



PUBLIC SUMMARY





Offshore wind will be indispensable to the energy transition in the Netherlands and the world, an important addition to the fuel mix that will reinforce the entire energy system. But to do this, offshore wind's LCOE must go down further. It must become competitive with fossil fuels and other renewable technologies, so that subsidies are no longer necessary.

The Dutch offshore wind sector is ideally positioned to overcome the challenges of the offshore wind roll-out, and can furthermore deliver new technologies on a large scale. It can leverage the Netherlands' strong offshore oil & gas, maritime and dredging capabilities, the close interconnections and links throughout the value chain, and an attractive home market. Dutch ports which are open and have low tidal ranges, are ideal for the offshore wind sector. Sites within the Dutch part of the North Sea have good conditions with abundant wind resources and are located in proximity to major load centers in the UK, Germany and the Benelux.

GROW is a consortium of companies and knowledge institutes in the Netherlands that executes a common research, development and demonstration (RD&D) program to overcome the challenges of offshore wind. The founding fathers are Deltares, Delft Offshore Turbine, ECN, Eneco, Lagerwey, LM Wind Power, Royal IHC, RWE, Seaway Heavy Lifting, Shell, Sif, TenneT, TNO, TU Delft, Van Oord, and Volker Stevin International.

The GROW consortium works on realizing two objectives. The first objective of GROW is to expand the role of offshore wind in the energy system overall by reducing costs and increasing value. Reduction of the LCOE will mean offshore wind can increase its value to the overall energy system and that operational subsidies can be phased out. Further value comes from offshore wind's contribution to the system's reliability and stability. GROW will also improve symbiosis with other sectors at sea (oil & gas, fishery, shipping and tourism) and will research and further limit the environmental effects of offshore wind.

The second objective of GROW is to strengthen the Dutch offshore wind sector. A direct effect of its RD&D projects will be the development of new products and processes. These will enable the sector to deliver more competitive solutions for projects in the Netherlands, Northwestern Europe and global export markets.

The mission of the GROW consortium is "*twenty for seven*". The GROW consortium of around 20 organizations in the Dutch offshore wind sector has set a goal to achieve further cost reductions and reach an LCOE of EUR 7 cts/kWh by 2030.

As a long-term and dedicated RD&D partnership, GROW's strength lies in its ability to run focused, sequential and complementary RD&D activities. It can thus focus on those activities that are most valuable in supporting the consortium partners in reaching the consortium's objectives. It can also exploit synergies between projects and commercialize innovations faster and more efficiently. In so doing, GROW will accelerate innovation in offshore wind.

A lean organization will steer the GROW program. The organization will be based on the experiences of the previous successful R&D program FLOW. Most of the founding fathers of GROW have also worked together in the FLOW program and will be able to bring this experience directly into the success of GROW. Each GROW project will be executed by organizations of the partners, which form separate project consortia for each individual project.

The total GROW budget amounts to a minimum EUR 100 million over its five-year period (from 2017-2021). GROW partners give upfront commitment for their individual contributions of the GROW program. GROW will mobilize public funding to match these contributions. The Dutch government will be asked to provide a significant portion of the long-term funding to ensure the continuity of the five-year program, and existing public funding instruments will be mobilized to fund individual projects.



The implementation of the GROW program covers the period between the presentation of the business plan to the Minister of Economic Affairs on June 15 and the launch of the first projects in the fall of 2016. Because GROW is building upon many aspects that have been proven in the FLOW program, GROW can be implemented swiftly. In fact, the existing FLOW organization can implement its initial activities.