



EU INNOVATE

**SUSTAINABLE INNOVATION IN ACTION:
THE CASE STUDY “SNAPSHOT” SERIES**

POLARSTERN

Truly Renewable Energy & Gas At Affordable Prices



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 613194

www.eu-innovate.com

July 2017

About EU-InnovatE

Between 2014 and 2016, the EU-InnovatE project investigated the potential of citizen innovation and sustainable entrepreneurship to achieve sustainable lifestyles in Europe by 2050. The following is one of a series of case study “snapshots” illustrating how new enterprises are being created by passionate, visionary individuals to benefit society at large.

The Case of Polarstern:

Providing Truly Renewable Energy and Gas at Affordable Prices

Polarstern is a ‘green’ energy provider based in Munich, which was founded in 2011. The company offers affordable electricity and gas, declares fully its supply sources and tariffs, and seeks to influence energy markets, especially in the use of biogas.

Collaborative Innovation in Practice

In late 2010, the German government passed legislation supporting one of the most important systemic shifts for the nation in many decades: the *Energiewende* (or ‘energy transition’) from a carbon-intensive economy to a low-carbon equivalent supported primarily by renewable energy sources and more efficient energy management.

The following year, Polarstern was founded by three entrepreneurs who recognised that many companies in Germany were offering renewable electricity but did not provide sustainable gas supplies. Only 20 percent of Germany’s household energy market is attributable to electricity and, of that, only a small proportion is generated from sustainable sources. Up to 80 percent of household energy is used in heating homes.

Householders had limited access to truly renewable energy supplies. Supplies were often linked to ‘climate compensation’ schemes (e.g., planting trees in lieu of consuming fossil fuels). The three entrepreneurs saw this deficiency in the market as a business opportunity that could be the basis of a new enterprise. Initially, the plan was to sell origin-certified sustainable gas and electricity to Germany’s established suppliers. However, the organisations approached regarded the proposals as too radical and declined to participate.

This led to a rethink of the business model, resulting in a decision by the entrepreneurs that they would enter the energy supply business for themselves and provide consumers with a complete package of sustainable electricity and gas. With a modest government business start-up grant, investment from a business ‘angel’, and a successful application to become a licensed energy supplier, Polarstern entered the market.

Collaborative Innovation in Practice

Polarstern thus established itself as the first German utility company to provide exclusively renewable energy (100% green electricity and 100% green gas). After a slow start, with fewer than anticipated customers signing up in the early years, Polarstern ultimately succeeded in establishing itself in the renewable energy market. It supplies electricity that is generated from 100% hydroelectric sources in Germany and sustainable gas that is a by-product of processing sugar beet at a factory in Hungary.

From the very beginning, however, it was clear for the three founders that the *Energiewende* should not end at the borders of their home country. Since the creation of the company, a one-to-one principle of small-scale development aid was embedded in its core mission. More specifically, for every customer it attracts in Germany, Polarstern supports a Cambodian family in the construction and maintenance of a locally-sourced bio-digester, which provides valuable energy from otherwise potentially harmful waste materials. The programme reflects the founders' desire to make a difference in the domestic market and on a global basis; it also significantly differentiates Polarstern from other companies in its sector.

Summary of User-Driven Innovation

Initial reluctance by consumers to switch energy suppliers led to a re-evaluation by the founders of how the company markets itself. With users' feedback influencing Polarstern's approach, emphasis has been placed on promoting a lifestyle choice about the use of renewal energy – 'something cool to do' – rather than appealing to people's desire to 'save the planet'.

The approach has been reinforced with company-sponsored events, such as surfing, winter sports competitions, and beach clean-ups – and advantage has been taken at events to convey messages about Polarstern's green energy offering to potential customers and to receive user feedback on its 'fit' with lifestyle perceptions and decision-making.

Influence on Core Business

Influences on the business and its founders can be summarised as:

- One of the entrepreneurs observing personally the impact of climate change on the environment, and long-term awareness by all three founders of the need for sustainable energy.
- Questioning why the energy market concentrates on promoting green electricity, but largely ignores gas from renewable sources.
- Realising that a business opportunity could be gained from the sectors' failure to provide consumers with an energy package that included both renewable electricity and gas.
- Acting on frustration with established energy suppliers' lack of innovation and an operational approach that will not bring about a sustainable energy market in Germany, or globally.

Cross-Sector Relevance: Top Three Insights

- Spotting a market opportunity when an established supplier either declines or fails to supply goods or services that would have a positive environmental outcome.
- Entering a consumer market with the intention of bringing about change and influencing other suppliers to revise their existing offering to bring about sustainable outcomes.
- Having courage to continue in a new business direction after being rebuffed or discouraged initially and offering sustainable goods or services largely unfamiliar to consumers, but which would have beneficial environmental, social and economic consequences.

To Learn More About the Case...

Please contact the lead investigator from the EU-InnovatE research team:

Julia Binder, Ecole Polytechnique Fédérale de Lausanne (and TUM School of Management during the project) – julia.binder@epfl.ch

Christina Hertel, TUM School of Management – Christina.hertel@tum.de

Further Information

Polarstern: www.polarstern-energie.de

Energiewende: https://en.wikipedia.org/wiki/Energiewende_in_Germany

TUM School of Management: www.wi.tum.de