
How the SDGs Can Power Innovation



By L. Felipe Monteiro , INSEAD

Risk-averse industries like the energy sector should use the UN's Sustainable Development Goals as the inspiration for new challenges.

"Sustainability is the goal; innovation is the tool." – Francesco Starace

The energy sector is a risk-averse industry with good reason – if something goes wrong, it goes terribly wrong for many people (like [Deepwater Horizon](#) or [Fukushima](#)). Disruption at the power plant level is not as easy or exciting as it might be in other markets.

Over the past few years, however, the industry has had to confront a new paradigm as we have moved from fears of climate change to the reality of climate crisis. This threat to our climate requires bold action, which energy giant Enel addresses with a unique approach. In "a sector that cannot make mistakes", as Enel CEO Francesco Starace says, the company has "used sustainability as a stimulus to innovation".

From state-owned to record profits

Enel began as Italy's national electricity company in the 1960s. After privatisation in the 1990s, it became an international power company as it expanded into Spain, Latin America and North America in the early 2000s. One of the largest power utility companies in the world with €80 billion in revenues in 2019, Enel has also been moving away from fossil fuels for some time by further investing in renewables (e.g. hydro, solar, wind and geothermal).

The renewable power industry has blown up over the past decade. In 2004, global annual investment in renewables amounted to US\$47 billion. Just 13 years later, it reached **US\$280 billion**. In 2019, Enel (through Enel Green Power) was the world's biggest privately owned renewable energy operator.

Starace, the force behind Enel Green Power, was appointed CEO of Enel in 2014. His mandate was to create long-term sustainable value for all Enel's stakeholders. To do this, the company would adhere to the UN Sustainable Development Goals (SDGs) to guide investment decisions. Now, not only do these goals guide Enel's investments, they are also integral to a new financial instrument. In 2019, the company launched the world's first general-purpose SDG-linked bonds.

In a recent case study, **"Enel's Innovability: Global Open Innovation and Sustainability"**, co-authored with José Miguel García (INSEAD MBA '19)), we look at how Enel has managed to thrive via innovation and sustainability in uncertain times for the energy sector.

Innovability

Naturally, before investing in disruption, a complete change of mindset at Enel was necessary. "Fear of making mistakes is a really terrible environment for innovation," Starace commented. "It is toxic."

The vision of sustainable energy through disruption was there, but Enel needed someone to realise it with the company. Ernesto Ciorra, Enel's Chief Innovability Officer, created the Innovability department – a portmanteau of innovation and sustainability. Soon after, to help change the corporate mindset that didn't allow for mistakes, Ciorra launched the internal platform called "My Best Failure" to encourage Enel's employees to share their biggest failures and lessons learned from these hurdles.

Instead of relying on innovation only from within Enel's business units, Ciorra started looking outside to see how it could be integrated into the energy giant. This kind of open innovation required even more changes in the culture and structure of Enel. Previously, each distinct part of the company had its own R&D department and these teams were not quick to share information. Now, Innovability teams are an integrated part of each business line and report to Ciorra. A large digitalisation project followed in accordance with **SDG 9: Industry, innovation and infrastructure**.

The next jump was pulling innovation from the outside into the company with a crowdsourcing innovation platform. Using OpenInnovability, thousands of "solvers" were able to contribute solutions to challenges. Instead of thinking outside the box, the company has invited those from outside to consider problems in ways that haven't yet been considered. One example is saving resources on an essential ingredient in geothermal plant thanks to a novel solution from a biologist, an outsider who has a different approach to the problems that engineers face on a daily basis.

Innovation hubs

Pulling in that outside innovation was important, and doing so on a larger scale, with **global open innovation**, which incorporates the best ideas from around the world into a firm, has had a tremendous impact. In 2016, Enel opened its first innovation hub in Tel Aviv. Starace described the thinking behind the decision of opening a centre outside of traditional energy company locations: "This is a compact environment with highly concentrated amount of smart people. The reason for the entrepreneurial background is that it's rooted in the system with a **strong academic link**."

At a presentation at INSEAD for **SDG Week**, Enel's Head of **Innovation Hubs** Fabio Tentori (INSEAD MBA '10) said, "Each ecosystem is peculiar and brings a variety of opportunities and benefits to Enel." He is the leader of the ten innovation hubs worldwide with a large variety in their output. Challenges vary depending on the innovation hub's market, but the link among the hubs is the way that SDGs underpin new ideas. One priority for Enel is to ensure that the **innovation hubs** are close to the expertise each area is known for to bring together the right talent in the right location.

"In traditional accelerator locations like Boston or San Francisco, Enel faces a lot of competition when it comes to convincing start-ups to work together," Tentori said. For less-known centres, like Chile or Russia, the challenge

sometimes lies in convincing business lines to work with start-ups from emerging markets. The energy company grants the opportunity to scale up solutions developed by start-ups on its assets and markets around the world.

For all the innovation hubs, there is a clear process that includes a use case and draws on the SDGs. “All of what we do is driven by reaching sustainable goals,” Tentori said. The cost of innovation is high, yet global open innovation works out better than a closed lab would. “Failing faster is good,” he remarked.

For him personally, listening is a vital part of his work. Listening to start-ups, innovators and competitors “helps me to open up my mind”.

Innovating for good

To truly effect innovation in a risk-averse organisation, a real change of mindset is required. Another risk-averse industry, banking, is also evolving to understand how it can support real change. In January 2020, ECB head Christine Lagarde **spoke** about how, for firms, “failing to act is already failing” when it comes to climate change. Clearly, business needs to innovate to improve the climate and society.

Enel’s SDG-linked bonds provide transparency for investors on the evolution of its entire business model to address the energy transition. The bonds’ issue was oversubscribed by nearly three times, with orders totalling around US\$4 billion. With its desire to transform, Enel has been **recognised** as a company that can “change the world”. The way forward is using sustainability as an engine to innovate.

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<https://knowledge.insead.edu/strategy/how-sdgs-can-power-innovation>

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About the research

This article is based on the case study "[Enel's Innovability: Global Open Innovation and Sustainability](#)".