



INAUGURAL LONG DURATION ENERGY STORAGE (LDES) SUMMIT

“ESGC Decadal Challenge”

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April 8th, 2024

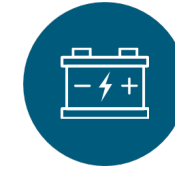
+ Agenda

- + Decadal Challenge explained
- + Structure and Steering Committee members
- + BIG Decadal Idea Generator (BIG-DIG)

+ Decadal Challenge



Reduce storage costs by
90% from a 2020
Li-ion baseline...



...in storage systems that
deliver **10+**
hours of duration



...in **1** decade

+ Purpose: Leverage the ESGC Lab Coordination team to identify key gaps and opportunities across energy storage that DOE can address over the next decade to achieve roadmap/storage shot goals.

+ Objectives:

- + Establish a Steering Committee that will ideate milestone-focused plans in a highly collaborative, cross-track approach that will consist of senior technical lab leadership that align with specific topics of interest (technology, manufacturing, policy, etc.).
- + Create a process that is open to all DOE Labs for wider engagement.
- + Address challenges across the ESGC tracks (minimum one challenge per track).

+ Budget: Total funds ~\$500-\$700K FY24, project ideas can be small/medium/large.

- + Funding is not intended to do the research, but to develop the concept into a full program plan.



Decadal Challenge Propose Structure

Topic/Sector	Year 1	Year 2 & 3	Years 4-8	Years 9 - 10
All/Cross Cutting	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
Technology Development				
Cost Reduction	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
Performance Improvement	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
...				
Markets and Valuation				
LD&ES Valuation and Markets	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
Policy Analysis	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
...				
Investment, Commercialization, & Scale Up				
Facilitating Private Sector Investment	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
Emerging Tech. Commercialization	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
...				
Manufacturing, Supply Chain, and Workforce				
Manufacturing	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
Supply Chain	Short Term Milestone/Target	Intermediate Term Milestone/Target	Long Term Milestone/Target	Final Milestone/Target
...				

+ Steering Committee








Steering Committee will develop challenge

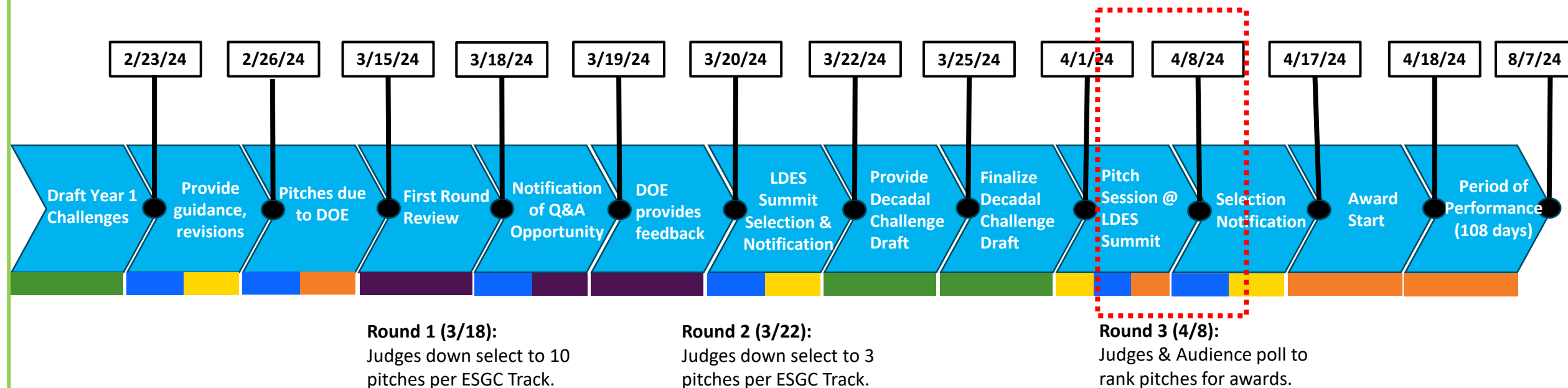
+ Decadal Challenge/BIG-DIG Timeline

Decadal Challenge | Department of Energy

Start (2/20/24):
Post Timeline & Pitch
Template. – Lab
Coordinators

Responsible Parties	
	Steering Committee
	DOE Sponsor
	Lab Coordinators
	ESGC Track Leads
	Participating Lab Staff/PI

End (8/7/24):
Pitch Updates
Presentation @
ESGC Summit –
Participating Lab
Staff/PI



+ BIG Decadal Idea Generator (BIG-DIG)

- + **WHAT:** Fast Pitch competition to select *needle-moving* seedling ideas for further development
 - + Funding is not to do the research, but to develop the concept into a full program plan
- + **PURPOSE:** Provide fully developed program plans that accelerate progress towards Energy Earthshot™/ESGC goals
- + **PROBLEM BEING SOLVED:** Maximize utilization long-range insights from national lab experts
- + **APPROACH:** Lab-coordinated work aligned with the 4 ESGC tracks
 - + Standardized pitch & 4-page summary format will be provided
 - + Track Leaders encouraged to coach ideas, as appropriate
 - + Judges are DOE track leads and other SMEs
- + **SCALE:** Total funds ~\$500-\$700K, project concepts can be small/medium/large
- + **TIMING:** Begin February 2024 - Final Selection April/May



BIG-DIG Pitch Selection Criteria



Markets and
Valuation


Investment,
Commercialization,
and Scale-Up

Manufacturing,
Supply Chain &
Workforce


Technology
Development




Long Duration Storage Shot



Reduce storage costs
by **90%***...



...in storage systems
that deliver **10+** hours
of duration



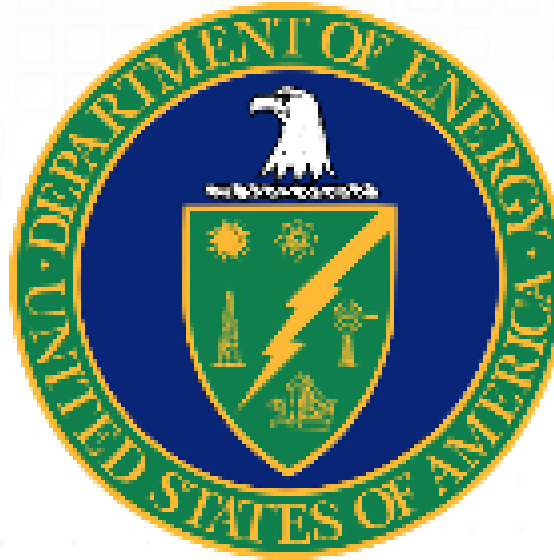
...in **1** decade

*from a 2020 Li-ion baseline

Clean power anytime, anywhere.

The concept pitches will be aligned with one of the four ESGC Tracks. Evaluation will be based on:

1. Potential to make an impact, to significantly advance energy storage technologies – “move the needle” and
2. Alignment with DOE ESGC 2020 Roadmap, Long Duration Storage Shot™, and the Energy Storage Decadal Challenge Year 1 Objectives



Thank You

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