# **SOLAR PRO.** Greek energy storage planning

Will Greece support a large-scale energy storage system?

The successful participants in the second round of Greece's auction for financial support of large-scale BESS have been revealed. The first energy storage asset built using Wärtsilä's new Quantum High Energy battery energy storage system (BESS) solution will be a 300MW/600MWh project in Scotland, UK.

### Should Greece invest in energy storage facilities?

Currently there is a growing interest for investments in storage facilities in Greece. Licensed projects mostly consist of Li-ion battery energy storage systems (BESS), either stand-alone or integrated in PVs, as well as PHS facilities.

## Why is Greece focusing on energy storage?

Greece has been actively focusing on energy storage since the emergence of the RES "boom" in 2020. The country recognised the pivotal role of energy storage in the energy transitionand emphasised its importance in the first iteration of the country's National Energy and Climate Plan in 2019.

### How long should energy storage be in a Greek power system?

Considering the energy arbitrage and flexibility needs of the Greek power system, a mix of short (~2 MWh/MW) and longer (>6 MWh/MW) duration storages has been identified as optimal. In the short run, storage is primarily needed for balancing services and to a smaller degree for limited energy arbitrage.

### How much will Greece spend on a 900MW energy storage pipeline?

The EU has approved a plan by the government in Greece to put EUR341 million (US\$339.5 million)towards a 900MW energy storage pipeline,under its state aid rules. The European Commission,the EU's executive arm,has approved the Greek state's measure to fund the construction and operation of grid-connected energy storage systems totalling 900MW.

#### How many storage plants are there in Greece?

Currently there are four(4) storage plants operating in Greece, two open-loop pumped-hydro storage (PHS) stations in the mainland (700 ?W in total) and two small hybrid RES-storage stations in non-interconnected islands (just 3 MW).

The new Greek energy and climate national plan, which is under development, will upgrade the goal for energy storage installations from the previous 1.5 GW to 3 GW. According to recent statements from Kostas ...

Building upon these foundations, Greece recently revamped its energy storage licensing regime in July 2022 with Greek Law 4951/2022, as amended and currently in force, and also paved the way toward an energy storage support scheme in April 2022 with Article 225 of Greek Law 4920/2022 which provided, among

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others, for the issuance of a Ministerial ...

(2) apart from a reasonable business model, the effectiveness of the energy storage planning method is also highly related to the benefit of energy storage utilization. However, there are very few studies that address the optimal energy storage planning problem under the CES business model considering electricity-heat coordination.

A hybrid energy project on the Greek Aegan island of Tilos uses 2.88MWh of battery storage and demonstrated how the island could reach high shares of renewable energy. Image: Eunice Energy. Greece's electricity market holds the potential to become an important European market for energy storage technologies like lithium-ion batteries in the coming ...

The government's strategy on energy is outlined in the National Energy and Climate Plan ... it is worth looking first at the background of Greek energy policy. Despite being a net energy importer historically, Greece has in recent years looked to its geographical location on the southeastern tip of continental Europe as a source of potential ...

for Energy Economics presents an analysis and detailed review of the Greek Energy market based on the most recent data and valuable insights. In this regard, HAEE's annual report manages to identify the relative strengths and weaknesses of the Greek energy market during a time of great change. The goal is to provide a full picture to

An energy storage facility has been given the green light despite fears it could "threaten the lives and health of residents". Thanet District Council (TDC) has given retrospective planning ...

- Promoting natural gas as an intermediate fuel for reducing the carbon footprint of the energy system; - Promoting renewable energy sources (RES), storage systems and fuel production from RES; - Improvement in energy efficiency of buildings, industry and infrastructures; - Reduction in emissions in the transport sector.

Greece adopted a National Plan for Energy and Climate (NPEC) in December 2019 in order to combat climate change and protect the natural environment mainly through ...

The plan further includes EUR 0.3 billion for energy research, development and demonstration (RD& D) relating to EVs and the development of Greece's first CO 2 storage facility.

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Overall, the Greek government has planned 1 GW of energy storage in auction programs. As of now, 400 MW of new battery storage capacity have been awarded in the 1st energy storage tender, spread among 12 projects and 300 MW have been awarded in the 2nd energy storage tender, split among 11 projects. These auction programmes signify a

This article highlights key steps recently taken by the Greek State as regards the legal/regulatory framework and appropriate State aid schemes, to kickstart electricity storage activity and allow for an efficient and timely development of ...

Greece is targeting 28 GW of total renewable energy capacity by 2030 in the country, to be scaled up to 65 GW by 2050. Solar PV"s share under its National Energy and Climate Plan (NECP) is 14.1 GW by 2030 and 34.5 GW by 2050. Greece also aims for 5.6 GW battery energy storage capacity of 5.6 GW and 23.3 GW, respectively.

An energy storage webinar organized last year by Greece's energy regulator RAE, suggested the country would need about 1,500 to 1,750 MW of new energy storage capacity. It is needed, in order to meet 60% of its 2030 electricity needs via renewable energy, which is in line with Greece's national energy plan for 2030.

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