Walstroom (Shore power)

Key Words:
Access to transport networks, infrastructure and nodes; Environmental standards and policy; Plug-in spots; Mobile application; Remote connection/disconnection from shore power; Smart metering; Smart remote charging; Environmental benefits; Regulatory framework; Shore electric power; Electricity connection; Onboard connectors; Inland waterways vessels; Inland waterways transport.

Description
Walstroom or Shore power, an initiative of Dutch provinces and port authorities in cooperation with a subsidiary of the Dutch energy company, Eneco, provides the necessary power for the operation of moored vessels. The solution uses remote smart systems to facilitate the connection and disconnection from the onshore power boxes. It also employs smart metering and charging for the users. Both of these aspects are feasible using mobile phones or internet applications.

Due to the use of electric shore power, Walstroom provides a cost-efficient solution, contributing to the local pollution and noise abatement and improving the general image of inland waterways.

Starting point/objectives/motivation:
Traditionally, inland waterway vessels use their internal—auxiliary—power sources for operating while at berth. This results to increased air emissions and noise in ports as these generators use diesel fuel.

Shore power is used as a substitute to the auxiliary generators, employing onshore electric power, which is fed into the vessels when they are moored. In order to make this solution even more accessible and easy-to-use, Walstroom offers an e-solution—using a mobile phone or via the internet and the telephone—for connecting and disconnecting the vessel from the shore sockets.

The main objective of Walstroom is to facilitate the processes of shore electric power, increasing its usage rate instead of diesel generators. This, consequently, has a positive effect on the noise and environment emissions.

Solution
In several sites in the Netherlands, it is possible to connect a vessel to an unused Walstroom Box. Then, via the internet, the phone or a mobile application the users can start the electric power supply with the vessel’s unique European number of Identification (ENI). In the same way, they can also stop the supply.

The users receive daily, when the vessel is moored, a text message with updates on the costs of their electricity consumption. The payment process is also semi-automated and the user receives an invoice with the monthly consumption and costs at all mooring sites. This information is also available for downloading using the Walstroom personal webpage.
In order to fully implement the solution it is important to have sufficient charging points (infrastructure), but also the vessel needs to employ a specific type of power cable to connect to a Walstroom box. Both of these instruments (connecting points, on-board electric systems and extension cables for connections) are eligible as operating assets for schemes liquidity benefits and tax reliefs. The user can then remotely connect and activate/deactivate the power and monitor daily the consumption and the costs.

The Walstroom pilot project, conducted by the Port of Rotterdam in collaboration with Utiliq, subsidiary of the Dutch Energy company Eneco, won the 2008 European Utility Award for Innovation. This service was expanded to other Dutch city ports. The project was co-financed by the European Funds for Regional Development.

More information:

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Transport mode or supply chain elements

- **Transport mode**
  - Inland waterways

- **Main actors involved**
  - Sustainable harbours: Port of Rotterdam, Port of Amsterdam, Port of Drechtsteden
  - The province of Zuid Holland
  - The municipality of Nieuwegein
  - Eneco and its subsidiary Utiliq
  - The Zeeland seaports
  - European Regional Development Fund

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