



2026 Low Emission Advanced Power (LEAP) Workshop
National Energy Technology Laboratory (NETL), Morgantown, WV
3610 Collins Ferry Road, Morgantown, WV 26505

Preliminary Technical Agenda*

Monday, September 21, 2026
Building 26 – Room G51

Time	Activity	Moderator
2:00 – 4:00 pm	Registration and Organizing Committee Meeting	TBD

Tuesday, September 22, 2026
Building 26 – Room G51
Day 1 – Digital Engineering

Time	Activity	Moderator
8:00 – 9:00 am	Registration	
8:00 – 10:00 am	Breakfast and Ice Breaking	TBD
10:00 – 10:30 am	Keynote	TBD
10:30 am – 12:00 pm	Sessions 1 – Digital Design with AI <ul style="list-style-type: none"> Automated design point analysis for energy systems for up-front screening using AI and learning methods. Technoeconomic assessment of new and existing technologies for dynamic environments where cost-based models no longer provide indication of economic viability. 	

Time	Activity	Moderator
12:00 – 2:00 pm	Lunch Break	
2:00 – 3:30 pm	Session 2 – Digital Twins and SCADA Systems <ul style="list-style-type: none">• Incorporating AI into multi-objective performance optimization.• Intelligent digital twins for performance optimization and future SCADA implementation.	TBD
3:30 – 4:00 pm	Break	
4:00 – 5:00 pm	Session 3 – Digital Approaches for Dynamic System Design <ul style="list-style-type: none">• Development of federated models for evaluating dynamic performance (IDAES).• Designing integrated energy systems based on current and future needs.	TBD

Wednesday, September 23, 2026
Building 26 – Room G51
Day 2 – Beyond Digital Twins

Time	Activity	Moderator
8:00 – 9:00 am	Registration and Breakfast	
9:00 – 9:30 am	Keynote	TBD
9:30 am – 10:20 am	Session 4 – From Dynamics to Real-Time <ul style="list-style-type: none">• Timescales for integrated energy systems, from supervisory control to frequency regulation• Methodology for accelerating physics-based or semi-empirical dynamic models to execute in real-time or at the controller sampling frequency.	TBD
10:20 – 10:40 am	Break	
10:40 am – 12:00 pm	Session 5 – Intelligent Hardware in Technology Development <ul style="list-style-type: none">• Application of real-time dynamic models for controls development in hardware in the loop simulations.• Realization of real-time digital twins and cyber-physical systems for dynamic performance optimization.• Incorporating AI/ML in dynamic controller development.	TBD
12:00 – 1:30 pm	Lunch Break	

Time	Activity	Moderator
1:30 – 2:30 pm	Research and Innovation Center Laboratory Tour	TBD
2:30 – 3:45 pm	UltraLab Demonstration	TBD
3:45 – 4:00 pm	Break	
4:00 – 5:00 pm	Session 6 – Cyber-Physical Systems <ul style="list-style-type: none">• Using cyber-physical systems to accelerate technology development.• How to design cyber-physical systems from concepts.	TBD

Thursday, September 24, 2026
Building 26 – Room G51
Day 3 – Hybrids

Time	Activity	Moderator
8:00 – 9:00 am	Registration and Breakfast	
9:00 am – 10:20 am	Session 7 – Technology Transition in the Energy Sector <ul style="list-style-type: none">• Intermittency in the power sector, issues and opportunities.• Supporting transition to novel technologies in the energy sector, from retrofit to generation asset replacement.	TBD
10:20 – 10:40 am	Break	
10:40 am – 12:00 pm	Session 8 – Needs of the Future Power Grid <ul style="list-style-type: none">• Intermittency in both power generation and demand, inverter-based power to data centers.• Integrated energy system opportunities in the changing power environment.	TBD
12:00 – 1:30 pm	Lunch Break	
1:30 – 3:00 pm	Session 9 – Realizing Autonomous Power <ul style="list-style-type: none">• Autonomous power generation.• Summary of key needs and research gaps.	TBD

* Subject to change.

Please reach out to us if you have questions.

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