

GREEN TRANSITION INVESTMENTS EXPECTED IN SPAIN:

“The Recovery, Transformation and Resilience Plan in the fields of energy and water.”

1. The European Green Deal Investment Plan

The **European Green Deal Investment Plan** (EGDIP) is referred to as Sustainable Europe Investment Plan (SEIP) and it is the investment pillar of the Green Deal. To achieve the goals set by the European Green Deal, **the Plan will mobilise at least €1 trillion in sustainable investments over the next decade.**

The European Green Deal Investment Plan has three main objectives:

- First, it will increase funding for the transition up to 1 trillion euros, **through the EU budget and associated instruments, in particular InvestEU;**
- Second, it **will create an enabling framework for private investors** and the public sector to facilitate sustainable investments;
- Third, it will **provide support to public administrations** and project promoters in **identifying, structuring and executing sustainable projects.**

The jump in private and government spending would **create millions of jobs in clean energy, including energy efficiency, as well as in the engineering, manufacturing and construction industries.**

In Spain, the Recovery, Transformation and Resilience Plan envisages the mobilisation of more than 140 billion euros in public investment until 2026.

The initial phase entailing the mobilisation of nearly 70 billion euros in transfers from the European Recovery and Resilience Facility. The plan earmarks 40% of investment for promotion the green transition, so, in the coming years, 28 billion euros will be invested in water and energy.

The Plan for Fair and Inclusive Green Transition includes the following components:

- **Renewable energies implementation and integration.**
- **Electrical infrastructures, promotion of smart networks and deployment of flexibility and storage.**
- **Renewable hydrogen roadmap and sectoral integration**
- **Fair transition strategy.**

The Spanish Ministry for Ecological Transition and the Demographic Challenge foresees **an approximate public investment of 7,000 million euros in Water over the next six years.**

Despite the economic crisis caused by Covid19, **investments in clean technologies have rocketed in Spain, reaching a total amount of 501.3 billion US\$ in 2020, which represents 9% more than in 2019,** according to the BloombergNEF report.

These investments have been allocated to mature technologies such as solar PV or wind power, heat pumps and electric vehicles, and, also to emerging technologies that are growing strongly, such as: green hydrogen and carbon capture systems.

The renewable sector is growing without subsidies and self-consumption in domestic households is on the rise: the number of solar PV panels has doubled in 2020 versus 2019 and according to *Red Eléctrica Española* (Spanish Electric Network): in 2020 renewable energies produced 44% of the total energy consumed in Spain. From Solar, Wind and Water Power. This represents an increase of 12.8% versus 2019.

2. Collaboration between European Union states to support the green transition

Spain is working with Portugal to become an Energy Hub for Europe, fostering investments in mature renewable technologies, such as solar and wind power. Spanish companies are exporting these technologies all over the world. These technologies are competitive, low-price and future-proof, and they can create millions of jobs and promote the competitiveness of European industries.

Additionally, the potential of new technologies such as green hydrogen in the energy matrix can be exponential in the Iberian Peninsula. Spanish energy companies are opting for green hydrogen. The Hydrogen roadmap in Spain foresees to reach an electric system 100% renewable by 2050.

3. New technologies in the Green Economy

Spanish companies are leaders in new green technologies, such as: off-shore wind power platforms; marine energy plants obtaining energy from the sea waves; solar PV plants and Solar Thermal plants, as well as water recycling plants (they also export these technologies all over the world, i.e.: to USA, South America and Asia- Australia and Philippines).

Regarding new emerging water technologies launched by Spanish Start-ups, I would like to mention some examples:

1. The use of **Artificial Intelligence** and big data processing **that allows determining the leakage of water in the network; to anticipate plant water stress, or to early warning of water quality events in river, among others.**
2. Innovative systems to obtain water from the air.
3. **Systems that can purify and reuse water from membrane filtration** (MBR-Membrane Bioreactors), through a biological additive and osmosis systems.
4. **Smart irrigation systems by wireless solar nodes and remote actuators** that can be easily controlled from the **smartphone**,
5. The use of a cultivation technology that applies **microalgae to recover** and conserve the planet's natural resources and biodiversity.

Finally, a Spanish start-up has created a refreshing recovery drink that included **20% of alkaline seawater from the Atlantic Ocean.**

4. Investments in clean energy in Spain

- The total estimated investment of Spanish Companies in Renewables Energies would be around 50 billion euros by 2025
- Acciona sets an alliance with Plug Power to invest 2 billion euros in green hydrogen
- Iberdrola will create specific green hydrogen corridors for the heavy transport
- Iberdrola will invest 2,5 billion euros in green hydrogen by 2023
- Repsol and Sener wil open the first factory for electrolyzers in 2022
- BBVA joints an European Alliance to invest 430 billion euros in green hydrogen in the coming years

Examples of investment by sector with Green Hydrogen

- CEMEX will open a factory to produce **cement** with low emissions using green hydrogen.
 - Iberdrola and Porcelanosa joint investment to use green hydrogen in the **ceramic industry.**
 - Iberdrola, BP and Enagas will invest more than 90 million **in Castellon** to produce green hydrogen.
- Mobility Sector**
- Hiperbaric develops the first Spanish **green hydrogen compressor** with high pressure
 - Puerto Valencia: H2Ports is a project to use **hydrogen-powered vehicles** by 2023.