

# Onshore Power Supply (OPS)

## Energy pier (quay 27)

*Through the Energy Optimized Port Cluster 2030 program, Gävle Hamn AB works together with terminals and partners to achieve the goals of the Paris Agreement. As an important part of this joint effort, Port of Gävle strives to provide renewable fuels and fossil-free electricity for goods handling and transports via the port.*



Almost eighty percent of the climate-affecting emissions within the port fairway, sea basin and port land area in Gävle come from vessel engines. A considerable part of these emissions occur at berth during loading and unloading, when the vessels auxiliary engines drive fans and pumps, etc. Gävle Hamn AB therefore works purposefully together with shipping companies and the port's various terminals in order to enable electrical connection of vessels (Onshore Power Supply, OPS) at various quays within the port area.

By offering OPS for berthing vessels, the vessels are given the possibility to switch off their auxiliary engines during the port stay. This greatly reduces carbon dioxide emissions and sulfur dioxide

and nitrogen oxide emissions are reduced to a minimum. In addition, it provides a quieter port environment and a better working environment for both the crew and the staff on the quay.

In order to enable OPS, both investments in electricity and transmission equipment on the quay as well as investments in the vessels that will receive the electricity are needed. The solutions that are created should suit the different vessel types calling the quay and harmonize with corresponding solutions in other ports around the world. There also need to be handling and safety rules that work for both ports, vessel companies and terminals and that are accepted by national authorities as well as classification societies.





Since 2019, Gävle Hamn AB has been working deliberately in close cooperation with the eight different terminals operating at the energy pier (quay 27), as well as together with several of the vessel companies calling the quay, to enable OPS. There has also been a close collaboration with the Port of Gothenburg, which has taken on a leading role in developing international standards for the electrical connection of energy quays for loading and unloading liquid energy products. Since the end of 2022, a completed OPS facility is installed at the energy quay in Gävle. The facility is based on standard IEC/

IEEE 80005-1:2019, delivers 6.6 kV, 50 Hz and has a capacity of 2000 kVA. Gävle Hamn provide the connection cable that is taken on board by the vessel cranes and connected amidships to the inerted connection room. Transformation and frequency realignment on board is the responsibility of the vessel.

During 2023, a number of live tests with equipped vessels will be carried out together with vessel companies and in collaboration with Port of Gothenburg. The goal is that the facility should be in full operation from the start of 2024.



The facility has been installed with financial support from the Swedish Environmental Protection Agency via Klimatklivet and will enable greatly reduced greenhouse gas emissions at the quay for the vessels that choose to connect. In parallel, several shipping companies are equipping their newly built vessels for receiving electricity at the quayside.

For more information: <https://gavlehamn.se/en/service-and-terminals/>



**Port of Gävle**