e-terra renewableplan
An Intelligent Way to Manage Your Renewable Resources
The race to replacing conventional energy resources with less polluting alternatives resulted in a proliferation of renewable resources. The cost of building these resources is becoming more affordable, in part due to the government subsidies and tax incentives used to encourage construction.

The integration of renewable energy resources into the grid creates new challenges for the grid operators and asset owners. The unpredictability and the intermittent nature of these resources make it very difficult to forecast and schedule these resources. This is even more important to entities with power balancing responsibility, which also have to consider the stiff ramping times of these resources.

These uncertainties can lead to very high penalties from the scheduling authorities for not maintaining the schedules, thus leading to potentially huge losses of revenue. Similar revenue losses can also occur when the assets are under-scheduled due to wind pattern uncertainties.

An intelligent way of managing and operating renewable resources

The intermittent nature of these resources requires a new, specialized set of tools to manage and optimize their utilization.

Alstom’s **e-terra renewableplan** offers the perfect solution for both asset owners and transmission system operators. Our product will give you visibility to the data forecast you never had before. This will allow you to schedule your assets more accurately, knowing when and what units to schedule.

**e-terra renewableplan** will allow you to perform reliability studies to see how your system behaves in the presence of renewable resources. You can also perform comparative studies to see the difference between running your system with or without renewables and what impact they have on the system. For example, if the wind is blowing too much, you might need to shut down a regular unit and still meet the schedule for operating reserves. Conversely, if the wind is dying down, you will know when to ramp up your other traditional units in time to meet your schedule, thus avoiding any penalties. In case of congestion, you will be able to curtail your renewable resources just as you would your traditional units.

If you are a Transmission Operator, you can also perform look-ahead analysis and network planning by using the data generated by **e-terra renewableplan**. This increased visibility to your system will allow you to plan your maintenance outages based on the generation pattern behavior.

If you are a Generation Company or an Asset Owner, **e-terra renewableplan** offers you another set of data that you can use in your risk management and strategic bidding tools. Our software brings the forecast data, which helps to evaluate and create a risk profile to optimize your bidding strategies. The advanced set of algorithms embedded in the **e-terra renewableplan** will help you solve a series of problems related to meeting and bidding operating reserves.
Leveraging over 30 years of industry and software development experience, the e-terra renewableplan includes an advanced set of analytic tools that take the data from your forecasting, weather, SCADA, and other systems and converts it into actionable information. This information will give an increased situational awareness to better manage and maximize your assets’ utilization.

**e-terra renewableplan** integrates seamlessly with your energy management, distribution management, and market management systems.

With **e-terra renewableplan**, you can model your renewable resources on-line and on-the-fly without the need of a specialized expertise.

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**Customer benefits**

- **Enhanced situational awareness** with full GIS-based user interface, such as Google and satellite maps
- **Interface with the field devices** through SCADA
- **Intelligent validation** of the renewable resources power forecasts
- **Advanced logic** to blend multiple forecasts
- **Intelligent alarming** and anomaly detection
- **Support of complex reliability** and look-ahead studies
- **Support of curtailment business process**
- **Support of reserve requirement calculations**
- **Support of training simulator environments**
- **Support of generation planning** (real-time, hour-ahead, and day-ahead)

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**e-terra renewableplan** – The only tool you need to manage your renewable resources safely and securely, and maximize your financial and environmental potential.
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