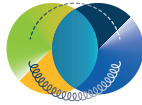


Formation of the Sustainability Committee

Philip Bechtle, Chris Delitzsch, Jack Jenkins, Stefan Krieg, Dirk Wiedner



color meets flavor

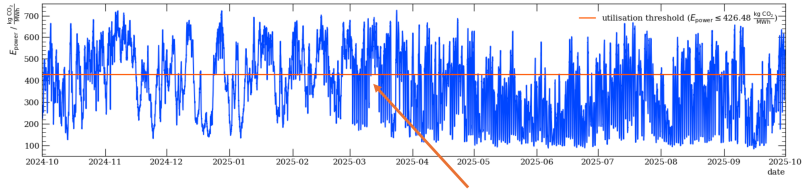
July 13th 2026

Participants and open slots

- ▶ Need one member for each RA and TA
 - ▶ Do: Chris Delitzsch (RA3)
 - ▶ Do: Dirk Wiedner (TA1)
 - ▶ Si: Jack Jenkins (RA2)
 - ▶ Jü: Stefan Krieg (TA2)
 - ▶ Bo: Philip Bechtle (RA3/maybe RA4)
- ▶ Need volunteer for
 - ▶ RA1
- ▶ subscribe on `cmf-sustainability@listen.uni-bonn.de`

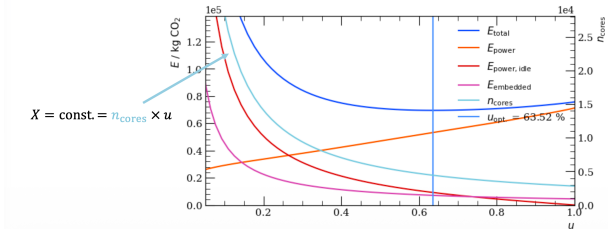
Example: Sector Coupling in Computing

- In cooperation e.g. with Öko-Institut Freiburg in the SUSFECIT ErUM-Data Consortium → paper submitted to EPJ RI <https://arxiv.org/abs/2604.25540>



Set cluster operation threshold

$$E_{\text{tot}}[\text{kg CO}_2](u) = \frac{X}{u} (E_{\text{embedded}} \times t_{\text{total}} + P_{\text{avg.}} \times \sum_i (E_{\text{power}, i} \times t) + P_{\text{idle}} \times \sum_j (E_{\text{power}, j} \times t))$$



ToDo's

- ▶ Documentation of running projects with direct or indirect sustainability aspects:
 - ▶ More precise accounting of CO₂eq saved by our contributions to moving our detector cooling towards N₂ or CO₂ **participants from the detector side sought**
 - ▶ Documentation of energy saved (maybe not CO₂eq, depending on PPA) through ELSA upgrades **participation from ELSA side welcome**
 - ▶ Documentation and lobbying of our institutions towards green power purchasing agreements
 - ▶ Documentation of CO₂eq budget per paper → ideas for accounting
- ▶ Active projects to reduce our climate impact
 - ▶ Sector coupling in computing (see above)
 - ▶ Activities towards installing local solar coupled to compute consumption (great example from Do)
 - ▶ Make concrete recommendations for travel in CmF
- ▶ Sustainability goes beyond ecological sustainability → FAIR principles

Connections to other areas: Research Data Management

- ▶ It saves infinite amounts of work to have an open, efficient, sustainable and interoperable research data lifecycle
- ▶ Projects under our participation in PUNCH4NFDI
- ▶ Examples:
 - ▶ Very successful standardization of metadata and data formats and sharing of data in the Lattice community
 - ▶ WIP: Technology for a analysis platform – could strive to move cross-experiment analysis/interpretation activities there
 - ▶ A possibility which can be studied (decision would depend on many factors): Operate INSIGHT software on software framework/environment key4HEP shared with **all** major future HEP experiments (LUXE, EIC, FCCee, ...) with shared underlying technology for the event data model, conditions databases, alignment, ...