CRES - Centre for Renewable Energy Sources
Directorate of Renewable Energy Sources
Department of Photovoltaic Systems

CRES – Associate Member of EPIA

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General Information

CRES is the National Centre for Renewable Energy Sources in Greece and one of the main organisations in the field of Rational Use of Energy. CRES is located in Pikermi, Athens.

Aim of CRES

The aim of CRES is the promotion of the applications of Renewable Energy Sources (RES), Rational Use of Energy (RUE) and Energy Saving (ES) on both national and international levels. CRES' mission is summarised in the following:

Mission of CRES

- Executes applied R&D of technologies related to RES and RUE.
- Organises, executes and supervises demonstration and pilot projects.
- Realises commercial applications of the new technologies in projects for the private sector, local authorities, co-operative societies, etc.
- Disseminates technology in the fields of its specialisation and provides objective information in the sectors of RUE and RES.

Mission of CRES

- Organises and/or participates in technical seminars, educational programmes, specialised training conferences, meetings, etc., with a view to the dissemination of RES and RUE.
- Provides technical services and advice as well as general information to third parties.
- Provides the government with proposals related to national policy on RES and RUE.

CRES co-operates with public and private organisations on national and international levels.

Directorate of Renewable Energy Sources

Comprises the following departments:

- Wind Energy
- Solar Thermal and Passive Solar Systems
- **Photovoltaic Systems**
- Biomass
- Geothermal Energy
- Rational Use of Energy in Industry
- Renewable Energy Sources and Hydrogen Technologies

PV Department Main Activities

- Participation in R&D and demonstration projects.
- Development of hardware equipment and system technology.
- Collaboration with the local and the European industry.
- Co-operation with public and private organisations on the national and international level for the promotion of photovoltaics.
- Participation in committees, international organisations, agencies etc. (e.g.: CENELEC, ELOT, EUREC Agency, EPIA, IEA).
- Personnel: 7 people

Facilities

- Experimental **PV module assembly** facility.
- **Battery lab**: Formation machinery and a 1m^3 environmental chamber.
- **Electronics and power electronics laboratory** and a 5m^3 environmental chamber.
- **Solar irradiance** measuring station.
- Modular **hybrid system** test field.
- R.O. water **desalination system**.
- Simulated field **PV pumping testing station**.
- Prototype **sun-tracking PV array**.
- **Electric vehicle**.
- Bench for exterior **PV lighting systems**.
- Portable **PV array tester**.

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PV Laboratory

← **Solar Simulator** – 1.6m×0.9m useful test area with 5% uniformity

PV Module Laminator – 1.3m×0.8m useful lamination area →

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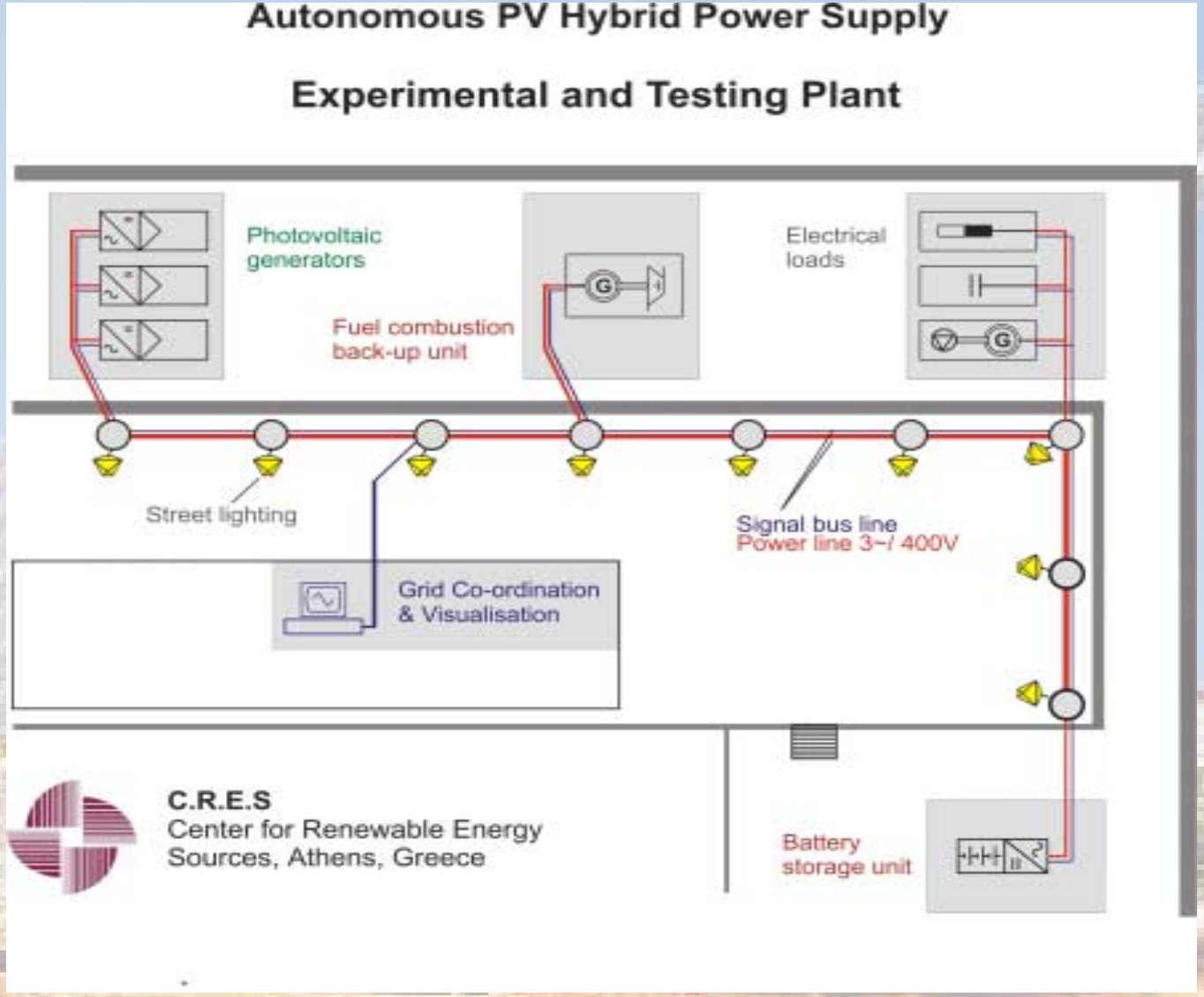
PV / hybrid System



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National Programmes

Integration of PV Modules on a Parking Shed at CRES
Installed Power: 5kWp

Installation: January 2000

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European Projects

Installation of a Novel, Modular PV System of Total Installed Power 60kWp on the island of Sifnos

THERMIE-A Project
SE/0135/96-HE-DE-IT
Participants: CRES, PPC/DEME, ANIT, SMA
Duration:
Dec. 1996 – Mar. 2000

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European Projects

PV Enlargement – Installation of a Total of 40kWp PV at CRES Premises

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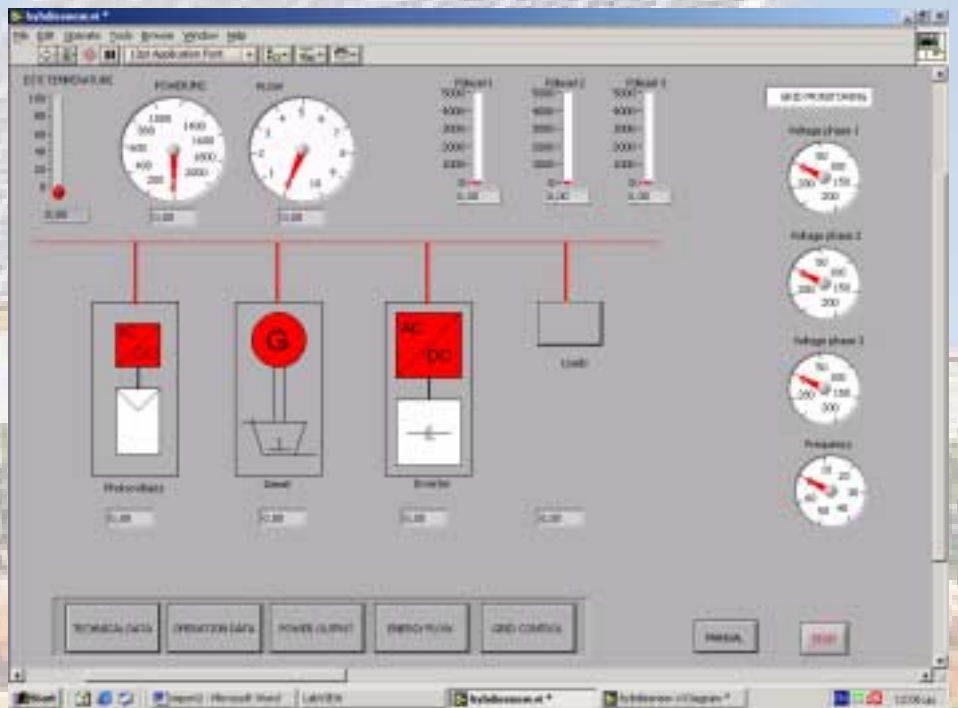
European Projects

PV Islands – Technology Development of PV Systems for the Gradual Penetration in Island Grids

JOULE III Project – JOR3-CT97-0158

Participants: CRES, ANIT, Total Energie, ISET

Duration: July 1998 – July 2000



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European Projects

PV MODE – Modular Autonomous PV Stations for Decentralised Electrification

JOULE III Project – JOR3-CT98-0244
Participants: ISET, CRES, Mun. of Kythnos, SMA, Uni Kassel, ARMINES
Duration: Aug. 1998 – Jan. 2002

On-going PV Projects

Acronym	Contract Number	CRES Budget [€]
PhotoVAlue	EPAN 4.5 – E7	95 000
Electric Vehicle	EPAN 4.5 – E11	136 928
Thin-film Plastic PVs	EPAN 4.5 – E13	96 000
MULTIBAT	ENK6-CT2000-00326	78 902
H_2MINIPAC	ENK5-CT2001-00558	118 788
DISPOWER	ENK6-CT2001-00522	356 120
BENCHMARKING	ENK6-CT2001-80576	231 366
PV-NAS-NET	NNE5-2002-00046	28 000
PV Enlargement	NNE5-2001-00736	364 736
HELSOLAR	ENK5-CT2002-30018	279 825
HOTSMES	ENK6-CT2002-00624	38 937
EU-DEEP	SES6-CT2003-503516	611 580
	Total:	2 436 182