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"LES AQUEDUCS" BUILDINGS – SOPHIA ANTIPOLIS

MICROGRID (SHARED LOCAL CONSUMPTION, STORAGE, MONITORING)

"Les Aqueducs" is a property showcasing 4 positive energy office : the production is superior than the consumptions.

Based in French Riviera (Sophia Antipolis – South of France), these buildings uses solar power first and foremost. This electricity is shared between occupants, and the production surplus is stored in batteries.

INNOVATIONS

- Solar electricity is self consummed in office buildings by different occupants.
- Equipments are controlled to adapt consumption to production (Hot Water, Electric Vehicles, heating/cooling system).
- Electric uses are mesured in real time and diplayed to users.
- Complete Autonomie is reached during working hours.

STAKEHOLDERS

- 100% private office program, cost effective without any subvention
- Land Developper, Owner, Asset Manager: VALIMMO
- R&D Department and Energy Installer: VALENERGIES
- Occupants: Altedia, Silicon Mobility, Trustonic, Pearl Partner, Wildmoka.

IMPLEMENTATION

- New Building: 2012 Thermal Regulation-Positive Energy
- Active since November 2015
- Challenges:
  - Technical: Storage techniques from Solar Power were used only in experimental conditions; this is the first realisation in operating conditions.
  - Financial: No subvention, an economic balance was absolultly necessary for this program.
  - Regulatory Framework: The distribution system operator, faced to this new type of project, was opposed to a single connection principle to the public grid network, which is necessary to allow shared consumption.

KEY DATA

- 4 Buildings - 6,400 square meters (24 open spaces)
- Solar Photovoltaïc: 215 kWp installed on the roofs and on carports
- Storage System 50 kW/ 50 kWh

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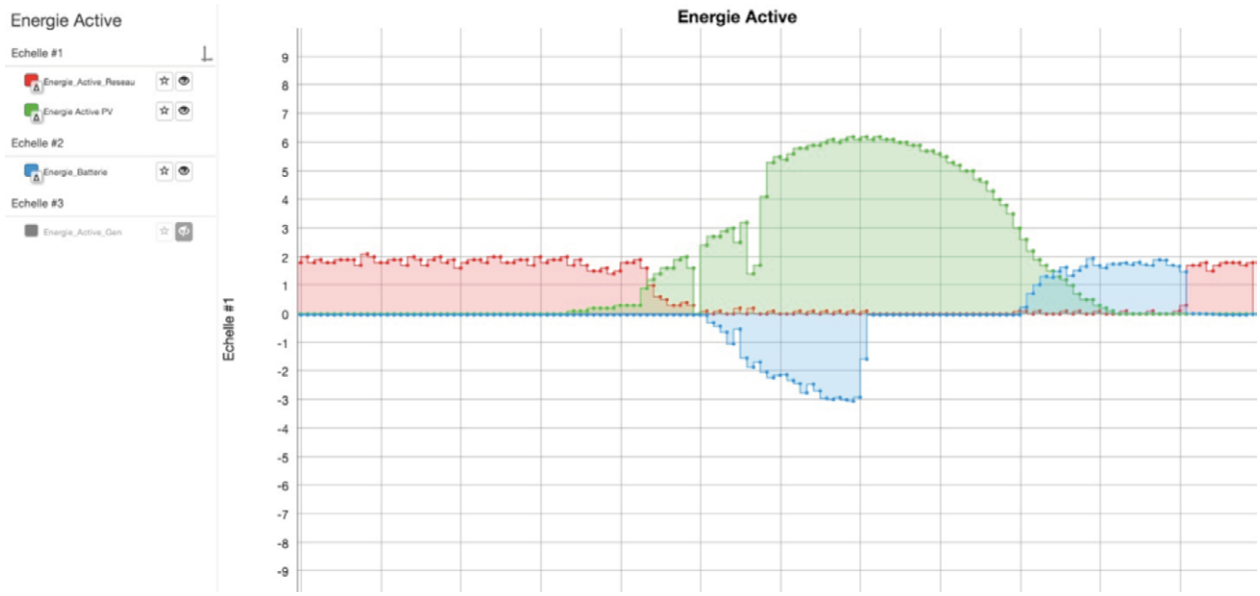
RESULTS

/// Environmental impact: Total Energy autonomy during working hours.

/// For occupants :

- Attractive place: Reduced Electricity Invoice, these offices are used only during working hours, when solar panels produce energy.
- Responsible use of resources: improvement of their corporate responsibility and brand image.
- For the Land Developer: attractiveness for future occupants.

/// **Price: Climate Energy Trophy**



FINANCIAL ASPECT OF THE OPERATION

/// The Business Model has been calculated for the whole program: a building which produces its own green energy reduces occupants' costs. It enhances the attractivity of the building compared to other old buildings, but the addition of rent amount + lease expenses don't increase. Goal achieved: at the end of 2016, every spaces will be rented.

→ **Additional cost : +5%**
→ **Return of Investment : 10 years**

ValEnergies

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