# AEAENERGY

*Smart solutions to drive the future*

**ENERGY PRODUCTION**

# ABOUT US

*AEA ENERGY*

AEA ENERGY is in partnership with a wide network of first raw industrial organizations that provide efficient customized energy solutions

Energy transformation and distribution is optimized to the country strategy and own available resources, it is the foundation of AEA ENERGY's commitment, In some cases,  AEA ENERGY coordinates the necessary funding as to trigger the investment initiation

Clarex manages the project implementation and delivers the turn key package to the owner/operator or operates the plant to supply the grid with power. As described, the core competence of AEA ENERGY is "Project Engineering" by proposing the optimized project for each client in its particular market position. AEA ENERGY provides short time response to embrace customers need, analyze and engineer the fully customized Energy Package.

# NUCLEAR PROJECTS

*AEA ENERGY*

**AEA ENERGY provides two types of nuclear Projects:**

- **Maintenance of nuclear power stations primary loop**
- **Equipment for fuel fabrication**
  - UO2 fuel
  - Recycled fuel

# PHOTOV. POWER FARM

*AEA ENERGY*

**250 MWp**

Photovoltaic Power Farm

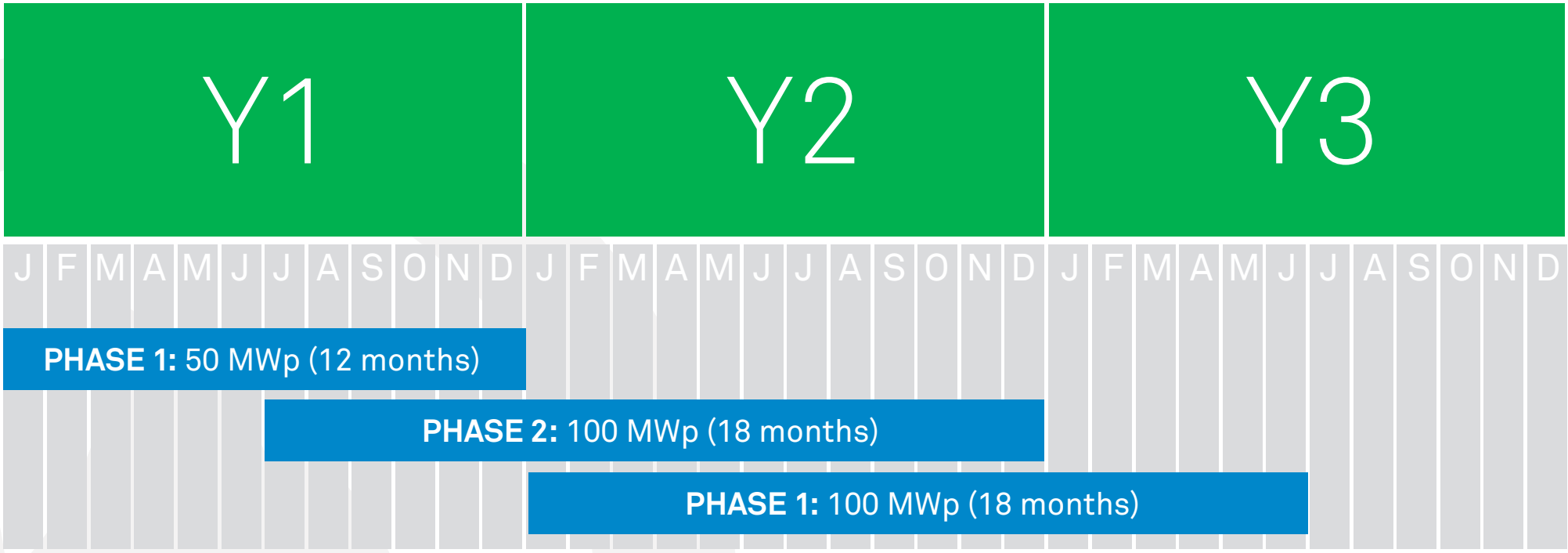
# PROJECT PHASES

*AEA ENERGY*

- Engineering, basic design, detailed design
- Selection of main component type and supplier, purchasing,
- Manufacturing of supporting structures
- Land preparation and civil works
- Cabling between panels and to sub-stations
- Conversion and connection sub-stations (inverters, combiners, and transformers)
- Applying remote maintenance
- Installing security equipment

# TYPICAL SCHEDULE

*AEA ENERGY*




PHOTOVOLTAIC
CELLS
MANUFACTURING
PLANT

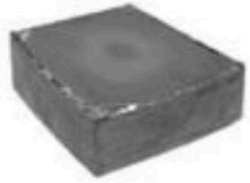
# WAFERING LINE, CELL LINE AND MODULE LINE

*Photovoltaic Cells Manufacturing Plant*

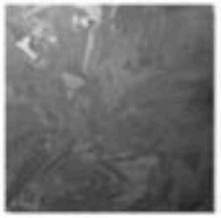
Polysilicon

Polysilicon produced from quartzite sand

Ingots / Wafers

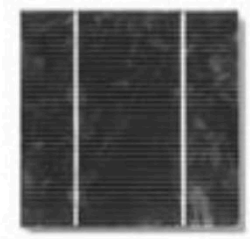


Polysilicon melted and cast into ingots



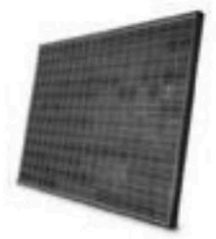
Ingots sliced into wafers

Solar Cells



Polysilicon wafers made into PV cells

Solar Modules



Cells interconnected and assembled

** 100 MWp/year*

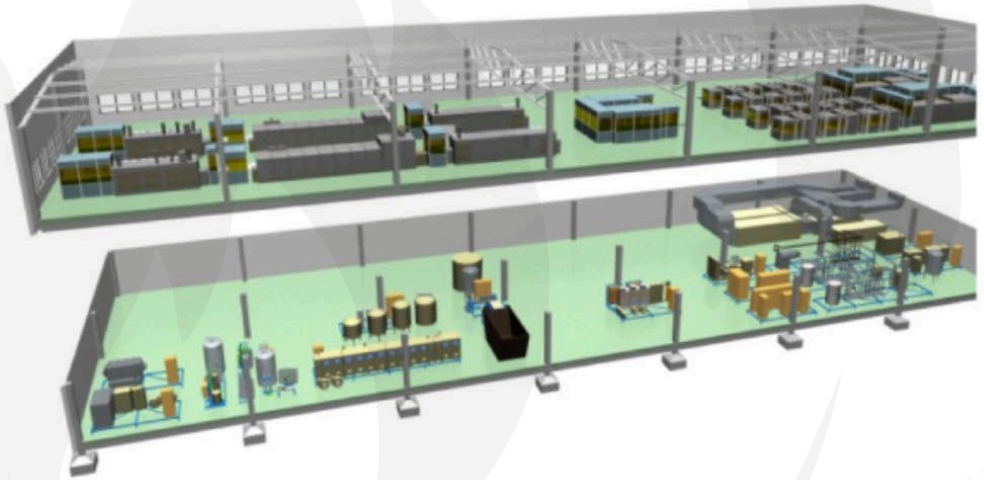
# BASIS PLANT CONCEPT

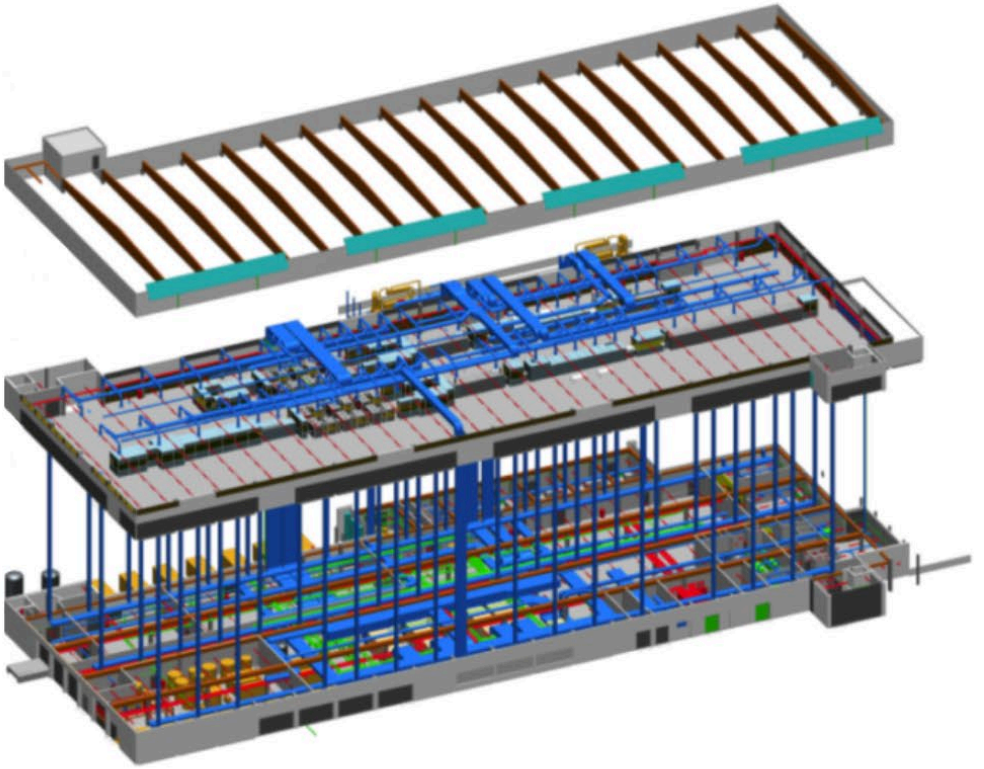
*Photovoltaic Cells Manufacturing Plant*

BUILDING

Cell Production Line + Process

Utility Engineering (Process related)






CONCENTRATED
SOLAR
POWER
FARM

# CSP-PARABOLIC TROUGH-HYBRID SYSTEM

*Concentrated Solar Power Farm*

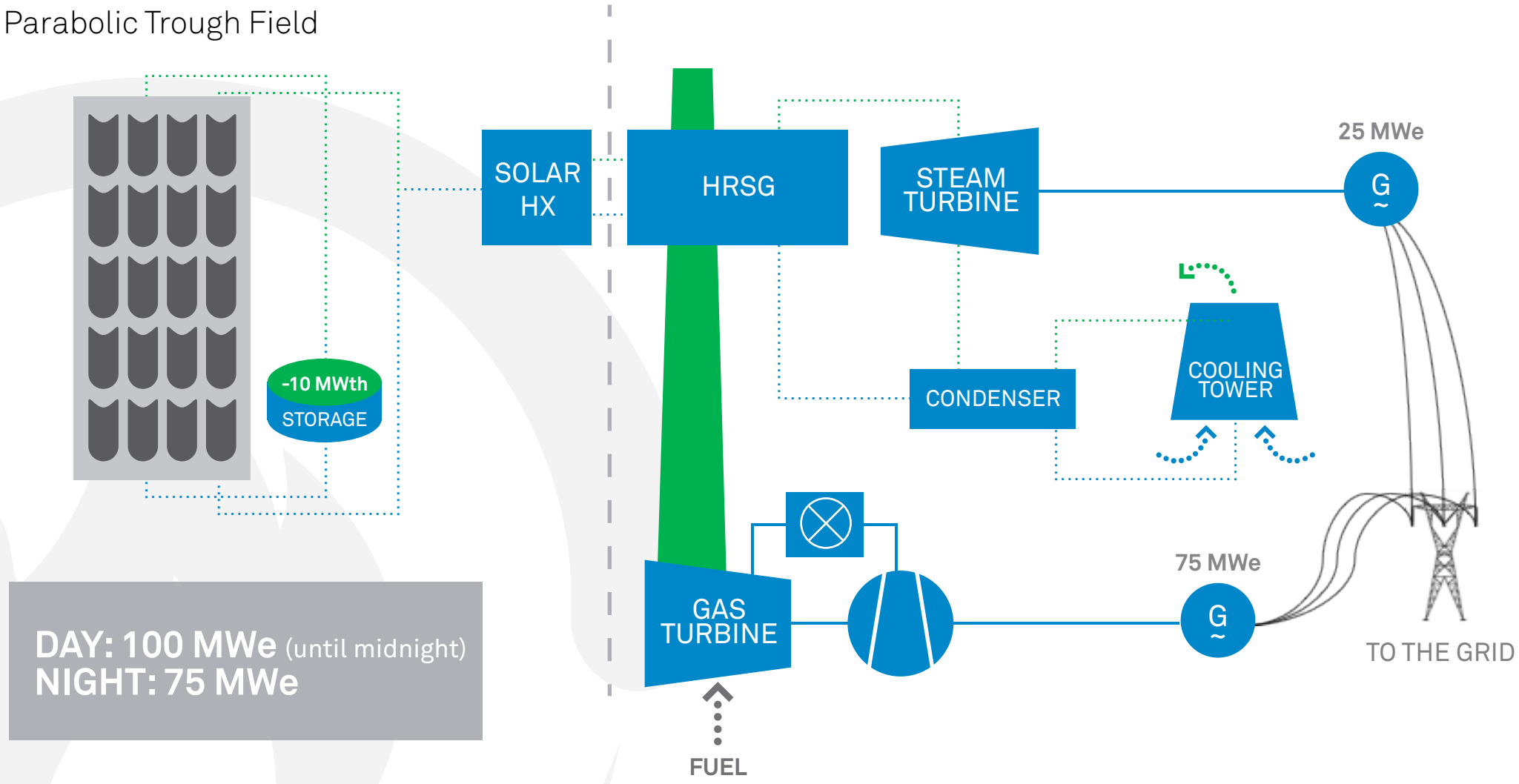
- AEA ENERGY suggests using a concentrated solar power system with parabolic (or Fresnel lenses) trough configuration.

- It is useful to combine the solar heater loop with a gas turbine (feed can be gas or liquid fuel) loop in order to achieve continuous power production.

- Furthermore, a heat storage capacity would be added to the solar loop to enable use of solar power until midnight; consequently, the share of pure solar energy is increased.

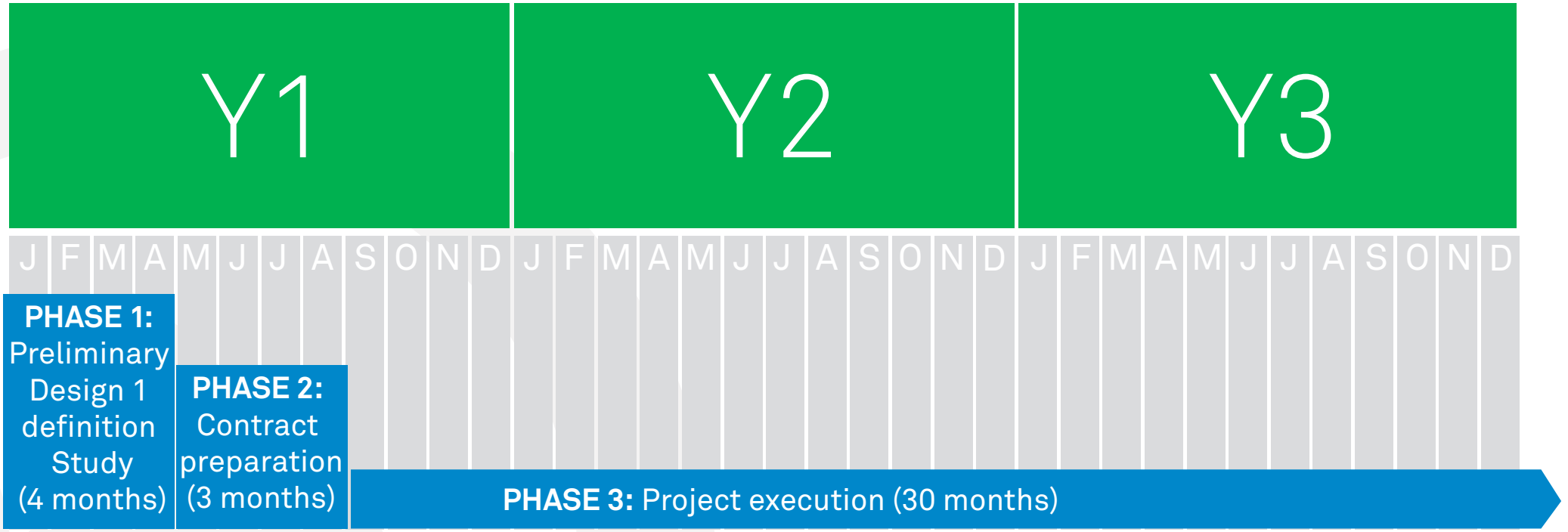
# CSP WITH STORAGE + GAZ TURBINE (100MWE)

*Concentrated Solar Power Farm*



# TYPICAL SCHEDULE

*Concentrated Solar Power Farm*




WIND
FARM

# CHARACTERISTICS

*Wind Farm*

- Projects can be delivered in 60 Mwe farms as an example, any other setup is also available
- Turbines of 3MWe or 5 to 6 Mwe are available
- The erection of a 60 MWe wind farm takes an average of 11 months from contract to commissioning
- If the wind exposure is not obvious, there is a need to observe wind conditions
- Homogenized selection of technology for consistent maintenance and spare parts strategy

# HYDROELECTRIC PLANT

# CHARACTERISTICS

*Hydroelectric Plant*

The solution, its cost, and the energy production is highly depending on the  hydroelectric project input data.

The specific request must be presented prior any feasibility study can be announced; please contact AEA ENERGY for a quick attention to your Hydro Project.

# SYNTHESIS

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*AEA Energy*

**Nuclear projects**
Maintenance of Power plants
Equipment for fuel fabrication plants

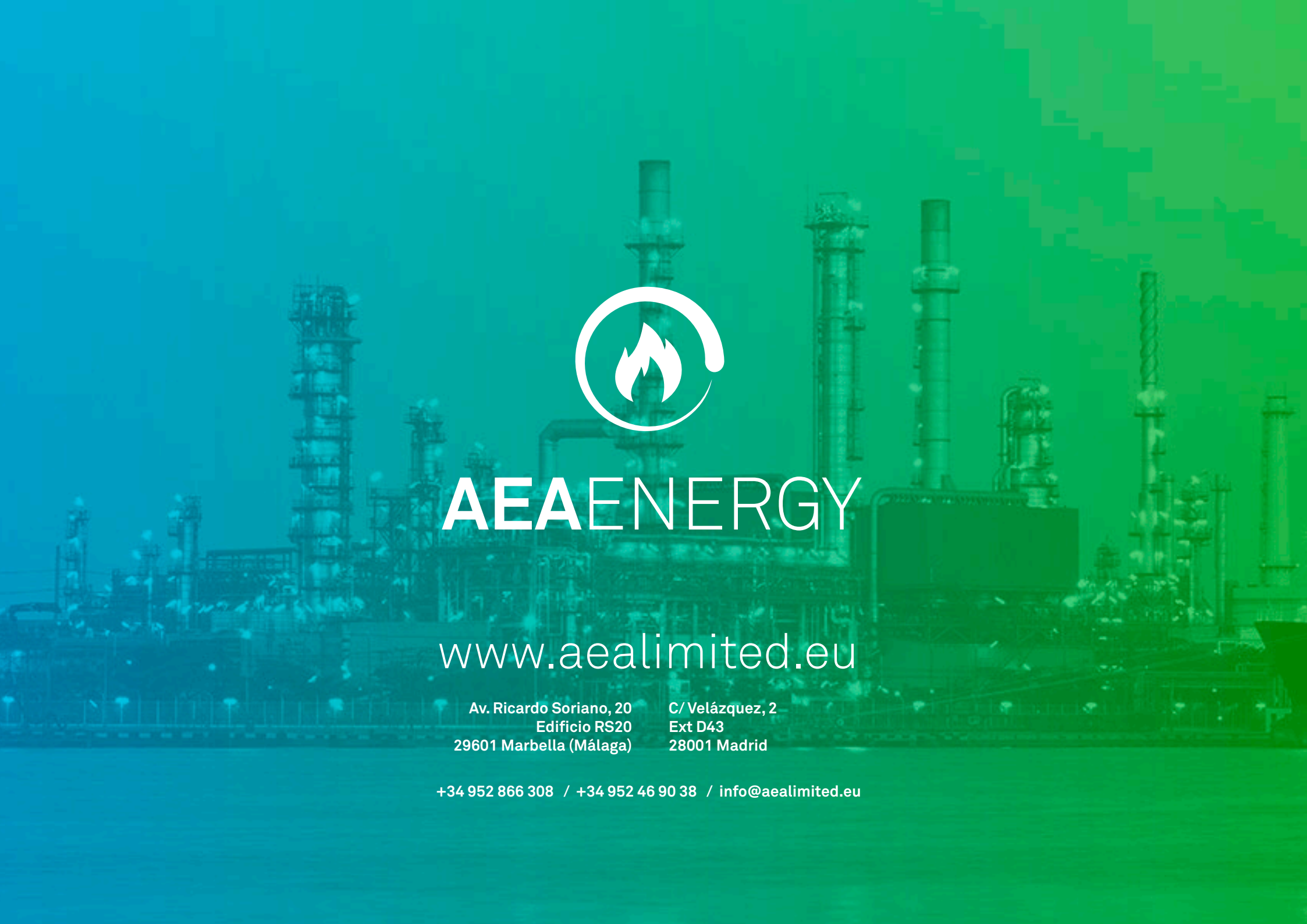
**Photovoltaic Farm**
250 MWp proposed (3 steps : 50-100-100)

**Photovoltaic cells manufacturing plant**
100MWp cells per Year; turnkey plant (without the wafering line)

**Concentrated solar power farm**
100 MWe proposed (25 Mwe Solar + 75 MWe fuel)
Combined Solar / Fuel for continued energy production

**Wind farm**
60MW Proposed

**Hydroelectricity plant**
To be evaluated after first feasibility study



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