

# Technical Advisory Council (TAC) Meeting

14 May 2024



# 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>



# Antitrust Policy Notice

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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
  - Other Updates
- 5:20 pm - 5:40 pm - TAC Evolution update
- 5:40 pm - 6:00 pm - OneNet Framework Presentation
- 6:00 pm - 6:20 pm - Shapeshifter 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](https://openprofile.dev).



**Antonello Monti**  
Chair  
Professor  
RWTH Aachen  
University



**Anne Tilloy**  
Project manager  
RTE (Reseau de  
Transport  
d'Electricite)



**Art Pope**  
Member of  
Technical Staff  
Google LLC



**Boris DOLLEY**  
Director of OSPO  
and Sustainable IT  
Strategy  
RTE (Reseau de  
Transport  
d'Electricite)



**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)
<b>PowSyBI</b>	Anne Tilloy, RTE
<b>OperatorFabric</b>	Frederic DIDIER, RTE
<b>OpenEEmeter</b>	Travis Sikes, Recurve
<b>GXF</b>	Maarten Mulder, Alliander
<b>SOGNO</b>	Antonello Monti, RWTH Aachen University (TAC Representative) & Fito Galeano, RWTH Aachen University
<b>CoMPAS</b>	Pascal Wilbrink Alliander & Sander Jansen, Alliander (TAC Representative)
<b>FledgePOWER</b>	Akli Rahmoun, RTE
<b>Hyphae</b>	Asimenia Korompili, RWTH Aachen University
<b>openLEADR</b>	Stan Janssen, OpenADR
<b>SEAPATH</b>	Éloi Bail, Savoir-faire Linux
<b>Grid Capacity Map</b>	Harald Klomp, Vattenfall
<b>Shapeshifter</b>	Robben Riksen, Alliander
<b>OpenSTEF</b>	Frank Kreuwel, Alliander

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

# Project & Working Group Leads

Project	Project Lead(s)
<b>Open Sustainable Technology</b>	Tobias Augspurger, Prototypes
<b>CitrineOS</b>	Thana Paris, S44
<b>covXtreme</b>	Sachin Bhakar, Shell
<b>Synthetic Energy Data</b>	Gus Chadney, Centre for Net Zero
<b>OpenSCD</b>	Sander Jansen, Alliander
<b>NODE Collective</b>	DeAndrea Salvador
<b>InterConnect SIF (Semantic Interoperability Framework)</b>	Milenko Tasic, VizLore Labs
<b>OneNet Framework</b>	

Working Group	Work Group Lead(s)
<b>AI Working Group</b>	Alexandre Pariost, The Linux Foundation
<b>Archimate Working Group</b>	Jonas van den Bogaard, Alliander
<b>DSAS (Digital Substation Automation Systems)</b>	Ben van 't ende
<b>ORES (Open Renewable Energy Systems)</b>	Chris Xie, Futurewei



# Project Review Cycle

2024 Reviews				
Project	Current Level	Initially Accepted	Last Review Date	Next Review Date
Shapeshifter	Incubation	April 6, 2021	April 11, 2023	May 14, 2024
OpenLEADR	Incubation	September 15, 2020	December 6, 2022	May 14, 2024
OpenGEH	Sandbox	October 12, 2021	October 4, 2022	June 4, 2024
FledgePOWER	Incubation	February 11, 2021	March 21, 2023	June 4, 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
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
PowSyBl	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

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
ORES (Open Renewal Energy Systems)	Working Group	March 12, 2024		March 25, 2025
Digital Substation Automation Systems (DSAS)	Working Group	April 2, 2024		April 15, 2025

# Project Review Cycle

2025 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
OpenSynth	Sandbox	January 9, 2024		January 7, 2025
Dynawo	Sandbox	December 6, 2022	January 30, 2024	January 21, 2025
OpenFIDO	Sandbox	January 17, 2023	January 30, 2024	January 21, 2025
RTDIP	Sandbox	October 25, 2022	January 9, 2024	January 28, 2025
OpenSCD	Sandbox	January 25, 2024		January 28, 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
SOGNO	Early Adoption	October 27, 2020	March 21, 2023	March 25, 2025
NODE Collective	Sandbox	April 2, 2024		April 15, 2025
InterConnect SIF (Semantic Interoperability Framework)	Sandbox			May 6, 2025

# Project Security Focus updates

- Ensure all projects up to date with OpenSSF Best Practices Badge per their maturity level
- Implement OpenSSF Scorecard for all projects to measure security posture.
- Review license scans and remedy open issues
- Security Audits for all 'Early Adoption' stage projects



## Early Adoption Projects

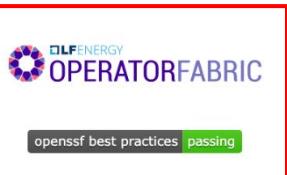
Must have a badge at the silver level.



openssf best practices silver



openssf best practices silver



openssf best practices silver



openssf best practices silver



## Incubation Projects

Must have a badge at the passing level.



openssf best practices passing



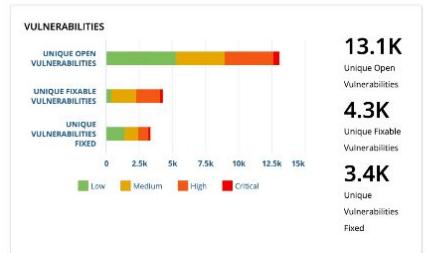
openssf best practices passing



Current OpenSSF Best Practices Badge status ( 3 projects out of compliance )

**ACTION: Projects in red boxes need review (source**

[https://tac.lfenergy.org/projects\\_with\\_bestpractices](https://tac.lfenergy.org/projects_with_bestpractices)



<b>18</b> Total Projects	<b>2</b> Projects Successfully Scanned	<b>11</b> Projects Partially Scanned	<b>4</b> Projects Unsuccessfully Scanned
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**GIF ENERGY SOGNO**  
SOGNO

opened best practices in progress 50%

TOTAL VULNERABILITIES: 3,5K FOUND | 563 FAIRABLE | 848 FIXED

35 TOTAL REPOS | 25 SCANNED REPOS | 0 DISABLED REPOS | 1 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY GFx**  
Grid eXchange Fabric (GFx)

opened best practices 100%

TOTAL VULNERABILITIES: 2,2K FOUND | 1,2K FAIRABLE | 0 FIXED

There are not enough data points to render a vulnerabilities graph.

12 TOTAL REPOS | 4 STANDARD REPOS | 8 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY OPENEEMETER**  
OpenEEMeter

opened best practices 100%

TOTAL VULNERABILITIES: 2,7K FOUND | 542 FAIRABLE | 1,2K FIXED

5 TOTAL REPOS | 0 NON INCLUSIVE INSTANCES | 0 DISABLED REPOS

3 TOTAL REPOS | 3 STANDARD REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY POWSYBL**  
PowsyBl

opened best practices pending

TOTAL VULNERABILITIES: 2,3K FOUND | 1,6K FAIRABLE | 665 FIXED

67 CODE SECRETS | 1,2K NON INCLUSIVE INSTANCES

47 TOTAL REPOS | 41 STANDARD REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY FLEDGE POWER**  
FledgePower

opened best practices pending

TOTAL VULNERABILITIES: 561 FOUND | 4 FAIRABLE | 116 FIXED

15 CODE SECRETS | 73 NON INCLUSIVE INSTANCES

23 TOTAL REPOS | 2 SCANNED REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY OPERATORFABRIC**  
OperatorFabric

opened best practices in progress 90%

TOTAL VULNERABILITIES: 378 FOUND | 173 FAIRABLE | 29 FIXED

1,2K CODE SECRETS | 242 NON INCLUSIVE INSTANCES

9 TOTAL REPOS | 4 STANDARD REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY COMPAS**  
ComPAs

opened best practices passing

TOTAL VULNERABILITIES: 279 FOUND | 137 FAIRABLE | 478 FIXED

56 GOOD STARTS | 154 NON INCLUSIVE INSTANCES

20 TOTAL REPOS | 11 SCANNED REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY OpenSTEF**  
OpenSTEF

opened best practices passing

TOTAL VULNERABILITIES: 57 FOUND | 9 FAIRABLE | 12 FIXED

490 CODE SECRETS | 9 NON INCLUSIVE INSTANCES

5 TOTAL REPOS | 0 SCANNED REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY SEAPATH**  
SEAPATH

opened best practices silver

TOTAL VULNERABILITIES: 46 FOUND | 1 FAIRABLE | 17 FIXED

40 CODE SECRETS | 149 NON INCLUSIVE INSTANCES

18 TOTAL REPOS | 4 SCANNED REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY Hyphae**  
Hyphae

opened best practices silver

TOTAL VULNERABILITIES: 40 FOUND | 40 FAIRABLE | 5 FIXED

162 CODE SECRETS | 1 NON INCLUSIVE INSTANCE

14 TOTAL REPOS | 12 SCANNED REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY EVEREST**  
Everest

opened best practices silver

TOTAL VULNERABILITIES: 39 FOUND | 11 FAIRABLE | 0 FIXED

26 GOOD STARTS | 2 NON INCLUSIVE INSTANCES

34 TOTAL REPOS | 1 SCANNED REPOS | 16 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY SHAPESHIFTER**  
Shapeshifter

opened best practices in progress 67%

TOTAL VULNERABILITIES: 1 FOUND | 1 FAIRABLE | 1 FIXED

14 CODE SECRETS | 1 NON INCLUSIVE INSTANCE

5 TOTAL REPOS | 1 SCANNED REPOS | 2 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY ARRAS**  
Arras

opened best practices pending

TOTAL VULNERABILITIES: 0 FOUND | 0 FAIRABLE | 0 FIXED

119 CODE SECRETS | 3 NON INCLUSIVE INSTANCES

12 TOTAL REPOS | 0 SCANNED REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY FlexMeasures**  
FlexMeasures

opened best practices pending

TOTAL VULNERABILITIES: 0 FOUND | 0 FAIRABLE | 0 FIXED

209 CODE SECRETS | 0 NON INCLUSIVE INSTANCES

5 TOTAL REPOS | 0 STANDARD REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY GRID CAPACITY MAP**  
Grid Capacity Map

opened best practices pending

TOTAL VULNERABILITIES: 0 FOUND | 0 FAIRABLE | 0 FIXED

8,700 CODE SECRETS | 339 NON INCLUSIVE INSTANCES

3 TOTAL REPOS | 0 STANDARD REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

**GIF ENERGY openLEADR**  
OpenLEADR

opened best practices pending

TOTAL VULNERABILITIES: 0 FOUND | 0 FAIRABLE | 0 FIXED

35 CODE SECRETS | 0 NON INCLUSIVE INSTANCES

5 TOTAL REPOS | 0 STANDARD REPOS | 0 DISABLED REPOS | 0 DETAILED REPORT

[View Dashboard](#)

# ACTION: John to review and debug issues.

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>  
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  
Details

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

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

- SPDX: <https://github.com/fscanning/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
- OperatorFabric - in progress
- 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.**

**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.

# LFX Meeting Management update

We now have a community calendar built that leverages LFX Meetings. Check it out at <https://zoom-lfx.platform.linuxfoundation.org/meetings/lf-energy>.

- We can also do project specific calendars ( example: <https://zoom-lfx.platform.linuxfoundation.org/meetings/everest> )

We will be moving from the previous calendar to this one and disabling the calendars at lists.lfenergy.org by end of month.

**ACTION: If your project has not moved over, contact us to do so.**

# Other updates

- Access to Github Actions large runners ( [#146](#) )
- Certified Open Source Developer in the Enterprise Exam ( [#130](#) )
- Whiteboard Tool for Project Collaboration ( [#128](#) )
- No maintainer for OpenLEADR ( [#24](#) )



# TAC Evolution Plan update

5:20 pm - 5:40 pm



# Agenda

- Timeline
- Project onboarding proposed changes
- Project Alignment
- SIG Alignment
- Next Steps



# Timeline



## We are here

**Q1 2024**

Socialize with TAC and Project Leads - gain consensus and approval

Socialize with GB

**Q2 2024**

Identify and launch initial SIGs - align TAC voting members with SIGs

LF Staff operationalize project onboarding changes

**Q3 2024**

TAC hold 2025 Strategy Planning meeting at LF Energy Summit

SIG working sessions at LF Energy Summit

LF Staff coordinate moving annual review schedules to SIGs

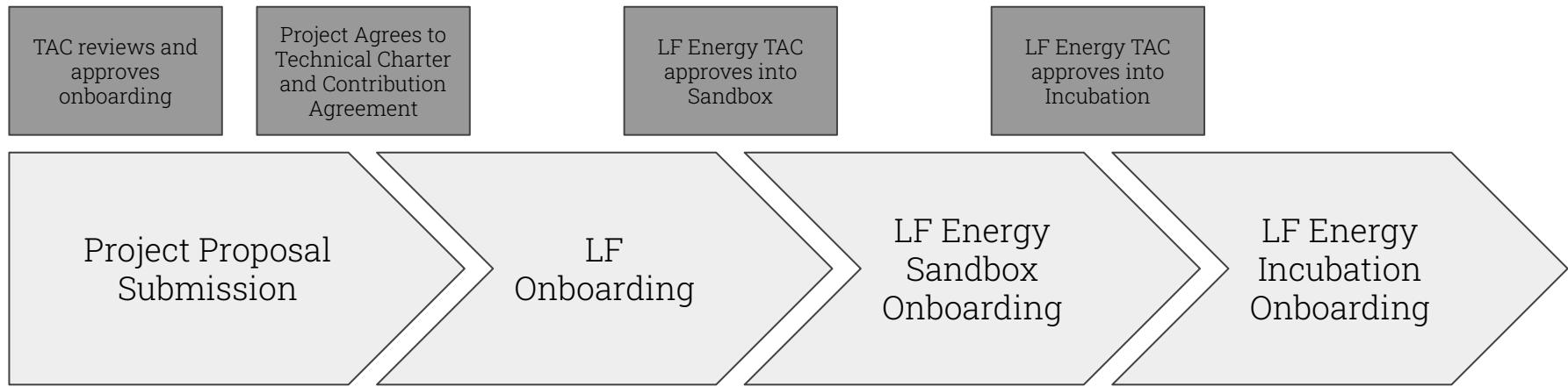
**Q4 2024**

Transition complete TAC to review and identify any bottlenecks

# Complete transition by Q4

# Project onboarding proposed changes

# Proposed Project Onboarding Timeline



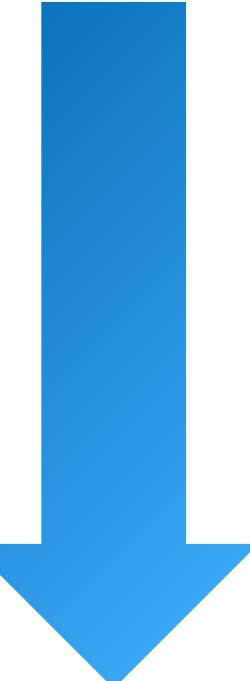
- Add to PCC
- Submit LF Project intake form (LF Staff)
- Share Instructions Sheet

- **Project publicly referenced as a 'LF Project'**
- GitHub Repo setup
- Intake code scan
- Domain transfer
- Other accounts/tools transfer
- LFX Tools onboarding
- TSC formation

- **Project publicly referenced as in the 'LF Energy Sandbox'**
- PCC move under LF Energy
- Setup Mailing Lists, Slack, Wiki
- Schedule ongoing license scans
- Staff quarterly check ins
- Create Logo, lfenergy.org landing page
- LFE Announcement

- **Project publicly referenced as an 'LF Energy Project'**
- Staff annual check ins

# LF Energy Project Proposal process

- 
- Project Proposal Submission completed by prospective project members (same form as today)
    - ◆ TAC members review and approve to onboard project
  - LF Energy staff / LF Project Formation team creates legal entity
    - ◆ LF Energy staff adds to internal systems
    - ◆ Socialize Technical Charter, Project Contribution Agreement, and Series Agreement with Project.
    - ◆ Setup meeting to review with the project ( if needed ).
    - ◆ Have Technical Charter approved, Project Contribution Agreement executed, and Series Agreement filed
  - Onboard project into the LF
    - ◆ Setup GitHub organization
    - ◆ Transfer domain names and any other accounts.
    - ◆ Intake code scan
    - ◆ Setup LFX tools
    - ◆ Coordinate TSC Formation

# LF Energy Sandbox approval process

- 
- LF Energy staff validates project intake activities are completed
    - ◆ Project Proposal
    - ◆ LF Project Onboarding
  - LF Energy staff coordinates Project Presentation meeting
    - ◆ 30 minutes maximum
    - ◆ TAC voting members can attend, but not required to attend.
    - ◆ Recording/materials made available to TAC voting members.
  - TAC Chairperson opens two week review period
    - ◆ Discussion via email, but add to TAC meeting agenda or hold a separate meeting if desired
    - ◆ Any concerns/questions should be raised during this period
  - Approval
    - ◆ If there are no concerns/questions raised during the two week period, then the project is admitted into the LF Energy Sandbox.
    - ◆ If there are concerns/questions raised, those must be resolved during a private TAC discussion, and then a formal vote will be taken.
  - LF Energy Onboarding
    - ◆ Setup communication tools ( Mailing Lists, Slack )
    - ◆ Add to code scanning schedule
    - ◆ Create logo and web page on lfenergy.org
    - ◆ Announce as part of LF Energy Sandbox in a blog post, newsletter, and momentum announcement.
    - ◆ Setup LF Energy Staff quarterly check ins
- 

# LF Energy Incubation/Early Adoption/Graduation approval process

- 
- Project proposes to their primary SIG that they would like to move to the next lifecycle stage.
    - ◆ Can be part of their annual review or any other time.
  - SIG reviews to ensure requirements are met.
  - SIG, via the TAC representative(s) assigned to the SIG, proposes to the TAC to review during an upcoming TAC meeting.
  - Project presents at an upcoming TAC meeting.
  - TAC members review and approve
    - ◆ Can be in person or following the meeting via email or in a private meeting if further discussion is required.
  - Onboarding
    - ◆ Announce as an LF Energy Project in a blog post, newsletter, and momentum announcement.
    - ◆ Setup annual LF Energy Staff check ins.

# Project Alignment

# Project Alignment

## Considerations

- Assess areas of alignment
- Project maturity vs current lifecycle stage
  - Several projects are likely not in the right stage based on the requirements for that stage.
- Aligning LFESS WGs to SIGs

### LF Energy Projects - Early Adoption .(6)



### LF Energy Projects - Incubation .(10)



### LF Energy Projects - Sandbox .(8)



NODE Collective   OpenSynth   covXtreme   Open Sustainable Technology  
OpenFIDO

### LF Energy Standards and Specifications (LFESS) Working Groups .(3)



# Proposed changes

## Move to Emeritus

- Hyphae
  - Needs OpenSSF Best Practices badge at 'passing' level
  - No code in repo
- OpenLEADR
  - No maintainer
- OpenGEH
  - No code in repo, and unclear timeline on when it will come
- Open Sustainable Technology
  - Disengaged project leaders and little traction

**ACTION: Align on proposed changes.**

## Move from Sandbox to Incubation

- RTDIP
  - Once Technical Charter is done
- OpenSCD
  - Has been part of CoMPAS in the past
  - Needs to complete OpenSSF Best Practices badge at 'passing' level

## Move from Early Adoption to Incubation

- SOGNO
  - Needs OpenSSF Best Practices badge at 'silver' level

## Move to LFESS Working Group

- TROLIE
  - Actually is a standards project
- ORES WG
  - Actually is a standards project

# SIGs Alignment

# Two types of SIGs

## Topical

- Align around a specific sector or area where projects have commonality
- Examples could be EV, Grid Automation, etc
- Each project must have a liaison to a vertical SIG
  - Projects may participate in multiple vertical SIGs

## Cross-project

- Cross-functional across topics that have impacts in the majority of the projects
- Examples could be AI, Security, Developer Experience.

# SIG and TAC Roles

## SIGs are responsible for

- Electing a Chairperson
- Holding regular meetings ( LF Staff to support )
- Coordinating annual reviews of projects
  - Only required to hold an annual review in the primary SIG the project has a liaison for.
- Recommending to the TAC projects that should be considered to move to a different lifecycle stage.

## TAC is responsible for

- Establishing new SIGs and decommissioning SIGs deemed no longer relevant or operating.
- Appointing TAC voting members serve as a liaison to a SIG.
  - Each SIG must have a TAC voting member liaison.
  - Responsibilities for the TAC voting member liaison include:
    - Regularly attend SIG meetings
    - Provide reports to the TAC on key activities and progress
- Reviewing SIG progress on regular basis

## Grid Operations

- OperatorFabric
- Grid eXchange Fabric (GXF)
- SOGNO
- Shapeshifter
- Real Time Data Ingestion Platform (RTDIP)
- FledgePOWER\*
- FlexMeasures

## Grid Simulation and Modeling

- Dynawo
- Power Grid Model
- PowSyBl
- Arras
- OpenSTEF
- Grid Resilience and Intelligence Platform (GRIP)
- covXtreme
- Grid Capacity Map

## Digital Substations

- CoMPAS
- OpenSCD
- SEAPATH
- FledgePOWER\*

## Data Standards and Tooling

- Carbon Data Specification (CDS)  
WG1: Customer Data\*
- Carbon Data Specification (CDS)  
WG2: Power Systems Data
- TROLIE
- Battery Data Alliance
- NODE Collective
- Super Advanced Meter (SAM)
- OpenEEMeter
- OpenSynth

## Inactive

- Hyphae
- OpenGEH
- Open Sustainable Technology
- openLEADR

## EV Charging

- CitrineOS
- EVerest

\* denotes project appearing in multiple categories

# Transitioning existing WGs to SIGs

- Archimate
  - Transition from existing Archimate WG
- AI
  - Already a SIG
- Digital Substation Automation Systems (DSAS) WG
  - Transition to SIG
- ORES WG
  - Move to LFESS WG

Discontinue Working Groups in LF Energy ( only have LFESS Working Groups )

# Next Steps

# Next Steps

## TAC

- Align on SIGs and identify SIG leader(s).

## LF Staff

- Revise Project Lifecycle as needed to support onboarding changes.



# OneNet Framework Presentation

5:40 pm - 6:00 pm



# Shapeshifter Annual Review

6:00 pm - 6:20 pm



# LFE TAC Annual Review Shapeshifter

14-05-2024

# Content

- Introduction
- Use cases
- Past year
- LF insights metrics
- Roadmap & What's to come
- LFE Early Adoption Stage Requirements

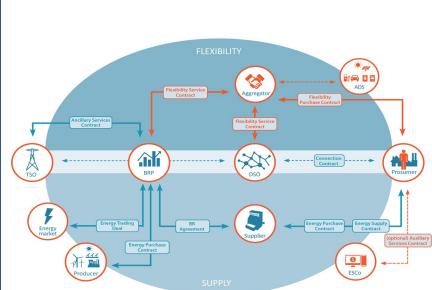
# Introduction

Shapeshifter implements the Universal Smart Energy Framework for flexibility forecasting, offering, ordering, and settlement processes

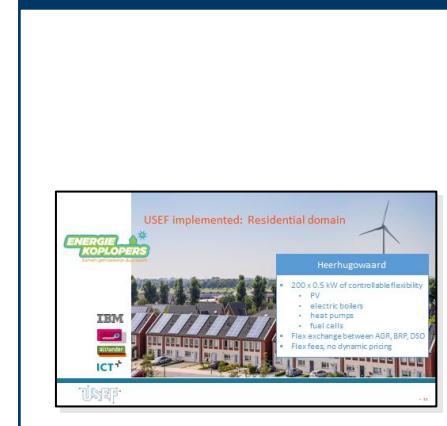
USEF was founded in 2014 with the common goal of developing a smart energy system that benefits all participants



USEF has developed a framework, role model and reference implementation for trading and financial settlement of flexibility. With a central role for the AGR.



USEF has been put into practice by Dutch DSO's. And in other European countries USEF has also been used and/or implemented as a reference



Update on framework in January 2020 based on learning experiences from implementations and in collaboration with DSO's and aggregators.

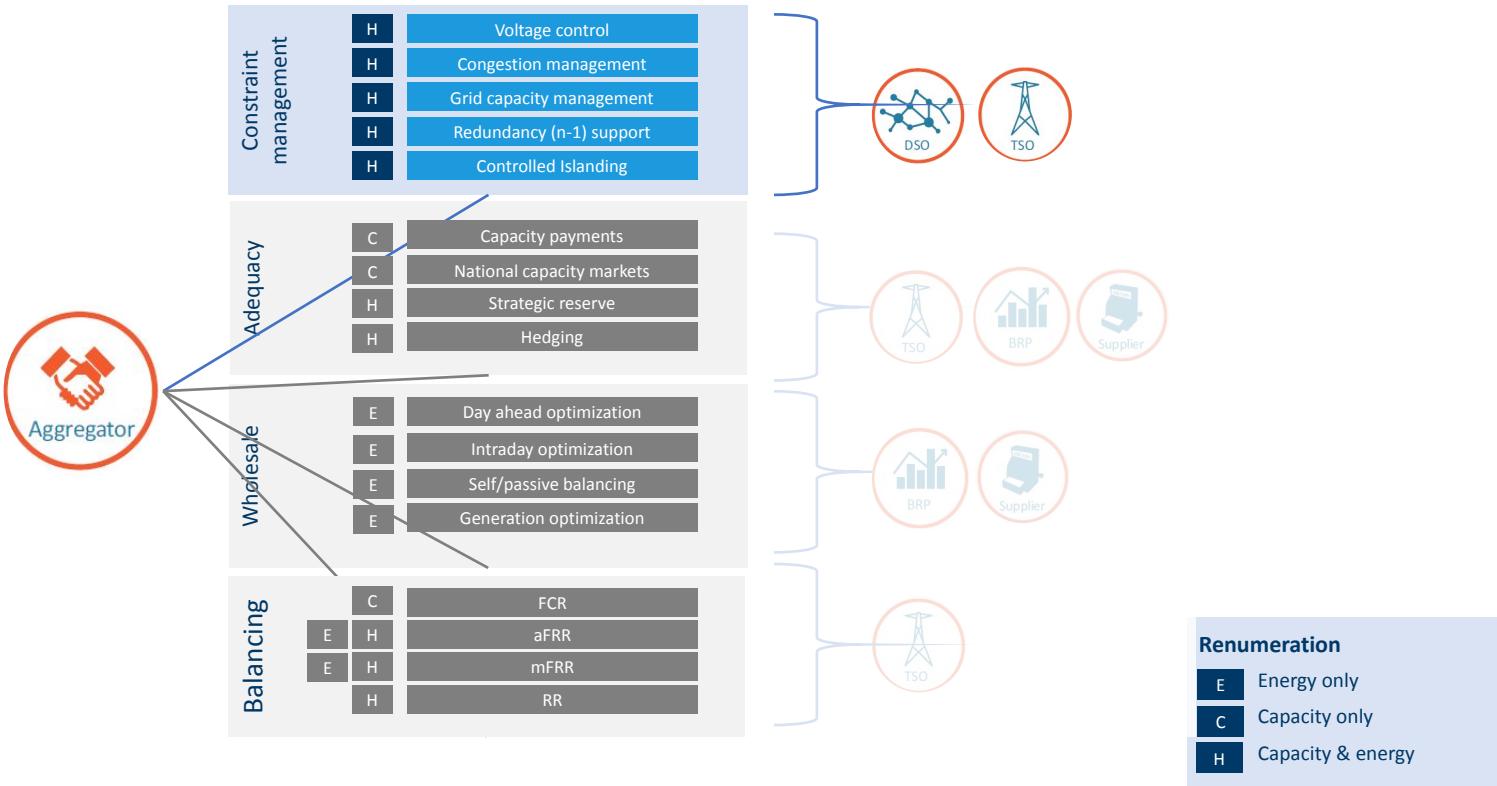
USEF Flex Trading Protocol (UFTP) is a subset of USEF and specifically aimed at flexible trading between the Aggregator and DSO or TSO.



# Introduction

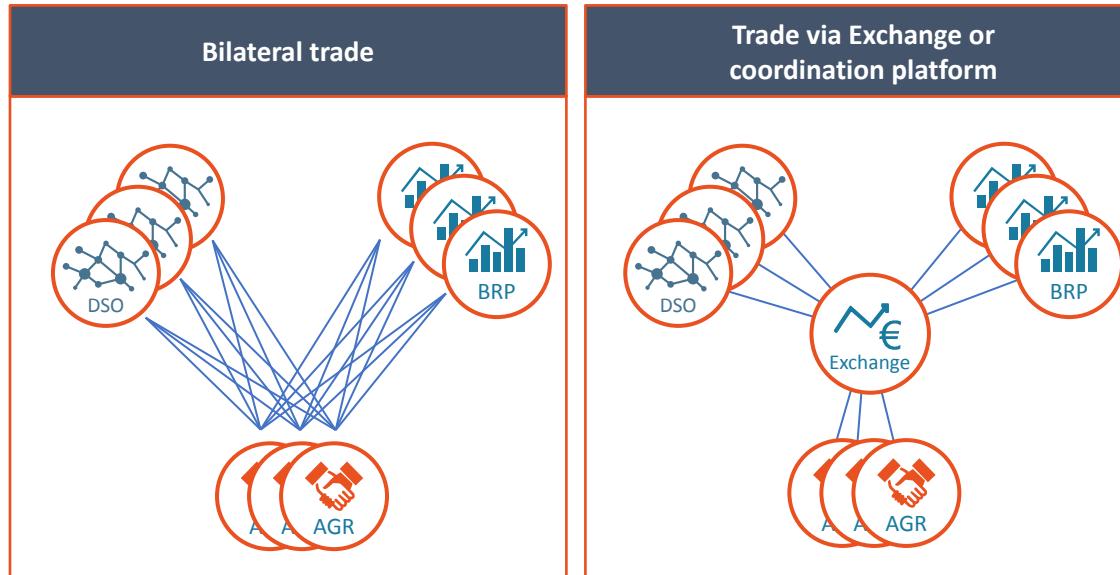
Shapeshifters facilitates the constraint management value chain

## Explicit flexibility value chain



# Introduction

Shapeshifters facilitates the constraint management value chain



Shapeshifter is implemented and used for bilateral trade between DSO and AGR and for trade via a coordination platform

# Use cases

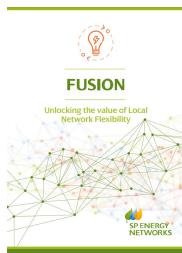
Shapeshifter currently has an active implementation by GOPACS

## FUSION – implementation Shapeshifter

Shapeshifter is implemented in the UK for congestion management in a demonstration project.

This resulted, among other things, in the change request to support verification of delivery based on metering data from sub-meters.

This pilot showcase implementation project ended in the beginning 2024. One of the involved parties is applying for funding for a new project



## GOPACS – implementation Shapeshifter

The Shapeshifter protocol is currently used to activate capacity limit contracts in the Netherlands

Shapeshifter currently supports activation of long-term capacity limit contracts. Starting with the 'trade phase' of Shapeshifter

This resulted in revision of the Shapeshifter Java library and the release of a Python library.



## Linux Foundation Energy

Community building with the Flexibility Suite with LFE projects that make an additional contribution to flex

To increase community involvement, Shapeshifter was presenting at the LFE Summit in Paris in June 2023 and FOSDEM in Brussels in February 2024



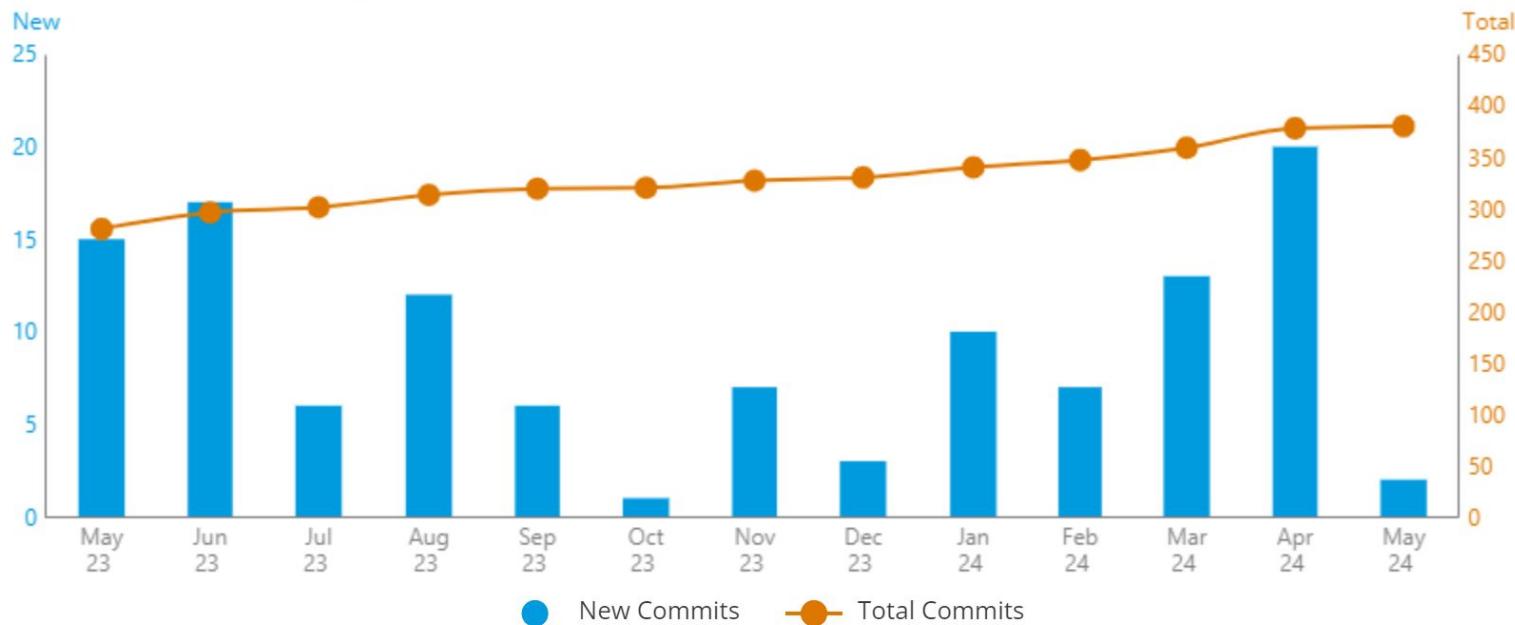
# Shapeshifter in 2023-2024

- Release of Shapeshifter Python library
  - The library for the implementation of Shapeshifter built by one of the Dutch DSO's was added to the project
  - This was a much-heard request from market parties working on an implementation
  - Shapeshifter now supports implementations with both a Java and Python library
- Professionalizing the work of the TSC
  - Working together on improvements
  - Proces for assessing and monitoring issues and pull requests
  - Making process towards an appropriate OpenSSF badge level

# Maintaining TSC and project growth

## Commits i

Commits **decreased by 13%** vs. the previous time period.



# Maintaining TSC and project growth

## Pull Requests [\(i\)](#)

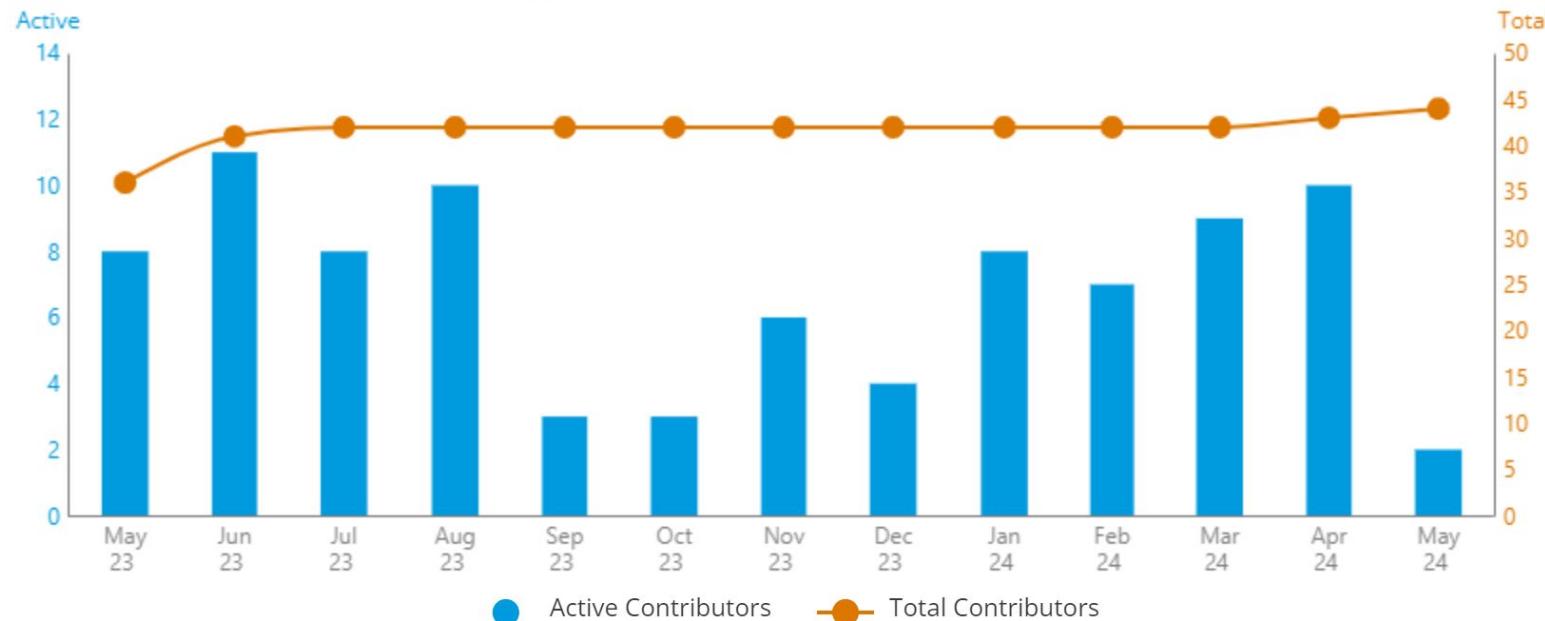
Pull request activity **increased by 14%**  vs. the previous time period.



# Steady contributor growth

## Contributors i

Active Contributors are **increased by 5%**  vs. the previous time period.



# Milestones and roadmap 2024-2025

- New users & community building
  - Use of the GOPACS platform is expected to increase in 2024
  - The scope of the GOPACS use of Shapeshifter is expected to increase slightly
  - This will cause Dutch grid operators and several congestion service providers to use the Shapeshifter protocol
  - We hope to see a new implementation in the UK ([e-gate](#))
- Grow towards early adoption stage
  - This year we will experience a growth in users
  - Aim to involve them with the Shapeshifter community
  - Organize strategy session with TSC to discuss the way forward and milestones
  - Professionalize project and process, make formal step to LF early adoption stage

# LFE Early Adoption Stage Requirements (1/2)

- Demonstrate growth in the project's community, including
  - Growth in the number of commits to the project, number of project committers, and organizational diversity of contributions and committers.
  - Production or planned production use of the project by at least two independent end users which, in the TAC's judgment, are of adequate quality and scope.
- Technical Governance of the project is operational, as measured by:
  - A Technical Steering Committee with at least 5 members and a chairperson elected by the members, holding regular open meetings.
  - Achievement of the OpenSSF Best Practice badge at the 'Silver' Level

# LFE Early Adoption Stage Requirements (2/2)

- Development of a growth plan, to be done in conjunction with their project mentor(s) at the TAC. This plan should address the following points:
  - Since these metrics can vary significantly depending on the type, scope, and size of a project, the TAC has final judgment over the level of activity that is adequate to meet these criteria.
  - Release plans for the next 18 months.
  - Target end-users.
  - Identification of any regulatory or standards body requirements for deployment, and plans for implementation.
  - Plans for growth of project contributors and committers to support the growth plan.
  - Identification of any infrastructure resources needed to fulfill the growth plan.
- Presentation to the TAC of the project's growth, technical governance, and growth plan.
- Receive the affirmative majority vote of the TAC and Governing Board

# Proposal: stay in incubator stage for 2024

- Aim to move to Early adoption stage towards 2025
- Well on our way towards Early Adoption
- Use 2024 to professionalize and formalize Early Adoption stage

# Marketing/PR/Events Updates

6:20 pm - 6:25 pm



# Marketing and PR Updates

- [Open Sustainability Policy Summit](#) - positive feedback across the board from attendees
- [Open EV Charging Summit](#) - 15-16 May, Texas Instruments Campus, Dallas, TX
  - We hit capacity for this event so registration was closed May 9
- [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
  - [CFP](#) is open through May 19
- [PowSyBl webinar](#) scheduled for 3 June
- [Power Grid Model Meetup](#) scheduled for 6 June
- CDSC webinar tentatively scheduled for 26 June (TBA soon)
- Content
  - Open source for vertical industries white paper will be ready to publish in May
  - Kicking off a Digital Substation Automation white paper later in May
- Use this [form](#) to submit any comms/marketing support requests



# Upcoming Event CFPs

- [NARUC Summer Policy Meeting - July 14-17, 2024, West Palm Beach, FL - Rolling submission deadline](#)
- [PAC World Americas Conference - August 12-15, 2024, Raleigh, NC - Submissions due May 31](#)
- [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
- [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](#)
- [DISTRIBUTECH - March 24-27, 2025, Dallas, TX - Submission deadline is June 3](#)
  - [Utility University \(4 or 8 hour tutorials\) is also accepting submissions through June 3](#)

# Closing and Next Meeting

6:25 pm - 6:30 pm



# Next TAC Meeting

The next meeting of the LF Energy TAC is scheduled for 4 June 2024 at 8:00 am US Pacific Time/11:00 am US Eastern Time/5:00 pm Central European Time. Agenda will include:

- General Updates
- Energy IoT Open Source Proposal
- OpenGEH Review
- FledgePOWER 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

# 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, More](#)
- [Energi Strategi Podden - Episode 246: Jonas Van Den Bogaard, Alliander](#)
- [TFIR - Carbon Data Specification Consortium helps drive climate solutions with carbon data standardization](#)
- [Forbes - Utilidata's AI Sharpens The Grid's Edge](#)
- [TFIR - LF Energy leads digitalization efforts to tackle decarbonization challenges](#)
- [TFIR - LF Energy expands its project and working group portfolio](#)
- [Environmental Modelling & Software - covXtreme : MATLAB software for non-stationary penalised piecewise constant marginal and conditional extreme value models](#)
- [North American Clean Energy - Hydro-Québec Demonstrates Commitment to Open Source for the Energy Transition with Membership in Linux Foundation Energy](#)

# ELF ENERGY

