Risks and Insurance for Offshore Wind Energy Projects

Offshore wind power generation is considered one of the most promising renewable energy sources for the next few years, forecast to grow eightfold by 2050, according to the International Renewable Energy Agency (IRENA).

Currently, the coastal regions of European countries concentrate most offshore wind farms. However, the sector tends to grow more and more, also encompassing emerging countries such as Brazil. According to the “Expanding Offshore Wind to Emerging Markets” study, the country has enormous potential – around 1,228 GW – to host this type of project.

How to manage risk in offshore wind energy projects?

The activities of an offshore wind farm encompass the stages of purchase, manufacture, transport, installation, connection of lines, operation, maintenance and decommissioning. Understanding this flow is essential to properly map the risks involved in the process, ensuring the project’s sustainability.

“To begin with, it is necessary to observe international standards, such as ISO 31000:2018 (Risk Management – Guidelines). In addition, the analysis of risks should not be limited to those of an operational profile, but also to exposures related to the structuring of the business, which includes financial risks, obtaining environmental licenses, partnerships, among others”, explains Rafael Souza, director of risks and insurance for the offshore sector at Horiens.

Most common risks and claims

Although there is still little history of claims in offshore wind turbine projects, when compared to other complex projects, the most common claims and losses are concentrated especially in the construction phase.
In this phase, the main incidents are: vessel collision, accidents during tower installation, foundation problems, damage to submarine cables, project, design or engineering failure, among others.

In the operation and maintenance phase, the most common events refer to falling into the water, slips, mechanical problems in the turbine, failure to comply with procedures, operational errors and environmental damage.

“In addition to the construction, operation and maintenance phases, it is important to look carefully at the decommissioning stage, which covers environmental risks related to the removal of equipment at sea and disposal of materials, as well as issues of environmental regulations”, highlights Rafael.

Insurance for offshore wind farms

The transfer of certain risks through insurance policies is necessary for the sustainability of the project’s cash flow or for the company that is in charge of its execution, as well as for the contracting company, which will have the concession to explore the area.

In the construction phase of a wind farm, contracting a construction insurance program is an important step, which will also cover cable installation, transport risks, removal of debris, extraordinary expenses, among others.

Other types of insurance, such as damage to third parties, pollution and general civil liabilities are essential for projects of this nature. It is also important to protect yourself from possible impacts on cash flow caused by certain events and, for this, delay in start up insurances (DSU) are recommended.

When we talk about the operation and maintenance phase, insurance for the vessels involved should be considered, such as hull and P&I (Protection & Indemnity), as well as physical damage insurance for wind turbines and liability civil law, the latter intended to protect the owner of the wind farm in cases of possible legal claims, risks of pollution and removal of debris, for example.

“An essential point to consider are also situations in which companies are subcontracted”, warns Rafael. “In these cases, the insurance programs of these contractors must be expedited, bearing in mind that the owner or operator of the wind farm may also be responsible for actions or omissions of these companies. Furthermore, in general, service providers with robust insurance programs tend to undergo greater scrutiny by their insurers, presenting a higher risk profile than companies that occasionally neglect to take out insurance”, he adds.