

International **T**echnological **A**pplications  
group of companies

**30 years in  
green energy  
& environment**

**FIELDS OF ACTIVITY**

**RENEWABLE  
ENERGY SOURCES**

**WIND**

**SOLAR**

**GEOHERMAL**

**BIOENERGY**

**HYDRO POWER**

**COGENERATION  
OF HEAT & POWER**

**CHP PLANTS**

**GREENHOUSES**

**DISTRICT HEATING-  
COOLING**

**DRYING PLANTS**

**ENVIRONMENTAL  
TECHNOLOGY**

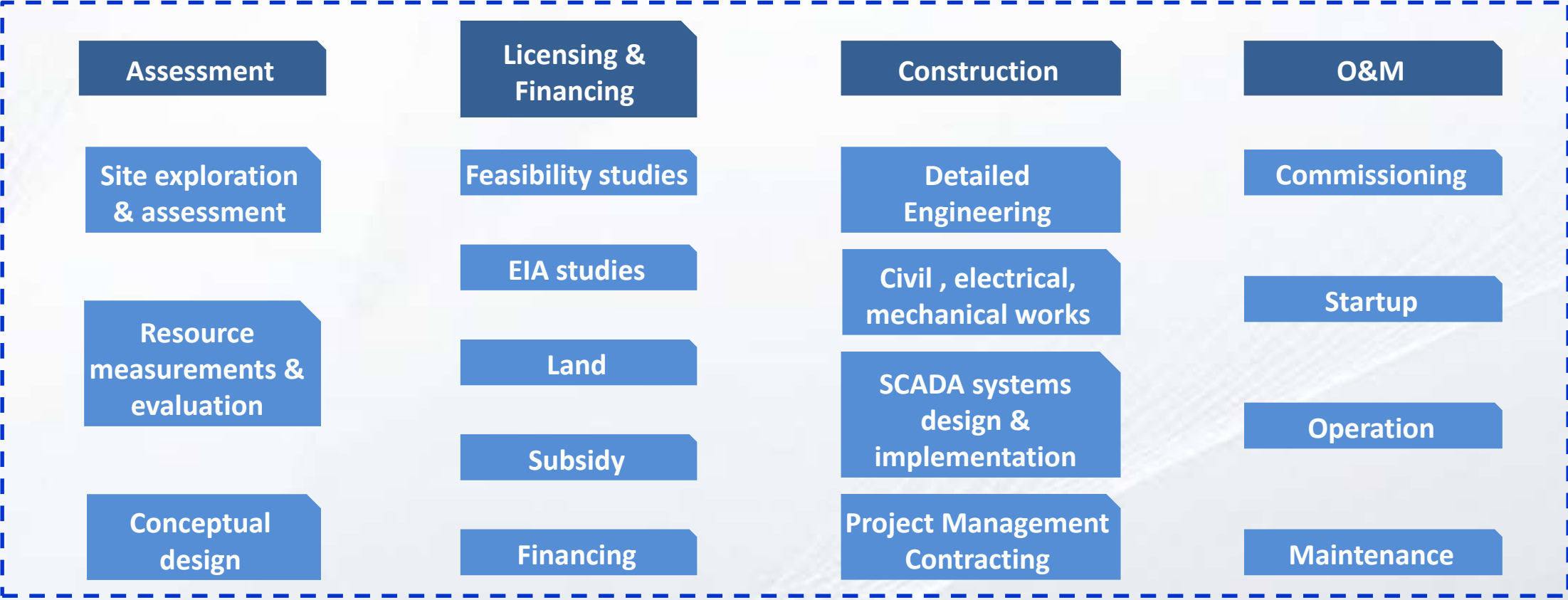
**DESALINATION**

**WASTEWATER  
TREATMENT**

**SOLID WASTE  
TREATMENT**

**RECYCLING**

**PROJECT ACTIVITIES**



**CONSULTING & MANAGEMENT**

**BOO & EPC TURNKEY PROJECTS**

**EQUITY PARTICIPATION**

INTERNATIONAL COLLABORATIONS

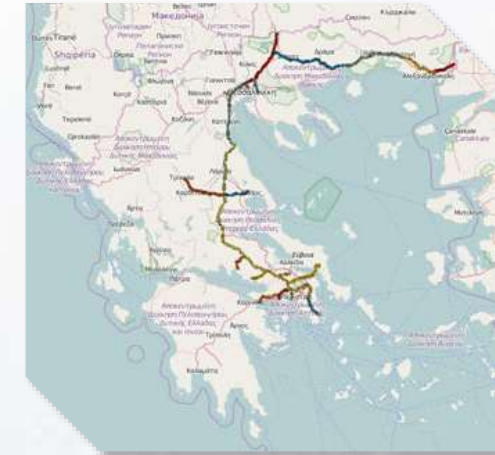


### The vision

To constantly update and expand our expertise in an evolving global energy market and to provide top level consultancy services.

Focus on critical infrastructure and emerging green technologies.

Development of pioneering projects to support a sustainable though competitive development



### Services offered by ITA & its collaborators

- Feasibility studies
- Resource assessment
- Engineering
- Licensing
- Procurement & Construction
- Project Management

EPC



### Business Sectors

- Natural Gas
- Refineries
- Power Plants
- Renewable Energy
- Underground fuel pipelines
- District heating networks
- Industrial buildings



### Reference list

- Greek high-pressure national natural gas system
- CHP power plant with district heating network of the city of Serres
- Sidirocastro wind farm in Northern Greece
- Bourlari wind farm in Evoia
- CHP Power Plant with 10ha greenhouse in Drama
- Revithoussa LNG terminal in Attica
- NG Power Plant of ELPEDISON POWER S.A. in Thessaloniki
- CCGT power plant of Protergia S.A. in Viotia
- CCGT power plant of Korinthos Power S.A. in Korinthia
- CCGT power plant Heron II in Viotia
- CHP power plant in Revithoussa LNG terminal in Attica
- LPG Train Loading Station in ELPE Aspropyrgos refinery



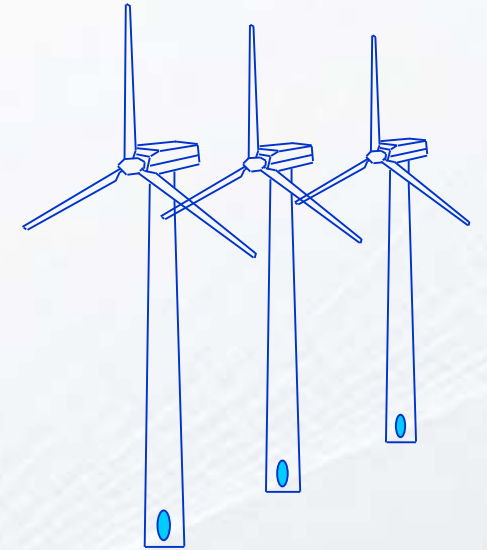
## Wind Farms

### In operation:

- 260 MW with PPC and private investors
- Studies for a plethora of wind farms
- Wind measurements with 130 wind masts in Greece (ISO certified)

### Under development (approx. 3 bio €):

- 900 MW on shore
- 450 MW offshore: 1<sup>st</sup> application for license in Europe



1<sup>st</sup> in Greece



First wind turbine  
installed in **1984** !!!

**WIND ENERGY**

**Milos Wind Farm**



**Bourlari Wind Farm**



**Syros Wind Farm**



**Sidirokastro Wind Farm**



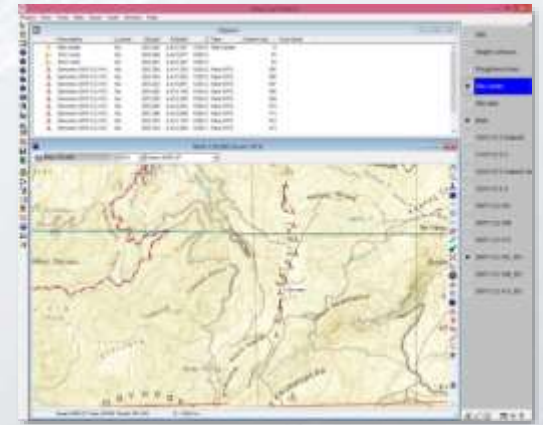
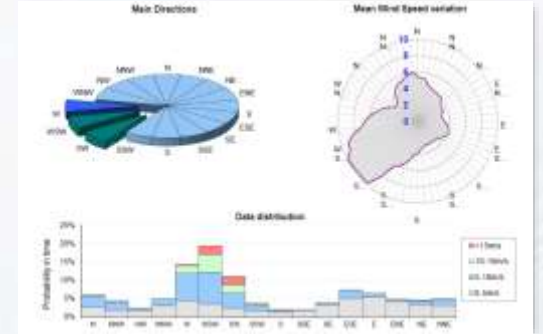


**WIND FARM ERECTION**





- **Wind measurements**  
Using latest technology meteorological equipment
- **Wind potential simulation and evaluation**  
Using special sophisticated simulation software
- **More than 130 meteorological masts**  
in Greece & Bulgaria
- **Wind potential evaluation studies for**
  - Wind Farms of 260 MW in operation
  - Wind Farms of 1.350 MW under development



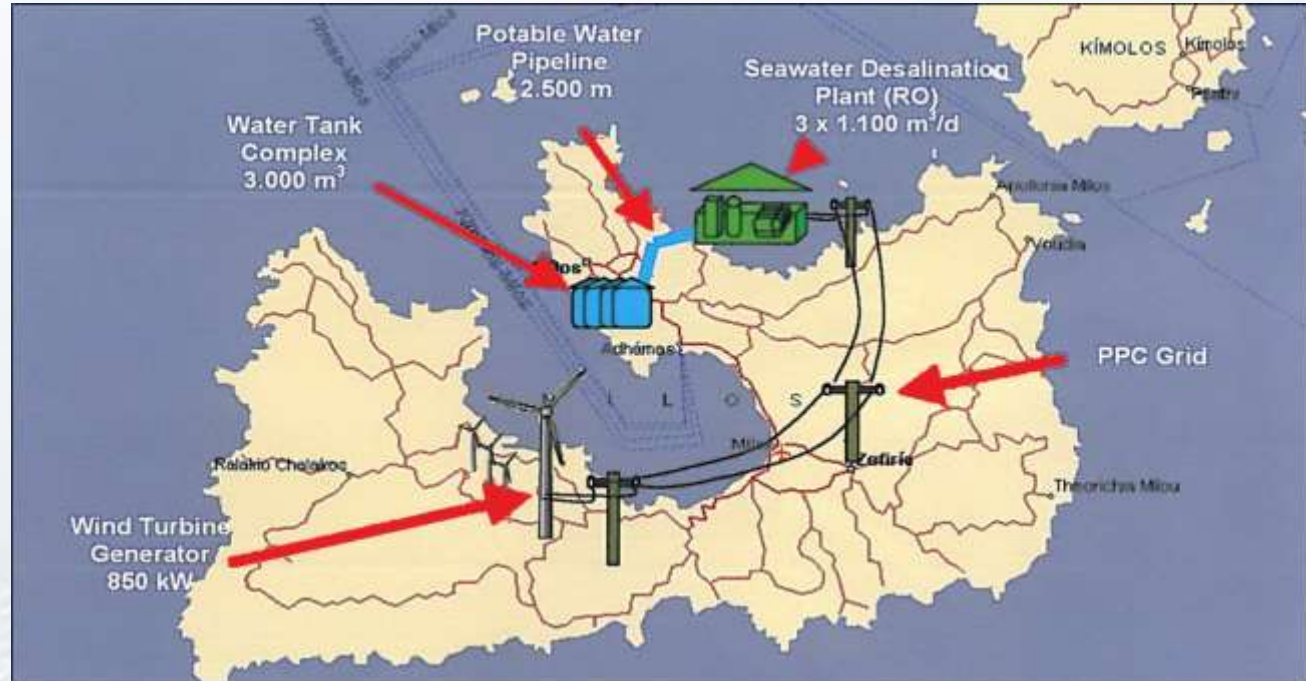
**DESALINATION w/ WIND ENERGY**



**AEOLIKI MILOU S.A.**  
MEMBER OF ITA GROUP

1<sup>st</sup> in Greece

**R.O. Desalination  
with the use of Wind Energy  
on the island of Milos, Greece  
Prod. Capacity 3.300 m<sup>3</sup>/d  
Investment 5 mio €**







### Project highlights

- Powered from 850kW wind turbine
- State-of-the-art Reverse Osmosis
- Production capacity 3x1.100m<sup>3</sup>/d
- Seawater feed
- Top quality potable water
- Transmission network 3km
- Storage tank complex 3.000m<sup>3</sup>
- Island demand coverage 100%
- Construction Budget € 5 mio
- Designed, built & operated by ITA



### Photovoltaic plants

#### In operation:

- 100 kWp PV power plant in Ovorous, Municipality of Tegea, Arkadia

#### Under development:

- PV plants of 15 MWp in Yaros island, Greece
- PV plants of 9 MWp in Drama, Greece
- PV plants of 560 kWp in Crete, Greece
- PV plants of 200 kWp, on Milos and Syros islands, Greece



SOLAR ENERGY – PV

“OVOROUS” PV PLANT IN TRIPOLI, GR

MEMBER OF ITA GROUP



Project highlights

- Monocrystalline PV technology
- Seasonally adjustable tilt
- Capacity 100 kWp
- Yield 160 MWh/y
- CO<sub>2</sub> avoided 136 tn/y
- In operation since 2009

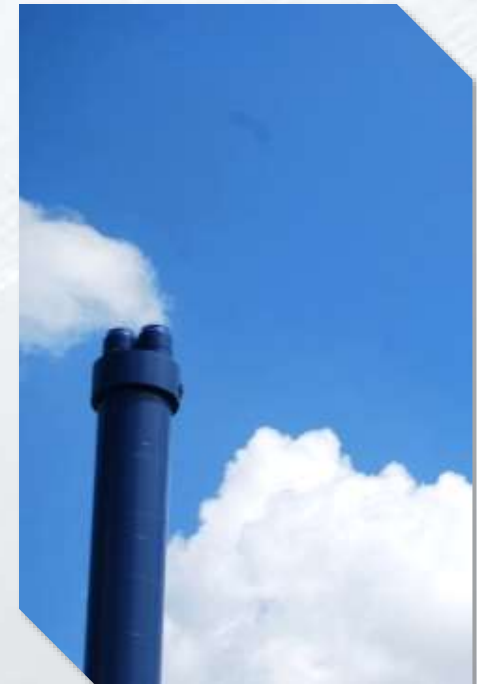


1<sup>st</sup> in Greece

**HiEf C.H.P. Unit with  
District Heating Network  
for the city of Serres**

**16 MWe - 92 MWth**

**Investment € 42 mio**





## DISTRICT HEATING w/ C.H.P.



### Project highlights

- N.G. fueled HiEf C.H.P.
- Total efficiency >88%
- Electric Power Output 16 MWe
- Thermal Power Output 92 MWth
- Distribution Network 50 km
- Buildings connected 850
- Apartments served 10.000
- Minimal emissions
- Construction Budget 42 mio €
- Customer heating cost -30%





1<sup>st</sup> in Greece

**10ha state-of-the-art glass**

**Greenhouse**

**in Drama, Greece**

**Investment            € 20 mio**





GREENHOUSES w/ C.H.P.





## GREENHOUSES w/ C.H.P.



### Project highlights

- N.G. fueled HiEf C.H.P.
  - Total efficiency >88%
  - Electric Power 5 MWe
  - Thermal Power 5 MWth
- 10 ha Hydroponic Glass Greenhouse
  - Product Colored peppers
  - Yield: 2.500 tons/y
  - Growth accelerated by CO<sub>2</sub> injection (CHP exhaust gases)
  - Certified by GLOBALGAP as “Health Safety Product®”
  - Biological pest control
  - No hormones



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1<sup>st</sup> in Greece

**Innovative application of CHP  
in agriculture**

**Alfalfa drying plant  
for the production of animal feed  
(pellets)**

**Under development**

**Est. Investment Cost     € 18 mio**







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**Operation, monitoring,  
maintenance and ad hoc  
inspection & repair services  
on renewable energy &  
thermal power plants**



- ✓ Top quality services
- ✓ Fast response times
- ✓ Technical and economical precedence
- ✓ International standards of safety



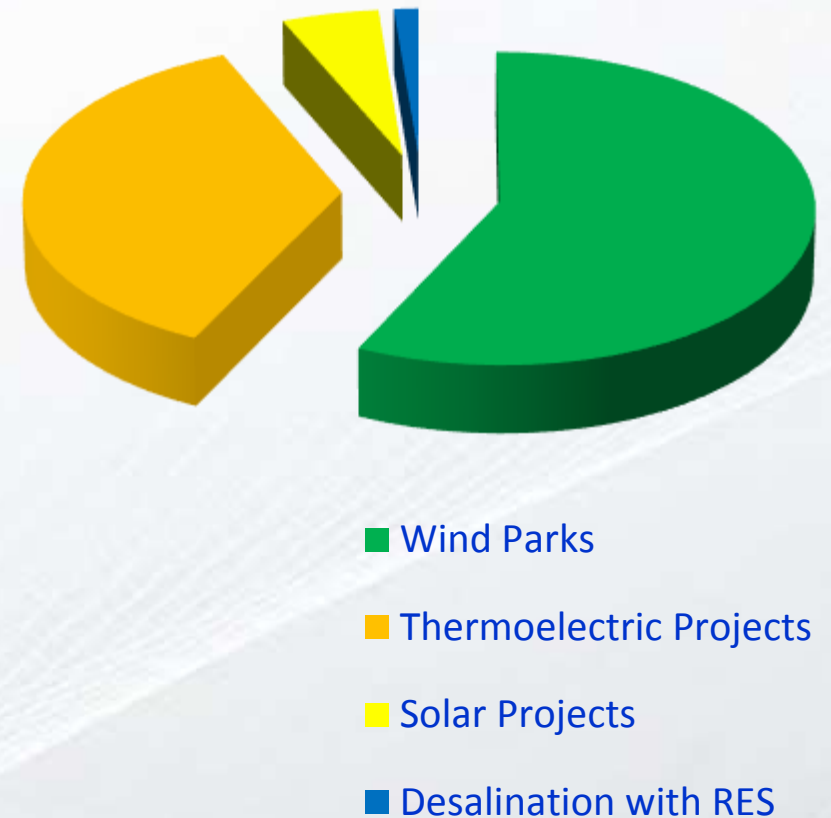
### Highlights

- 15y experienced staff
- Special training in Denmark & USA
- State-of-the-art equipment
  
- Scheduled maintenance
- Preventive maintenance
- Ad hoc repairs
- Corrective maintenance
- Operation monitoring and upgrade
- Expert consulting services in testing & inspection





- **Developing (in Greece)**
  - € 2,2 bio worth of wind projects
  - € 1,4 bio worth of thermo-electrical projects (CHP)
  - € 200 mio worth of solar projects
  - € 50 mio worth of desalination projects
- **Exploring new opportunities in**
  - Solar thermo-electric
  - Hydroelectric
  - Geothermal
  - Bioenergy
  - Hydrogen
  - Waste management
- **Investing in emerging opportunities**  
in the near-Greece region, focused on the MENA & the Balkans.



***Thank you !***

**International Technological Applications**  
group of companies