

Ener-t International Ltd.



Proven Renewable Energy Projects

Developer, Manufacturer, EPC, O&M, and Technology Provider of Renewable Energy Projects

40 Years of Proven Experience



40 Years of Experience

Drawing on a strong solar power generation heritage spanning for more than three decades, Ener-t International's Solar Power and other Renewable technologies of Concentrated Solar Power (**CSP**), Solar Photovoltaic (**PV**) power plants, **Biogas** systems, **Waste-to-Energy** by **Anaerobic Digestion**, **Battery** Energy Storage Systems (**BESS**), Thermal Storage Systems (**TES**) and Patented Integrated **Hybrid Solar Fuel** (**IHSF®**), creating successful power plants with superior annual production.

Projects - USA

Since the early 1980's, our team has pioneered the R&D, design, engineering, construction and O&M work for three generations of the original thermal solar technology used in the landmark **354MW SEGS projects in California with investment of USD 1.5 billion**.

The people of Ener-t were directly responsible for all aspects of the technology which continue to be used until today in the majority of thermal solar projects all over the world. Members of our team have also developed, built and operated the unique production lines of the key solar field components used in the SEGS projects, including the Heat Collecting Element (HCE) and the Solar Collector Assembly (SCA).

Projects - Europe

Our passion has not subsided in our quest to promote the adoption of parabolic trough technology as we continue to participate in the Engineering, Procurement and Construction (**EPC**) work of projects, such as **3 X 50 MW (150MW) of €900 million projects in Spain**, which already entered operation successfully. Based on our proven experience, Ener-t has served as a Technology Provider and EPC partner supplying the optimized configuration, core engineering design and selection of key components for these state-of-the-art projects that were design to also include Thermal Energy Storage (**TES**) system for extended electricity supply and manageability. Ener-t is active in the promotion and development of **+500MW** of renewable energy projects in Europe.

Projects - Asia

Ener-t International serves as an EPC Contractor and Technology Provider in several multi-megawatt projects under construction and in development in Asia. In India, Ener-t provided **Turnkey EPC services** including **manufacturing** for a **60MW thermal solar project** approved under phase #1 of the Jawaharlal Nehru National Solar Mission of India.

Ener-t was selected also by Indian Institute of Technology Jodhpur (IITJ), Indian Oil Corporation Limited (IOCL) and Bharat Heavy Electricals Limited (BHEL) for the design of the **National Solar R&D center at Jodhpur, Rajasthan, India**.

In China Ener-t established production lines for solar collector's structure and is currently involved in several utility scale solar projects of **several hundreds MW** performing pre-construction, conceptual design and performance optimization work. **In Vietnam, +200MW** Solar Projects under advanced stages of development.

In Israel Ener-t provides services for the of **121MW Ashalim solar** of **USD 1.1 billion** project and was responsible for the development of its performance security/enhancement program and won a national tender (**Build-Operate-Transfer BOT**) in for the construction of **utility scale floating PV** systems. Ener-t has also constructed **multi-MW** of **rooftop PV systems**, all currently connected and producing electricity. Several **biogas systems** with **combined heat and power (CHP)** generation under development/construction.

Hybrid & Energy Storage Technology

Ener-t technology offers all modes of operation:

- Combined with **Thermal Energy Storage/ Battery Energy Storage Systems (BESS)** offering long hours of operation even when no solar radiation is available.
- Patented integrated **hybrid systems of CSP with Biomass** and/or all types of thermal fuels to provide most reliable power 24/7 all year round.
- Hybrid systems of CSP with other technologies: **Large scale PV systems, Desalination, Biogas, Biomass, Energy from Waste, Combined Cycle and Cogeneration with Heat.** Can also be used for Fast Response requirements and stabilization of the power generation.

Ener-t also developed and patented Integrated **Hybrid Solar Fuel (IHSF®) technology** for the hybridization of solar with any thermal fuel including biomass, coal and other fossil fuels. Ener-t's hybrid projects can supply power 24/7 all year round.

Photovoltaic (PV)

In the area of **Photovoltaic (PV)** Ener-t is a leading international company operating in the photovoltaic (PV) market and provides in high quality, innovative, efficient, and reliable solar PV systems. Ener-t focuses on PV development, EPC and O&M activities. Ener-t served as the EPC contractor and O&M contractor for multi-MW solar PV projects of any proportion on a turnkey basis from concept to completion and as per the custom requirements of clients. Ener-t offers solutions for **Residential, Commercial, Institutional, Industrial, Government, Floating PV, Agri-PV and Utility Scale projects.**

Anaerobic Digestion – Biogas

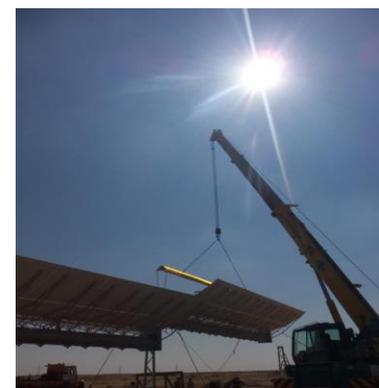
Ener-t is currently involved in providing economic and ecological waste-to-energy solutions for agriculture– livestock and crop waste. Biogas is generated by anaerobic digestion of waste and is used to generate renewable heat and electricity via a gas engine. Therefore, using gas from waste as a form of energy is a great way to combat global warming. Several **biogas systems** with **combined heat and power (CHP)** generation are currently under development/construction by Ener-t.

Qualified Technology Provider

Ener-t is the technology partner of choice of power producers engaged in the development, construction and operation of thermal solar power generating plants and renewable energy projects. As an experienced company, Ener-t is committed to building the most efficient and economical projects possible from the start.



Kramer junction – view of the solar field from the SEGS project



ES-3.5 - Ener-t New Generation Solar Collector parabolic trough collector installed in India



Biogas system



Kramer junction – view of the power block from the SEGS project

The company

With 40 years of experience, presence in 4 continents and the most experienced team in the sector, Ener-t has become one of the most outstanding Israeli business groups and a benchmark in the renewable energy and technology sectors.

The founder and CEO is Mr. Yehuda Harats. Mr. Harats was previously the Executive VP of R&D, Engineering, Manufacturing and Operations at Luz Ltd. – the pioneer of thermal solar power technology and developer of the famous 354MW SEGS projects. He is also the developer of the original evacuated receiver tube (HCE), the core component of the parabolic trough system. At the core of the Ener-t's group are highly experienced scientists and engineers who are also veterans of Luz. Their experience covered all aspects of the solar power technology – including the complete solar field with all of its key components, technology and the integration of the solar field with the power block to create highly reliable and efficient solar power stations.

Ener-t experience in solar projects goes back more than 35 years but we still continue to innovate in all aspects of the technology. Ener-t further developed its technology to the level that it can supply base load power 24 hours a day all year around. Our design strategy is focused on creating most economical projects with optimized configuration that can operate in reliable way year after year.

The company is focused on development and the execution of EPC work in all phases: Design, Engineering, Procurement, Construction, Commissioning and Operation and Maintenance (O&M), Manufacturing and Technology Provider.

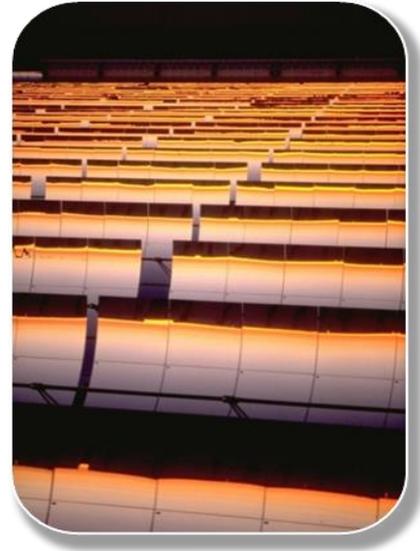
Ener-t is uniquely positioned to successfully provide complete EPC work. As our team have led the development of the original commercial parabolic trough technology, as well as having participated in all aspects of the engineering of the successful SEGS plants in California and other projects in Spain, India and the Middle East.

Our capabilities and company structure allow us also to achieve a low Capex & Opex plants configuration (with high local supply content) combined with a high expected performance. We bring these strengths to achieve the best possible plant configuration, optimized to its location and unique project characteristics at the lowest project investment.

Ener-t is quality certified per ISO-9001:2008 and 14001:2004 standards requirements.

To learn more about Ener-t's Renewable Energy solutions contact us at:

Ener-t International Ltd.
45 Hashayarot Street
Jerusalem, Israel 92544
Tel: +972 2 650 2777
www.enertgroup.net
info@enertgroup.net



Ener-t's Chairman Yehuda Harats

Previously – Executive V.P. Technology & Operation of the Luz company,

Pictured at the SEGS-I site California, 1985

