# Encouraging Energy Efficiency and Sustainability in HPC



Teratec May 22, 2025 Natalie Bates Q: Why are we here?

A: Learn, solve problems, embrace

challenges

### **OUR VISION**

Sustainably
Supporting
Science through
committed
community
action.



Curb environmental impact through increased energy efficiency in HPC

Current focus: Energy Efficiency and Sustainability New domain: HPC and Al

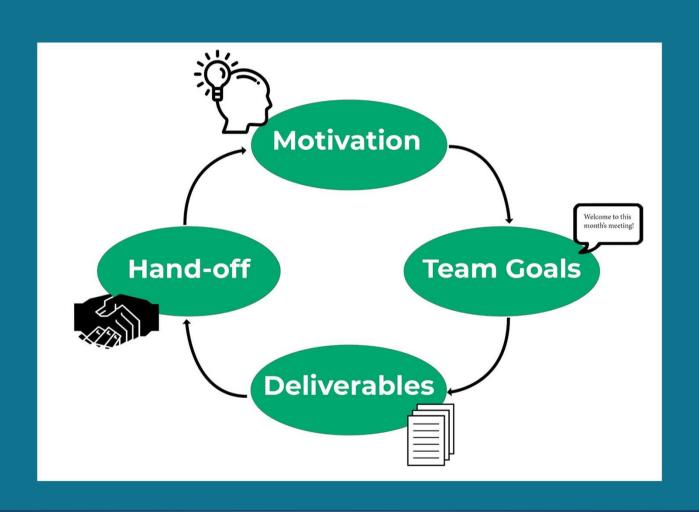
### GLOBAL, OPEN, ACTIVE

Sustainably
Supporting
Science through
committed
community
action.



- 1300+ members from 40+ countries
- 50% sites, 30% vendors, 20% academics
- Unique blend of facility & HPC system focus
- Free and open membership

### **TASK FORCE STRATEGY**



### **TEAMS**

**Currently active** 

**Procurement** 

Operational Data Analytics

**Cooling Controls** 

Power Measurement

**Power API** 

Water Management

Liquid Commissioning

TUE

**Convened previously** 

Wx

Electrical

Commissioning

Liquid Cooling Spec

Liquid Cooling How to

Dashboards

**Grid Integration** 

**EPA JSRM** 

**Electrical Distribution** 

**Brainstormed** 

**Optimized Loading** 

**RASM** 

Reproducibility

Heat Re-use

Modular Data Centers

**Power Stack** 

**Dynamic Power** 

### **ACTIVE TEAMS**

Team (Green Active Link)	Deliverable
Procurement	New Section on Sustainability
Operational Data Analytics	Site presentations
Power Measurement	New Revision of Methodology
Power API	New Section on Liquid Cooling
Cooling Controls	ORNL Case Study
-TUE	How-to Guide
Liquid Commissioning	Updated Guide
Water Management	Site survey and presentations

# Liquid Cooling How-to Guide: Whitepaper and Youtube

Liquid Cooling How-to Team

#### WHITEPAPER:

https://docs.google.com/document/d/1UAABaaU7BdVNyx3N0vuG5i9eruXXdwp0/edit?usp=sharing&ouid=114225751913896442315&rtpof=true&sd=true

#### YOUTUBE:

https://www.youtube.com/playlist?list=PLRxuIFmOiKohzwAIEp02wMMURnn0KGMCR

### Participate

- Visit Website <a href="http://eehpcwg.llnl.gov">http://eehpcwg.llnl.gov</a>
- Join a Team- nbates@lbl.gov
- Bi-monthly General Membership Meetings (June 10<sup>th</sup>)
- Workshop and Birds of Feather at ISC25
  - Energy Efficiency with Sustainable Performance (EESP)
  - Green500 Birds of Feather
- Virtual EE HPC WG Workshop June 25th and 26th
- Lawrence Livermore National Laboratory/El Capitan Showcase
- Booth, Workshop and Birds of Feather at SC25



## Merci!

http://eehpcwg.llnl.gov

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