Press Release

Floating wind: Industry leaders collaborate to demonstrate transformative 'TetraSpar' concept in Norway

- **innogy, Shell and Stiesdal Offshore Technologies to invest some €18 million**
- **Project will use Siemens Gamesa Renewable Energy 3.6MW direct drive turbine**
- **Planned to be deployed in 2019 at the Metcentre demonstration site in Norway**
- **Modular TetraSpar concept offers significant cost reduction potential for floating wind**

Essen, 5 October 2018

innogy SE, Shell and Stiesdal Offshore Technologies A/S (SOT) have signed an investment and cooperation agreement today committing the partners to build a demonstration project using SOT's 'TetraSpar' floating foundation concept. Its modular layout consists of a tubular steel main structure with a suspended keel. It is expected to offer important competitive advantages over existing floating wind concepts, with the potential for leaner manufacturing, assembly and installation processes with lower material costs. The project has a budget of approximately €18 million.

Hans Bünting, COO Renewables of innogy SE, said: "These are exciting times. The floating offshore wind market is evolving but until now, floating foundations have been stubbornly expensive.
This demonstration project will give us a better understanding of how the cost can be driven down.
The industrialised approach of the TetraSpar design, combined with innogy's experience in delivering offshore wind projects, will enable large-scale, cost-effective deployment of floating wind projects around the world."

Dorine Bosman, VP Shell Wind Development, added: "This initiative could help to lower the cost of offshore wind energy while providing more options for development locations, giving access to higher wind speeds and deeper water depths. Building our offshore wind business is a key part of the Shell New Energies strategy. Investing in innovative projects such as TetraSpar gives us early access to a new technology that could help us become a leading player in this field."

The demonstration project will use a 3.6MW Siemens Gamesa Renewable Energy (SGRE) direct drive offshore wind turbine and is due to be deployed in 2019. It will be located approximately 10km from shore in water depths of 200m at the test site of the Marine Energy Test Centre (Metcentre) near Stavanger in Norway. The foundation will be manufactured and assembled in Denmark and the turbine will be installed in the port of Grenaa, from where it will be towed to site. At site the floating structure will be moored to the seabed with three anchor lines and connected to the electrical grid.

Henrik Stiesdal, CEO of Stiesdal Offshore Technologies A/S, stated: "We are very excited about the prospects of carrying out the deployment and test of our full-scale demonstration project in collaboration with leading industry players. We have already benefited greatly from the dialogue with innogy, Shell and Siemens Gamesa Renewable Energy during the project planning. Their experience combined with the competences of our manufacturing and installation partners, Welcon A/S and Blue Power Partners A/S, will put us on the fast-track for rapid commercialisation."

The partners will set up a company with a 33 percent share each for innogy and Shell, with the rest held by SOT and its parent company. SGRE is contributing to the project as a technology partner and will provide the wind turbine and required services. The partners will be part of a project team that will gain detailed, practical insights into the construction, installation and operation of the TetraSpar concept as well as detailed performance data.

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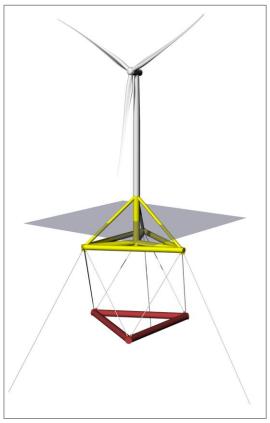

Caption: TetraSpar concept (main structure and suspended keel)
Picture Credit: Stiesdal Offshore Technologies A/S

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About innogy SE

innogy SE is a leading German energy company, with revenue of around €43 billion (2017), more than 42,000 employees and activities in 15 countries across Europe. With its three business segments Renewables, Grid & Infrastructure and Retail, innogy addresses the requirements of a modern, decarbonised, decentralised and digital energy world. Its activities focus on its about 22 million customers, and on offering them innovative and sustainable products and services which enable them to use energy more efficiently and improve their quality of life. The key markets are Germany, the United Kingdom, the Netherlands and Belgium, as well as several countries in Central Eastern and South Eastern Europe, especially the Czech Republic, Hungary and Poland. In renewable power generation, the company is also active in other regions, e.g. Spain, Italy and the USA, with a total capacity of 3.9 gigawatts. As a leader of innovation in future-oriented fields like eMobility, we are represented in the international hot-spots of the technology industry such as Silicon Valley, Tel Aviv and Berlin. We combine the extensive expertise of our energy technicians and engineers with digital technology partners, from start-ups to major corporates.

innogy plans, builds and operates plants to generate power and extract energy from renewable sources. Part of our portfolio is wind and hydro power plants as well as solar and biomass plants. Currently, we are particularly strongly represented in our home market, Germany, followed by the United Kingdom, Spain, the Netherlands, Poland and Italy. Our aim is to expand renewables in Europe further, both on our own and working with partners. We believe that working together in this way is the key to making the energy transition a success. With an installed capacity of more than 925 megawatts in offshore wind and with over 2100 megawatts in onshore wind, innogy is one of the major operators in Europe. At the moment we are focusing on continuing to expand our activities in wind power. That's why, in addition to our core markets, we are already active in new markets such as the USA and Ireland. Another growth technology is the construction of utility-scale photovoltaic power plants - for example in Australia.

About Shell New Energies

Shell established its New Energies division in 2016 and plans to invest on average $1-2 billion a year until 2020 in commercial investments that build on our strengths in new and fast-growing segments of the energy industry. Shell New Energies focuses on two main areas: new fuels for transport, such as advanced biofuels and hydrogen; and power, which includes low-carbon sources such as wind and solar, as well as natural gas.

Shell first entered the onshore wind business in the USA in 2001. Today, we have interests in five onshore wind power projects in North America and one offshore wind farm in Europe. In total, our share of the energy capacity from these projects is more than 400 megawatts (MW). Shell is also part of the Blauwwind consortium (Shell share 20%) that will build and operate Borssele 3&4 wind farms off the Dutch coast. The wind farms are designed to have a total installed capacity of 731.5MW, enough to power around 825,000 Dutch households.

About Stiesdal Offshore Technologies A/S

Stiesdal Offshore Technologies specializes in the development and supply of innovative, industrialized solutions for offshore wind power. The company is an affiliate of Stiesdal A/S, a company developing climate solutions, including offshore foundations, energy storage and carbon-negative fuels.

The two first products developed by Stiesdal Offshore Technologies are the TetraSpar floating offshore foundation and the TetraBase fixed offshore foundation. Both are manufactured using industrial processes, and both can be deployed from any ordinary port using only land-based cranes. No offshore installation vessels are needed.

Stiesdal Offshore Technologies carries out its projects in cooperation with two main partners, Welcon A/S, the world's leading manufacturer of offshore wind towers, and Blue Power Partners A/S, a leading player in the field of offshore project management, logistics and marine operations. Following successful testing of the two foundation concepts, Stiesdal Offshore Technologies will offer the foundations on a worldwide scale.

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