Home Energy
Real-Time Digital Twin

dcbel

It will be too late if we wait to have millions of intelligent grid-edge devices deployed before contending with their impact on the energy market, and asset and feeder management.

Particularly, the mass amount of DERs installed in a distribution network means that traditional feeder load forecasting models now yield less accurate results as they do not account for the significant generation and supply occurring behind the meter. The increasing adoption of EVs and bidirectional chargers will further exacerbate this problem.

Today

8%
of single family homes **have solar**

20%
of new car sales **are EVs**

Digital Twin

2030

25%
of single family homes **will self produce**

2/3
of global car sales **will be EVs**

dcbel's **Home Energy Real-Time Digital Twins** allow for real-time behind the meter visibility and the ability to simulate the grid impact of thousands of DER interactions against real world conditions without the need for costly and time-consuming hardware deployments. This innovative approach provides critical net load data to ADMS and near-real world insights into the future impact of DER integration, flexibility programs, and energy asset control.

## Real-time and multi-year granular DER net load forecasts

- **Analyse** the impact of the bottom-up adoption of DERs over a defined customer base

- **Evaluate** the impact of real-time flexibility price signals and dynamic prices on net load forecasts (PV, home load, ESS and EV usage forecasts)

- **Integrate** seamlessly with DERMS/ADMS/load forecasting tools via IEEE 2030.5/OpenADR/CIM or the powerful Chorus REST native API

DER Butterfly Effect
A Single ESS Impacts LMPs

A global platform that provides near real-time forecasts for hyper-accurate feeder forecasting, active Grid capacity management and development plans, and to test DER response elasticity.
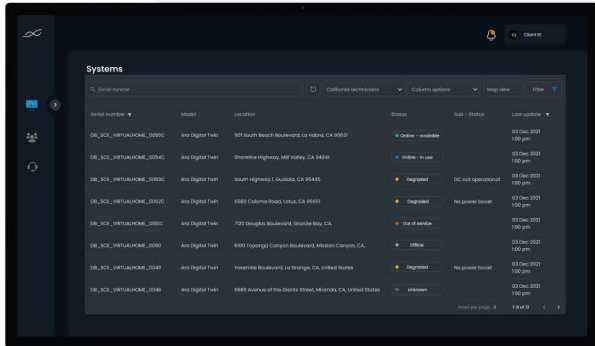

Real customer base, virtual DERs

Batch create and configure your Digital Twins and energy baseline by uploading meter data or using personas to create synthetic meter loads.
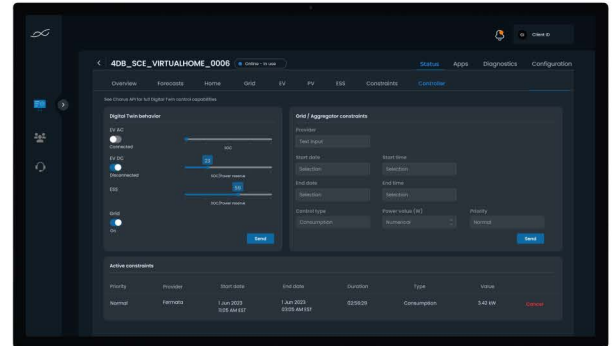
Constraints from home to grid

Use the Chorus API or Control Center interface to simulate different states such as EV arrival and departure, grid outages or a completely new energy program or tariff.
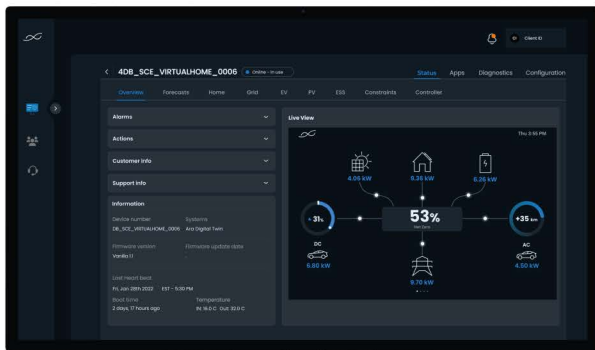
Real-time weather, pricing and family activity

Run baseline profiles or real-time meter data and simulated input through energy forecasting algorithms.

Load, EV, Solar, ESS, Feeder forecasts... Yup!

Multiple rolling forecasts connect directly to your DERMs and existing BI systems via the Chorus Load Forecast API.

To learn more, contact us at
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