

PV Tech Premium talks to Slovenian solar company Bisol and the International Polar Foundation about features of renewable energy production at the Princess Elisabeth Antarctica Research Station...

A microgrid, regarded as one of the cornerstones of the future smart grid, uses distributed generations and information technology to create a widely distributed automated energy delivery network. This paper presents a review of the microgrid concept, classification and control strategies.

By collecting the latest data available on renewable energy deployment in Antarctic stations, this article provides a snapshot of the progress towards fossil fuel-free facilities in the Antarctic, complementing the data published in the Council of Managers of National Antarctic Programs (COMNAP) Antarctic Station Catalogue (COMNAP 2017). In ...

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This paper presents an overview of current electricity generation and consumption patterns in the Antarctic. Based on both previously published and newly collected data, the paper describes the current status of renewable ...

The Showa base is located in Antarctica, so there is heat demand throughout the year. Therefore, the capacity of transportation of fuel and emissions of carbon dioxide has become an issue. For these reasons, the construction of clean energy systems using renewable energy in order to locally produce energy for local consumption is being planned.

frequency variation of the Antarctica Showa Base microgrid (SBMG). We clarified the smallest frequency variation proportion of the amount of Photovoltaics and wind power generation. The Showa base is located in Antarctica, so there is a great demand for heat in winter. Therefore, we investigated the limits

Managed by a Programmable Logic Controller, the smart grid reaches an installed energy that is ten times superior to the energy production, making the station's micro smart grid three times more efficient than any existing network.

A microgrid is a local electrical grid with defined electrical boundaries, acting as a single and controllable entity. [1] It is able to operate in grid-connected and in island mode. [2] [3] A "stand-alone microgrid" or "isolated microgrid" only operates off-the-grid and cannot be connected to a wider electric power system. [4]

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