

Technical Advisory Council (TAC) Meeting

2 April 2024

OLFENERGY

Meeting information

- Meeting to begin at 5:00 pm Central European Summer Time
- Join the meeting at the link in your calendar in [LFX Individual Dashboard](#)
- Any problems with connectivity, you can contact John Mertic from the Linux Foundation at +1 234-738-4571
- Previous TAC Meeting notes, deck, and recording, at <https://wiki.lfenergy.org/display/HOME/Technical+Advisory+Council#TechnicalAdvisoryCouncil-MeetingMinutes>

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Agenda

All Times in Central European Time Zone

- 5:00 pm - 5:20 pm - Opening and General Updates
 - TAC member updates and project review date reminders
 - General updates
 - Project Security Focus updates
- 5:20 pm - 5:40 pm - Digital Substation Automation Systems (DSAS) presentation
- 5:40 pm - 6:00 pm - Sylva presentation
- 6:00 pm - 6:20 pm - NODE Collective presentation
- 6:20 pm - 6:25 pm - Marketing/PR/Events updates
- 6:25 pm - 6:30 pm - Closing and Next Meeting

Opening and General Updates

5:00 pm - 5:20 pm

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TAC Voting Members

You can update your
headshot/title at
openprofile.dev.



Antonello Monti
Chair
Professor
RWTH Aachen
University



Anne Tilloy
Project manager
RTE (Reseau de
Transport
dElectricite)



Art Pope
Member of
Technical Staff
Google LLC



Boris DOLLEY
Director of OSPO
and Sustainable IT
Strategy
RTE (Reseau de
Transport
dElectricite)



Bryce Bartmann
Chief Digital
Technology Advisor
Shell International
Exploration &
Production, Inc.



**Jonas van den
Bogaard**
Open Source Office
Lead
Alliander



Maarten Mulder
PO Field Device
Platforms
Alliander



Travis Sikes
Senior Data
Scientist
Recurve



Yixing Xu
Microsoft
Corporation

LF Energy Hosted Project Leads

Project	Project Lead(s)
PowSyBI	Anne Tilloy, RTE
OperatorFabric	Frederic DIDIER, RTE
OpenEEmeter	Travis Sikes, Recurve
GXF	Maarten Mulder, Alliander
SOGNO	Antonello Monti, RWTH Aachen University
CoMPAS	Aliou Diaite, RTE & Sander Jansen, Alliander (TAC Representative)
FledgePOWER	Akli Rahmoun, RTE
Hyphae	Asimena Korompili, RWTH Aachen University
openLEADR	Stan Janssen, OpenADR
SEAPATH	Éloi Bail, Savoir-faire Linux
Grid Capacity Map	Harald Klomp, Vattenfall
Shapeshifter	Robben Riksen, Alliander
OpenSTEF	Frank Kreuwel, Alliander

Project	Project Lead(s)
EVERest	Marco Möller, PIONIX
OpenGEH	Nicolas Bernhardt, Energet
FlexMeasures	Nicolas Höning, Seita Energy Flexibility B.V.
Arras	David Chassin, SLAC
Dynawo	Marco Chiaramello, Benoît Jeanson, RTE
OpenFIDO	David Chassin, SLAC
Power Grid Model	Tony Xiang, Alliander
Real Time Data Ingestion Platform (RTDIP)	Bryce Bartmann, Shell
TROLIE	Christopher Atkins, MISO Energy
Battery Data Alliance	Gabe Hege, AMPLabs
GRIP (Grid Resilience and Intelligence Platform)	Alyona Teybar, MASc

Project & Working Group Leads

Project	Project Lead(s)
Open Sustainable Technology	Tobias Augspurger, Protontypes
CitrineOS	Thana Paris, S44
covXtreme	Sachin Bhakar, Shell
Synthetic Energy Data	Gus Chadney, Centre for Net Zero
OpenSCD	Sander Jansen, Alliander

Working Group	Work Group Lead(s)
AI Working Group	Alexandre Pariost, The Linux Foundation
Archimate Working Group	Jonas van den Bogaard, Alliander
ORES (Open Renewable Energy Systems)	Chris Xie, Futurewei

Project Review Cycle

2024 Reviews				
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date
SOGNO	Early Adoption	October 27, 2020	March 21, 2023	April 23 2024
FledgePOWER	Incubation	February 11, 2021	March 21, 2023	May 14, 2024
Shapeshifter	Incubation	April 6, 2021	April 11, 2023	May 14, 2024
CoMPAS	Incubation	May 5, 2020	July 13, 2022	June 25, 2024
OperatorFabric	Early Adoption	April 30, 2019	July 25, 2023	July 16, 2024
Arras	Sandbox	July 12, 2022	July 25, 2023	July 16, 2024
TROLIE	Incubation	September 5, 2023		September 3, 2024
Battery Data Alliance	Incubation	September 5, 2023		September 3, 2024
GXF	Early Adoption	February 4, 2020	September 26, 2023	September 24, 2024

2024 Reviews				
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date
Open Sustainable Technology	Sandbox	October 17, 2023		October 4, 2024
Grid Capacity Map	Incubation	April 27, 2021	October 17, 2023	October 4, 2024
OpenEMeter	Incubation	June 4, 2019	October 17, 2023	October 4, 2024
OpenSTEF	Incubation	September 21, 2021	October 25, 2022	November 5, 2024
FlexMeasures	Incubation	November 2, 2021	November 28, 2023	November 19, 2024
PowSyBI	Early Adoption	April 30, 2019	November 28, 2023	November 9, 2024
CitrineOS	Sandbox	November 28, 2023		November 19, 2024
SEAPATH	Early Adoption	October 6, 2020	December 19, 2023	December 10, 2024
covXtreme	Sandbox	December 19, 2023		December 10, 2024
OpenLEADR	Incubation	September 15, 2020	December 6, 2022	TBD
OpenGEH	Sandbox	October 12, 2021	October 4, 2022	TBD

Project Review Cycle

Working Groups				
Group	Current Level	Initially Accepted	Last Review Date	Next Review Date
Archimate Working Group	Active	October 4, 2022	November 28, 2023	October 29, 2024
AI Working Group	Working Group	January 25, 2022		TBD

Past Reviews				
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date
EVERest	Early Adoption	October 12, 2021	January 9, 2024	January 7, 2025
Synthetic Energy Data	Sandbox	January 9, 2024		January 7, 2025
RTDIP	Sandbox	October 25, 2022	January 9, 2024	January 28, 2025
OpenSCD	Sandbox	January 25, 2024		January 28, 2025
Dynawo	Sandbox	December 6, 2022	January 30, 2024	January 21, 2025
OpenFIDO	Sandbox	January 17, 2023	January 30, 2024	January 21, 2025
Hyphae	Incubation	December 8, 2020	February 20, 2024	February 11, 2025
Power Grid Model	Sandbox	February 7, 2023	February 20, 2024	February 11, 2025

TAC Sponsors for Projects

As part of the benefit for LF Energy projects, the TAC has a sponsor for each project.

“Appointment of an existing TAC member by the TAC that will act as a sponsor of the project and provide recommendations regarding governance best practices.”

ACTION: Review assignments, let John or Yarille know if there are issues

Project	Current Level	TAC Sponsor
Archimate Working Group	Working Group	Maarten Mulder
Arras	Sandbox	Antonello Monti
Battery Data Alliance	Sandbox	
CitrineOS	Sandbox	
CoMPAS	Incubation	Bryce Bartmann
Dynawo	Incubation	Art Pope
EVERest	Early Adoption	Bryce Bartmann
FledgePOWER	Incubation	Jonas van den Bogaard
FlexMeasures	Incubation	Maarten Mulder
Grid Capacity Map	Incubation	Boris Dolley
GRIP (Grid Resilience and Intelligence Platform)	Sandbox	
GXF	Early Adoption	Jonas van den Bogaard
Hyphae	Incubation	Antonello Monti

TAC Sponsors for Projects

Project	Current Level	TAC Sponsor
OpenEEmeter	Incubation	Travis Sikes
OpenFIDO	Sandbox	Avi Allison
OpenGEH	Sandbox	Avi Allison
OpenLEADR	Incubation	Anne Tilloy
OpenSCD	Sandbox	
OpenSTEF	Incubation	Jonas van den Bogaard
Open Sustainable Technology	Sandbox	
OperatorFabric	Early Adoption	Boris Dolley
PowSyBl	Early Adoption	Anne Tilloy
Power Grid Model	Sandbox	Jonas van den Bogaard
Real Time Data Ingestion Platform (RTDIP)	Sandbox	Art Pope
SEAPATH	Early Adoption	Boris Dolley
Shapeshifter	Incubation	Jonas van den Bogaard
SOGNO	Early Adoption	Antonello Monti
Synthetic Energy Data	Sandbox	
TROLIE	Sandbox	Boris Dolley

General Updates

- Yarille will be reaching out to project/working group leads to update slide in HL overview deck. (<https://github.com/lf-energy/tac/issues/91>)
- We'd like to schedule guest speakers/topics that would be of interest to TAC members and TSC leads.
 - **ACTION: Let us know what would be of interest at <https://github.com/lf-energy/tac/issues/31>.**
- Plan to move all projects to using LFX PCC Meeting Management by end of Q1; current status at <https://github.com/lf-energy/tac/issues/39>
 - **ACTION: Projects lead to work with John on transitioning: <https://github.com/lf-energy/tac/issues/110>**
- Future of Slack; Zulip being trialed by EVerest (<https://github.com/lf-energy/tac/issues/48>)

Project Security Focus updates

- Ensure all projects up to date with OpenSSF Best Practices Badge per their maturity level
- Clean up LFX Security to ensure it's accurate
- Review license scans and remedy open issues
- Security Audits for all 'Early Adoption' stage projects
- Security strategy developed by TAC (response standards, CVE response)



openssf best practices silver



openssf best practices silver



openssf best practices passing



openssf best practices silver



openssf best practices in progress 73%



openssf best practices passing



openssf best practices passing



openssf best practices passing



openssf best practices passing



openssf best practices passing



openssf best practices passing



openssf best practices passing



openssf best practices passing



openssf best practices in progress 97%



openssf best practices passing



Current OpenSSF Best Practices Badge status (4 projects out of compliance)

ACTION: Projects in red boxes need review (source

https://tac.lfenergy.org/projects_with_bestpractices)

VULNERABILITIES

13.1K Unique Open Vulnerabilities

4.3K Unique Fixable Vulnerabilities

3.4K Unique Vulnerabilities Fixed

CODE SECRETS

3,810 CODE SECRET ISSUES

3.67%	password in uri	0.58%	secret in xml
0.24%	password in uri params	0.05%	google oauth
4.78%	jwt token	5.17%	secret assignment
0.03%	sqlite database file	74.85%	others

UNIQUE NON-INCLUSIVE LANGUAGE WORDS DETECTED

41 Unique Non-Inclusive Language Words Detected

18
Total Projects

2
Projects Successfully Scanned

11
Projects Partially Scanned

4
Projects Unsuccessfully Scanned

44.8K
Upstream Dependencies

94
Types of licenses found

44
Languages

ACTION: John to review and debug issues.

<p>SOGNO</p> <p>opentf best practices passing 50%</p> <p>TOTAL VULNERABILITIES: 3.5K FOUND, 543 FIXABLE, 848 FIXED</p> <p>305 CODE SECRETS, 295 NON-INCLUSIVE LANGUAGE WORDS</p> <p>35 TOTAL REPS, 25 SCANNED REPS, 1 DISABLED REPS</p> <p>View Dashboard</p>	<p>GXF</p> <p>Grid Exchange Fabric (GXF)</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 3.2K FOUND, 1.2K FIXABLE, 0 FIXED</p> <p>19 CODE SECRETS, 1 NON-INCLUSIVE LANGUAGE WORDS</p> <p>12 TOTAL REPS, 4 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>OPENEEMETER</p> <p>OpenEEMeter</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 2.7K FOUND, 1.4K FIXABLE, 1.2K FIXED</p> <p>6 CODE SECRETS, 0 NON-INCLUSIVE LANGUAGE WORDS</p> <p>3 TOTAL REPS, 3 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>POWSYBL</p> <p>Pow5yBl</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 2.3K FOUND, 1.6K FIXABLE, 665 FIXED</p> <p>47 CODE SECRETS, 1.2K NON-INCLUSIVE LANGUAGE WORDS</p> <p>47 TOTAL REPS, 41 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>
<p>FledgePower</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 561 FOUND, 4 FIXABLE, 116 FIXED</p> <p>15 CODE SECRETS, 73 NON-INCLUSIVE LANGUAGE WORDS</p> <p>23 TOTAL REPS, 2 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>OPERATORFABRIC</p> <p>OperatorFabric</p> <p>opentf best practices in progress 64%</p> <p>TOTAL VULNERABILITIES: 378 FOUND, 173 FIXABLE, 29 FIXED</p> <p>1.2K CODE SECRETS, 242 NON-INCLUSIVE LANGUAGE WORDS</p> <p>9 TOTAL REPS, 4 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>COMPAS</p> <p>CoMPAS</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 279 FOUND, 137 FIXABLE, 478 FIXED</p> <p>56 CODE SECRETS, 154 NON-INCLUSIVE LANGUAGE WORDS</p> <p>20 TOTAL REPS, 11 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>OpenSTEF</p> <p>OpenSTEF</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 97 FOUND, 3 FIXABLE, 12 FIXED</p> <p>400 CODE SECRETS, 9 NON-INCLUSIVE LANGUAGE WORDS</p> <p>5 TOTAL REPS, 4 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>
<p>SEAPATH</p> <p>SEAPATH</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 46 FOUND, 1 FIXABLE, 17 FIXED</p> <p>40 CODE SECRETS, 140 NON-INCLUSIVE LANGUAGE WORDS</p> <p>18 TOTAL REPS, 4 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>Hyphae</p> <p>Hyphae</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 40 FOUND, 40 FIXABLE, 5 FIXED</p> <p>162 CODE SECRETS, 1 NON-INCLUSIVE LANGUAGE WORDS</p> <p>14 TOTAL REPS, 12 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>EVERest</p> <p>EVerest</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 39 FOUND, 11 FIXABLE, 0 FIXED</p> <p>28 CODE SECRETS, 2 NON-INCLUSIVE LANGUAGE WORDS</p> <p>34 TOTAL REPS, 1 SCANNED REPS, 16 DISABLED REPS</p> <p>View Dashboard</p>	<p>SHAPESHIFTER</p> <p>Shapeshifter</p> <p>opentf best practices in progress 67%</p> <p>TOTAL VULNERABILITIES: 1 FOUND, 1 FIXABLE, 1 FIXED</p> <p>14 CODE SECRETS, 1 NON-INCLUSIVE LANGUAGE WORDS</p> <p>5 TOTAL REPS, 1 SCANNED REPS, 2 DISABLED REPS</p> <p>View Dashboard</p>
<p>ARRAS</p> <p>Arras</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 0 FOUND, 0 FIXABLE, 0 FIXED</p> <p>119 CODE SECRETS, 1 NON-INCLUSIVE LANGUAGE WORDS</p> <p>12 TOTAL REPS, 0 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>FlexMeasures</p> <p>FlexMeasures</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 0 FOUND, 0 FIXABLE, 0 FIXED</p> <p>203 CODE SECRETS, 1 NON-INCLUSIVE LANGUAGE WORDS</p> <p>5 TOTAL REPS, 0 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>GRID CAPACITY MAP</p> <p>Grid Capacity Map</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 0 FOUND, 0 FIXABLE, 0 FIXED</p> <p>3 CODE SECRETS, 336 NON-INCLUSIVE LANGUAGE WORDS</p> <p>3 TOTAL REPS, 0 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>	<p>OpenLEADR</p> <p>OpenLEADR</p> <p>opentf best practices passing</p> <p>TOTAL VULNERABILITIES: 0 FOUND, 0 FIXABLE, 0 FIXED</p> <p>39 CODE SECRETS, 1 NON-INCLUSIVE LANGUAGE WORDS</p> <p>5 TOTAL REPS, 0 SCANNED REPS, 0 DISABLED REPS</p> <p>View Dashboard</p>

All current projects accepted before 12/1 had license scans done at the end of December

ACTION: Review latest license scans sent from Jeff Shapiro and address open issues

JS

Jeff Shapiro <jshapiro@linuxfoundation.org>

December 29, 2023, 10:19 PM

LF Energy - SEAPATH License Scan and Findings - Dec 2023

[Details](#)

To: SEAPATH-TSC <SEAPATH-TSC@lists.lfenergy.org> Cc: & 1 more

Hi Team,

Here are the results from the December 2023 license scan of the SEAPATH project. The scan was performed using the Linux Foundation Fossology server. Licenses and copyrights were examined.

The key findings (if any) and license summary can be found in the HTML report, the list of files in the spreadsheet, and also find the SPDX file listed below:

NOTE: I recommend that SPDX license identifiers be added to ALL source file headers. [see <https://spdx.dev/learn/handling-license-info> for examples]

NOTE: There are high priority key findings, please address these as soon as possible:

Finding #1

Priority: High

These files have an Apache-2.0 notice, but they also contain a comment indicating that they contain code from a third-party GPL v2 project.

The GPL v2 license is generally understood as prohibiting GPL v2 code from being incorporated into another work under a different license. The GPL v2 code from the upstream project should likely be removed and rewritten without using that project's code.

4 files

Finding #2

Priority: High

These files indicate that they contain content (or refer to a 3rd party dependency) under a version of the LGPL, typically seen as a weak copyleft license. Although LGPL content can be used in compatible ways with Apache-2.0 projects, its code should not be intermingled with code that needs to remain Apache-2.0, and it imposes some requirements that users of an Apache-2.0 project may not expect. The project may want to remove these files and replace them with permissively-licensed alternatives if that is feasible.

4 files

Finding #3

Priority: High

These recipes appear to contain some patches and code files that are under GPL-2.0, a strong copyleft license which is typically seen as incompatible with Apache-2.0 in many instances.

This may be okay, to the extent that the recipe is patching a GPL-2.0 project. However, for the patches / files that are GPL-2.0, will these be interacting with the project's Apache-2.0 code?

14 files

Finding #4

Priority: High

These files are under a GPL license which may conflict with your project license, especially if they are source code that is integrated with other code. Unless they are 100% separate and stand-alone, they need to be removed from your repo.

12 files

REPORTS:

lfenergy/seapath, code pulled 2023-12-23

- report: <https://liscanning.org/reports/lfenergy/seapath-2023-12-23-1eed5565-a64d-4d91-a21f-645536f1a512.html>

- xlsx: <https://liscanning.org/reports/lfenergy/seapath-2023-12-23-1eed5565-a64d-4d91-a21f-645536f1a512.xlsx>

- spdx: <https://github.com/liscanning/spdx-lfenergy/tree/master/seapath/2023-12/seapath-2023-12-23.spdx>

Please feel free to contact me with any questions about the scan results. Be sure to reply to me directly as I may not get an email sent directly to the distribution list.

Thanks, Jeff

Security Audits through Open Source
Technology Improvement Fund.

Priority Focus for 'Early Adoption' projects

In progress:

- SEAPATH - in progress
- EVerest - kickoff in Q1 2024
- PowSyBL - kickoff late Feb 2024
- OperatorFabric - introed to OSTIF team

TODO:

- GXF
- SOGNO

Next focus is on Incubation projects.

ACTION: Remaining 'Early Adoption' projects get lined up for scans; identify any 'Incubation' projects next.

OSTIF.org



The Open Source Technology Improvement Fund is a corporate non-profit dedicated to **securing open source apps** that we all depend on. Securing software isn't easy, and we know what it takes to succeed. By facilitating security audits and reviews, OSTIF makes it easy for projects to significantly improve security.

Security Strategy

TAC take the lead on developing a common set of security expectations and infrastructure for all hosted projects.

Besides the aforementioned topics, the TAC should provide guidance on:

- Base security policy for projects
- Standards for security response and responsible disclosure (CVE)
- Anything else industry specific to consider

ACTION: TAC to discuss forming a group to focus on building out security strategy

Digital Substation Automation Systems (DSAS) Presentation

5:20 pm - 5:40 pm

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Digital Substation Automation Systems Working Group

Working Group because we want to achieve things, not only discuss



1. DSAS Initiative 2020

Linux Foundation organization, LF Energy, with GE Renewable Energy, Schneider Electric and RTE, also launched CoMPAS to make substation systems interoperable as part of this initiative by the late Shuli Goodman

Press release:

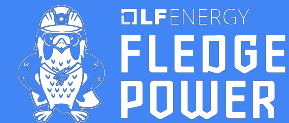
<https://www.prnewswire.com/news-releases/lf-energy-launches-digital-substation-initiative-to-modernize-power-grid-infrastructure-301082425.html>



2. Substation Community

Currently, there are 4 substation projects under the LF Energy umbrella:

1. **CoMPAS** – Configuration Modules for Power industry Automation Systems – Profile management and configuration of Protection Automation and Control System (PACS)
2. **SEAPATH** – Software Enabled Automation Platform and Artifacts (THerein) – Real-time platform that can run virtualized automation and protection applications
3. **OpenSCD** – Substation Configuration Designer – Platform to enable fully digital substations, from design and commissioning through to maintenance and replacement
4. **FledgePOWER** – Multi-protocol translation gateway for power systems based on the industrial IoT LF Edge project Fledge.



Summary 1st Substation Working Group Meeting:

Date: March 25, 2024 (next meeting April 16)

Present: Nico Rikken (Alliander - OpenSCD, CoMPAS), Zhen Wang (Alliander - Power Grid Model), Daniel Lazaro (Aveva - Fledge Power), Erwann Roussy (Savoir-Faire Linux - SEAPATH), Ben van 't Ende (Organiser - Age of Peers)

Key points included:

- 1. Combining Projects:** It was recognized that combining projects like Fledge Power, SEAPATH, OpenSCD, and CoMPAS was essential to address data infrastructure challenges in substations effectively.
- 2. Technical Roadmap:** There was agreement on proposing a technical roadmap outlining the capabilities the working group aims to develop.
- 3. Demonstrator:** The group discussed the importance of creating a demonstrator showcasing how the projects can work together to provide a combined solution.
- 4. Engagement with TAC:** The plan is to recommend the idea to the Technical Advisory Committee (TAC) and invite them to contribute to the solution by integrating other LF Energy projects' functionalities.
- 5. Next Steps:** The group agreed to continue discussions, plan future meetings, and maintain momentum despite potential scheduling challenges due to time zone differences and daylight savings.

Sylva Presentation


5:40 pm - 6:00 pm

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NODE Collective Presentation

6:00 pm - 6:20 pm

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Powering Electrification through Open Data

April 2024



NODE Collective is a nonprofit alliance dedicated to sourcing, structuring, and maintaining comprehensive data on every residential electrification incentive program in the U.S.



Founding Members

Our founding members include Eli Technologies, the Building Decarbonization Coalition, Rewiring America, RMI (founded as Rocky Mountain Institute) and the North Carolina Clean Energy Technology Center.



Incentive Data is Critical to the Future of Electrification

Use Cases

Consumers

example (BDC and Rewiring America)

SPAN See Pricing →

ESTIMATED ENERGY SAVINGS PER YEAR ⓘ
\$1,510

Total incentives
\$16,236
⚡ ⚡ ⚡

These values are estimates and may be inaccurate. Tax credits can only be used to offset your federal taxes owed. Powered by Rewiring America and subject to the API Terms of Service.

AVAILABLE NOW

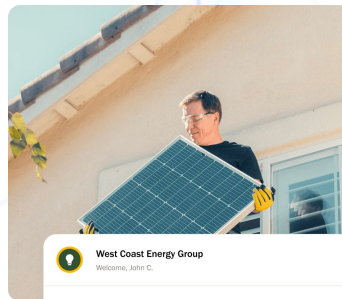
Tax credits
Save on SPAN Panel and other home electrification upgrades.

ITEM Estimated savings

SPAN Smart Electrical Panel ⓘ **\$600**

In Market example:
Span.io

Powered by Rewiring America's Open API



Contractors
example (Eli)

West Coast Energy Group
Wescott, John C.

\$354,400	7	\$12,800	16
Dollars processed	Active jobs	In settlement	Qualified programs

Active Jobs

Address	Gross Quote	Incentive total	Qualified programs
456 Greatview Drive Heat Pump Water Heater HVAC	\$8,000	\$6,800	3
3141 Beachhead Lane Electrical Solar Panels	\$12,000	\$7,800	2
223 Oak Park Avenue HVAC Electrical	\$6,500	\$4,300	2

Dynamic Landscape

There are over 5,000 estimated incentives in the United States all with varying eligibility requirements, constantly in flux, and often spanning multiple jurisdictions in the same state.

Which Creates Challenges

Sourcing
Accurate
Data

Structuring
Accurate
Data

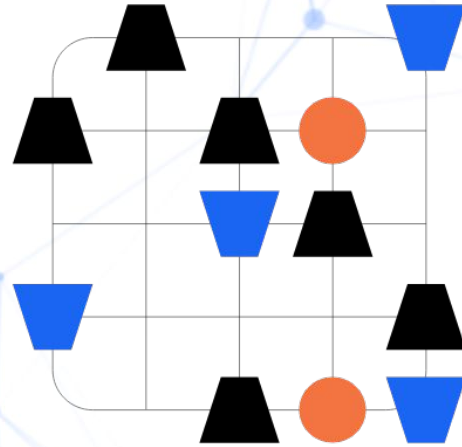
Maintaining
Accurate
Data

Multiple organizations are trying to solve this challenge, taking similar – yet different – approaches. This is duplicating work and contributing to the fractured landscape.

Solution: Data as a Public Good

A unified, decentralized strategy that transcends individual agendas.

- ❑ Open, accessible & structured data
- ❑ A broad coalition of providers and users
- ❑ Transparent governance



Powering the Electrification Market



Consumers

Affordability and transparency



Contractors

Tools for informed customer interactions



OEMs + Retailers

Accurate pricing and richer customer journey



Startups

Create powerful new tools to drive decarbonization



Government

Fine-tune policy instruments for maximum impact



CBOs

Better support to bring electrification to disadvantaged communities

Org Creation & Launch!

Establish governance, create home for the NODE Collective, operating principles, and prepare for launch

Combine Data

NODE Collective has already already amassed the most complete, well-structured, accurate set of incentive data in the U.S, the next step is putting it into a standardized format.

Member Engagement

Kick off initial member engagement with State Energy Offices and Program Administrators to help inform key activities and design of the collective

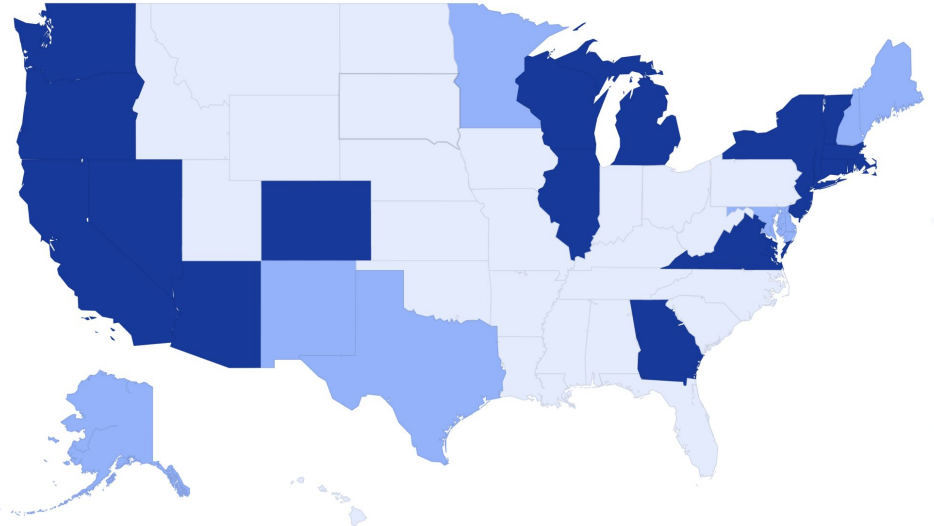
How We Do It



Progress

working on an initial unified data set for our members

- 2,000 incentives mapped
- Announcement Waitlist
- Building the Governance
- Co-design with Key Stakeholders



Levels of coverage



The Next 6 Months

- ❑ Sharing & structuring existing data
- ❑ Developing a data specification, governance structure, and maintenance & validation process
- ❑ Recruiting data providers and users
- ❑ Building out the dataset
- ❑ Creating a long-term funding model

How LF Energy Can Help

How Can We Learn From You

IP Considerations

Liability Advice for the Dataset

Governance

Fundraising

Maximizing the value of the alliance through collaborative competition: strategies for effective meetings, safeguarding participant comfort, and encouraging open knowledge sharing



Thank You



Marketing/PR/Events Updates

6:20 pm - 6:25 pm

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Marketing and PR Updates

- [OpenSynth launch event](#) 9 April in London, hosted by Octopus Energy
- LF Energy Summit 2024 - 5-6 Sept, Marriott Grand Place Brussels
 - [Sponsorship prospectus](#) now available - please consider sponsoring and reach out to Alex with questions or to discuss options
- Please help promote [Open Sustainability Policy Summit](#) (May 2-3) and [Open EV Charging Summit](#) (May 15-16) with the linked marketing kits
- Upcoming CFP deadlines - if your org/project would like help with proposals, please let Dan know
 - [MOVE London - June 19-20, 2024 - Rolling submission deadline](#) (for this one, we should email cormac.martin@terrapinn.com with speaking proposals)
 - [Open Source Summit Europe - September 16-18, 2024, Vienna - Submissions due April 30](#)
 - [Climate Week NYC - September 22-29, 2024, New York - Submissions due June 30](#)
 - [National Clean Energy Week - September 23-27, 2024, Washington, DC - Rolling submission deadline](#)
 - [Enlit Europe - October 22-24, 2024, Milan - Rolling submission deadline](#)
 - [CIGRE National Conference - GRID OF THE FUTURE - November 11-14, 2024, Raleigh, NC - Paper submission deadline is August 5](#)
 - [Climate Tech Show - November 27-28, 2024, London - Rolling submission deadline](#)
- Use this [form](#) to submit any comms/marketing support requests

Closing and Next Meeting

6:25 pm - 6:30 pm

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Next TAC Meeting

The next meeting of the LF Energy TAC is scheduled for 23 April 2024 at 8:00 am US Pacific Time/11:00 am US Eastern Time/4:00 pm Central European Time. Agenda will include:

- SOGNO Annual Review
- General Updates
- Marketing/PR/Events update

To add agenda items, go to <https://github.com/lf-energy/tac/issues/new/choose>.

You can review the TAC Agenda at <https://github.com/orgs/lf-energy/projects/2/views/1>

APPENDIX

Marketing and PR Updates



Governing Board CONFIDENTIAL

Events

- FOSDEM 2024 - 3-4 Feb, Brussels
 - [Videos](#) available of all talks
 - Final blog summaries of all sessions are now live
- [Open Sustainability Policy Summit](#) - 2-3 May, Washington, DC
 - This event will be hosted by Johns Hopkins University at their DC facility
 - Agenda is now final - please help promote with our [marketing kit](#)
- [Open EV Charging Summit](#)
 - Texas Instruments Campus, Dallas, TX
 - May 15-16, 2024
 - Agenda to be announced soon, but please also promote this with our [marketing kit](#)
- LF Energy Summit 2024
 - Marriott Grand Place Brussels
 - September 5-6, 2024
 - All contracts have been signed
 - [Sponsorship prospectus](#) now available
 - CFP to open in early April
- [Event tracker](#) - please review and add any additional opportunities

Open Source Summit Europe

- 16-18 September, Vienna
- Unfortunately SustainabilityCon is being removed starting with this event, which makes it more difficult for our projects to submit speaking proposals
- Topic ideas:
 - Benefits of Open Source in Vertical Industries - Jonas from Alliander has volunteered to represent Energy, and we would look to add speakers from telecommunications, financial services, automotive, or other vertically-focused LF project communities (Open Source Leadership Summit track)
 - How Open Source is Transforming Energy Systems - 3-4 LF Energy member representatives sharing real stories of how launching OPSOs and adopting our projects have impacted energy systems (OSPOCon track)
 - Unveiling the CDSC spec - representatives from the CDSC working group discuss the specification which should be released by this time (Standards & Specifications Forum track)
 - Project-specific topics will need to focus on technical development to fit tracks like Open AI & Data Forum, SupplyChainSecurityCon, Embedded Linux Conference, CloudOpen, etc.



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