

IENE Company Profile

TERNA ENERGY: Greece's First Multinational RES Company

TERNA ENERGY is a well known Greek energy company focusing on renewables and wind energy in particular, which has been active since the late 1990's having pioneered some of Greece's first wind farms. What is lesser known is that the company is one of the few European based RES companies with significant operations outside the continent having invested heavily and consistently in the demanding but highly promising USA wind market over the last five years. That is in addition to having developed several state of the art wind farms currently in operation outside Greece, in Bulgaria and Poland. With almost 50% of its investment portfolio now being developed outside Greece, TERNA ENERGY SA could rightly be called Greece's first multinational renewables company.







Today the company has 738 MW of wind projects in operation around the world with another 245 MW, under construction or ready to be built (see Table A) while it has in the pipeline a further 5,200 MW. Consequently, TERNA ENERGY is very near in achieving its goal of having 1,000 MW of wind installations operating worldwide.

TERNA ENERGY SA is rightly regarded as Greece's leading IPP company, a developer and operator of Renewable Energy Projects with a capacity that spans from site investigation and assessment of available renewable energy potential, to the design, licensing, construction, as well as the operation, maintenance and commercial exploitation of RES projects. In addition to wind energy TERNA ENERGY is also active in hydroelectricity, photovoltaic, biogas and waste management projects. In this sense TERNA ENERGY commands a unique position as RES integrator.

The "IENE Company Profile" is an occasional communication published by the Institute of Energy for SE Europe in its effort to broaden the dialogue on current energy issues of regional and global interest. A Company Profile, as the name implies, focuses on a particular company engaged in one or more areas of activity in the broad energy field. The scope of the "Company Profile" is to focus on the achievements and plans of prominent energy companies and organizations which through their work paradigm could provide inspiration for leadership, strategy and innovation. Material used for a Company Profile may come from published sources but also from original input contributed by IENE's staff and research associates.

TERNA ENERGY, being a member of one of Greece's leading business groups, GEK TERNA Group of Companies a €1.0 bn year turnover group, enjoys strong synergies from the group's presence in South East Europe, Middle East and North Africa in construction, concessions, real estate, industrial production, as well as thermoelectric stations and cogeneration units. In addition, TERNA ENERGY undertakes the construction of energy projects as an EPC contractor in the private and public works sector.

Table A. Terna Energy RES project portfolio

		In operation (MW)	Under construction or ready to build (MW)	Pipeline (MW)
	Wind Energy >	711	245	4841
	Hydroelectric Projects >	18	-	183
	Hybrid Projects >	-	-	139
	Solar Energy >	8.5	-	15.1
	Biogas >	1	-	19
	Pumped Storage Projects >	-	-	3100
Total: Capacity in MW		738.5	245	8297.1

TERNA ENERGY is one of Greece's few vertically organized RES companies undertaking the development, construction, financing, and operation of a wide range of renewable energy projects (wind, hydro, solar, biomass, waste management). With a strong portfolio of RES projects around the world in operation, under construction or in an advanced stage of development, the company has established a lead in Greece, with a footprint in Central and South East Europe, as well as in the USA.

Since its setting up in the late 1990's TERNA ENERGY has been active in common efforts and initiatives in support of renewables, and hence participates in local and international initiatives to further promote their use. TERNA ENERGY is a member of the European Renewable Energy Federation (EREF) while the company also participates in the WISE Power project, funded through Intelligent Energy Europe and seeking to foster social acceptance of onshore wind projects by supporting and facilitating effective social engagement, and innovative local financing arrangements.

TERNA ENERGY also actively participates in the Greek Association of Renewable Energy Producers, (www.hellasres.gr) which is a respected and reliable body with deep knowledge on RES issues in Greece and has over the years made significant interventions, especially on legal and regulatory affairs. The Greek Association of RES

Producers also takes initiatives in organizing public awareness campaigns, whereas it participates in international associations and institutions (EWEA, EREF).

Explaining the company's strategy, its CEO Mr. **Manolis Maragoudakis** says that TERNA ENERGY is committed to sustainable development and the priority that green energy has in achieving a sustainable world. "We consider that energy is the key driver for the development of our society and we are committed in building a sustainable energy future for the world by increasing the use of Renewable Energy Sources" Mr. Maragoudakis says and stresses that "The key goal of the company is the establishment of a competitive position in the RES projects' chain, from development to energy production, building a strong position in a portfolio of technologies, with a strong presence in Greece and abroad. A top priority for the company remains the expansion of its installed capacity, according to its current investment plan. The strengthening of its leadership position in Greece is seen through the further expansion of its international presence".



One of TERNA's latest wind projects on the rocky and uninhabited islet of St. Giorgio, located south west of Cape Sounion in the Saronic Gulf with 70 MW of installed wind capacity. Electricity produced at St. Giorgio is channeled via a 20 km underwater cable to the mainland grid.

"Holding a diversified portfolio of technologies, maintaining a strong position in wind, on shore and off shore, and expanding in solar, hydro and biomass are equally strong and constant objectives", notes Mr. Maragoudakis. "Exploiting the Group's competencies in the RES value chain by gaining experience in areas such as submarine energy transmission cable laying, pumped energy storage and combined solar-thermal energy production has lately emerged as another priority in the company's ever evolving technical capabilities", says Mr. Maragoudakis.

A Stellar Financial Performance

With the company's goal to reach 1,000 MW of a globally operational wind capacity not very far off, its management is exuberating an air of confidence rarely seen nowadays in Greek companies' boardroom. The company's stellar financial performance over the last two years comes to reinforce this spirit of optimism which, alas, is based on solid achievements in the ground but also on the financial front. Without doubt, 2015 was positive for TERNA ENERGY's finances as net cash flows from its operations started showing strongly in its accounts.

That year, sales were reported at €198.6 million, having registered an improvement of +25.5% compared to 2014. Likewise, EDITDA was reported at €99.3 million also sharply up at +34.1% compared to the previous year, EBIT at €60.3 million, compared to €41.8 million to 2014 and finally net income was reported at €17.4 million, a huge increase (198.4%) from the year before when only €5.8 was reported as profit.

The positive streak in the company's finances continued well into 2016 as the latest consolidated 9 month period results show. With total sales amounting to 148.3 million euro compared to 135.2 million euro during the 9-month period of 2015, increased by 9.7% with income from the electricity production division amounting to 104.7 million euro compared to 102.5 million euro in the corresponding period of 2015, posting an increase of 2.1%. Equally strong were sales of the electricity trading division which amounted to 24.6 million euro compared to 20.4 million euro in the corresponding period of 2015, posting an increase of 20.6%.



TERNA's economic success is reflected in the satisfactory performance of its stock in the Athens Exchange

The company's strong financial position is evident as EBITDA amounted to 78.9 million euro in the last 9 months of 2016, compared to 75.2 million euro in the corresponding period of the previous year, increased by 4.9. Furthermore, earnings before interest and tax (EBIT) amounted to 48.7 million euro compared to 46.5 million euro, increased by 4.7% with earnings before tax amounting to 22.1 million euro compared to 25.2 million euro in the 9-month period of 2015, a decrease by 12.3%. Net earnings after minority interests amounted to 13.9 million euro compared to 15.8 million euro, decreased by 12%. As the company observes, net earnings were negatively affected by foreign exchange differences which were negative by 1 million euro during the current period whereas during the respective period of the previous year were positive by 1.9 million euro.

According to the company's latest filing in the Athens Exchange, where the company has been listed since 2008, the Group's net debt position (bank debt minus cash & cash equivalents) at the end of the nine-month period of 2016 amounted to 394 million euro compared to 372 million euro at the end of the previous quarter of 2016 reflecting the strong capital expenditures of the Group.

To finance its investments and its fast evolving wind farm construction programme in Greece and in the USA, TERNA ENERGY does not rely on local financing but is successfully tapping global and regional funds. Its agreement with EBRD last November for a 60 million bond loan is a typical example. In this instance, the funding consisted of a Euro 50 million bond provided by EBRD and Euro 10 million by Piraeus Bank with funds being used to finance the development, construction and operation of a 48 MW wind farm in Central Greece.

Likewise, to fund the company's investment plan in USA TERNA ENERGY entered into a co-operation agreement with Copenhagen Infrastructure Partners (CIP). The first phase of the agreement's implementation concerns the 155.4 MW Fluvanna I wind farm that TERNA ENERGY is currently constructing in Scurry County of Texas. CIP will contribute \$61 million to cover part of the development cost with total project investment exceeding \$250 m. Goldman Sachs will, subject to satisfaction of certain conditions precedent, make an equity investment in a holding company that owns the project following the commencement of commercial operations of the project while financing during construction will be covered by a group of banks including HSBC, NordLB, Morgan Stanley and Rabobank. Fluvanna I uses GAMESA wind turbines and is expected to commence commercial operations in Q4, 2017. "Financing our investments and operations in the USA is considerably different from the model used in Europe", says Mr. Maragoudakis, "in the USA, the predominant form of financing is linked to the tax credit scheme and combines tax equity financing, debt financing and contribution of own funds to the tune of 15-20%", TERNA ENERGY CEO added.

Biogas Projects and Waste Management

As Greece's RES sector started slowing down from 2013 onwards as the government was grappling with huge deficits in the electricity market operation, unable to continue paying over generous feed in tariffs to an outsized photovoltaic sector,

TERNA ENERGY started looking more actively in other areas including the management and energy utilization of waste and biomass.

The company has already acquired substantial and specialized expertise and technological know-how in the field, which enables it to undertake integrated waste management projects. The company aims to further intensify its acquisition of expertise and related technical skills through strategic partnerships with major international firms, in order to capture a sizable share in the continuously developing sector of waste management in Greece and abroad.



A latest TERNA Biogas plant in the rural area of Partheniou, Municipality of Chalcedon, in the Prefecture of Central Macedonia

Following considerable investments and technological tie ups with foreign specialist firms, TERNA ENERGY is now capable of offering innovative, financially viable and efficient solutions with regard to the reduction of pollution generated by the ineffective or even non-existent management of municipal solid waste, as well as of residues or by-products of agricultural, forestall or stock breeding activities in the country. This is made possible by the company's acquired working experience and specialized know-how obtained through its strategic partnerships. Depending on local requirements, the choice can be either the production of electric energy, soil conditioners, fertilizers and/or other products.

In this context, TERNA ENERGY has participated in all the big public tenders throughout Greece over the last two years, proposing integrated and optimized solutions, on a "project by project" basis. Through this approach, TERNA ENERGY believes that it can offer the Greek State, and its various municipalities, a wide spectrum of technical, financial and socially viable solutions, coupled with the production of useful products, while complying fully with the strictest Greek and EU environmental standards.

An Ecological Approach

In pursuing its various goals in Greece and abroad, TERNA ENERGY participates fully in local community affairs contributing know how and funds where necessary towards improving welfare services and providing necessary amenities. Furthermore, the company makes strong efforts to inform local communities about critical energy issues whom it often seeks to engage in the decision making process. It also utilizes specialized consultants and local media in order to explain its position and attain its goals.

The company has over the years developed a three pronged approach when it comes to utilizing RES for commercial use and social benefit. Firstly, the company invests its own capital in the development of new electrical energy production units, whether through wind farms, photovoltaic or hydro. Secondly, the company develops new installations by utilizing its own specialized personnel and associated infrastructure and equipment e.g. for wind measurements, energy capacity planning, permission and construction procedures and thirdly the company owns and commercially operates its various energy units.

Right from the start of the company's operations back in 1997, TERNA ENERGY was a firm believer in the vital role that Renewable Energy Technologies could play in providing clean energy to safeguard the environment and minimize the impact from conventional energy sources. The aim of the projects which TERNA ENERGY develops is the utilization of the wind, solar or hydro, potential of specific geographical areas in order to produce clean electricity. The proposed investment utilizes an inexhaustible natural resource without burdening the environment as there is no waste production. It also helps lessen natural energy dependence and thus contribute towards energy autonomy. Indirectly, this has a positive impact on a national scale as it helps save fossil fuels and avoid the use of other solid or liquid fuels that would otherwise be necessary to produce the same amount of electricity and which, moreover, during combustion will produce air pollutants, such as greenhouse gases, ozone depletion, acid rain etc. with negative environmental impact.



A TERN wind farm in Elmore County, Idaho, USA



Partial view of a TERN wind farm at Kutno County, LODZ Voivodeship, Poland

As TERNAL ENERGY continues to expand in Europe and the USA with new RES installed capacity being added steadily, the company is harbouring plans for further diversification of its technological base and investment portfolio. With the region of Peloponnese in Greece soon expected to enter into a government approved agreement with TERNAL ENERGY, on the basis of a public private partnership (PPP) scheme, for the waste collection, processing and disposal, including power generation of the whole region, the company is now contemplating its next move. This will most likely be a big leap forward in consolidating its position in the waste management- biomass sector with wind energy.

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