



Wind Jobs in Greece

Panagiotis G. Papastamatiou

ALL THINGS ENERGY FORUM



ENTEKA S.A.

The oldest Group in Greece, specializing in wind energy and generally in Renewable Energy Sources

01

The activities of the Group started before 35 years, in 1984

02

ENTEKA undertakes and successfully executes every step related to the implementation of RES projects including: i) planning and development, ii) investments and iii) operation and maintenance

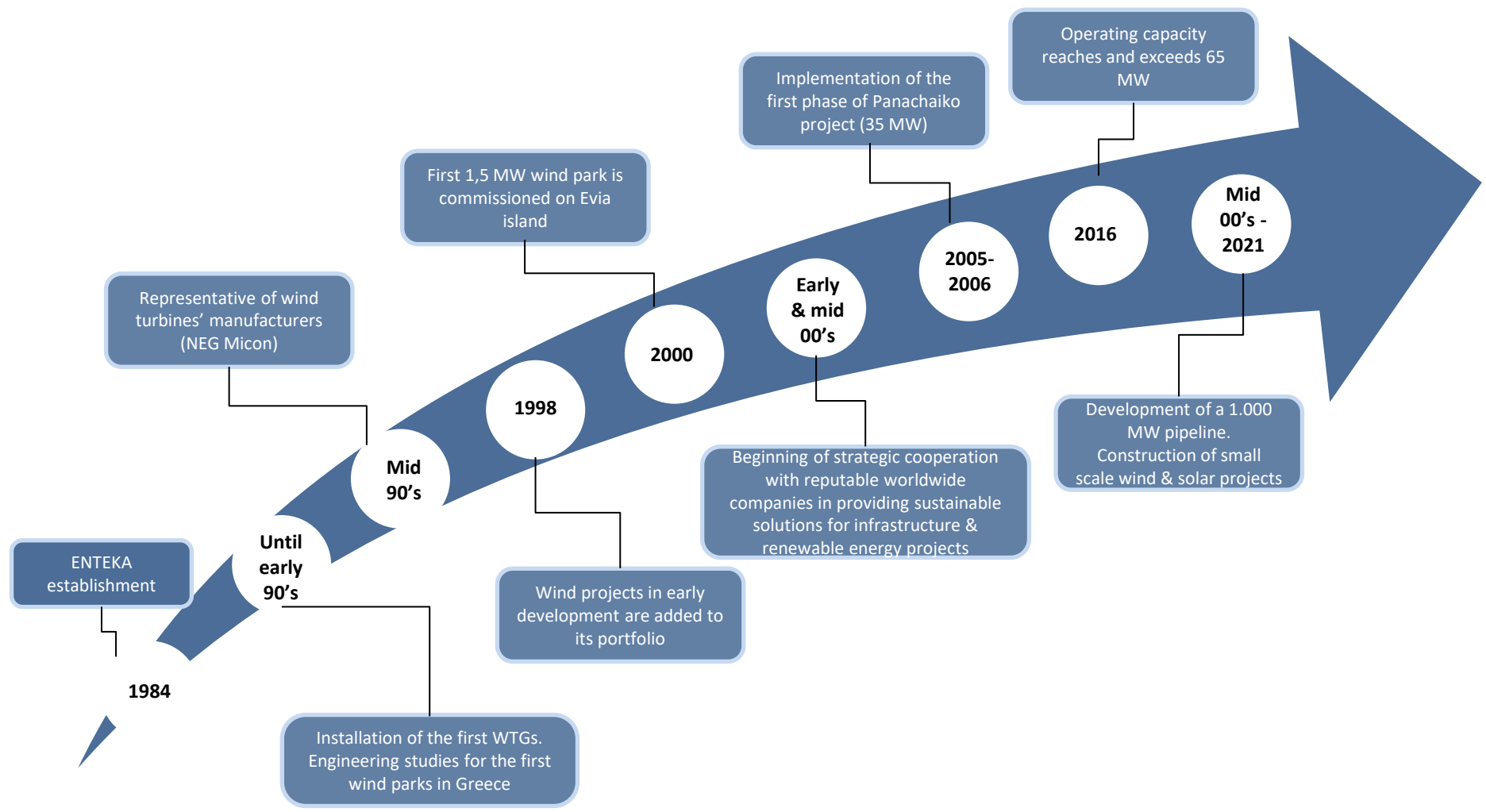
03

The RES capacity installed of the Group is 65 MW, of which: 60 MW in Wind farms, 5 MW Photovoltaic farms and has (mainly through its shareholders) minority holdings with total (attributable) power 8 MW in wind farms.

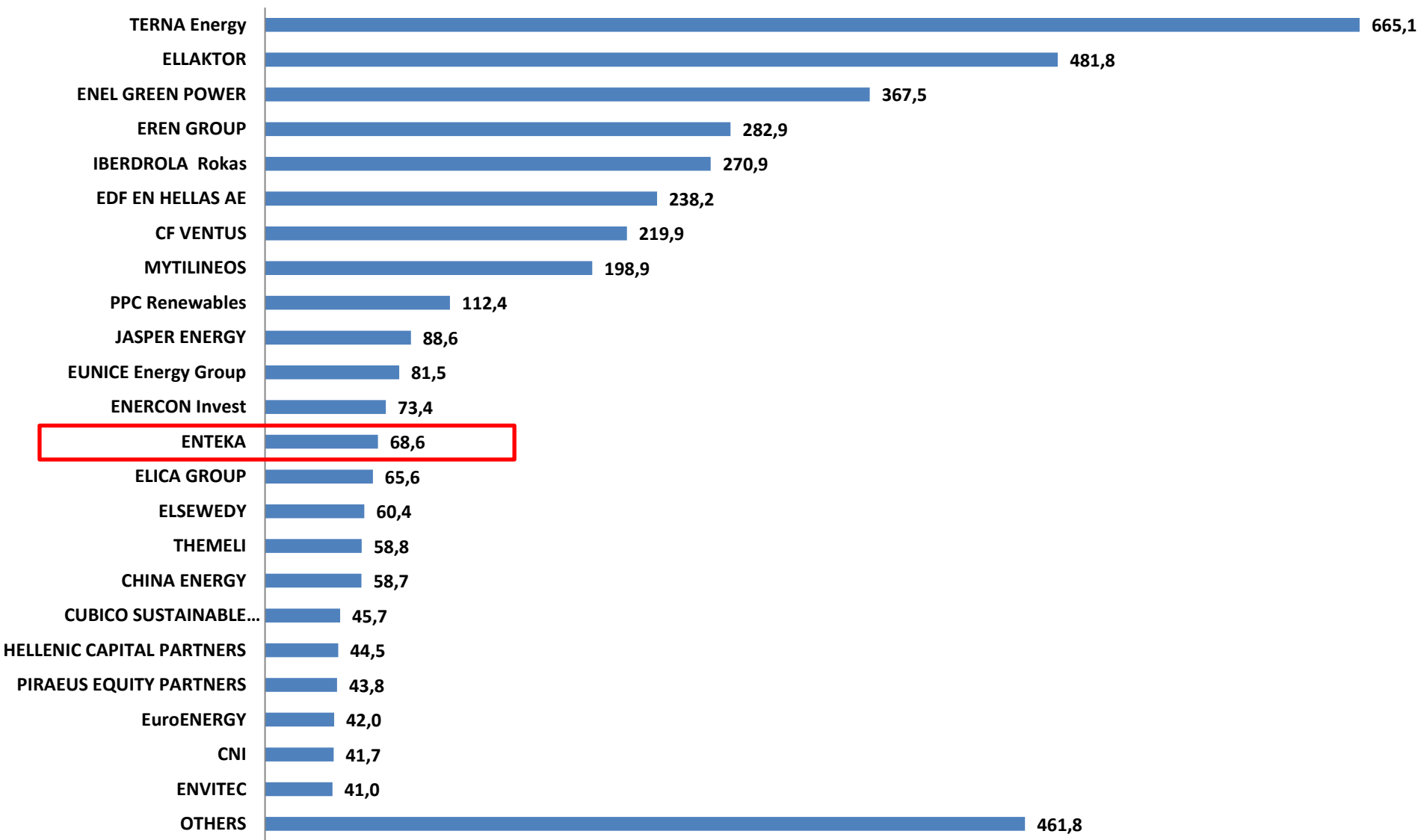
04

ENTEKA are currently developing more than 1.000 MW projects, at several stages of the licensing process.

ENTEKA history in brief



Installed wind capacity in Greece, 2020



1. Development phase



- Analysis and selection of location
- Wind measurements & load factor assessment
- Project design (technology selection, scheduling, budget)
- Permits & licenses, public consultation, coordination with local authorities

2. Construction



- Early pre-construction works
- Cooperation with subcontractors
- Engineering, supervision of construction works
- Commissioning

4. Asset O&M



- Operation and monitoring services
- Preventive and corrective maintenance
- Accounting, financial reporting
- Licensing and regulatory documentation management

3. Investments



- Economic and financial analysis
- Equity financing
- Debt financing
- Assets' ownership



ENORA (developer)

- Site identification & Layout design
- Supervision of wind measurement campaign & Energy production assessment
- Project management of licensing including the elaboration of EIA and other applications & supervision of special studies executed by external experts
- Follow-up towards obtaining necessary permits & licenses
- Investigation of land properties
- Local community issues



PARTNER (strategic investor)

- Cover the external costs (e.g. for wind measurement campaign, for special studies, for land securing).
- Guarantees required by authorities (e.g. Grid Connection), the Banks or the suppliers
- Securing of the funding for the project realization and operation



Business relation

- A development fee for ENORA is agreed in euros/MW
- Part of this fee is paid by the Investor to ENORA in milestones i.e. upon success of specific project milestones
- The rest part is injected by the Investor as equity on behalf of ENORA in the SPV
- ENORA maintains the option to invest more equity up to a maximum percentage
- The Investor provides all the guarantees / coverages / comport-support letters etc. required by the banks for the financing - ENORA has the obligation to pledge its shares in favor of the Bank if required
- If the Investor withdraws before the FID, it pays a penance fee and the project returns to ENORA
- During operation, all the profits are distributed as dividends (after reserves and payments of obligations)
- Each party has a pre-emptive right on the shares of the other party



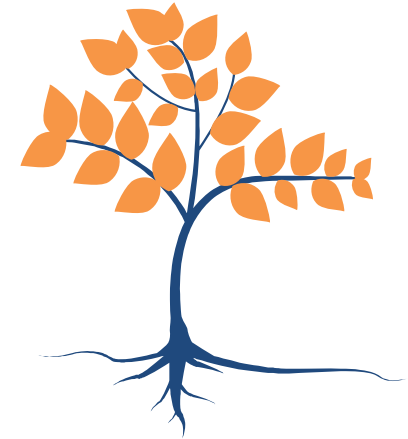
RES Market

- Strategic partnerships in order to implement large scale projects of the pipeline
- Focus on wind energy, onshore and offshore
- Track energy market & RES legislation developments



Business Model

- Continue to develop high quality pipeline with capacity factors and above market average
- Maintain implementation model based on in-house development of assets, maintenance and daily operation surveillance of them
- Refinance of operating assets in order to inject equity in new investments

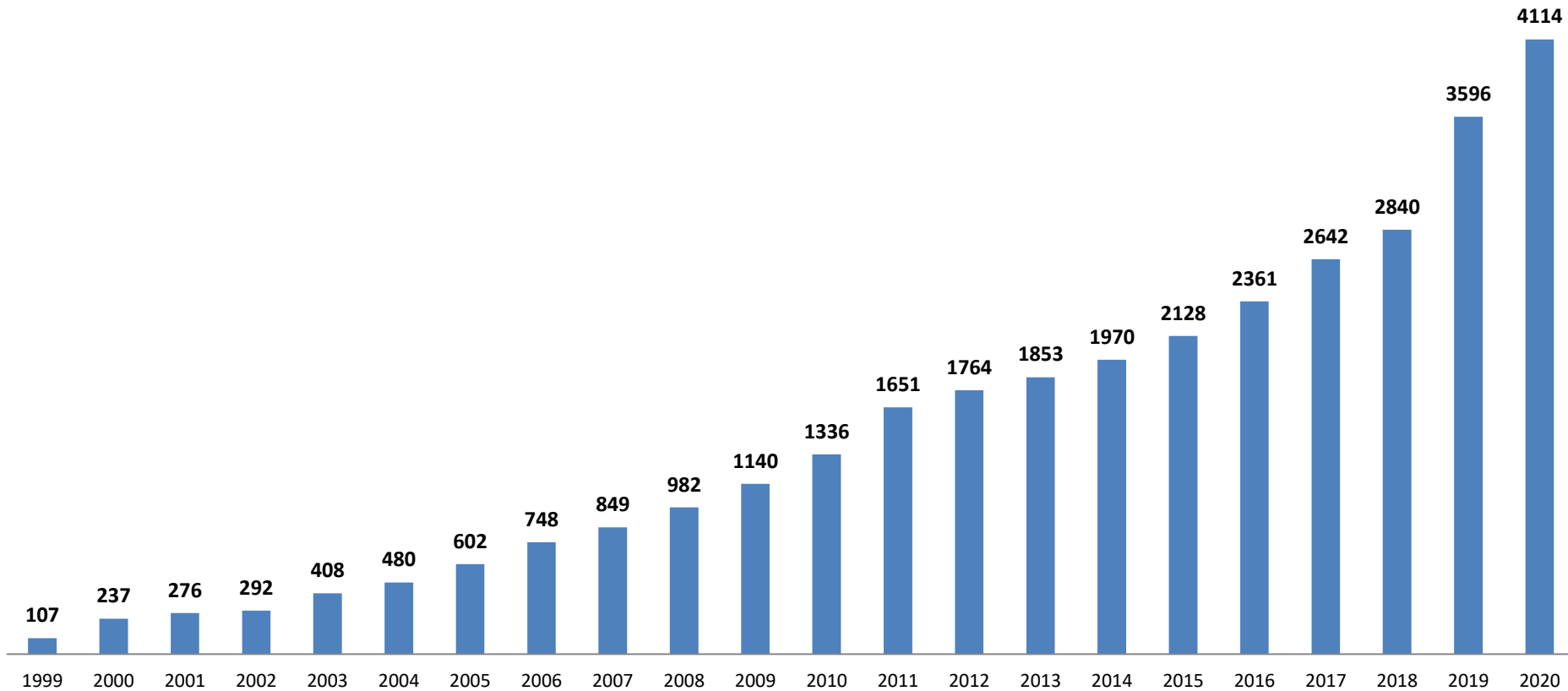


Funding

- Capitalize on available funding sources with no reliance on subsidies
- Maintain strong banking relationships and seek to expand debt availability
- Seek to improve existing debt terms
- Target for full repayment of the bank debt within the next year

HWEA Wind Energy Statistics – 2020

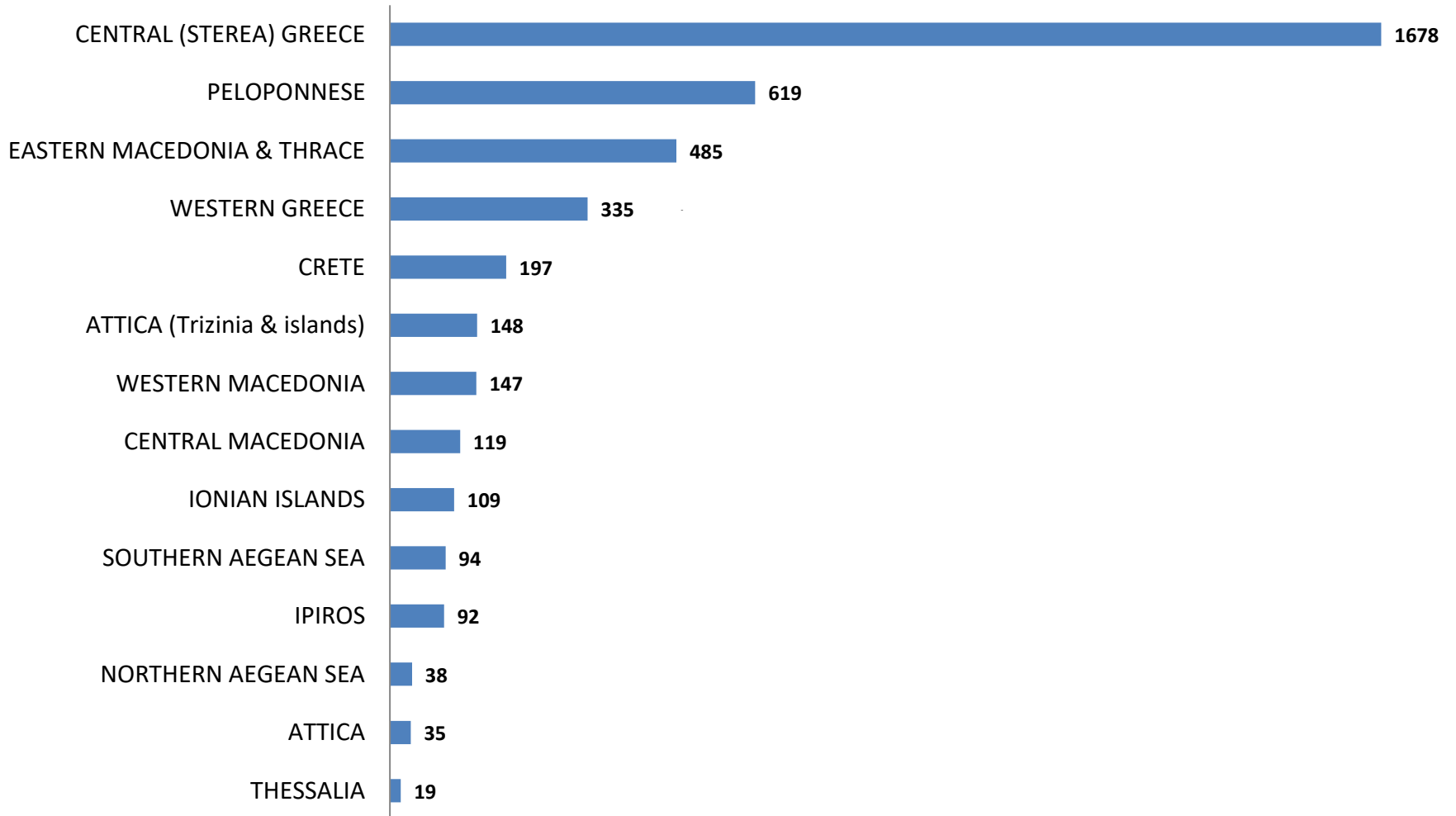
Total capacity to the grid (MW) per year

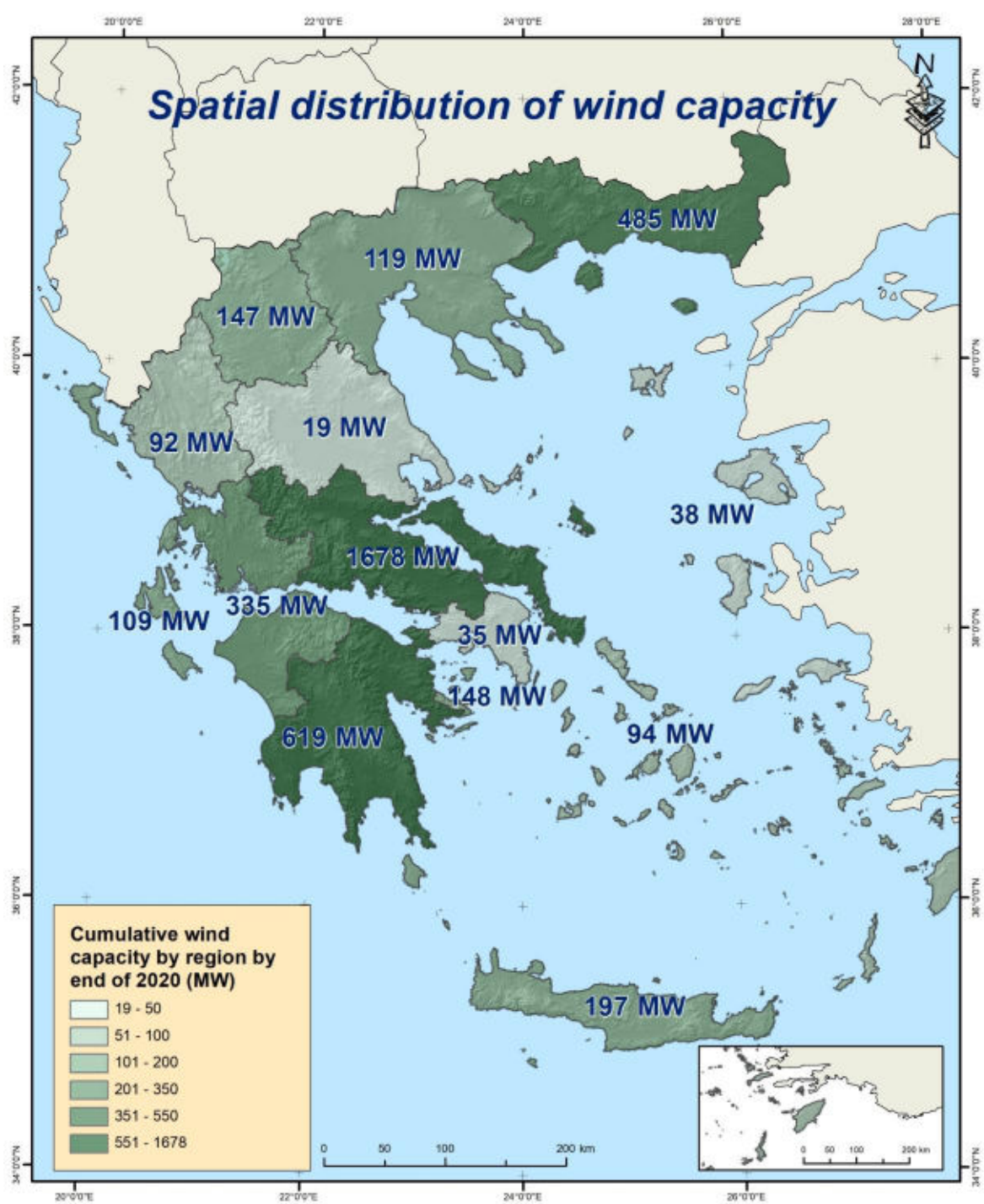


The HWEA Wind Energy Statistics take into account the wind capacity which is in commercial or test operation in Greece and are based on sources from the market actors. HWEA has made effort to crosscheck and confirm the data. However, HWEA does not guarantee the accuracy of them and do not undertake any relevant liability.

HWEA Wind Energy Statistics – 2020

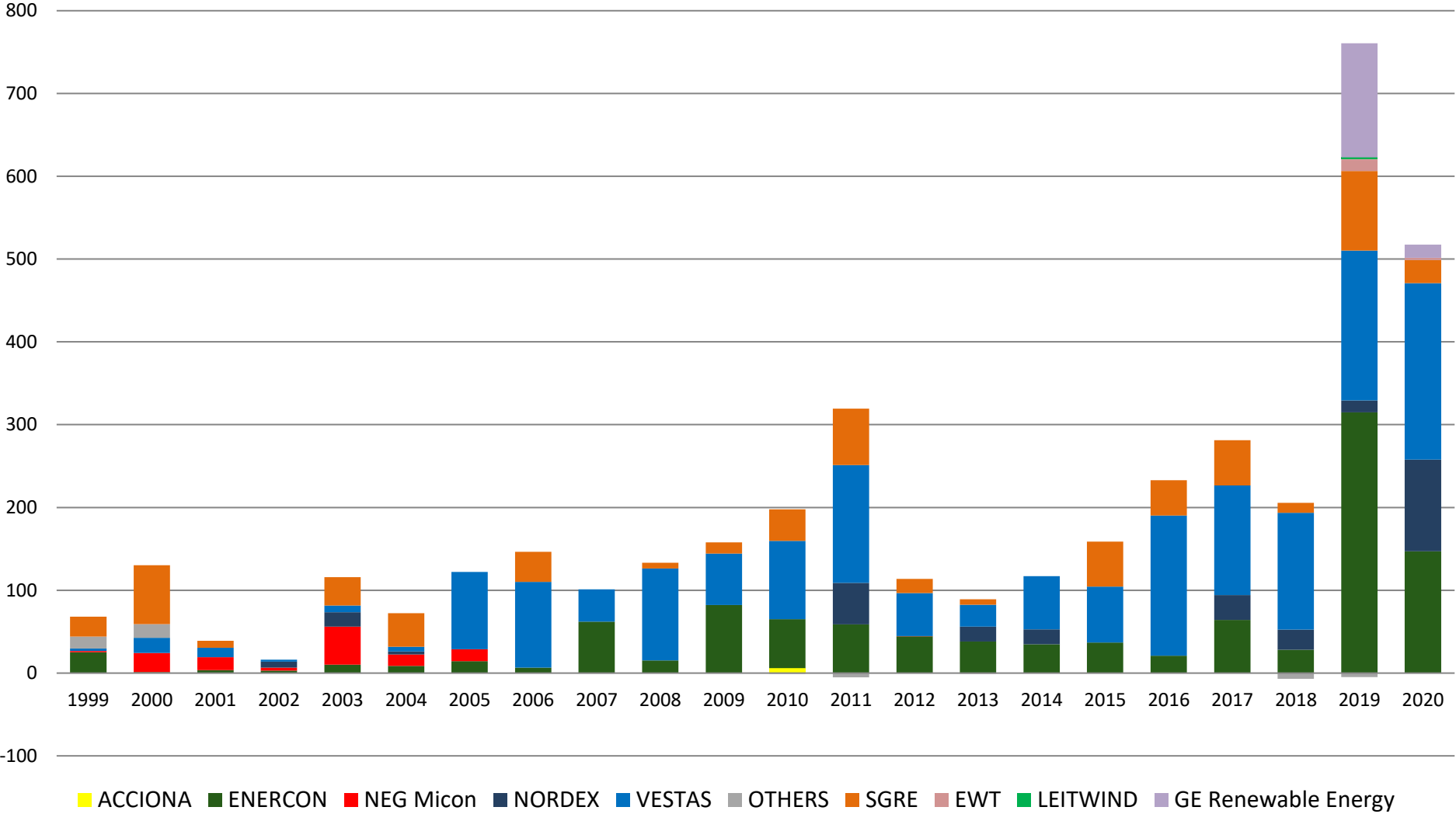
Capacity (MW) per region





HWEA Wind Energy Statistics – 2020

Capacity (MW) per year per manufacturer



Wind Jobs in Greece

From an actual measurement carried out by the Association of Electricity Producers from RES in the first 600 MW of wind farms installed in Greece, it was found that the following jobs had been created:

0.49 full-time jobs / MW in the sectors of development, implementation and operation of the Operators – Investors

0.32 full-time jobs / MW in the sales, maintenance and operation sectors of wind turbine suppliers in Greece

0.19 full-time jobs / MW in other sectors including wind turbine construction

Local Wind Jobs in Greece

The 218.7MW wind farms operating in southern Evia in 2018 and built in the period 1998-2017 had created from their operation: 62 direct permanent local jobs (data 2017), i.e.

0.3 local jobs / MW These are positions of employees who are locally employed in the operation and maintenance of wind turbines

For comparison, it is reported that the first modern private gas station 400MW built in Greece created about 32 permanent jobs, i.e. 0.08 jobs / MW compared to 0.3 local jobs / MW from the wind farms of southern Evia (about 4 times less).

Renewables Jobs in Greece

	2017	2018
Wind energy	3.100	5.100 ^[1]
PVs	1.300	1.800
Hydroelectric	2.000	2.400
Biomass	2.600	2.400
Biogas	1.300	800
Biofuels	11.500	10.900
Solar thermal	2.000	1.800
Heat pumps	1.200	1.500
Waste	100	<100
Geothermal	<100	<100
Total	25.200	26.900

^[1] 1,8 direct and indirect jobs per MW

Visit www.ask4wind.gr

ask4wind
Powered by EΛETAEN

Αιολική Ενέργεια Μύθοι και Αλήθειες

Η Πρωτοβουλία Ask4Wind, της Ελληνικής Επιστημονικής Ένωσης Αιολικής Ενέργειας (ΕΛΕΤΑΕΝ), όπου με επιστημονική τεκμηρίωση και απλότητα, δίνονται απαντήσεις στα ερωτήματα και τις ενστάσεις που διατυπώνονται για την αιολική ενέργεια.



ΣΥΝΟΨΗ

ΠΛΗΡΗΣ ΕΚΔΟΣΗ

[Privacy & Cookies Policy](#)



Wind Jobs in Greece

ALL THINGS ENERGY FORUM