

# The Department of Energy National Labs: A Vital Network for U.S. Science and Technology



- **Core mission:** science and technology through large-scale infrastructure and enduring expertise
- **Dynamic programs:** interdisciplinary teams addressing current grand challenges
- **Rapid response:** expertise mobilized for urgent national needs
- **University-National Lab-Industry nexus:** coupling innovation to the world



# NATIONAL LAB PARTNERSHIPS AND PEOPLE

Paul K. Kearns, Laboratory Director

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of the Secretary of Energy Advisory Board

UChicago  
Argonne, LLC



U.S. DEPARTMENT OF  
**ENERGY**

Argonne National Laboratory is a  
U.S. Department of Energy laboratory  
managed by UChicago Argonne, LLC.

# Partnerships and people amplify the value the DOE laboratories deliver to the nation

## Argonne's signature contributions

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Scientific discoveries

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Cutting-edge research facilities

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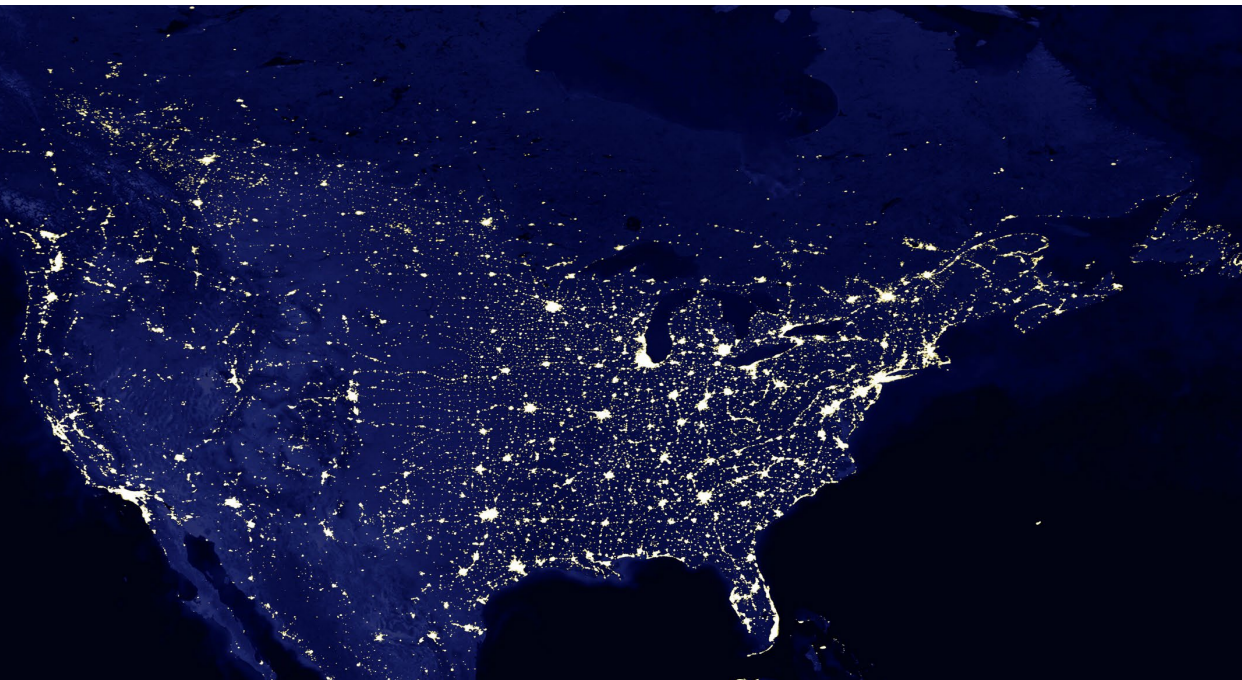
Energy and climate solutions

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Global security advances

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Developing leaders and  
the STEM workforce



# Strengthening communities and economies in our regions



## Example: Goals for Argonne's Chicago location

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**Extend** benefits from Argonne's capabilities and resources to underserved communities

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**Advance** science and technology through expanded collaborations

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**Accelerate** the transfer and adoption of technology by industry for U.S. economic prosperity

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**Build** the workforce of the future to maintain U.S. competitiveness

# Leveraging DOE's innovation and partnership programs

Collaborations with universities and companies large and small

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Lab-embedded entrepreneurs

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Consortia

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National centers and hubs

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One-to-one Lab-industry partnerships

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# Nurturing world-class communities of talent

Replace monovalent  $\text{Li}^+$  with di- or tri-valent ions:  $\text{Mg}^{2+}$ ,  $\text{Al}^{3+}$ , ...  
Double or triple capacity stored and released

Focus on working ions, such as magnesium or yttrium, that carry twice or triple the charge of lithium and have the potential to store two or three times as much energy.

**Early-career scientists**

**Leadership development**

**Women of color at the laboratories**



THANK YOU