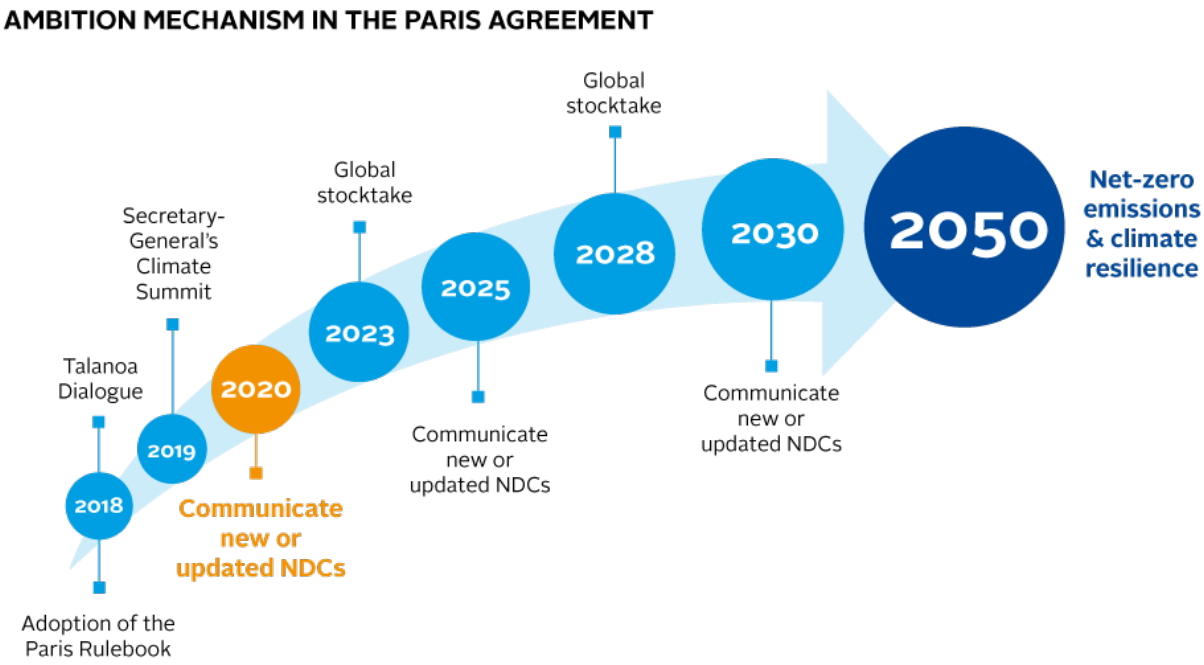
Renewable Energy: How Spain is Making a Brighter Future

Average temperatures have increased by 1.2C since the 19th century, with CO_2 levels having increased by 50%. As a result, it is clear that our climate is in crisis. Renewable energy promises to fix this. It offers a way to reduce net global carbon emissions to reach zero by 2050. To this end, Spain has advanced on this through policy.

However, Spain did not begin to regulate renewable energies until the 1980s, when a law promoting hydroelectric power was introduced (Law 82/1980 on energy conservation). This aimed to deal with an oil crisis which existed at the time and improve energy efficiency, thus reducing dependence on foreign countries.

Currently, most existing renewable energy regulations have aimed to develop and promote renewables. However, a new bill passed by the Spanish government would ban all new fossil fuel projects and prevent existing projects from extending beyond 2042. This is combined with a €1.7 billion plan to invest in impact-reduction projects.

This bill ensures Spain aligns with the 2015 Paris Agreement, where countries work together to keep average temperatures rising over 1.5 degrees over pre-industrial levels, and stop the worst effects of climate change. With this in mind, Spain has set a national target to reduce greenhouse gas emissions by 20% by 2030, compared to 1990 levels.



The Paris Agreement at a glance. Source: Principles for Responsible Investment

The Climate Change and Energy Transition Law (PLCCTE) creates a pathway to reduce emissions. For instance, they plan to reduce emissions by 23% compared to 1990 levels. One of the ways they aim to achieve this is through adding more renewable energy to Spanish power grids. This is the first legislative project that aims for a carbon-neutral Spain. It seeks to achieve this by 2050 at the latest.

Spain's Renewable Energy Initiatives

To encourage the use of renewable energy, Spain aims to achieve the following:

- The removal of Spain's infamous 'sun tax' (introduced in 2015 to tax solar energy production and use) allowing more businesses and households to generate their own electricity with solar roof panels.
- Decarbonising Spain's electricity grid. This includes plans to install over 3,000 megawatts of wind and solar power capacity each year for the next ten years.
- More energy sector jobs through the manufacturing, installation, maintenance, and modelling of renewable energy sources.

It is a process that may result in 100% of Spain's electricity being renewable by 2050. Solar power could help meet this goal in the near future. One source suggests that it could potentially make up 13% of all electricity generation by

2030, from 2% today. These processes change the sector and traditional business models.

This is already profitable, increasingly cheaper and more efficient also reduces CO_2 emissions.

Renewable energy such as solar and wind power can be useful for reducing our climate impacts. Source: Climate Scorecard

In 2020, global greenhouse gas emissions fell by 5.8% compared to prior years. However, 2021 would see them rise back up again. Despite this, a new report by the International Renewable Energy Agency (IRENA) reveals that renewable energy is becoming cheaper than fossil fuels. The report also shows that over half of 2019's new renewable capacity had lower energy costs than new coal plants. They are also becoming cheaper than coal plants.

COP26: A Platform for Renewable Energy Action

As per the Paris Agreement, the EU needs to reduce coal use by 2030. To this end, countries such as Poland have rehabilitated many of their natural areas to

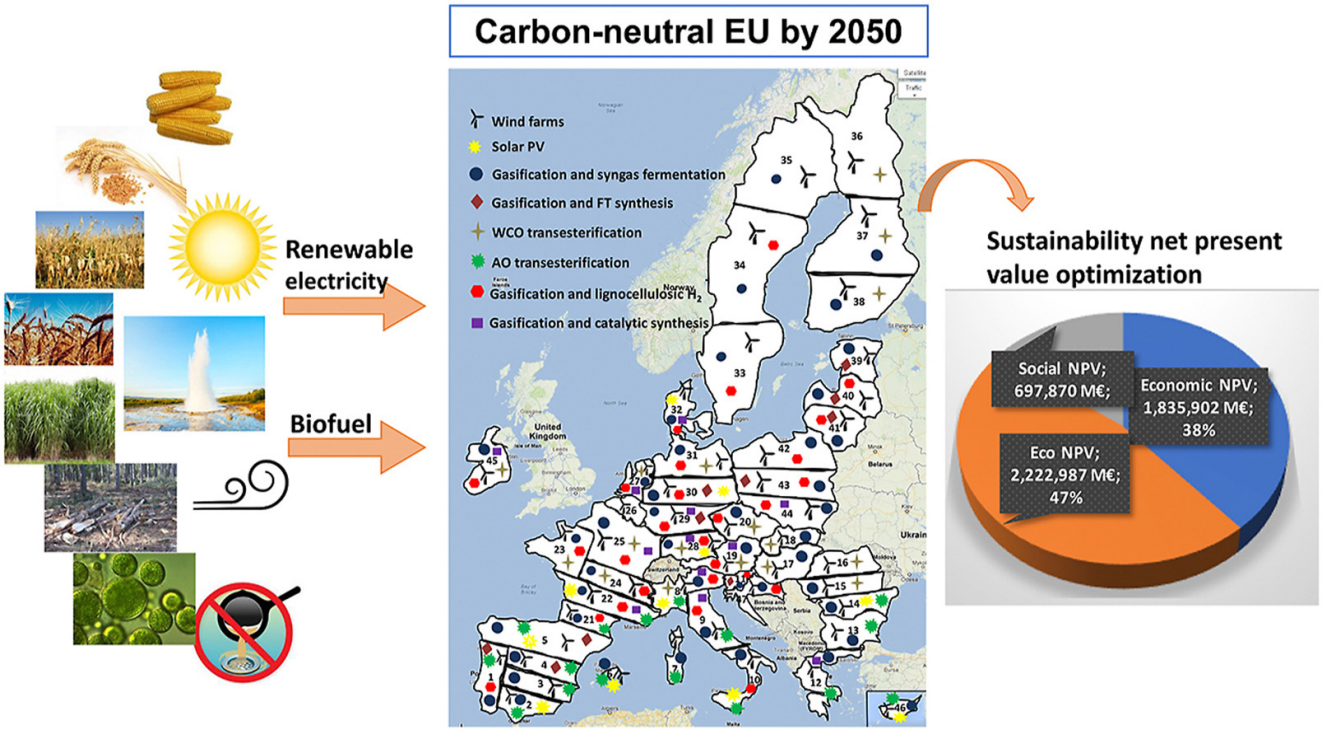
act as carbon farms to absorb CO_2 from the atmosphere. However, due to relying on coal to hold up their economy, they have difficulties in transitioning to renewable energy.

Given the challenges that nations have in working towards stopping climate change, COP (Conference of the Parties) was started in 1994 as a gathering of nations that have signed the United Nations Framework Convention on Climate Change (UNFCCC). COP26, held in Glasgow, UK is the most recent iteration of this. These annual meetings aim to allow governments across the world to meet to discuss and make agreements on reducing climate impacts.

If temperatures rise over 1.5C above pre-industrial levels, climate change will become worse. Fires, floods, and natural disasters will happen more often. Reducing emissions is one major step in reducing our impacts. clean, renewable energy is one way to achieve this.

At COP26, countries aim to keep temperatures below 1.5C, and reduce greenhouse gas emissions. Renewable clean energy is one of the biggest ways countries can achieve this. With this in mind, Spain seeks to have a 100% renewable power grid by 2050. Combined with legislation banning new fossil fuel projects, this can both clean the air and save money from not having to deal with pollution.

The Future of Renewables



A potential plan towards carbon neutrality. Image courtesy: Sanja Potrč et al., 2021

It is no secret that the ice caps are melting and that water levels in the Arctic and Antarctic are rising. Even if we meet all the 2030 goals made at COP26, temperatures will likely reach around 2.4C. Therefore, Spain's plan toward a net-zero future, is a huge step to a more thrivable Earth. We should all take these words to heart:

> *"Governments should not just say, but act to stop climate change".*
>
> *(Greta Thunberg, 2019)*

Renewable energy should be at the heart of global efforts to revive the economy even after the COVID-19 pandemic. With the right policies, lowering the costs of renewable energy can greatly contribute to a green recovery.

If we act now, we can give every one of us a better future. The THRIVE Platform uses scientific data to empower everyone from governments to individuals about how sustainable they are. Hence, we can understand what to do to make a more thrivable world. If you would like to plant the seeds of change, click this link to find out more about our THRIVE platform.

Meanwhile, for more information on environmental footprints, you can also visit our THRIVE Blog.