OptimaFlex
Optimization through flexibility
Maximizing profitability

OptimaFlex: ready for your projects
Beyond the traditional off-the-shelf approach, which results in products that more or less fit all the sites, but are sub-optimal for many, the Siemens Gamesa OptimaFlex technology delivers a uniquely tailored solution that is perfect for our customers’ specific needs.

Optimized site design combined with a customizable product platform, based on flexible power rating, site specific towers and optimized BoP solutions, allow Siemens Gamesa to deliver reduced LCoE by increasing AEP while optimizing cost.

Siemens Gamesa turbines can be configured to adapt perfectly to site conditions, offering our customers the best product for their projects.
Unparalleled flexibility at every stage of the project’s life cycle

**Customer collaboration**
We engage with our customers from the very early stage of the project development and assess with them every single detail to ensure the minimum LCoE.

- Detailed study of the business case combined with comprehensive site analysis.
- Expert technical input at the outset of the planning process.
- State-of-the-art site design tools.

Only such an in-depth collaboration allows us to deliver maximum profitability and returns over the project’s lifetime.

**A flexible product platform**
In life, change is the only constant. In wind power, that means changing environmental conditions as well as the fluctuating economic barometer that has an impact on our customers’ business case.

Thanks to the Siemens Gamesa OptimaFlex technology, turbines can be precisely configured to suit site conditions:

- Customization of product offer to optimize performance.
- Site specific tower portfolio to offer the most suitable hub height and full adaptability to site loads.

**Ongoing optimization**
OptimaFlex is ready for your projects, meaning our turbines will be able to react to contingencies over the lifetime of the project:

- Changing site and business case conditions.
- Grid connectivity requirements.

Constant monitoring of environmental, grid and turbine physical conditions allows for real-time power optimization. Longer term changes can be responded to through re-calibration of the turbine.
Maximizing profitability

Flexible rating

The availability of a flexible power rating enables turbines to be configured for optimal performance in each individual project and to achieve maximum returns. Every product is available with a number of Application Modes fully configurable via control software and supported by technical documentation, type certificate and the required contractual warranties.

This way, Siemens Gamesa delivers the best product configuration, depending on the project requirements and the actual environmental conditions of the site, with the perfect mix of the following parameters:

- Active power.
- Wind conditions.
- Ambient temperature.
- Reactive power capabilities.
- Aerodynamic noise.

Advanced site optimization

Thanks to advanced siting and design tools, we deliver the optimum site design that maximizes production and reduces loads.

We analyze the following met mast and wind farm data to define the optimal layout:

- Wind data (Vavg, Vref, TI, Weibull k, wind shear, etc.).
- Noise limitations.
- Tip height restrictions.
- Flickering requirements.
- Site orography / complex terrain.
- Distance requirements from houses and roads nearby.
Site specific tower portfolio

Siemens Gamesa advanced tower portfolio enables cost savings and higher energy production from the very early stage of the bidding process. Also, site and market specific designs maximize competitiveness.

With our innovative flexible design approach, we deliver towers fully adapted to the specific needs of each project. The result is a tower design that can be customized per project and engineered to order:

- Multiple tower heights available to comply with the specific tip height restrictions of the project and maximize production.
- For each height, several structural designs are available to meet project and market constraints and site loads.
- Multiple tower technologies available, with different materials (steel, concrete and hybrid).
- The adoption of pedestals solutions (high-foundation) allows us to offer those heights otherwise not technically feasible for dynamic reasons.

BoP optimization

**ONE methodology:**
Thanks to the Siemens Gamesa ONE methodology, we offer an optimized cost-efficient BoP solution for the project, resulting from a thorough analysis of the logistics, construction and other BoP data and requirements in the site.

Even when the BoP is not in the scope of supply of Siemens Gamesa, customers are provided with engineering support to reduce the overall expenditures in their wind energy project by optimizing the BoP costs, which normally accounts for 25-30% of the total costs, thus affecting significantly the business case.

**Foundation design:**
Siemens Gamesa's engineering teams provide extensive expertise in foundation design. The wind turbine foundation accounts for 7-9% of the total costs and can be optimized on a project-by-project basis to reduce LCoE.
SGRE flexible product platforms

Our new product portfolio represents a fresh approach to wind power. Conventionally, turbines are designed to meet the demands of the most challenging conditions: the most remote sites, severe legal restrictions, extreme ambient temperatures and so on.

Siemens Gamesa OptimaFlex technology is a radical departure from this off-the-shelf philosophy. The deep insights we gain through collaboration with our customers are transformed into bespoke solutions that fit our customers’ needs precisely:

- Turbines are designed and certified to cover a wide range of project requirements and environmental conditions.
- Every turbine is configured via control software to guarantee the lowest LCoE for the project.
- A unique nacelle, hub, blade hardware for every turbine model optimizes the supply chain and improves internal costs of complexity.
- Real-time configuration of operational parameters ensures continuous optimal performance.

Moving from off-the-shelf to tailor-made solutions
Argentina
Juana Manso 555 Piso 5, Oficina D
1107 Buenos Aires

Australia
160 Herring Road
Macquarie Park
Sydney, NSW 2113

Austria
Siemensstraße 90
Wien 1210
Phone: +43 51707 0

Belgium
De Gijzeleer Industrial Park
Industriezone Neerdorp
Huizingen, Guido Gezellestraat 123
Vlaams-Brabant 1654 Beersel
Phone: +32 (2) 536 2111

Brazil
Eldorado Business Tower
Av. das Nações Unidas, 8.501 5º andar
Pinheiros, São Paulo - SP
Phone: +55 (11) 3096-4444

Canada
1577 North Service Road East
Oakville, Ontario, L6H 0H6
Phone: +1 905-465-8000

Chile
Avenida Vitacura 2969, Oficina 1002
Las Condes, Santiago

China
23rd Floor, No. 1 Building
Prosper Center, No. 5 Institution
Guanghua Road, Chaoyang District
Beijing 100020
Phone: +86 (10) 5789 0899

Croatia
Heinzelova 70a
HR-10000 Zagreb
Phone: +385 (1) 6106 494

Denmark
Borupvej 16
7330 Brande
Phone: +45 9942 2222

Egypt
3, Rd 218 Degla
11431 Maadi, Cairo
Phone: +20 25211048

France
40 avenue des Fructiers
93200 Saint-Denis
Phone: +33 (0)1 85 57 00 00

Germany
Berliner-Tor-Center
Beim Strohhause 17-31
20097 Hamburg
Phone: +49 (40) 2889 0

Greece
44-46 Riga Fereou Str.
15451 Neo Psychiko
Athens
Phone: +30 210 6753 300

India
#334, 8th Floor, Block-B
The Futura Tech Park
Sholinganallur
Chennai-119
Phone: +91 44 39242424

Indonesia
Eighty-eighth Kasablanca Office Tower
Lantai 35 Unit A-D JI
Casablanka Kav. 88 Rt 016 Rw 005
Menteng
Jakarta 10350

Iran
No. 13, Bandar Anzali Street
Ayatollah Taleghani Avenue
15936-4331 Tehran
Phone: +98 (21) 8518 1

Ireland
Innovation House, DCU Alpha
Old Finglas Road, Glasnevin
Dublin 11

Italy
Via Ostiense 131/L
Corpo C1, 9° piano
00154 Roma
Phone: +39 06 57 50 531

Japan
Gate City Osaki West Tower
1-11-1 Osaki, Shinagawa-ku
Tokyo, 141-0032
Phone: +81 (3) 3493-6378

Korea
Seoul Square 12th Floor, 416 Hangang-daero, Jung-gu
Seoul 04537
Phone: +82 (2) 6270 4800

Mexico
Paseo de la Reforma nº 505, piso 37
Torre Mayor, Col. Cuauhtémoc
06500 Mexico City
Phone: +52 55 50179700

Morocco
Anfa Place Blvd. de la Corniche
Centre d’Affaires “Est”, RDC
20200 Casablanca
Phone: +212 5 22 67 68 01

Netherlands
Prinses Beatrixlaan 800
Zuid-Holland, 2595 BN Den Haag
Phone: +31 (70) 333 2712

Norway
Østre Aker vei 88
0596 Oslo

Poland
ul. Zupnicza 11, Mazowieckie
03-821 Warsaw
Phone: +48 (22) 870 9000

Singapore
60 MacPherson Road
The Siemens Center
Singapore 348615
Phone: +65 6490 6004

South Africa
Siemens Park, Halfway House
300 Janadel Avenue
Midrand 1685
Phone: +27 (11) 652 2148

Sweden
Evenemangs gatan 21
169 56 Solna, Sweden
Phone: +46 (8) 728 1000

Turkey
Esentepe mahallesi, Kartal
Yakacik Caddesi No 111
34870 Istanbul
Phone: +90 (216) 459 2000

United Kingdom
Faraday House
Sir William Siemens Square
Frimley, Camberley GU16 8QD

USA
3500 Quadrangle Boulevard
Quad 14, Orlando, FL 32817

Vietnam
16th floor, Saigon Center
29 Le Duan st., Dist. 1. Ho Chi Minh City
Phone: +84 28 35207713

The present document, its content, its annexes and/or amendments has been drawn up by Siemens Gamesa Renewable Energy, S.A. for information purposes only and could be modified without prior notice. The information given only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract. All the content of the document is protected by intellectual and industrial property rights owned by Siemens Gamesa Renewable Energy, S.A. The addressee shall not reproduce any of the information, neither totally nor partially.

05/2019

www.siemensgamesa.com