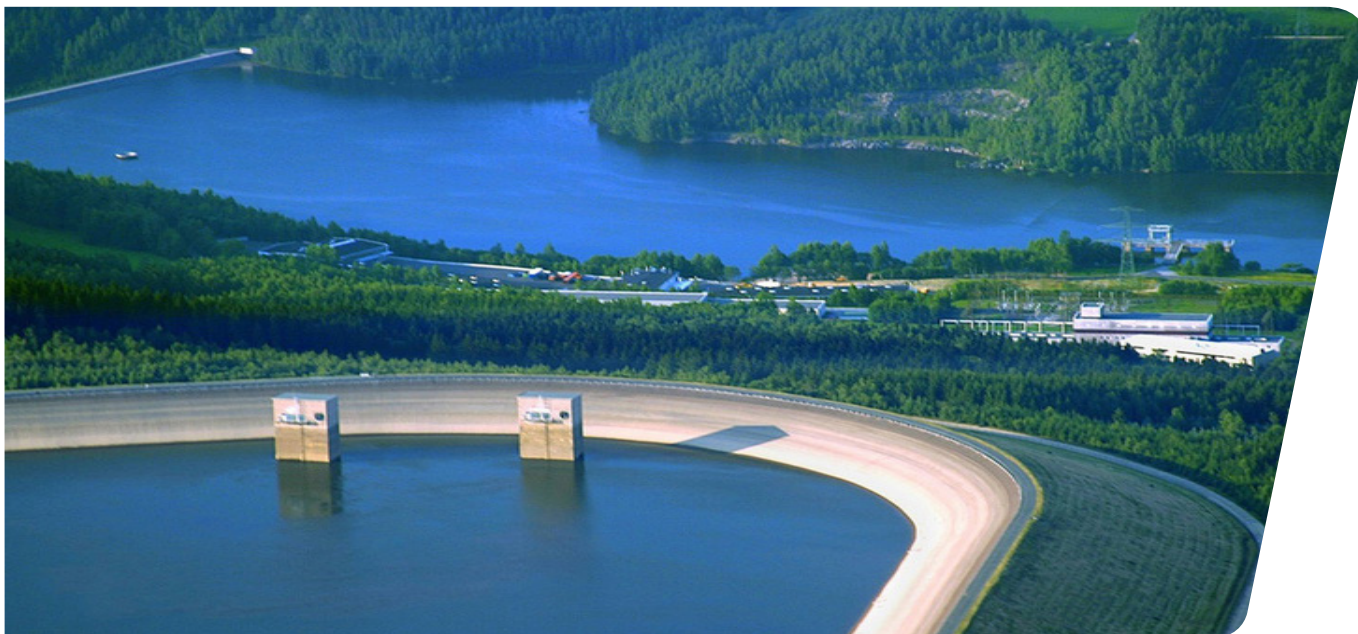


# Case Study

## Markersbach hydro dam



### PROJECT OVERVIEW

- Location: Markersbach , Saxony , Germany
- Completed: 2020
- Owner: Vattenfall
- Designer and Developer: Vattenfall
- System Size: 4.3MW
- Number of Panels: 10,710 pieces
- Product: STP 400 S -A72/Vnh

### BENEFITS

- PV@Hydro Project has completely adopted high-efficiency multi-busbar half-cut modules, the mainstream product of Suntech, and it is predicted that the solar electricity generated will meet the annual needs of up to 1500 average households in Germany.

“The use of existing technical infrastructure leads to synergies that also favor the economic efficiency of solar power.”

Claus Wattendrup, head of Solar & Batteries business unit at Vattenfall

## Suntech Unlocks New Mode of PV + Power Storage

Suntech has provided modules for Markerbach pumped storage power plant in Saxony, Germany, as part of the PV@Hydro Project. PV + Pumped Storage Power Plant is planned and constructed by the Swedish company, Vattenfall, the 5th largest energy company in Europe. Vattenfall has started to install about 10,710 PV modules with a capacity of 4.3 MW on the dam of the upper reservoir to fully use the solar power as a supplement for the hydro plant.

In addition, PV modules with a capacity of 2.4 MW will be installed on the roof of Geesthacht PSW in Schleswig-Holstein, Germany. With a total capacity of 7 MW, these two projects, after completion, will be seen as another milestone of PV @ Hydro Project implemented by Vattenfall in Germany. The reliable, stable and clean power for the projects generated by

A decorative graphic in the top-left corner consisting of a cluster of grey circles of varying sizes, arranged in a roughly circular pattern.

## Markersbach hydro dam

Suntech's high-quality modules proves that they are adaptable to various complicated construction environments.

"The locations of our pumped storage facilities offer good conditions for the construction of photovoltaic systems," said Claus Wattendrup, head of Solar & Batteries business unit at Vattenfall, "And the use of existing technical infrastructure leads to synergies that also favor the economic efficiency of solar power." PV @ Hydro is a very good example of how to improve the power transformation and combination.



### **Knowledge sharing:**

#### **What is the pumped storage power plant?**

**The pumped storage power plant, also known as storage power hydro plant, generates power by pumping water to the dam of the upper reservoir at valley time of the electricity load, and draining water into the dam of the lower reservoir at peak time of the electricity load. The pumped storage power plant is reliable in operation, flexible to start and quick in adjustment. The major functions are peak and valley load regulation, frequency and phase adjustment and emergency backup. Also, the stored power can help to regulate the operation in peak and valley time, level the fluctuation caused by external electricity, improve operation stability, power grid operation stability and power system economic operation, so as to optimize the social resource allocation.**

#### **About Vattenfall**

**Vattenfall is the 5th wholly-state-owned largest energy company in Europe. The electricity and thermal energy generated by Vattenfall benefit about 1.3 million users in Scandinavia and 6 million users in Northern Europe.**