



SYSOLIA

AQUITAINE INDUSTRIAL
SOLAR SYSTEMS CLUSTER

R E G I O N



AQUITAINE

SYSOLIA, Aquitaine Industrial Solar Systems Cluster

AN OPERATIONAL ECOSYSTEM



Aquitaine, Green Tech Leader

- Top French region for the creation of green jobs since 2009, including 65 % in the solar industry
- Aquitaine, “Ecoterritoires” partner
- A sunny region, covered with large areas of available land and forests and with a solar potential averaging 2,000 hrs/year producing some 1,500 kWh/m²/year of electrical energy
- A region involved in advanced research on sustainable energy and photonics thanks to the AVENIA and Route des Lasers competitiveness clusters

An industrial reality

- One of the top 3 French industrial regions in photovoltaics with market leaders, Fonroche in Lot-et-Garonne and Solarezo in Gironde and Landes
- From the upstream to the downstream end of the production chain:
 - Solar systems: Eosol, Exosun, Fonroche, MWE Group, Neasol/ ICnergie, Immosun, Silimelt, Solarezo, Sunnco, TCE Solar, Valorem
 - Equipment manufacturers: Amplitude Systèmes, Eolite Systems, i2S, Nexeya, Oxymetal, Polyrise, Rescoll, Saft, Ventec



Mobilized R&D players

- A network of international experts in organic and hybrid photovoltaics at Bordeaux University: IMS, LCPO, LCOO, ICMCB
- Professor Georges Hadziioannou’s 50-member team in “Organic Electronics”, sponsored by the Aquitaine Regional Council and Arkema, in order to invent “the photovoltaics of tomorrow”
- Numerous labs, e.g. Institut de Mécanique et d’Ingénierie (I2M) of Bordeaux

Aquitaine brings together numerous stakeholders in the solar industry sector. Through its systems approach, the Sysolia Cluster enhances local industry dynamics and thanks to engineering experience in the aeronautics, photonics and building sectors.

SYSOLIA pursues 2 objectives:

- Contributing to the autonomy of France's energy supply
- Develop industrial activity and create lasting jobs

SYSOLIA's actions correspond to 3 strategic orientations:

- BIPV (Building Integrated PhotoVoltaics): PARA'SOL, a dedicated platform for solar architecture integration solutions
- Solar thermodynamic energy with advanced concept technology demonstrators
- R&D driven by major pivotal projects (new generation organic films, storage, recycling)

INVOLVING THE ENTIRE VALUE CHAIN



Technological catalyzers

- The Route des Lasers competitiveness cluster (optics-photonics), indispensable expertise in key "thin layer" technologies
- Competitiveness clusters: Aerospace Valley (aeronautics, space, embedded systems) and Xylofutur (forest, woodcraft)
- Competency centers: CREAHD & Eskal Eureka (building)
- Platforms for Technological Innovations: ALPhANOV, CANOE, ELORGA

Ecodynamic public authorities

- The largest BIPV urban solar power plant in France: Bordeaux exhibition center, 20 hectares, 60,000 solar panels (92,000 m²), 14 GWh of electrical production
- New Buildings of the Gironde General Council and Bordeaux Urban Community: 240 m² of facades covered with solar panels
- The "toits bleus" operation of the Aquitaine Regional Council – high schools equipped with BIPV
- The Gabardan solar plant in Landes, the largest PV power plant in Europe (one million panels installed, some with trackers, on a 317-hectare site)
- Strong support from the regional authorities to develop the solar industry: lands layout, support for industrial projects and R&D programs



SYSOLIA'S EXPERTISE

ALPHANOV	laser micro-machining
AMPLITUDE SYSTÈMES	ultrafast fiber Lasers
ARKEMA	nanostructured thermoplastics, encapsulators, backsheet and frontsheet materials
ASTF-ALCEN	3D laser welding, solar thermodynamic power plant, linear Fresnel mirror
BASE	solar PV and thermodynamic, energy conversion
CANOE	nanomaterials, organic electronics
CAP INGELEC	high voltage, low voltage networks
ELORGA	organic photovoltaic cells (OPV), Dye Sensitized Solar Cells (DSSC)
EOLITE SYSTEMS	rod type fiber lasers
EOSOL	solar power plant developer
EXOSUN	ground mounted solar plant – tracking systems
FONROCHE	utility-scale photovoltaic system solutions, module manufacturer
GROUPE MWE	photovoltaic roof solutions
I2M	mechanics, fluid & thermal transfer, energy
i2S	industrial vision systems, digital imaging
IMMOSUN	utility-scale photovoltaic project developer
IMS LABORATORY	research in systems integration
LCOO LABORATORY	organic and organometallic chemistry
LCPO LABORATORY	organic polymer chemistry
NEASOL/ICNERGIE	building integrated photovoltaic solutions
NEXEYA SYSTEMS	optronics and laser
OXYMETAL	laser cutting, oxycutting
POLYRISE	optical surface treatments, nanomaterials
RESCOLL	material characterization, surface treatments
SAFT	high technology batteries
SILIMELT	silicon processing, plasma torch
SOLAREZO	solar power farms on ground, roof-mounted solar generators, PV module manufacturer
SPIE	equipment integration and maintenance
SUNNCO GC	roof-mounted photovoltaic system solutions, project development, maintenance
TCE SOLAR	building integrated photovoltaic solutions
VALOREM	ground and roof-mounted photovoltaic system solutions
VENTEC	energy management systems, batteries

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