



Renewable Energy and Demand Forecasting Solutions

.Kreate

Enabling better decision making through data driven solutions



.Kreate offers RED – a Renewable Energy and Demand forecasting tool that is designed to meet the needs of generators, distribution companies, state and regional load dispatch centers, as well as meeting compliance needs of regulatory commissions. Our easy to use product helps you lift your overall energy business performance and simplify reporting.

RED uses a sophisticated dual-ensemble approach using physical and statistical modelling of weather and generation data to achieve best-in-class energy forecast accuracy. We achieve this high level of performance by blending high quality weather data with energy production data using predictive analytics that utilize advanced machine language techniques. Our online portal is easy to use, and available to all the key users at client organizations.

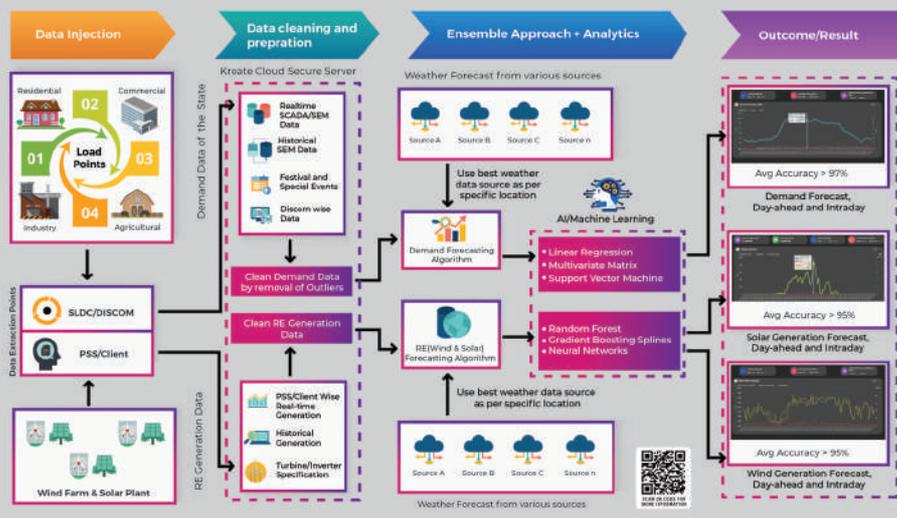
.Kreate has proven expertise in short-term wind/solar generation and load forecasting. We are a leader in deploying advanced analytics for forecasting of wind/solar generators, DISCOMs, SLDCs, and RLDCs. We also offer Qualified Co-ordinating Agency (QCA) services in which one of the key components is aggregate generation forecasting for a portfolio of Wind/Solar generators that share a substation.

Current Portfolio:

**Demand Forecasting
50,000 MW**

**Wind Forecasting
9,325 MW**

**Solar Forecasting
4,808 MW**



.Kreate's forecasting tool RED provides intraday/day ahead/ week ahead generation forecasting for Wind/ Solar plants, and demand forecasting at distribution utility and state levels.

We offer products and services that create highly accurate Wind/Solar generation and demand forecasts to help asset owners and system operators to reduce deviation charges. Our state-of-the-art products have intuitive navigation, comprehensive data visualization and extensive management reporting.

FEATURES OF RED



Real-Time Analytical Dashboard and Mobile application for monitoring Solar/ Wind Plant generation data, comparing actual with forecast, revising forecasts and monitoring Deviation Settlement Mechanism (DSM) charges.



Real-Time Analytical Dashboard and Mobile application for monitoring demand data, comparing actual with forecast and revising forecasts.



Monthly MIS reports on forecast Vs actual generation, DSM charges summary and any other MIS as per the requirement.



Available on cloud and for in-house installation.



SMS/Email alerts to the concern officials.



Compatible with most Browsers.



Our reporting formats meets all CERC/SERC compliance requirements



Robust QA/QC process is followed to ensure best forecasting result



Fast customer set-up time

OUR TEAM

The team has deep power sector work experience in utilities, SLDCs, renewable energy generators and industries. Our team's exceptional techniques of meteorology, renewable energy systems, advanced machine learning models, weather prediction, and data analytics offers a variety of forecasting products and services.

- Diversified team of Data scientists/Machine Learning, Weather scientist and experts with rich experience in forecasting activities
- Development support from experienced professionals from IIT Mumbai, Delhi , ISI Delhi and US consultants
- 24*7 dedicated operation Team support

CASE STUDIES

RED Fx



Client: Solar Power Plant Owner



Challenge: Solar generator required efficient services that provide forecast to minimize their huge deviations & losses.



Value: Highly accurate day ahead forecast (no compliance penalty), timely delivery of forecast, incorporation of wide variety of variables like weather, high accuracy, high value, client dashboard, daily and monthly accuracy reports



MAPE: below 5% (for solar forecasting) & below 10% (for wind forecasting)

RE Forecast

RED Fx Pro



Client: Wind Farm Owner



Challenge: Wind generator required 24*7 support and accuracy guarantee to ensure minimum DSM penalty.



Value: Highly accurate day ahead forecast (no compliance penalty), timely delivery of forecast, incorporation of wide variety of variables like weather, high accuracy, high value, client dashboard, daily and monthly accuracy reports, 24*7 control room monitoring, energy accuracy guarantee, DSM accounting



MAPE: below 5% (for solar forecasting) & below 10% (for wind forecasting)

RED Fx



Client: DISCOM/SLDC/RLDC



Challenge: In absence of effective forecasting tool, DISCOMs are incurring high financial penalties due to high deviations



Value: Highly accurate day ahead demand forecast, high accuracy, high value, incorporation of wide variety of variables like weather and events, timely delivery of forecast, client dashboard, daily and monthly reports



MAPE: less than 3% (for demand forecasting)

Demand Forecast

RED Fx Pro



Client: DISCOM/SLDC/RLDC



Challenge: In absence of effective forecasting tool, DISCOMs are incurring high financial penalties due to high deviations



Value: Highly accurate day ahead demand forecast, high accuracy, high value, incorporation of wide variety of variables like weather and events, timely delivery of forecast, client dashboard, daily and monthly reports, 24*7 control room monitoring. Intraday demand forecast revisions and alerts are issued when extreme weather events occur



MAPE: less than 3% (for demand forecasting)

Services	RE Forecasting		Demand Forecasting	
	RED Fx	RED Fx Pro	RED Fx	RED Fx Pro
Forecasting	✓	✓	✓	✓
Automated Scheduling	✓	✓	✗	✗
Client Dashboard	✓	✓	✓	✓
Accuracy Analysis	✓	✓	✓	✓
Monthly Report	✓	✓	✓	✓
DSM Calculations	✓	✓	✗	✗
24/7 control room monitoring	✗	✓	✗	✓
Manual schedule verification	✗	✓	✗	✗
DSM Accounting Settlement	✗	✓	✗	✗
Energy Accuracy Guarantee	✗	✓	✗	✓

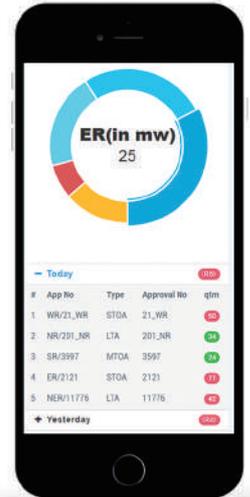
OTHER VALUE ADDED SERVICES

PTS-GENCO: A Contract Management and Scheduling Solution that manages the power transactions from front-to-back office.

- Contract Management Solution (CMS): Manages the complete life cycle of a transaction (sale/ purchase of power) i.e. from entering into a contract until bill generation and account settlement.
- Scheduler: takes care of scheduling of power

Benefits:

- Low operating cost.
- Minimum manual intervention.
- Flexible payment option.



CMMIDEV / 3SM



**Best Analytics
Platform Award
2019**



**Certification of Registration
ISO 27001:2013**



**Certification of Registration
ISO 9001:2015**

Contact bd_reforecasting@kreatetechnologies.com for additional information and to set up a pilot project

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through data driven solutions

