



POWER ENERGY CYPRUS LTD



Private Investments in the Energy Sector

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Regulatory and market conditions are ideal for the investments into the energy sector

Current Market Overview

- Currently, EAC is the dominant generator on the island, covering 83% of electricity generation in Cyprus
- The remaining 17% covered by independent Renewable Energy Sources (“RES”) producers

	Fuel	Maximum Capacity	Thermal Efficiency (2016 data)
Vasilikos Power Station			
3 x 130 MW Steam Units	Heavy Fuel Oil	390 MW	38.08%
1 x 38 MW Open Cycle Gas Turbine	Gas Oil	38 MW	24.33%
2 x 220 MW Combined Cycle Gas Turbine Units	Gas Oil	440 MW	46.0%
Dhekelia Power Station		460 MW	35.65%
6 x 60 MW Steam Units	Heavy Fuel Oil	360 MW	29.71%
2 x 50 MW Internal Combustion Units	Light Fuel Oil	100 MW	41,58%
Moni Power Station		150 MW	24,33%
4 x 37.5 MW Open Cycle Gas Turbines	Gas Oil	150 MW	24,33%
Total EAC installed Capacity		1,478 MW	36.25%

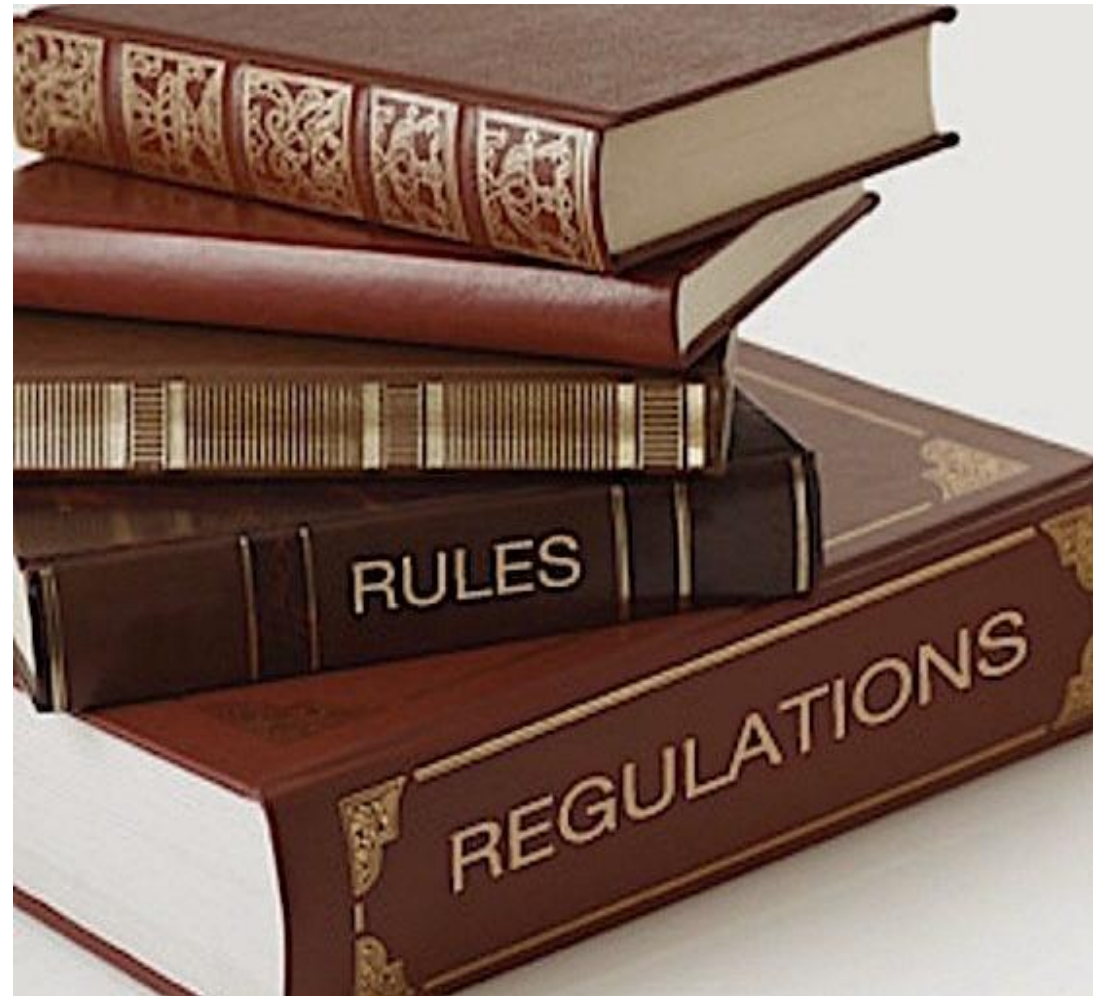
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Regulation has recently changed and adapted to promote private investments in the electricity sector

Regulatory Regime

The regulatory regime supports the private initiatives:

- We salute the new legislation voted in the parliament for the new Market Rules
- In the attempt to promote competition in the market, CERA and the TSO will impose 35% of EAC's total consumption to be covered through the DAM
- **CERA needs to control and protect the liberal market from the incumbent**
- **We welcome any efforts for the liberalization of the market ASAP**

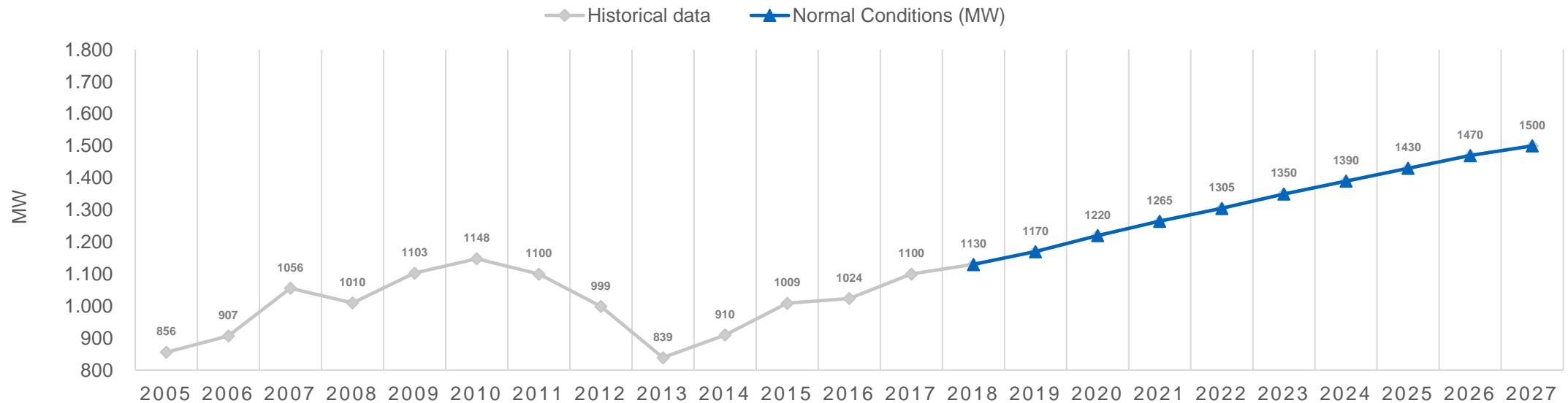


Economic growth is coupled with rising demand in electricity

Demand side mechanics and Future Demand

- Cyprus forecasts are expected to reach 1.500 MW maximum annual energy generation by 2027
- EAC is not sufficient to cover the future demand for electricity (today's max active capacity at ~1,200MW)
- RES is currently at 17% of generated capacity

LONG TERM FORECAST OF ANNUAL MAXIMUM GENERATION 2018-2027 (MW)



3 There is a significant supply shortage and technology gap that requires more private investments

Supply side mechanics

- Today's technologies have a higher efficiency compared to 48% for EAC's combined cycle machines and 36% overall efficiency
 - Latest Wholesale price posted by EAC at 30c/kWh
- RES currently occupies 17% of the generated capacity, while the target for 2030 is 30% - assuming storage
- Dhekelia Power Station in Larnaca, constructed in 1953, will be decommissioned in 2024, wiping out 360MW of HFO run steam turbines



New thermal power plants and RES investments will significantly reduce the Carbon footprint of the country

The environmental limits are getting tougher to meet

- EAC's HFO units have operational restrictions starting in 2020 of 500 hours per year
- The environmental limits as of 2020 are below 50 ppm for NOx and SOx
- High efficiency means that new plants will emit half the CO2 emissions compared to today's average
- CO2 tariffs are extremely high currently
- Natural Gas is a much cleaner fuel than any liquid fuel
- More Gas turbines means more Grid Flexibility therefore greater influx of renewables

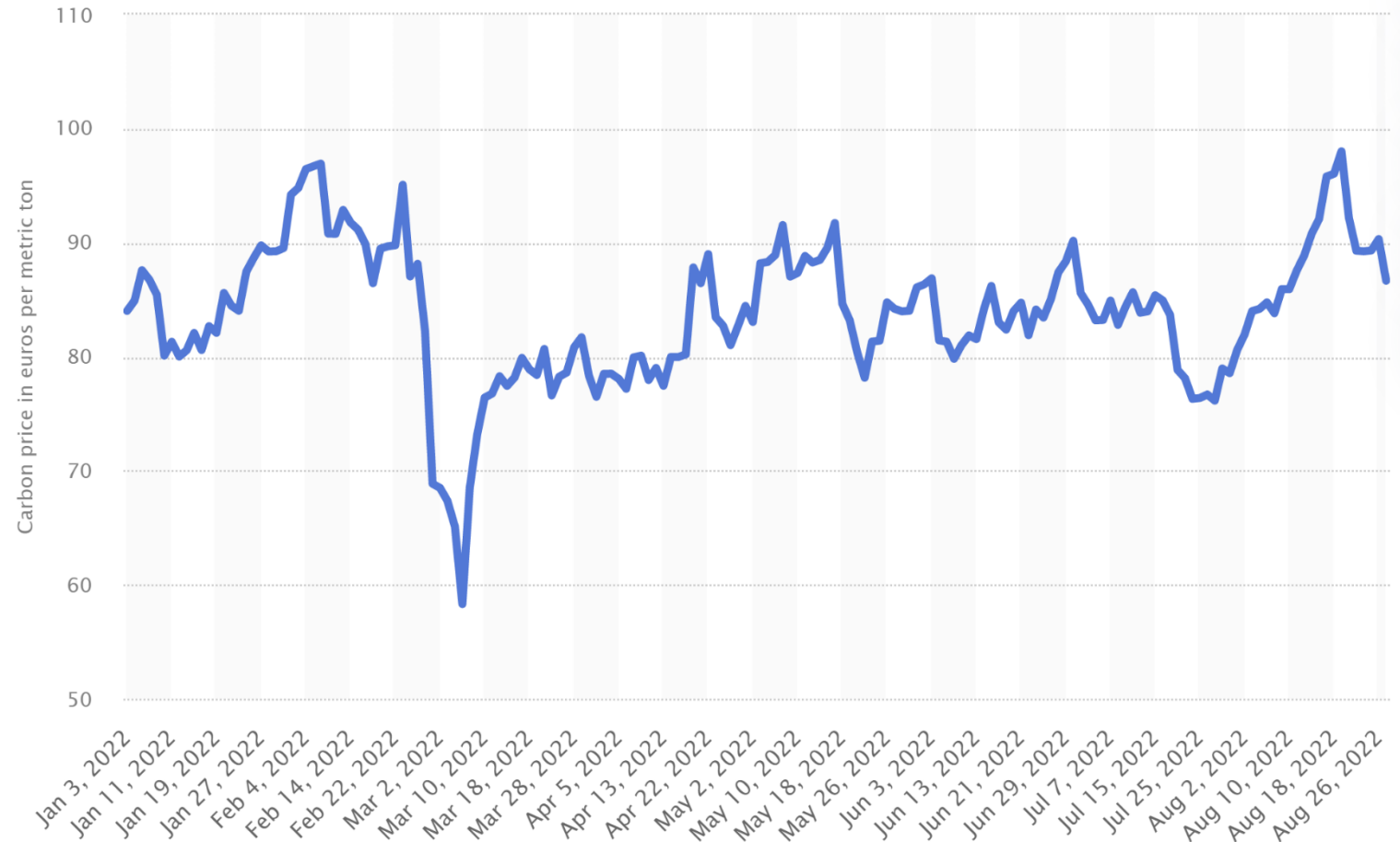


The Green New Deal is a disaster. The way it's enforced has crippled economies

Soaring Electricity prices are due to rapid de-carbonization of the EU and lack of investment in Fossil Fuels

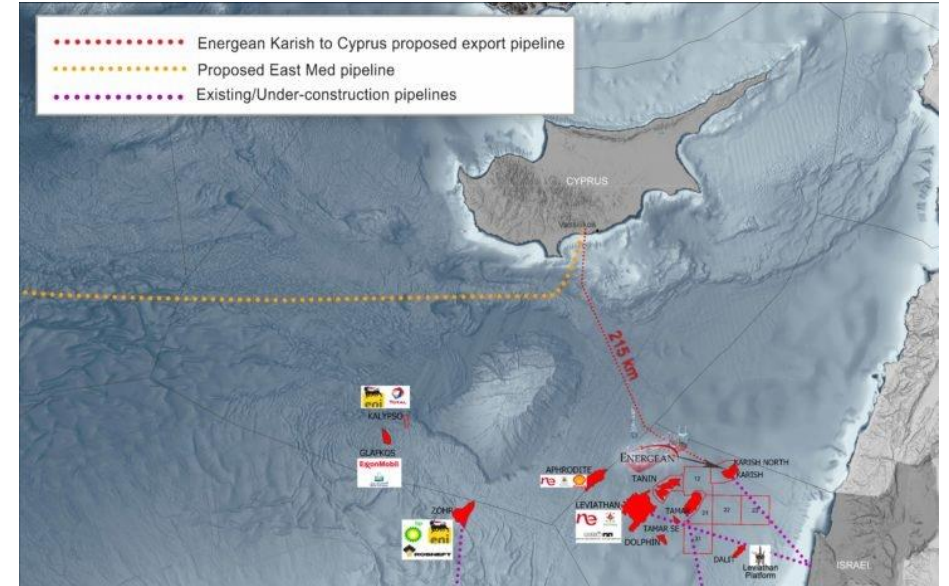
- Prices of Gas increased 10-fold, TTF trading more than 200 USD
- EIB/EBRD stopped financing Fossil Fuel projects in 2020
- Created dependency on Russian Gas
- Trillion of Euros of infrastructure needed globally for GAS trading, and RES balancing not ready
- High Energy cost means higher inflation and cost of production
- Less disposable income for households
- **It has escalated to financial crisis and probably food crisis**

EU carbon tariffs



We welcome new entrants in the Natural Gas import and Supply

Is it really a battle of the two?



- The two solutions are **complementary**
- We should not be creating another Government monopoly
- Price of Gas can be less than 7 EUR/MMBTU in a free competition
- Natural Gas is vital to the true liberalization of the electricity market and a competitive economy

There is an endless potential in the market for Electric Cars

Electric Cars in Cyprus

- 450 electric cars in Cyprus only, last in EU
- The EU target for transport emissions at 20% reduction from 2008 levels by 2030
- 40% of new cars and vans to be zero- or low-emission vehicles by 2030
- 30% of total CO2 emissions
- **We salute the 38.6 million for electric car incentives, but we need more in Tax breaks**
- **We salute the EV charger subsize scheme**
- **Electric cars will double the consumption of electricity in Cyprus**



EuroAsia interconnector is the largest threat to the domestic market if not properly managed and operated

The Risks of the EuroAsia



Lack of information, transparency and strategy make the project a threat to the Electricity Market

EuroAsia interconnector is the largest threat to the domestic market if not properly managed and operated

Common misinformation

Balance the RES generation of Cyprus, with countries that have a much greater urgent need to balance?

Cyprus has shortage of electricity generation so where exactly we will export?

Export RES to countries that have mass scaled PV parks of 200+MW? At what price?

Cyprus LCOE for PV is 6cents/kWh while Greece 2.5cents/kWh

Export RES to a Greece which has at times 100% RES generation **Already?**

Export Power from Natural Gas to Israel which has Natural Gas production at 4\$ per Mmbtu?

EuroAsia interconnector is the largest threat to the domestic market if not properly managed and operated

The Risks of the EuroAsia

Therefore the project is going to be an Importer of Electricity

No Interconnector in the world has more capacity than the needs of the country. Huge risk of Damping and shutting down local generation with National Security Issues

If CERA/Ministry wants to protect local generation they will have to impose an importing limit

EuroAsia interconnector is the largest threat to the domestic market if not properly managed and operated

The Risks of the EuroAsia

No Cable in the world has even been placed at this length and depth

The project cost at 2.7 billion before current commodity price and interest rates escalations

Who is going to pay for the remaining 2.1 Billion euros?

If there is a trading limit how will the project be feasible? By Socializing the cost to consumers and taxpayers?

EuroAsia interconnector is the largest threat to the domestic market if not properly managed and operated

The Risks of the EuroAsia

Banks and investors are terrified

Consumers misled

Electricity cost will **Rise**

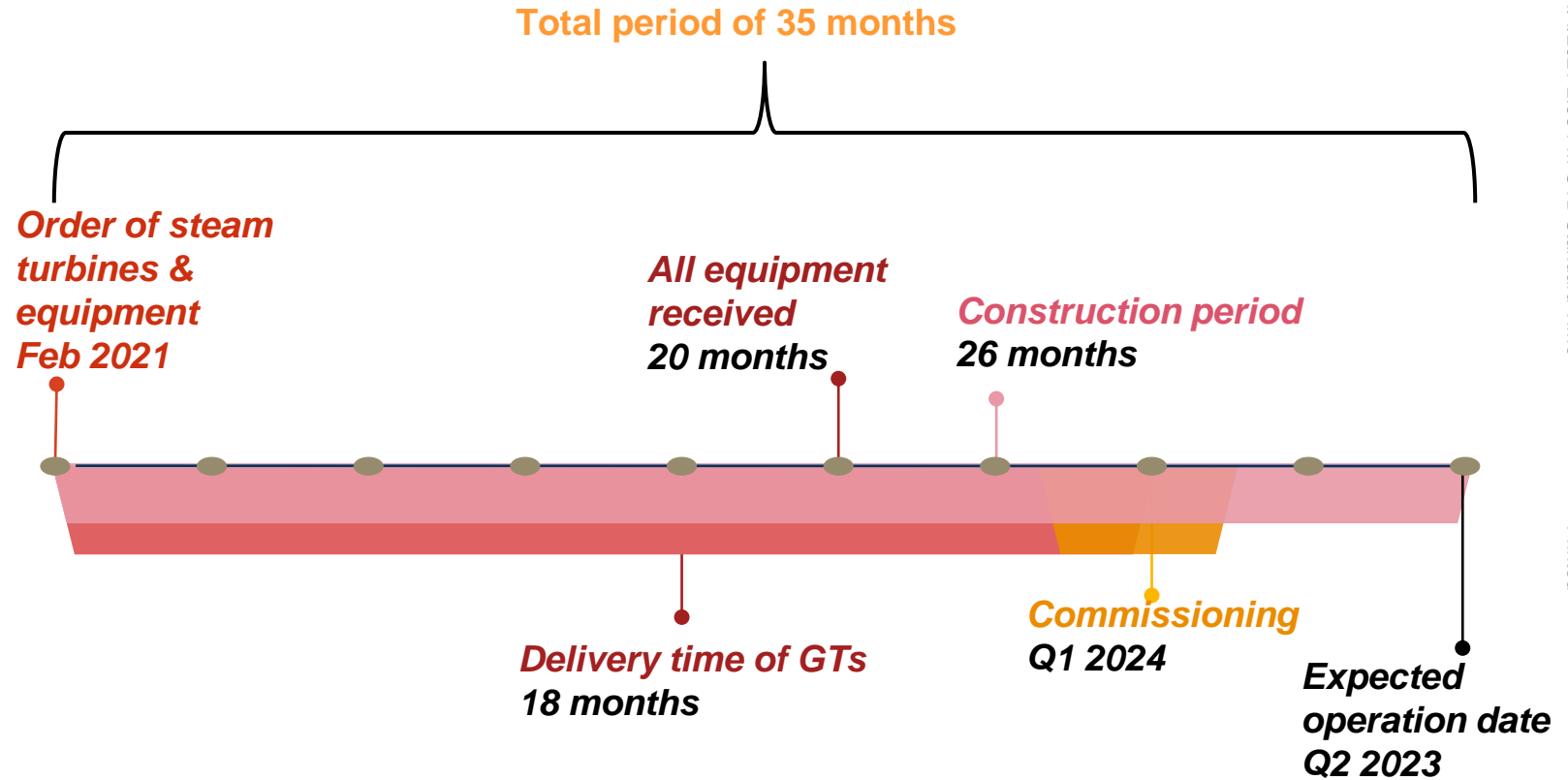
Our grid cannot accommodate more renewables. Investments on the grid must be a higher priority than the Interconnector

The CCGT project of 260MW has already started and it's due completion in 2024

Project information

- The project refers to the construction and operation of the first independent power plant in Cyprus
- It will be the largest private infrastructure project ever in Cyprus, with 200m budget
- It aims to satisfy around one third of the island's power requirements
- The Company has obtained all required licenses for the construction and operation of the power plant
- The project emissions are estimated to be 40% lower than the current average for the conventional generation
- Will de facto liberalize the electricity market in Cyprus

Project timeline



This is expected to be in line with CyGas' expected timeline for LNG arrival



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Thank you

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