



The connected
source for economic
risk analysis.

HITACHI
Inspire the Next



Turnkey SaaS solution
for renewable developers

Renewable Insights

Renewable power generation development continues to experience accelerated growth on a global scale; the ensuing level of steep competition has motivated developers to push for greater insight into the operational and financial performance of project sites. Hitachi Energy’s convenient SaaS solution offers specific data for individual renewable project analysis sold on a site-by-site basis at a fraction of the usual price.



The market

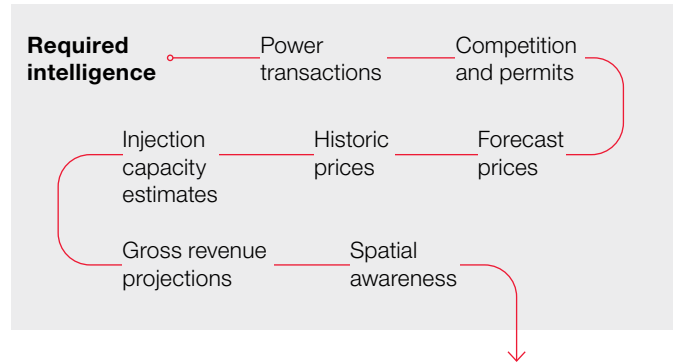
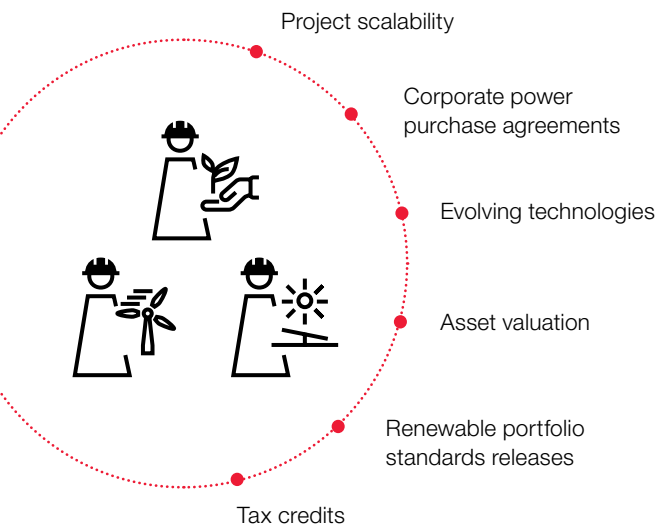
Rapid growth in the renewable power generation development space is largely due to impacts from project scalability, renewable portfolio standards releases, corporate power purchase agreements, tax credits and evolving technologies. Easy public access to these resources has helped bring the renewables market to a point where developments across a broad range of size & scope have become financially viable.

Financing & power purchase agreement negotiations also require developers to understand and demonstrate awareness of their market impact and exposure. With tax credit uncertainty, supply chain impacts, increased competition and market complexity, trustworthy financial and operational analysis has become an industry-wide imperative.

Industry challenges

Gathering the required intelligence is typically a time-intensive, unpredictable and costly process with limited courses of action. Developers either purchase and implement a robust enterprise software instance run by trained staff or hire a series of analysts and consultants to procure and provide the necessary data and analytics. These collective challenges inspired Hitachi Energy to create an affordable and comprehensive software solution that provides all needed intelligence for assessing risk, reviewing project sites and making better decisions – fast.

Factors encouraging the rapid growth in the renewable power generation development space



Our solution

Renewable Insights is our modular, turnkey software-as-a-service solution that provides developers with the site-specific capability and functionality of two of Hitachi Energy’s most powerful enterprise software solutions combined with power consulting expertise:

- **Velocity Suite** – collects, cleans and formats analysis from 3,000 different sources.
- **Reference Case** – provides unbiased market intelligence and reliable forecasts.
- **Power Consulting** – simulated injection capacity at the substation level using market-trusted modeling

Hitachi Energy supports additional analysis in this solution with proprietary research into potential permits needed in each state, as well as proposed generation or transmission expected in the area.

It also incorporates Independent System Operator generator Interconnection Queues from the surrounding area, enhanced with Hitachi Energy research to identify specific power plants and substations referenced in the queue, while leveraging cleaned power transaction data from the Federal Energy Regulatory Commission. The tool is designed to enhance the analysis process for any development site.



Comprehensive site due diligence in one unified, intelligent platform

Renewable Insights features tailored dashboards with supporting APIs that provide users intelligence into siting, interconnection, risk, and finance needs for a specific development site. Users can review infrastructure, other projects, ownership territories, regulated lands, industrial facilities, commercial facilities and data centers within a radius of their project.

They can also analyze five years of hourly locational marginal price (LMP) data for their site alongside their basis risk to a delivery hub. Hitachi Energy's fundamental forecast results are included with various scenarios for market risk, as well as gross revenue projections based on the LMP site, the expected forecast values and capacity factors derived from National Renewable Energy Laboratory (NREL) models.



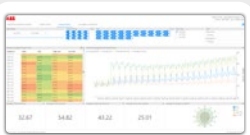
Spatial awareness

Features maps and information regarding transmission lines, substations, utility territories, regulated lands, industrial facilities that may potentially need power, and power plants currently existing or planned near a desired site including ownership, capacities and other attributes.



Historic pricing

Market pricing for the site with components and analytics. Spread analysis for basic risk between the project site and its potential delivery market hub. Details to help gain an understanding of curtailment potential and all the major price events relevant to the project's financial success with varying aggregations and time views.



Forecast prices

Contains third-party, unbiased, market-leading forecast prices from Hitachi Energy for the next 25 years. These help with the project's financial expectations, merchant exposure and economic viability. View the market expectations with various market risk scenarios including higher gas prices, lower prices, and other market driving factors.



Wholesale transactions

Shows aggregated and cleaned transaction history to analyze who already buys and sells power in this area, at what cost, and with what contract structures.



Competition and permitting

Based on Hitachi Energy's own research for permits from identified authorities that other facilities have generated. Complete coverage of ISO Interconnection Queues and many non-ISO Balancing Authority Queues to track competitive projects and their status within the region.



Gross revenue projections

Calculates expected revenue by month and peak type based on historic price patterns, forecast prices, and capacity factors adapted from NREL wind and solar models. Predictive analytics provide insight to identify the best potential site for your project, or the best potential project for this site.

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