



RE4iINDUSTRY

Renewable energies for industries

100% Renewable

Energies for

Industries

www.re4industry.eu

**At a
glance**

**RE4Industry: 100% Renewable Energies for Energy
Intensive Industries**

**Project Coordinator:
FUNDACION CIRCE - CENTRO DE INVESTIGACION DE
RECURSOS Y CONSUMOS ENERGETICOS**

11 partners from 6 countries (AT, BE, DE, ES, GR, NL)

Total EU contribution: € 2 999 500 (total cost)

Starting date: 1st September 2020 - Duration: 36 months

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Context

The EU has started a progressive decarbonisation with the **aim to become carbon neutral by 2050**. Energy Intensive Industries (EII) are expected to play an important role in this transition as they represent 24% of the final energy consumption, but **a clear long-term vision and strategy is required** in order to remain competitive while contributing to the decarbonization targets of the EU.

RE4Industry has been conceived under this framework with a twofold aim:

- to support EII in the **identification and integration of renewable energy (RE) solutions** together with the definition of **Action Plans for decarbonisation**
- to transform the EU industrial landscape into **a large market niche for the uptake of RE** while defining the appropriate framework conditions for **short- and long-term scenarios**.



Goals

1

To set a multi-actor collaborative network, involved and actively compromised to gather and identify the needs of the sector, in order to make possible this transition

2

To show the RE technologies with more potential to be utilised by Ells or integrated in their industrial processes, and mark the path in the short (2030) and long term (2050)

3

To identify, visualise and share success stories of Ells already adopting RE with the innovations

4

To promote the early transition of Ells by means of a direct accompaniment within companies

5

To achieve a common understanding and vision of the role that Ells have to play towards 2050 a RE consumers and potential RE promoters

6

To promote a more favourable policy and market framework to allow the competitiveness of RE based Ells goods

7

To ensure a growing interest and alignment of European society by means of a strong and coordinated communication campaign coherent with Ell sector messages

8

To empower the sector and key organizations through knowledge transfer, strategic positioning and cross-border actions

SHORT-TERM VISION

2030

LONG-TERM VISION

TECHNOLOGY OPTIONS

- Conventional RE heating / power
- New RE (solar thermal, bio syngas)
- H2 (electrolysis / syngas)
- E-fuels (synthesis fuels from RE based hydrogenation of CO2 captured)

ACHIEVABLE RATES

- CO2 balance ≤ 0
- RE use = 100%

CURRENT SECTOR NEEDS

- Scope to understand the future options on RE
- Implications for retrofitting to produce and adopt e-fuels
- Energy balances and key indicators of adopting each RE alternative (for an early decision making in short-medium term)
- Expected costs for RE use

2050

TECHNOLOGY OPTIONS

- Conventional RE heating
- Biomass
 - Bioenergy carriers
 - Solar (high temperature)
 - Geotherm

ACHIEVABLE RATES

- CO2 balance > 0 (reduced according to RE use)
- RE use $< 50\%$

CURRENT SECTOR NEEDS

- Existing options for retrofit
- Cases already implemented
- Lessons learned
- Insight in cost / economics
- Opportunities (e.g. for financing, long term RE contracting)
- Positive social perception
- Influence for a better framework

Vision

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RE4Industry actions



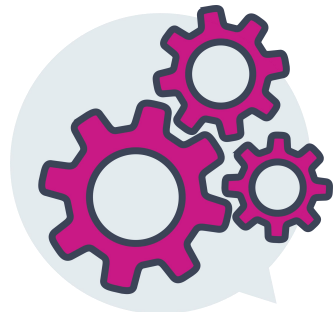
A strong engagement strategy following a multiactor approach



A dialogue with and within EIs and EI organizations



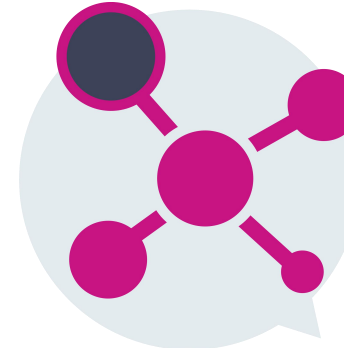
A thoughtful review of RE technologies and options for a 100% RE production by 2050



Insights into industry retrofitting and promotion of RE integration



Recommendations for the uptake of RE by EIs and advocacy



Multiplication and replication



A solid dissemination and communication strategy

Collaborative Network

RE4Industry Clusters



As part of the RE4Industry cluster for **Spain, Greece, the Netherlands or Germany**, experts will be part of a **national multi-thematic technical group**, unique in its kind.

The deep and extensive knowledge and background on their technical side will contribute to the **definition of a 100% renewable vision for European energy intensive industries.**

Contribution

RE4Industry Clusters



- Top notch **consultation** for the project, providing invaluable **technical feedback** about processes, experiences with technologies and new developments.
- **Provide input** for specific technical activities of the RE4Industry workplan.
- Meet periodically (~biannually) connected to other project activities.

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RE4Industry Clusters

The benefits of the clusters

- Full and very first insights to all **project outcomes**, based on the work **performed** in some of the **major European energy intensive industries**;
- Opportunities for **knowledge exchange and networking with high-level national and international actors**;
- **Open door for participation in future EU-funded projects**;
- **Full visibility at EU level**, on our project website and all public communication materials and channels;
- Updates on **tailored events, seminars or other actions** based on your interests;
- **Insights in opportunities and barriers** for decarbonisation of **energy intensive industries**.

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Specific Project Results of Interest:

TG Energy Intensive Industries

- Report on **Barriers, Drivers and Opportunities** for RE market (3/2023);
- Report on **Success cases** of integration of **RE in EIs** (2/2022);
- **Case study** highlights in **RE adoption** by 3 EIs in **Steel, Aluminum and Chemical** sectors (2/2023);
- EIs **Sector status in EU** report (2/2022);
- **Mapping tool** of the EIs per sector in Europe (8/2021);
- **Handbook** for transition towards **100% RE-based production** of EIs (8/2023);
- **Feasible technologies and requirements** for RE integration (2/2023);
- RE4Industry **Brochure** (4/2023);
- **Common vision** for decarbonization of EIs in **Europe** and **policy recommendations** (2/2023).

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RE4Industry Clusters

Specific Project Results of Interest:

**TG technology
providers, ESCOs,
engineering firms**

- Report on **Success cases** of integration of **RE in EIs** (2/2022);
- **Case study** highlights in **RE adoption** by 3 EIs in **Steel, Aluminum** and **Chemical** sectors (2/2023);
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- **Common vision** for decarbonization of EIs in **Europe** and **policy recommendations** (2/2023).

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Specific Project Results of Interest:

**TG academia,
researchers and
R&D departments**

- Report on **Barriers, Drivers and Opportunities** for RE market (3/2023);
- Report on **Success cases** of integration of **RE in EIs** (2/2022);
- EIs **Sector status in EU** report (2/2022);
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Specific Project Results of Interest:

**TG relevant value
chain actors and
associations**

- RE4Industry **Brochure** (4/2023);
- **Common vision** for decarbonization of ELLs in **Europe** (2/2023);
- **Policy recommendations** (2/2023).

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Specific Project Results of Interest:

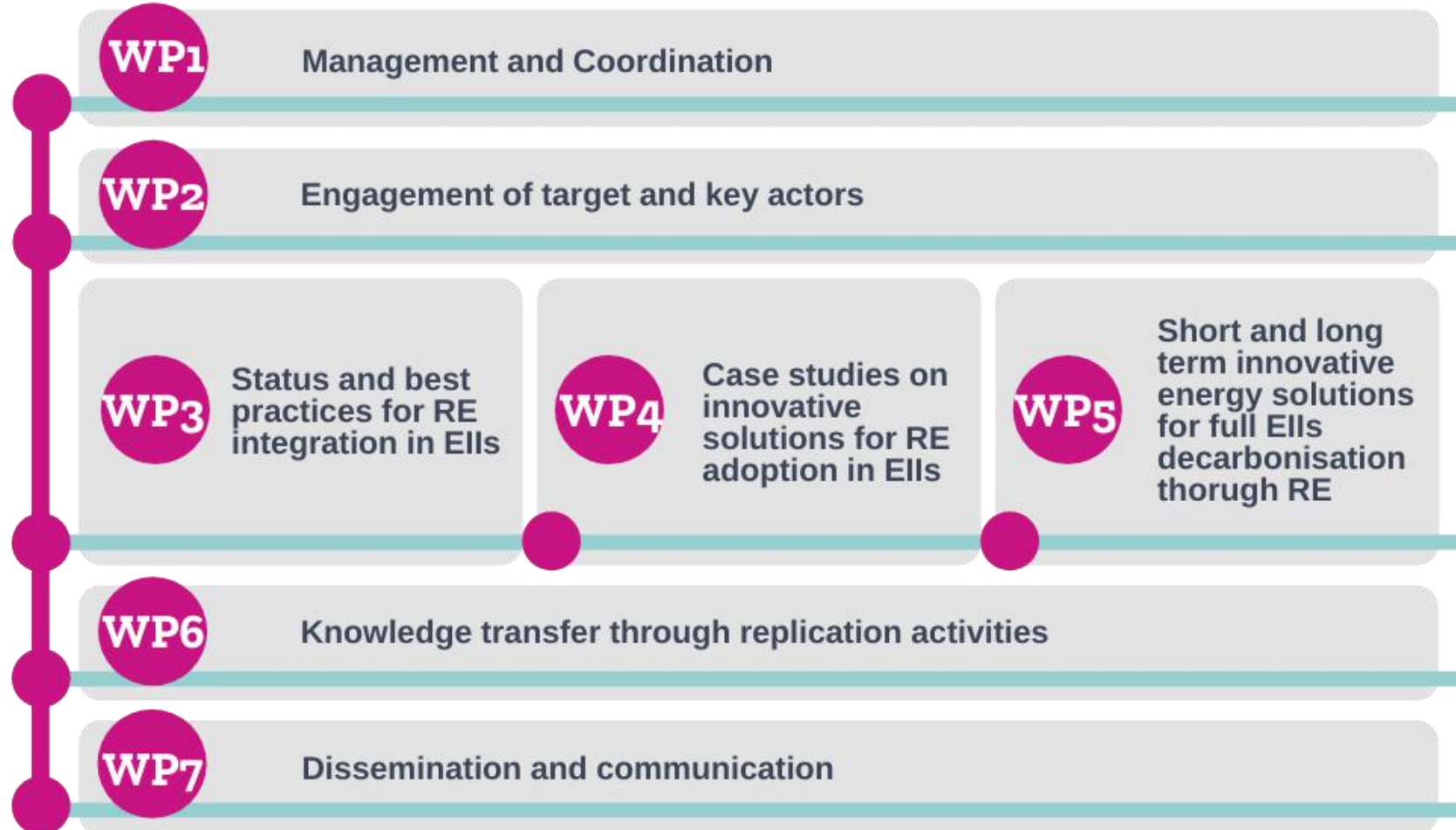
TG policy actors

- **RE4Industry Brochure** (4/2023);
- **Common vision** for decarbonization of ELLs in **Europe** (2/2023);
- **Policy recommendations** (2/2023).

Collaborative Network***RE4Industry Clusters*****Specific Project
Results of
Interest:****TG society**

- **Common vision** for decarbonization of ELLs in Europe (2/2023);
- **Policy recommendations** (2/2023).

Project workflow



Consortium

TECHNOLOGICAL AND SOCIAL EXPERTS



RENEWABLE ENERGY-ORIENTED ASSOCIATIONS



ENERGY INTENSIVE INDUSTRIES



Thank you!

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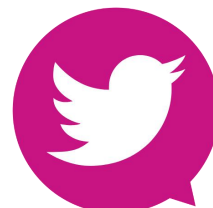
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