

# Siemens Electric Apparatus (Suzhou) Ltd. Digital Distributed Photovoltaic (PV) Project

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## Scope of supply

- 1 ) Total design of photovoltaic project
- 2 ) Government registration
- 3 ) Purchasing for equipments and products
- 4 ) Construction and grid-connection
- 5 ) Applying for government subsidies
- 6 ) EMS ( Energy management system ) integration
- 7 ) Operation and maintenance plan
- 8 ) Implement for operation and maintenance for 25 years

## Project Highlight

It's Siemens first digitalized rooftop PV project in China , equipped with about 4000 pieces of PV modules and 28 units string inverters at the best dip angle of 25 degree on the roof. It also integrated EMS system and IOT features for PV panels monitoring, which can monitoring electricity consumption by 62 smart electric meters constantly. The overall features include:

- 1 ) High system efficiency, which can achieve about 81.3% on average for the whole system.
- 2 ) Digital energy management system to reduce the factory overall energy consumption.
- 3 ) Using DC side shut-off equipment and reducing the risk of electric shock.
- 4 ) Setting up PV panel level monitoring function helps promoting precision and reducing the risk of operation and maintenance.

## Expected benefits to customers

The digital PV system would be able to supply the plant's partial electricity requirements in the sunny days, so that the factory in Suzhou would realize partial self-sufficient with power by achieving win-win of profit and environment protection. And this project has a short payback period, it will provide a potential business model for factories in China and beyond.

This project could :

- 1 ) Providing about 1100MWh power annually;
- 2 ) Reducing 850 tons of CO<sub>2</sub> emission per year, and saving around 21,050 tons of carbon dioxide over its lifecycle time.
- 3 ) Expected to recouping the initial investment within about 7 years