

EnerCoRD Company Presentation

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01. Company Identity

EnerCoRD – (www.enercord.com) - is a USA based **Consulting, Research and Project Development** company, with a European branch in Greece, in the field of energy systems established in **2005** as part of the **EnerCo** team of companies which consist of:

- **EnerTOP:** Research, Computational Tools Development and Consulting, USA
www.EnerTOP.com
- **EnerServ:** Integrated Energy Management Services, GR
www.Ener-Serv.com
- **EST-America:** Solar Plants Engineering, Procurement and Construction, USA
www.EST-America.com
- **EST Hellas:** Solar Plants Engineering, Procurement and Construction, GR
www.EST-Hellas.gr





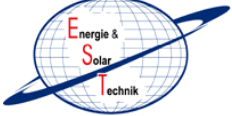

01. Company Identity

EnerCoRD is active in **Greece, South-east Europe, Central Europe, Nordic Europe, USA and South America** offering services in the following fields:

- **Consulting:** for the energy assets' **portfolio** and **risk management**, on engineering-economic energy assets **portfolio evaluation**, for the energy assets **due-diligence**, on the development and implementation of new **regulatory schemes**, for **business development, strategic and executive advice**, on the **integrated water resources** management optimisation and on **environmental studies** for energy systems development.
- **Research:** in **methodologies** for energy systems planning operation and expansion, in energy assets' **portfolio** and **risk management** processes and in **renewable energy sources**(Solar, Wind, Hydro, Bio-fuels and Bio-Mass).
- **Project Development:** of **renewable energy projects** (Solar, Wind, Hydroelectric, Bio-fuels, Bio-Mass and waste to energy), of **conventional energy projects** (gas, coal, lignite and fuel) and of **residential and industrial energy projects** (co-generation and tri-Generation).

Our focus in EnerCoRD is on providing **customised solutions** to the client needs, emerging from our **internal team** know how and our **international collaborations**, while keeping a **close cooperation** with the client's **technical** and **decision making** groups, complemented by intensive **follow-up** and **quality control**.

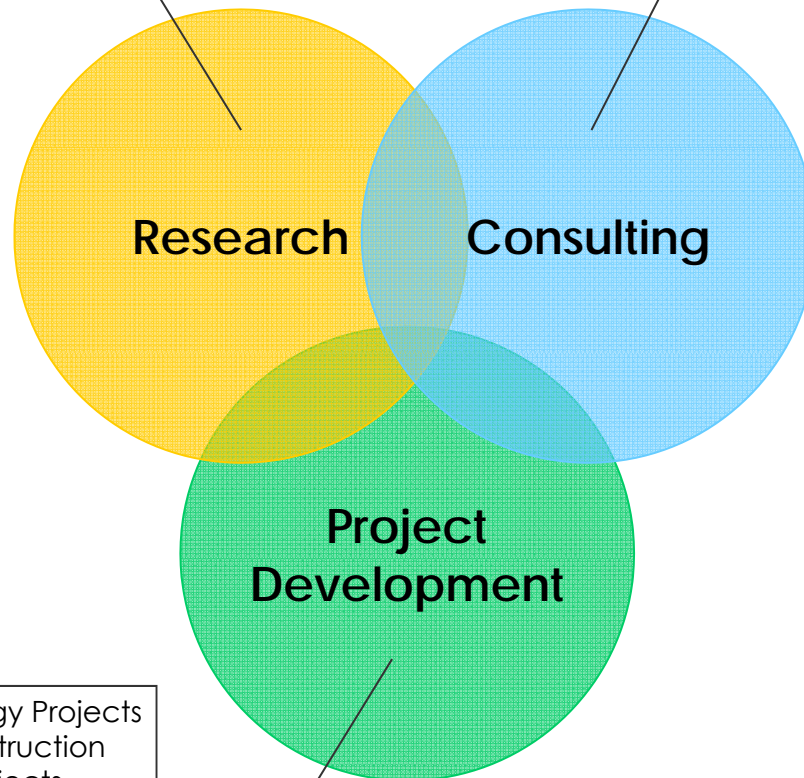
01. Company Identity – team *EnerCo*

				
		 EST-Hellas	 EST-America	
www.EnerCoRD.com	www.EnerTop.com	www.EST-Hellas.gr	www.EST-America.com	www.Ener-Serv.com
		(50% owned by EST GmbH)	(31% owned by EST GmbH)	
Energy Consulting, Research and Project Development	Optimisation Tools for Energy Systems	Solar Systems Engineering, Procurement and Construction	Solar Systems Engineering, Procurement and Construction	Integrated Energy Management Services
Consulting - Corporate energy strategy development - Energy Systems studies - Engineering studies Research - Energy Systems development and technologies Project Development - Conventional energy project development - Renewable Energy Sources project development - Cogeneration and Trigeration	Consulting - Energy Systems optimisation algorithms - Energy Systems Modelling Research - Energy Systems optimisation algorithms - Energy Systems Modelling Computational Tools Development - Computational tools development and implementation - Algorithms development and implementation	Electricity Generation - Solar plants - Auxiliary and backup systems - Hybrid Systems Buildings Technology - Solar electricity systems - Solar heating systems Mounting systems - Engineering, Procurement and Construction	Electricity Generation - Solar plants - Auxiliary and backup systems - Hybrid Systems Buildings Technology - Solar electricity systems - Solar heating systems Mounting systems - Procurement and Construction	Energy Diagnosis Measurements, Energy and Cost Balances, Energy Improvement Actions Detection, Cost - Benefit Analysis Project Development Detailed Market's survey, Offers Selection, Administrative procedures, Feasibility study Project Implementation and EPC Support and Assessment of Financial Sources, Detailed Design, Installation & Commissioning of the Equipment, Training, Operation and Maintenance services, Follow-up and monitoring

02. Fields of Activity

EnerCoRD core fields of activity

- Risk Control processes
- Hydrological models
- Risk Management Techniques
- Renewable Sources of Energy



- Engineering-Economic energy asset portfolio evaluation
- Investment Studies
- Regulatory studies
- Environmental Studies
- Business Development
- Strategic consulting
- Executive Consulting
- Due-diligence
- Courses design

- Renewable and Conventional Energy Projects Engineering Procurement and Construction
- Residential and Industrial Energy Projects
- Project Financing
- Licensing procedure and Grant Submission

02.Fields of Activity - Consulting

Energy Assets Portfolio Financial Management

- Physical and Financial risk management
- Portfolio management

Energy Market Strategy development

- engineering-economic **assets evaluation** and **Due-diligence**
- development and implementation of new **regulatory schemes**
- **business Development, Strategic consulting** and **Executive Consulting**

Courses

- **Professional courses** on the areas of energy systems optimisation and Energy Assets Portfolio Financial Optimisation

02.Fields of Activity - Research

Energy Systems Optimisation

- **Risk management** of fundamental factors (fuel prices, climatic variables and hydrologic conditions)
- **Water Resources management** optimisation (multiple uses of water)
- Energy systems **integral optimisation**

Energy Assets Portfolio Financial Optimisation

- Physical and Financial **risk management**
- **Portfolio management**

Courses

- **Academic courses** on the areas of energy systems optimisation and Energy Assets Portfolio Financial Optimisation

02.Fields of Activity - Project Development

EnerCoRD through its collaborators undertakes the development of **Energy Assets projects** development in a “**turn-key**” approach that consists of:

1. Site Research
2. Feasibility Study
3. Project financing
4. Licensing and Grant submission
5. Engineering Procurement Construction
6. Plant Maintenance

The categories of energy projects are:

- **Renewable Energy Projects**
 - Wind, hydro and Solar
 - Biofuels and Biomass
 - Waste to Energy
 - Co-generation
- **Conventional Energy Projects**
 - Coal, lignite, Gas fuelled using GT and CCGT
- **Residential and Industrial Energy Projects**
 - Photovoltaics for stand alone systems
 - Co-generation for standalone systems

03.EnerCoRD Resources

EnerCoRD combines its **in-house experts** with the **international network** that has built over the years of **specialised companies, expert consultants** and **academic institutes** in order to bring the optimal result to its clients.

More Specifically these resources are structured as follows:

- **In House**
- **Academia**
- **Industry**

03. EnerCoRD Resources – In House

EnerCoRD consists of in-house **experts** in the fields of:

- Energy Systems Engineering
- Power Systems and Plants Engineering
- Civil Engineering
- Electrical Engineering
- Mechanical Engineering
- Environmental Engineering
- Financial Analysis and Engineering
- Legal consulting
- Project financing
- Project management

03. EnerCoRD Resources - Academia

In order to strengthen further its technical skills, EnerCoRD collaborates in projects with **international** and **local academic** and **scientific institutes** in Europe and the United States of America.

03. EnerCoRD Resources - Industry

Collaborations





EnerCoRD has built over the years a global network of collaborations consisting of:

- **specialised companies** with important know-how in the field of energy systems
- internationally recognised experts in **decision under uncertainty, portfolio and risk management, financial engineering, hydrology, statistics, transmission networks, regulation, renewable energy systems design and engineering, gas systems operation, gas system engineering and energy project management.**

03. EnerCoRD Resources - Industry

Affiliations

In its fields of activity EnerCoRD is **affiliated** to:

Company		Field	Companies Relation
	EnerServ(GR)	Integrated Energy Management Services	Affiliate Company within EnerCo team of companies
	EnerTOP (USA)	Energy Systems Optimisation Tools Company	Affiliate Company within EnerCo team of companies
	EST America (USA)	Solar Plants Engineering, Procurement Construction active in USA	Affiliated company within the EnerCo team of companies 33% owned by EST-Energie (DE)
	EST Hellas (GR)	Solar Plants Engineering, Procurement Construction active in Greece	Affiliated company within the EnerCo team of companies 50% owned by EST-Energie (DE)

04. Affiliations - EnerServ

EnerTOP (www.ener-serv.com) is a Greece based **Consulting, Engineer, Procurement and Construction company**, providing integrated Energy Management Services established in **2008**.

EnerServ is active in **Greece** and the surrounding countries, offering services in the following domains:

- **Energy Diagnosis:** Measurements, Energy and Cost Balances, Market and Technologies Survey, Assessment, Detection of the Energy Improvement Actions, Cost - Benefit Analysis, Corporate Discussion, Decision making.
- **Project Development :** Detailed Market's survey, Selection of the offers, Administrative procedures, feasibility study and final total proposal preparation.
- **Project Implementation and EPC :** Support and Assessment of possible Financial Sources, Detailed Design, Commissioning & Installation of the Equipment, Training, Measurement and Verification, operations and maintenance services, follow-up and monitoring to ensure results.

04. Affiliations - EnerServ

- Our focus is on assisting companies to comprehend the benefits of energy savings, as well as providing customised energy services to the client needs
- Our company offers to its clients our internal team know how and our international collaborations, while keeping a close cooperation with the client's technical and decision making groups, complemented by intensive follow-up and quality control.



04. Affiliations - EnerTop

EnerTop (www.ener.top) is a company focusing on computational tools for the optimisation of Energy Systems.

EnerTop bridges the gap between the energy industry needs for energy systems computational tools and the know-how of the scientific community of academia and industry in the fields of:

- **Research**
- **Development**
- **Consulting**

EnerTop focuses on:

- **Researching** computational tools / methods for their application in energy systems
- **Developing** computational tools for energy systems especially in the niche areas of uncertainty (stochastic), robust optimization and unit commitment
- **Consulting** on energy systems modelling and computational tools

EnerTop focuses on:

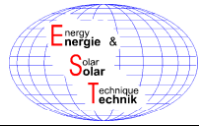
- Through high involvement with industry, active research and highly skilled key experts, EnerTop pro-acts in the field of state of the art computational tools development for the energy industry enabling EnerTop to offer high level consulting on energy systems



04. Affiliations - EnerTOP

EnerTOP's operation methodology combines the close contact and follow up of the clients needs to actively:

- Publish in **journals**
- Author and edit **books** and journals
- Organize **conferences**
- Participate in **conferences**
- Direct and participate in **PhDs** and **Post Docs**
- **Lecture** academic and industrial courses
- Manage a pool of **high level key experts** coming both from academia and industry



04. Affiliations – EST America and EST Hellas

EST America (www.est-america.com), owned at 33% by EnerCo team of companies, is the branch in **USA** of the German company **EST Energy**.

EST Hellas (www.est-hellas.gr), owned at 50% by EnerCo team of companies, is the branch in **Greece** of the German company **EST Energy**.

EST Energie & Solar Technik GmbH (www.est-energy.com) was founded in **1997** in Germany by Alfred Karner. Mr. KARNER has installed the first PV-system for Siemens AG Germany in 1982 in Egypt as installation manager.

Since **1999**, EST Energie & Solar Technik is one of the **leading German companies** in the field of photovoltaic in Germany.

In 2009, EST-Energie entered into a **joint venture** with **Gloria Solar International Holding Inc.** in order to **distribute Gloria modules** in Europe and exclusively in Germany, Austria and Greece, and **develop projects jointly** in the European market.

EST-Energie has its **headquarters in Germany** and **local offices in Spain, Italy, Greece, Czech Republic, USA** and **Switzerland**.

EST-Energie is **active** in all **European countries, Central and South African countries** and **USA**



04. Affiliations – EST America and EST Hellas

Core Competences:

- Project Development
- Project Management
- Engineering
- Procurement
- Construction
- Project Commissioning
- Maintenance and Operation

Fields of Activity:

- Power Supply
 - Photovoltaic - grid-connected systems
 - Photovoltaic – stand alone systems / off-grid systems
 - Photovoltaic – hybrid systems with photovoltaic and diesel generators
 - Photovoltaic – UPS and emergency power supply
 - Photovoltaic – solar home systems
 - Obstruction lights / tower warning lights
 - Photovoltaic street lighting systems
- Solar structures
 - Car port (alkaPORT)
 - Warehouse and Hall structures

05. Client Categories List

- Biomass Producers
- Development Groups
- Electricity Consulting Companies
- Electricity Utilities
- Energy Service Investment Companies
- Energy Trading and Risk Management Tools Companies
- Energy Trading Companies
- Engineering Groups
- Gas Utilities
- Investment Banks and Funds
- Management Consulting companies
- Regulators
- Renewable Energy Sources Project Development Companies
- Research Centres
- Transmission System Operators

Contact details

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