



Ministry of Economy and Industry  
Foreign Trade Administration



THE ISRAEL EXPORT &  
INTERNATIONAL COOPERATION INSTITUTE



Israel  
NewTech  
National energy & water program

# ENERGYVEST - Energy Technology Investor Conference

## Eilat-Eilat 2016 Conference

Dan Hotel, Eilat, Israel

November 28, 2016



CAPITAL NATURE  
INVESTING IN GOOD ENERGIES

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**It gives me great pleasure to welcome you to EnergyVest 2016!**

EnergyVest was originally conceived few years ago, as amidst Israel's growing role within the dynamic global energy sector, it became evident that time was ripe to convene a platform that could allow leaders of the global energy field to communicate intimately and directly with Israel's entrepreneurs.

A small and exclusive event, EnergyVest was tailored to meet the needs of investors eager to meet the wealth of cutting-edge Israeli energy companies up close while familiarizing themselves with current trends in the alternative and smart energy arena.

This year, building on the initial success of EnergyVest, we've designed the event while lining up a cadre of speakers and panelists that promise to and spark important dialogue between the different components of the sector: international investors and global players, government officials, and entrepreneurs. Most importantly, this year's conference showcases 10 of Israel's seasoned and emerging energy companies that jointly offer a fascinating and diverse range of technologies that represent the best of what creativity and innovation can produce.

We at Israel NewTech are proud of Israel's accomplishments, as in spite of a major scarcity of natural resources and potentially-crippling geopolitical instability, Israel has harnessed its ingenuity toward finding solutions that make sustainable growth a possibility in 2014 and well into the future.

We remain eager to partner with the international community in advancing the types of initiatives that accelerate the energy industry and improve lives, and welcome you to contact us as we tap into the best of governmental and private sector resources toward securing a sustainable future for us and our children.

Wishing you a productive and enriching conference.

Sincerely,

**Oded Distel**  
**Director**  
**Israel NewTech**



**Year Established:** 2015

**Number of Employees:** 6

Contact: Avishai Drori, CEO | Avishai.drori@sol-around.com

[www.sol-around.com](http://www.sol-around.com)

## Investment Rationale

The Global PV market will exceed \$138B by 2020, with a 25% CAGR and with main priorities remaining efficiency increase and energy-cost reduction. SolAround, which develops leading technologies for high-power/high-efficiency solar cells, has broken longstanding technology barriers and will soon launch its bifacial p-PERT cell, which will significantly decrease cost-of-energy, contributing to the environment. SolAround's co-founders, world PV experts, have formerly developed, manufactured and sold leading PV cells. A high interest in SolAround is expressed by large utilities and PV industries.

## Business Strategy

SolAround's target markets are white-flat-rooftop and utility PV installations, where energy gain is maximal. Prime geographical markets are the US (specific tax credits), India, China, Japan, Australia and Latin-America. SolAround will license its technologies to large scale PV vertical/equipment manufacturers and utilities, expanding in future to direct OEM sales to special niche markets, while maintaining high profit-margins and low burn-rate.

## Core Technology

An innovative technology for manufacturing bifacial p-PERT high-power high-efficiency PV cells by standard industrial machines and in near-standard production cost, applicable in almost any existing cell line worldwide by a simple retrofit, yet with high-entry barriers and full IP protection.

## Product / Profile / Pipeline

The company collaborates with leading PV R&D centers in Europe, has proven industrial feasibility of technology and manufactures cell prototypes for potential clients in Europe and India. The company seeks strategic investments for funding its R&D industrial pilot line and its market penetration.

## What's next?

Pilot production line in Europe, process proof and first sales by Q2-2018; Profitability with very high margins by 2020.



**Year Established:** 2012

**Number of Employees:** 15

Contact: Yair Teller | info@homebiogas.com

[www.homebiogas.com](http://www.homebiogas.com)

## Investment Rationale

HomeBiogas Ltd developed and fielded the most efficient, affordable, user-friendly and cost effective **household biogas system**. We sell an appliance that converts organic waste into clean cooking gas and into liquid natural fertilizer, all while maintaining the highest safety and health standards. We have applied for different patents for our technology which meets the most stringent safety standards. This July we started commercial stage, delivering our product to 35 countries.

## Business Strategy

We are the only company which can offer biogas systems suitable for private homes of eco-friendly, middle class/upper middle class families who want to recycle the organic waste that they create, waste that is seen to be a major source of pollution. Our Total Addressable Market in affluent societies exceeds 50M households equally divided between the USA Australia and the EU.

Establishing a strong online assets and direct sales channels together with local distributor's partners in key markets are the 2 main channels for the first years of commercial phase.

## Core Technology

We offer the most advanced compact and cost-effective solutions that convert kitchen leftovers and animal manure into cooking gas and liquid fertilizer, while maintaining the highest safety and health standards. HomeBioGas 3 (patents pending) family-size appliances are the ultimate clean solution for generating local energy through bacterial anaerobic digestion of organic waste.



## HomeBiogas at a Glance

**Stop wasting waste** – Introducing the revolutionary backyard biogas system that will transform your household waste into clean energy!

### Efficient

Converts minimal household food scraps into maximum cooking gas and fertilizer!

### Environmentally Friendly

Sustainably recycles household waste locally, generating renewable energy and reducing 6 tons of greenhouse gas emissions annually!

### Easy to Use

Designed for easy assembly, comfortable use, and low-maintenance- making your family's waste-to-energy experience fun and convenient!



**Year Established:** 2013  
**Number of Employees:** 4  
 Contact: Boaz Ur | boaz@harbo-technologies.com  
[www.harbo-technologies.com](http://www.harbo-technologies.com)

## Investment Rationale

HARBO provides unique systems and technologies to a \$5B+ potential market. HARBO develops a revolutionary oil spill response technology. Dozens of potential customers, regulators and distributors have already approached HARBO. HARBO's product has been tested successfully at the most advanced testing facility in the world, OHMSETT. HARBO's product will be commercially available in 2017. HARBO is supported by government grants and investments from a VC, and a key industry player. HARBO's technology is a leap forward in an industry that hasn't seen innovation for decades.

## Business Strategy

HARBO will sell through existing equipment distributors globally, enabling a lean sales force. HARBO sells a disposable product, thus generating recurring revenues. HARBO's margins are based on the difference between relative low cost of raw materials and extremely high value that the end solution provides.

## Core Technology

Patented plastic product built with state of the art technologies based on well-known, reliable materials.

## Product / Profile / Pipeline

T-Fence, a complete system that deploys 2000 meters of boom (floating fence) in 30 minutes at the point of failure.

## What's next?

2017 - HARBO's commercial product beta site and demo at Europe largest port, and supported by Europe's largest private responder and one of the most influential regulators. Sales will commence at that time.



**Year Established:** 2014  
**Number of Employees:** 3  
 Contact: Shai Binyamini | shai@tamuz-energy.com  
[www.tamuz-energy.com](http://www.tamuz-energy.com)

## Investment Rationale

Tamuz-Energy is pursuing the untapped market of renewable Industrial Process Heating and Cooling. This 50 billion \$ market includes steam generation for industries such as food, pharmaceutical, textile, Enhanced Oil Recovery, process heat and absorption chilling. Tamuz Energy developed revolutionary low cost distributed solar technology for production of thermal energy (up-to 300°C) for industrial process heat / steam production. Industrial process heat is energy intensive and typically requires the consumption of fossil fuels; either gas or light fuel oil. Tamuz-Energy will provide cost effective renewable energy, reducing energy prices by up to 75% without the need for government incentives.

## Business Strategy

Tamuz have two business models:

- Sale of system to clients (industrial plants) via distributors/installers, the system will reduce energy prices to client and allow equity payback in 2-5 years
- PPA (Power Purchase Agreement), Tamuz install the system at customer, Tamuz owns the system and sell heat energy to customer at lower rate than customer pays using fossil fuel – this model minimize the risk to clients.

## Core Technology

Innovative concentrated solar thermal collectors: Unique high efficiency solar receivers assembled inside a two SQM footprint collector with linear Fresnel lenses optics. Revolutionary integrated storage module inside the collectors. Monolithic structure – enables simple & fast installation. Low weight solution – allows rooftop installation.

## Product / Profile / Pipeline

Tamuz Energy's first full-scale prototype successfully launched in 2015. Demonstration system in a commercial plant launched in Q3-2016. The company signed LOI for system supplying with three industrial plants.

## What's next?

The company won the INCENSE grant and accelerator program (European Commission & ENEL) and is planning to supply first commercial system for a food processing plant in 2017 (The project is supported by the Israeli MOE). The company is in the process of securing round A financing for commercialization.



**Year Established:** 2013  
**Number of Employees:** 3+8  
 Contact: Oren Ezer | oren@electroad.me  
[www.electroad.me](http://www.electroad.me)

## Investment Rationale

Cities are fundamental in the fight against climate change. Urban transport accounts for around 40% of emissions from the entire transport sector and that is why urban mobility lies at the heart of this fight. ElectRoad's solution reduces it to zero.

## Business Strategy

ElectRoad will offer a green city bus line solution in cooperation with bus operators. ElectRoad's solution bring a strong business case with a significant cost advantage (both CAPEX and OPEX) when compared to existing market participants. It is also more flexible as it applies to all types of EVs.

## Business model

PPP projects, JV with stakeholders, Revenue sharing, IP licensing and Sale of equipment.

## Core Technology

On the move "wireless power transfer system" based on a unique patented technology. ElectRoad's revolutionary technology removes the energy source (NO battery) from the vehicle and powers it wirelessly via minimal infrastructure located under the driving lane. This brings unparalleled saving in Electric Buses costs and its operations, and can lead to tremendous savings in all Electric Vehicles electric costs in urban centers.

## Product / Profile / Pipeline

### Main Components:

- **Stripe:** Placed underneath the asphalt. Receiver: Placed on bus's chassis
- **Electric converter:** Transforms energy from the grid to the stripe.
- **Communication system:** Real time communication with the vehicle allowing billing, traffic status, management of city public transportation and more.

## What's next?

ElectRoad won three Grants, one from the Horizon2020 program. We have a prototype which demonstrate the system including an electric car and 25 m road. We started working on a full-scale pilot including an electric bus and 500 m road, The next step will be a pilot in a major city in Europe in 2018.



**BladeRanger**

**Year Established:** 2016  
**Number of Employees:** 5  
 Contact: Assaf Friedler | info@bladeranger.com  
[www.bladeranger.com](http://www.bladeranger.com)

## Investment Rationale

After First Round Capital from CapitalNature (Capital Nature portfolio companies benefit from a unique opportunity to access the vast technological, financial and marketing capabilities of Capital Nature investors like: Elbit, Ormat and ProSeed). The company founded by experienced management team lead by co-founder and CEO, Assaf Friedler, Cogniteam Ltd. Israel's premiere autonomous robotics company and Prof. Gal Kaminka of Bar Ilan University in Israel, winner of the prestigious Landau prize in robotics.

## Business Strategy

Autonomous Cleaning and Inspection of Solar Power's Dirty Side  
 BladeRanger is a startup company (Established in early 2016) that brings an Autonomous inspection and cleaning system for photovoltaic solar and CSP fields, based on robotics components and advanced algorithms (generic solution).

## Core Technology

BladeRanger is actually developing a generic platform to provide a solution that fits the vast market of solar industry. And yet will be used in the future, as unique, high-quality infrastructure for many more autonomous robotic applications to come...

## Product



## What's next?

Enabling consumers to achieve the true potential of their solar panel technology by maximizing its efficiency and convenience. In addition, become THE player in UAV-based service and maintenance.



**Year Established:** 2014  
**Number of Employees:** 4  
 Contact: Oded Rozenberg | Info@thesolarpaint.com  
[www.thesolarpaint.com](http://www.thesolarpaint.com)

## Investment Rationale

After two years of research at the SolarPaint laboratories at the Technion in Israel and Seed funding from early stage investors and the Israeli government, we are now seeking further investment to complete our product development.

## Business Strategy

SolarPaint presents a totally new approach for the solar energy industry, using a unique configuration of cell architecture that includes a **patented flexible electrode net** and a **photovoltaic paint**.

We are developing an extremely low cost **photovoltaic wallpaper rolls** - each 3km long, 2m Wide, able to produce 60kWp at a cost of ~\$0.13/Wp, with certified field performance of ~10% efficiency and 25 years lifetime.

## Core Technology

The combination of our **unique selective bottom electrode net** and a **stable nontoxic photovoltaic paint** eliminates the need for expensive transparent electrode, dramatically reduces sensitivity to shorts and shunts, and eliminates the need for challenging encapsulation.

Each of the 2 components has significant value of it's own. We are currently working on the integration of both - the is a system that can be significantly cheaper and easier to make than any other solar technology today.

SolarPaint has proved the concept of photovoltaic paint over selective bottom electrode net in July 15 and has 3 pending patents with over 42 claims considered novel and inventive by the European examiner.

## Product / Profile / Pipeline

- 2017 - A4 size prototype in lab 5% efficiency
- 2018 - roll to roll prototype 10% efficiency
- 2019 - certification beta sites and preliminary sales

## What's next?

- Efficiency > 10% - improvement of active material chemistry and electrodes adhesion
- Improve manufacturing speeds - new inline equipment for the R2R machines
- Adaptation of transparent asphalt used in solar roads projects for use with SolarPaint



**Year Established:** 2014  
**Number of Employees:** 10  
 Contact: Lana Elnor | lana@trucknet.co.il  
[www.trucknet.co.il](http://www.trucknet.co.il)

## Investment Rationale

We offer a unique fully-automatic solution to a core problem in the Transport & Logistics industry. An "Alpha" stage in Israel used daily by over 300 transport companies and our system is on the verge of a European launch.

## Business Strategy

Trucknet connects transport companies and offers smart & automatic freight exchange solutions for their empty commutes. We charge a small commission from each transaction made through our platform.

## Core Technology

Trucknet connects to existing optimization software and provides a match between empty rides and a suitable transport request from various companies, via its patent pending algorithm.

## Product / Profile / Pipeline

Trucknet is a cloud based platform that utilizes smart freight exchange to improve efficiency & profitability of transport companies while reducing expenses and CO2 Emissions.

## What's next?

- Trucknet is aiming to become a complete optimization solution for transport & logistics companies.
- On the Horizon, we plan to offer a dedicated solution for self driving vehicles fleets



**Year Established:** 2013  
**Number of Employees:** 9  
 Contact: Ilan Ben-David | ilan.bendavid@chakratec.com  
[www.chakratec.com](http://www.chakratec.com)

## Investment Rationale

Chakratec is a manufacturer of a patented kinetic storage, with unlimited charge/discharge cycles. The company focuses on developing a full storage solution for EV Charging Stations (EVCS) in areas with limited infrastructure or high demand fees. Chakratec solution "releases" electrical vehicles owners from two well-known pains, RANGE ANXIETY and EXTENDED BATTERY CHARGING TIME, thus supporting the expected fast penetration of EV's.

## Business Strategy

Chakratec is cooperating with utilities and large system integrators to integrate its storage system as part of their future fast charging stations. Following the pilots, Chakratec will be an OEM supplier to those customers. At a later stage the company plans to move to a rent type business model, which is better adapted for smaller customers. The company addresses a market need of 4.5B\$.

## Core Technology

Chakratec's kinetic Storage provides unlimited charging and discharging cycles and is sustainable for a period of no less than 20 years of operation, easily deployable and eco-friendly. Chakratec solution has superior economics in applications with more than 2 deep cycles per day and its main applications are: Storage for EV charging stations, Grid stabilization and regulation, Microgrid stabilization.

## Product / Profile / Pipeline

In addition to its Israeli pilot with the IEC, the company is cooperating with a leading European utility to develop an advanced EV charging station.

## What's next?

The company is looking to raise \$5M, for deployment of additional pilots in the lucrative EV charging market, and to start initial deployment of commercial systems.



**Year Established:** 2014  
**Number of Employees:** 5  
 Contact: Ronny Izhak | ronny.izhak@synvertec.com  
 Tal Cohen | tal.cohen@synvertec.com  
[www.synvertec.com](http://www.synvertec.com)

## Investment Rationale

Synvertec is a solution provider offering grid stabilization for 'on' and 'off' grid operations. The company's solution allows inertia capabilities, energy management with grid stability generations and grid friendly inverters for open new applications. These values are very important when the proportion of renewable energy and other power sources that connect to the grid via electronic converters reaches high enough levels.

## Business Strategy

The company will supply the IP protected solution to inverter manufacturers in the segments of wind, PV and storage, in small and medium sizes. This strategy will be implemented with present and future partners in the inverter market. The prime geographical markets are Western EU and U.S. along with Islanded regions implementing high volume of renewable energy.

## Core Technology

The Synchronverter emulates the mechanical and electrical properties of a synchronous generator into the control algorithm operating the inverter's switches. One part of the control algorithm developed at Synvertec causes a conventional DC/AC converter to mimic a synchronous generator, including the inertia which has a stabilizing effect.

## Product / Profile / Pipeline

The innovative technology, designed to work with numerous inverters, will launch by mid-2017. The product is currently in final testing for a 'market ready' product.

## What's next?

Along with R&D, Synvertec will continue to create partnership channels that will lead to the breakthrough of our technology in the relevant markets. These partnerships will also lead to new products in new market segments.





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