

## Vision

To enhance the nation's security and prosperity through sustainable, transformative approaches to our most challenging energy, climate, and infrastructure problems.

# Energy, Climate, and Infrastructure Security (ECIS) Strategic Management Unit (SMU)

Access to reliable, affordable, and sustainable sources of energy is essential for all modern economies. Since the late 1950s, we Americans have not been energy self-sufficient.

Our addiction to foreign oil and fossil fuels puts our economy, our environment, and ultimately our national security at risk. Furthermore, there is a growing recognition of the requirement to balance our need for plentiful, low-cost energy, with an inherent responsibility to steward the environment. The U.S. does not face this challenge alone. As

the world continues to become more connected, our collective futures are inextricably linked, and energy lies at the core of global interactions. Meeting our growing energy needs and managing the impacts on climate change will have profound ramifications on the global economy and ultimately on global political stability.

## National Energy Challenges

- » Reduce our dependence on foreign oil
- » Increase deployment of low-carbon stationary power generation
- » Understand risks and enable mitigation of climate change impacts
- » Increase security and resiliency of critical infrastructures
- » Strengthen the nation's science & technology (S&T) base in energy, climate, and infrastructure



The energy, climate, and infrastructure security mission space has four principal program areas:

### Energy Security

To accelerate the development of transformative energy solutions that will enhance the nation's security and economic prosperity.

### Infrastructure Security

To develop and apply analytical approaches to secure the nation's critical infrastructure against natural or malicious disruption.

### Climate Security

To understand and prepare the nation for the national security implications of climate change.

### Enabling Capabilities

To provide a differentiating science understanding that supports Sandia's mission technologies now and into the future.

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## 10 Year Objectives



### Objective 1 Anticipate & Enable Policy & Regulatory Decisions

Anticipate and enable sound government policy and regulatory decisions by providing timely and objective technology assessments and systems analyses.



### Objective 3 Steward Competencies

Create and steward enduring science, systems, and security competencies to support inherently government functions and services and anticipate national security challenges.



### Objective 2 Accelerate Solutions

Accelerate U.S. industries' innovation, development, and successful deployment of solutions to the nation's most challenging energy, climate, and infrastructure problems to meet U.S. policy objectives.



### Objective 4 Support International Engagement

Support U.S. leadership in global energy, climate, and infrastructure challenges through strategic international engagement.

## Key Facilities

Many of Sandia's unique research facilities are available for use by industry, universities, academia, other laboratories, state and local governments, and the scientific community in general. User and collaborative facilities are a unique set of scientific research capabilities and resources whose primary function is to satisfy DOE programmatic needs, while also being accessible to outside users.

- National Solar Thermal Test Facility (NSTTF)
- Joint BioEnergy Institute (JBEI)
- Combustion Research Facility (CRF)
- Battery Abuse Testing Laboratory (BATLab)
- National Infrastructure Simulation and Analysis Center (NISAC)
- Photovoltaic Systems Evaluation Laboratory (PSEL)
- National Supervisory Control and Data Acquisition (SCADA) Test Bed
- Center for Integrated Nanotechnologies (CINT)
- Distributed Energy Technologies Laboratory (DETL)
- Scaled Wind Farm Technology (SWIFT) Facility
- Atmospheric Radiation Monitoring (ARM) Climate Research Facility
- Regional Test Center (RTC)

