

Press Release

March 7th, 2023

SOLARNL: Large consortium commits to large-scale production of Dutch solar panels

Ambitious cooperation between industry and research institutes for large-scale production of circular integrated solar cells and panels from Dutch soil

This is a joint press release from: Solarge, MCPV, HyET Solar, Compoform, Exasun, Energyra, Lightyear Layer, IM Efficiency, Taylor, TNO, Hogeschool van Amsterdam, SolarLab and Foundation NWO-I/AMOLF

With an ambitious plan, a large consortium of Dutch solar companies wants to give the solar industry a leading position in Europe. The consortium is bringing the plans together under the name: SolarNL. The goal is to build several factories in just a few years, building on ambitious innovation programs. In doing so, the companies are working closely with research organizations. This should yield high-efficiency circular solar panels that take into account the specific requirements of the European and Dutch markets. For example, they should be much easier to recycle, more aesthetically pleasing and also applicable on vehicles or on roofs that are not suitable for standard panels. The goal is to set up the entire production chain on European soil. Important because the EU is pushing heavily for greater energy independence by increasing competitiveness in "net-zero technology. To make the program possible, the parties have applied for a grant from the National Growth Fund.

The total budget is 898 million euros of which 586 million euros will be covered by private funding. The requested Growth Fund grant is 312 million euros. Parallel public investment is 181 million euros. The program focuses on R&D, innovation and on training specialized personnel for high-value jobs. It leads to an expected added value for the Dutch economy of 500-700 million euros/year in 2031 and cumulatively 20-25 billion euros in 2050.

There is a huge opportunity to build a local industry on European soil as well. Currently, 97% of solar panels come from China. The demand for materials, production machinery and other crucial technology from China, the US and other countries such as India is huge. So is the suction power on investment projects, technical expertise and manpower. *"If we don't act now, we will fall behind the net in Europe for access to this critical technology. Suppliers also need to be able to operate with high volumes to be competitive. Also, we really don't want to be primarily dependent on foreign regimes for our new (sustainable) energy supply."* - reads the proposal of the SolarNL consortium.

By taking concrete action now, the Netherlands can place itself at the forefront of the European solar industry, which will provide a crucial economic and strategic advantage in the long term. This European industry must distinguish itself in innovative products: higher conversion efficiency and products for large-scale integration of solar technology that do not exist today. The proposal links directly to European initiatives such as RePowerEU that aim to strengthen Europe's energy autonomy.

SolarNL aims to innovate along three program lines:

1. High-efficiency solar cells based on the new state-of-the-art "silicon-heterojunction" technology) with top efficiency: 25-26%. For this purpose, a factory will be built that can

produce on a large scale and cheaply (production volume 3 GWp/year). The factory concept can later be copied to other locations in the Netherlands and Europe (18 GWp/year). Thus, this program will achieve about 25-30% of the RePowerEU target.

2. Flexible solar films that are easy to recycle (based on perovskite). A separate plant is also being built for this with a production facility of 1 GWp/year. These solar cells can be applied in places where conventional panels are inadequate. Some 1,000 km² of solar technology must be installed in the Netherlands by the year 2050, and that is not possible with conventional rigid glass panels alone.
3. Integrated circular lightweight solar panels for specific applications, in roofs and walls of buildings, cars and trucks. This will use the cells and foils developed in the first two program lines. Solar panels are also being developed with a stacking of silicon and perovskite, so-called tandem technology, with which an efficiency of more than 30% is achievable, almost half more than current regular panels.

Already in the Netherlands, over 35,000 people are employed in the solar PV sector (construction, installation, maintenance, integration into the power grid, etc.) and that number is expected to grow by 15-30% annually. SolarNL should create about 1,500 jobs for the Dutch solar industry.

SolarNL is a collaboration of Solarge, MCPV, HyET Solar, Compoform, Exasun, Energyra, Lightyear Layer, IM Efficiency, Taylor, TNO, Hogeschool van Amsterdam, SolarLab and NWO-I/AMOLF Foundation.