



Paris, July 7, 2026

IPVF Confirms the Performance of Quebec's Reflectricity Technology

The Institut Photovoltaïque d'Île-de-France (IPVF), based at Paris-Saclay, has issued an official scientific opinion based on its analysis of the report produced by the Institut National d'Optique of Canada (INO/Luqia). The **reflectricity** technology was developed by **reflect10**, a private research company founded in Quebec City, Canada.

This opinion constitutes a scientific assessment of the claimed performance of this photovoltaic innovation, which is based on a passive optical architecture.

An Innovation Grounded in the Laws of Geometric Optics

In its opinion, IPVF specifies that the technology operates within the geometric optics regime, governed by the laws of Snell-Descartes.

On this basis, the Institute concludes that the technology yields, in particular:

- an average daily gain of approximately **20%**;
- a more evenly distributed production profile throughout the day;
- a higher active photovoltaic surface density per unit of installation length;
- multiplication factor exceeding **2** during periods of low solar elevation — a result considered expected given this architecture.

A Production Profile Suited to Electrical Grid Demand

IPVF further highlights that this architecture favourably modifies the daily electricity production profile.

By increasing output during the early morning and late afternoon, the technology could contribute to better meeting periods of peak electricity demand, while reducing the concentration of production around the sole midday solar peak.

A Significant Advance Relative to the Historical Progress of Photovoltaics

According to data referenced in the press release, the average efficiency of photovoltaic modules under real-world conditions has risen from approximately **6% in 1954 to nearly 19% in 2026** — a progression of approximately **13 percentage points over 72 years**, corresponding to an average **annual gain of approximately 0.18 percentage points**.

In this context, IPVF indicates that the performance figures presented in the INO report — a 20% average daily gain and a multiplication factor of 2.66 during periods of low solar elevation — represent a significant departure from the sector's customary pace of improvement, which has historically focused on the incremental optimisation of the intrinsic efficiency of photovoltaic cells.



Validation of Industrial Transferability

The scientific opinion also confirms:

- the scale invariance of the observed performance, enabling transposition to modules and installations of varying sizes;
- the technology's compliance with the laws of geometric optics;

an improved production-to-footprint ratio, resulting from a higher active photovoltaic surface density per unit of installation length.

About IPVF

The Institut Photovoltaïque d'Île-de-France (IPVF) is an energy transition institute dedicated to the research, innovation, and development of next-generation photovoltaic technologies. Located at the heart of the Paris-Saclay ecosystem, IPVF's mission is to accelerate the transition to a low-carbon economy through world-class research, development, education, and technology transfer activities.

Its founding members and shareholders from the academic and industrial communities are:

- CNRS;
- École Polytechnique;
- TotalEnergies;
- EDF;
- Air Liquide;
- Horiba;
- Riber.

Bringing together leading academic teams and industrial partners, the Institute develops innovative solutions across the full photovoltaic value chain, with the goal of fostering the emergence of solar energy that is more efficient, competitive, and sustainable.

Contacts:

For IPVF, contact@ipvf.fr

Press attaché — Paris / reflect10

Caroline Elbaz-Zenatti

+33 6 63 73 79 42

c.elbazzenatti@cez-presse.fr

media@reflect10.com

Note: The French-language version of this press release constitutes the official reference document. This English translation is provided for convenience only. In case of any discrepancy or inquiry, media are invited to refer to the original French text issued by IPVF.