

# DIRECTION

THE FUTURE OF WIND



The ONYX Insight whitepaper reveals how effective O&M decisions need to be based on a combination of data analytics and real-world engineering experience. (Courtesy: Shutterstock)

# Smart digitalization strategy can lead to O&M savings, according to whitepaper

Owners and operators who look to make “quick digitalization fixes” rather than investing in smart digitalization strategies are in danger of missing out on huge operations and maintenance (O&M) savings that are critical to wind-farm profitability. This is according to ONYX InSight, a leading provider of predictive maintenance solutions to the wind industry.

The emergence of COVID-19 has accelerated the adoption of digitalization practices. Some owners and operators who have previously overlooked digital technology in their operations now find themselves at a substantial disadvantage, struggling to deal with a wide range of market challenges. Even those who have previously invested are looking at ways to bolster the effects of their strategies as they look to take advantage of a predicted boost in renewable investments.

In its new whitepaper, *How smart digitalization will help you thrive in a post-pandemic world*, ONYX InSight warns how the industry is at a crossroads when it comes to digitalization adoption and how digitalization has the potential to bring its own costs and downsides to the industry if applied ineffectively.

The whitepaper highlights three common obstacles that owners and operators must avoid in order to prevent a poor return on their digitalization investment:

- ▶ Collecting data with no clear strategy.
- ▶ Over-reliance on artificial intelligence (AI) and machine learning (ML).
- ▶ Failure to recognize multiple data streams.

When owners and operators struggle to implement successful digitalization strategies, and expected returns do not materialize, disillusionment starts to set in. In the whitepaper, ONYX InSight warns that companies may begin rejecting advances in digitalization because they are not getting the returns promised by some service

providers and they do not know how best to use the technology on offer.

“Some owners and operators invest in cheaper AI-only services because they receive assurances that these services will increase their profits,” says Bruce Hall, CEO, ONYX InSight. “However, the issue with some of these services is they rely only on algorithms to identify the trends and anomalies that indicate operational issues and lack the engineering expertise to provide accurate interpretation of the data and draw out the trends. This is problematic because most ML and AI tools only look for indicators of anomalous behavior, rather than direct fault identification, and fail to spot or highlight the ‘real’ issues. This means owners and operators still need access to practical engineering skill sets or other tools if they are to extract useful insights. Without those skills the data — and therefore service — is of limited value. This has caused some operators to become disappointed in ML services.”

“We are very optimistic about what ML can offer,” he said. “Data analytics has a huge role to play in improving profits and production on wind farms through predictive maintenance ... but only if the technology is utilized in the right way.”

The whitepaper reveals how effective O&M decisions need to be based on a combination of data analytics and real-world engineering experience, how combining data streams can transform the level of insights that can be drawn from wind-turbine data and how the industry needs to eliminate data silos and bring all data into one place.

“The future of predictive maintenance in the wind industry will see more data streams introduced into analysis to enable wind-farm owners and operators to realize maximum production and profits,” Hall said. “However, the addition of extra data streams will only compound the issue

created by ineffectual data services. This is why it is so important to ensure the right analysis and expertise are called upon. The best service providers in the industry will have experienced engineers who have not only seen most issues before but can also tackle new issues efficiently while delivering actionable advice that makes a real commercial difference to wind-farm owners and operators.”

“The lessons of the pandemic must be combined with the lessons of the past few years,” he said. “Advances in remote sensing and remote analytics are accelerating rapidly as part of our ‘new normal,’ and it is likely that this new way of working will continue. It is for this reason that digitalization needs to be approached systematically, ensuring that the technology is understood, expectations are realistic, and that best practice in data analysis becomes ingrained into O&M operations.”

MORE INFO [onyxinsight.com](http://onyxinsight.com)

## GCube highlights growing cyber threat to energy companies

GCube Insurance, a leading provider of insurance services for renewable energy projects, has emphasized that renewable energy asset owners relying more heavily on digital systems during the current period of lockdown — and beyond — must adapt to increased exposure to cyber threats such as ransomware, denial-of-service, and human error.

Recent cyber-attacks on global renewable energy businesses have underlined the scale and nature of this previously under-reported threat and have added to the already significant demand for GCube’s non-damage cyber risk insurance product as increasing numbers of firms seek to mitigate their potential exposure to business



The emergence of COVID-19 has led to an unprecedented lockdown worldwide, leading many renewable energy companies to take advantage of remote monitoring systems and working practices to try and ensure “business as usual” despite the disruption. (Courtesy: GCube)

interruption and other cyber losses.

The emergence of COVID-19 has led to an unprecedented lockdown worldwide, leading many renewable energy companies to take advantage of remote monitoring systems and working practices to try and ensure “business as usual” despite the disruption.

Though cyber-attacks such as ransomware and denial-of-service remain significantly under-reported in the renewable energy industry, recent high-profile examples in the U.K., the U.S., and Portugal have provided additional public demonstration of the need for asset owners to invest in cyber insurance products that can provide financial cover in these “non-physical damage” events.

“Digitalization, of course, drives significant efficiency gains for businesses and is now a necessity for renewable energy companies looking to maintain continuity during the COVID-19 pandemic,” said Geoffrey Taunton-Collins, senior analyst at GCube. “But with portfolios now at greater risk of cyber-attacks, we are seeing even greater demand for our cyber insurance product as project owners are increasingly realizing the very real threat that cyber-attacks pose.”

Numerous businesses have approached GCube seeking a means to mitigate their financial exposure to cyber-attack. These include wind proj-

ects owned by leading firms such as Eolenerg and Molly Wind Ltd, who have either procured the coverage outright or included the product as part of their insurance renewal.

GCube’s research suggests that though cyber-attacks are estimated to be responsible for more than \$3 trillion in losses annually — and are set to rise — the cyber insurance market last year was only worth about \$5 billion, with many insurers not yet providing cyber cover.

**MORE INFO** [www.gcube-insurance.com](http://www.gcube-insurance.com)

## Stoel Rives energy partner named to legal power list

Stoel Rives LLP recently announced Chad Marriott, energy development partner and head of the firm’s wind energy subgroup, was named to *A Word About Wind’s* Top 100 Legal Power List 2020, a list of the 100 most influential lawyers working globally on the financing of wind-energy projects. The list is based on industry input and independent research.

Marriott has a national practice in energy project finance and M&A. He serves as counsel to sponsors, owners, and investors in the development, sale,



Chad Marriott (Courtesy: Stoel Rives LLP)

acquisition, and financing of renewable-energy projects, has led teams advising on the acquisition of historic wind assets for repowering and has served as lead counsel on the acquisition of both operational and development-stage wind, solar, and battery energy storage projects in the United States and Canada.

“Chad’s extensive experience in finance, M&A, and state and federal utility regulation are invaluable to our clients at all stages of project development, operation, and repowering, and we are thrilled he received this industry recognition,” said Jennifer Martin, Stoel Rives partner and co-chair of the Energy & Natural Resources Industry Group. “In addition to his knowledge and practice skill, he has the ability to manage diverse teams across practice areas and offices to the benefit of the firm’s clients.”

Marriott’s selection follows an extensive, independent ranking process undertaken by *A Word About Wind’s* editorial and insight teams in conjunction with its advisory board and panel of expert judges from the wind and finance sectors. The Legal Power List ranks and profiles the most important and influential legal professionals working in the global wind industry across in-house counsel and at law firms. Founded in 2012, *A Word About Wind* seeks to accelerate the growth of



The Åndberg wind farm is one of four current wind power investments managed by Ardian's new sustainable energy investment platform, eNordic. (Courtesy: KfW IPEX-Bank)

wind globally by informing and connecting key industry decision-makers.

**MORE INFO** [www.stoel.com](http://www.stoel.com)

## Ardian signs 20-year financing agreement for Åndberg wind farm

Ardian, a world-leading private investment house, has signed a 20-year financing for its 286 MW "Åndberg" wind farm in Sweden. The financing is provided by KfW IPEX-Bank, which is the part of KfW Group responsible for project and export finance.

The long-term financing was secured on the back of a 10-year green power purchase agreement (PPA) with Skellefteå Kraft, one of Sweden's largest energy producers, agreed in October 2019. The financing allows Ardian and eNordic to further optimize and secure more revenue streams for the wind farm.

Ardian Infrastructure acquired the Åndberg wind farm from OX2 in February 2019 as part of its Nordic sustainable energy investment platform, eNordic. The wind farm is relying on the latest technology, having upgraded its Nordex turbines to the 5MW class earlier this year. Following its completion in 2021, Åndberg will each year provide clean electricity in excess of 800 GWh, making it one of the largest wind farms in Sweden.

The Åndberg wind farm is one of four current wind power investments managed by Ardian's new sustainable energy investment platform, eNordic. Earlier this year, Ardian made its first investment in Finland with the acqui-

sition of the Lakiakangas 1 wind farm from German-based wind-power company, CPC Finland Oy.

"This agreement is the latest step in our strategy to build a leading independent sustainable energy group in the Nordic region," said Thomas Linnard, managing director, eNordic. "The long-term financing was secured at very attractive terms despite current market conditions and high level of complexity involved, highlighting the strength of the project and our approach."

"This project is a great example of our asset management capabilities and ability to improve our investments' performance including financing, hedging, build-ups, and technical optimization," said Simo Santavirta, head of asset management, Ardian Infrastructure.

"This operation highlights our continued commitment to sustainability and relentless activity as we continue to look for investment opportunities to support the sustainable energy transition in the Nordic region," said Amir Sharifi, managing director, Ardian Infrastructure.

"KfW IPEX-Bank is firmly committed to finance innovative energy and environmental projects, and we're pleased to support Ardian and eNordic's Åndberg wind farm as they continue to support the sustainable energy transition in the Nordics," said Markus Scheer, member of the management board of KfW IPEX-Bank. "It has been a real pleasure to work with their highly competent teams, and we look forward to a long-term partnership." ✎

**MORE INFO** [www.ardian.com](http://www.ardian.com)



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