

## Semiconductor Energy Efficiency Scaling for 2 Decades (EES2) RD&D Roadmap Working Group Meeting #8

Hosted by the DOE/EERE Advanced Materials and Manufacturing Technologies Office (AMMTO)  
Argonne National Laboratory  
Conference Room D120, Building 203  
July 19<sup>th</sup>-20<sup>th</sup>, 2023

### DRAFT AGENDA

July 19, 9:00 AM – 5:00 PM CDT	
Time	Activity
9:00 – 11:05	<b>Opening Plenary</b>
9:00 – 9:15	Pledge Signing Ceremony
9:15 – 9:25	Welcome from DOE AMO Organizer (Tina Kaarsberg, DOE AMMTO, Meeting Chair)
9:25 – 9:35	Welcome from Paul Kearns, Director, Argonne National Laboratory
9:35 – 9:55	Power and Control Electronics group update (Paul Sharps, Sandia National Laboratories)
9:55 – 10:15	Infineon Plenary Talk (Danny Clavette, Infineon)
10:15 – 10:25	Combined Q&A
10:25 – 10:55	Classical, Quantum and Nature-based Computing (Sadas Shankar, Stanford and SLAC)
10:55 – 11:05	Roadmap Strategy-Emmanuel Taylor
11:05 – 11:15	<b>Break</b>
11:15 – 2:45	<b>Facilitated Discussions</b>
11:15 – 12:30	Parallel Session 1: Circuits and Architectures, Power and Control, Metrology and Benchmarking, Manufacturing Energy Efficiency and Sustainability
12:30 – 1:30	<b>Lunch Break</b>
1:30 – 2:45	Parallel Session 2: Material and Devices, Software and Algorithms, Advanced Packaging/Heterogeneous Integration, Manufacturing Energy Efficiency and Sustainability
2:45 – 2:50	<b>Day 2 Expectations</b>
2:50 – 3:00	<b>Day 1 Closing Remarks (Tina Kaarsberg, DOE AMMTO, Meeting Chair)</b>
3:00 – 4:30	<b>ANL Tours</b>
4:30 – 5:00	<b>Optional Gatherings (also at Guest House) to identify Dinner participants &amp; Adjourn</b>

July 20, 9:00 AM – 2:00 PM CDT	
Time	Activity
<b>9:00 – 10:25</b>	<b>Opening Plenary</b>
9:00 – 9:15	Welcome from DOE AMO Organizer (Tina Kaarsberg, DOE AMMTO, Meeting Chair)
9:15 – 9:35	Software and Algorithms group update (Brian Hirano, Micron)
9:35 – 9:55	HPC for Energy Innovation Program Plenary Talk (Aaron Fisher, LLNL)
9:55 – 10:05	Combined Q&A
10:05 – 10:15	Roadmap Strategy-Emmanuel Taylor
<b>10:15 – 10:25</b>	<b>BREAK</b>
<b>10:25 – 1:45</b>	<b>Facilitated Discussions</b>
10:20 – 11:40	Parallel Session 1: Circuits and Architectures, Power and Control, Metrology and Benchmarking, Manufacturing Energy Efficiency and Sustainability
<b>11:40 – 12:30</b>	<b>Lunch Break</b>
12:30 – 1:45	Parallel Session 2: Material and Devices, Software and Algorithms, Advanced Packaging/Heterogeneous Integration, Manufacturing Energy Efficiency and Sustainability
<b>1:45 – 1:50</b>	<b>EES2 R&amp;D WG Next Steps</b>
<b>1:50 – 2:00</b>	<b>Day 2 Closing Remarks (Tina Kaarsberg, DOE AMMTO, Meeting Chair)</b>

## Meeting Logistics Info

Our 8<sup>th</sup> Meeting for the Energy Efficiency Scaling for Two Decades (EES2) Roadmap is taking place on July 19<sup>th</sup> and 20<sup>th</sup> at Argonne National Laboratory. This meeting will feature plenary talks from our own Sadasivan Shankar on some interesting new results comparing energy efficiency of classical, quantum and nature-based computing. We also will have Infineon discussing Vertical power and substrate IVR power delivery concepts as well as from the co-chairs of the Power and Control Electronics and Software and Algorithms working groups summarizing their efforts-to-date as well as a special guest to be announced.

The end of the first day will feature a tour of Argonne’s Advanced Photon Source and the Aurora supercomputer at the Argonne Leadership Computing Facility.

If you are joining us onsite, please remember to register and fill out a site access form, information below.

For in-person participants

1. Event locations below

- Bldg. 203, Conf. Rm. D120 (meeting room)
- Bldg. 221, Conf. Rm. C101 (breakout room)

- Bldg. 203, Conf. Rm. C110 (breakout room)
  - Map: (<https://www.anl.gov/directions-and-maps>)
- NOTE: we may have shuttle buses to get from ANL Guest House to Bldg. 221 (20 min walk)
2. Event registration form (complete both ASAP)
    - [EES2 Workshop Registration](#)
    - [Visitor Lab Access Registration | Argonne National Laboratory \(anl.gov\)](#)
  3. Accommodation:
    - The group rate at Argonne Guest House ([Argonne Guest House | Argonne National Laboratory Guesthouse \(anlgh.org\)](#) ) has ended. However, they may still have rooms available at their standard rate.
    - Alternate options: <https://www.anl.gov/area-accommodations>
  4. Wifi access instruction for guest during event- attached
  5. Brittany will be the point of contact (Name: Brittany Hudson, Email: [bspears@anl.gov](mailto:bspears@anl.gov), Ph# (630) 252-7592).

If you are not able to travel for the event, we have a virtual option. Please register using the link below. In-person attendees also should register if they want to see and or participate via Chat

[https://www.zoomgov.com/meeting/register/vJlscuipqTlvHjnMarC-\\_EKdWpgRibbcVmk](https://www.zoomgov.com/meeting/register/vJlscuipqTlvHjnMarC-_EKdWpgRibbcVmk)