Mission Statement

The National Open Data for Electrification (NODE) Collective is a nonprofit alliance dedicated to sourcing, structuring, and maintaining comprehensive data on every incentive program in the U.S.

Description

A nonprofit alliance founded by the Building Decarbonization Coalition, Rewiring America, and Eli Technologies, the National Open Data for Electrification (NODE) Collective will source, structure, and maintain data on every incentive program in the nation, and make it open and accessible to all who are committed to furthering the goal of building decarbonization. The NODE Collective has already amassed the most complete, well-structured, and accurate set of incentive data in the U.S. It has developed the tools to enlist a broad coalition in this effort moving forward.

The Challenge: Fragmented and outdated electrification incentive data are major barriers to progress in the electrification

Our Solution: NODE Collective introduces a vibrant, evolving data repository, a cornerstone of reliable and up-to-date electrification information, energized by:

- Proactive Data Collection: dedicated submission channels enable us to actively gather up-to-date and precise incentive data.
- Collaborative Updates: A network of stakeholders collaborating to maintain data accuracy and consistency, underpinned by structured protocols and expert review.
- Standardization of Incentive Data: By creating clear formats and guidelines, NODE Collective eliminates inconsistencies, facilitating streamlined data exchange.

The Foundation for Impact:
NODE Collective's data repository will set the gold standard for tracking electrification incentives, laying a solid foundation for informed decisions, innovative tools, and insightful policy development.

Is this a new project or an existing one?

New project, combining prior efforts of founding members.

Current lead(s)

DeAndrea Salvador, Head of Partnerships, Eli
Jeff Coleman, Founder and CEO, Eli

André Meurer, Head of Product, Building Decarbonization Coalition
Tom Carden, Head of Engineering, Rewiring America

Sponsoring organization(s), along with any other key contributing individuals and/or organizations

NODE Collective has received expressions of interest from >25 organizations so far, with offers of participation including hands-on standards development and sharing of existing data sets.

We are actively seeking participation from relevant nonprofits and government labs in the space, including RMI, NREL, PNNL, ENERGY STAR, and DSIRE, though none have confirmed participation at this stage.

Detail any existing community infrastructure, including:

- Github/GitLab, or other location where the code is hosted
- Website and/or docs
- Communication channels (such as Mailing lists, Slack, IRC)
- Social Media Accounts

Github/GitLab, or other location where the code is hosted:

- https://github.com/node-collective

Website and/or docs:

- https://www.nodecollective.org/

Communication channels (such as Mailing lists, Slack, IRC):

- Cross-organization Slack so far.
- Shared/ cross-organization email

Social Media Accounts:

- N/A

Are there any specific infrastructure needs or requests outside of what is provided normally by LF Energy ? If so please detail them.

As an open data project, NODE Collective would benefit from immediate guidance on intellectual property considerations for licensing a data set, as well as guidance on beginning a standards development and implementation project to reconcile multiple different data structures currently in use across member organizations.

Why would this be a good candidate for inclusion in LF Energy?

- LF Energy projects are helping transform the world's power systems rapidly to electrification. This project is well aligned with this mission and the open standards that underpin LF Energy and its projects.
- A single unified data set of tax credits, rebates and other electrification incentives would eliminate the need for multiple organizations to independently research, collect and monitor changes to this data. It would lower the cost of entry to new markets, allow automated inclusion of incentives in marketing and sales tools, provide policy organizations with powerful insights and analytics, etc.
- Ultimately, this data set enables service providers to massively lower the cost of customer acquisition for electrification / decarbonization projects, and will increase uptake and impact of energy efficiency programs nationwide.

How would this benefit from inclusion in LF Energy?

- As a new organization, we want to avoid reinventing the wheel when it comes to crafting the right governance processes for our standard and our open data sets.
- We would rather share the administrative overhead around fundraising and other areas where the needs and requirements are not unique to our organization.
- We would benefit from expert guidance on matters relating to intellectual property and the creation and maintenance of open data sets and open standards.

Provide a statement on alignment with the mission in the LF Energy charter.

As a Technical Project of the LF Energy directed fund, NODE Collective is aligned with the fund's charter "to raise, budget, and spend funds in support of various open source and/or open standards projects relating to the generation, transmission, distribution, and delivery of energy, including infrastructure and support initiatives related thereto." NODE Collective will offer open source code, openly licensed data, and an open standard to foster an ecosystem of mutually beneficial tools and systems that will support the electrification and decarbonization of the US.

What specific need does this project address?

- Founding members are already duplicating efforts in creating and maintaining separate databases of electrification incentives and are in regular contact with other industry and nonprofit organizations that are similarly duplicating efforts.
- We seek to create a focal point for collaboration and oversight of a single unified dataset. By combining efforts and making a neutral, unified group, we allow external stakeholders (such as state energy offices, utilities, city/county climate offices, green energy banks, etc) to help manage data updates through a single relationship and open process, rather than a patchwork of independent interests.

Describe how this project impacts the energy industry.

Open, accessible data amplifies the effectiveness of every actor in the electrification space:

- Consumers get affordability and transparency
- Contractors and OEMs get the tools for informed interactions and accurate pricing
- Governments and Program Admins are empowered to fine-tune policy instruments for maximum impact

We invite all stakeholders—from grassroots organizations to large corporations—to contribute to this living data repository. Through open collaboration, we can accelerate the design, adoption, and scaling of impactful decarbonization solutions.

Specific strong signals we've seen in the industry:

- Rewiring America has seen strong interest in the early, closed version of this data set with over 200 applications to use its API. Applicants range from startups to established public companies, nonprofits, research groups, etc.
- Rewiring America has received interest in supporting and extending its incentives datasets from fellow nonprofits, state energy offices, etc.
- BDC has run a successful directory of California incentives and seen strong interest in an API, as well as in expansion to other U.S. states.
- Eli's founding team has led a public-private partnership to build a "one-stop shop" for Californians living in disadvantaged and environmental justice communities to access clean transportation benefits and has heard strong interest from organizations across the U.S. for incentive availability datasets.

Describe how this project intersects with other LF Energy projects/working groups/special interest groups.

NODE Collective may have overlapping audiences with LF Energy projects (e.g. Arras) that serve utilities, software vendors, and researchers. There may also be interest from LF Energy projects

(e.g. Battery Data Alliance, FlexMeasures) with respect to demand-side programs, battery storage incentives, etc.

See the table below for our initial analysis based on top- level project descriptions

Project	Description	NODE Collective Intersection
Arras	Arras, formerly known as HiPAS GridLab-D, has emerged as an important open-source tool for utilities, researchers, and technology vendors in the development, maturation, and deployment of smart-grid and renewable energy resource integration technology.	Small. Potentially shared audiences of utilities, researchers and vendors.
Battery Data Alliance	Building sustainable open source software, best practices, and deliver standards for the battery industry.	Small. Potential to share incentive data on (residential) battery storage.
CitrineOS	Open source charger network software for rapid OCPP 2.0.1 and NEVI compliant EV charge management.	None.
CoMPAS	The primary goal of the CoMPAS project is to develop open source software components related to IEC 61850 model implementation, specifically for profile management and configuration of a power industry Protection Automation and Control System…	None.

Dynawo	The nature of power system dynamics is deeply evolving towards more diverse and difficult to predict behaviors due to the massive changes going on in power systems.	None.
EVerest	The primary goal of EVerest is to develop and maintain an open source software stack for EV charging infrastructure. By digitally abstracting the complexity of multiple standards and use cases, EVerest will run on any…	None.
FledgePOWER	FledgePOWER is a multi-protocol translation gateway for power systems based on the industrial IoT LF Edge project Fledge.	None.
FlexMeasures	Developing energy flexibility apps & services (e.g. to enable demand response) is crucial, but expensive. FlexMeasures is the intelligent & developer-friendly EMS to support real-time energy flexibility apps, rapidly and scalable.	Very small. Potential to share incentive data for demand response programs?
Grid Capacity Map	Grid Capacity Map is a map that provides public information about grid capacity and grid connection cost to give an early indication to customers seeking grid connection.	None.
GXF	Grid eXchange Fabric (GXF) is a software platform that enables hardware monitoring and control in the public space. GXF provides several functions out of the box and provides scalability & high availability, high security, and no vendor lock-in.	None.

Hyphae	With energy resources and infrastructure increasingly challenged to meet the coming impacts of climate change and natural disasters, Hyphae aims to make the grid more resilient and flexible with microgrids.	None.
Open Sustainable Technology	A directory and analysis of the open source ecosystem in the areas of climate change, energy, biodiversity and natural resources.	None.
OpenEEmeter	OpenEEmeter is an open source toolkit for implementing and developing standard methods for calculating normalized metered energy consumption (NMEC) and avoided energy use.	None.
OpenGEH	OpenGEH (GEH stands for Green Energy Hub) enables fast, flexible settlement and hourly measurements of production and consumption of electricity. OpenGEH seeks to help utilities to onboard increased levels of renewables by reducing…	None.
openLEADR	A friendly and compliant OpenADR implementation for Python 3.	None.
OpenSTEF	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.	None.
OperatorFabric	OperatorFabric is a smart assistant for systems operators.	None.

Power Grid Model	Power Grid Model is a high-performance Python/C++ library for steady-state distribution power system analysis.	None.
PowSyBl	PowSyBl (Power System Blocks) is an open source library dedicated to electrical grid modeling and simulation.	None.
Real Time Data Ingestion Platform (RTDIP)	Real Time Data Ingestion Platform (RTDIP) aims to provide easy access to high-volume, historical and real-time process data for analytics applications, engineers, and data scientists wherever they are.	None.
SEAPATH	SEAPATH, Software Enabled Automation Platform and Artifacts (THerein), aims at developing a "reference design" and "industrial grade" open source real-time platform that can run virtualized automation and protection applications (for the power grid industry in…	None.
Shapeshifter	Shapeshifter implements the Universal Smart Energy Framework for flexibility forecasting, offering, ordering, and settlement processes.	None.
SOGNO	The project Service-based Open-source Grid automation platform for Network Operation of the future (SOGNO) is creating plug-and-play, cloud-native, micro-services to implement our next generation of data-driven monitoring and control systems.	None.

TROLIE	Accelerating the implementation of interoperable systems for the exchange of transmission facility ratings.	None.

Who are the potential benefactors of this project?

Founding members: Rewiring America, Building Decarbonization Coalition, Eli

Climate investors, health impact investors, Philanthropic foundations.

What other organizations in the world should be interested in this project?

- Nonprofits
- State Energy Offices
- City / County Climate Offices
- Major / municipal utilities
- Electrification contractors / OEMs / Retailers
- Energy industry researchers / government labs
- Media / news
- Climate investors, health impact investors
- Climate startups
- Community Based Organizations (CBOs)
- Academic, research, and policy advocacy organizations

Plan for growing in maturity if accepted within LF Energy

- Immediately: create a technical working group to document a standard, open up RA/BDC/Eli data sets and begin unifying the data format to comply with the standard, implement github-driven open workflows for managing changes to the standard and dataset, support complementary open source code projects.
- Convene events and found other relevant working groups (e.g. regional focus, research, market intelligence, policy, etc).

Project license

We are willing to work with LF Energy to evaluate and select the appropriate project licenses for our use case. Rewiring America currently uses Apache (https://www.apache.org/licenses/LICENSE-2.0) for its own code.

Considering:

- CC-0 for data
- CC-0 for standard
- Apache 2 for code

Is the project's code available now? If so provide a link to the code location.

No code, data, or documentation is available yet.

Does this project have ongoing public (or private) technical meetings?

Private weekly meetings of the steering group.

Does this project's community venues have a code of conduct? If so, please provide a link to it?

We intend to adopt the Linux Foundation's code of conduct guidelines for our Slack, Github, and other collaboration tools.

Describe the project's leadership team and decision-making process.

The founding/steering group of BDC, Eli, and Rewiring America is currently informal and consensus-based, with a default to open and transparent sharing of all documents and records.

Does this project have public governance (more than just one organization)?

As the project gains traction and the ability to direct more significant resources, we intend to adopt the Open Governance Network Model as recommended by the Linux Foundation.

Does this project have a development schedule and/or release schedule?

Not yet. We intend to form our first working group to develop our technical standard, based primarily on existing specification and schema development at Rewiring America which will be open sourced imminently. The working group will determine the roadmap for subsequent releases of the specification and associated data sets.

Does this project have dependencies on other open source projects? Which ones?

No. The project is primarily a specification and open data effort with no external dependencies.

Describe the project's documentation.

The initial release will include spreadsheet templates for the gathering and maintenance of state-level electrification incentive data, as well as a guidance document for participants in the data processes.

Describe any trademarks associated with the project.

NODE Collective has a logo that was created jointly by BDC and Eli and is intended to be owned by the collective. There is no formal registered trademark associated with the logo.

Do you have a project roadmap? If so please attach or provide a link.

N/A

Are this project's roadmap and meeting minutes public posted?

N/A

Does this project have a legal entity and/or registered trademarks?

No.

Has this project been announced or promoted in any press?

There is a website and initial partner conversations, but the project has not been announced or promoted in the press.

Does this project compete with other open source projects or commercial products?

There are no comparable open data sets. There is some overlap with DSIRE, AFDC, and other nonprofit/public initiatives, though they do not fully meet the needs and level of detail required by the collective today. Additionally, we welcome their open collaboration and partnership.

Eventually, our members may have overlap on downstream commercial offerings, for example, startups in the space like founding member Eli, Upfront (knowupfront.com), and Pencil Energy (pencilenergy.com), as well as longer-standing commercial entities like Eco Rebates (ecorebates.com), however, given the intention of the project is centered around creating open and shared incentive availability data we could see this project being an opportunity for availability dataset collaboration as opposed to competition.

Add tasklist