

SolydEra: Technologies for the Energy Transition

Produced in the state-of-the-art plant in Pergine Valsugana, solid oxide cells represent a key technology for the European energy transition.

The European energy strategy represents one of the main industrial challenges of our time, but also a concrete opportunity for growth through innovation. Decarbonization, efficiency and resilience are no longer just longterm goals, but processes already underway that are transforming how energy is produced, managed consumed. At the heart of this transformation stands SolydEra, a Trentino-based technology leader and internationally recognized player in solid oxide

Alexander Liberov



technologies, bridging cutting-edge research with real-world industrial applications.

Founded in 2006 as a spin-off from R&D activities at Eurocoating — now Lincotek — SolydEra was born from an idea developed in Trentino, shaped by the scientific vision of Fabio Ferrari, former Rector of the University of Trento, and the entrepreneurial drive of Nelso Antolotti, owner of Lincotek. Starting from applied research, the company has built a portfolio of strategic technological solutions for the evolution of energy systems, profoundly with a strong focus on industrialization and scalability.

A strategic role in the energy transition

"Europe is entering a new phase of structural transformation, driven by decarbonization, electrification and digitalization," says **Alexander Liberov, CEO of SolydEra**. "But the transition cannot be merely 'green' — it must also be reliable, secure and economically sustainable." The growing share of renewables, inherently intermittent and unpredictable, makes it essential to deploy technologies capable of ensuring flexibility, stability and operational continuity — especially as electricity demand rises steadily and grid infrastructure comes under increasing pressure.

Solid Oxide Technology

The core of SolydEra's innovation is represented by solid oxide fuel cells and electrochemical systems based on ceramic materials. "Our products convert chemical energy into electricity with very high efficiency," explains **Massimo Bertoldi, CTO** and one of the company's founding figures, "delivering low emissions, silent operation and minimal maintenance requirements, thanks to the absence of combustion and moving parts."

A key differentiator is the reversibility of the technology, which allows systems to operate in different modes depending on application needs — offering a flexible response to the challenges of energy storage and conversion.



SolydEra
Ciré di
Pergine
Valsugana

The largest Solid Oxide Cell plant in Europe

Despite its relatively compact size, SolydEra operates in a strongly international context, with partners, clients and teams distributed across Europe, the United States, Asia, Africa, and Australia. The company currently has over **3,000 generators** installed in **25 countries**, totaling more than **10 million hours of operation** in complex applications, and today represents the largest production facility of solid oxide cells in Europe.

The Pergine Valsugana plant, completed in 2020 and recently expanded, represents the core of the Lean Manufacturing model, offering the company a significant competitive advantage and a strategic asset for future growth. In 2026, further expansion is planned, with new hires to support the increase in production volumes.

Data center & new industrial applications

The energy transition represents a concrete industrial opportunity for SolydEra. Among the most promising markets are data centers, a rapidly expanding sector driven by Artificial Intelligence (AI) and characterized



Massimo Bertoldi

by a growing demand for energy, often exceeding the capacity of existing power grids to respond in a timely manner. "Energy security is increasingly perceived not only as a cost, but as a strategic operational risk," emphasizes Alexander Liberov. "This is pushing companies to invest in solutions capable of ensuring autonomy, operational continuity and greater resilience." In this context, the high-efficiency technologies developed by the Trentino-based company provide a concrete response to the needs of reliability, stability and cost control of digital and industrial infrastructures. (gt)