

OPENGRID PLATFORM COMPONENTS – MODEL PLUGINS

One open platform, powerful interoperable components

OpenGrid's foundation is robust, trusted, open data, with task-ready applications layered on top. Each component was shaped by conversations with the grid planning community and user research on modeling pain points, and each deep-dive sets out what we heard, the outcome we're working toward, and a draft product concept for the community to react to.

Each deep-dive draws on more than 65 conversations with over 55 participants globally across the grid planning ecosystem, conducted in early 2026. We group participants into six personas along two lines: whether they produce analyses or use them, and whether they sit inside or outside the organization whose decisions are at stake. Each group brings different needs, and together they shape how every OpenGrid component is designed. To protect confidentiality, interviewees are identified only by organization type. The draft product concepts are starting points for OpenGrid's Technical Committee and working groups to refine, and we expect scope, priorities, and naming to change as that work happens.

This summary describes the current vision for each component of the OpenGrid Platform. They are not definitive specifications and are still subject to ongoing refinement. Each component will be shaped by the Technical Committee and a working group that is open to anyone who wants to take part. We expect scope, priorities and naming to change as that work happens. Comments, corrections and alternative proposals are welcome. We are publishing at this stage deliberately, so that direction can be shaped in the open rather than presented once it is already fixed.

Model Plugins

Pain points, from user research

Grid modelers rely on well-established tools they have validated over many years, so an open platform is most useful to them when it works with those tools. Many interviewees described pains that connecting their existing tools to shared data and workflows would address.

What we heard

- A European TSO compared a commercial license at about €20K a year with an open-source specialist at about €200K a year: at present, the math often doesn't favor open source. Commercial vendors field 50+ person dev teams against partial open-source coverage.
- An open resource planning initiative said practitioners report being satisfied with many of their commercial tools. Utilities hesitate to switch because testing a new tool takes 6+ months, and most are expected to keep using commercial tools.
- A commercial software provider endorsed positioning OpenGrid as a way to enable existing tools.
- A North American public utility cited 5+ year license renewals, decade-long transitions between simulation tools, and files and integrations built around existing tools like PSS/E.

What users asked for

- A commercial software provider and an open resource planning initiative both said planners want to keep the tools they trust while gaining easy access to shared data, workflows, and emerging tools around them.
- A California CCA pushing for its ISO to adopt an open-source planning tool said adoption depends on someone committing to maintain the tool over the long term.

Vision

Any modeling tool, open-source or commercial, can join the ecosystem and gain the benefit of shared data, standards, and workflows.

Planners keep the tools they know and trust while gaining access to everything around them: better data, other models, shared workflows, and ways to compare results. Tool developers connect once and reach every user of the ecosystem without building custom integrations customer by customer. A new method from a research lab can be tested against real planning problems, alongside established tools, without first building its own data pipeline.

OpenGrid succeeds when existing tools become more valuable. The goal is a larger, more connected marketplace for modeling capability, in which tools compete on the quality of their answers.

Draft product concept (for discussion)

Model Plugins is the connection layer that lets existing tools run inside the open ecosystem, as distinct from the Translator, which converts their data. A plugin interface wraps a modeling tool so calls flow in both directions: OpenGrid can invoke the tool (running it as a workflow step or executing its solver), and the tool can call back into OpenGrid to pull datasets from the Data Hub. A modeler keeps the tool they already trust and gains access to everything else.

OpenGrid may fund plugins for an initial set of priority open-source and commercial tools. Over time, the goal is for tool owners to build and maintain their own plugins, so connections keep pace as tools evolve.

Boundaries. Plugins wrap tools; the Translator converts data between formats; APIs & Integrations expose OpenGrid's own products. Plugins do not re-implement a tool, own its internal model logic, or sequence runs (Workflow Orchestration).

Who We Heard From

Our platform components were shaped by more than 65 conversations with over 55 participants across the grid planning ecosystem. We group them into six personas along two lines: whether they produce analyses or use them, and whether they sit inside or outside the organization whose decisions are at stake.

Producer Side — People Who Run the Models

Transmission-System Users. Engineers and planners at ISOs, RTOs, TSOs and vertically integrated utilities who model the bulk system, often chaining three to five specialized tools through a single study.

Primary Distribution-System Users. Operators and modelers of distribution networks, from Europe's largest DSOs to small municipal utilities with one- to five-person teams.

Point-Source Modelers. Developers, hyperscaler procurement teams and community energy buyers who model a single point of grid interaction, with analyses that must be defensible enough to underwrite capital commitments.

Consumer Side — People Who Use the Results

Internal Decisionmakers. People who use model outputs to allocate their own organization's capital and must trust analysis they did not run.

External Evaluators. Regulators, intervenors, advocacy organizations, think tanks and data-infrastructure bodies who use outputs to scrutinize decisions made by better-resourced entities.

Straddling Both

External Primary Modelers. Analysts at public utility commissions, reliability councils, think tanks and capacity-building organizations who run their own models to examine decisions made by others.