



TAC Meeting

13 September 2022

# Antitrust Policy Notice

Linux Foundation meetings involve participation by industry competitors, and it is the intention of the Linux Foundation to conduct all of its activities in accordance with applicable antitrust and competition laws. It is therefore extremely important that attendees adhere to meeting agendas, and be aware of, and not participate in, any activities that are prohibited under applicable US state, federal or foreign antitrust and competition laws.

Examples of types of actions that are prohibited at Linux Foundation meetings and in connection with Linux Foundation activities are described in the Linux Foundation Antitrust Policy available at <http://www.linuxfoundation.org/antitrust-policy>. If you have questions about these matters, please contact your company counsel, or if you are a member of the Linux Foundation, feel free to contact Andrew Updegrave of the firm of Gesmer Updegrave LLP, which provides legal counsel to the Linux Foundation.

# Agenda

## Opening (10 Minutes)

- **Landscape updates**
- **TAC Sponsors for projects**
- **Summary of last TAC meeting & Updates from the Board Meeting**

## TAC Business (75 Minutes)

- LF Energy Member and Project Maintainer Survey Results
- OpenEEMeter Annual Review
- Improving TAC Meeting Content
- Marketing for Projects

## Closing and Next Meeting (5 Minutes)

# TAC Voting Members

New members in **bold**

| <b>Full Name</b>      | <b>Account Name</b>                    | <b>Appointed By</b>                    |
|-----------------------|--|--|
| Boris DOLLEY          | RTE (Reseau de Transport dElectricite) | Vote of TSC Committee - OperatorFabric |
| Anne Tilloy           | RTE (Reseau de Transport dElectricite) | Vote of TSC Committee - PowSyBI        |
| Carmen Best           | Recurve                                | Vote of TSC Committee - OpenEEmeter    |
| Jonas van den Bogaard | Alliander                              | Membership Entitlement                 |
| Maarten Mulder        | Alliander                              | Vote of TSC Committee - GXF            |
| Benoît Jeanson        | RTE (Reseau de Transport dElectricite) | Membership Entitlement                 |
| Antonello Monti       | RWTH Aachen University                 | Vote of TSC Committee - SOGNO          |
| Art Pope              | Google                                 | Membership Entitlement                 |
| Avi Allison           | Microsoft                              | Membership Entitlement                 |

# LF Energy Hosted Project and Working Group Leads

Changes in **bold**

| Project                                     | Project Lead(s)  |
|---|--|
| PowSyBI                                     | Anne Tilloy, RTE   |
| OperatorFabric                              | Boris Dolley, RTE  |
| OpenEEmeter                                 | Carmen Best, Recurve   |
| GXF   | Maarten Mulder, Alliander  |
| SOGNO                                       | Antonello Monti, RWTH Aachen University                                |
| CoMPAS                                      | Frederic Fouseret, RTE & Sander Jansen, Alliander (TAC Representative) |
| FledgePOWER                                 | Akli Rahmoun, RTE  |
| Hyphae                                      | Asimena Korompili, RWTH Aachen University                              |
| openLEADR                                   | Lonneke Driessen & Stan Janssen, OpenADR                               |
| SEAPATH                                     | Eloi Bail, Savoir-faire Linux  |
| Grid Capacity Map                           | Per Lysemose Hansen, Energinet   |
| Shapeshifter                                | Jelle Wijnja, Alliander  |
| OpenSTEF                                    | Frank Kreuwel, Alliander   |
| EVERest                                     | Marco Möller, PIONIX   |
| OpenGEH                                     | Martin F. Hansen, Energinet  |
| FlexMeasures                                | Nicolas Höning, Seita Energy Flexibility B.V.                          |
| OCPD Cloud Connector                        | Rebecca Wolkoff, Chargenet   |
| GridLab-D                                   | David Chassin, SLAC  |
| Full Architecture WG (FAWG)                 | Benoît Jeanson, RTE  |
| Carbon Data Specification Consortium (CDSC) | TBD  |

# Landscape now with more project info!

We are using the LF Energy Landscape to showcase more project information:

- Mailing List/Slack Channel
- LFX Insights
- SBOM
- Wiki
- TSC Meeting Notes
- Calendar
- Contribution Guidelines

**ACTION: Project leads please review your entry and ensure it is accurate; issue PR for any changes needed.**



|                         |   |               |             |
|-------------------------|---|---------------|-------------|
| Crunchbase              | crunchbase.com/organization/lf-energy   |               |             |
| LinkedIn                | linkedin.com/company/lf-energy  |               |             |
| Twitter                 | @LFE_Foundation   | Latest Tweet  | this week   |
| First Commit            | 5 years ago   | Latest Commit | 3 weeks ago |
| Contributors            | 35  | Headcount     | 1-10        |
| Headquarters            | San Francisco, California   |               |             |
| Mailing List            | <a href="https://lists.lfenergy.org/g/sogno-discussion">https://lists.lfenergy.org/g/sogno-discussion</a>   |               |             |
| Slack Channel           | #sogno  |               |             |
| LFX Insights            | <a href="https://insights.lfx.linuxfoundation.org/projects/lfenergy%2Fsogno">https://insights.lfx.linuxfoundation.org/projects/lfenergy%2Fsogno</a> |               |             |
| Wiki Page               | <a href="https://wiki.lfenergy.org/display/HOME/SOGNO">https://wiki.lfenergy.org/display/HOME/SOGNO</a>   |               |             |
| SBOM                    | <a href="https://github.com/lfscanning/spdx-lfenergy/tree/main/sogno">https://github.com/lfscanning/spdx-lfenergy/tree/main/sogno</a>               |               |             |
| TSC Meeting Notes       | <a href="https://github.com/sogno-platform/tsc/tree/master/tsc/meetings">https://github.com/sogno-platform/tsc/tree/master/tsc/meetings</a>         |               |             |
| Calendar                | <a href="https://lists.lfenergy.org/g/sogno-tsc/calendar">https://lists.lfenergy.org/g/sogno-tsc/calendar</a>                                       |               |             |
| Contribution Guidelines | <a href="https://github.com/sogno-platform/tsc/blob/master/CONTRIBUTING.md">https://github.com/sogno-platform/tsc/blob/master/CONTRIBUTING.md</a>   |               |             |

# 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.”*

**ASK: Volunteer to be a TAC sponsor for a project**

| Project                                | Current Level  | TAC Sponsor           |
|--|----------------|-----------------------|
| CoMPAS                                 | Incubation     |                       |
| Carbon Data Specification Consortium   | Standards      |                       |
| Everest                                | Incubation     |                       |
| FledgePOWER                            | Incubation     | Benoît Jeanson        |
| FlexMeasures                           | Incubation     |                       |
| Full Architecture Working Group (FAWG) | Working Group  |                       |
| Grid Capacity Map                      | Incubation     |                       |
| GridLab-D                              | Sandbox        | Antonello Monti       |
| GXF                                    | Early Adoption | Jonas van den Bogaard |
| Hyphae                                 | Incubation     | Antonello Monti       |
| OpenEEmeter                            | Incubation     | Carmen Best           |
| OpenGEH                                | Incubation     |                       |
| OpenLEADR                              | Incubation     |                       |
| OpenSTEF                               | Incubation     | Jonas van den Bogaard |
| OperatorFabric                         | Early Adoption | Boris Dolley          |
| PowSyBI                                | Early Adoption | Anne Tilloy           |
| SEAPATH                                | Incubation     | Benoît Jeanson        |
| Shapeshifter                           | Incubation     | Jonas van den Bogaard |
| SOGNO                                  | Early Adoption | Antonello Monti       |

# Interest in Energy DevRoom at FOSDEM

Nico Rikken and Boris Dolley amongst others have been having a conversation on hosting an Energy DevRoom. If you are interested, please contact them and/or join #fosdem2023 on [LFE Slack](#).



# FOSDEM



# Summary of Last TAC Meeting

- Meeting notes and deck at <https://wiki.lfenergy.org/display/HOME/Technical+Advisory+Council#TechnicalAdvisoryCouncil-MeetingMinutes>

## Updates from the Board

# Agenda

## Opening (10 Minutes)

- Landscape updates
- TAC Sponsors for projects
- Summary of last TAC meeting & Updates from the Board Meeting

## **TAC Business (75 Minutes)**

- **LF Energy Member and Project Maintainer Survey Results**
- **Improving TAC Meeting Content**
- **OpenEEMeter Annual Review**
- **Marketing for Projects**

## Closing and Next Meeting (5 Minutes)

# LF Energy Member and Project Maintainer Survey Results



# Member/Maintainer Survey - Key Insights

- ~90% of members and projects are satisfied with their experience ( TAC, staff, marketing, membership benefits )
- Companies overwhelmingly are looking to increase open source participation and bring internal projects to open source, but blocked by internal support primarily and tooling secondarily.
  - 75% of member companies have a central manager/coordinator for open source strategy
  - 83% of member companies have seen the internal perception of participating in open source as positive.
- Members and projects would like to participate in more outreach content, namely podcasts and videos.

Detailed results in here: <https://github.com/lf-energy/foundation/tree/main/surveys/2022-06>

# Improving TAC Meeting Content



# Improving TAC Meeting Content

- Generally TAC meetings have focused on Project Approvals and Annual Reviews.
- We've had feedback from project leads that that content isn't very appealing.
- Ideally, the TAC meetings should provide content that is interesting for any member of the LF Energy technical community.

**DISCUSSION: What topics would be of interest for project leads?**

# OpenEEMeter Annual Review



Approved for Incubation - Sept 23, 2022



TAC Annual Review  
OpenEEmeter



*The current activity of the project, including releases, adoption, and committer/contribution growth and diversity.*

- No new [Releases](#) since 2021 update (last ones were: 2.10.11, 3.0.0, and 3.1.0 = Bug fixes and adaptations of the methods)
- Most Committers and Contributors are still from Recurve team.
- While method and EEmeter code base has been stable:
  - Scale of use of the method + code base grown across U.S. utilities; and companies reliant on calculations for performance payment. Examples:
    - New California policy (Market Access program) launched \$150M in activity 2022-2023
    - New U.S. Federal policy (Inflation Reduction Act) calls for open-source measurement and verification for home performance incentive program
  - Code for complementary applications - for comparison groups and demand response are accelerating (but have not yet been formally included in the project)

# OPENEEMETER is the foundation for Demand Flexibility Performance Transactions

## Utility Demand Flexibility Buyers



## Demand Flexibility Providers

|  |  |  |  |   |  |
|--|--|--|--|---|--|
| <p><b>BlocPower</b><br/>Increase your building's profitability with a modern heating and cooling system.</p>                     | <p><b>BRIGHT POWER</b><br/>Bright Power is the premier provider of energy and water management services.</p>                         | <p><b>CARBON LIGHTHOUSE</b><br/>Cut Energy at a Florida Scale. Because one building at a time doesn't cut it.</p>                                | <p><b>CH Energy</b><br/>CH Energy is an expert in providing a turnkey energy solution.</p>   | <p><b>CLEAResult</b><br/>CLEAResult<br/>We make energy efficiency simpler, faster, and more accessible for everyone.</p>              | <p><b>OhmConnect</b><br/>OhmConnect<br/>Use energy when it's cheapest and earn rewards for saving when it's dirty.</p> |
| <p><b>Conectric</b><br/>Operational Asset Risk Management.</p>   | <p><b>DIVIDEND</b><br/>Dividend Finance<br/>A smarter, faster way to finance home improvements and commercial upgrades.</p>          | <p><b>ecobee</b><br/>ecobee<br/>A smart home technology helping customers measure, control, and cut costs.</p>                                   | <p><b>EcoGreen</b><br/>EcoGreen Solutions<br/>We help companies save energy and cut costs.</p>   | <p><b>Ecology Action</b><br/>Ecology Action is creating a thriving environment and low-carbon economy.</p>                            | <p><b>PACKETIZED ENERGY</b><br/>Packetized Energy makes electricity flexible.</p>                                      |
| <p><b>edgewise energy</b><br/>edgewise energy<br/>Helping property owners to improve resiliency, sustainability, and profit.</p> | <p><b>ELECTRUM</b><br/>Electrum<br/>Electrum provides a home electrification concierge marketplace.</p>                              | <p><b>Elevation Home Energy Solutions</b><br/>Elevation Home Energy Solutions<br/>We are on a mission to Elevate the Home Energy Experience.</p> | <p><b>ECO</b><br/>Energy Conservation Options (ECO)<br/>Duke's Mission<br/>Independent, owner-owned &amp; stable licensed firm offering C&amp;E energy management.</p> | <p><b>ERI</b><br/>Energy Resilience Management<br/>Developing Sustainability through Energy Efficiency.</p>                           | <p><b>Sealed</b><br/>Sealed<br/>Space-free home upgrades? With Sealed, they're not just a fantasy.</p>                 |
| <p><b>ev energy</b><br/>ev energy<br/>A vehicle platform that connects to EVs and EVSEs to deliver load flexibility.</p>         | <p><b>EVERWATT</b><br/>EverWatt<br/>Stop wasting money on old lighting.</p>  | <p><b>FlexCharging</b><br/>FlexCharging<br/>Electric Vehicles use here. Save money AND carbon emissions. It's EASY.</p>                          | <p><b>Geneti Energy Solutions</b><br/>Geneti Energy Solutions<br/>Geneti is democratizing the energy stack across.</p>   | <p><b>GROUSE ASSOCIATES</b><br/>Grouse Associates<br/>Experts in reducing embedded energy in your HVAC system.</p>                    | <p><b>swell</b><br/>Swell Energy<br/>Swell Energy is an energy and smart grid solutions provider.</p>                  |
| <p><b>Helo</b><br/>Helo is a building residential and commercial energy services provider in NY.</p>                             | <p><b>HomeWorks Energy</b><br/>HomeWorks Energy<br/>We simplify energy conservation and solve home energy efficiency challenges.</p> | <p><b>Joule Smart</b><br/>Joule Smart<br/>Joule Smart will save you time, money, and give you peace of mind.</p>                                 | <p><b>leap.</b><br/>Leap<br/>Leap is a marketplace for grid services, to help balance the grid.</p>  | <p><b>NBSA</b><br/>National Resource Management<br/>If your business relies on refrigeration systems, NBSA has a way to help you.</p> | <p><b>voltage</b><br/>Voltage<br/>Better Energy. More Cash.</p>  |



Assessment of whether the project is fulfilling the requirements for the project to remain at its current stage [incubation], or be considered for a different stage

- Have an open and documented technical governance, ✓
- Complete and approve the Technical Charter and agree to transfer any relevant trademarks to The Linux Foundation or its affiliate, LF Projects, LLC, and to assist in filing for any relevant unregistered ones. ✓
- Have achieved and maintained a Core Infrastructure Initiative [Best Practices Badge](#) at the 'Passing' level. [-]
- Have had a successful license scan with any critical issues remedied. ✓
- Have a defined project mission and scope ✓
- An overview of the project's architecture and features defined. ✓
- A project roadmap defined, which should address the following questions. ✓
- Community and contributor growth assessment
  - The current number of contributors and committers (28), and the number of different organizations (2-3)
  - Demonstrate a sustained flow of commits / merged contributions [-]
  - A credible plan for developing a thriving user community, in particular expanding the number of committers and contributors? [quarterly meet ups and new methods launch pending]
  - Outline of the plan for the project to complete the requirements for Adopted Stage [-]
- Receive the affirmative majority vote of the TAC. [Purpose of Today's Meeting]

*Feedback on its experience as an LF Energy project, including benefits from being an LF Energy project and areas that the TAC and LFE staff can better support the project.*

- **Experience as an LF Energy project has been positive.**
  - Support in explaining open-source and its value to our industry
  - Provides reference point of "acceptance" for the market
  - Provides access point for the industry from a trusted source
  - Policy positioning for open-source transparency
- **Key Benefits are both for the project but also for the company**
  - Branding
  - Nudging
  - Community with other projects
- **TAC / LFE Staff can support with considering transition, and promoting new model**
  - OpenEEmeter standing alone just doesn't do much
  - Still have scattered governance for multiple open-source methods and code
  - Bringing it under a single umbrella will help but still questions about how methods and code can best co-habitate in an LFE project

**GOVERNANCE** 

| <b>METHOD</b><br>LFE Energy Standards & Specification Project   | <b>CODE</b><br> <b>OPENEEMETER</b>  | <b>USER COMMUNITY</b>  |
|---|---|--|
|  CALTRACK <a href="#">CalTRACK</a><br>[pending additions to CalTRACK]<br>DRmethod<br>PVmethod<br>EVmethod | <a href="#">OpenEEmeter</a><br><a href="#">EEweather</a><br><a href="#">EEmeter</a><br><a href="#">GRIDmeter</a><br>[pending] DRmeter<br>PVmeter +<br>EVmeter | DSM Evaluator,<br>Implementer, Utility,<br>Regulator                             |
| Comparison Group methods<br>[Gridmeter <a href="#">Methods page</a> ]   |   | DSM Evaluator,<br>Implementer, Regulator,<br>utility, System Planner,<br>RTO/ISO |
| <b>Action needed:</b> Create WG in <a href="#">LF Energy Standards &amp; Specifications (LFESS) Project</a> ; <a href="#">LFE Expectations of the "life" of a Standards project</a>       | <b>Action needed:</b> Modify existing charter to include more tracks for gridmeter, dr, ev, pv ; in charter cite relationship with Methods WG project.        | Assign FTE's to support these projects   |

# Project Review Cycle

| Project                                | Current Level     | Initially Accepted  | Last Review Date        | Next Review Date          |
|--|-------------------|---------------------|-------------------------|---------------------------|
| <b>OpenEEmeter</b>                     | <b>Incubation</b> | <b>June 4, 2019</b> | <b>October 12, 2021</b> | <b>September 13, 2022</b> |
| GXF                                    | Early Adoption    | February 4, 2020    | October 12, 2021        | October 4, 2022           |
| OpenGEH                                | Incubation        | October 12, 2021    |                         | October 4, 2022           |
| OpenSTEF                               | Incubation        | September 21, 2021  |                         | October 25, 2022          |
| SEAPATH                                | Incubation        | October 6, 2020     | November 23, 2021       | October 25, 2022          |
| FlexMeasures                           | Incubation        | November 2, 2021    |                         | November 15, 2022         |
| PowSyBI                                | Early Adoption    | April 30, 2019      | August 31, 2021         | November 15, 2022         |
| EVerest                                | Incubation        | October 12, 2021    |                         | December 6, 2022          |
| OpenLEADR                              | Incubation        | September 15, 2020  | November 23, 2021       | December 6, 2022          |
| Hyphae                                 | Incubation        | December 8, 2020    | December 14, 2021       | January 17, 2023          |
| Full Architecture Working Group (FAWG) | Working Group     |                     | January 25, 2022        | January 17, 2023          |
| Data Architecture Working Group (DAWG) | Working Group     |                     | January 25, 2022        | January 17, 2023          |
| FledgePOWER                            | Incubation        | February 11, 2021   | February 15, 2022       | February 28, 2023         |
| SOGNO                                  | Early Adoption    | October 27, 2020    | March 8, 2022           | March 21, 2023            |
| OCPP Cloud Connector                   | Sandbox           | March 8, 2022       |                         | March 21, 2023            |
| Shapeshifter                           | Incubation        | April 6, 2021       | April 19, 2022          | April 11, 2023            |
| Grid Capacity Map                      | Incubation        | April 27, 2021      | July 12, 2022           | June 18, 2023             |
| OperatorFabric                         | Early Adoption    | April 30, 2019      | June 21, 2022           | June 20, 2023             |
| CoMPAS                                 | Incubation        | May 5, 2020         | July 12, 2022           | June 20, 2022             |

# Marketing for Projects



# Marketing and PR Updates

- Dan Brown joined the team as internal marketing lead as of August 23
- Momentum press release planned for end of September, highlighting new members, new governing board representatives, and project launches including OCCP Cloud Connector and GridLab-D
- Digital transformation readiness research survey has been finalized and is scheduled to go into the field September 21
  - Please help us promote this - we will share graphics along with copy for blogs, social posts, etc.
- Starting to repost and better promote project blogs about version releases and other significant announcements, including latest OperatorFabric and FlexMeasures releases
  - Please reach out to me directly with any content you would like our help in promoting or with ideas for announcements, blogs, etc.
- New case study submission form now available for members and end users
  - Feel free to submit your stories or encourage your end users to do so at <https://www.lfenergy.org/case-study/submit>



[dbrown@linuxfoundation.org](mailto:dbrown@linuxfoundation.org)  
+1 415-420-7880



# Agenda

## Opening (10 Minutes)

- Landscape updates
- TAC Sponsors for projects
- Summary of last TAC meeting & Updates from the Board Meeting

## TAC Business (75 Minutes)

- LF Energy Member and Project Maintainer Survey Results
- OpenEEMeter Annual Review
- Improving TAC Meeting Content
- Marketing for Projects

## Closing and Next Meeting (5 Minutes)

# Next TAC Meeting

The next meeting of the LF Energy TAC is scheduled for 4 October 2022 at 8:00 am US Pacific Time/11:00 am US Eastern Time/5:00 pm Central European Time.

**NOTE:** *New meeting invite for series titled 'LF Energy TAC meeting ( 2022 )' from 'LF Energy (LFE) - Meetings <[meetings@lfx.linuxfoundation.org](mailto:meetings@lfx.linuxfoundation.org)>'. Register for meeting at: <https://zoom-lfx.platform.linuxfoundation.org/meeting/98588947265>*  
Please remove all other meeting invites.

## **Agenda will include:**

- Recap of last TAC meeting
- GXF Annual Review
- OpenGEH Annual Review



Thank you!

# Outreach

- TFiR videos
  - <https://www.tfir.io/?s=lf+energy>
- Recent press articles
  - <https://www.lfenergy.org/news/media-coverage/>
- We want your project news!
  - Doesn't need to be anything huge!
  - Examples of news:
    - New releases ( example <https://github.com/powsybl/pypowsybl/releases> )
    - New features added
    - New maintainers/organizations involved
    - Upcoming plans