Why asset management is crucial for a sustainable transition

By Hendrik Bohne, Chief Asset Officer at Aquila Clean Energy, APAC

Securing a net-zero future is an imperative that demands efforts from all parts of our economy. For the energy sector, you could argue that the stakes are double. Transitioning to clean energy is not just about transforming the sector itself, but also powering the transformation of many other industries in a sustainable way.

We've advanced somewhat on that journey, and the urgency to continue building infrastructure that harnesses our planet's renewable assets is both needed and welcome. But in the momentum of this transition, we also need to ensure that the urgency of developing clean energy projects does not come at the cost of their quality or longevity.

This is where asset management, a crucial yet often overlooked component in the energy transition, comes in. When incorporated early on in project development and approached with a long-term and holistic view of the project and its stakeholders, asset management can help determine a project's efficiency, profitability and sustainability.

Here are four reasons why.

1. Prioritising asset management in the development and construction phases minimises risks and costs over a project's lifespan

Careful planning and investment in asset management during the early stages of a project instead of only at commercial operations will shape the technical and commercial management of assets and reduce costs and impacts for years.

For example, selecting the right monitoring hardware for long-term compatibility with evolving software, or planning for remote access by operation and maintenance teams can save significant time and financial resources over the lifespan of a project.

At one solar PV farm that our team members had been involved with prior to joining Aquila and only at the operation and maintenance stage, the EPC contractor had installed a basic monitoring system without string-level diagnostics. This resulted in delayed fault detection, energy losses and avoidable increased O&M expenses to the tune of 15 percent of the project's annual revenue. Having an asset management team on hand during the development stage would have identified the risk and mitigated this by investing in an advanced monitoring system, allowing real-time fault detection during operations.

Additionally, when the asset management team leads early intervention in a project from a health and safety perspective, it ensures that all risks are assessed so that the public and the

asset are protected. This may involve evaluating and selecting new technologies that enable early and effective safety interventions, such as incorporating not just the legally

mandated fire protection, but also the most suitable solutions into a battery energy storage system right from the start. Careful and considerate plant design and engineering can also reduce the risk of accidents for maintenance personnel. Lastly, understanding and implementing local standards and regulations will go a long way to reducing the risk of regulatory noncompliance, which can be both time-consuming and costly for projects to resolve.

2. When asset management gets involved early, it can help successfully deliver stakeholder engagement frameworks over the long term

Clean energy projects are complex endeavours involving a wide range of stakeholders, from traditional landowners and community members to local and regional authorities and lenders. By being called in early to support aspects of planning and stakeholder relations, asset managers can help deliver agreed commitments and anticipate issues.

At an Aquila wind park in Denmark, the asset manager responded to a neighbour's noise concern by proactively commissioning an independent noise study, despite the turbines operating within the permitted range. While the independent study confirmed compliance with regulatory limits and environmental guidelines, by addressing the concerns seriously and transparently, the asset manager fostered trust and showed a continued commitment to community engagement, ensuring good relationships with neighbours while maintaining operational integrity.

3. Asset management helps prioritise long-term gains over short-term cost considerations

The need to secure funding and accelerate the roll-out of clean energy projects often means that short-term considerations outweigh long-term risks in planning and decision making. This approach is short-sighted and often costly – with seemingly small shortcuts in planning or construction resulting in permanently high costs of operations.

One example is incorporating animal grazing into a solar PV site without considering the other essential requirements in the project's design. If a project is designed with narrow rows between the panels or the panels are too low to the ground, access for mowing and sheep grazing will be limited. Sheep will only eat grass of a certain height, meaning that either the grass must be regularly maintained or the sheep must be moved across the site by a shepherd to eat enough.

In addition to hiring a shepherd, the drainage must be covered appropriately so the animals can cross safely. To accommodate the more widely spaced panels, the electrical infrastructure will also be managed on a bigger surface and that requires additional health and safety considerations, too.

This is one example among many that underscores the importance of asset management being drawn in early. Similar considerations for the overall plant design life and for future retrofitting or repowering activities for wind, solar PV and BESS assets are equally important.

4. Asset management helps boost economic opportunities in local communities and build trust

By assessing suppliers' capabilities early in the development phase, asset managers can also help source materials and services locally, boosting local livelihoods and reducing transportation costs.

At Aquila's wind parks in Europe, local contractors are selected for Balance of Plant services whenever possible, creating local jobs that directly benefit the community, ensuring local expertise and a mutual commitment to the wind park's success. O&M providers without this emphasis may bring in external contractors to do this work instead.

Additionally, by taking a broad and long-term view of projects, asset management can work closely with communities to minimise ongoing visual and environmental impacts on one hand, and to maximise social and environmental benefits such as local training, employment and education programmes on the other.

A 'crucial' success factor

For these reasons and more, proactive asset management is a crucial success factor in individual projects, and in the energy transition as a whole. This is why having dedicated asset management teams is crucial in supporting projects through all phases, starting with planning.

Most notably, asset managers play a pivotal role by working closely with investment and development teams on all aspects of a project – from engaging contractors and evaluating and managing risk, to providing input on design, engineering and financial planning of the operations.

We believe this is a key differentiator and a guarantee to lenders and partners that all best efforts are being made to minimise risks and costs and maximise opportunities over the lifespan of projects.

The energy transition is not a sprint, it is a marathon, and we owe it to future generations to deliver clean energy assets that last and perform over time. With asset management as a core consideration of every project, we can build a sustainable and robust energy transition, for good.

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