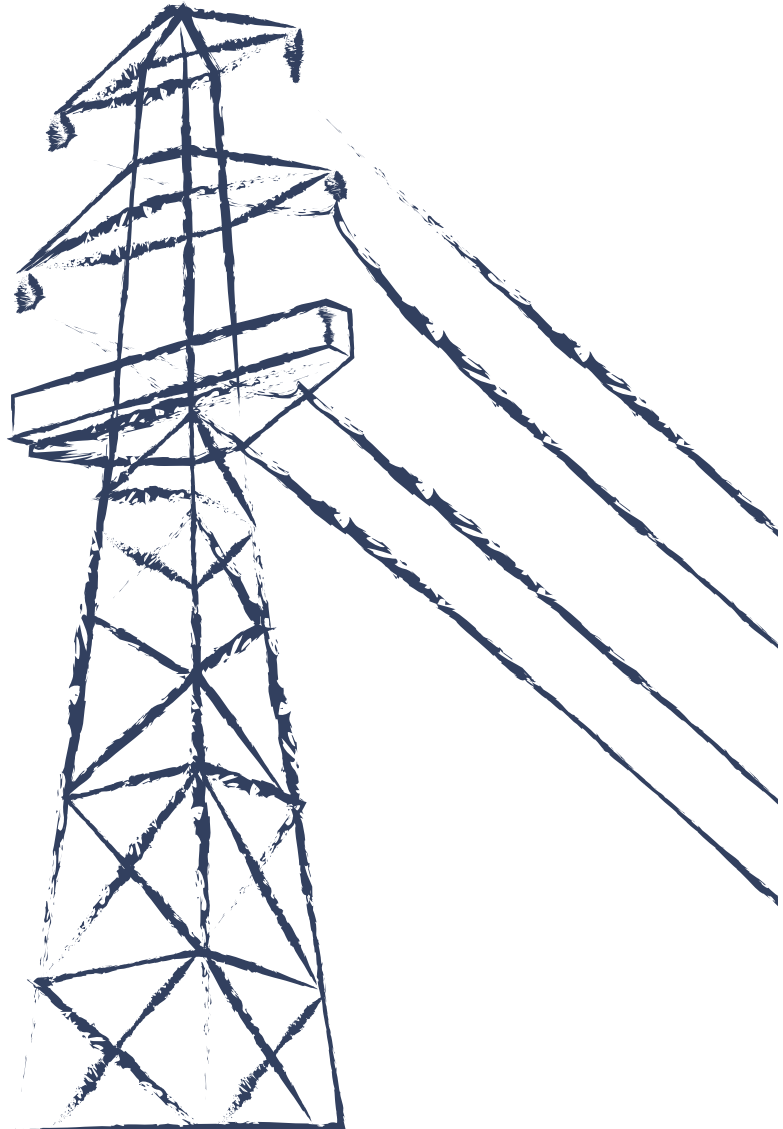
Permitting is hampering the energy transition

Renewables Grid Initiative

grid

ACCELERATION AREAS

AN APPROACH TO TACKLE PERMITTING CHALLENGES



Renewables Grid Initiative

POLICY & REGULATORY framework

Renewables Acceleration Areas
Article 15c

*By **21 February 2026**, Member States **shall** ensure that competent authorities adopt one or more plans designating, as a sub-set of the areas referred to in Article 15b(1), renewables acceleration areas for **one or more types of renewable energy sources**.*

Emergency regulation
Article 6

*Member States may exempt renewable energy projects, as well as energy storage projects and **electricity grid** projects which are necessary to integrate renewable energy into the electricity system, from the environmental impact assessment […] and from the species protection assessments […]*

Grid Acceleration Areas
Article 15e

*Member States **may** adopt one or more plans to designate dedicated infrastructure areas for the development of **grid and storage** projects that are necessary to integrate renewable energy into the electricity system […] The aim of such areas shall be to support and complement the renewables acceleration areas.*

EU Action Plan for Grids
Action 11

*At the latest by **mid-2025**, in view of the permitting obstacles encountered by energy infrastructure projects, the Commission will provide guidance on the designation of dedicated infrastructure areas for grid projects necessary to integrate renewables as provided by the revised RED.*

Renewables Grid Initiative

A MAKE-OR-BREAK *opportunity*

Renewables and grid acceleration areas are not always **considered jointly**

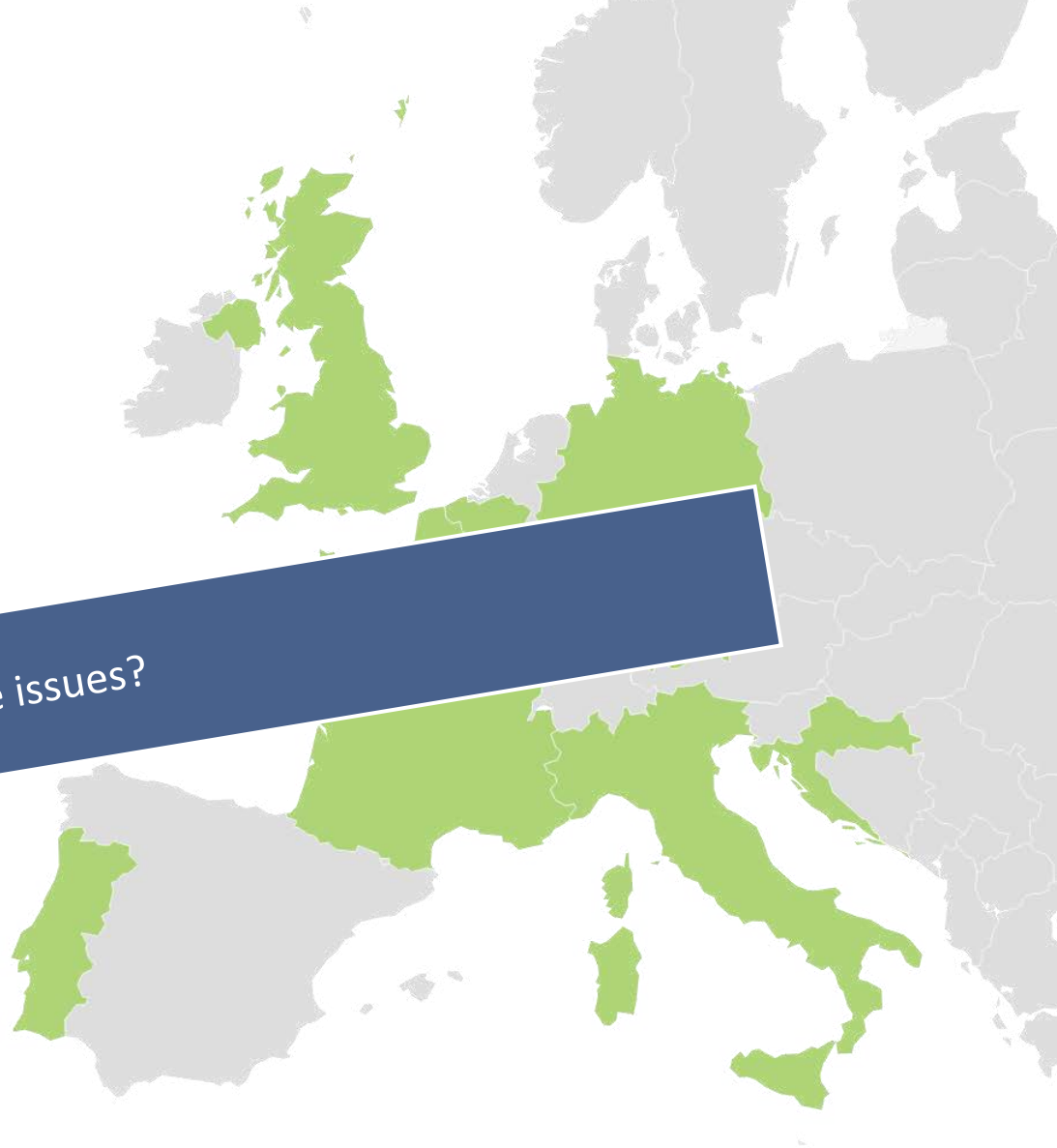
Not enough alignment between frameworks stemming from EU legislation and lack of guidance

Need to strengt

How can we tackle all of these issues?

Mitigation measures are not part of national discussions yet

Room for improvement on **stakeholder engagement** processes



THE ‘NO-BRAINERS’

Strengthened capacities for competent authorities

One-Stop-Shop to ensure better communication with authorities and provide clear guidance for project promoters

Simplified and digital procedures – including sharing applicable regulation, documentation of project decisions, deadlines

Streamlined data collection and integration

Renewables Grid Initiative

Holistic approach
INSTEAD OF DEREGULATION

Renewables Grid Initiative

Regulatory and political support, as well as policy and process integration

Strategic planning, with optimisation and sensitivity mapping

Robust, early and continuous **stakeholder engagement**

PRACTICES

- Early start of construction
- Elisabeth Energy Island
- Single environmental assessment for offshore wind and electricity grid

PRACTICES

- Integrated approach
- Grid hosting maps
- Onshore zoning

PRACTICES

- EU Pact for Engagement
- North Sea Agreement
- Long-standing collaborations

DEEPENING THE *dialogue*

- Complex and long permitting procedures
- Capacities and coordination in and between competent authorities
- Political continuity and public opposition
- Lack of policy integration
- Data availability and robustness

THANK YOU – *LET'S KEEP IN TOUCH!*

alexandros@renewables-grid.eu

Sign up to our NEWSLETTER

renewables-grid.eu/newsletter

Follow us on SOCIAL MEDIA

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Renewables Grid Initiative

Co-funded by the European Union

Renewables Grid Initiative

Questions & Answers

European Commission

Panel CCS / EII / Hydrogen

Main challenges, issues and lessons learned

Ecoplanta: David Perez Gonzalo – Renewable Fuels Projects Senior Manager

Silverstone / Coda Terminal:
Ásdís Nína Magnúsdóttir – Project manager Public Funding and Policy

Triskelion: Jesús Louro

GreenH2CY: Sylvia Trabert – Technical Project Manager

European Commission

Panel CCS / EII / Hydrogen

Ecoplanta: David Perez Gonzalo – Renewable Fuels Projects Senior Manager

European Commission

REPSOL

ecoplanta
MOLECULAR RECYCLING SOLUTIONS

Brussels- April 2025

Funded by the European Union
Emissions Trading System
Innovation Fund

Agenda

1. Project introduction
2. Main challenges and issues of the permitting process
3. Overcoming issues and challenges
4. Lessons learned and recommendations

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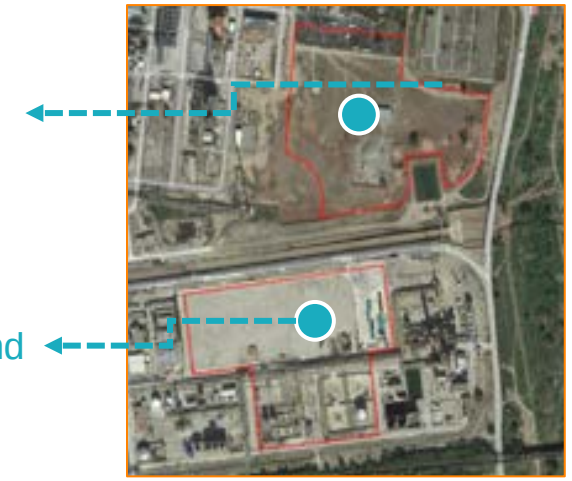
Ecoplanta Project

Located in **El Morell**, Tarragona, Ecoplanta will be the first plant in Europe to produce circular and bio methanol from treated municipal waste, mainly from the surrounding Eco-parks.

The project is located within Repsol's complex and will benefit from synergies



Feedstock

~ 400 kty

MSW (Municipal solid waste)

Biomass (forestry and agricultural waste)

Gasification process

External **Hydrogen** input

Pre-treatment → Gasification → Reforming & Quenching → Syngas conditioning and cleaning → Methanol synthesis

Syngas (H_2, CO)

End products

~ 240 kty

Renewable / Circular **methanol** (CH_3OH)

Gasification technology is fundamental in Repsol's Industrial businesses decarbonization roadmap

- Chemicals
- Biofuels

- **FID January 2025**
- **Startup in 2029**
- **3.4 Mt CO2eq of greenhouse gas (GHG) emissions reductions** over the first ten years of operation
- **Recycling over 70% of the carbon** present in the residual waste

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Main challenges and issues of the permitting process

- **Timeframe required to obtain** integrated **environmental permit** remains very long (> 2 years)

- **Match the deadlines required for each of the requested permits with the progress of the project:**
  - Under Spanish regulations, construction permit application require significantly more detail than integrated environmental permit, posing challenges for the Financial Close milestone.
  - **It would be advisable to simplify permitting and alleviate deadlines for highly challenging projects** (technical, regulatory and commercially)

- **End of waste status** for methanol from Ecoplanta:
  - **National level:** end-of-waste status for methanol has been granted by the regional authority:
    - Biomethanol: end-of-waste status granted by the regional authority enforceable only within the region where it is issued, rather than nationwide[1]. Recognition of end-of-waste status by every other regional authority is necessary for the use of biomethanol in the rest of the Spanish territory.
  - **European level:** lack of harmonization and visibility in the **application of End-of-Waste Criteria** in Member States.

(1) First one in Spain for the valorization of organic waste (other than the valorization of UCO, animal fats, and other VOs) to produce biofuels

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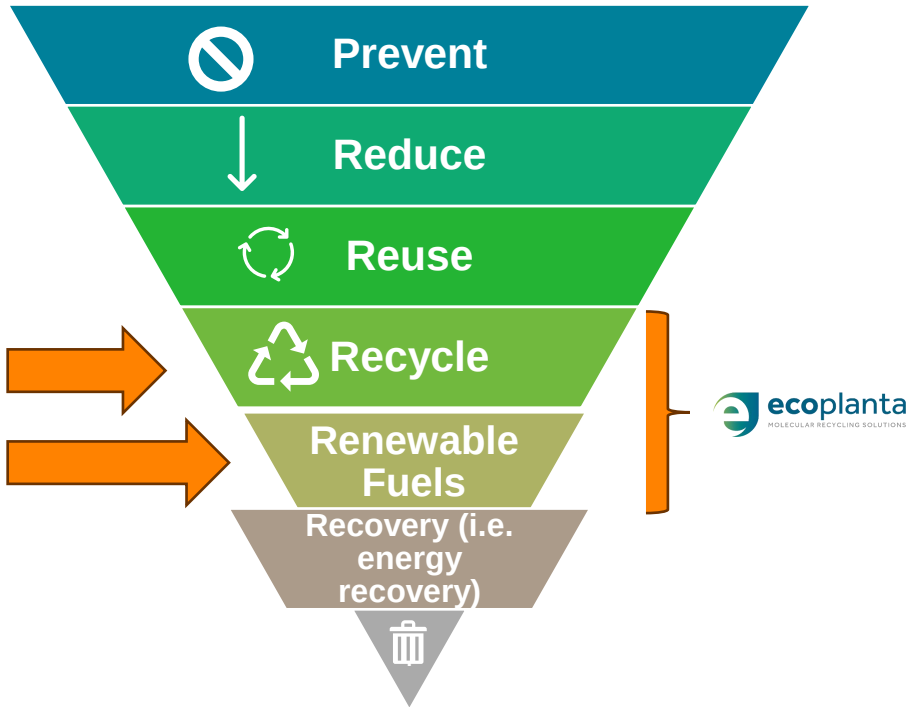
Overcoming issues and challenges

- Ecoplanta is subject to different **regulations** coming from different Commission DGs (WFD/RED –DG ENV, RFNBO –DG ENV/DG CLIMA, SANDACH – DG SANTE) and it is necessary to ensure **consistency** between them.
- **Review Waste Hierarchy** to encourage new circular economy technologies such as **gasification**:
  - Transforming **non-recyclable waste into renewable fuels and circular products** provides a comprehensive solution to the waste problem generated by our society and reduces energy dependency on imports.
  - Therefore, **the processing of waste into renewable fuels should be expressly prioritized in the waste hierarchy** over its direct incineration with energy recovery.



- **Harmonize the application of end-of-waste criteria at EU level** – commercial products obtained from waste gasification, such as methanol, that it's a chemical building block, meeting quality specification (e.g. IMPCA), and is registered under REACH[1], **should be granted EoW automatically**, regardless its final use (biofuel or circularity)
- **Circularity and recycled content targets not fully developed for all the value chains** (only for plastics in packaging, automotive). Several uncertainties yet about the methodologies for calculating recycled content from chemical recycling, as well as about the demand for circular methanol from mixed waste (e.g. plastics, textiles,...) in the absence of specific targets.

1 Methanol CAS 67-56-1: https://echa.europa.eu/information-on-chemicals/registered-substances/-/disreg/substance/100.000.599

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Lessons learned and recommendations

Lessons learned

- Complexity of the Permitting Process
  - Obtaining the required permits (particularly the environmental permit) can be a lengthy and intricate procedure. This may result in a misalignment between the permit-granting process and the project's progress milestones.
  - The lack of harmonization in the application of End-of-Waste criteria at both national and EU levels has created uncertainties. Consistency between different regulations is crucial.

Recommendations

- Simplification of the permitting process:
  - Streamline administrative procedures and alleviate deadlines for highly challenging projects.
  - Promote a harmonized application of End-of-Waste criteria at the EU level to facilitate the use of renewable fuels.
- Recognition of New Technologies:
  - Review the waste hierarchy to encourage circular economy technologies such as gasification.
- Improvement of Communication :
  - Foster collaboration and communication between different regulatory authorities to ensure coherence.
  - Further develop regulations to support circularity.

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Innovation Fund

REPSOL

ecoplanta
MOLECULAR RECYCLING SOLUTIONS

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Innovation Fund

Panel CCS / EII / Hydrogen

Silverstone / Coda Terminal:

Ásdís Nína Magnúsdóttir – Project manager Public Funding and Policy

European Commission

Carbfix

Carbfix has developed the process of rapid underground mineralisation of CO_2 captured from industrial sources or CO_2 captured directly from the atmosphere – turning it into stone by accelerating a natural process to mitigate climate change. The Carbfix method is scientifically proven, permanent, cost effective, scalable and safe.

Ásdís Nína Magnúsdóttir
Project Manager Public Funding and Policy

7. May 2025
Brussels

Carbfix

Silverstone and Coda Terminal

- **Silverstone – small scale EU IF grant**
- Captures 95% CO_2 and HS_2 emissions from a geothermal power plant in Iceland
- Mineralizes the CO_2 onsite
- Will enter into operation in June 2025

- **Coda Terminal – large scale EU IF grant**
- CO_2 mineral storage hub that will store CO2 from hard to abate sector in Northern Europe
- Will enter into operation in phases, the first one in 2028 and become fully operational in 2032
- Target capacity of 3 million tonnes of CO_2

Carbfix

Relevant permits and other legislation

CCS Directive

- Silverstone was granted the first onshore storage permit in Europe
- The recent review of the Guidance Documents removed certain ambiguities regarding subsurface mineralization, e.g. that a cap-rock is not required for trapping – given that solubility trapping and mineral trapping serve the same purpose – and that water used for dissolving CO_2 for injection is not considered to be a part of the CO_2 stream, which, under the rules must consist “overwhelmingly of CO_2 ”

EU ETS Directive

- Not all of our projects fall neatly under the EU ETS Directive, e.g. when storing CO_2 from non-ETS sources such as geothermal and Direct Air Capture.

- No exemptions permitted for small emitters when it comes to geological storage.

Water Framework Directive

- The CCS exemption had not been implemented into Icelandic law even though the CCS Directive had been implemented, this was fixed through a legislative change but caused delays.
- We have still not received guidance on the legal composition of the CO_2 stream, this is not an issue for Silverstone but needs to be resolved before we can enter into operations for projects involving CO_2 from hard to abate sector.
- Wording on provisions for CCS activities

Carbfix

Lessons learned

- Start as early as possible, first of a kind projects take longer both for project developers to prepare permitting applications but also for institutions to process
- Monitor closely and engage when Guidance Documents are being revised, not all legislation is inclusive of new technologies that did not exist at the time of their creation

Carbfix

Panel CCS / EII / Hydrogen

Triskelion: Jesús Louro

European Commission

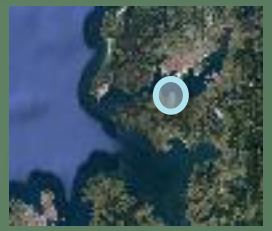
WHAT IS TRISKELION

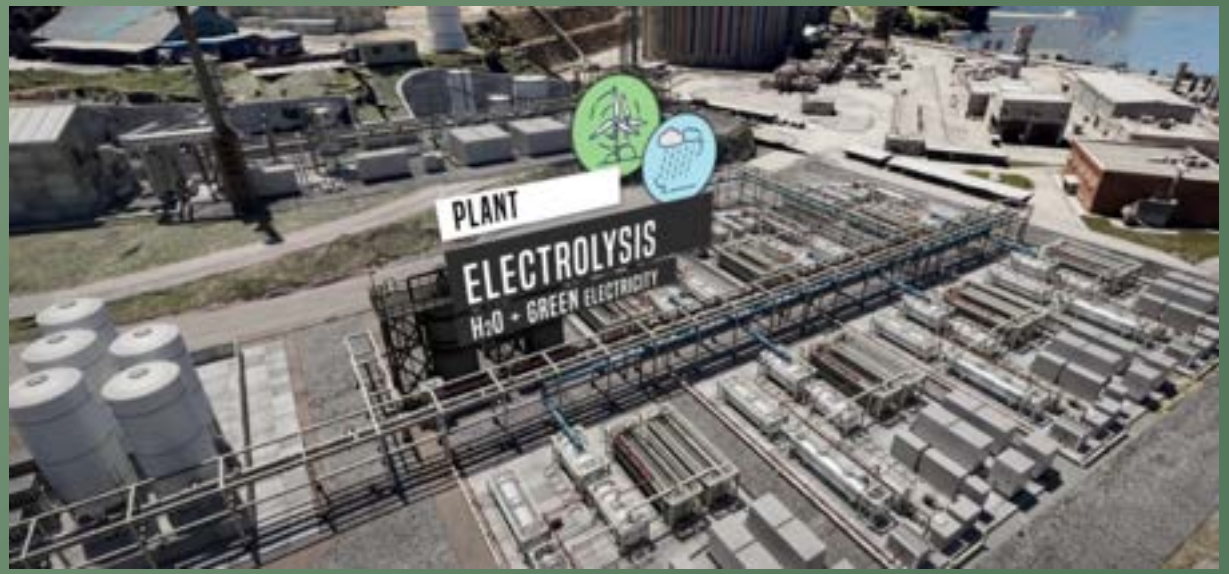
Triskelion involves the production of 40.000 tons/year of green methanol through the synthesis of renewable hydrogen, while capturing and 56,000 tons of CO2.

The e-Methanol is intended for applications in the shipping and chemicals industries.

LOCATION

Mugardos- Ferrol
A Coruña-Spain





tklmethanol.es

FORESTAL DEL ATLANTICO
Funded by the European Union

MAIN CHALLENGES OF THE PERMITTING PROCESS

#	DATE OF GRANT	PERMIT TYPE/DESCRIPTION	COMPETENT ADMINISTRATIONS AND/OR ENTITIES
1	27/10/2022	Strategic Industrial Project Declaration	Council of Xunta de Galicia (regional government)
2	29/01/2024	Favourable Environmental Impact Statement (Favourable EIS)	General Directorate of Environmental Quality, Sustainability and Climate Change (Department of the Environment, Territory and Housing)
3	13/02/2024	Integrated Environmental Authorization (updated with Triskelion) (IPPC updated)	General Directorate of Environmental Quality, Sustainability and Climate Change (Department of the Environment, Territory and Housing)
4	21/10/2024	Construction License	Council of Xunta de Galicia (regional government)
5	31/01/2025	Resolution - authorisation of works and extension of land concession	Ferrol-San Cibrao Port Authority

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OVERCOMING ISSUES AND CHALLENGES

ACCESS AND CONNECTION TO ELECTRICITY GRID

The permits to allow the access and connection to the transmission and distribution grid, (80 Mw) are already in place, but involve the development of new facilities and the enforcement of the existing ones.

It means investments from our side that are being negotiated with the distribution operator.

ENERGY SUPPLY

There are legal proceedings in Galicia that are slowing down the development of new electricity generation facilities, making it difficult to obtain the necessary supply.

This situation, together with the complexity of regulatory and operational requirements, puts at risk the viability of Green Hydrogen projects and their ability to contribute significantly to the decarbonization of the continent.

FORESTAL DEL ATLANTICO
Funded by the European Union

LESSONS LEARNED AND RECOMMENDATIONS

TRISKELION is being a success case from the permitting point of view, due to:

1. The provision of a properly coordinated multidisciplinary team to the project
2. The good performance of the administration that, by means of the declaration of the project as strategic, has provided a true one-stop shop.

Funded by the European Union

Panel CCS / EII / Hydrogen

GreenH2CY: Sylvia Trabert – Technical Project Manager

European Commission

GreenH2CY Project

Sylvia Trabert, Technical Project Manager

Closed Door Knowledge Sharing Workshop, Brussels, 07/05/2025

MCK. FUTURE FUELS LTD

+357 22 876699

trabert@futurefuels-cy.com

Project Website: https://greenh2cy.futurefuels-cy.com/

FUTURE FUELS LTD

PROJECT OVERVIEW

The GreenH2CY Project entails for the installation and operation of a 2 MW Proton Exchange Membrane (PEM) electrolyser consisting of 2 electrolysis stacks, 1 MW each.

The project includes a hydrogen storage facility – two storage units (2 x 500 kg) and a re-fuelling station in the same location.

Starting date: June 2023 Entry into operation: September 2026

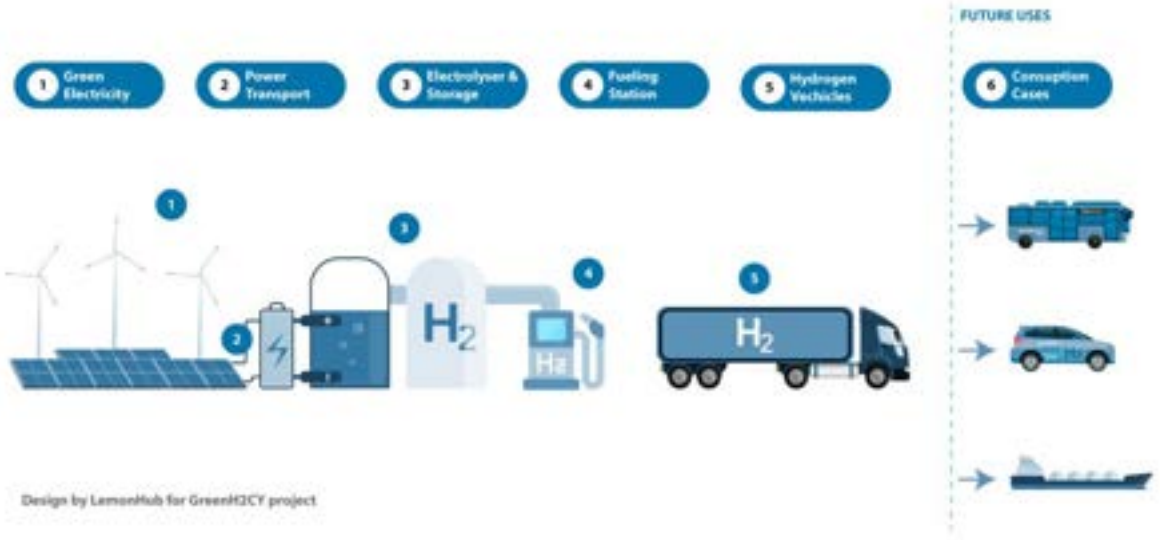
The first and, to date, only national project approved under the Innovation Fund and at the same time the first hydrogen production unit in Cyprus.

GreenH2CY Project

Electricity from Renewable Energy Sources - use of guarantees of origin (GOs)

Water from Tertiary treatment of wastewater (WWTP) from the Water Development Department of Larnaca

Product: The GreenH2CY project is expected to produce 150 tonnes of hydrogen fuel per year, equivalent to 627 tonnes of diesel fuel per year.



01. COORDINATOR
KETONIS HOLDINGS LTD
(Ketonis H.)

02. BENEFICIARIES
MCK. FUTURE FUELS LTD
(Future Fuels)

PROJECT PERMITTING – HISTORY & STATUS

21 July 2022

TOWN PLANNING APPLICATION

14 February 2023

TOWN PLANNING APPLICATION BY WAY OF DEROGATION FROM THE PROVISIONS OF THE LOCAL PLAN OF LARNAKA

20 December 2023

FULFILLED ALL THE REQUIREMENTS AND COMMENTS MADE BY THE TOWN PLANNING DEPARTMENT

5 February 2024

REPORT FROM TOWN PLANNING DEPARTMENT TO SY.ME.PA (ΣΥΜΒΟΥΛΙΟ ΜΕΛΕΤΗΣ ΠΑΡΕΚΚΛΙΣΕΩΝ – assessment council for derrogation)

12 April 2024

PUBLIC HEARING

05 September 2024

DERROGATION DECISION BY COUNCIL OF MINISTERS OF CYPRUS

25 September 2024

PLANNIG PERMIT ISSUED

13 March 2025

BUILDING PERMIT APPLICATION

Challenges and delaying factors

- Government reform and creation of EOA (Self-Governance District Organisation)
  → Licensing transferred from central to district level
  → Application filing system changed to digital only (quite a number of glitches in the beginning)
- Hydrogen production and usage: New technology with no prior experience by licensing bodies of how to deal with it
- Delays to get response from various department and bodies, e.g. Fire Brigade re. fire & accident risk assessment
- Obtaining firm commitment from offtakers
- Assist / create market with affordable and/or subsidised FC-vehicles

Lessons learned and recommendations ……..

Panel CCS / EII / Hydrogen

Questions & Answers

European Commission

Panel RES / Energy Storage

Main challenges, issues and lessons learned

NEXTFLOAT+: Gemma Bosch – Senior BD Manager
N2OWF: Sebastian Kaufmann – Finance Director
Blades2Build: Ana Teresa Lima – Senior Researcher at DTU
UNITED HEAT: Dorota Wolko-Aydi – Project Implementation Specialist

European Commission

Panel RES / Energy Storage

NEXTFLOAT+: Gemma Bosch – Senior BD Manager

European Commission

CONFIDENTIAL

Next+ Float

CINEA Closed-door Knowledge Sharing Workshop on Permitting

May 7th 2025

T.EN TECHNIP ENERGIES

Co-funded by the European Union
Emissions Trading System
Innovation Fund

X1 WIND disrupting offshore wind

NextFloat+ will deploy and operate a next generation >6MW floating platform

Project with ambitious goals:

1. To demonstrate a **cost-efficient >6MW prototype** in real operational environment, bringing significant capex reduction to the floating system
2. To use this prototype to **produce 20.605 MWh/year** of renewable electricity to be injected to the grid, thus **avoiding 3567,5 tonnes of GHG emissions per year**
3. To ensure a **minimal environmental and social impact** of floating wind across its life-cycle using sustainable innovative concepts and creating a standard impact assessment methodology
4. To prove the scalability of the integrated NEXTFLOAT+ solution for **larger turbines (14-20MW)** optimized for deep waters in different sea basins
5. To detail an **industrialisation road map** for mass production of NEXTFLOAT+ 14MW+ – 20MW+ system, including the optimisation of manufacturing, assembly and installation processes
6. To demonstrate several innovations that will **facilitate the O&M** and enhance the accessibility to floating systems during its operational lifetime
7. To advance and **de-risk commercial deployment of floating offshore wind** energy by securing businesses cases and LCOE assessment for various sea basins.
8. To **increase the undertaking of and confidence** in these technologies by the investment community and wider public.

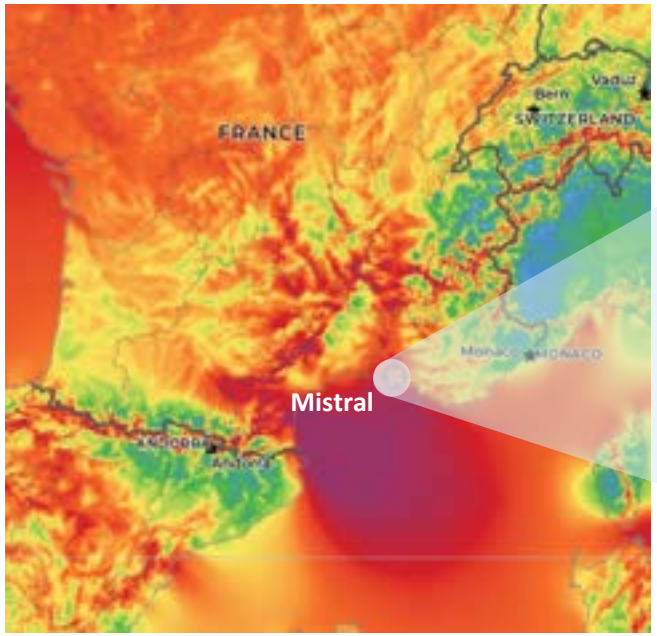
Consortium of world-class partners:

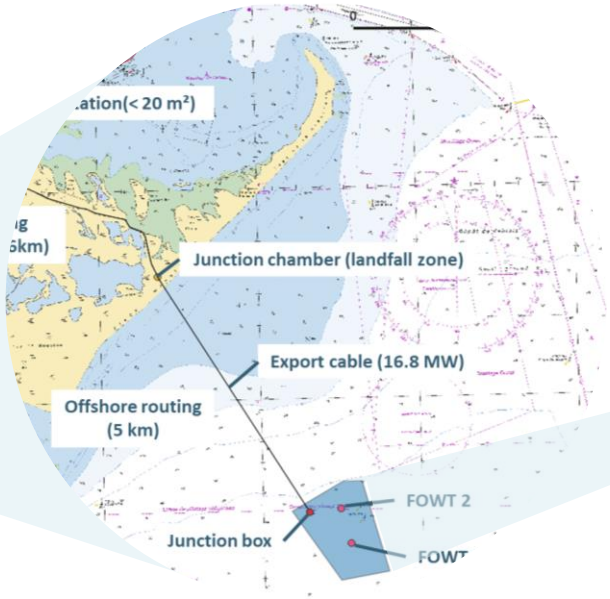
X1 WIND

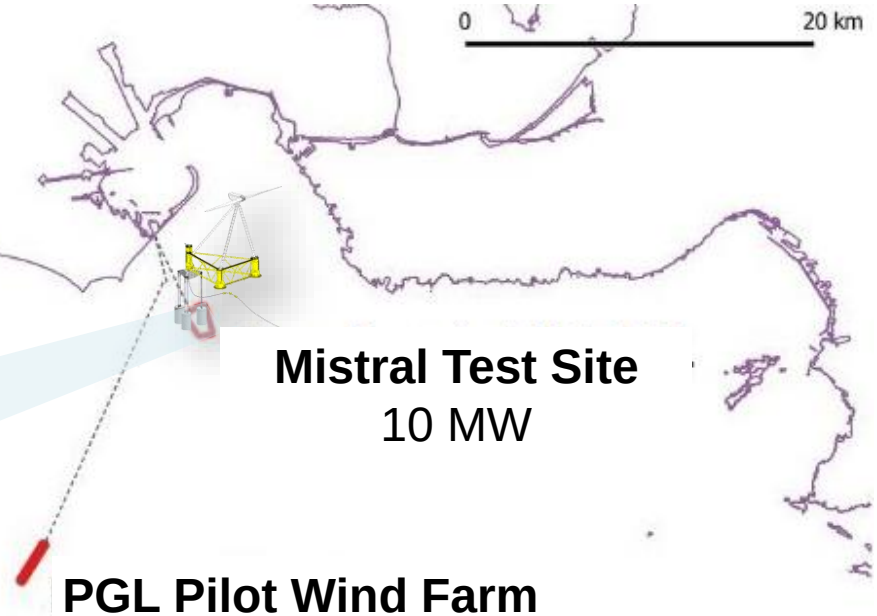
T.EN TECHNIP ENERGIES

Next+ Float

Main Challenges and Issues of the Permitting Process







Mistral Test Site
10 MW

PGL Pilot Wind Farm
25 MW

- **On July 7th, 2014, a permit was issued** for the installation of two floating wind turbines located 5 km offshore.
- A decade later, the landscape has transformed significantly, with the area now hosting a 25 MW pilot wind farm and a future 750 MW commercial wind farm in proximity.

Future Commercial Wind Farm
750 MW

MISTRAL Test Site Permitting Issue

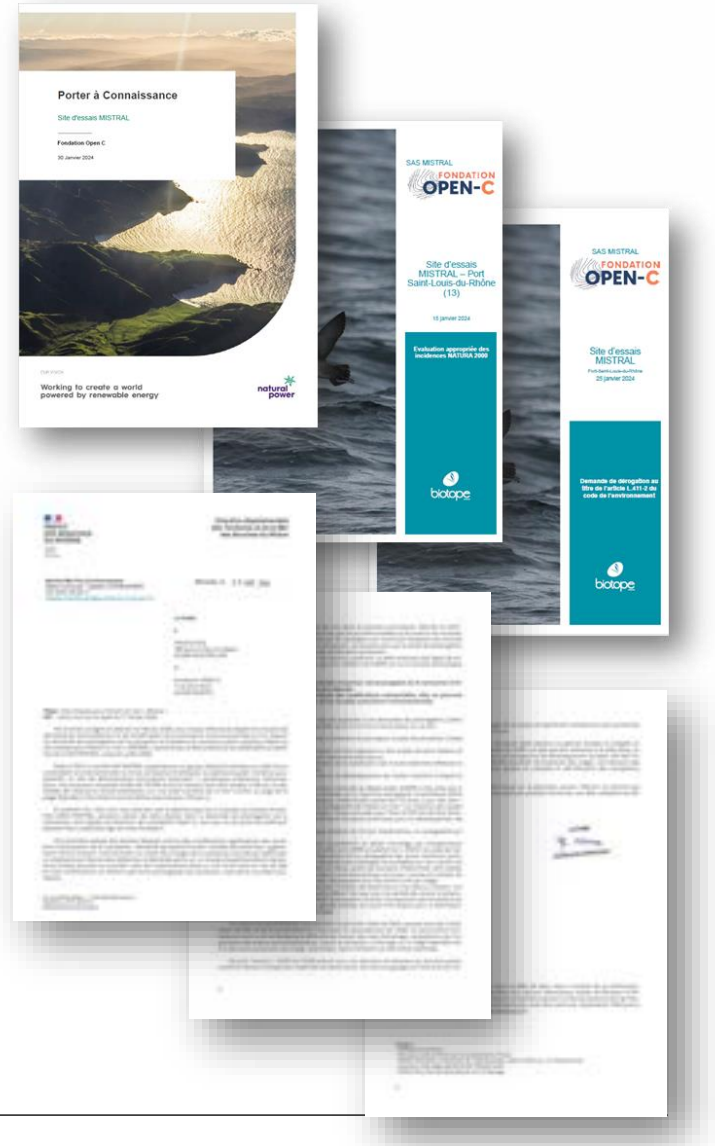
- **Authorizations**
  - Submission to the Prefect of Bouche-du-Rhône of the Dossier for the extension and modification of authorizations on February 7, 2024 (DDEP, Natura 2000, PAC, Seabed lease)
    - Environmental authorization to put in compliance with regulation
    - Modifications asked :
      - 10-year operation extension (from 1st FWT commissioning)
      - 160m maximum turbine height (instead of 140m)
      - Variation in FWT positioning in the test site area
  - Rejected by the Bouches-du-Rhône Prefect on April 25th, 2024
    - ► *substantial modifications*
    - ► *context is different than 10 years ago*
    - ► *grid connection could also be a challenge*
  - Open-C (the test site developer) filed a gracious appeal which was finally rejected by the prefecture on September 19th, 2024
  - Submission of authorization application to the French civil aviation authority (DGAC/DSAC) on March 1, 2024
  - Submission of authorization application to the French state aviation authority (DSAE/PREMAR) on March 1, 2024

Stakeholders dialogue

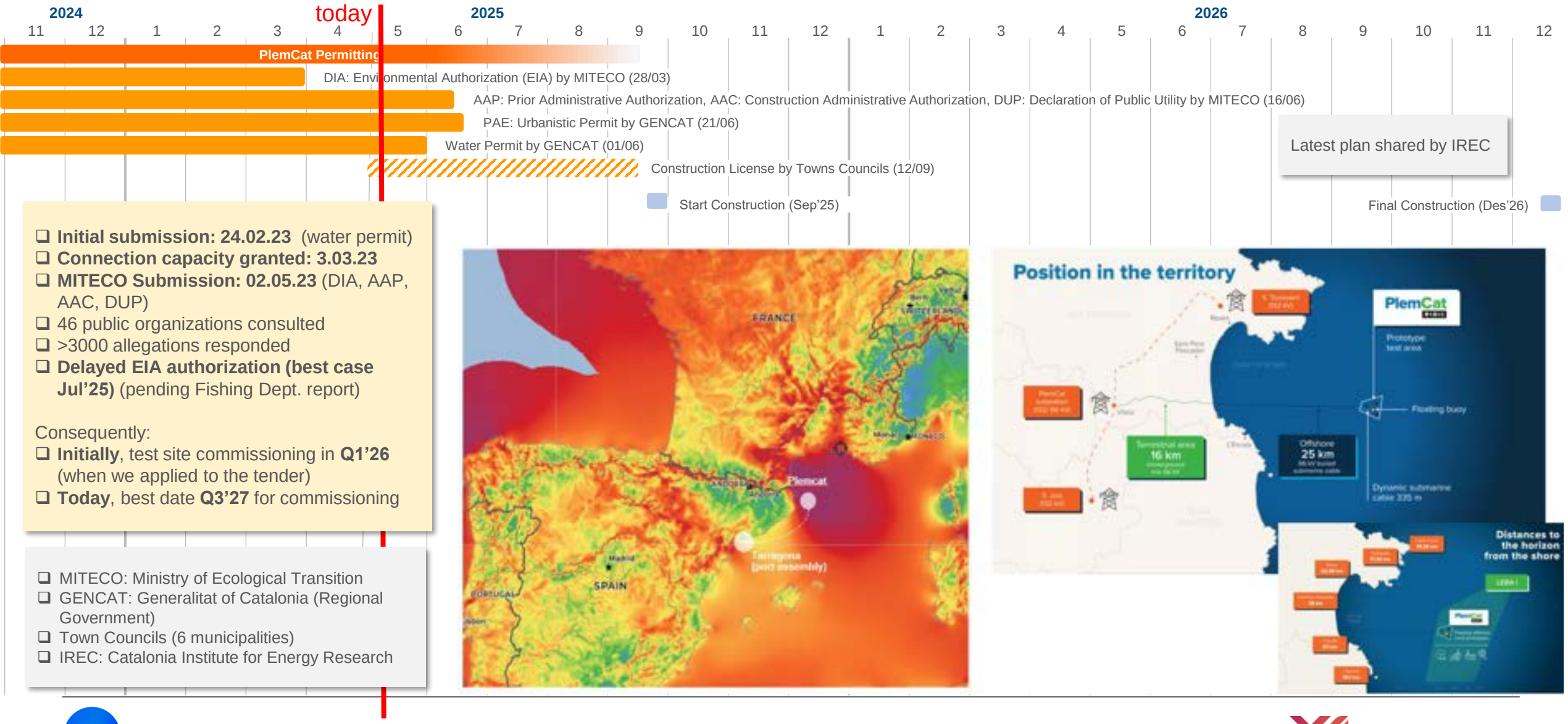
- Strong opposition from local mayors

2 Options to move forward

- Re-start a complete permitting process for Mistral test site (several years process with high level of uncertainty)
- Move to a new test site



Overcoming Issues and Challenges. PlemCat (IREC)



- **Initial submission: 24.02.23** (water permit)
- **Connection capacity granted: 3.03.23**
- **MITECO Submission: 02.05.23** (DIA, AAP, AAC, DUP)
- 46 public organizations consulted
- >3000 allegations responded
- **Delayed EIA authorization (best case Jul'25)** (pending Fishing Dept. report)

Consequently:

- **Initially**, test site commissioning in **Q1'26** (when we applied to the tender)
- **Today**, best date **Q3'27** for commissioning

- MITECO: Ministry of Ecological Transition
- GENCAT: Generalitat of Catalonia (Regional Government)
- Town Councils (6 municipalities)
- IREC: Catalonia Institute for Energy Research

Lessons Learned and Recommendations

❑ **Projects**

1. **Permitting Delays**: It's nearly impossible to accurately predict delays caused by permitting. To address this, we could work with funding authorities to introduce flexibility in project timelines.

For example:

- Allow for a slow start with a smaller team until permits are secured.
- Introduce flexibility in gate timing to ensure the project isn't suspended if a deadline is missed due to permitting issues.

2. **Site Selection**: Prioritize sites where all major permits and authorizations have already been granted.

❑ **Policy Makers**

3. **Streamlined Permitting for Pilot Projects**: Differentiate the permitting process for commercial projects and innovative pilot projects. The latter should have a lighter, faster process, as the goal is to gather data to better understand potential impacts on the former.

4. **Harmonized European Permitting:** Standardize permitting processes across Europe with clear steps, timelines, and responsibilities to ensure transparency and efficiency.

5. **Developer Involvement:** Define and enhance the role of project developers in the permitting process to create more opportunities for effectively communicating project details and addressing stakeholder concerns. This proactive approach can help prevent unnecessary obstacles and facilitate a more efficient and timely completion of the permitting process.

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Emissions Trading System
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Panel RES / Energy Storage

N2OWF: Sebastian Kaufmann – Finance Director

European Commission

N2OWF

Nordseecluster (GER)

Project Presentation
May 2025

Finanziert von der Europäischen Union

N2OWF is part of NSC, a 1.6 GW de-risked flagship offshore wind project in the German North Sea

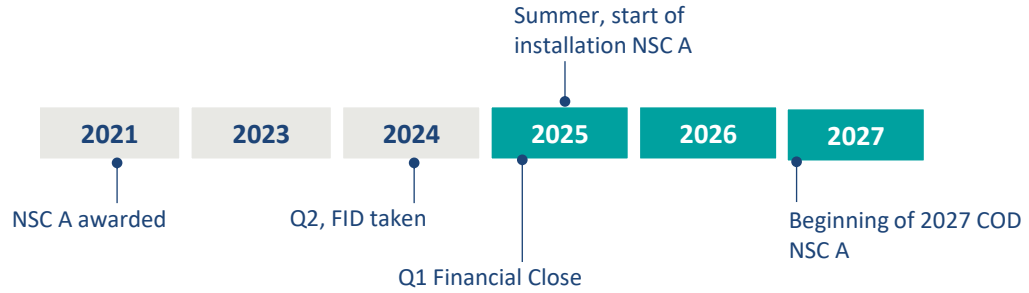
Project Description

- 4 offshore wind projects with a capacity of ~1.6 GW
- Located ~50 km off the island of Juist in the German North Sea
- FID (Final Investment Decision) taken in Q2, 2024
- The NSC project is fully merchant and will be constructed in two phases
  - Phase A – 660 MW (N2OWF area part of it with 420 MW): Permit already obtained
  - Phase B – 900 MW: Permit application issued
- Main supply contracts logged in:
  - Turbines: Vestas (104 x 15 MW WTG)
  - Monopile foundations: Dajin Offshore
  - Offshore substations: Chantiers de l'Atlantique
  - Inter Arrary Cables: Hellenic Cables

Key Technical Parameters

Wind Turbine Generator	1.560 MW – 104 x Vestas V236 -15 MW
NCF	47.9%[1]
Wind speed	Mean: 9.02 m/s; Extreme: 43.3 m/s
Water depth	Average: ~32 m
Substation	Two substations of 155 kV each (NSC A)
Grid connection	Provided by TenneT (NSC A) via DolWin6 converter station, in operation since 2023. For NSC B under construction by Amprion

Project Timeline – NSC A



Note: 1. A weighted average NCF of NSC A and NSC B, assuming 35 years lifetime and 100% WTG availability

The initially granted N2OWF project and its innovations portfolio

Initially broad portfolio of innovations were planned, incl. next generation WTGs, singe piece monopile, vibro piling, H2 electrolyser on site to fuel O&M service vessel, split into separate permitting workstreams with specific challenges:

- **Windfarm**
  - Separation into four separate permitting processes, one for ease of the four areas, even if same design was applied
  - Lengthy processes, requiring significant contribution by external experts, ranging from certification of foundation design to lightning of helidecks
- **Hydrogen Electrolyser**
  - No clear path on requirements and timelines for permitting offshore hydrogen was available
  - There is no standard design for offshore hydrogen and relevant codes and standards are not established

Discontinue parts of the N2OWF project as unpleasant but necessary solution to avoid risk of loosing the full project

Offshore Wind Farm

- Mirroring structures and organization of the permitting process within the project
- Providing permitting documents as early as possible and consider buffer in the project schedule for clarification rounds

Permitting process for offshore wind farm well on track, permits for first construction activates received as planned

Hydrogen Electrolyser

- In the end, the following situation arose with the permitting authority (BSH):
  - According to the national area development plan (“Flächenentwicklungsplan”) the N2OWF area is not labelled as for H2 production, but just for conventional wind farm. That means that there is no legal basis yet to permit any H2 production there.
  - Introducing the H2 set-up within the “standard” permit process would also heavily delay the process of the windfarm. Given the already tight schedule of the wind farm, there was a risk to even loose the project rights if time schedule couldn’t be met.
  - Running the H2 platform as “auxiliary plant” in a decoupled permit process would not solve the issue, since such application will be the first of its kind, it is right now completely unclear to the BSH which standards and regulations will apply.
  - Unclarity regarding certification standards (offshore wind standards vs oil and gas standards) prevented also the continuation of design activities.

Despite all efforts the decision had to be made to stop the works on a Hydrogen Electrolyser as part of the project

Well established permitting processes can be improved but innovations require completely new processes and standards

Offshore Wind Farm

- Exchange with authorities is essential to ensure that developments positions are considered (e.g. participation in hearings on revised offshore development plan to provide developers perspective)
- Engagement has to be on an ongoing basis by providing proactive updates and openly raise issues
- Use in-house experience from previous projects and involve recognized experts

Hydrogen Electrolyser

- Build up internal knowledge and expertise in new technologies early well ahead of project start
- Develop step-by-step-procedure on deliverables and timeline for permitting considering significant buffer
- Develop proposal on relevant codes and standards, to have a starting point if no standards exist yet.
- Align proactively with authorities on new processes and standards
- Have clear expectation management towards permitting authorities

Law makers should aim to facilitate new, innovative ideas by accepting that standards are developed „on the journey“

Thanks for your attention and happy to take questions

Panel RES / Energy Storage

Blades2Build: Ana Teresa Lima – Senior Researcher at DTU

European Commission

BLADES2BUILD

Recycle, repurpose and reuse end-of-life wind blade composites – a coupled pre- and co-processing demonstration plant

Knowledge Sharing Workshop on Permitting,
7 May, Brussels

Technical University of Denmark on behalf of all partners

Funded by the European Union

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DTU Technical University of Denmark

Project Facts and Concept

EU Funding programme: *Horizon Europe*

Call: *HORIZON-CL5-2022-D3-01: Sustainable, secure and competitive energy supply*

Topic: *HORIZON-CL5-2022-D3-01-02*

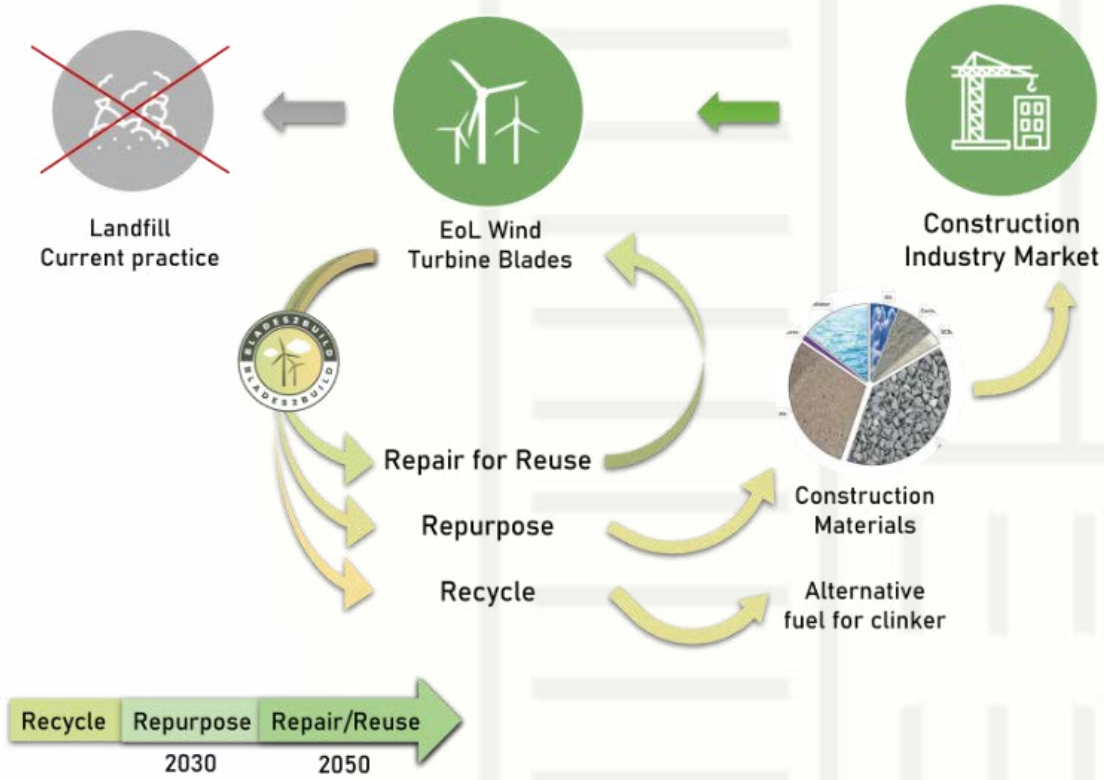
Type of action: *HORIZON Innovation Actions*

Start date: *01-01-2023*

End date: *31-12-2025 (foreseeable delay of 9 months)*

Duration: *36 months*

Budget: *12.3 million Euro*



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Main challenge, issue and lesson

- Main challenge: obtain the environmental permit (Integrated Envronmental Authorization – EIA) from the regional government of Castilla y León (North-west of Spain)
    - Long period of processing without communication
- Issue: Although under current Spanish legislation the authority has 6 months to respond to the IEA application, the reality is that, since administrative silence is considered negative, the applicant has no choice but to wait for the official resolution - whether it is approved or denied - which has no deadline established.
    - There were a few environmental issues that needed to be addressed in the permit request by our partner, but these were addressed in a timely manner
    - The authority had only one person in charge for the permitting process and there was a substitution during the process. Additionally, the original person in charge went on sick leave for several weeks, which brought the process to a halt that was never communicated by the authority.
- Lesson: have a plan B for demonstration plant establishment
    - In this case, we proposed an alternative location for the demonstration plant

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Solution

Plan A – Cubillos del Sil

Plan B – Tudela de Duero

- **The new proposed site** *for the demonstration plant is Tudela de Duero, 200 km from Cubillos del Sil (Plan A location).*
- *PreZero developed a non-hazardous industrial waste recycling plant in an industrial park in Tudela del Duero (Valladolid).*

- **Tudela del Duero** *already had an approved Integrated Environmental Authorization (IEA) for the construction of a non-hazardous industrial waste treatment plant. (Plan B location).*
- *The only environmental procedure required was a non-substantial modification to incorporate the necessary equipment for recycling wind turbine blades.*

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Recomendations

- To projects

Have a plan B for your demonstration location

Having a partner with a widespread business, with several potential sites for development, makes it easier for Plan B development

Engage early with the local authorities, at the proposal stage

- To policy makers

At the call description require the description of a contingency plan or risks for projects with high TRL and demonstration plant requirements

Help implementing the maximum processing times for permitting at the regional government

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DTU Technical University of Denmark

Thank you!

atmli@dtu.dk

www.blades2build.com

DTU

www.blades2build.com

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Timeline

- **June 29th, 2023: Submission of the integrated environmental authorization**

***C**ontinuously monitoring the status of the application, responding promptly and efficiently to all objections, reports, and requests received from the Administration in all the different phases of the process, with the primary goal of accelerating its final approval as much as possible.*

- **June 30th, 2024: The official approval of the environmental permit was still not obtained**

***T**his impeded obtaining the GO decision from CINEA. This, in turn, caused the Blades2Build to be temporarily suspended.*

- **September 30th, 2024: As the risk that final approval of the environmental permits could be delayed beyond that date was quite significant (which would have led to the definitive cancellation of Blades2Build project)**

***D**ecided to propose an alternative location for the demonstration plant to try to reverse this situation*.

- **August 5th, 2024,** *was the modification submitted.*

According to current Spanish legislation (Royal Legislative Decree 1/2016), the Administration has a one-month period to respond to IEA non-substantial modification requests. As no notification was received before 5th September, it could be automatically considered as approved by positive administrative silence.

- **September 5th, 2024,** *modification approved*
- **September 9th, 2024,** obtained the building permit for the construction of the demonstration plant in *Tudela de Duero*.
- **October 1st, 2024,** *Blades2Build out of the suspension*

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UNITED HEAT: Dorota Wolko-Aydi – Project Implementation Specialist

European Commission

united heat

a joint project by SWG Stadtwerke Görlitz AG SEC ZGORZELEC

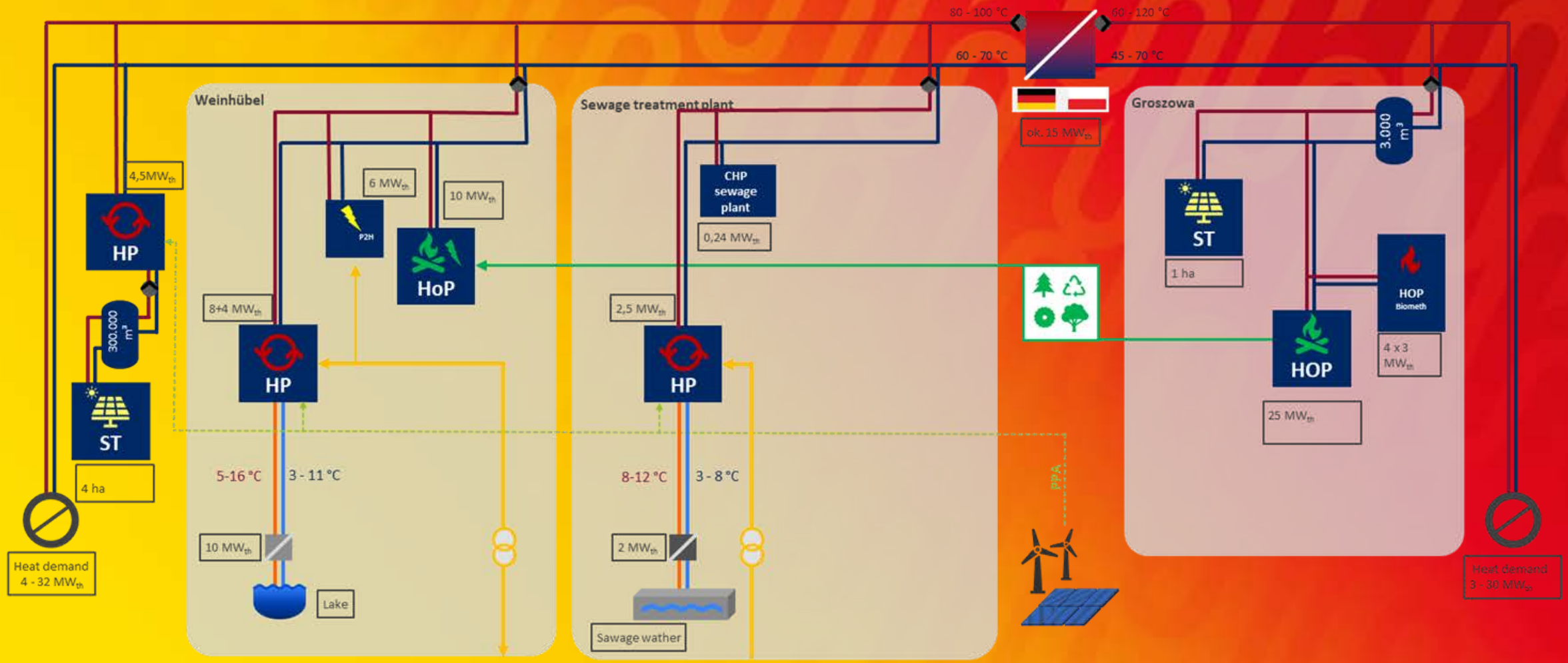
Climate-Neutral District Heating Project for the Europe- City of Görlitz-Zgorzelec

PERMITTING administrative path

e·on VEOLIA

07.05.2025

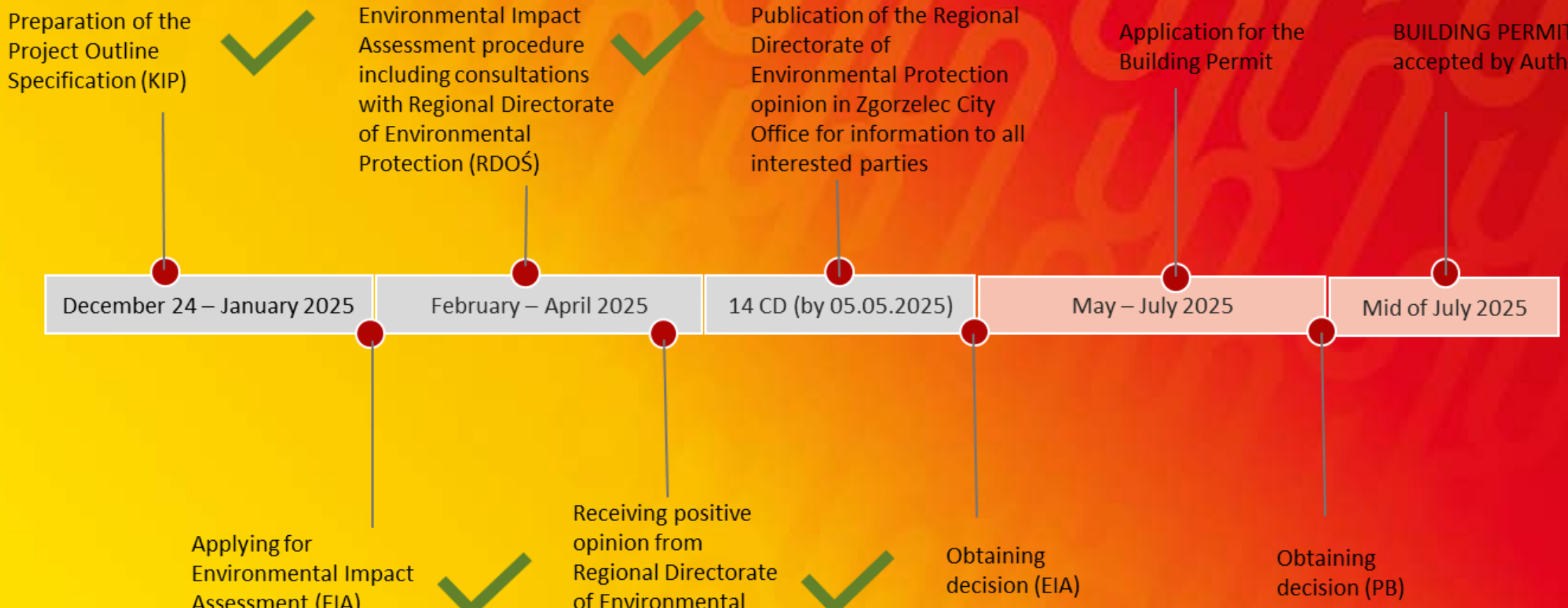
Technical concept



Administrative path => time schedule

	ADMINISTRATIVE PATH				DESIGN PATH		
TIMING	OBJECTIVES	ACTION	RELATED ACTIONS	TIMING	OBJECTIVES	ACTION	RELATED ACTIONS
1,5 MONTHS	ENVIRONMENTAL IMPACT ASSESSMENT (EIA)	preparation of the Project Outline Specification (KIP)					
			application for "Expert from the land register" to country Geodetic and Cartographic documentation centre	4 MONTHS	BUILDING DESIGN		"Base map for design purposes" is required
		application for "Decision on the environmental conditions of the project, together with the project outline specification" to Regional Directorate of Environmental Protection (RDOŚ)	application for "Cadastral MAP" to country Geodetic and Cartographic documentation centre			documentation for "Coordination Team Approval" (ZUDP)	
3 MONTHS		OBTAINING DECISION EIA REPORT REQUIREMENT					execution of the geological and engineering documentation
		ENVIRONMENTAL IMPACT ASSESSMENT procedure including consultations with RDOŚ and local society				Building design Land development plan Information Safety and Health Plan (BIOZ) Base map for design purposes Geotechnical investigations	
		OBTAINING DECISION					
2,5 MONTHS	BUILDING PERMIT	application for "BUILDING PERMIT" with a statement of disposition of property for construction purposes					
		OBTAINING DECISION BUILDING PERMIT accepted by Authorities					

The biomass plant permit status



Recommendations and key success factors

- ✓ regular monitoring of the status of the administrative proceedings
- ✓ close informal communication and good relationships with local and regional permitting authorities
- ✓ working with experts (contract engineer, general contractor, legal advisory office)

THANK YOU

a joint project by

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Panel RES / Energy Storage

Questions & Answers

European Commission