Pacific Northwest
NATIONAL LABORATORY

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PRIMA

PLATFORM FOR REGIONAL INTEGRATED MODELING AND ANALYSIS

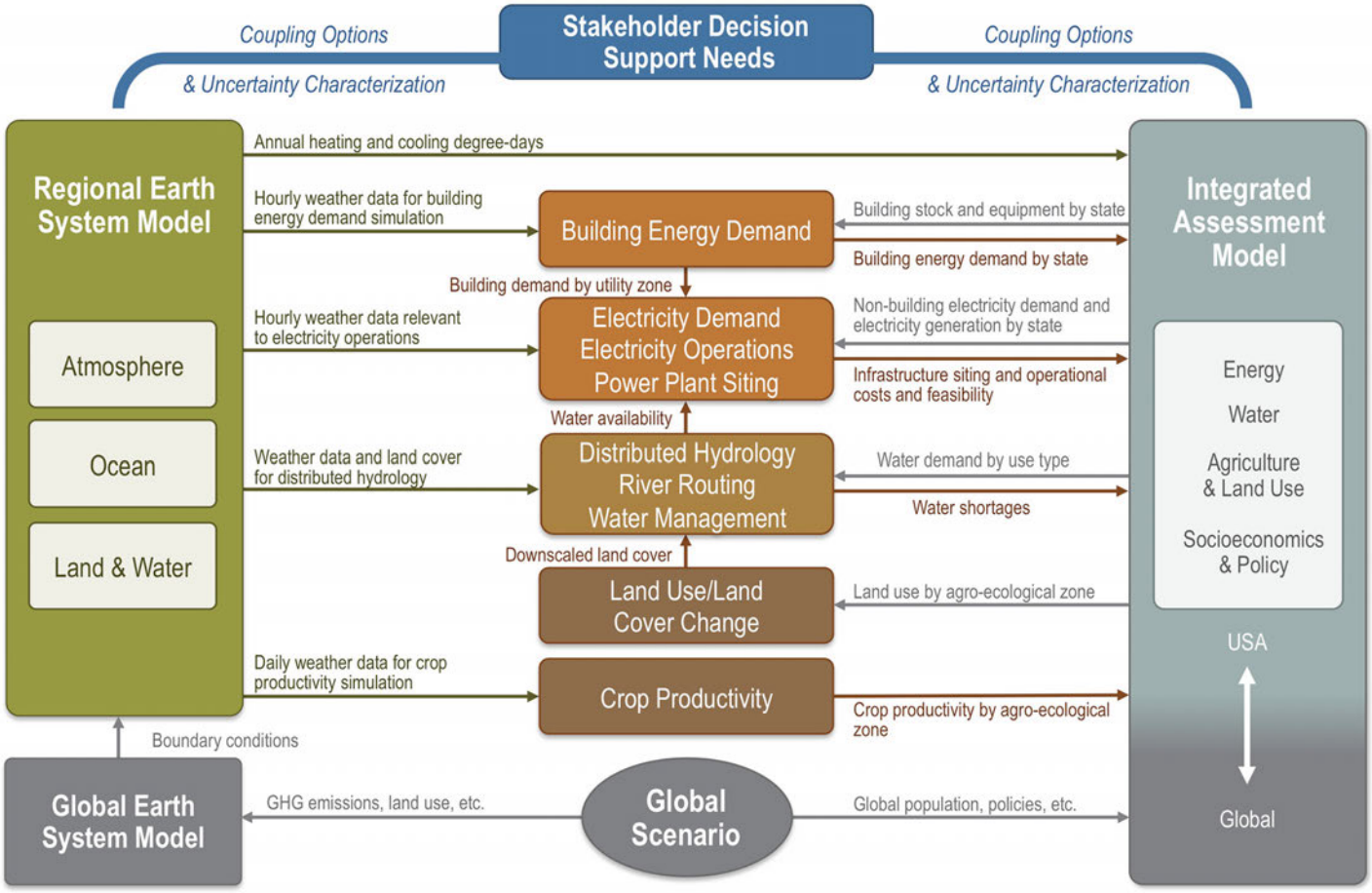
A unique capability that integrates:

- High-resolution modeling of weather-sensitive building loads, optimal power plant dispatch and operations, and power plant siting.
- Biophysical modeling of future environmental systems (e.g., climate and weather, water availability)
- Macroeconomic integrated assessment modeling (e.g., energy, agriculture, transportation)
- Global, national, and state-level socioeconomics, resource constraints, and policies (e.g., cap and trade, Clean Water Act).

To address questions, such as:

- How resilient is current or projected future energy infrastructure to extreme events, such as drought, heat waves, and hurricanes?
- How do future climate scenarios affect demand; resource availability; and future infrastructure siting, operations, and reliability?
- How do climate/energy policies and environmental regulations affect technology choice and subsequent performance of energy systems under climate change?
- How could policy in other sectors (e.g., bioenergy crop incentives) influence future infrastructure, energy costs, water availability, and reliability?

How PRIMA Works



Additional PRIMA Features

- Regional and temporal resolution of simulation models appropriate for policy makers and infrastructure investors
- Uncertainty characterization process identifies key uncertainties and robust decisions
- Open source
- Regionally flexible
- Model testing and validation
- Current demonstration projects in the Eastern Interconnection involve stakeholders in the energy, agriculture, and water sectors.

CONTACT INFORMATION

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U.S. DEPARTMENT OF ENERGY