

Green Circles

May we introduce you to MECs?

DEVELOPMENT OF MODULAR ENERGY SYSTEM BOOSTED BY EMISSION-FREE INLAND SHIPPING

We've joined forces with ING, ENGIE, HEINEKEN, the Port of Rotterdam, CCT, Wärtsilä, Eneco and BTCN to develop **Modular Energy Concepts** (MECs). MECs make clean energy available in a flexible way for industry and the transport sector. Modular Energy Concepts should be an important addition to the existing energy portfolio, and should support the energy transition and eliminate air pollution.

Emission-free modular energy

Mobile switchable battery containers

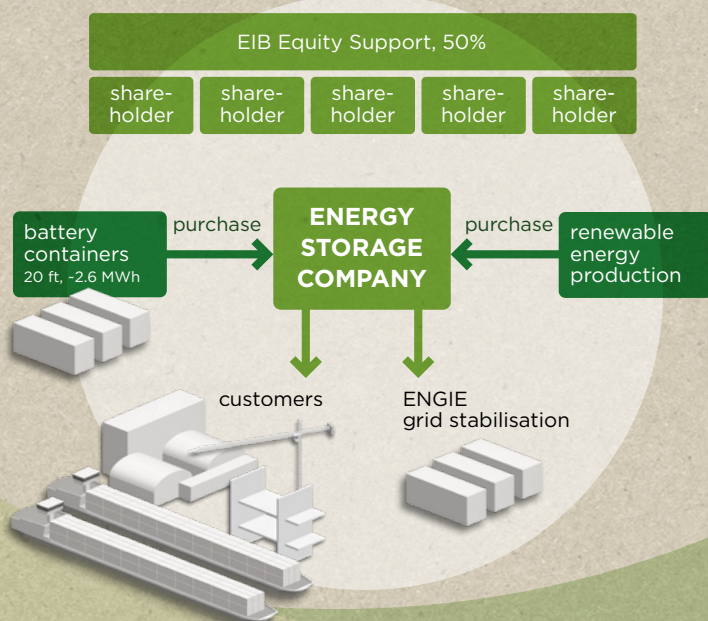
Network for charging and exchanging batteries

Pay-per-use

Grid stabilisation with battery containers

Lower energy costs for users

We've found our launching customer: inland shipping in the Amsterdam-Rotterdam-Antwerp triangle, the busiest inland navigation region in Europe. The battery containers will be deployed with a threefold purpose: to propel inland vessels, stabilise the grid, and to meet other demands for clean, local, temporary energy. Use is paid for by the users. An **Energy Storage Company** (ESC) owns the valuable batteries. This ESC has shareholders who realise their investment returns from the payments made for the use of the battery containers. For users, this means the costs will be equal to or even lower than their current fossil fuel energy usage costs.



We are starting with a **pilot** in which five inland vessels will carry HEINEKEN beer from the breweries in Zoeterwoude and Den Bosch to the ports of Rotterdam and Antwerp. This will enable us to test and develop the concept in practice. The ultimate intention is for more than 400 inland vessels on the ARA waterways to make use of the battery containers.

Contact

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The partners have joined forces with each other within Green Circles for this programme. Green Circles wants to contribute to a climate-neutral chain, a sustainable economy, a pleasant living environment, and knowledge development for a climate-neutral society. It does this by realising programmes in the fields of energy, water, raw materials, mobility and living environment, with nature as the starting point.

ING

ENGIE

HEINEKEN

Port of Rotterdam

CCT
Combined Cargo Terminals

WÄRTSILÄ

BCTN

Eneco

Rijksdienst voor Ondernemend Nederland