

Solar energy sharing

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement GA101037053



01 BASIC PROJECT INFORMATION

Project name Solar energy sharing

Partners involved

Brussels Airport Company
UPT Erasmus
Bolt

Implementing airport / site

Brussels Airport

Period tested

2025

Project lead / contact

BAC

02 OBJECTIVE

What are we trying to solve or tackle with this project?

Setup a framework on how locally generated solar electricity from airport installations could be shared with residents in neighbouring municipalities.
The project aimed to turn the theory into practice, involve communities in the energy transition, provide guaranteed renewable power, test public acceptance and clarify the airport's potential role in establishing a local energy community.

Success criteria (optional):

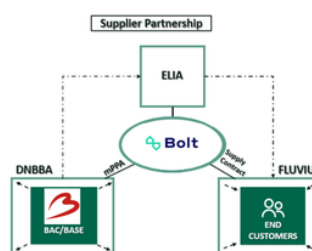
Deliver one year of local renewable electricity to the community
Recruit residents from four neighbouring municipalities.
Measure community sentiment and impact.
Identify a legally and financially viable energy-sharing model.

03 APPROACH (HOW WE TESTED)

Test set-up & method

Brussels Airport supplied solar power from installations on its offices and west fire station to residents in Zaventem, Kortenberg, Steenokkerzeel and Machelen for one year. The PoC enrolled 85 participants. Electricity delivery was measured, and participant surveys plus municipal meetings assessed motivation, satisfaction and views on airport leadership.

Data & measurement



KPIs:

Passenger Experience (Survey)

- 80% had an overall positive experience
- 40% agreed Brussels Airport Company is committed to supporting local community & the environment
- 50% signed up to save money on their energy bill
- 50% signed up to be part of the BRU community

Energy shared: 286,500 kWh Eq to 100 households annual usage

Limitations

Only one of three business scenarios was financially feasible: sharing surplus electricity.
Current intra-DGO limits sustainable business model.

The one-year PoC covered 85 households, so wider uptake and long-term economics remain unproven.

04 RESULTS & IMPACT

Key results

The Solar Energy Community PoC supplied 286,500 kWh of locally generated airport solar power—about the annual consumption of 100 average households—to 85 residents in four neighbouring municipalities. Feedback on the experience and process was generally positive. Participants were motivated by financial savings, community involvement and support for local generation.

Municipalities saw an important airport role but questioned whether the airport should lead these initiatives.

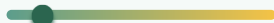
Regulation and grid charges remain a main barriers. Only the surplus-energy scenario was financially feasible.



05 RATINGS (QUICK ASSESSMENT)

Deployment Approach

How standardised is the solution: can it be deployed off the shelf, or does it require extensive customization?

Off The Shelf  Custom-Built

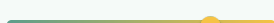
Investment Magnitude

From low-cost deployment to major investment.

Low Investment (less than €10k)  High Investment (more than €15mio)
OPEX ☐ CAPEX

Sector Readiness

From non-existing or emerging standards, regulations, and certification pathways to fully established industry practices.

Emerging Framework  Established Framework

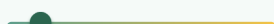
Innovation Maturity

How does the solution score in terms of maturity, from low TRL experimental/pilot-stage to high TRL market-ready.

Experimental  Market-Ready

Operational Impact

Does the innovation deliver targeted improvements or rather drastically transform processes and/or operations.

Incremental Improvement  Transformational Change

Notes

The PoC proved that airport-generated solar power can be shared locally at meaningful scale. For replication purposes, airports should act in partnerships with municipalities and community partners, clarify leadership and ownership. Setting up a model using surplus generated energy is crucial for a durable business model.

06 NEXT STEPS / RECOMMENDATION

Recommendation:

Adapt and continue: pursue energy sharing with clear community governance, supportive regulation and surplus renewable generation that offers a durable business case.

Next steps:

- 1) Define governance with municipalities and residents, including who leads these initiatives.
- 2) Focus on solar 'over'production.
- 3) Seek lower regulatory and grid-tariff barriers.