

Port of Kristiansand

Shore Power



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Ferry - SuperSpeed

Shore power system opened in 2014

High voltage 11 kV/50Hz

Using 2,8 mill kWh annually



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LOW VOLTAGE SHORE CONNECTION

We have several mobile low voltage systems, can connect on most quays.

100% Hydropower

400 - 700 V

50 or 60 Hz

Up to 2,0 MVA



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Cruise

Shore power facility, **16MVA**

- 11kV or 6,6kV high voltage effect – 50/60Hz
- Complies with the international standard CEI/ISO/IEEE 80005-1
- Facility Integrated in standard 20'' containers – Mobile



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Cruise

The facility arrives Kristiansand in 2018



**PORT OF
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Cruise

So far, no negative experiences, customers are satisfied

- 2018: 1 Connection
- 2019: 14 planned, due to weather condition 10 completed connections
- 2020: 1 cruise ship laid-up from 01.06.2020
- 2021: 120 planned calls... ??
- 2021/22: We plan to connect +/- 45 percent of cruise-calls



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Cruise

First connection was Regal Princess 10th of September 2018.



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Cruise

- Connecting to shore power takes approx. 30 min from the ship is moored, included safety routines
- Disconnection takes approx. 20 min, included safety routines
- Cruise-ships calling Kristiansand require 4 - 10 MW
- The shore power system works without any problems
- The system supplier can follow the operation online
- Important, communication with the chef eng. in front



**PORT OF
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Cruise

We run the shore-power operation as self-financing business

- We include port investment and running cost in price per kWh
- We see the economy for high and low voltage shore power combined
- We invoice a fixed amount for connecting/disconnecting the ship/cables
- The price has been 20 cent per kWh for cruise ships
- We have not experienced financial losses



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