

# SGS TECHNICAL DUE DILIGENCE FOR BUTENDIEK OFFSHORE WIND FARM PROJECT

ISSUED – NOVEMBER 2011

At the end of 2011, Marguerite Adviser S.A. approached SGS to perform technical due diligence services for the Butendiek Offshore Wind Farm Project.

Marguerite project leaders selected SGS to assist the project due to the SGS expertise and extensive experience in similar projects like Global Tech I and Trianel Windkraftwerk Borkum (formerly Borkum West II) and its deep knowledge of BSH (the German acronym for the Federal Maritime and Hydrographic Agency) design and approval requirements as well as how to acquire mandatory agency-issued project permits and licenses.

Based in Luxembourg, Marguerite is the adviser of the 2020 European Fund for Energy, Climate Change and

Infrastructure which is established with the backing of six of Europe's leading public financial institutions to make capital-intensive infrastructure investments, mainly in Renewables, Energy and Infrastructure.

Together with other firms involved in the project, SGS was awarded the 2013 Project Finance Award for Butendiek, taking the trophy for Europe Offshore Wind Deal of the Year. Awarded by Project Finance Magazine, Euromoney Publications' flagship international infrastructure finance title, the distinguished honour recognises excellence in financing of both large and small infrastructure projects.

### BUTENDIEK OFFSHORE WIND FARM

Located approximately 30 kilometres west of the island of Sylt in the North

Sea, the nearest wind farm neighbouring Butendiek, Dan Tysk, is about 30 kilometres to the west. The Butendiek project is currently in the late design stage and construction is scheduled to begin in 2014. Upon completion, Butendiek will consist of 80 Siemens (SWT 3.6–120) 3.6 MW turbines producing a total capacity of 288 MW.

### SGS ASSESSMENT OF THE SITUATION

During the initial review of existing project documents, SGS delivered a report as comprehensive and of good quality including post loan-period project performance.

Following a delay in the project entailing certain changes, the important technical issues touched upon in the original report were re-assessed on the complete lifetime of the wind farm project.

SGS specialists investigated several technical, permitting, risk and cost aspects in more detail. In particular, the energy yield calculation established by the developer was re-evaluated to include reductions and uncertainties as a basic input parameter for the financial model. The SGS report also focused on potential long-term costs (CAPEX and OPEX) and revenues, O & M strategy and relevant opportunities and risks. SGS experts were able to produce a clear risk and risk mitigation analysis from the available documents.





SGS re-examined all main system components and contracts and additionally assessed critical technical aspects potentially affecting a 25-year operational period. Many important considerations were covered in more detail and from another point of view, taking the new time schedule, further project development, BSH approval procedures, CAPEX and OPEX and the contractual situation into account.

#### **SGS TECHNICAL DUE DILIGENCE**

When investing in or developing major energy projects, all technical risks must be understood and avoided before the commitment decision can be made. SGS technical due diligence helped Butendiek project investors understand the project technical feasibility by providing a full technical risk review.

#### **SGS ASSISTED BUTENDIEK PROJECT LEADERS AND POTENTIAL INVESTORS IN**

- understanding and mitigating a variety of technical, legal and socio-environmental risks before valuable time and resources were committed to the project
- ensuring the technical feasibility of the project made for sound investment
- ensuring that all factors had been taken into account in the development process

SGS gave two technical due diligence report updates, the first in February of 2012 following SGS arrival on the scene. The first update targeted the analysis of

the main contracts, costs, revenues and project risks. In addition to Marguerite Adviser S.A., three investors, Industriens Pensionsforsikring A/S, PKA AIP A/S and Siemens Project Ventures GmbH, joined the project progress in the second update.

During a four-week verification period from 4 October–18 November 2012 and subsequent second update process of the SGS technical due diligence report which lasted until January 2013, SGS experts provided the Butendiek project with a technical feasibility assessment by conducting a full technical risk review which included evaluating:

- new contracts, contract changes
- time schedule
- financial models, CAPEX, OPEX
- risk matrix
- interface matrix
- design basis
- BSH approval, BSH releases
- grid connection
- update status of CPs
- noise mitigation, current status, complements

SGS was pleased to participate in the prestigious Butendiek project and to receive an overwhelmingly positive response from Marguerite Adviser S. A.

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