

Princess Elisabeth Antarctica



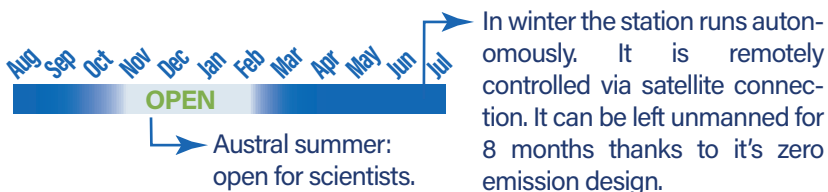
What?

1st and **ONLY** zero emission research station in Antarctica demonstrating how today's energy challenges can be tackled in order to secure a sustainable future.

A base where scientists can conduct world-class research in fields like Climate & Weather, Glaciology, Geology, Geodesy, Biology, Space & High Atmospheric Sciences, etc., while minimizing their carbon footprint.

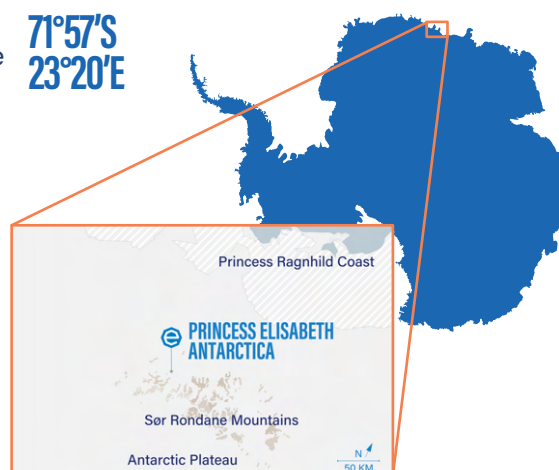


2007-2008 →  15 Feb 2009
2008-2009



Utsteinen Ridge -
North of Sor Rondane
Mountains,
Dronning Maud Land,
Antarctica.

71°57'S
23°20'E



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Equipment & Facilities



Satellite dish allowing efficient communication & high-speed data-transfer from the field.



Observatories and Science Shelters in the vicinity of Princess Elisabeth Antarctica, hosting permanent & temporary scientific instruments.



Operational machines, snow tractors and vehicle park (Prinoth, skidoo, container side loaders, etc.)



Technical Workshops (building, electronic & vehicle maintenance)



Mobile solar-powered energy field units producing up to 25 kWh per day that scientists can use while on extended research missions in the field

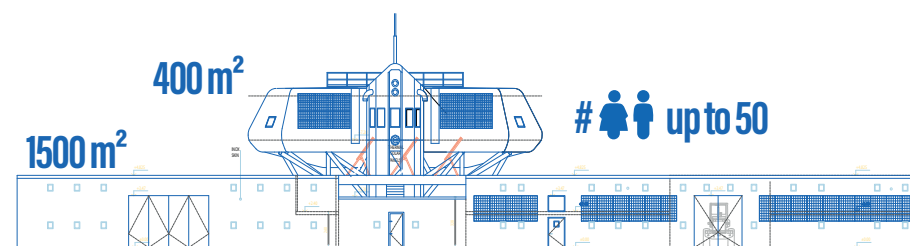


Automated Weather Stations measuring meteorological parameters at different locations.



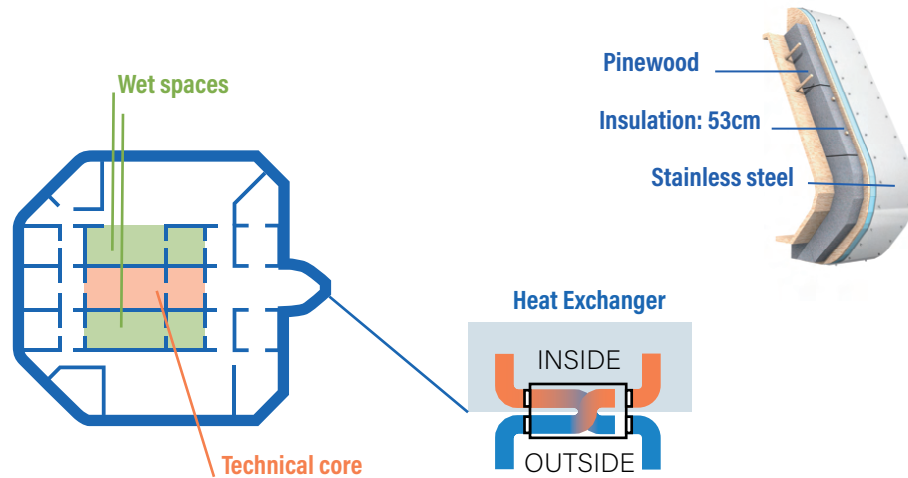
**2022
NEW!**

The world's first electrical vehicle capable of running & supporting scientists in the harsh environment of Antarctica.



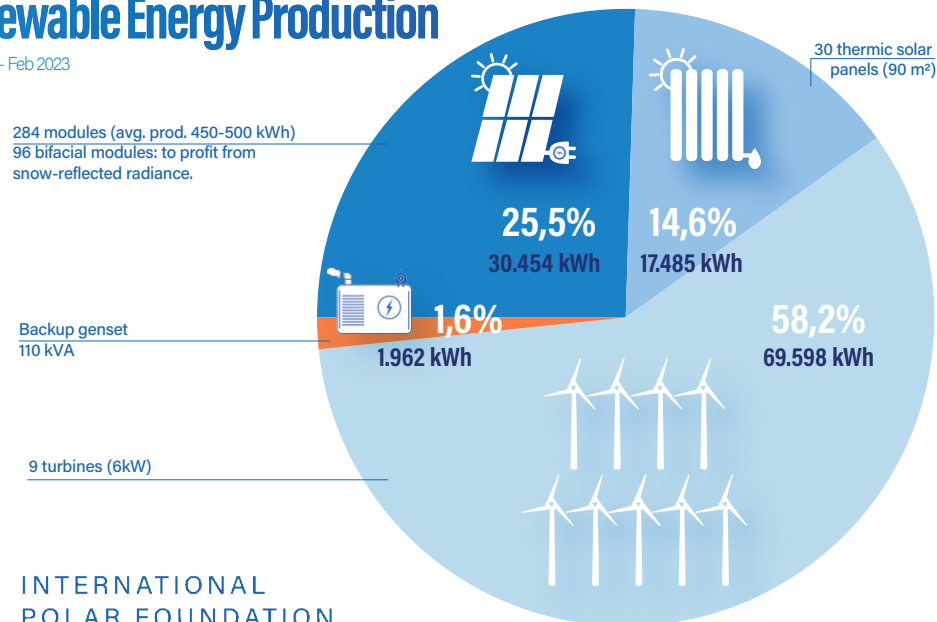
Unique Design

The station's shape, orientation, skin, insulation, and window disposition allow a comfortable ambient temperature to be maintained inside the building with little energy input. The station's operation systems are located at the core of the building, with the outer rooms serving as an extra layer of insulation to avoid freezing during winter.



Renewable Energy Production

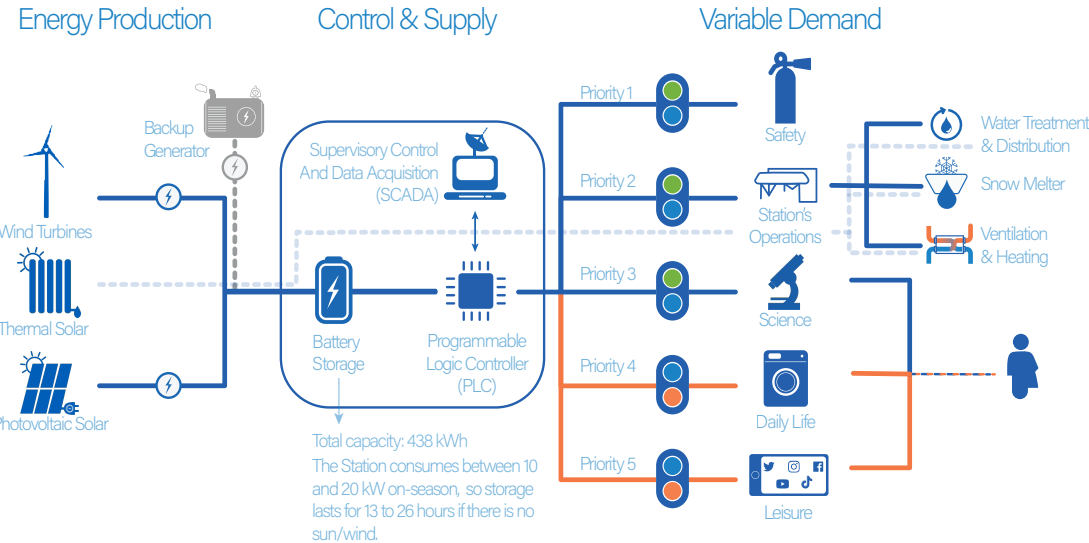
Feb 2022 - Feb 2023



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Intelligent Systems

The renewable energy production is variable, hence, an intelligent system balances available energy and energy demand through a system of dynamic prioritisation.



Water Treatment

A uniquely designed water treatment system, inspired by space technology, allows 95% of used water to be treated before discharge and/or reuse.

Water use at Princess Elisabeth Antarctica is about 35-45 liter per person, per day.
 = 1/2 average Belgian water use
 = 1/3 average EU water use
 = 1/5 average US water use

