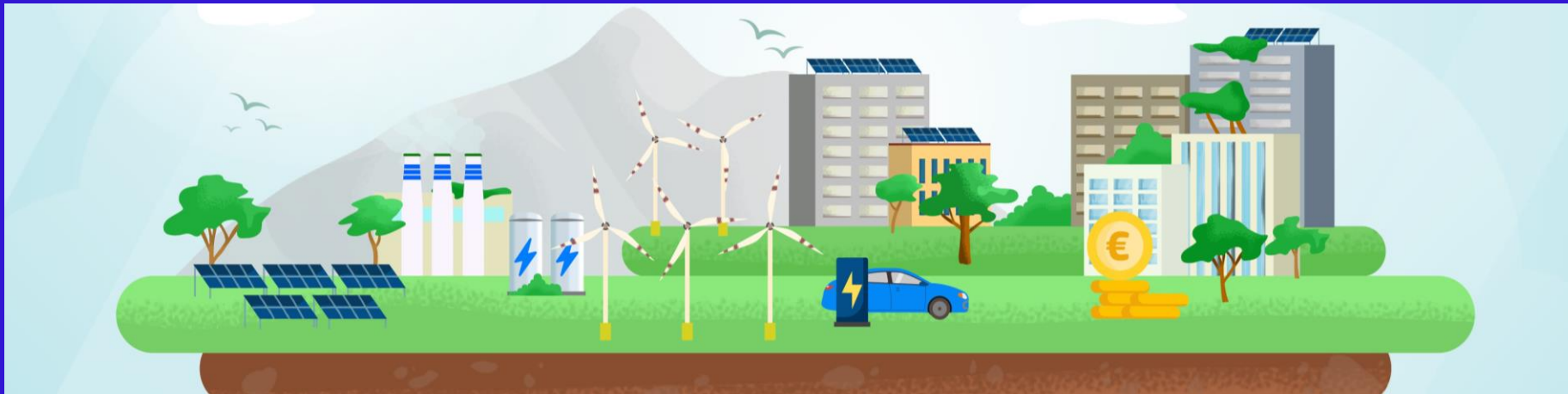


# Jornada informativa sobre el Fondo de Innovación: Tercera convocatoria de proyectos de gran escala



*Madrid, 15 de febrero de 2023*



GOBIERNO  
DE ESPAÑA

MINISTERIO  
PARA LA TRANSICIÓN ECOLÓGICA  
Y EL RETO DEMOGRÁFICO

# Políticas en materia de cambio climático. Oportunidades para la Descarbonización y la Innovación

Jornada Fondo de Innovación de la UE

Ignacio Sánchez  
15 de febrero de 2023  
Oficina Española de Cambio Climático  
Ministerio para la Transición Ecológica y el Reto Demográfico



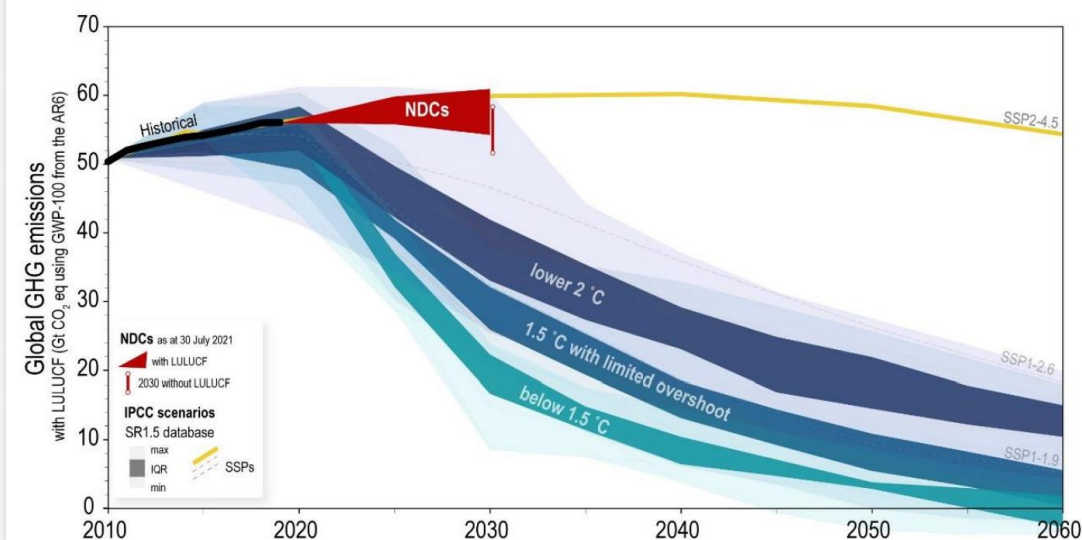
# Índice

- **Contexto: Emergencia climática y tensiones geopolíticas**
- **Políticas de Cambio Climático en Europa**
- **Marco normativo en España**
- **Oportunidades y desafíos para la Descarbonización y la Innovación**

## Contexto : emergencia climática

- El informe especial sobre el calentamiento global de 1,5°C, publicado por el IPCC en 2018, señala que para limitar el calentamiento global a 1,5 °C se necesitan **acciones urgentes y cambios rápidos**, de largo alcance y sin precedentes en todos los aspectos de la sociedad.
- Lograr este objetivo requiere que las economías desarrolladas se comprometan con la **neutralidad climática para 2050**, cumpliendo así con el **Acuerdo de París sobre Cambio Climático**.
- Se requiere el **despliegue masivo** no solo de medidas de mitigación, sino también de **sumideros de carbono**, incluyendo tecnologías basadas en CCUS

Comparison of global emissions under scenarios assessed in the Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5 °C with total global emissions according to nationally determined contributions



*Note:* The assessed global emission ranges (including LULUCF) for the IPCC scenarios provided in the SR1.5 (table 2.4) are shown with interquartile ranges. The illustrative SSP scenarios considered in the contribution of Working Group I to the AR6 are indicated (SSP2-4.5 by a yellow solid line, with an estimated end-of-century temperature of 2.7 (2.1–3.5) °C). The total GHG emission level resulting from implementation of the latest NDCs is compared with the emission levels for three of the scenario groups in the SR1.5 scenario database: a group of scenarios in which global mean temperature rise is kept at all times below 1.5 °C relative to the 1850–1900 (“below 1.5 °C”); a group of scenarios in which warming is kept at around 1.5 °C with a potential limited overshoot and then decrease of global mean temperature rise below 1.5 °C by the end of the century (“1.5 °C with limited overshoot”); and a third group that implies warming of well below 2 °C, that is above 1.5 °C by 2100 but with a likely chance of it being below 2 °C at all times (“lower 2 °C”). The latter group features scenarios with strong emission reductions in the 2020s or only after 2030.

## Contexto : Tensiones geopolíticas

### Oportunidades:

Inversiones en **Energías Renovables**

Consolidación de la **Unión de la Energía**

Esfuerzos para **reducir la dependencia energética**

### Amenazas:

Retorno del **Carbón**

Dependencia del **Gas Natural Licuado**

**Incentivos** a los **Combustibles Fósiles**

**Agenda climática** en un **segundo plano**

DECISIONES CLAVE EN BRUSELAS

### ¿La guerra retrasa o activa la acción climática?

• La respuesta europea ofrece señales contradictorias: se subvenciona la gasolina pero la ciudadanía cobra más conciencia de la necesidad de dejar de depender de los combustibles fósiles



.ysychansk ardiendo junto al río Donets, en Luhansk (SOPA Images / Getty)

Clima y Medio Ambiente

EL PAIS

CRISIS CLIMÁTICA >

### La guerra en Ucrania amenaza la lucha global contra el cambio climático

El aumento de las ayudas a los combustibles fósiles y de la extracción de petróleo y gas contradicen los esfuerzos contra el calentamiento. Los expertos advierten de los impactos del conflicto para el multilateralismo



## Contexto EUROPA

### El Pacto Verde Europeo:

Convertir a Europa en el primer continente climáticamente neutro

### Ley de cambio climático de la UE:

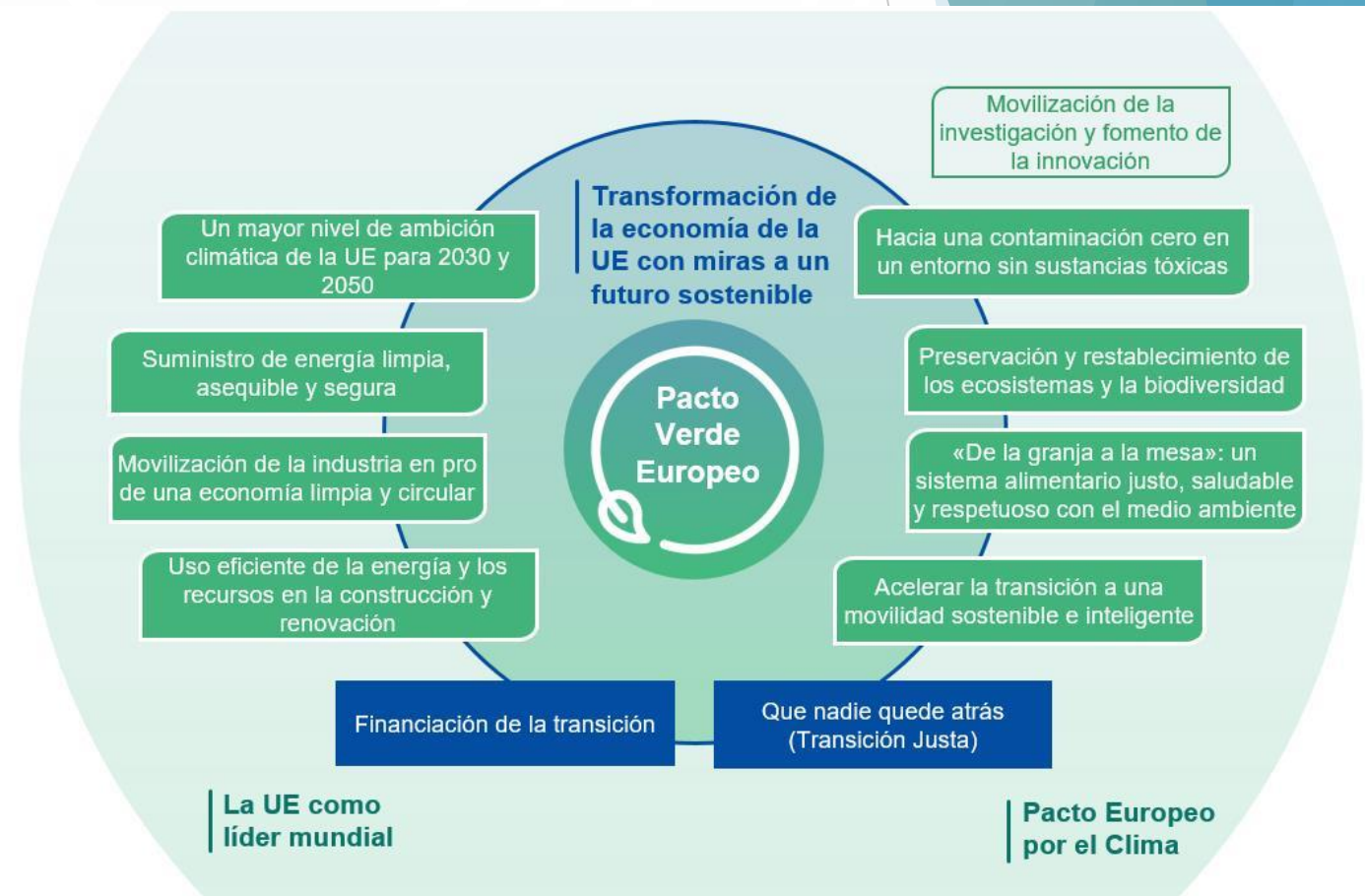
Objetivo vinculante de emisiones de gases de efecto invernadero netas nulas en 2050

### Aumento de la ambición climática a 2030:

Aumentar el objetivo de reducción de emisiones de gases de efecto invernadero hasta el 55%

### Presupuesto de la UE para 2021-2027 y “Next Generation EU”:

Más de 1.750.000 millones de euros → 30% cambio climático



# Policy Architecture: assessment supported by common analytical base

DELIVERING THE **EUROPEAN GREEN DEAL**

The "Fit for 55" Package

CLIMATE



ENERGY



TRANSPORT



TAXATION AND TRADE



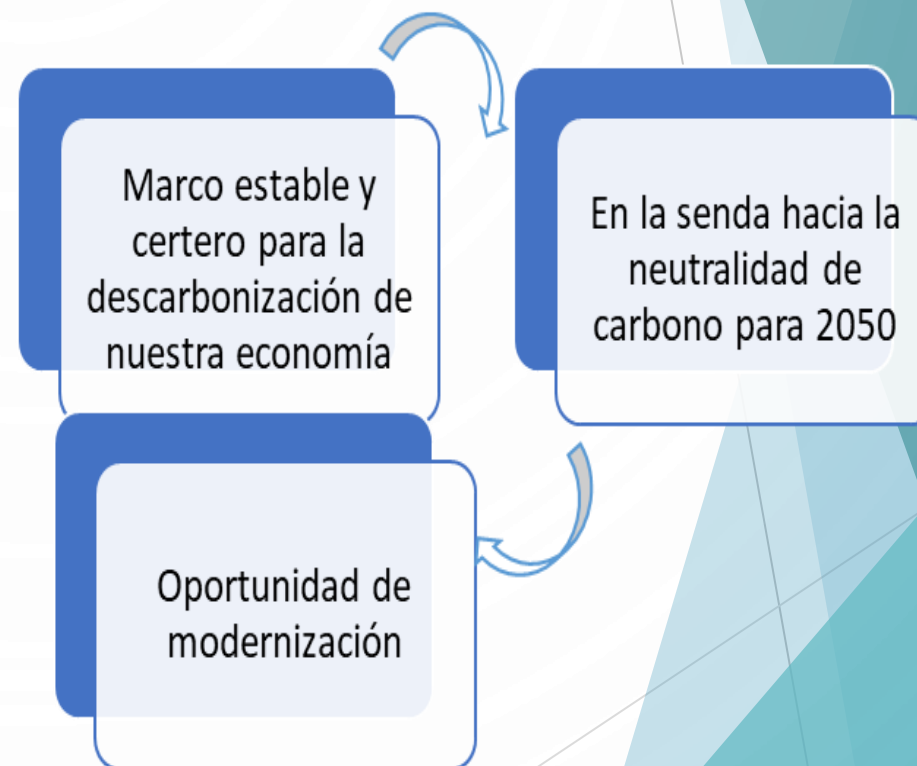
## Algunos elementos relevantes del paquete legislativo “fit for 55”

- **Comercio de derechos de emisión:**
  - Mayor ambición: reducción del 62% de las emisiones GEI en 2030
  - Integración del transporte marítimo
  - Nuevo régimen de comercio para edificación, transporte por carretera y pequeña industria
  - Impulso a la innovación: Aumenta el alcance y tamaño del Fondo de Innovación
  - Mecanismo de apoyo a la utilización de los combustibles sostenibles de la aviación
- **Mecanismo de ajuste de carbono en frontera:**
  - Declaración y pago por el carbono implícito en productos importados (hierro y acero, cemento, fertilizantes, aluminio, electricidad e hidrógeno)
- **FuelEU maritime** (combustibles renovables e hipocarbónicos en el transporte marítimo)
- **RefuelEU aviation** (transporte aéreo sostenible)

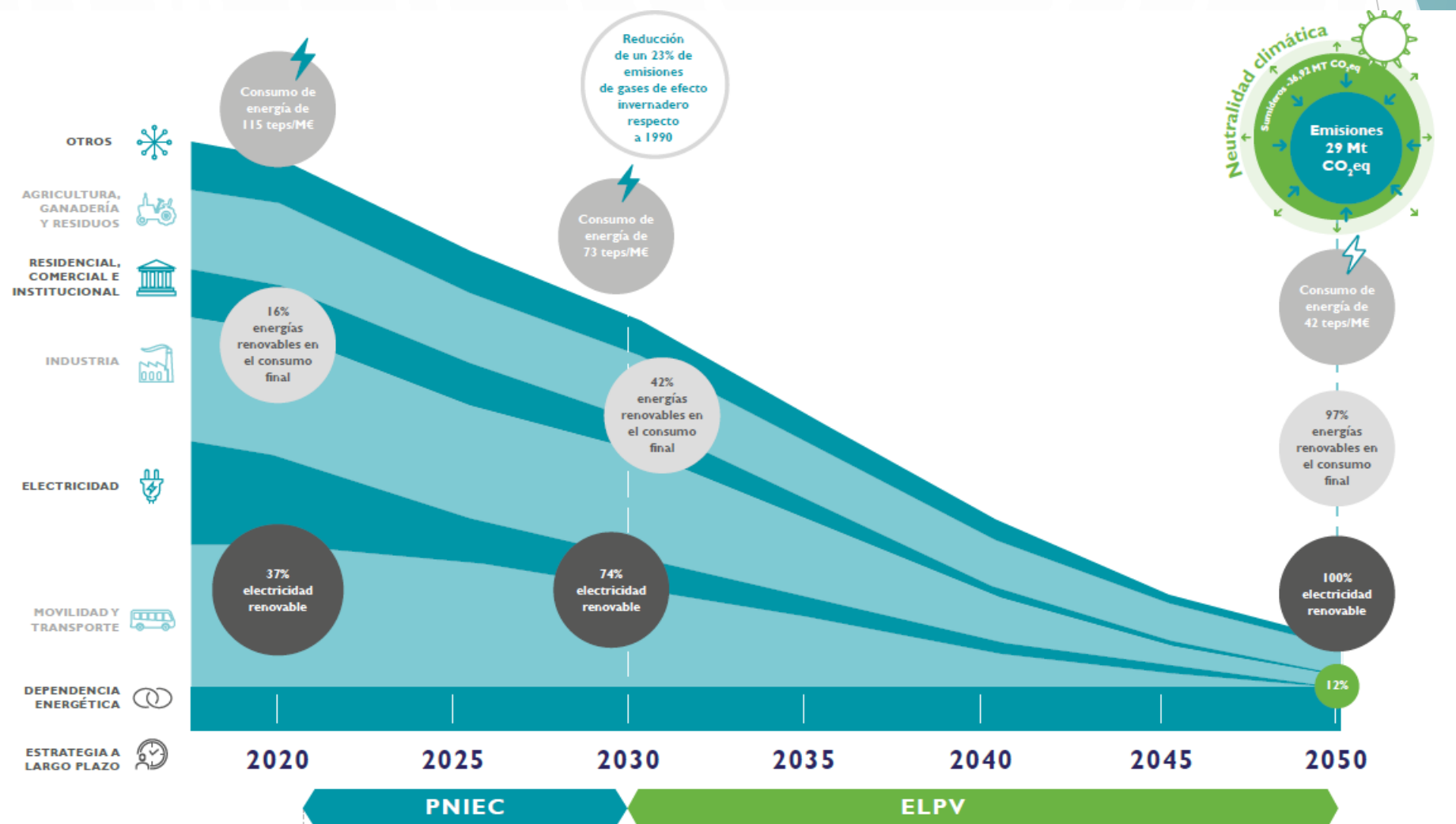


## ESPAÑA: cambio climático como prioridad del Gobierno

- Integración de la variable cambio climático
- **Marco Estratégico de Energía y Clima**
  - Ley 7/2020 de cambio climático y transición energética
  - Estrategia a Largo Plazo
  - Estrategia de Transición Justa
  - 2030 - Plan Nacional Integrado de Energía y Clima
  - 2030 - Segundo Plan Nacional de Adaptación
  - Estrategia de Economía Circular



# ESPAÑA: ELP



## ESPAÑA: ELP – Una Industria sostenible y competitiva

FIGURA 6.6 Industria sostenible y competitiva



Fuente: Ministerio para la Transición Ecológica y el Reto Demográfico, 2020

# Plan de Recuperación Transformación y Resiliencia: EJES Y POLÍTICAS



## Desafíos para la Innovación y la Descarbonización

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### Interseccionalidad de las políticas:

Impactos específicos **sobre poblaciones vulnerables – Justicia Climática**  
**Sinergias positivas o negativas** con otras políticas

### Complejidad para la coFinanciación:

**Competición/solapamiento** entre iniciativas. Compatibilidades.  
**Complejidad en la tramitación**

### Diálogo Tecnología-Sociedad:

Más allá del **Tecnocentrismo**  
Análisis de las **dinámicas sociales** (análisis de sistemas complejos)



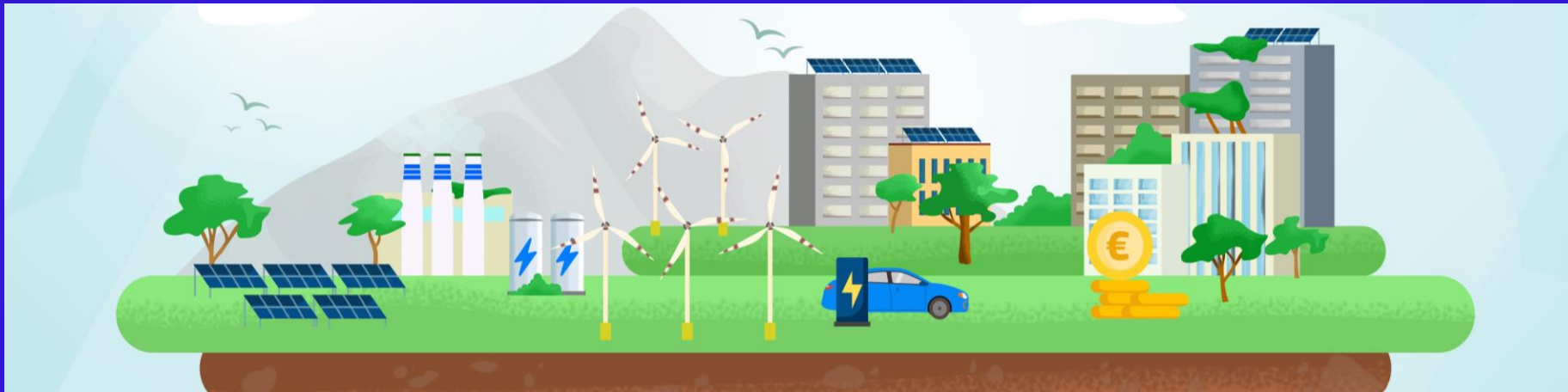
GOBIERNO  
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Y EL RETO DEMOGRÁFICO

**MUCHAS GRACIAS**

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# Jornada informativa sobre el Fondo de Innovación: Tercera convocatoria de proyectos de gran escala



*Madrid, 15 de febrero de 2023*

# Instrumentos de financiación para proyectos de hidrógeno renovable

*Pilar Sánchez García*

*Subdirección General de Hidrocarburos y Nuevos Combustibles*

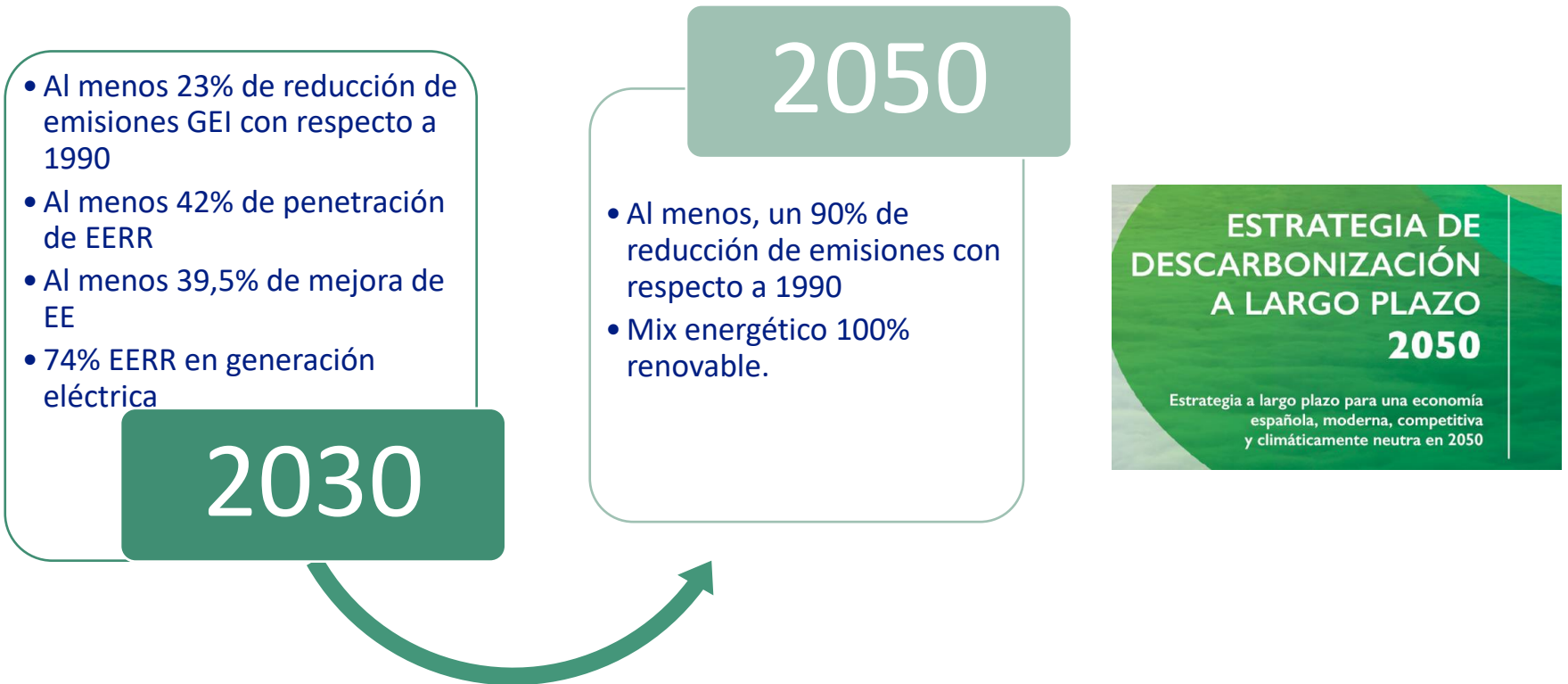


# 1

## Contexto Energético

## 1. Contexto energético – Estrategia energética española (I)

- Plan Nacional Integrado de Energía y Clima
- Estrategia a Largo Plazo para una Economía Descarbonizada en 2050



- Ley 7/2021, de 20 de mayo, de Cambio Climático y Transición Energética → *Artículo 12. Promoción de gases renovables.*

## 1. Contexto energético – Contexto Europeo (II)

- ❑ **Objetivo UE:** Alcanzar la neutralidad climática en 2050.
- ❑ El paquete “**Fit for 55**” reformas dedicadas a la revisión o aprobación de Reglamentos y Directivas para alinear las normativas europeas con objetivos en política climática y cumplir objetivos a 2030. Aplicables al hidrógeno:
  - Directiva de Energías Renovables (DER)
  - Reglamento para el despliegue de la infraestructura para el suministro de combustibles alternativos (AFIR).
  - Paquete de descarbonización de gas.
- ❑ Invasión rusa de Ucrania acelera la transición energética: “**Plan REPower EU**”: aumentar la producción de hidrógeno a 10 millones de toneladas en 2030 e importar 10 millones de toneladas más de hidrógeno.



REPowerEU

# 2

## Hoja de Ruta del Hidrógeno: una apuesta por el hidrógeno renovable

## 2. Hoja de Ruta del Hidrógeno. Una apuesta por el hidrógeno renovable (I)




### 2030




4 GW de potencia instalada de electrolizadores



25% del consumo energético de la industria




150-200 autobuses FCHV



5.000-7.500 vehículos ligeros y pesados FCHV



8900 M€ en inversiones para proyectos de producción de hidrógeno renovable



4,6 MTON de CO<sub>2</sub>eq reducidas

### 60 medidas



100-150 hidrogeneras de acceso público



2 líneas comerciales trenes propulsados con H<sub>2</sub>

500.000 t/año de consumo de hidrógeno, principalmente gris, utilizado como materia prima en refinerías (alrededor del 70%) y fabricantes de productos químicos (25%)

## 2. Primeras actuaciones: Hoja de Ruta del Hidrógeno. Una apuesta por el hidrógeno renovable (II)

### Líneas de acción de la Hoja de Ruta

60 medidas

#### ☐ *Instrumentos regulatorios*

- Simplificación administrativa: instalaciones producción + suministro (permitting)
- Utilidad pública líneas directas / hidrogenoductos
- Sistema de Garantías de Origen H2 renovable **APROBADO**

#### ☐ *Instrumentos sectoriales*

LÍNEAS DE AYUDAS

- **Industria:** objetivos de penetración (distintivo comercial) / instrumentos financieros apoyo adaptaciones industriales / hydrogen valleys o clústeres + mesas regionales/ impulso a la industria de la cadena de valor del H2 renovable en España para ser un líder dentro del sector.
- **Movilidad:** incentivos a la compra vehículos + despliegue hidrogeneras / transformación locomotoras diésel / normativa específica hidrogeneras / promover bioqueroseno sintético / apoyo a astilleros / infraestructura portuaria recarga
- **Integración sectorial:** Power to X / Almacenamiento / requisitos de combustión en calderas
- **Estadísticos:** desarrollo de un sistema estadístico nacional de H2

## 2. Primeras actuaciones: Hoja de Ruta del Hidrógeno. Una apuesta por el hidrógeno renovable (III)

### Líneas de acción de la Hoja de Ruta

60 medidas

#### *Instrumentos transversales*

- Información y formación: hub informativo IDAE / perfiles profesionales
- Estudios: potencial producción y consumo / impacto socioeconómico
- Contribución a políticas de transición justa y lucha frente al reto demográfico

#### *Impulso a la I+D*

- Papel del H2 en los Planes Estatales de Investigación Científica y Técnica y de Innovación
- Rol del CNH2 y la cooperación internacional
- Fomento de tecnologías concretas: combustión para generación eléctrica / grandes electrolizadores / reciclado elementos **LÍNEAS DE AYUDAS**
- Centros de excelencia para la investigación
- Rol del CDTI y su líneas de financiación
- Líneas de financiación UE

# 3

## Avances regulatorios



### 3. Avances regulatorios recientes (I)

## Real Decreto-ley 6/2022, de 29 de marzo, por el que se adoptan medidas urgentes en el marco del Plan Nacional de respuesta a las consecuencias económicas y sociales de la guerra en Ucrania.

**Disposición final cuarta.** Modificación de la Ley 34/1998, de 7 de octubre, del sector de hidrocarburos.

➤ Tres: Modifica artículo 78. Líneas directas:

- “(...) o a la conexión de una planta de producción de gases renovables con el sistema gasista destinada a la inyección”
- Excluidas de la planificación y de la expropiación
- Titular: consumidor o productor de gas renovable. Excluidas del régimen retributivo
- Apertura a terceros: se dispondrá reglamentariamente
- Tramitación CCAA, salvo que atraviese mas de una CCAA, informe vinculante GTS si es de inyección

➤ Seis: Introduce disposición adicional 38: “Suministro de gases renovables mediante canalizaciones aisladas”

- Actividad de interés general: expropiación forzosa
- Excluidas planificación
- Tramitación CCAA con independencia de la presión, siempre que transcurran por una CCAA, tramitación por AGE si transcurre por mas de una CCAA
  - Si >16 bar: informe vinculante DGPEM, informe preceptivo CNMC
  - Informe REE si electrolizador está conectados a la red
- Acceso de terceros negociado
- Transportista o distribuidor
- Comercializadores y derechos consumidores

### 3. Avances regulatorios recientes (II)

#### **Real Decreto-ley 18/2022, de 18 de octubre, por el que se aprueban medidas de refuerzo de la protección de los consumidores de energía y de contribución a la reducción del consumo de gas natural en aplicación del “Plan + seguridad para tu energía (+SE)”**

- Artículo 13. Nueva modificación del artículo 78. Declaración de utilidad públicas de las líneas directas de conexión de plantas de producción de gases renovables con la red de transporte y distribución de gas natural.
- Modificación Reglamento 1434/2002: reconocimiento utilidad pública y líneas directas.

#### **Orden TED/1312/2022, de 23 de diciembre, por la que se establecen los precios de los cargos del sistema eléctrico de aplicación a partir del 1 de enero de 2023 y se establecen diversos costes regulados del sistema eléctrico para el ejercicio 2023.**

##### **Disposición Novena.**

*las instalaciones de producción de hidrógeno renovable inscritas en el Registro de instalaciones de producción de gases renovables, [...], así como el sistema de garantías de origen de los gases renovables, y en su normativa desarrollo, **resultarán exentas del pago de los cargos del sistema eléctrico** cuando en la información de ámbito general se haya indicado que la instalación lleva a cabo un proceso de conversión*

# 4

## PERTE ERHA

## 4. PERTE ERHA (I)

### COMPONENTE 9: Hidrógeno renovable, un proyecto país

**Objetivo:** Posicionar a España como referente tecnológico en producción y aprovechamiento de hidrógeno renovable, facilitando las condiciones para que el hidrógeno renovable pueda contribuir de forma significativa a la descarbonización de la economía y al posicionamiento tecnológico e industrial de España y la UE.

**1.555 M€ apoyo público**

#### Primeros instrumentos lanzados

- Línea 1. Cadena de valor innovadora y de conocimiento de hidrógeno renovable
- Línea 3. Proyectos pioneros y singulares de hidrógeno renovable

250 M€

150 M€

**LÍNEA 1: CADENA DE VALOR INDUSTRIAL INNOVADORA Y DE CONOCIMIENTO EN HIDRÓGENO RENOVABLE**

11. Investigación básica-fundamental, pilotos innovadores y formación en tecnologías clave
12. Mejora de capacidades de I+D+i, instalaciones y fabricación de equipos y componentes
13. Movilidad pesada a hidrógeno
14. Grandes demostradores de electrolisis

FASE I

FASE II

FASE II

FASE III

**LÍNEA 2: CLÚSTERES O VALLES DE HIDRÓGENO RENOVABLE PARA LA INTEGRACIÓN SECTORIAL A GRAN ESCALA**

15. Impulso de clústeres o valles de hidrógeno renovable

FASE III

**LÍNEA 3: PROYECTOS SINGULARES PIONEROS**

16. Proyectos pioneros de hidrógeno renovable

FASE III

**LÍNEA 4: IPCEIS DE HIDRÓGENO RENOVABLE**

17. Apoyo a la integración de la cadena de valor nacional en la cadena de valor comunitaria (IPCEI)

FASE III



## 4. PERTE ERHA

### PROYECTOS IMPORTANTES DE INTERÉS COMÚN EUROPEO

**PIICE:** marco de colaboración donde distintas empresas de varios Estados miembros colaboran en la constitución de un gran proyecto de interés europeo de especial relevancia en las cadenas de valor estratégicas industriales para la Unión Europea.

- **IPCEI Hy2Tech.** Resuelto 15/07/2022
  - Dedicado al impulso de la tecnología.
  - Real Decreto de concesión directa de subvenciones.
- **IPCEI Hy2Use:** Resuelto 21/09/2022.
  - Dedicado a las aplicaciones en industria.
  - **7 proyectos ganadores.**
  - Mismo instrumento que Hy2Tech.
  - [Directrices sobre Energía Climática y Ayudas al Medio Ambiente \(CEEAG\).](#)
- **IPCEI Mobility and Transport:** prenotificación 30/09/2022.
  - Dedicado al desarrollo de soluciones innovadoras para el uso del hidrógeno renovable en transporte.



#### I. DISPOSICIONES GENERALES

#### MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA Y EL RETO DEMOGRÁFICO

**629** *Real Decreto 4/2023, de 10 de enero, por el que se regula la concesión directa de subvenciones a los proyectos españoles por su participación en el Proyecto Importante de Interés Común Europeo de tecnología de hidrógeno dentro del Componente 9 del Plan de Recuperación, Transformación y Resiliencia.*



Proyecto	Costes Subvencionables (millones de euros)	Déficit de Financiación (millones de euros)	Ayuda de Estado a conceder (millones de euros)
Iveco ES.	52	-27	27
H2B2.	30	-25	25
Nordex.	45	-12	12
SENER.	20	-10	10
<b>Total.</b>	<b>147</b>	<b>-74</b>	<b>74</b>

# 5

## Futuros Instrumentos

## 5. Futuros instrumentos

### RePower EU

10 mil. ton de producción nacional de hidrógeno renovable y 10 mill. ton de importaciones para 2030, a fin de sustituir el gas natural, el carbón y el petróleo en industrias y sectores del transporte difíciles de descarbonizar.

Para acelerar los proyectos de hidrógeno, se reserva una financiación adicional de **200 millones EUR para investigación. Primer instrumento, IPCEI.**

### European Hydrogen Bank (EHB)

El pasado 14 de septiembre de 2022, la presidenta de la Comisión, Ursula Von der Leyen, anunció la creación de un Banco de Hidrógeno que liderará el mercado del H2 en Europa.

- **Objetivo:** cubrir el gap de inversión en H2 y conectar demanda y producción para asegurar la compra de H2.
- **Inversión:** de **3 B€** para la creación de un mercado de H2 (a partir de fondos del Innovation Fund)

### Connecting Europe Facility (CEF)

Instrumento de financiación de la UE para fomentar el crecimiento, el empleo y la competitividad mediante inversiones en infraestructuras específicas a escala europea. Apoya el desarrollo de redes transeuropeas de alto rendimiento, sostenibles y eficientemente interconectadas en los ámbitos del transporte, la energía y los servicios digitales.

CEF Energy: €5.84 billion 2021-2027

CEF Transport: €25.81 billion 2021-2027

# Instrumentos de financiación para proyectos de hidrógeno renovable

*[bnz-h2renovable@miteco.es](mailto:bnz-h2renovable@miteco.es)*



#innovacion  
#ayudascdti  
#asesoramiento  
#internacionalizacion



@CDTIoficial



## Instrumentos de financiación para proyectos innovadores – CDTI

Guillermo Alvarez  
CDTI

HORIZONTE  
  
**EUROPA**  
@HorizonteEuropa

- Financiación CDTI
- Financiación Horizonte Europa
  - Clúster 4 Industria
  - Clúster 5 Energía

# Ayudas del CDTI a la I+D+I

**OBJETIVO: promover la innovación y el desarrollo tecnológico de las empresas españolas**

## Financiación de Proyectos de I+D+I

**AYUDAS PARCIALMENTE  
REEMBOLSABLES**

**SUBVENCIONES**

Fondos en 2022: 891 M€ para financiación de proyectos  
(35% en subvención)

# Ayudas Parcialmente Reembolsables

Proyectos de  
Investigación y  
Desarrollo

Proyectos de  
Innovación

- Ayudas a tipo de interés fijo por debajo de mercado (hasta el 85% del presupuesto elegible)
- **Tramo No Reembolsable (hasta el 33%)**
- Largo periodo de amortización (hasta 15 años)
- **Convocatorias permanentemente abiertas**
- **Sin restricción sobre el sector o tecnología a desarrollar**

Horizonte Europa **55** proyectos de **ENERGÍA** financiados en 2022 con una aportación de **40,5 M€**

# Subvenciones

- Convocatorias en régimen de **conurrencia competitiva** con plazos determinados de presentación
- Generalmente dirigidas a **sectores y tecnología específicas**
- Alto contenido en Investigación
- Principalmente financiadas con fondos MRR → principio **DNSH** (no perjuicio al medio ambiente)

## Convocatorias

### MISIONES

Plan Tecnológico Aeronáutico

Programa Audiovisuales y  
Videojuegos

### NEOTEC

Sellos de Excelencia

**CERVERA Centros Tecnológicos**

- Desarrollo de grandes proyectos estratégicos de I+D **en áreas concretas** (entre ellas **ENERGÍA SOSTENIBLE**), identificadas por su relevancia para los retos futuros de España
- Proyectos **colaborativos con 2 tipologías**:
  - Misiones Grandes Empresas. 3 a 8 empresas (1 pyme)
  - Misiones PYMES. 3 a 6 empresas (pymes)
- **Presupuesto 2022: 125 M€**
- **Subvención** hasta límites de intensidad máximos: 65% Gran Empresa, 75% Mediana Empresa y 80% Pequeña Empresa
- **Resultados**: 41 proyectos aprobados, **18 en energía con 56,4 M€ (45% de fondos)**

- Realización de programas estratégicos de I+D+I por agrupaciones de **Centros Tecnológicos** en las tecnologías **prioritarias Cervera** (incluye **Transición Energética**)
- Beneficiarios: Agrupaciones de **Centros Tecnológicos (3 a 5)**
- **Presupuesto 2021: 35 M€**
- **Subvención** de hasta el 100% del programa estratégico
- **Resultados 2021:** 9 programas aprobado, **1 en Transición Energética con 3,8 M€**

# MÁS INFORMACIÓN EN

[www.cdti.es](http://www.cdti.es) (Ayudas a la I+D+I)





- Financiación CDTI
- Financiación Horizonte Europa
  - Clúster 4 Industria
  - Clúster 5 Energía




- Financiación CDTI
- Financiación Horizonte Europa
  - Clúster 4 Industria
  - Clúster 5 Energía



EUROPEAN UNION

## Qué es Horizonte Europa

Es la propuesta de la CE para un programa de investigación e innovación basado en la excelencia con un presupuesto de inicialmente 100.000 M€ para siete años (2021-2027)

-  Reforzar la base científica y tecnológica de la UE
-  Acelerar la capacidad de innovación europea, su competitividad y la creación de empleo
-  Avanzar en las prioridades de la ciudadanía y dar soporte a nuestro modelo socioeconómico y nuestros valores

HORIZONTE  
EUROPA  
@HorizonteEuropa



#HorizonEU

RESEARCH &  
PROGRAMME  
2027



# Características generales del Programa

**Competitivo:** No hay asignación previa de fondos a los países UE.

**Gestión centralizada:** Comisión Europea (CE) o agencias delegadas (REA, CINEA, HaPEA, EISMEA).

De forma general, **las prioridades de I+D+I** que financia el programa **las marca la CE** a través de las convocatorias y programas de trabajo

Algunas **convocatorias de temática abierta** (“bottom-up”):  
Ciencia Excelente (MSCA, ERC) y EIC.

Contribuir a alcanzar los **objetivos políticos de la Unión Europea**

# Horizonte Europa (2021-2027)



## Pilar 1 Ciencia excelente

Consejo Europeo de  
Investigación

Acciones Marie Skłodowska-  
Curie

Infraestructuras de  
investigación



## Pilar 2 Desafíos mundiales y competitividad industrial europea

Clústeres

- Salud
- Cultura, creatividad y sociedad inclusiva
- Seguridad civil para la sociedad
- Mundo digital, industria y espacio
- Clima, energía y movilidad
- Alimentación, bioeconomía, recursos naturales, agricultura y medio ambiente

Centro Común de Investigación



## Pilar 3 Europa innovadora

Consejo Europeo de Innovación

Ecosistemas europeos  
de innovación

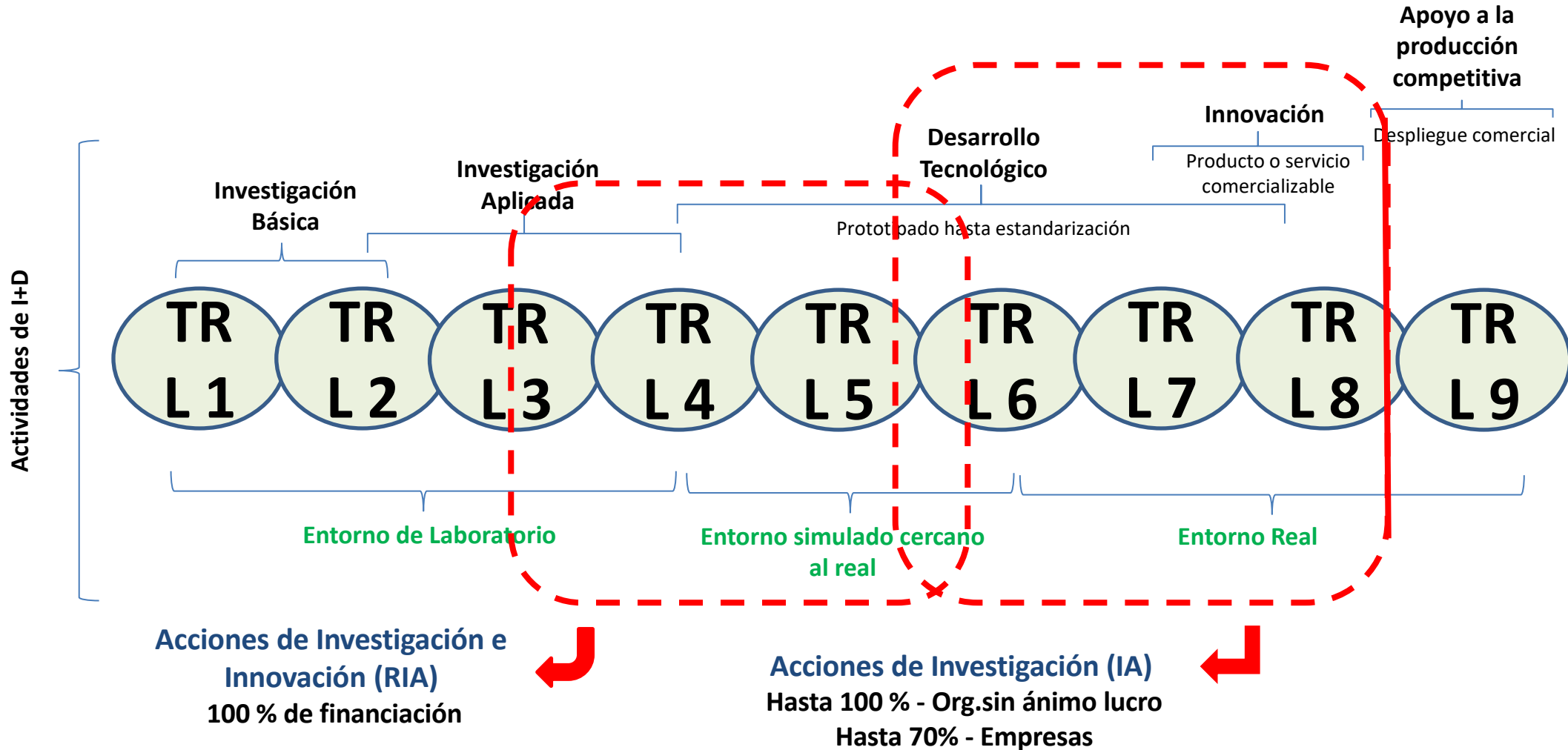
Instituto Europeo de  
Innovación  
y Tecnología

## Ampliar la participación y fortalecer el Espacio Europeo de Investigación

Ampliar la participación y difundir la excelencia

Reformar y mejorar el sistema europeo de I+i

# Tipología más común de proyectos colaborativos del Pilar-II de HE



# Horizonte Europa (2021-2027)



# Cluster 5 –Clima **Energía** y Movilidad- Areas de Intervención

Destination 1 –  
Climate science

Climate science

Destination 2 –  
Cross-cutting  
solutions

Batteries

Cities

Breakthrough  
technologies

Citizen and  
stakeholder  
engagement

Destination 3 –  
Energy supply

Renewable  
energy

Energy system,  
grids and  
storage

CCUS

Cross-cutting  
activities

Destination 4 –  
Energy demand

Buildings

Industry

Destination 5 -  
Clean and  
competitive  
solutions for all  
transport modes

Zero-emission  
road transport

Aviation

Waterborne  
transport

Transport-  
related health  
and  
environmental  
issues

Destination 6 -  
Transport and  
Smart Mobility  
services

Connected,  
Cooperative and  
Automated  
Mobility

Multimodal and  
sustainable  
transport  
systems for  
passengers and  
goods

Safety and  
resilience



# SINERGIAS CON Horizonte Europa

## Cluster 5- Energía Topics 2023

PV/CSP  
/Solar-Geo  
Thermal

Biofuels/  
alternative  
fuels

Storage

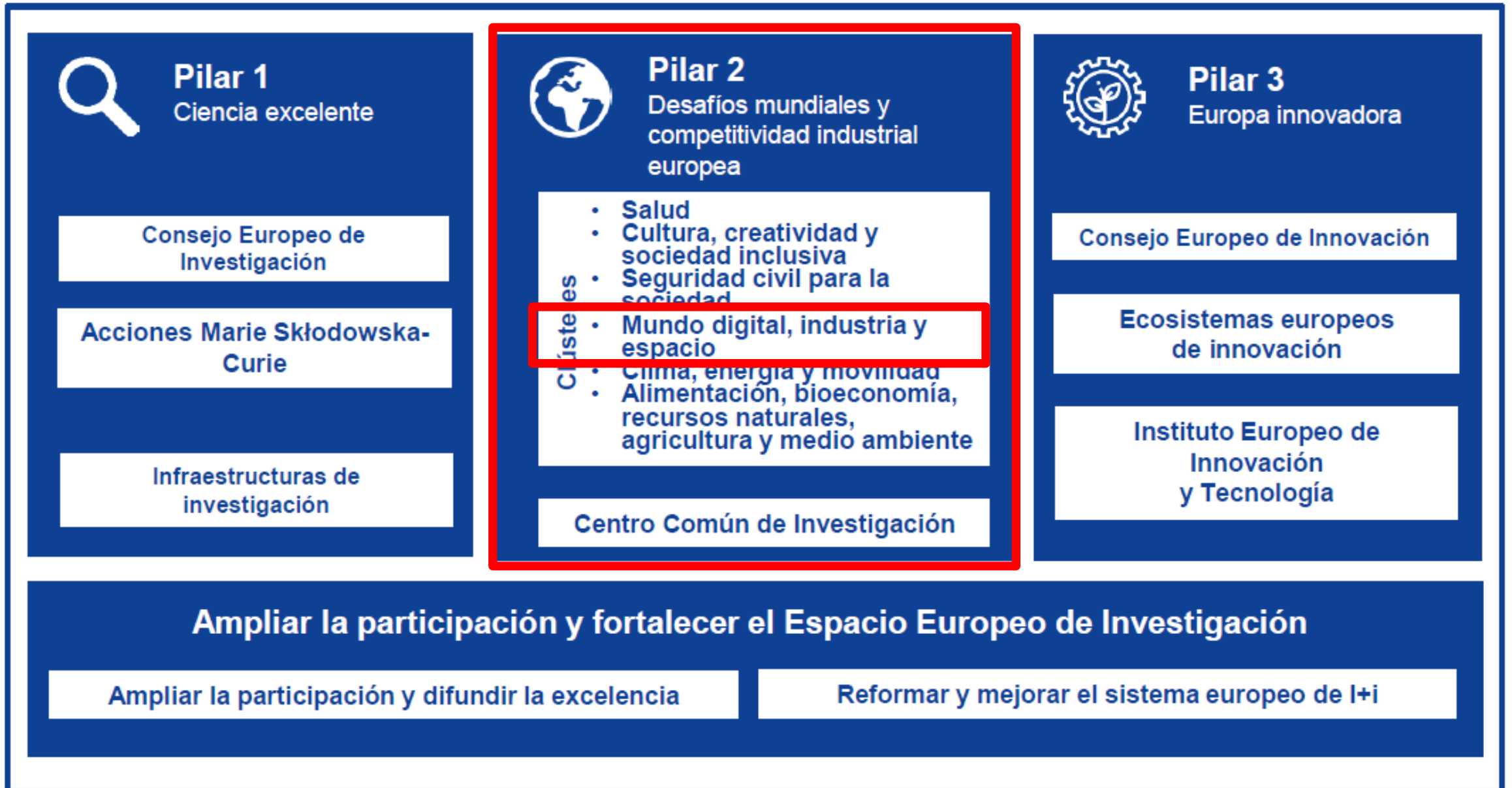
CCUS

- HORIZON-CL5-2023-D3-01-02: PV integration in buildings and in infrastructure
- HORIZON-CL5-2023-D3-01-03: Floating PV Systems
- HORIZON-CL5-2023-D3-02-12: Large Area Perovskite solar cells and modules
- HORIZON-CL5-2023-D3-01-04: Solar Systems for Industrial Process Heat and Power
- HORIZON-CL5-2023-D3-02-03: Industrial manufacturing for lower-cost solar thermal components and systems
- HORIZON-CL5-2023-D3-02-06: Smart use of geothermal electricity and heating and cooling in the energy system
  
- HORIZON-CL5-2023-D3-01-06: Demonstration of advanced biofuel technologies for aviation and/or shipping
- HORIZON-CL5-2023-D3-01-07: Demonstration of synthetic renewable fuel for aviation and/or shipping
- HORIZON-CL5-2023-D3-01-08: Demonstration of sustainable tidal energy farms
  
- HORIZON-CL5-2023-D3-01-09: Waste heat reutilisation from data centres
- HORIZON-CL5-2023-D3-01-14: Demonstration of innovative, large-scale, seasonal heat and/or cooling storage technologies for decarbonisation and security of supply
  
- HORIZON-CL5-2023-D3-01-17: Development of CO2 transport and storage demo projects

The **exploitation plan** should include preliminary plans for scalability, commercialisation, and deployment (feasibility study, business plan) indicating the possible funding sources to be potentially used (**in particular the Innovation Fund**).

The **exploitation plans** should include preliminary feasibility study and business plan also indicating the possible funding sources to be potentially used (such as private equity, the InvestEU, the EU Catalyst Partnership and the **Innovation Fund**).

# Horizonte Europa (2021-2027)



# Destination 1: Climate neutral, Circular and Digitised Production

WP 23-24



**Manufacturing Industry**



**Energy efficient and climate neutral process industries**



**Hubs for circularity**, first-of-a-kind, lighthouse demonstrator plants implementing urban industrial symbiosis



**A New Way to Build**, accelerating disruptive change in construction (2 fases)

**Circularity and Zero Pollution in process industries**

**Clean Steel**, to the Fit for 55 targets



# Programa de Trabajo 2023-24

## Oportunidades en tecnologías descarbonización

---

### DESTINATION 1: Energy Intensive industries

HORIZON-CL4-2023-TWIN-TRANSITION-01-31: **Energy efficiency** breakthroughs in the process industries (RIA)

HORIZON-CL4-2023-TWIN-TRANSITION-01-33: **Electrification** of high temperature heating systems (IA)

HORIZON-CL4-2023-TWIN-TRANSITION-01-36: Modelling industry transition to climate neutrality, sustainability and circularity (RIA)

HORIZON-CL4-2024-TWIN-TRANSITION-01-35: Turning **CO2 emissions** from the process industry to feedstock (IA)

HORIZON-CL4-2024-TWIN-TRANSITION-01-34: **Renewable hydrogen** used as feedstock in innovative production routes (RIA)

HORIZON-CL4-2023-TWIN-TRANSITION-01-43: **Low carbon-dioxide emission technologies** for melting iron-bearing feed materials OR smart carbon usage and improved energy & resource efficiency via process integration (IA)

HORIZON-CL4-2024-TWIN-TRANSITION-01-46: **CO2-neutral steel production** with hydrogen, secondary carbon carriers and electricity OR innovative steel applications for low CO2 emissions (RIA)

# Convocatorias 2023. Datos prácticos

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## Más Información:

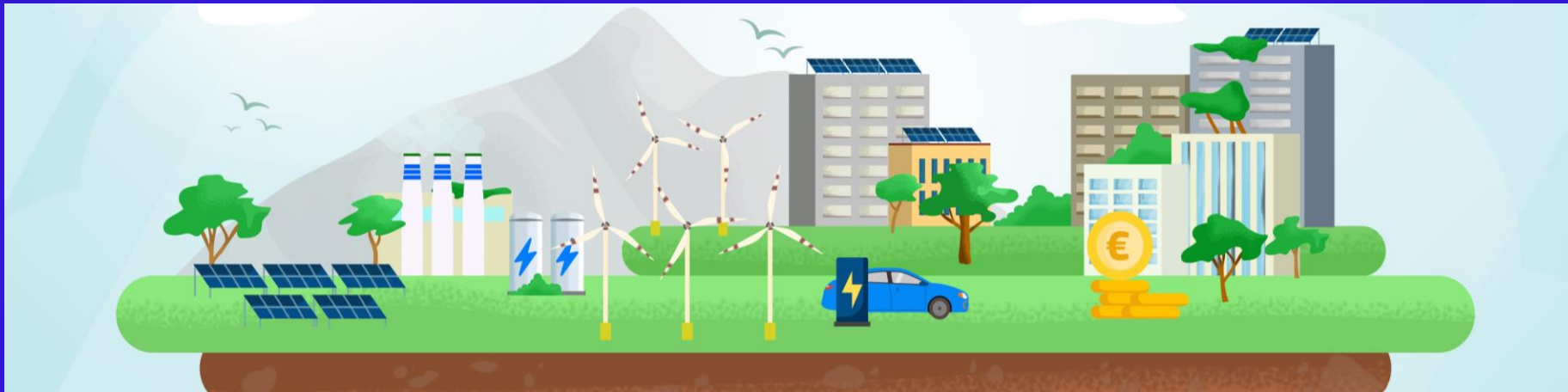
- Cluster 5 Energía** Luisa Revilla [luisa.Revilla@cdti.es](mailto:luisa.Revilla@cdti.es) Cristina Garrido [cristina.garrido@cdti.es](mailto:cristina.garrido@cdti.es)
- Cluster 4 Industria** Nieves González [nieves.gonzalez@cdti.es](mailto:nieves.gonzalez@cdti.es) Carlos Toledo [carlos.toledo@cdti.es](mailto:carlos.toledo@cdti.es)

+info sobre programas y ayudas CDTI  
para  
proyectos de I+D empresarial e innovación



@CDTIoficial

# Jornada informativa sobre el Fondo de Innovación: Tercera convocatoria de proyectos de gran escala



*Madrid, 15 de febrero de 2023*



# Innovation Fund

## The third call for large-scale projects

Johanna Schiele, DG CLIMA





# 1. Innovation Fund contribution to the European Green Deal



Cleaning our Energy system



Making transport sustainable for all



Renovating buildings



Transforming our economies and societies



Working with nature to protect our planet and health



Leading the third industrial revolution



Boosting global climate action

- The Innovation Fund focuses on **highly innovative technologies** and **flagship large-scale demonstration or first-of-a-kind projects** within EU, in NO and IS that can deliver significant GHG emission reductions.

- **Innovative technologies in “hard to abate” sectors** are needed to reach carbon neutrality.

- The Innovation Fund has awarded projects on green hydrogen, CC(U)S, PtX, negative emissions amongst others – that **must be demonstrated by 2030** so that they can be **mainstreamed and help achieve climate neutrality by 2050**.

- **Around 200 Mt CO<sub>2</sub>eq of GHG abatement** expected under combined 1<sup>st</sup> and 2<sup>nd</sup> large-scale calls and 1<sup>st</sup> small-scale call

# INNOVATION FUND

Driving clean innovative technologies towards the market



First call for projects in 2020



€38 billion\* to invest up to 2030 in EU's climate neutral future



Avoid emissions and boost competitiveness

Supporting innovation in:



Energy intensive industries



Renewables



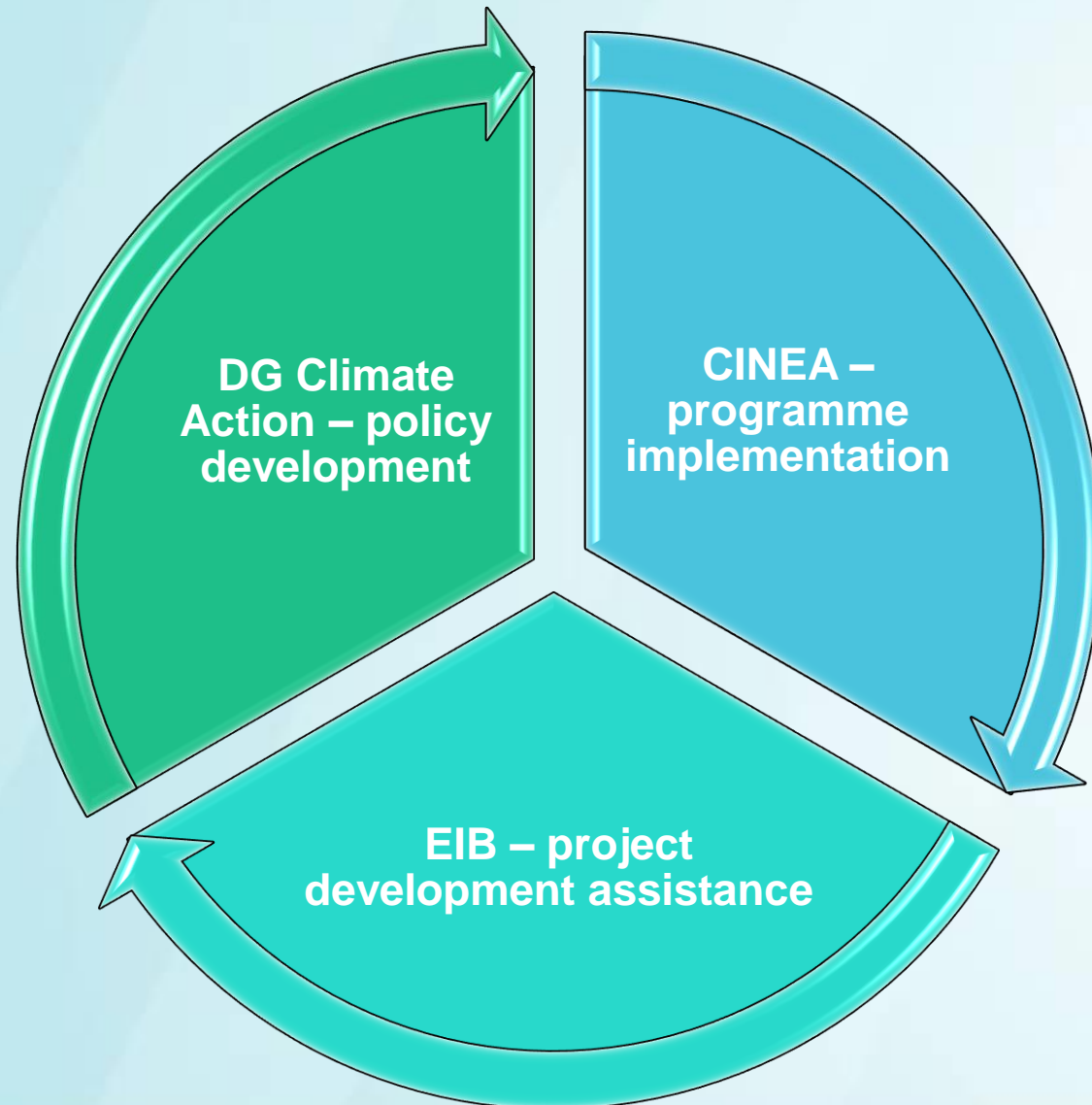
Energy storage



Carbon capture, use and storage

\*depending on the carbon price.

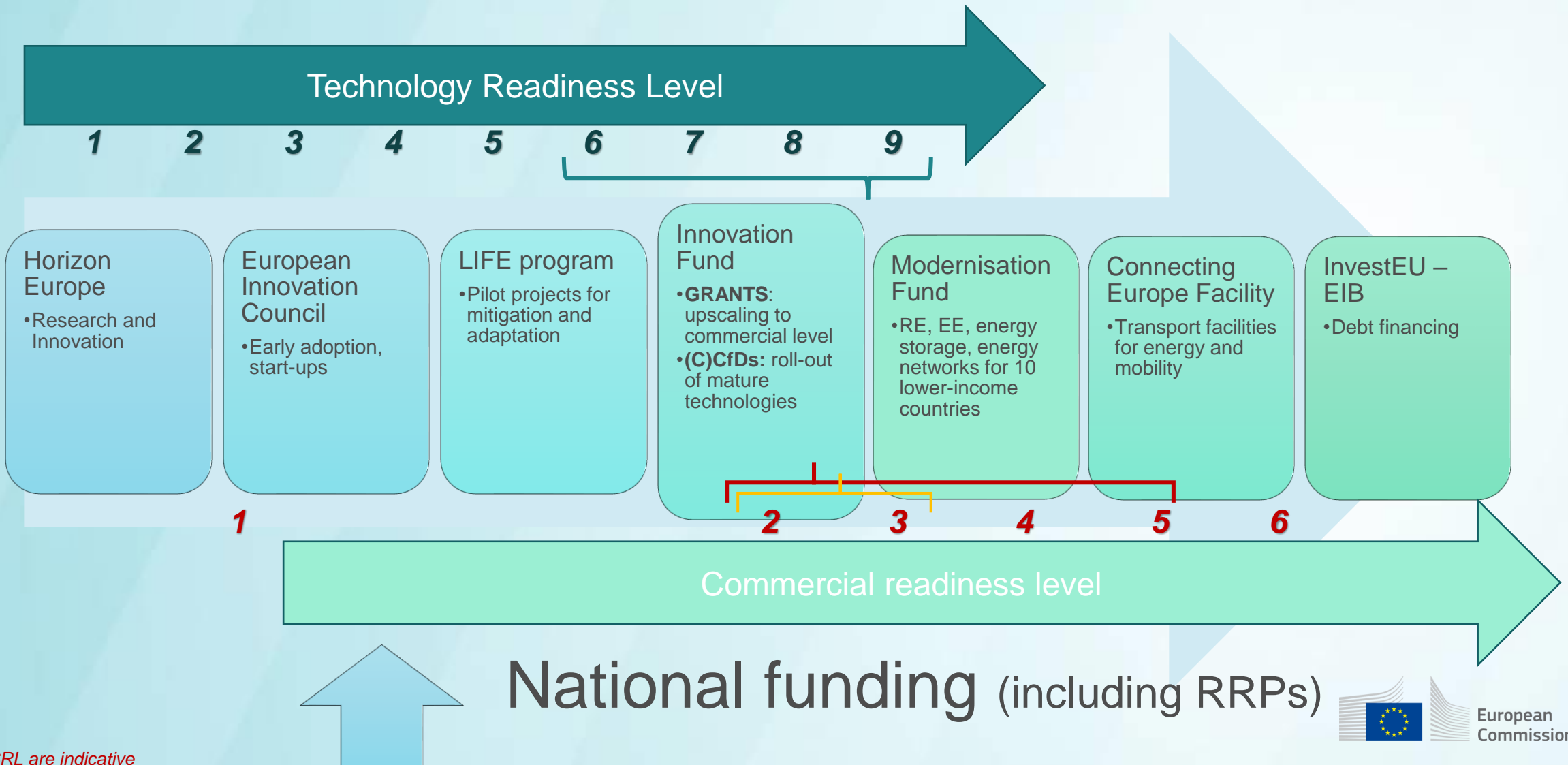
# Innovation Fund - Governance



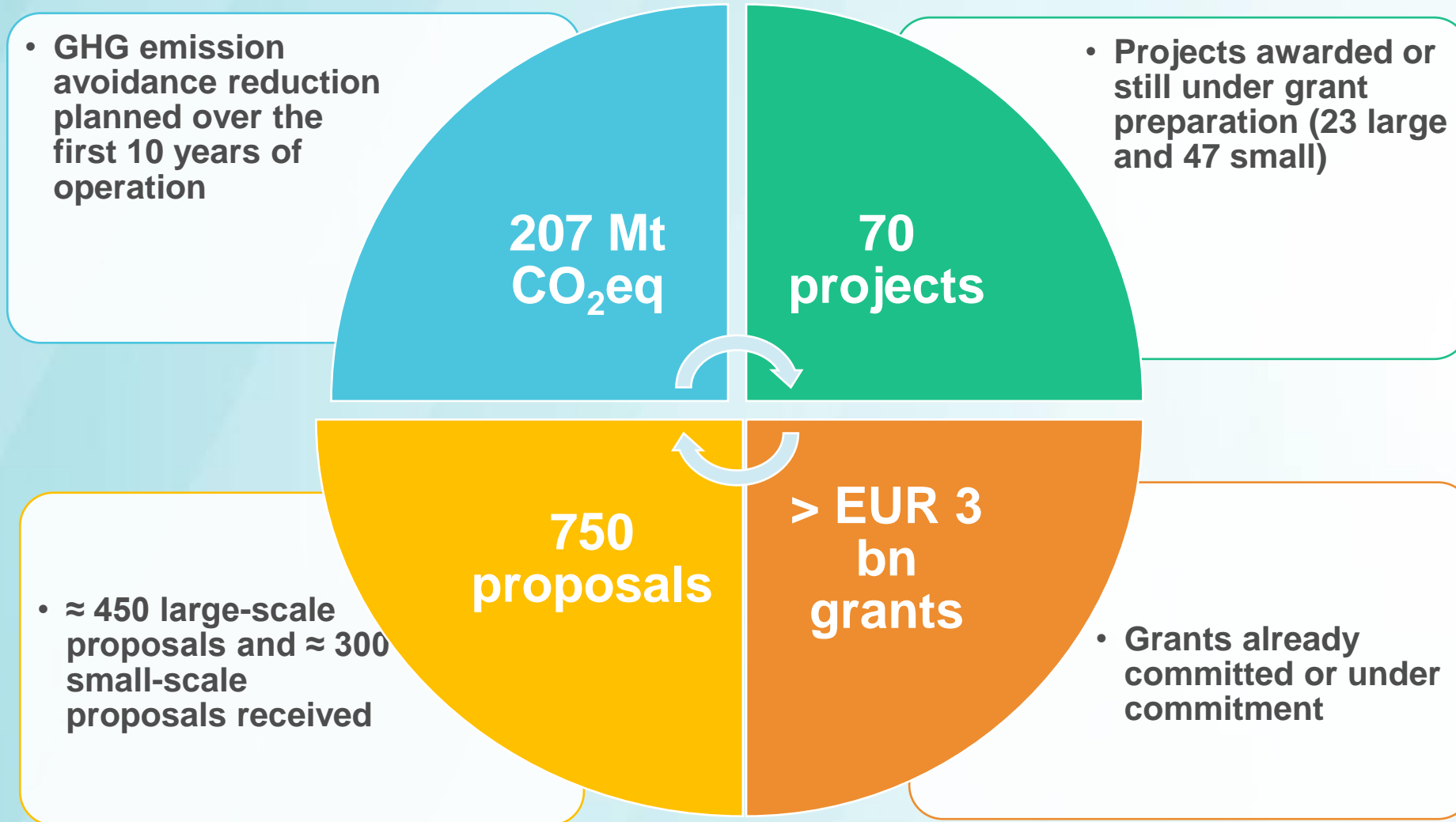
# Innovation Fund revision under FF55

- To make the IF even better suited for the task, the **revision of the IF** was part of proposal for **revised ETS Directive under “Fit for 55” package** – provisional agreement reached in December 2022:
  - **Increased number of allowances from ETS to fund the IF**
  - **More support for the Member States with low effective participation**
  - **Support low carbon innovation in aviation, maritime, road and building sectors**
  - **New instrument to provide support to projects proposed: auctions/competitive bidding and (carbon) contracts for difference** – currently under preparation
- Other improvements could be made in the revised Delegated Act in 2023 (e.g. improving outlook for medium-sized projects)

# Innovation Fund – targeted project portfolio



# Results achieved so far - key indicators



# Key features

Financed from the revenues of the **EU Emissions Trading System**  
450 million allowances plus unspent revenues from NER 300 Programme

Volume: **EUR 38 billion\*** until 2030 (depending on carbon price)  
*\*at EUR 75 / tCO<sub>2</sub>*

**Grants:** Large projects: Support of up to **60% of additional capital and operating costs** (up to 10 years)  
Small projects: **up to 60% of CAPEX**

**Grants:** **Up to 40%** of grant disbursed at financial close

**Grants:** **At least 60%** of grant disbursed during construction and up to **5-years** monitoring period against GHG emission avoidance

Pilots and Small scale projects – shorter **3 years** period

**Grants:** **Annual calls** for large-scale and small-scale projects

**Single applicant or consortium**  
Projects must be implemented in the EU, NO and IC

Project development assistance by EIB

**Large-scale projects:** CAPEX above EUR 7,5 million  
**Small-scale projects:** CAPEX up to EUR 7,5 million

# 2022 large-scale projects call: key features



**Launch  
Deadline  
Results**

03 Nov. 2022  
16 March 2023  
Q4 2023



**EUR 3 billion for grants**  
+  
Project Development Assistance



**Four topics**

## AWARD CRITERIA

**Degree of innovation**

**GHG emission avoidance\***

**Project maturity**

**Scalability**

**Cost efficiency**

\*incl. quality of calculations, net carbon removals and other GHG emission savings (bonus point)

## GRANT DISTRIBUTION

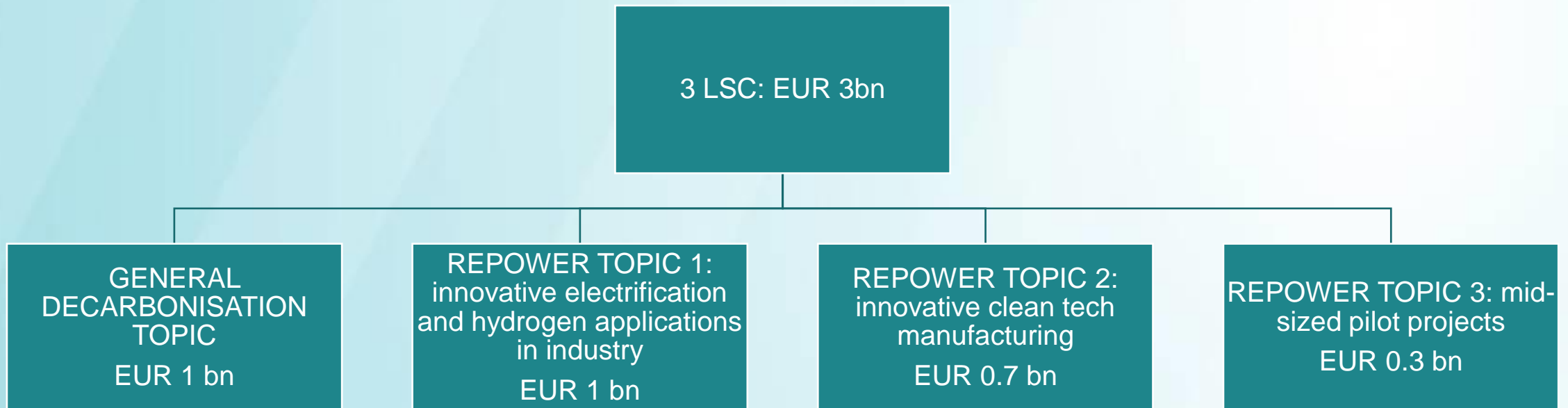
**LUMP-SUM contribution  
grant up to 60% of relevant costs**

- up to 40% of grant at financial close
- remaining amount of at least 60% after financial close
- generally, at least 10% after Entry into operation.



# Innovation Fund and the REPowerEU Plan

- Budget made available for **3LSC: EUR 3bn**
- In the 3LSC, thanks to **increased budget** and to **reflect the REPowerEU priorities**, the Innovation Fund will become **more focused** by creating 3 dedicated topics
- Launch: 03 Nov 2022, Deadline 16 March 2023, Results Q4 2023



# Topic 1: General Decarbonisation (1bn EUR)

The following **activities can be funded** under this topic:

- activities that support innovation in low-carbon technologies and processes in sectors listed in **Annex I to the EU ETS Directive**, including environmentally safe carbon capture and utilisation (**CCU**), as well as **products substituting carbon-intensive ones** produced in sectors listed in Annex I
- activities that help stimulate the construction and operation of projects that aim at the environmentally safe capture and geological storage of CO<sub>2</sub> (**CCS**)
- activities that help stimulate the construction and operation of innovative **renewable energy** and **energy storage technologies**.

*Carbon capture and utilisation can be funded if the capture of CO<sub>2</sub> occurs within one of the activities listed in Annex I, or if the utilisation of CO<sub>2</sub> results in products substituting carbon-intensive ones from the sectors listed in Annex I, even if carbon is captured outside the activities of Annex I.*

# Topic 2: Innovative industry electrification and hydrogen (1bn EUR)

- **A.** Activities that support the **innovative direct electrification of industry** replacing conventional fossil fuels use, both in sector-specific and cross-sectoral uses.
- **B.** Activities that support **innovative hydrogen production and applications** (i.e. hydrogen use as an energy carrier/reducing agent/feedstock) in industry.
  - **B.1 those where the main innovation lies in the use of hydrogen in industrial applications.** As the focus in this topic is to reduce the use of and the dependence on fossil fuels, the use of fossil fuel-based hydrogen is excluded from this topic.
  - **B.2 those where the main innovation lies in renewable hydrogen production** and production of hydrogen-derived renewable fuels (i.e. renewable fuels of non-biological origin) and feed-stocks.
- Projects can include either one or both of the activities described under B.1 and B.2.

# REPowerEU Topic: Innovative industry electrification and hydrogen

**A. EXAMPLES of technologies and activities where innovative direct electrification replaces conventional fossil fuel use:**

## ***Sector specific activities where fossil fuels have to be replaced***

- steam reforming, cracking, as well as other routes for the production of commodity chemicals
- melting in glass furnaces
- drying and melting in ceramics plants
- calcination of limestone for cement production

## ***Technologies used across a range of industrial activities***

- electro-technologies for process heat, such as electromagnetic heating (infrared radiation, induction, microwave radiation)
- electric furnaces (e.g. plasma furnace)
- mechanical vapour recompression other innovative applications of Power to Heat
- innovative application of industrial heat pumps

*Excluded activities: the use of state-of-the art industrial heat pumps, or other currently commercially available electrification technologies*

# REPowerEU Topic: Innovative industry electrification and hydrogen

## B. EXAMPLES of technologies and activities of innovative hydrogen use and production

**B.1 that support innovative hydrogen applications** (i.e. use of hydrogen as an energy carrier, or as a reducing agent, or as a feed-stock) **in industry:**

- renewable hydrogen replacing the use of carbon-intensive hydrogen in refineries,
- renewable hydrogen replacing the use of fossil fuels and carbon-intensive hydrogen used as feedstock in chemical industry, such as the production of ammonia, methanol and other chemicals
- renewable hydrogen replacing fossil fuels in zero-carbon steel making processes (in DRI-EAF route)
- renewable hydrogen replacing fossil fuels for high-temperature heat in the industry (e.g. glass, ceramics)

# REPowerEU Topic: Innovative industry electrification and hydrogen

## B. EXAMPLES of technologies and activities of innovative hydrogen use and production

### B.2 that support innovative renewable hydrogen production

- captive or by-product or merchant production of renewable hydrogen for industrial applications
- captive or by-product or merchant production of renewable hydrogen for transport applications (e.g. in maritime sector) or buildings
- captive or by-product or merchant production of renewable hydrogen for a mix of different applications (e.g. in industry and in transport)
- production of **hydrogen-derived renewable fuels**
- innovative **storage or transport infrastructure as part of integrated renewable hydrogen production project.**

*Excluded activities: projects whose main innovation lies solely in hydrogen use in transport or buildings or power generation or combined power and heat or storage.*

<b>Innovation in hydrogen...</b>	Production of H2 and H2-derived fuels (regardless of which sector will offtake it)	Consumption /use of H2 in industry	Consumption /use of H2 in transport or buildings, or power generation or CHP	Transport/storage of H2 as part of integrated project and depending on type of H2 produced	Transport infrastructure for H2 as stand-alone projects	Storage of H2 as stand-alone projects
Renewable H2	<b>INDUSTRY-ELEC-H2</b>	<b>INDUSTRY-ELEC-H2</b>	<b>GENERAL DECARBONISATION</b>	<b>INDUSTRY-ELEC-H2</b>	Not eligible	<b>GENERAL DECARBONISATION</b>
Fossil H2 with CC(U)S	<b>GENERAL DECARBONISATION</b>	<b>GENERAL DECARBONISATION</b>	<b>GENERAL DECARBONISATION</b>	<b>GENERAL DECARBONISATION</b>	Not eligible	<b>GENERAL DECARBONISATION</b>
Low-carbon H2 other than fossil H2 with CC(U)S e.g. H2 from biomass or hydropower	<b>GENERAL DECARBONISATION</b>	<b>INDUSTRY-ELEC-H2</b>	<b>GENERAL DECARBONISATION</b>	<b>GENERAL DECARBONISATION</b>	Not eligible	<b>GENERAL DECARBONISATION</b>
Fossil H2	Not eligible				Not eligible	<b>GENERAL DECARBONISATION</b>

# Topic 3: Innovative Clean Tech manufacturing (700M EUR)

The following activities can be funded under this topic: construction of manufacturing facilities and their operation to produce specific components for:

- **renewable energy installations** (in photovoltaics, concentrated solar power, on-shore and offshore wind power, ocean energy, geothermal, solar thermal, and others), including their connection to the electricity/heat grid;
- **electrolysers and fuel cells**;
- **energy storage solutions** for stationary and mobile use for intra-day and long duration storage;
- **heat pumps**.

This topic is targeted at **the innovation in manufacturing of components**.

Components, in line with GHG methodology guidance, are to be understood to **include also final equipment** such as wind turbines, solar panels, batteries, heat pumps or electrolysers.



# REPowerEU Topic: Innovative Clean Tech manufacturing

- Topic is targeting those **components that are a significant factor** in the performance and/or cost of the final equipment.
- Activities relating to the **recycling of critical materials** to be used in the above equipment categories or components thereof may also be funded under this topic.
- Equipment and components can be **sold on the EU market and in third countries.**
- The topic seeks to enhance the Union's innovation and technological leadership in clean tech manufacturing. Activities that can be funded include those where the main innovation lies in the **product as well as in the production processes.**
- Innovation can concern one or several steps of the manufacturing process.

*Excluded activities: use of innovative components (including the final equipment) in power/heat generation/energy storage/production of hydrogen. (but see Topic General)*

*Excluded activities: testing new components/final equipment (but see Topic Pilots)*

# Topic 4: Mid-sized pilots (300M EUR)

The following activities can be funded under this topic:

- Construction and operation of **pilot projects that focus on validating, testing and optimising** highly innovative, **deep decarbonisation solutions** in sectors eligible for Innovation Fund support.
  - Pilot projects can thus concern: industrial sectors listed in Annex I to the EU ETS Directive, including environmentally safe (CCU) that contributes substantially to mitigating climate change, as well as products substituting carbon-intensive ones produced in sectors listed in Annex I to the EU ETS Directive or construction and operation of innovative energy or CO<sub>2</sub> storage solutions or construction and operation renewable energy installations.
- Activities that can be funded are those that **tackle technical risks** of innovative technologies and solutions, e.g. **optimising process** and operational parameters of the innovation, and/or **improving the characteristics of the final products**.

# Topic 4: Mid-sized pilots cont'd

- In this topic, **a higher degree of innovation is expected** than in the other topics
  - to be demonstrated under *Degree of Innovation* award criterion, points will be doubled.
- Pilot projects should prove an **innovative technology or solution** in an operational environment, but are not expected yet to reach large scale demonstration or commercial production.
- BUT the projects can entail **limited production/operation** for testing purposes, including delivery to/from potential customers for validation.
- **Project viability** rather than project profitability is to be demonstrated
  - to be assessed under the *Financial Maturity* award criterion
- The **maximum amount of Innovation Fund grant** for an individual project under this topic is limited to **EUR 40 million**.



# Thank you



[https://cinea.ec.europa.eu/programmes/innovation-fund\\_en](https://cinea.ec.europa.eu/programmes/innovation-fund_en)



[@cinea\\_eu](https://twitter.com/cinea_eu)

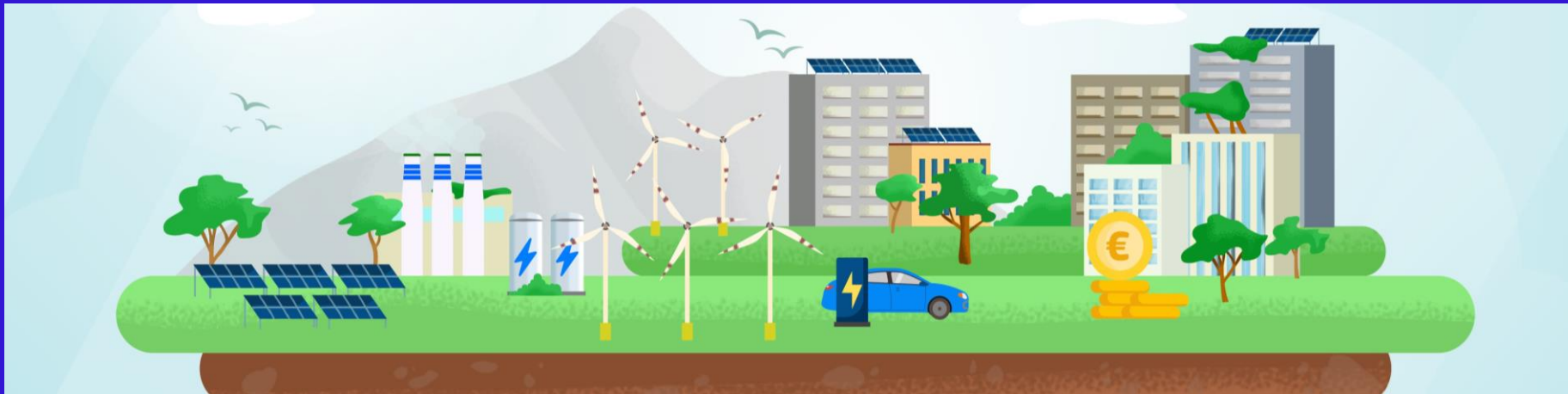


[European Climate, Infrastructure and Environment Executive Agency](#)



[CINEATube](#)

# Jornada informativa sobre el Fondo de Innovación: Tercera convocatoria de proyectos de gran escala



*Madrid, 15 de febrero de 2023*

# Innovation Fund

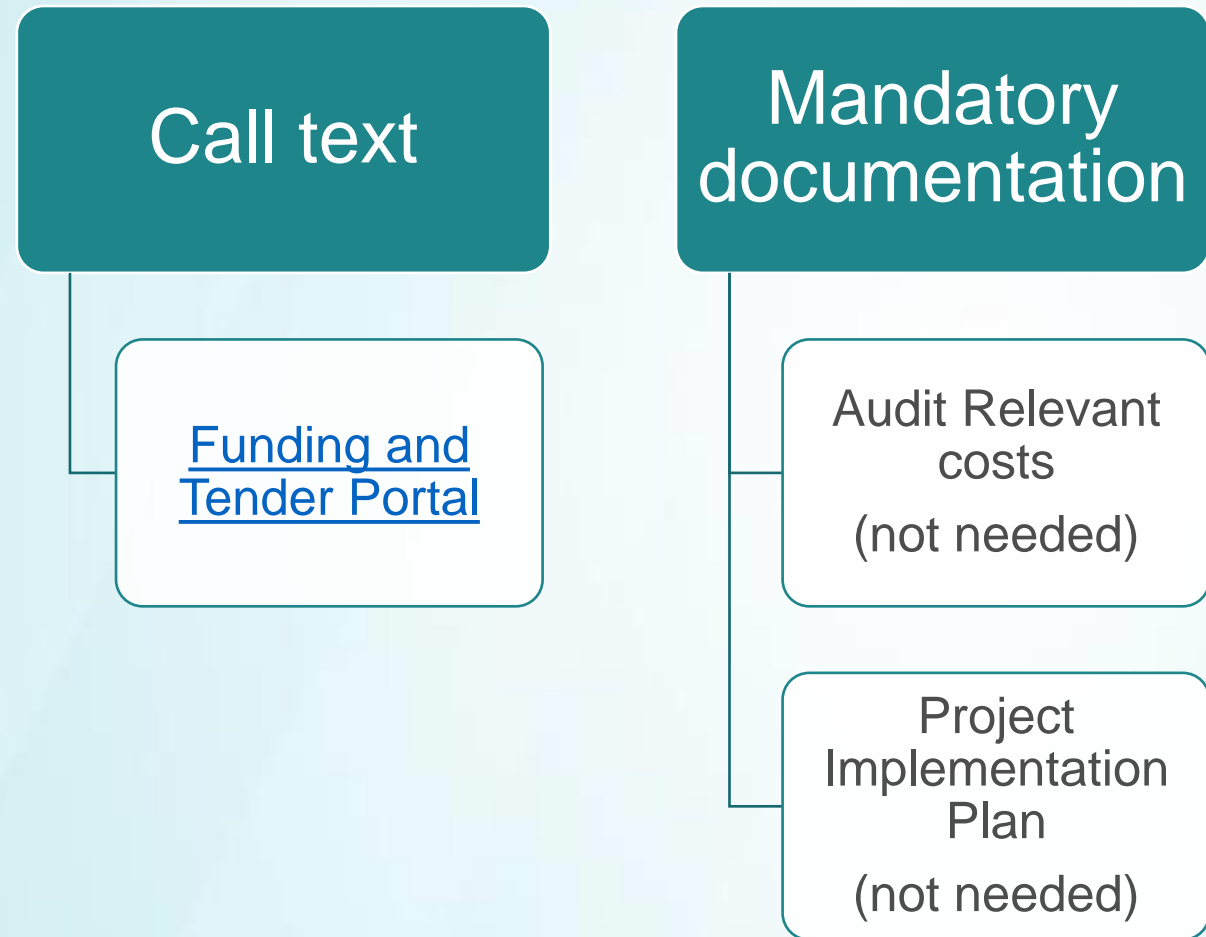
Award criteria and practical tips related to the application

Carmen Millan Chacartegui, CINEA



# Call text and mandatory documentation

Please find more information on the mandatory documents and how to apply in the [following tutorial](#) and in the [CINEA website](#)





# Award Criteria

## DEGREE OF INNOVATION

Innovation beyond state of the art (see Annex 1 of call text) at European level

\* **NEW**: consider the ongoing InnovFund projects

## GHG EMISSIONS AVOIDANCE

- **Absolute** emissions avoidance (*compared to sector depending on median avoidance*)
- **Relative** emissions avoidance
- **Quality and credibility** of the calculation and minimum requirements\*

\* **NEW**: additional minimum requirement for PILOT projects

## PROJECT MATURITY

- Technical maturity
- Financial maturity
- Operational maturity

## SCALABILITY

\***NEW** : one criterion looking at

- Scalability in terms of efficiency gains
- Scalability in terms of further technology or solutions deployment
- Quality and extent of the knowledge sharing

## COST EFFICIENCY

- Cost efficiency ratio (i.e. the EU contribution requested per tCO<sub>2</sub> avoided)\*
- Quality and credibility of the cost calculation

\* **NEW**: different formula for PILOT projects

# Degree of Innovation

The Innovation Fund aims to support projects that go beyond incremental innovation (Annex 1 of call document)



**Incremental innovation**, the degree of innovation is very low since only minor changes or improvements are made to existing products, processes or business models, projects which will deliver only incremental innovation **will not be retained.**

**Intermediate or strong** degree of innovation is present in new or considerably changed technologies or processes or business models for the production or delivery of existing or new products or services

**Very strong or breakthrough** degree of innovation is present in completely new technologies or processes or business models or completely new products or services, which substitute existing products or business models

# How to make your proposal successful

- Clearly describe the innovation in the individual elements of the proposed solution and, if relevant, of their combination and their respective degrees of innovation
- Clearly describe the state of the art as a benchmark against which the assessment of the innovation(s) is made (include geographical reference point)
- Evaluators need to be convinced by the application, so substantiate well the performance advancements compared to state-of-the-art solution, provide credible performance data. Consideration of innovation needs to take into account at least plant design; operating approach; construction; performance; reliability & availability; maintenance and economics.

# GHG: calculation tools must be used

## Examples available

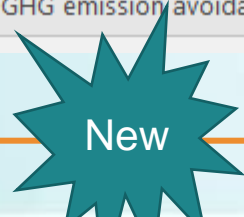


Scalability tab no longer available

### Absolute GHG emissions by scenario and step of the process

Reference and project GHG emissions by step of the production process during the first 10 years of operation, in tCO<sub>2</sub>e.

Step	Reference emissions	Project emissions	Variation
	tCO <sub>2</sub> e	tCO <sub>2</sub> e	tCO <sub>2</sub> e
Input	-	-	-
Overview	<b>Summary</b>	Reference emissions	Project emissions
Ref <sub>inputs</sub>	<b>Obligatory</b>		
Processes [add rows and column, as needed]			
Ref <sub>processes</sub>			
Ref <sub>processes</sub>			
Ref <sub>processes</sub>			
Combustion [add rows and column, as needed]			
Proj Conversion Factors	Net carbon removals	Other GHG emission avoidance	Additional ren. electricity
	<b>Only if relevant</b>		
			<b>Advisable</b>



# GHG - Minimum requirements



## Comparison with EU ETS benchmark emissions (only for projects producing products with a EU ETS benchmark)

Calculate the GHG emissions per unit of product according to the EU ETS methodology and compare with the equivalent EU ETS benchmark(s) applicable at the time of the application and confirm that the project emissions are **lower than the EU ETS benchmark emissions**.



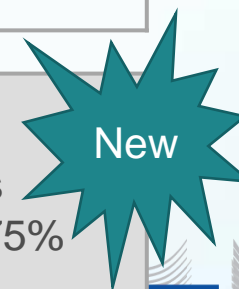
## Sustainability of biomass (only for projects using biomass as feedstock)

Projects using biomass as feedstock must confirm that the biomass used will at least meet the sustainability requirements of the Renewable Energy Directive. The biomass feedstock must either be listed in **Part A of Annex IX** of the Directive or be certified as **low indirect land use change (ILUC)-risk** as defined by Commission Delegated Regulation (EU) 2019/8072.



## Additional requirement for “PILOT” projects

At least 75% emissions reductions below the relevant ETS benchmark for industrial installations covered by the EU ETS. For other projects, the relative emission avoidance should be at least 75%



# Bonus points





Bonus	
1 - The potential to deliver <b>net carbon removals</b>	1 point (half point 0.5 possible)
2 - <b>other GHG savings</b> from emissions sources that go beyond the boundaries established in the Innovation Fund methodology for the given sector	1 point (half point 0.5 possible)
3: commitment to use <b>electricity from additional renewable sources</b> : projects that propose to use significant amounts of electricity from the grid are encouraged to demonstrate whether they are using additional electricity of renewable origin and whether they are adding to the deployment of renewable energy	1 point (half point 0.5 possible)

# Main mistakes on GHG emissions avoidance




Difference in scope of reference and project scenarios

Adoption of inadequate reference scenario and emissions factor



Project boundaries different from the methodology ones

Assumptions and data not backed with supporting evidence



Additional GHG savings claimed under Absolute GHG emissions avoidance



# Project Maturity - Technical Maturity

**Objective: assess the technical maturity of the proposed projects**

**Technical feasibility to deliver the expected output and GHG emissions avoidance**

**Technology risks and proposed mitigation measures**

- **Application form, Part B, sections:**
  - 3.1 (technical maturity)
  - 3.4 (risk management)
  - Section 0: technical characteristics and scope / technology scope
- **Feasibility study** (mandatory annex)
- Any existing technical due diligence report (optional)



# Technical Maturity

How mature is your technology?

**Describe the actual readiness level of your technology/solution**

**Resubmissions are welcome**, particularly if the readiness of your technology has improved

## Ensure consistency

between ALL documents, and in particular: project implementation plan (Part B), feasibility study, business plan and GHG calculations

### 1 Provide a thorough analysis and technical description

- Be concise and focus on key facts and figures

### 2 Justify and provide evidence for the claimed expected output, e.g.:

- Evidence and performance data from previous stages/site/pilot
- Third party confirmations, quotes from vendors or suppliers, signed letters of agreements or head of terms

### 3 Analysis of technical risks and their mitigation is required

- Use due diligence report when available

# Financial Maturity – key points

**Objective: assess the project capacity to reach Financial Close within 4 years**

**Project business plan and profitability**

**Soundness of the financing plan**

**Commitment of project funders**

**Understanding of project financial risks**

# Project Maturity : Operational Maturity

**Objective: assess the prospects of the project for its successful deployment**

Project implementation plan

Permits, Rights, Licences and Regulatory procedures

Public acceptance of the project

Project management team and project organisation

Operational risks and proposed mitigation measures

- **Application form, Part B, sections:**
  - 3.3 - Operational maturity
  - 3.4 - Risks and mitigation measures
  - 6.1 - Work Plan
  - 6.2 – Work Packages, activities, resources and timing
  - Timetable
- Timetable-Gantt chart (mandatory document)
- Any existing due diligence report (optional)

New

Project implementation plan **no longer mandatory** as separate document: all information integrated in Part B of the application form

# Operational Maturity



Properly associate work packages (WPs) with activities and with their planned costs



Define adequate deliverables, milestones and means of verification



Do not underestimate the risk analysis



Present a detailed and realistic strategy to obtain all relevant permits and licenses



Make sure that the role and responsibility of each entity and party is clearly explained



Ensure consistency

# Scalability

**Objective: assess the scalability and the knowledge sharing**

**Scalability in terms of efficiency gains**

**Scalability in terms of further technology or solutions deployment**

**Quality and extent of the knowledge sharing**

- Efficiency gains:
  - expected technology **cost reductions**;
  - **efficient use of resources** or other ways to address resource constraints notably in terms of **reduction of use** and **more efficient use** of critical raw materials biomass and other scarce resources, and in terms of **circularity, recycling and recyclability** of such resources.
- Scalability in terms of further technology or solutions deployment:
  - at project site and possible transfer to other sites;
  - at sector level, regionally or across the EU economy or globally;
  - + potential for technology transfer beyond sector

Follow the guidance provided in the Application form, section 4

# Cost efficiency

**Requested Innovation Fund grant**

**Absolute GHG emission avoidance**

During 10 years after entry into operation

**Maximum grant is 60% of total relevant costs**

**Applicants choosing not to apply for the maximum grant will be more competitive when ranked against other applicants in 'cost per unit performance' metric. However if the project will receive project specific state-aid, this must be added to the requested IF grant amount in the numerator of the formula**

**New**

# How to make your proposal successful

Cover in a **clear and exhaustive manner** all the points in the Part B and substantiate them, avoid vague statements as evaluators will be asked whether the claims you made are credible;

- underpin your claims with evidence and analysis
- be realistic in your growth expectations
- address well the resource constraints and any limiting factors for further scale-up

# Some recommendations

- Read carefully the call documents and understand well the requirements (including the admissibility and eligibility ones)
- Get familiar with and follow the call methodologies and guidance (GHG and relevant costs)
- Before submitting, please check consistency between different parts and documents of your application
- Help is available:
  - Innovation Fund helpdesk
  - IT helpdesk
  - Lessons learned and info-day recordings
  - Tutorial on the application procedure
  - Video on the financial model summary sheet
  - Recording of the infoday and lessons learned



# Forthcoming events

16 March 2023 17:00



**Large-scale call  
Submission Deadline**

End March/Mid April  
2023



**Launch Small-Scale  
call 2023 and Infoday**

Summer 2023



**Information to the  
LSC-2022 applicants**

Autumn 2023



**First H2 auction**

# Where to find more information?



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

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

<https://europa.eu/!QB67by>



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

<https://europa.eu/!rx34Dt>



Innovation Fund - YouTube

<https://bit.ly/2WxK8w7>



# Thank you



[https://cinea.ec.europa.eu/programmes/innovation-fund\\_en](https://cinea.ec.europa.eu/programmes/innovation-fund_en)



[@cinea\\_eu](https://twitter.com/cinea_eu)

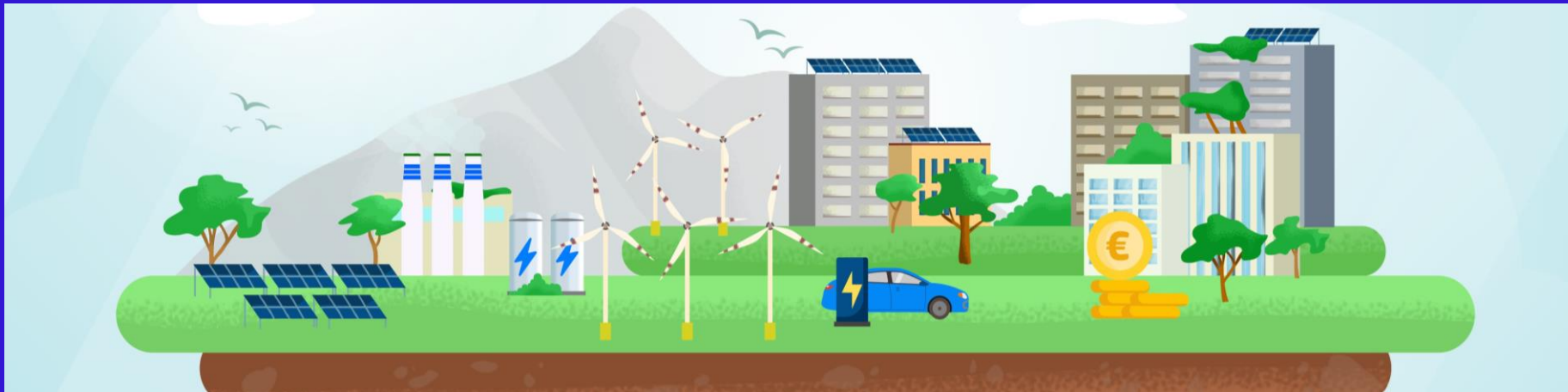


[European Climate, Infrastructure and Environment Executive Agency](#)



[CINEATube](#)

# Jornada informativa sobre el Fondo de Innovación: Tercera convocatoria de proyectos de gran escala



*Madrid, 15 de febrero de 2023*



# INNOVATION FUND

Lessons learnt from LSC-2021 and best practices

Financial maturity

15 February 2023



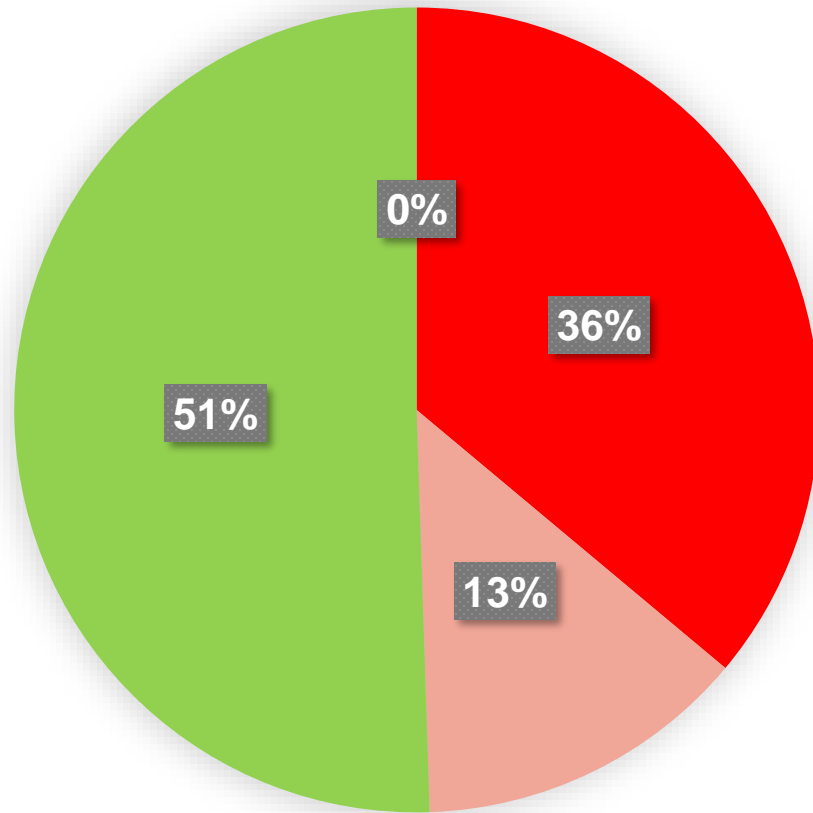
#InnovationFund



# Best practices Financial maturity

# Financial Maturity (FM) : success rates LSC 2021

Projects assessed under the Project Maturity Criterion

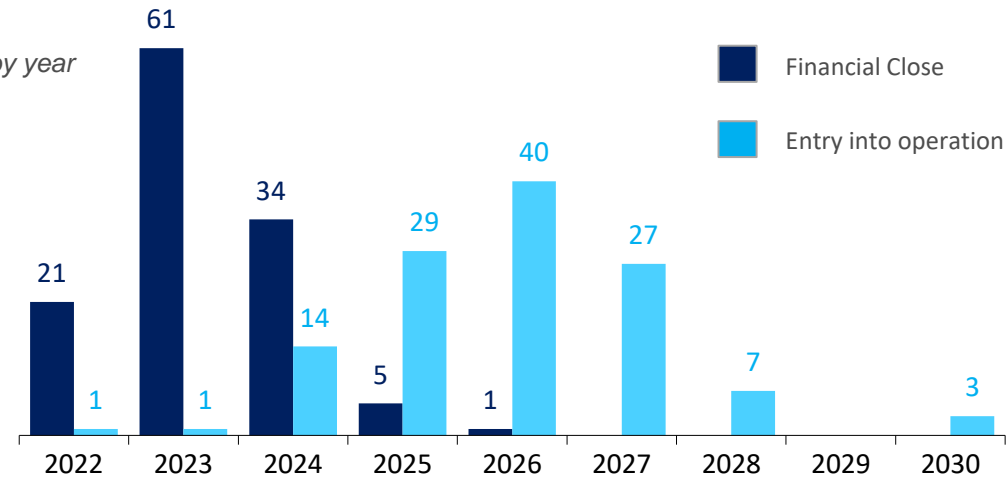


- Projects Failing only in FM
- Projects Failing in FM + at least 1 other criteria
- Projects reaching the thresholds under FM
- Project failing Maturity outside FM

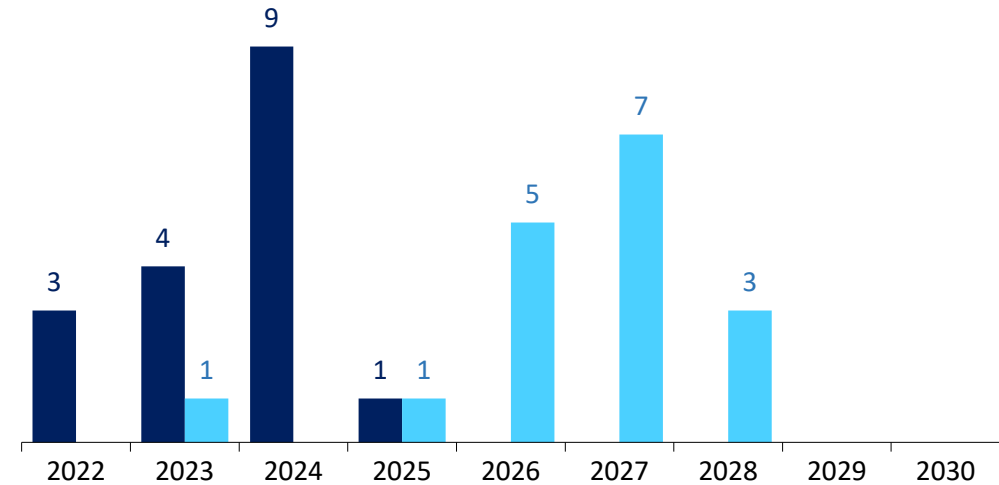
# Most proposals anticipate FC within 2 years and 3 years of construction

## Submitted proposals

Number of proposals by year



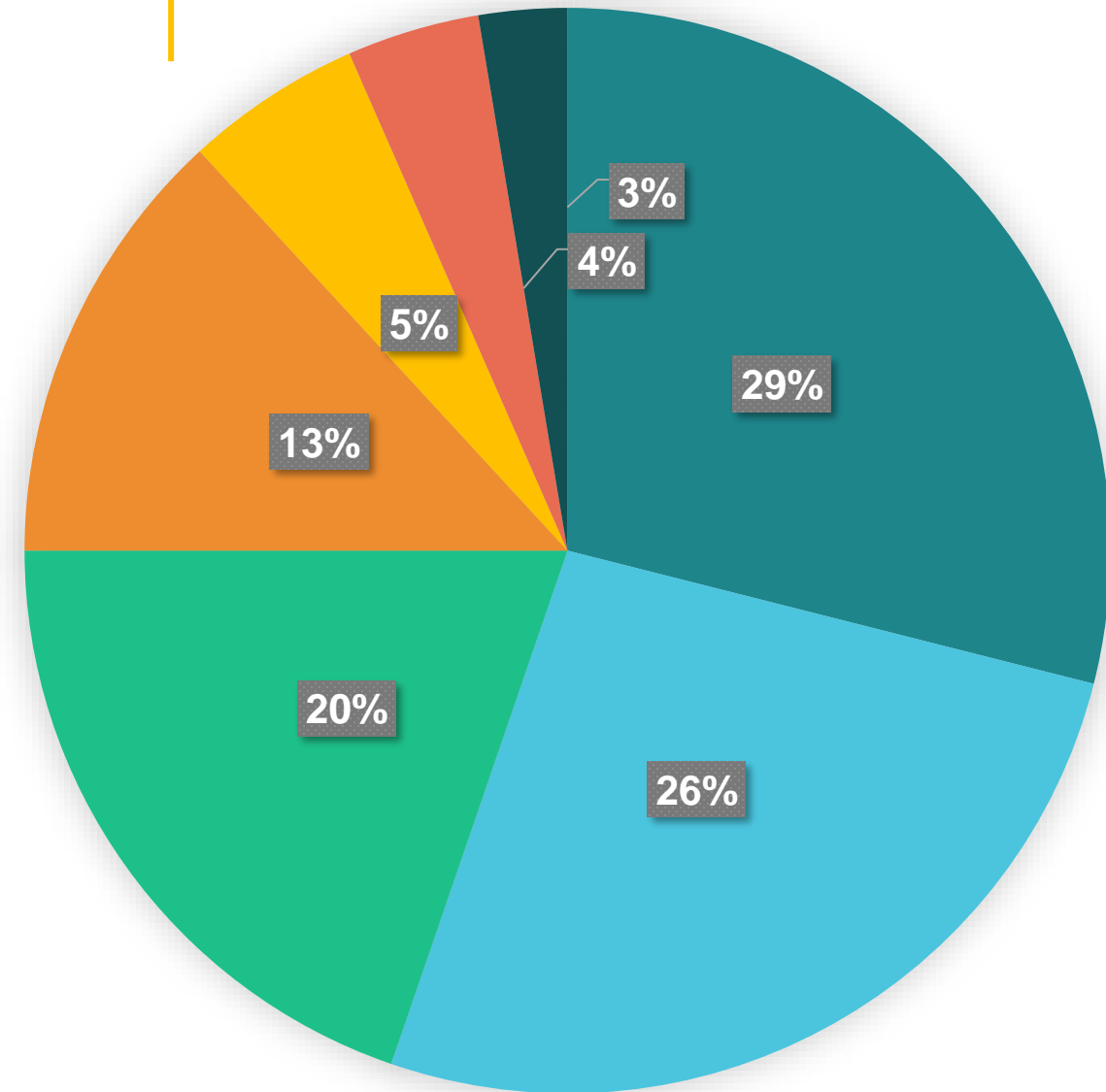
## Pre-selected proposals



- Assuming that pre-selected projects sign their grants by end of December 2022, 94% of them are anticipating to reach financial close within 2 years from grant signature
- When taking all projects submitted into account, 95% are planning to reach financial close within 2 years
- Business plans anticipate construction to take about 3 years on average, but for some projects completion is expected to take more than 5 years



# Most frequent Significant Weaknesses



- The project is not profitable + the financing plan is not credible
- The business plan is not credible + assumptions are not substantiated nor credible
- There are inconsistencies between RC - BP - FMSS - Detailed Business Model
- The WACC is not credible : there are inconsistencies or is not calculated according IF Methodology
- The business and financial risks and their mitigations are not identified nor substantiated
- The scope of the business plan is inconsistent and not substantiated
- The Financing Plan is not credible + the commitment of the funds providers is not credible nor substantiated

# Credibility of the Business Plan

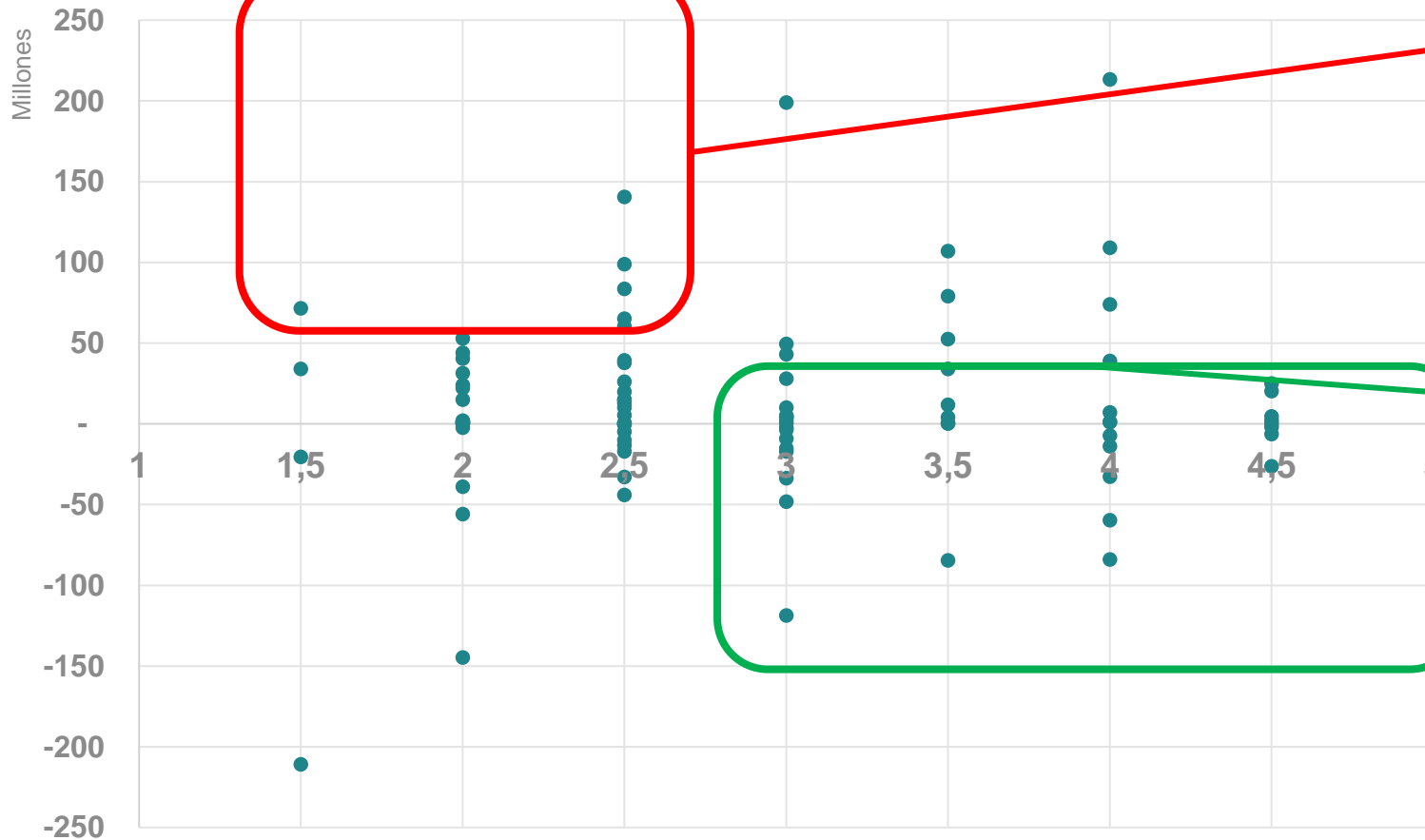
- Make sure that the financial projections are coherent with the assumptions detailed in the business plan and used in the other application documents
- Fully describe and substantiate the main revenues and cost assumptions: provide and justify volumes, prices assumed, write a clear narrative for your assumptions and make sure they are coherent with your thorough market assessment and technical feasibility assessment
- Provide a clear and full breakdown of CAPEX with references and justifications
- Make sure that the scope of activities of your business model and business plan match the scope of the project you submit, that the assets and costs of the project are borne by the applicant and grant beneficiaries
- Justify the cost contingencies assumed and ensure that they are in line with market practice in your sector
- Focus on quality instead of quantity of information

# Credibility of the Financing Plan

- Highlight the financing structure indicating whether the debt will be raised at the level of the corporate entity or of the project, and the level of recourse to the project shareholders
- If the project is planning to raise external debt, justify the key terms assumed, expected cash flows and that this debt level and repayment profile is in line with market standards. If possible, provide letters from banks/debt investors to support these assumptions
- **If project has low profitability and/or subject to high volatility of cash flows, we expect strong evidence of commitment from sponsors.**

# Profitability is not the whole story

Project Net Present Value



Profitable proposals could be penalized severely if their business and/or financing plans lack credibility

Proposals with low returns could still meet scoring thresholds in particular if the funders provide strong evidence that they are committed to fund the project

**Profitability is only one element considered in the evaluation of financial maturity**

# Avoid inconsistencies and provide supporting evidence

- Provide contractual evidence (e.g., letters of support, MoUs, indicative terms of agreement) for off-take agreements, key suppliers, construction/EPC parties
- Make sure that the grant disbursement schedule is in line with the call text guidelines
- Ensure that assumptions used for WACC are adequately reflecting the project risks and **refer to dedicated section on WACC assumptions in the guidance on relevant cost methodology**
- Provide a detailed financial model covering the entire project lifetime and consistent with the project milestones



## Best Practice :

Use your own Detailed Financial Model to fill the Financial Information File

Item	Unit	EUR/t	2023	2024
<b>Volumes</b>				
<b>Baseline</b>				
Feedstock	kt		17	50
Product - Light	kt		9	26
Product - Heavy	kt		4	14
<b>With Project 1</b>				
Feedstock	kt		17	62
Product - Light	kt		9	32
Product - Heavy	kt		4	14

[PROJECT] - Model inputs				
Year		2023	2024	
Period Start		01-01-2023	01-01-2024	
Period End		31-12-2023	31-12-2024	
<b>Profit &amp; loss</b>				
<b>Revenues</b>				
(1) Total revenues from products and other revenues	k EUR		Total	
(2) Total revenues from products	k EUR			
[Product/Service 1]				
Price	[Unit]			
Volume	[Unit]			
[Product/Service 2]				
Price	[Unit]			
Volume	[Unit]			

# Provide supporting evidence : example

Macroeconomic assumptions		2022	2023	2024
Inflation	%	19.00%	9.20%	3.50%
GDP growth	%	4.50%	2.00%	3.00%
Increase in exports	%	4.80%	5.00%	4.40%
Growth rate of gross average earnings	%	15.80%	7.10%	7.00%
Corporate tax rate	%	9.00%	9.00%	9.00%
Employer's contributions	%	13.00%	13.00%	13.00%
Risk-free forward return	%	0.27%	1.10%	1.57%
Unlevered industrial beta	—	0.75	0.75	0.75
Market risk premium	%	6.00%	6.00%	6.00%
Country risk premium	%	1.85%	1.85%	1.85%
Innovation risk premium	%	3.00%	3.00%	3.00%

For EACH of the assumption used, provide the sources and the justification:

- If it is publicly available – the website reference
- If it is NOT publicly available - the detailed data as annex of the Business Plan

**The justifications provided have to be accessible, verifiable and reproducible.**

# Identify the risks, mitigate them and clarify the scope

## Example 1 : Carbon capture and storage (CCS)

If the carbon storage is outside the scope of the project, ensure that you do have enough strong indication that CO2 transport and storage infrastructure will be available and related contracts secured to ensure that your project can mitigate these risks

## Example 2 : Waste-to-power for production of hydrogen or chemicals

If the feedstock is externally sourced, ensure that you have Letters of intent (LoI's) from potential suppliers and provide a detailed overview of the feedstock availability in the project area. Take the potential cannibalisation effect into account.

# The 7 golden rules of FM

Clearly outline project scope, legal structure (\*) and potential interdependencies with other projects

Identify & provide effective mitigation measures for key business risks

Ensure your business plan is fully funded and provide evidence of funding commitment

Substantiate and justify your business assumptions

**Financial  
Maturity**

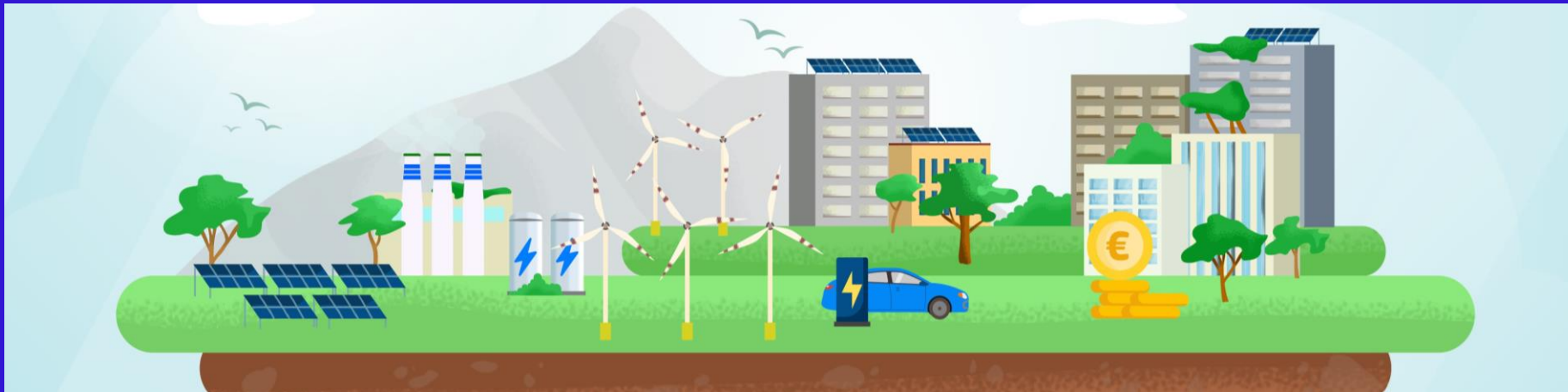
Be consistent and follow our guidance on how to calculate your project WACC in line with your project risks

Give evidence of preliminary contract agreements with your main suppliers, construction contractors and offtake parties

Assess market, competitive landscape and commercialisation of your technology



# Jornada informativa sobre el Fondo de Innovación: Tercera convocatoria de proyectos de gran escala



*Madrid, 15 de febrero de 2023*



GOBIERNO  
DE ESPAÑA

MINISTERIO  
PARA LA TRANSICIÓN ECOLÓGICA  
Y EL RETO DEMOGRÁFICO

# España en el Fondo de Innovación

Jornada Fondo de Innovación de la UE

Arantzazu Mojarrieta Sanz  
15 de febrero de 2023  
Oficina Española de Cambio Climático  
Ministerio para la Transición Ecológica y el Reto Demográfico



# ESPAÑA EN EL FONDO DE INNOVACIÓN

- Los Estados Miembros participamos en el **IFEG (Innovation Fund Expert Group)** junto con otras organizaciones en determinados hitos, sobre los que nos consulta la Comisión:
  - Seguimiento y orientación a la Comisión
  - Aspectos generales en la preparación de las convocatorias

Los EEMM en concreto, además:

- **Luz verde a la relación de proyectos preseleccionados**
- **Elementos de índole financiera** en las convocatorias (presupuesto destinado a PDA, uso de otras formas de financiación aparte de subvenciones...)
- **Punto Focal Nacional:** Subdirección General de Mercados de Carbono (Oficina Española de Cambio Climático)

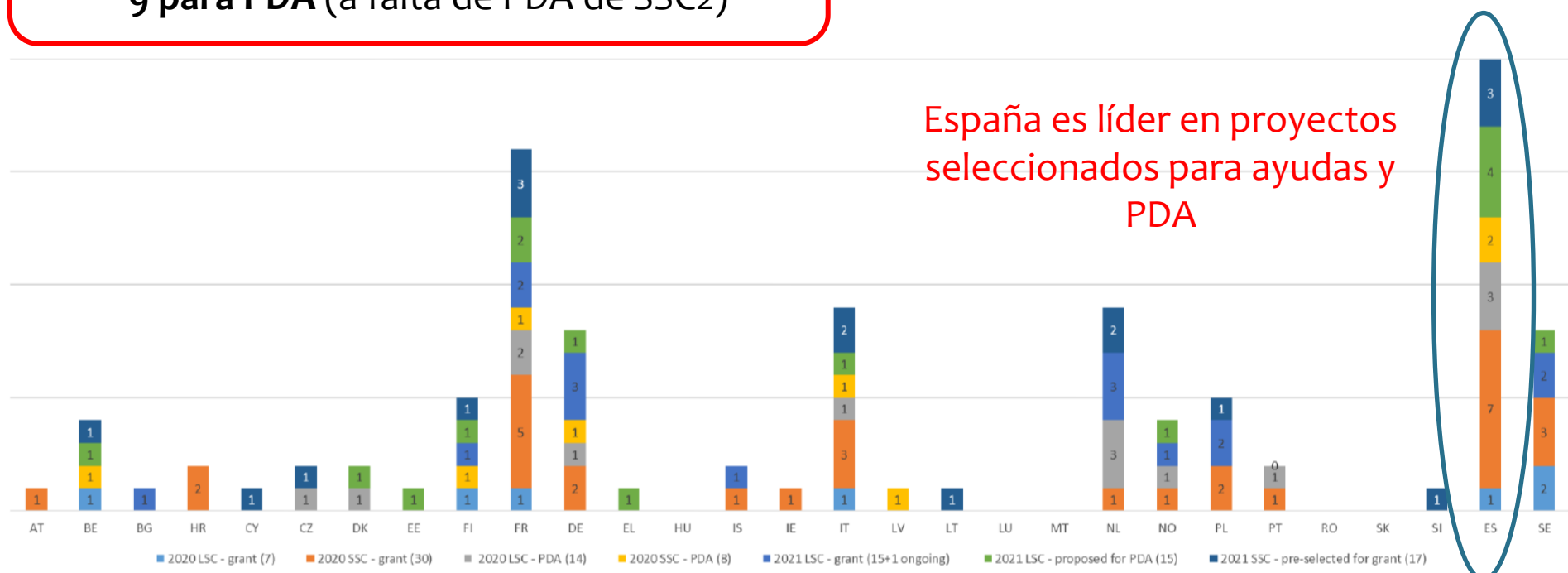
# ACTIVIDAD COMO PUNTO FOCAL NACIONAL



- No participamos en la ejecución de las convocatorias
- **Difusión** de la actividad del Fondo de Innovación:
  - Anuncio de convocatorias
  - Anuncio de eventos preparados por CINEA, DG CLIMA u otros
  - Infodays Nacionales
  - Participación en Jornadas a solicitud de otras administraciones
- **Coordinación interministerial**, incluyendo:
  - Ministerio para la Transición Ecológica y el Reto Demográfico
  - Ministerio de Industria, Comercio y Turismo
  - Ministerio de Ciencia e Innovación
  - Difusión interna de convocatorias, resultados, procesos participativos (encuestas, talleres...)
- **Consultas y apoyo a potenciales promotores:**  
[bzn-fondoinnovacion@miteco.es](mailto:bzn-fondoinnovacion@miteco.es)

# Participación española en convocatorias anteriores

Tras 4 convocatorias, España cuenta con **12 proyectos elegidos para ayudas y 9 para PDA** (a falta de PDA de SSC2)



\* Los proyectos sólo se muestran bajo el país del coordinador en los casos de proyectos con localización en varios países.



# Participación española en convocatorias anteriores

---

**1ª Gran Escala** (Jul.2020): asignados 1.100 M€ en ayudas

**41 solicitudes elegibles, seleccionado 1 proyecto**, ayuda otorgada 107 M€.

- ECOPLANTA - Ecoplanta Molecular Recycling Solutions S.L. - Repsol.

**Y 3 proyectos elegidos para recibir asistencia bajo el PDA del BEI:**

- SUN2HY - Repsol, Enagás.
- Sun2Store - Malta Iberia Pumped Heat Electricity Storage.
- TRISKELION - Forestal del Atlántico.

**2ª Gran Escala** (Oct.2021): asignados 1.800 M€ en ayudas.

**16 solicitudes elegibles, no seleccionadas. 4 proyectos elegidos para PDA:**

- H2-LSE-TGNA - Repsol, Enagás.
- LessCO Surfaces - Cosentino.
- H2Pole - Reganosa, EDP.
- MEIGA - Iberdrola.



# Participación española en convocatorias anteriores

**1ª Pequeña Escala** (Dic.2020): asignados 109 M€ en ayudas.

**41 solicitudes elegibles, seleccionados 7** con ayudas por 25M€.

- W4W - Waga Energy.
- SKFOASS - SKF.
- HYVALUE - Tubacex.
- AGGREGACO2 - Petronor.
- SUN2HY - Repsol, Enagás.
- CO2-FrAMed - Acciona y otros.
- GREENMOTRIL - Puerto Motril y otros.

**Y 2 proyectos para recibir asistencia bajo el PDA del BEI:**

- FRFS - FinnRecycling.
- TRUCK2WIND - Green Capital Power.

**2ª Pequeña Escala** (Mar.2022): asignados 62 M€ en ayudas.

**12 solicitudes elegibles, seleccionados 4** con ayudas por 14,7 M€.

- CIRQLAR - Repsol.
- CLYNGAS - Cemex.
- Sustain-Sea - Bound4Blue.
- Listlawelbattcool - Valeo (ES, FR, CZ).

**Se desconoce todavía qué proyectos recibirán asistencia bajo el PDA del BEI.**

# Participación española en convocatorias anteriores

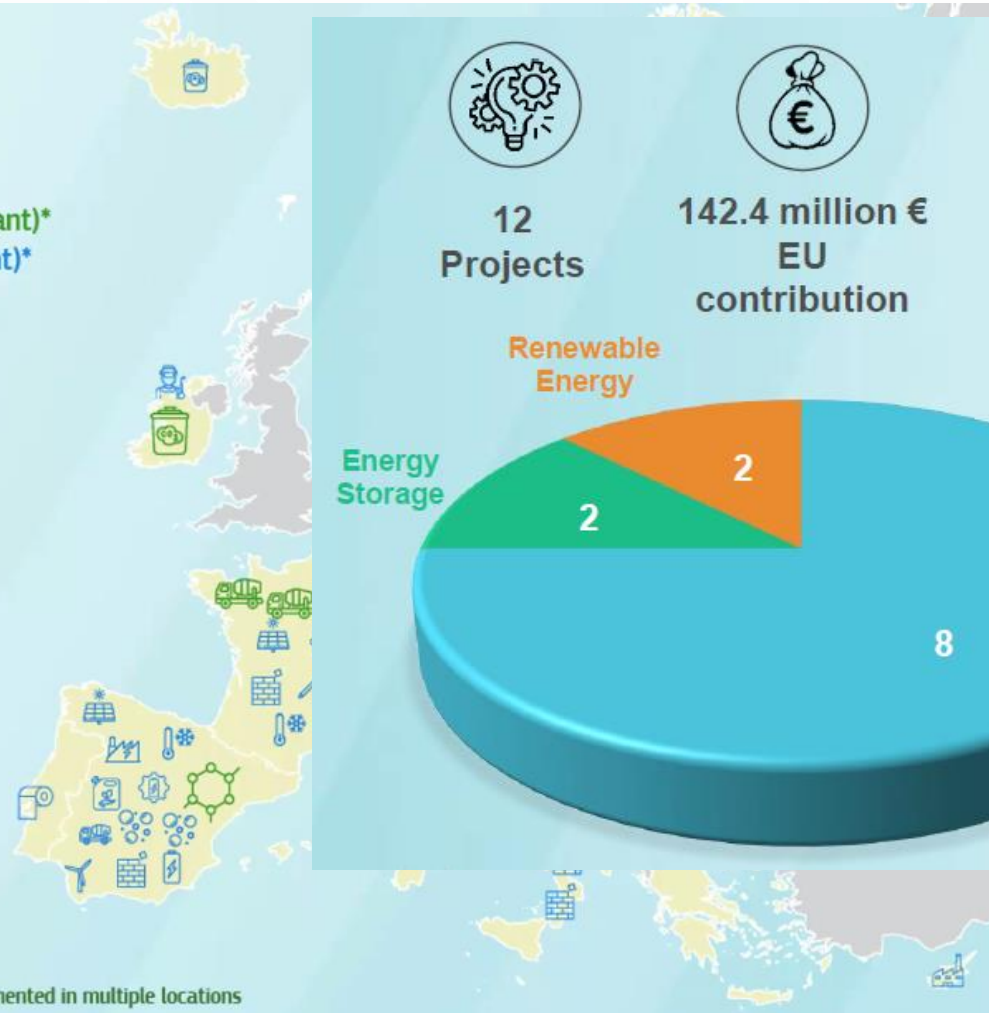


## Innovation Fund project portfolio

**Green:** Large-scale projects (23 awarded or pre-selected for grant)\*

**Blue:** Small-scale projects (47 awarded or pre-selected for grant)\*

- |  |   |
|--|---|
| Biofuels and biorefineries                       | Other energy storage                    |
| Chemicals  | Geothermal energy                       |
| CO <sub>2</sub> transport and storage            | Pulp and paper                          |
| Hydrogen   | Refineries                              |
| Intra-day electricity storage                    | Renewable heating/cooling               |
| Iron and steel                                   | Solar energy                            |
| Non-ferrous metals                               | Wind energy                             |
| Glass, ceramics and construction material        | Cement and lime                         |
| Manufacturing of components for renewable energy | Use of renewable energy outside Annex 1 |
| Manufacturing of components for energy storage   | Other energy intensive industries       |



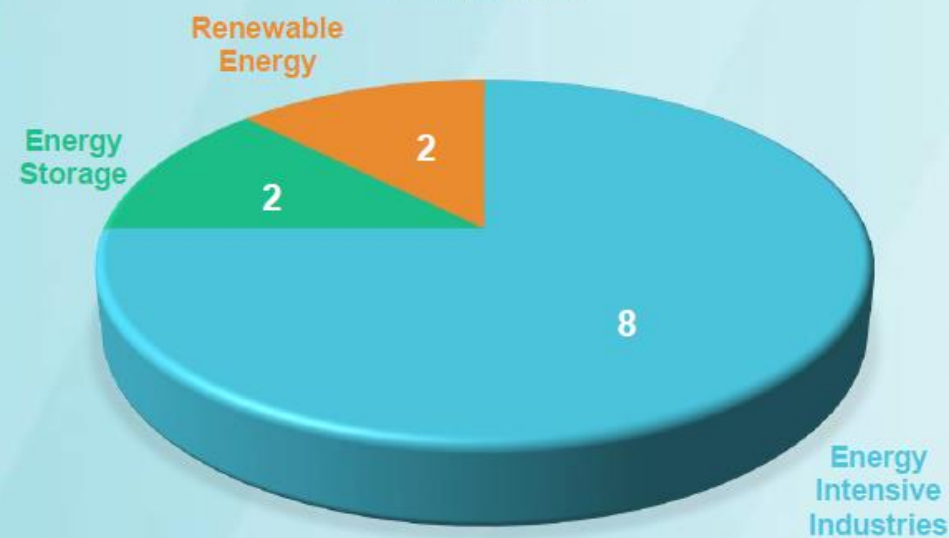
12  
Projects



142.4 million €  
EU  
contribution



4.2 Mt CO<sub>2</sub> eq  
first 10 years



\*The number of symbols is higher than the number of projects, as some projects are implemented in multiple locations



# Participación española en convocatorias anteriores



GOBIERNO DE ESPAÑA

MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA

Pendiente actualización de la ficha con resultados de SSC2.

European Commission | English | Search

European Climate Infrastructure and Environment Executive Agency

Home | About us | Programmes | Funding opportunities | Our Projects | News & Events | Publications

European Commission > CINEA > Programmes > Innovation Fund > Innovation Fund projects per country

### Innovation Fund projects per country

Overview of the Innovation Fund awarded projects per eligible country where the projects are implemented.

Austria Overview of supported projects	Belgium Overview of supported projects	Bulgaria Overview of supported projects	Croatia Overview of supported projects
Finland Overview of supported projects	France Overview of supported projects	Germany Overview of supported projects	Iceland Overview of supported projects
Ireland Overview of supported projects	Italy Overview of supported projects	Netherlands Overview of supported projects	Norway Overview of supported projects
Poland Overview of supported projects	Portugal Overview of supported projects	Spain Overview of supported projects	Sweden Overview of supported projects

European Commission

### Innovation Fund Programme

#### Overview of awarded projects in Spain

Funded by the revenue of the EU Emissions Trading System, the Innovation Fund's goal is to help businesses investing in innovative low-carbon technologies with significant GHG emissions reduction potential. The Innovation Fund currently supports **8 projects** located in Spain, which will contribute to the decarbonisation of European industries with a total expected GHG emission reduction of **3.8 Mt CO<sub>2</sub> equivalent in the first 10 years of operation**. The total **Innovation Fund grant in Spain is of EUR 131.3 million**, out of the **total relevant costs of EUR 230.2 million**, as defined in Art 5 of the Delegated Regulation 2019/856 on the Innovation Fund<sup>1</sup>.

#### Projects per category

Number of projects and percentage of the total

Category	Percentage	Number of Projects
Energy Intensive Industries (EE)	75%	16
Renewable Energy (RES)	12%	1
Energy Storage (ES)	12%	1

#### Projects per sector

Number of Small and Large-Scale projects

Sector	Small Scale	Large Scale
Solar energy	1	0
Refineries	1	0
Other energy storage	1	0
Hydrogen	0	2
Glass, ceramics & construction material	1	0
Chemicals	1	0
Biofuels and bio-refineries	1	0

#### Projects per phase<sup>2</sup>

Number of projects

Phase	Number of Projects
Preparation	7
Operation	1

#### Top 5 technology pathways<sup>3</sup>

Number of projects

Technology Pathway	Number of Projects
Recycling/reuse: municipal solid waste	3
Energy intensive industries: New process/New product	2
Renewable energy: fuels	2
other	2
Recycling/reuse: biogenic waste and residues	1

# Participación española en convocatorias anteriores



GOBIERNO DE ESPAÑA

MINISTERIO PARA LA TRANSICIÓN ECOLÓGICA

## List of awarded Innovation Fund projects in Spain

Acronym	Title	Sector	Start date	Project phase	Beneficiaries	Innovation Fund grant (EUR million)	Expected GHG emission avoidance (t CO2eq)
<b>Large Scale</b>						<b>106.4</b>	<b>3,444,269</b>
ECOPLANTA	Reduction of CO2 emissions in methanol production from municipal non-recyclable waste	Chemicals	01/11/2021	Preparation	Ecoplant		
<b>Small Scale</b>							
AGGREGACO2	Fabrication of CO2 negative AGGREGates based on disruptive accelerated carbonation processes fuelled by carbon capture in refineries	Glass, ceramics & construction material	01/04/2021	Preparation	PETRONOR   REPSOL PETROBRAS   OCO		
CO2-FrAMed	CO2-Free Agriculture for the Mediterranean region	Solar energy	01/01/2022	Preparation	QPV   AGR   ISF FENACORE   ADC Cingral   R		
GREENMOTRIL	Development and operation of a GREEN energy community in the port of MOTRIL	Other energy storage	01/01/2022	Preparation	APM   SIEMENS   CUERVA		
HYVALUE	Novel upcycling production process based on an innovative circular business model for urban waste stream valorisation for	Hydrogen	01/11/2021	Preparation	ECOLOGY   TUBOX SA   NOV		

### Project overview

Acronym	Title	Abstract
AGGREGACO2	Fabrication of CO2 negative AGGREGates based on disruptive accelerated carbonation processes fuelled by carbon capture in refineries	AGGREGACO2 project targets the aggregates industry for a revolution through the successful commercial deployment of a sustainable aggregate as a solid alternative of conventional aggregates not fully environment-friendly. The AGGREGACO2 proposes a FOAK innovation through the introduction of CO2 captured of refinery processes in an Accelerated Carbonation Technology (ACT), that revalorise Air Pollution Control residues (APCr), which are hazardous residue nowadays stored after treatment, for the fabrication of carbon negative aggregates. The AGGREGACO2 project will demonstrate the industrial feasibility and cost-effectiveness of the first carbon negative aggregate that can compete face-to-face in the market while reduce drastically the GHG emissions emitted by refineries, the carbon footprint of the fuels and APCr in landfills.  PETRONOR and OCO together with the Repsol Group, will become the first companies in the world in introducing industrial ACT processes perfectly connected with refinery plants, paving the way towards the transformation of the traditional oil & gas plants in places where fabricate derivative sustainable products with high added-value. This joint research produced attractive and promising results at high TRL-levels that make the AGGREGACO2 industrial concept profitable at mass fabrication level. A perfect symbiosis scenario is achievable because the ACT process can be 100% fuelled using the CO2 captured in a refinery as resource. Therefore, the main objective of the project is to design, implement and validate the first commercial production plant of carbon negative aggregates (in EU) with a capacity of 56,000 Tn/years, with adequate stability (>7,000 h) and capable to revalorise 22,000 Tn APCr/year and use 2,200 Tn CO2 captured. This project will avoid 2,836.44 TnCO2eq/year (i.e. 28,364 TnCO2eq considering 10 years of project operation) and, besides that, REPSOL will produce around 400 Tn/year of low carbon hydrogen.
CO2-FrAMed	CO2-Free Agriculture for the Mediterranean region	The CO2-FrAMed project will build approximately 12 stand-alone large-power photovoltaic irrigation systems (PVI) that do not require back-up batteries and significantly reduce risks related to the integrity of the water distribution infrastructure. This solution is a suitable alternative to conventional electric and diesel-based pumping systems. It brings environmental benefits in terms of CO2 emission reduction and economic benefits in terms of lower costs for farmers. Overall, the project will reduce reference emissions by 100% and farmers will benefit from zero-carbon irrigation at a competitive price.  Innovation in the technology and in the way to finance it The project's innovative elements are threefold: a new technology, an advanced monitoring system and an innovative financing model. (1) The PVI technology was developed within Horizon 2020 to solve the intermittency problem of photovoltaic power sources. Intermittency can cause overvoltage and water hammers, which can seriously damage the irrigation infrastructure and dramatically reduce its lifetime. The PVI technology allows for the integration of the hydraulic components, the PV generators, and the frequency converters and it guarantees that the pressure remains always within optimal operational values. Such a solution avoids the need to use expensive backup batteries. (2) The advanced monitoring and automated analysis of key system parameters is a breakthrough in the farming sector, also enabling fault detection, diagnosis and reporting for high performance of the large-power PVI systems. (3) The innovative business model proposed for the project builds on the work of the H2020 ResFarm project, which developed a framework to ease the access of on-farm renewable energy sources to capital market funding. The business model of CO2-FrAMed is based on the commercialization of PV electricity through a pool of power purchase agreements (PPAs) totaling 7.35 MW capacity. The model also enables the reduction of financing costs of the PVI projects, by showing that they qualify as collateral for high-quality financial instruments (green bonds).  Multiple technical, environmental and economic benefits for the farmers The project will deploy zero-carbon irrigation systems, avoiding 17 700 tCO2e during the first 10 years of operation, which corresponds to 100% of the reference emission, while also tackling many of the technical, economic, and administrative challenges faced by farmers. The project aims to demonstrate that PVIs are well suited for medium-large irrigation applications. They can replace conventional electric (grid connected or using batteries as back-up) and diesel-based pumping systems and can work as stand-alone installations without the need for batteries or a connection to the grid. Introduction of advanced monitoring and analysis features will ensure optimal performance, minimise operational expenses, and reduce the cost of the electricity paid by the farmers. The project will also have a positive impact on circular economy by reducing the consumption of water in the farming sector by up to 30% without increasing GHG emissions. The pooled PPA approach significantly reduces financial and transaction costs for the PVI installations and prevents Operations & Maintenance costs and burdens from falling on farmers. In addition, the project will have a significant impact on agricultural activities in the region, contributing to a substantial increase in agricultural production.  High scale-up potential in the irrigation sector worldwide The potential for expanding the project on site and transferring the technology to other sites with similar conditions is very high. The availability of a cost-effective 100% renewable and independent energy solution for irrigation systems opens sizeable opportunities worldwide, particularly in locations lacking a reliable electric grid. The introduction of concepts and practices from the securitization industry into the ori
ECOPLANTA	Reduction of CO2 emissions in methanol	The ECOPLANTA project will revolutionise municipal solid waste (MSW) management by using non-recyclable materials rejected by sorting centers to produce circular chemicals and advanced biofuels. The project will deliver a first-of-a-kind commercial plant for the European market, using waste that would otherwise end up in landfill. Located in a petrochemical

## Featured Projects



The SKFOAAS story: a new circular technology on oil regeneration for European industry and climate



The TANGO story: Toward largest solar factory in



# MUCHAS GRACIAS

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# Proyecto Ecoplanta

Jornada Fondo Innovación UE - 15 febrero 2023, MITECO (Madrid)



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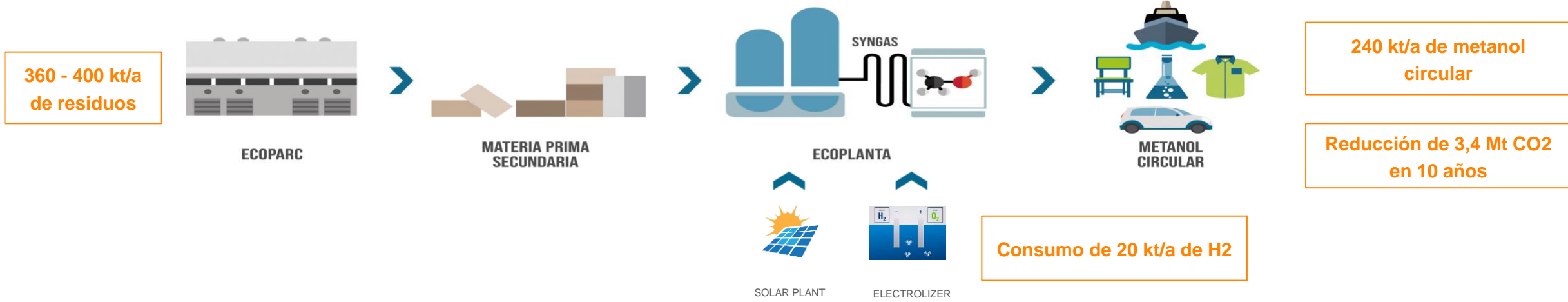
# Proyecto Ecoplanta



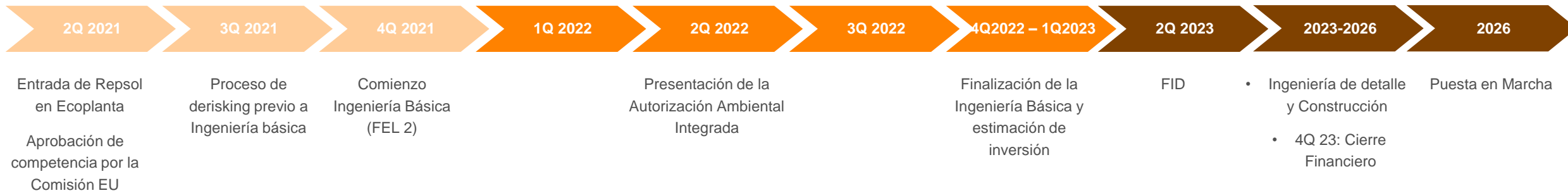
## Proceso



Tarragona, España



## Calendario



## Calendario IF



- ➔ La modificación del sistema de la convocatoria, de dos fases a una, ha supuesto una simplificación del proceso que valoramos positivamente.
- ➔ Otro aspecto favorable en la documentación de este año es la unificación en un único fichero del modelo financiero y el cálculo de costes relevantes/subvención.
- ➔ La comunicación entre los solicitantes y la Comisión/MITECO debe fomentarse de forma que se incremente el conocimiento sobre los proyectos y el feedback sobre los mismos y sobre la estrategia.
- ➔ El buzón de consultas de los Innovation Funds atiende adecuadamente las consultas realizadas aunque se podría disponer de una ayuda más personalizada y ágil en el caso de que sea necesario.
- ➔ Los cambios de metodología han incrementado significativamente la rentabilidad mínima de los proyectos lo cual es difícil de alcanzar en proyectos con alto grado de innovación. En este sentido, el criterio WACC como referencia de rentabilidad tal y como lo veníamos entendiendo hasta ahora, aparentemente deja de tener esa función.
- ➔ Es un reto combinar proyectos de alta innovación y suficiente madurez tecnológica y financiera.
- ➔ El proceso se ha vuelto más sencillo al eliminar las auditorías tanto financiera como de emisiones.
- ➔ Puede haber cambios en el alcance del proyecto tras el Grant Agreement que hay que gestionar junto a la Comisión.
- ➔ Importancia de los Fondos de Innovación para la Transformación.

A large, vertical stainless steel tank is shown on the left side of the image. It features a blue and black label with the SKF logo and the text 'RecondOil' in white.A large, vertical stainless steel tank is shown in the center of the image. It features a blue and black label with the SKF logo and the text 'RecondOil' in white.A large, vertical stainless steel tank is shown on the right side of the image. It features a blue and black label with the SKF logo and the text 'RecondOil' in white.

## Proyecto SKFOAAS

Cambiando el uso del aceite en la industria

Jornada informativa del Fondo de Innovación  
- Ministerio para la Transición Ecológica y el Reto Demográfico

SKF Española, S.A. – 15 Feb 2023



Financiado por  
la Unión Europea



A world of reliable rotation

The undisputed leader  
in the bearing business



42,602

EMPLOYEES

40

CUSTOMER  
INDUSTRIES

87

MANUFACTURING  
UNITS

130

COUNTRIES

15

TECHNOLOGY  
CENTERS

>17,000

DISTRIBUTORS



## Alcanzando el cero neto

Nuestra ambición frente al cambio climático es que todas las instalaciones de producción de SKF en todo el mundo tengan emisiones cero neto de gases de efecto invernadero en 2030.

En 2050, toda la cadena de suministro, desde los materiales hasta el producto entregado, también será cero neto.



## SKF Care

- Business
- Environmental
- Employees
- Community



# We are not alone

## Ratings from external organisations



Signifies leadership and application of best practice



Platinum rating two years in a row



Our **net zero targets** are in the process of alignment and acceptance

## Sharing knowledge with others





## No tan bueno como nuevo. Mejor.

Un rodamiento remanufacturado brinda beneficios tales como plazos de entrega reducidos, operaciones eficientes, a costes más bajos.

También reduce la huella de carbono hasta en un 90% en comparación con un rodamiento nuevo, sin comprometer la calidad.



ZERO

OIL CHANGES

## SKF RecondOil

SKF RecondOil ofrece un uso completamente circular del aceite, lo que reduce costes y el impacto ambiental.

El aceite industrial ya no debe verse como un consumible costoso y dañino para el medio ambiente, sino como un activo circular sostenible.

Tecnología RecondOil® de Doble Separación:

Consiste en la regeneración continua de aceite industrial eliminando todas sus partículas contaminantes, incluyendo las más pequeñas\*, adquiriendo una condición de ultra-limpieza para su reutilización en repetidas veces.

\* Eliminación de nano-partículas  
1 nanómetro = 0,001 micra





# SKF RecondOil – a true circular use of oil



Mejora de la sostenibilidad



Reducción de costes



Mejora del rendimiento

## Nuevo tratamiento de limpieza de aceite



Nueva tecnología patentada que separa la contaminación del aceite combinando un proceso químico-mecánico.



# Compatible con múltiples tipos de aceite



\* Según ISO 4406.

Existen algunos tipos de aceite incompatibles con la tecnología DST

# Impacto medioambiental



3 toneladas de CO2 ahorradas por cada tonelada de aceite reutilizado - ¡cada vez!



9 años en producción



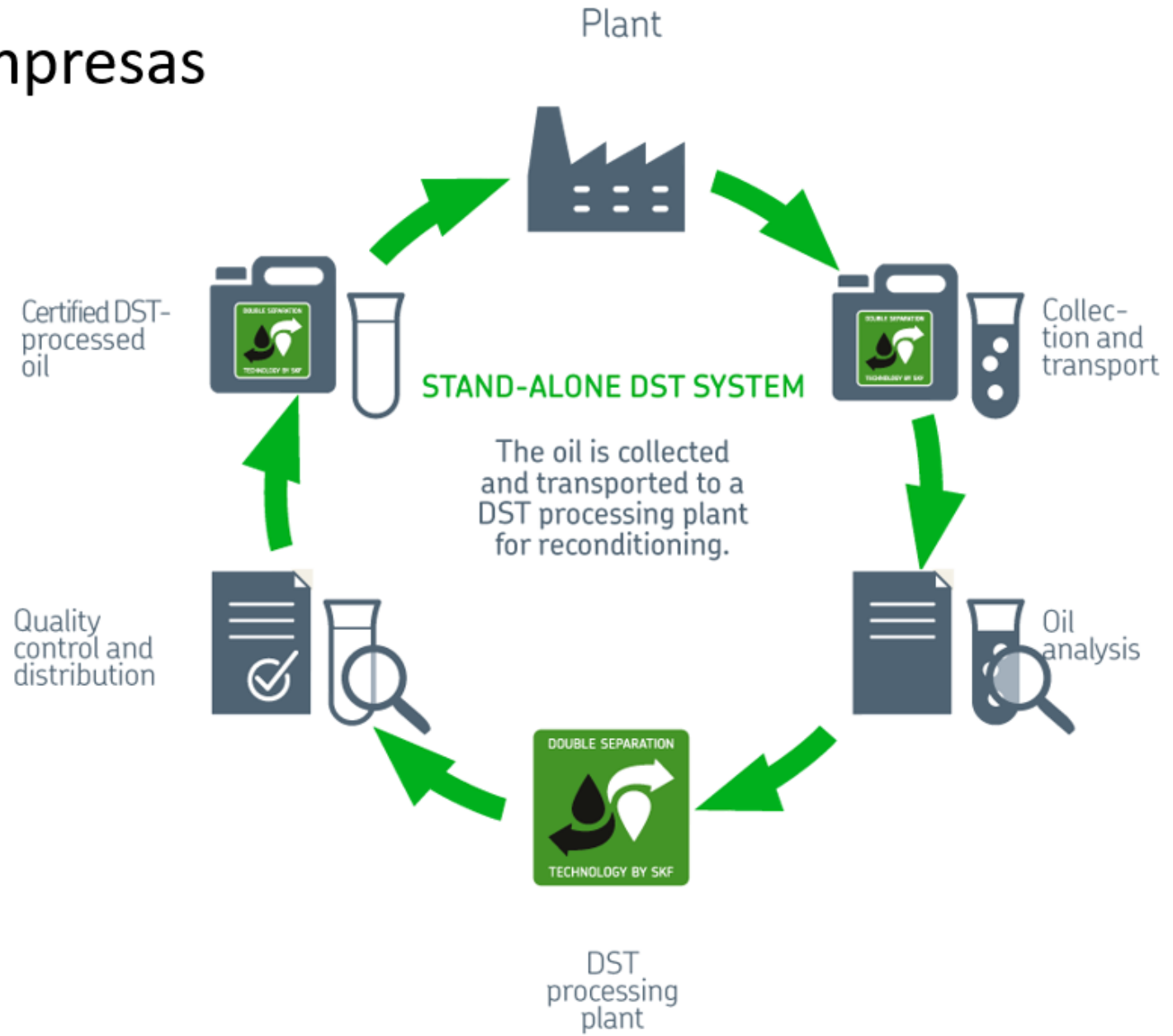
= 30 oil changes

9 años en producción con SKF RecondOil



= No oil changes

# Uso circular del aceite para empresas



Aceite como servicio

Reacondicionamos el aceite usado y lo devolvemos ultra limpio



# PROYECTO SKFOAAS





Unidad de tratamiento de aceite RecondOil® en Fábrica SKF Tudela

# Proyecto SKFOAAS

- Unidad de tratamiento y purificación de aceite industrial usado con tecnología patentada de **doble separación (DST®)**, con el que se obtiene un **grado de limpieza increíblemente alto (más del 99%)**.
- **Reutilización del mismo aceite** varias veces en la misma máquina, reduciendo el consumo de aceite nuevo.
- Oferta al mercado industrial de **aceite como servicio (OaaS)**
- Desde **1.000 a 6.000 m<sup>3</sup>/año** de capacidad de tratamiento\*.
- **Objetivo:** Limpiar hasta 20 millones de litros de aceite usado, evitando la emisión de **15.300 tCO<sub>2</sub>-e** (10 años de operación).
- Inversión CaPex: **2,7 M€**.
- Subvencionado a través del programa **EU Grant - Innovation Fund**



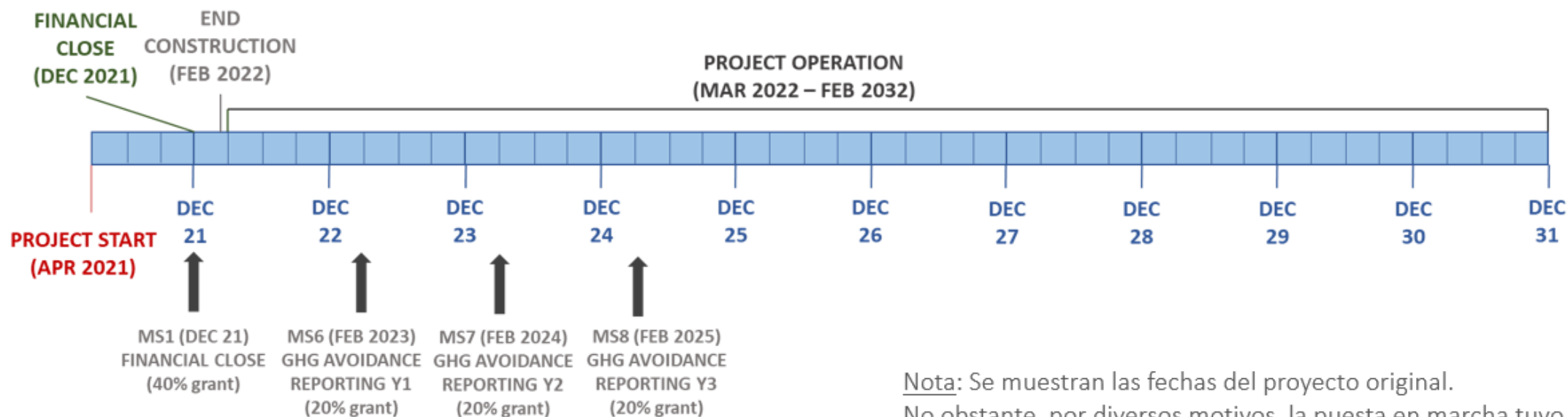
Financiado por  
la Unión Europea

\*Dependiendo de la viscosidad de los aceites tratados



# Financiación del proyecto

- Capital propio (2,7 M€, importe íntegro) de SKF Española, 0% deuda.
- Subvencionado (60%, 1,62 M€) a través del programa EU Innovation Fund, (small scale, lump sum).



Nota: Se muestran las fechas del proyecto original. No obstante, por diversos motivos, la puesta en marcha tuvo que retrasarse por lo que todas las fechas están retrasadas 6 meses.

**El proyecto inició operaciones en Julio de 2022.**

# Innovation Fund

First call for small-scale projects



**EU GRANT  
INNOVATION FUND  
- SKFOAAS -**



Financiado por  
la Unión Europea

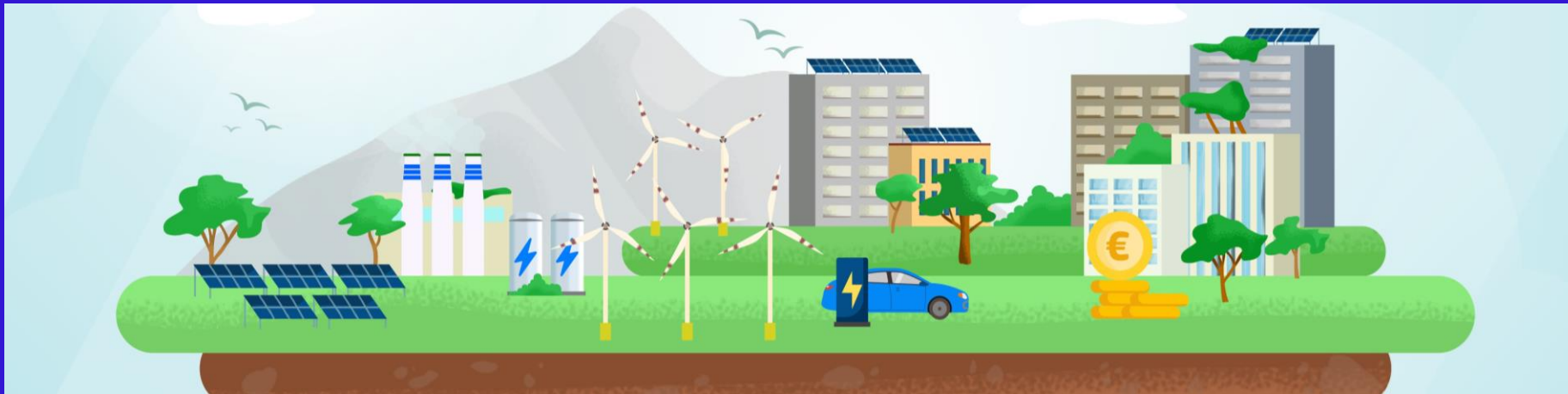
# WE ∞ OIL

Join the circular movement

RecondOil®

**SKF®**

# Jornada informativa sobre el Fondo de Innovación: Tercera convocatoria de proyectos de gran escala



*Madrid, 15 de febrero de 2023*