

# Improving technology for solar energy



Key words: solar cells, renewable energy, sustainability



## Stefan Reber

CEO of NexWafe | Main product: NexWafe

### Aim

Solar wafer epitaxial growth technology to decrease production costs of solar cell manufacturing

### KEY FACTS

**Project started:** 2016

**Innovation Community:**  
EIT InnoEnergy

**Theme:**  
Renewable energy

**Funding generated:**  
EUR 1.9 million

**Number of partners:** 5

## The project

### Overview

NexWafe produces n-type mono-crystalline silicon wafers for high-efficiency solar photovoltaics that are reliable and of superior quality. The wafers are fully compatible with common cell and module fabrication processes at a fraction of the cost of standard wafers.

This will help solar cell producers increase their bottom-line earnings through drastically reduced silicon usage, dramatically less energy consumption, and significantly reduced capital expenditure.

### EIT InnoEnergy support

Our company received important support from EIT InnoEnergy with funding of EUR 2 million. The EIT Community also provided support in the development of the business.

### Groundbreaking innovation

NexWafe's technology meets specific photovoltaic industry

needs by providing a true drop-in replacement for costly Czochralski silicon wafers. This guarantees easy use in existing solar cell and module production lines, and high quality n-type silicon wafers enable solar cell manufacturers to produce higher solar cell efficiencies. NexWafe also offers high potential for cost-reduction by minimising energy and material consumption while improving capital efficiency.

### Societal impact

Our product strengthens the portfolio of available photovoltaic solutions, and will make solar energy more accessible on a global scale. In addition, the manufacturing of photovoltaic equipment will bring industrial jobs back to the EU. The manufacturing model itself drastically reduces the carbon footprint of producing n-type photovoltaic wafers, making solar energy even more sustainable.

### Achievements so far...

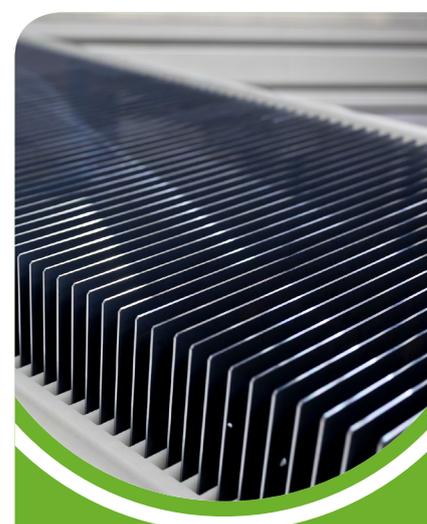
The first functional wafers have been produced, and the site for the manufacturing plant has been selected.

### Teamwork

The project has five partners, three of which are companies operating in the solar energy sector and two are research institutes with expertise along the whole value chain of the project.

The project partners are representatives of the product value chain: NexWafe as the commercialisation partner and Ecosolifer and Fill Factory as first users. First users have the unique opportunity to benefit early from the advantage of the technology and its impact on product quality and cost production.

Fraunhofer, as the initial R&D centre at the origin of the technology, benefits from previously acquired agreements with NexWafe.



NexWafe strengthens the portfolio of available photovoltaic solutions, the fastest growing renewable energy source.