



Dutch Energy Solutions is a collaboration of energy solution suppliers, R&D institutes and associations supported by governmental bodies. The objective of the cluster is to establish on-going exchange of information, knowledge and business relations with partners in the Gulf Region.

The Netherlands is a leading global knowledge economy, with a longstanding history of innovations that has placed the country at the forefront of solving global challenges. Dutch industry draws considerable attention to the implementation of outstanding innovative projects worldwide.

For every challenge there is a solution. As Dutch Energy Solutions we believe that continuous innovation will transform the industry to better cope with ongoing industrial and global issues. With this framework in mind the DES energy vision focuses on major themes relevant to the energy industry: implementing innovation, energy efficiency, offshore, logistics & transport, circularity in the industry and new energies for the industry.

Dutch Energy Solutions was founded in 2009 by Association FME and Association IRO on behalf of the Ministry of Economic Affairs and Climate Policy of the Netherlands.

TRANSFORM THROUGH INNOVATION
www.dutch-energysolutions.nl

IMPLEMENTING INNOVATION

The Netherlands is one of the most innovative nations in the world which is reflected in the creation of a continuous stream of innovations from their idea phase all through scaled-up implementations. The Dutch Energy Solutions cluster focuses on innovations that typically have passed the pilot stage and has first commercial implementations in the Netherlands or elsewhere. We seek to help to adopt these innovations to the Middle Eastern environment.

Digitalisation is an important element of each innovation.

SUSTAINABLE PROCESSES & ENERGY EFFICIENCY

Clean power generation is essential for a healthy society, healthy environment and the future of our world. Rising energy consumption has led to the increase of emissions of pollutants and greenhouse gases like CO₂. This has led to a series of harmful effects on the environment, specifically through increased average temperatures and consequential effects on local climates and rising sea levels. To mitigate the problem, it becomes highly important to develop high quality and energy efficient equipment and solutions that lower the energy use wherever possible.

Dutch Energy Solutions promotes companies that contribute internationally to improvement of equipment and processes. Through international co-operation we stimulate early involvement of innovative suppliers to avoid energy spill and find solutions for more efficient processes.

Members of Dutch Energy Solutions are active in R&D, consultancy, design & engineering, fabrication and maintenance of high quality and efficient instruments and equipment.

OFFSHORE, LOGISTICS & TRANSPORT

The Ports of Rotterdam and Amsterdam are amongst the world's largest. They play a pivotal role in European waterborne logistics. Our engineering and construction firms build amazing maritime structures, such as dykes, ports, bridges and artificial islands.

Dutch suppliers have relevant expertise in areas such as: exploration, the design and fabrication of offshore equipment; pipelaying (vessels); (de-)commissioning; the transport and installation of offshore structures, and large-scale development of offshore wind farms. The expertise of renowned Maritime companies and many SME suppliers is founded on four centuries old of maritime tradition.



CIRCULARITY IN INDUSTRY

Circularity in industry covers different aspects. First, industries buy vast amounts of materials for industrial processes, or goods used in industry because of their functions (e.g. equipment). Circularity aims firstly at reducing waste of materials, rest materials and complete reuse of goods at the end of their lifetime.



Secondly, procurement teams in industry have a large influence on the prequalification of sustainable suppliers and the use of sustainable products, as far as possible for the required purpose. Hence, Dutch Energy Solutions aims to equip procurement teams to systematically enhance circularity and other aspects of sustainability by requiring suppliers to comply to best practices. Performance of suppliers should be monitored by adequate certification of their products and processes.



Thirdly, responsible businesses are stewards of the products they supply to the world. Dutch Energy Solutions aims to equip these businesses with knowledge, tools and a collaborative network to improve product stewardship. For example, petrochemical industries with their vast knowledge of plastic products and their application for numerous useful cases, are and can be a great partner in establishing the avoidance of single use plastics and far going reuse of other plastics.

NEW ENERGIES FOR INDUSTRY

Industries aim to increase new energies in their mix of supplies, after achieving optimal energy efficiency.

Solar PV can be used in all buildings, as a source of electricity in mobile systems or to feed e.g. electrolysis for hydrogen production. Industries can also choose to source energy from large external PV farms or concentrated solar installations, depending on the network infrastructure of the location at hand.

Wind energy can be generated in large wind farm, onshore or offshore, or distributed over many smaller locations. Sometimes wind and solar can be combined leading to increased efficiency.



Some industrial processes use large amounts of hydrogen. We need to aim at least to partially generate this by electrolysis based on green energy. Hydrogen has advantages in energy storage and mobile application. Industries are the main actors in studying feasibility and engineering installations which enable feature large scale transport of hydrogen.

Other relevant alternatives for industry include the use of ammonia and metal fuels.