OpenSTEF Project Webpage

General Page Information

Item	Link/Context	Notes
Project Name	OpenSTEF	Exact spelling and capitalization
Logo	https://artwork.lfenergy.org/projects/openstef/	Provided by LFE Staff
Hero image		Let us know what you imagine on your site, or link an image that you'd like us to use. Final choice will be a decision of the LF Energy staff.
Wiki	OpenSTEF	Provided by LFE Staff, but built out by project
Mailing List	lists.lfenergy.org@lists.lfenergy.org	Provided by LFE Staff
GitHub	https://github.com/alliander-opensource/OpenSTEF	
Roadmap	OpenSTEF Roadmap	
Metrics Dashboard		Provided by LFE Staff

Project Overview (opening text)

Example content: Background of project and why it was created. Ultimate goals and objectives.

OpenSTEF provides automated machine learning pipelines to deliver accurate, self-correcting and explainable forecasts of the load on the grid for the next 48 hours.

Project Details

The energy transition poses new challenges to all parties in the energy sector. For grid operators, the rise in renewable energy and electrification of energy consumption leads to the capacity of the grid to near its fysical constraints. Forecasting the load on the grid in the next hours to days is essential for anticipating on local congestion and making the most of existing assets.

OpenSTEF provides a complete software stack which forecasts the load on the electricity grid for the next hours to days. Given a timeseries of measured (net) load or generation, a fully automated machine learning pipeline is executed which delivers a probabilistic forecast of future load. This works for energy consumption, (renewable) generation or a combination of both. OpenSTEF performs validation on the input data, combines measurements with external predictors such as weather data and market prices, trains any scikit-learn compatible machine learning model, and delivers the forecast via both an API and an (expert) graphical user interface. The stack is based on open source technology and standards and is organized in a microservice architecture optimized for cloud-deployment.

The Dutch DSO Alliander started the Short-Term-Forecasting project to anticipate congestion in the distribution grid, to allow for grid safety analysis in the transmission grid and to enable smart grid innovations to locally balance supply and demand within the constraints of the grid. By opensourcing the stack, the ambition is to provide an industry standard for generating and evaluating forecasts in the operational time-domain, as well as allow for structured collaboration.

Other information to include (optional)

Feature image (optional).

This image can be embedded within the content of your page.

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