Technical Advisory Council (TAC) Meeting

23 April 2024



Meeting information

- → Meeting to begin at 5:00 pm Central European Summer Time
- → Join the meeting at the link in your calendar in <u>LFX Individual Dashboard</u>
- → 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



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 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 Updegrove of the firm of Gesmer Updegrove LLP, which provides legal counsel to the Linux Foundation.



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 Energy IoT Open Source Presentation
- 5:40 pm 6:00 pm InterConnect Semantic Interoperability Framework Presentation
- 6:00 pm 6:20 pm SOGNO Annual Review
- 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



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

PO Field Device

Platforms

Alliander



Boris DOLLEY Director of OSPO and Sustainable IT

Strategy RTE (Reseau de Transport dElectricite)





Travis Sikes Senior Data

Scientist Recurve



Bryce Bartmann Chief Digital Technology Advisor Open Source Office Shell International

Exploration & Production, Inc.



Lead Alliander



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		
	Antonello Monti, RWTH Aachen University (TAC		
	Representative) & Fito Galeano, RWTH Aachen		
SOGNO	University		
	Aliou Diaite, RTE & Sander Jansen, Alliander (TAC		
CoMPAS	Representative)		
FledgePOWER	Akli Rahmoun, RTE		
Hyphae	Asimenia 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 Bernhardi, 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	
NODE Collective	DeAndrea Salvador	

Work Group Lead(s)
Alexandre Pariost, The Linux Foundation
Jonas van den Bogaard, Alliander
Chris Xie, Futurewei



Project Review Cycle

2024 Reviews				
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date
SOCNO	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				
Open Sustainable Technology	Sandbox	October 17, 2023		October 4, 2024
Grid Capacity Map	Incubation	April 27, 2021	October 17, 2023	October 4, 2024
OpenEEmeter	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	
Al Working Group	Working Group	January 25, 2022		September 17, 2024	

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
NODE Collective	Sandbox	



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



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





























penssf best practices passing



openssf best practices passing























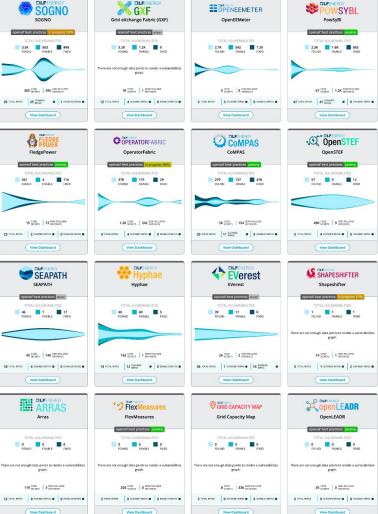


Current OpenSSF Best Practices Badge status (4 projects out of compliance)

ACTION: Projects in red boxes need review (source https://tac.lfenergy.org/projects_with_bestpractices)



ACTION: John to review and debug issues.



OLFENERGY

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



Jeff Shapiro < jshapiro@linuxfoundation.org>

LF Energy - SEAPATH License Scan and Findings - Dec 2023

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

December 29, 2023, 10:19 PM

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 thirdparty 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 imposs 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 flies are under a GPL license which may conflict withj 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 flies

REPORTS:

Ifenergy/seapath, code pulled 2023-12-23

- report: https://lfscanning.org/reports/lfenergy/seapath-2023-12-23-1eed5565-a64d-4d91-a21f-645536f1a512.html
 xlsx: https://lfscanning.org/reports/lfenergy/seapath-2023-12-23-1eed5565-a64d-4d91-a21f-645536f1a512.xlsx
- spdx: https://github.com/ifscanning/spdx-ifenergy/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
- OperatorFabric firm approved and getting started
- PowSyBL reviewing proposals
- EVerest kickoff in late Q2/early Q3 2024

TODO:

- GXF
- SOGNO

Next focus is on Incubation projects.

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



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.

Energy IoT Open Source Presentation

5:20 pm - 5:40 pm



InterConnect Semantic Interoperability Framework Presentation

5:40 pm - 6:00 pm



SOGNO Annual Review

6:00 pm - 6:20 pm



LILFENERGY

Annual Review for SOGNO



SOGNO

Brief Description:

SOGNO creates plug-and-play, cloud-native, micro-services to implement next generation of data-driven monitoring and control systems for grid automation. It simplify the life of utilities by enabling them to optimize their network operations through open source to deliver cost-effectively, and seamless, secure power supply for their customers. SOGNO introduces the idea of grid automation as a modular system in which components can be added through time. This is in opposition to classical monolithic solutions..

TSC Chairperson:

Antonello Monti (amonti@eonerc.rwth-aachen.de)

TSC Members and Affiliations:

Erdem Gümrükcü (until December 2023), Juan Adolfo Galeano, Saloni Dhingra, Florian Oppermann (RWTH-Aachen University)

Markus Mirz (PSI)

Federico Paolantoni, Alberto Patrizi, Ciro Cavacchini, Francesco Rizzi, Mattia Alfieri and more (Areti)

William Bariselli, Giuseppe Cofano (Google)

Key Links:

Github: https://github.com/sogno-platform

Website:

https://www.lfenergy.org/projects/sogno/

Artwork: N/A

Mailing lists:

https://lists.lfenergy.org/g/SOGNO-TSC

OpenSSF Best Practice Badge URL: N/A

Organizations/projects contributing/using SOGNO



















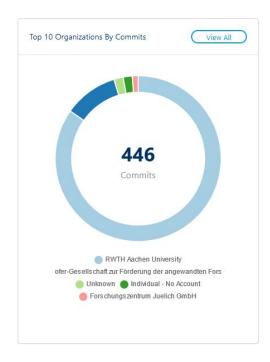


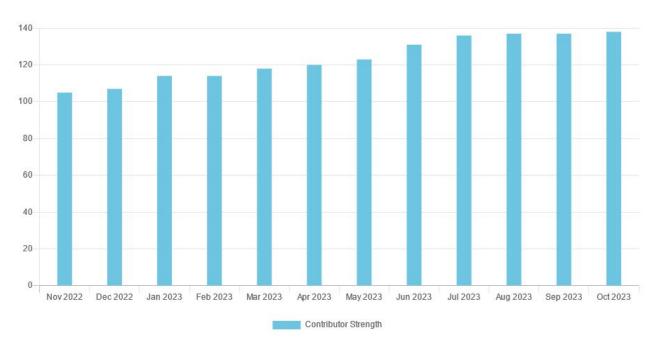






Contributions:







Commercial implementation at the scale of the whole city in Rome

- RomeFlex project aims to create a local flexibility market in some areas of the city.
 - Prosumers modulate their consumption/production.
 - Offer their flexibility services to the DSO.
- SOGNO implemented as DSO technical platform.



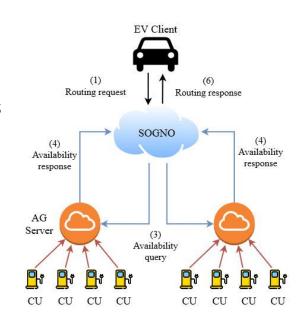


https://www.enlit.world/demand-response/rome-flexibility-project-begins/



New Service: Evrich

- Synchronous communication between DSOs and external platforms (e.g., energy management systems of aggregators or charging point operators) over Connectors.
- The last updates include documentation on how to automatically deploy several Connectors depending on the number of external platforms you want to work with.
- Dynamic test of Evrich in a flexible setup as part of master's thesis.





New Package: Datafev

- A Python framework for the development and testing of management algorithms for electric vehicle charging infrastructures.
- **Used within Evrich:** Offer Datafev as a cloud simulation service where the users can post their simulation scenario via API and get the simulation results.

- Pymfm: A Python framework for microgrid flexibility management.
 - o Previous versions used in **Platone**.
- Multi-level video tutorials for Platone.
 - Motivation.
 - Step-by-step guide for deployment.
 - Testimonials from users.
- Step-by-step guide for generic service.
- The goal is to cover all SOGNO services by time

DPsim:

- New models added: SG Models, SG Controllers, Grid forming Inverter.
- Support matpower format for static simulation, and an extension of the marpower round for dynamic simulations.
- Improve online system matrix computation and refactorization to support nonlinear elements in network solution (KLU & NICSLU integration).
- Simulation of benchmark systems (Kundur's two-area, IEEE14, IEEE39).
- o Improvements in Helmchart, example usage, and bug fixes.



Interaction with LF Energy Projects

SOGNO-PGM: Hackathon





- RWTH Aachen University + PSI Energie EE + Alliander.
- Successful POC: PGM as a service in the SOGNO platform.

Growth Plan: Projects

- Evrich with Datafev: will be used in Horizon EU projects.
 - Beflexible: Integrating real-time traffic conditions. EV routing service to be integrated into pilot in Spain.
 - HedgeloT: Deployment on Italian Demo to Enhance GridResilience and RES Hosting.
 - o CreteValley.
- Open Energy Twin (RWTH, Offis and Fraunhofer):
 - Expect to have real-life tests.
 - Identify points of improvement.
 - Potential stakeholder's feedback/requirements.
- SeGuro: Ongoing development of dynamic state estimation using Pyvolt results.



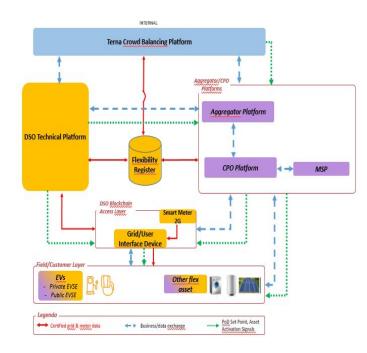
Growth Plan: Projects

• FLOW:

- Representing DSO technical platform in the
 Demonstration Entire Value Chain (EVC) in Rome, Italy.
- Algorithms to be integrated for coordination of V2X-capable systems in urban electric vehicle (EV) charging hotspots.

• Beflexible:

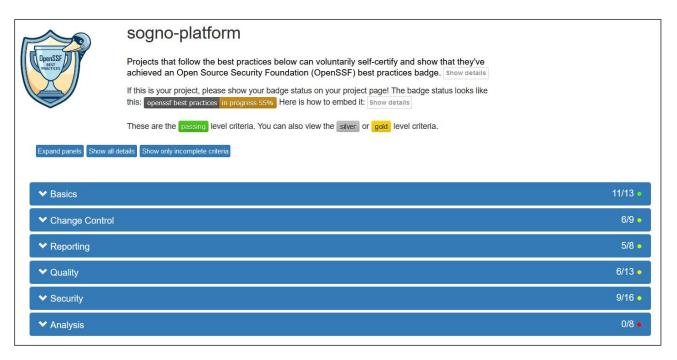
- Improvement in Proloaf, and establishment of link
 between proloaf and pyvolt for congestion mitigation
- Improvement of API in Covee.



Growth Plan: Platform enhancement

- Refine roadmap.
- Improve data validation and interface unification.
 - o Timeseries service.
 - CIMgen, CIMpy: Refactor to integrate Pydantic.
 - Integration of CIM into the APIs.
- New interface between Datafev and Pymfm: Optimize management of Ev and Microgrids. Constraints for the Grid.
- Pymfm: New version will be used in Ensure.

OpenSSF Best Practices



https://bestpractices.coreinfrastructure.org/en/projects/5627



Plan to get the "Passing" Badge

- Get the access required to make changes to the criteria and self-certify.
- Add OpenSSF's certification to the SOGNO's Roadmap as a priority.
- Verify non-compliant repositories.
- Internal regular meetings will be used to go one by one around the criteria in the order:
 - 1. MUST/MUST NOT requirements.
 - 2. SHOULD requirements.
 - 3. Finally, SUGGESTED requirements.
- We might already be meeting some criteria.
 - O For example:

 O Met
 O Unmet
 English. [english] Show details
- After some iterations, ask to goldance, help on onclear chieffa. Especially because sOGNO has several repositories and contributors. Need to refine our workflow.



Current status

Criteria to be revised

	MUST/MUST NOT	SHOULD	SUGGESTED
Basic	0	2	0
Change Control	2	0	1
Reporting	3	0	0
Quality	4	0	3
Security	2	0	0
Analysis	3	0	5

MUST criteria to be investigated:

- Release notes.
- Vulnerability report process.
- New functionality testing,
 Warning flag.
- Secure development.
- Static/Dynamic code analysis.

Possible training required



- It is necessary to check the exact requirements, as security developers need specific training.
- There is a course via LF Training & Certification: "Developing Secure Software".



Areas the project could use help on

- Enhance collaboration with other LF projects
 - Exploring opportunities in the field of Data Spaces (Onenet).
 - Containerization of Hyphae functions to produce new SOGNO microservices e.g. microgrids operation optimization.
 - Connectors to interact with other platforms in the LFE ecosystem (EVerest).
- Growth opportunities:
 - Promoting existing SOGNO services to potential users.
 - Jointly searching funding opportunities for future developments.
- Guidance on best practices.



Feedback on working with LF Energy

- Synergies among LFE projects allow focusing on complementary areas and help to learn about new techniques, workflow, and potential improvements.
- Helps to identify common elements that can then be used as a framework to expand the SOGNO suite more cleanly.
- Motivates to produce reusable, open source, and well-documented code during research projects, thus also improving the transfer of learning.
- Identification and alignment with the industry requirements thanks to the open community environment.
- Automated tools are very helpful: License scan and Insights.
- Guidance on management and quality assessment would be highly appreciated

TAC Open Discussion

TILFENERGY



Marketing/PR/Events Updates

6:20 pm - 6:25 pm



Marketing and PR Updates

- <u>PowSyBl Webinar</u> taking place June 3
- 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 <u>Open Sustainability Policy Summit</u> (May 2-3) and <u>Open EV Charging Summit</u> (May 15-16) with the linked marketing kits
- Upcoming CFP deadlines if your org/project would like help with proposals, please let Dan know
 - o NARUC Summer Policy Meeting July 14-17, 2024, West Palm Beach, FL Rolling submission deadline
 - Open Source Summit Europe September 16-18, 2024, Vienna Submissions due April 30
 - LF Energy Summit September 5-6, 2024, Brussels Submissions due May 19
 - Includes project demos which will take place in the exhibit area these should be submitted through the CFP
 - o PAC World Americas Conference August 12-15, 2024, Raleigh, NC Submissions due May 31
 - o DISTRIBUTECH March 24-27, 2025, Dallas, TX Submission deadline June 3
 - o 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
 - o Climate Tech Show November 27-28, 2024, London Rolling submission deadline
- Use this <u>form</u> to submit any comms/marketing support requests



Closing and Next Meeting

6:25 pm - 6:30 pm



Next TAC Meeting

The next meeting of the LF Energy TAC is scheduled for 14 May 2024 at 8:00 am US Pacific Time/11:00 am US Eastern Time/4:00 pm Central European Time. Agenda will include:

- General Updates
- FledgePOWER Annual Review
- Shapeshifter Annual Review
- 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

Marketing and PR Updates

- OpenSynth launch event 9 April in London had nearly 200 attendees
- Open source for vertical industries white paper will be ready to publish in May
- Use this <u>form</u> to submit any comms/marketing support requests

Recent Media Coverage

- TFIR Energinet harnesses data and open source to drive the Green Energy transition
- North American Clean Energy LF Energy Releases Annual Report, Exploring Community Progress in 2023
- TFIR Washington DC to host Open Sustainability Policy Summit to find ways to combat climate change
- Climate Tech Review 2023 LF Energy Annual Report
- North American Clean Energy Linux Foundation Energy Announces New Open Source Initiatives for Substation Digitalization, Energy AI and Data, and More
- Power Electronics News LF Energy launches open source substation digitalization, energy AI and data initiatives
- Sustainable Tech Partner Sustainability News 17 April 2024: Coolset, Cozero, Deloitte, KPMG. Sumday.



Events

- Open Sustainability Policy Summit 2-3 May, Washington, DC
 - This event will be hosted by Johns Hopkins University at their DC facility
 - Please help promote with our <u>marketing kit</u>
- Open EV Charging Summit
 - o Texas Instruments Campus, Dallas, TX
 - o May 15-16, 2024
 - o Agenda is complete, please also promote this with our marketing kit
- <u>LF Energy Summit 2024</u> September 5-6, Marriott Grand Place Brussels
 - Sponsorship prospectus now available
 - o <u>CFP</u> open through May 19
- <u>Event tracker</u> please review and add any additional opportunities



JLFENERGY