



Ministry of Economy



The Israel Export &
International Cooperation Institute



Israel
NewTech

National energy & water program

Israeli Smart Energy Technologies at European Utility Week 2015

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www.export.gov.il

www.israelnewtech.gov.il

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The National Energy and Water Program

Israel NEWTech was established in 2006 under the leadership of the Ministry of Industry, Trade and Labor and with the participation of ten government ministries and official organisations. Israel NEWTech focuses on water and energy technologies and provides an infrastructure that encourages the development of technologies in this sector.

For more information on Israel NEWTech, please visit website: www.israelnewtech.gov.il

The Israel Export & International Cooperation Institute

The Israel Export & International Cooperation Institute, founded in 1958, is supported by over 2,600 member firms, private sector bodies, and the Israeli government. The Israel Export & International Cooperation Institute promotes business relationships between Israeli exporters and overseas businesses and organisations.

Energy & Environmental Technologies Department

The IEICI's Water & Environmental Technologies Department has an intimate acquaintance with the Israeli Water, Renewable Energy & Environmental industry exporters, which includes more than 400 companies, and about 100 start-ups. It has a proven ability to identify and match suitable potential business partners, organising one-on-one business meetings and is a focal point for contacts with the government as well as with the industry. By providing a wide range of export-oriented services to Israeli companies, and complementary services to the international business community, the institute helps to build successful joint ventures, strategic alliances, and trade partnerships.

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Israel Trade Center Munich

The Commercial Department of the General Consulate of the State of Israel is located in Munich and conducts a wide range of activities throughout Germany. Also called the "Israel Trade Center", its primary mission is the promotion of trade, economic cooperation and cooperation in research and development, as well as bilateral investment

between Israel and Germany. Our office will work with you and assist you in establishing successful long term relationships with relevant companies.

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One goal - Wide partnership

The Israel NewTech national program is led by:

Ministry of Economy Foreign Trade
Administration - Investment Promotion
Center, Ministry of National Infrastructure

Members:

The Israel Export & International
Cooperation Institute | Prime Minister's
Office | Ministry of Finance | Ministry
of Foreign Affairs | Ministry of National
Infrastructure | Ministry of Environmental
Protection | Ministry of Science Culture &
Sport | Ministry of Agriculture | Ministry of
Negev and Galilee | Public Utility Authority-
Electricity | Council for Higher Education

Ministry of Economy: Office of The Chief
Scientist | The Israel Standards Institute |
Industrial Cooperation Authority | ASHRA -
The Israel Export Insurance Corp. Ltd. |
Economic Planning Administration |
Knowledge-Intensive Industry
Administration | Manpower Training and
Development Bureau

AQUA - R I M A T

Water Alarm Systems - Total Smart Water Management & Leak Protection

Category: End User, IT & BI System, Control Systems, Energy Efficiency, AMR, Cleantech, Control & Monitoring, Pressure Monitoring, Protection, R&D, Water Quality, Analyzers & Controllers

www.aquarimat.com

Company activity in a nutshell

Aqua Rimat is an innovative Hi Tech company that develops End User water management and water damage prevention systems. Our products provide a sophisticated and precise monitoring tool that learns End-users water consumption patterns and helps manage them online. We can also monitor water pressure and water quality i.e. temperature, conductivity, PH, chlorine, etc.

Technologies & products

LeakBuster™ manages water at the end user point. It monitors incoming water, uses artificial intelligence, and communicates with the user, enabling immediate detection of any leak or anomalies. allIGATER™ allows water supply only when needed. By using allIGATER, business can protect their property from water damage and reduce their consumption.

Objectives / Target companies

Aqua-Rimat's innovative systems are already installed in many residential buildings and offices in Israel. Our main objectives today are: To accelerate penetration to global markets by cooperating with strategic partners.

Partner with key investors and expedite R&D for next generation systems, enhancements and added value attributes.



Software to improve Asset Reliability & Maintenance

Category: Energy Efficiency, Smart Grid, Renewable Energy, Energy Storage
Sub Category: Lighting, HVAC, Analyzing & Control systems, Monitoring & Control, Energy Management, Smart Metering, Wind Energy, Geothermal Energy, Rechargeable Batteries

www.bqr.com

Company activity in a nutshell

BQR is the developer of one of the most powerful optimization tools that can analytically model complex systems and optimize reliability, maintenance, availability and production of the maintained asset, this saves huge sums of money and allows the software users to maximize productivity and revenues. BQR offers the software as a solver that can be used by any Asset Management System or the integration of the software as a combined service and software package in order to help in the assimilation integration and utilization of the optimization processes.

Examples of projects

BQR have successfully done hundreds of projects around the world in the last 10 years in the smart utility sector (Petrobras, Alstom, Bombardier, IEC-Israel Electric Corp, Elbit systems, Saab aerospace, Israeli navy, Baker Hughes, Philips, Siemens and others).

Technologies & products

- **apmOptimizer software:** Optimize maintenance policy and reducing cost
- **fiXtress software:** Detect design and stress errors in electronic circuits
- **CARE software:** Computer Aided Reliability Engineering.

Objectives / Target companies

The apmOptimizer is an expert system that is used by maintenance and reliability engineers, the systems benefit and products can however effect the entire organizational logistic array and maintenance policies and save large amount of money in a constructive and systematical way, this impacts the organization and require a decision maker like VP engineering or CTO to make.



Category: Renewable Energy
Sub Category: Solar Energy
www.bren-energy.com

Company profile

Brenmiller Energy is an innovative thermo-solar company, providing modular solar steam generation products – the bCell™ System - for power & steam applications. Led by a team comprising of the world's top-leading experts in renewable thermo-solar energy, the company's knowledge and expertise are based on years of field experience in building and operating over 500MW of thermo-solar power plants in the US and in Spain.

Year of establishment: 2012

No. of employees: 100+

Background of the company

Founded in 2012, by Avi Brenmiller, a prominent figure in the Solar Thermal world and former CEO of Siemens CSP and Solet. Our R&D team possesses extensive knowledge and a proven track record in developing ground-breaking solar technologies. The company is innovation-oriented with over 100 people employed, in sub-contracting, in research and development.

Examples of projects

Our team led and was actively involved in planning, designing, building and operating thermo solar power plants in Spain and in the U.S. supplying over 500MW of electricity.

Technologies & products

General description:

The bCell™ is a continuous solar steam boiler producing 24/7 (upon demand) regulated and controlled steam, at standard turbines conditions (500°C 100 bars). Its main building block is the Energy Center, with a unique heat storage, which acts also as a buffer, to allow both real dispatchability and stable steam regardless of solar irradiation variations. One bCell™ can produce about 1.5 MWe equivalent of steam (depending onsite irradiation and operation strategy), which is produced from the solar field. The solar field, based on an enhanced collector trough system, and the Energy Center are combined together to create the bCell™.

Function of the products:

The bCell™ System, which is comprised of bCell™ modules (the core of the system), produces stabilized steam, directly to the turbine inlet, at a steady rate throughout the day, all yearlong. The product is designed for high efficiency, high availability and easy maintenance. It is modular and scalable and can provide specific solutions to various energy demands and different operation strategies, whether peak, intermediate or base-load demands.

Objectives / Target companies

The Company would like to be introduced to potential developers, local partners, investors and customers.



Unlimited Smart Green Energy Storage

Category: Energy Efficiency, Smart Grid, Renewable Energy, Energy Storage, Green building

Sub Category: Lighting, Monitoring & Control, Energy Management, Demand Response, Energy Management, PV, Wind Energy, Off Grid, Solar Lighting, Rechargeable Batteries, Storage for the Grid

www.chakratec.com

Company activity in a nutshell

Chakratec is developing an energy storage system with unlimited charge / discharge cycles, totally green and easily deployable. At the heart of the system is an array of innovative flywheel storage units. This array is managed by our smart management system allowing the customer to maximize his benefits by dynamically allocating storage resources for the main energy storage uses like Energy Time Shift, UPS, Regulation and others.

Examples of projects

Typical projects are commercial and industrial sites with needs for renewable integration. The projects may range even from small residential systems of 2 x 1.5 kWh up to 1,000 kWh in dedicated energy containers. Such projects will be deployed as turnkey projects where Chakratec's flywheel energy storage may replace existing batteries and integrate to existing solar inverters or as another option is to be deployed as part of an EPC turnkey project.

Technologies & products

Chakratec is taking a fresh view on market needs, incorporating patent pending innovations in flywheel structure, materials and system architecture into energy storage design that optimizes storage resources allocation. This storage system has unprecedented economic benefits specifically in small to medium size applications from 5 kWh to 1 MWh systems.

Objectives / Target companies

The target of the company is to develop a scalable system from single 3kWh units up to a full 40' container of about 500 kWh or a multiple of containers for larger systems. The immediate target is to deploy a 10kWh to 20kWh system in the first half of 2015.



Big Data Revenue Analytics

Category: Energy Efficiency, Smart Grid

Sub Category: Analyzing & Control systems, Monitoring & Control, Smart Metering, Non-Technical Loss Detection

www.cvidya.com

Company activity in a nutshell

Market leader in Big Data Revenue Analytics, allowing electric utilities to maximize efficiency of their field inspection crews by leveraging cVidya's non-technical loss detection platform, and to maximize benefits of the Smart Metering program by avoiding 'bill shocks' and revenue leakage in large and complex billing transformation projects.

Examples of projects

cVidya's Revenue Assurance/Fraud Management platforms and Risk Assessment services have been deployed across over 150 Telecom operators including AT&T, Bell Canada, Telefonica, Vodafone and Telecom. The platform and services have been tuned to meet Utility requirements seeking to optimize their revenue assurance and non-technical loss detection operations.

Technologies & products

Revenue Assurance - Big Data Analytics platform providing end-to-end Meter-to-Cache revenue leakage and non-technical loss detection through analysis and reconciliation of multiple data sources (Smart Meters, MDM, CRM, Billing, Logistics ERP, Accounting systems) and leverage of industry best practice use cases and methodologies.

Revenue Assurance Maturity & Risk Assessment – Innovative service based on TMF standards and methodologies helping utilities to identify their RA maturity and high leakage areas.

Rating and Billing Assurance - Verifies the rating and billing of all TOU rates and interval usage data, avoiding 'bill shocks' and Smart Meter pushback.

Objectives / Target companies

Maximize revenue and margins for utility companies by leveraging cVidya's market leading Revenue Assurance platform and services. Minimize non-technical losses by maximizing efficiency of field inspection crews in identifying electricity theft. Targeting Tier-1 utility customers and Smart Meter and Billing/MDM vendors to provide optimized Meter-to-cash processes.



Advanced security platform for the Industrial Internet

Category: Energy Efficiency, Smart Grid

Sub Category: Communication and Control Systems, ICS Security, SCADA Cyber Security

www.cyberx-labs.com

Company activity in a nutshell

CyberX provides an advanced security platform for the Industrial Internet, focusing on Energy utilities and the Gas & Oil industry. Though the Industrial Internet is rapidly changing our lives with the convergence of machines and intelligent data, the transformation cannot prosper without cyber-security as one of its pillars. CyberX's solutions secure these networks with its situational aware and fully-agnostic technology.

Examples of projects

Working with energy companies in the US (classified).

Technologies & products

XSense, CyberX's flagship product, is a fully agnostic solution that easily integrates into any operational network. Its powerful anomaly detection engine turns it into the only situational aware solution on the market.

XSense Key Features

- Fully Agnostic
- Deep Packet Inspection of Industrial Protocols
- Automatic Asset Discovery and Management
- Real-Time Insights of Cyber Security and Operational Incident.

Objectives / Target companies

CyberX's objective is to secure the Industrial Internet which is growing at a rapid pace. CyberX is targeting all the Utility companies along with companies in the Oil & Gas Industry.



Cost Effective Bulk Energy Storage

Category: Energy Storage

Sub Category: Primary Batteries, Rechargeable Batteries, Fuel cells, Storage for the Grid

www.enstorageinc.com

Company activity in a nutshell

EnStorage developed the most cost effective flow battery for grid scale energy storage. A self-contained system with over 10,000 cycles, it can serve as a grid asset for 20 years. The technology has 9 patents covering base materials, system & controls and a proprietary low cost membrane and catalyst. 2 beta systems will be deployed in 2015, each sized at 150KW/900KWH which would be based on our grid connected technology demonstrator.

The company is developing a containerized energy storage system with power ratings varying from 75KW-225KW and an energy rating of 900KWH. Multiple systems connect to create a larger storage facility. The solution does not require fueling, is self-contained with no by products and over 10,000 cycles at full DOD.

Technologies & products

The company is developing a containerized energy storage system with power ratings varying from 75KW-225KW and an energy rating of 900KWH. Multiple systems connect to create a larger storage facility. The solution does not require fueling, is self-contained with no by products and over 10,000 cycles at full DOD.

Objectives / Target companies

EnStorage aims to deploy large scale energy storage projects worldwide and seeking to partner with: large manufacturing and engineering firms to build its balance of plant; utilities and renewable energy developers; EPC contractors, micro-grid developers; and large industrial energy users.



Modern Billing

Category: Energy Efficiency, Smart Grid

Sub Category: Billing solutions for utilities service providers, Monitoring & Control, Energy Management, Demand Response, Smart Metering, Grid

www.maxbill.com

Company activity in a nutshell

LogNet Billing and MaxBill turn billing, service delivery and customer experience management into competitive advantages for utilities service providers. Based on our Modern Billing strategy, we help utilities service providers achieve their strategic objectives and grow their businesses. The MaxBill solution enables utilities service providers to offer attractive packages with zero-touch, automated service delivery, simplified customer support and transparent billing.

Examples of projects

Recent utilities customers in Europe include: • First Utility - billing for the leading independent energy supplier in the UK • CCT Correios de Portugal - billing for a provider of water and municipal services in Portugal • Infostan - billing for multiple utilities services for municipalities in Serbia

Technologies & products

MaxBill is a billing and customer experience management solution. MaxBill is a module-based system that includes the building blocks for a full range of business support functionality and processes, including CRM, order management, service delivery, product catalog, rating, billing, trouble ticketing, workforce management, accounts receivable and more. The solution includes a library of preconfigured best practice templates, which allows a service provider to configure business processes and workflows to support the specific needs of its operation.

Objectives / Target companies

We are interested to meet utilities service providers (electricity, gas, water, municipalities) as well as system integrator that provide solutions for this sector.



NextNine
Industrial Strength Cyber Security

NextNine - Industrial Strength Cyber Security

Category: Critical Infrastructures

www.nextnine.com

Company activity in a nutshell

NextNine is a leader in Operational Technology (OT) security management software for industrial and critical infrastructure, markets that are vulnerable to cyber attacks and are underserved by conventional enterprise IT solutions. Distributed critical infrastructure plants and facilities with proprietary ICS/SCADA networks and devices, together with the need for external vendors to provide remote maintenance and support, create an ideal target profile for hackers and terrorist attacks. Traditional IT security solutions typically cannot handle adequately the proprietary nature of the ICS/SCADA world.

NextNine has over 10 years of experience in OT security, and has purpose-built its Remote Secure Site (SRS) solution to deal with these unique challenges. Top tier critical infrastructure companies along with 5 of the 7 largest industrial vendors have standardized on NextNine, reaching nearly 5000 installations globally.

NextNine has been recognized by the White House for its leadership in the efforts to improve critical infrastructure cyber security. The company has received ISO/IEC 27001:2013 certification, assuring that it operates a comprehensive security program and manages information security risks effectively.

Technologies & products

NextNine's Remote Secure Site (SRS) solution is an industrial strength software platform delivering robust, customizable and field proven OT security management. Its centralized security management enables companies to enforce security policies, reduce cyber risks, gain visibility into vulnerabilities and meet compliance requirements.

Objectives / Target companies

The company is seeking cooperation with System Integrators and MSSPs that deal with Operational Technology (OT), and to expand its customer base that is currently comprised of oil, gas, mining, pharma, chemicals, energy, manufacturing, defense, nuclear and critical infrastructure facilities.



Category: Renewable Energy
www.qnergy.com

Company profile

Qnergy is focused on the development and manufacturing of advanced Stirling engines, which convert Thermal Energy into Electrical Energy with very high efficiency, remarkable reliability and attractive cost per Watt generated. Qnergy's products are suitable for various applications, such as micro-combined heat and power (CHP), GenSets for the Oil and Gas industry, solar power generation and solar CHP, liquefied natural gas, and more.

No. of employees: 45

Background of the company

Qnergy was established in 2009 by Ricor Cryogenic & Vacuum Systems (Israel), a world leader in Stirling devices. Ricor's proven technology has more than 30% of the global market share for space and defense applications. Ricor manufactures 10,000 Stirling devices annually

On December 2013, Qnergy has acquired the assets of Stirling developer Infinia Corporation Inc. (US), including assembly plant with 18,000 engines/year capacity.

Examples of past projects

Qnergy partners with one of the world's largest manufacturers of residential and commercial water heating equipment and boilers for market introduction of a very efficient and cost effective micro-CHP system.

During 2013, 1.5MW Utility-scale Solar Stirling Dish field was successfully installed in Tooele Army Depot, Utah, USA. Currently the company is working to commercialize its product in the O&G space together with a service provider company.

Technologies & products

Free Piston Stirling technology offers the perfect solution for the energy market's needs utilizing a distributed generation technology enabling electricity production that captures heat generated from combustion of a fuel source and using it for electricity generation and local heating purposes, e.g. hot water.

Since an external burner drives the engine, it can operate using virtually any fuel source (e.g. oil, gas, solar, wood, natural waste). Stirling engines have a regenerative heat exchanger that allows them to re-use their heat, making the Stirling cycle so efficient. Another key attribute is the fact that the engine has **ZERO maintenance** and life expectancy of **more than 60,000 running hours with no need for maintenance or repair**.

Objectives / Target companies

Qnergy is implementing its innovative technology solutions within various applications, such as: Oil & Gas generators, multifamily and small commercial micro CHP and off-grid generators. Qnergy is penetrating the market using an OEM model, working with strategic partners such as Oil and Gas service providers, Boiler manufacturers, and Energy utilities as well as development partners. The company is looking into a model where its partners are providing the branding, marketing, sales and distribution of the complete solution.

Qnergy is looking for investors and strategic partners in order to boost the execution of its strategy plan.



Secure Networking for Critical Infrastructure

Category: Energy Efficiency, Smart Grid, Renewable Energy, Energy Storage, Green building

Sub Category: Analyzing & Control systems, Monitoring & Control, Energy Management, Demand Response, Smart Metering, Energy Management, Grid, PV, Wind Energy, Off Grid, Rechargeable Batteries, Super Capacitors, Storage for the Grid

www.radiflow.com

Company activity in a nutshell

RADiFlow is providing secure communication solutions for critical distributed automation applications. Our security tool-set includes SCADA IPS, Encryption and Identity management. This security tool-set is optimized for distributed automation deployments of utilities by using a service-aware security engine that is integrated into ruggedized communication platforms to be deployed in the edges of the operations network. Such a distributed network-based security deployment protects against an attacker that gained access to the internal operational network.

Examples of projects

Smart Grid over fiber and cellular in Scandinavia Sub-station automation in HV IEC61850 sub-stations in India SCADA access along a Gas Pipeline in the US Surveillance and Paytoll automation along a Highway in central Europe Sub-station automation for legacy serial devices in MV sub-stations in Brasil.

Technologies & products

RADiFlow developed a SCADA deep-packet-inspection software engine that runs on a combination of distributed service-aware site gateways and a central security server. Our SCADA IPS solution is using a combination of user-authentication and deep-packet-inspection to provide a strict role-based validation of the SCADA sessions at each access point ensuring that any abnormal activity in the internal SCADA network is detected and blocked.

Objectives / Target companies

Local distributor active in the sectors of industrial automation and/or utilities. System integrator for critical infrastructure applications A vendor of automation solutions.



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