



SITE ASSESSMENT



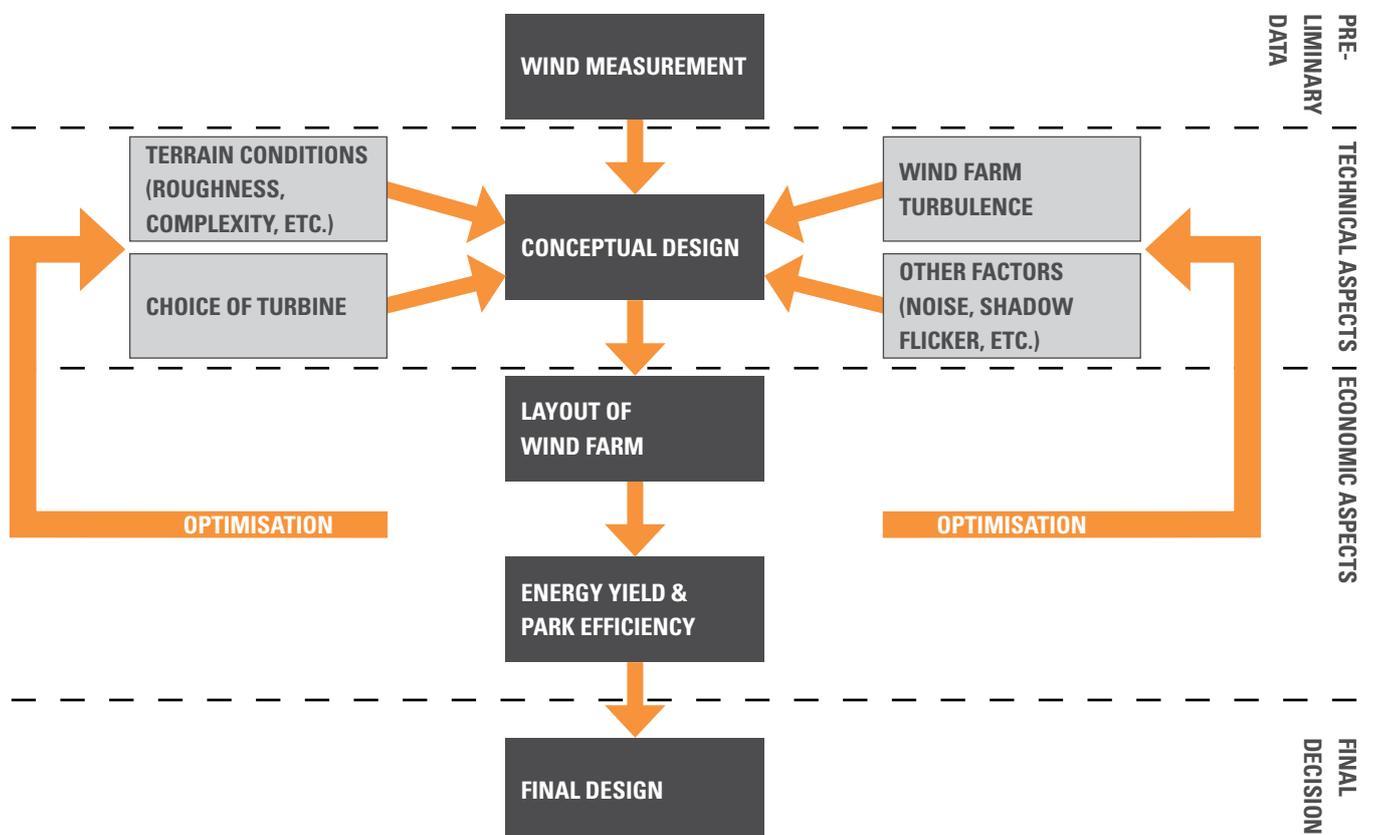
TO ENSURE THAT YOU GET IT RIGHT IN THE BEGINNING

THE OBJECTIVE

The key to realising successful wind energy project lies in making the correct strategic decisions in the early stages of project development. In parallel with the ever increasing scale of wind projects, in terms of turbine size and turbine number, the need for reliable and accurate evaluations and calculations of site-specific issues is becoming more acute. SGS Site Assessment Services aim to assist our clients in efficiently developing their projects in a reliable and financially sound manner. The ultimate objective of Site Assessment is to facilitate overall project development by ensuring the viability, economical soundness and site optimisation of the undertaking.

THE SOLUTION

In the initial phases of development of a potential project, thorough verification of technical and financial issues is crucial. In this context, SGS offers a comprehensive range of project development services, including the optimisation of technical and financial parameters. The following flow chart illustrates SGS's general approach to site assessment services.



Early involvement of SGS helps ensure that well-informed and financially sensible decisions are taken and that all technical requirements for further development are properly evaluated.



OUR SERVICE FOR **SITE ASSESSMENT**

The SGS approach for site assessment can be described as an optimisation process comprising the following sub-packages.

PRELIMINARY DATA

The profitability of a wind energy project is rooted in the realistic estimation of mean annual wind speeds at the targeted location. Any change or deviation from initial estimates and calculations will have a significant bearing on the project and especially its viability as an investment. In this context, SGS offers a comprehensive verification of measurement campaigns and other sources of wind data to be used as input in technical and financial models.

TECHNICAL ASPECTS

Wind energy projects are influenced by a number of technical factors, most of which are interdependent on one another, which means that an overall approach is needed in which multiple parameters such as turbine model, wind farm effects and terrain conditions are optimised and taken into account in the decision-making process.

ECONOMIC ASPECTS

SGS offers a full portfolio of project development services which form the basis for financial calculations and estimates. During the project development process the financial parameters of the project must be verified, particularly the energy yield calculations for one or more turbine models/classes and project layout scenarios. SGS performs such detailed calculations using modern, state-of-the-art software tools and drawing from a wide range of expertise. The results provide an overview of resulting energy production of each turbine within a wind farm as well as the overall efficiency of the park.

OPTIMISATION

The interdependent nature of technical and financial variables alluded to above means that the process of site assessment is not a fixed sequence of individual calculations which can be carried out as stand-alone exercises. For instance, the turbine layout has an influence on wake effects and turbulence levels which in turn raises the issue of the capacity of the selected turbine to withstand site-specific turbulence conditions. Additionally, as the energy production of the wind farm is strongly dependent on both the wind turbine layout and the turbine type, an optimisation process is the only means of evaluating the best solution for each specific project.

FINAL DECISION

The optimisation process of all technical and financial aspects culminates in a comprehensive set of reports, including an overall summary which forms the basis for the financial and technical decisions with respect to the project future.

WHY SGS?

SGS can offer the full range of site assessment services which formulates a base for decision as a package out of one hand. Furthermore we established services around the full life cycle of a project which means SGS can assist in every phase of a project from conceptual development over design issues, manufacturing, installation, commissioning up to ongoing in-service inspections during the operational life of a wind farm. Hence, SGS is not only a supplier of small service packages; we can be your partner for the whole life of your project.

SGS IS THE WORLD'S LEADING INSPECTION, VERIFICATION, TESTING AND CERTIFICATION COMPANY. SGS IS RECOGNISED AS THE GLOBAL BENCHMARK FOR QUALITY AND INTEGRITY. WITH MORE THAN 75,000 EMPLOYEES, SGS OPERATES A NETWORK OF OVER 1,500 OFFICES AND LABORATORIES AROUND THE WORLD.

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WHEN YOU NEED TO BE SURE

