Sharing Data on Livewire

Livewire supports three formats for sharing data:

- Direct downloads for data stored on Livewire
- APIs[1]
- Links to existing data stores outside of Livewire.

Data owners can host their project's APIs outside of Livewire. With a few simple integration steps, that data is made available to Livewire users. Access to API data on the platform is through a single API key, assigned when new user accounts are created.

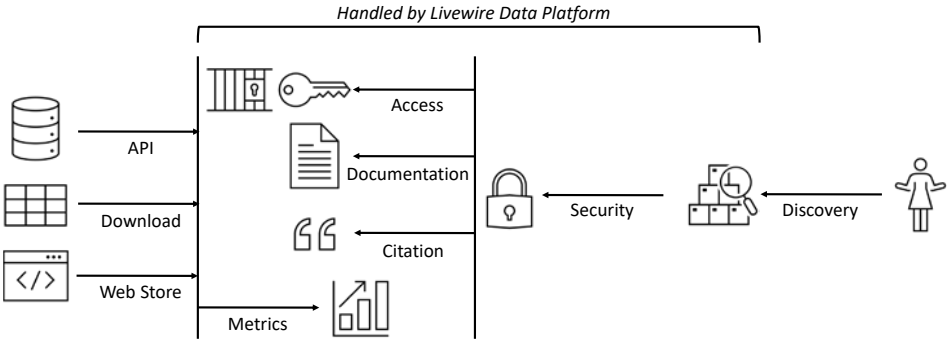
Some data formats require more time to integrate into Livewire, such as geospatial web services, databases, streaming data and others. Users can request new storage technologies if needed for a project.

Livewire Project Spotlight: Mobility Energy Productivity Metric

How it shares data: Via API and through direct download

Supported by VTO, the mobility energy productivity (MEP) metric quantifies the efficiency of transportation systems, providing a robust assessment of the quality of mobility provided to travelers in a given location. By using Livewire to host data, National Renewable Energy Laboratory researchers can share MEP scores for over 100 major metropolitan areas across the country. Livewire's functionality lets the team share data two ways—through direct download and via API that can be queried to return an area's MEP.

Learn more at:
livewire.energy.gov/project/mep



Livewire handles a range of storage, security, and documentation features to make it easier to share and preserve mobility data.

Storing and Downloading Data

Livewire uses Amazon Web Services to store up to 10 terabytes of data per project at no cost.

- Stored data is downloaded through Livewire's web interface.
- A command line tool is available to upload large datasets (greater than 3 gigabytes or 3000 files).
- Data shared on the platform is preserved per Livewire's data management plan.
- Users can download data as a zipped file or a script, available for Windows, MacOS, or Linux.

Note that Livewire preserves data per its data management plan even when a researcher leaves or a project is over. A new data owner can be assigned or re-assigned to a project by the Livewire team under VTO guidance.

Getting Started

1. **Assess the project's data needs.** Consider certain aspects, such as the number, size, and complexity of datasets, as well as format and metadata attributes.

2. **Consider factors that can increase complexity,** such as survey collection, licensing and privacy concerns, and the willingness of researchers to share data.

3. **Consider both data inputs and data outputs for a project.** Both can be provided to Livewire.

Learn More About Livewire

Livewire.energy.gov

Whatever the project, the Livewire Data Platform team is ready to help with mobility data needs from planning to project wrap-up. Send questions to livewirecontact@lyris.pnnl.gov. ■

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[1] An API, or application programming interface, allows one application to provide data from its database to another in a standardized, machine-readable format. Accessing data via API automatically updates a user's content as database content changes.

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For more information, visit:
livewire.energy.gov

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