Pacific Northwest
NATIONAL LABORATORY

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PRIMA

PLATFORM FOR REGIONAL INTEGRATED MODELING AND ANALYSIS

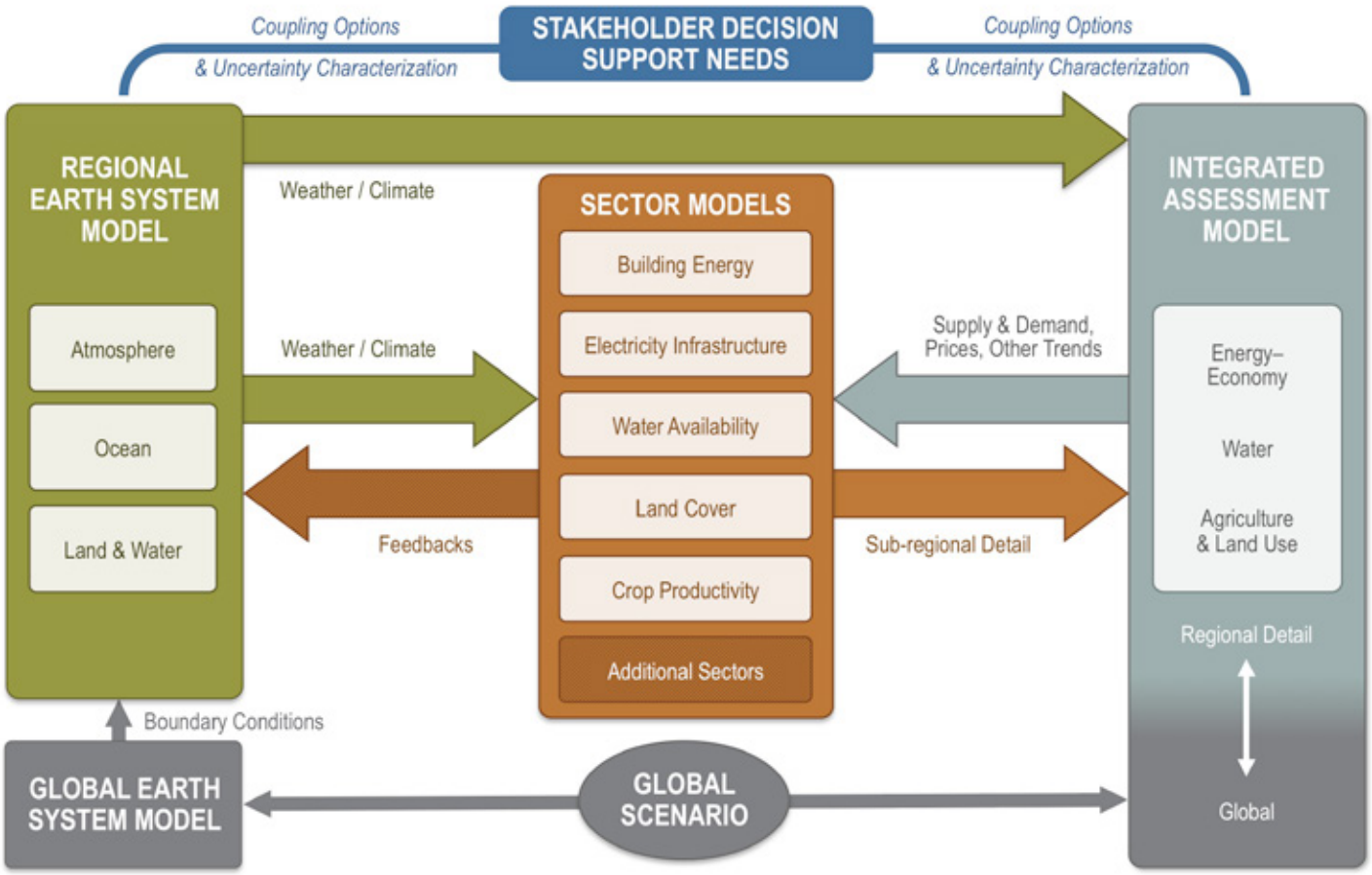
A unique capability for simulating complex interactions among human and natural systems at decision-relevant spatial scales:

- Integrates detailed models of regional climate, hydrology, energy, agriculture, socioeconomics, and other systems
- Flexible, modular, and portable for any region
- Regional, climate, and socioeconomic models driven by global boundary conditions to ensure consistency across regions
- Stakeholder input used to design numerical experiments and guide uncertainty characterization.

PRIMA can address complex, multifaceted questions, such as:

- How resilient is current and proposed future energy infrastructure to extreme events, such as drought, heat waves, and hurricanes?
- How do policies in one sector influence outcomes in other sectors? For example, how would diverse bioenergy crop incentives influence energy costs, water availability, and land use in different regions?
- How do the intrinsic characteristics of a region enhance or constrain its ability to reduce greenhouse gas emissions or adapt to the impacts of climate change?

How PRIMA Works



Why PRIMA?

- Many environmentally relevant decisions, from natural resource management to renewable portfolio standards, are made at spatial scales that are not well resolved in global models or do not account for the full set of interactions among relevant human and natural systems.
- Each region differs in its distribution of energy, land, water, and other resources, as well as in its capacity to respond to climate change and other environmental and socioeconomic challenges.
- Regional stakeholders need tools to evaluate different strategies for responding to climate change that can account for complex and uncertain multiscale interactions among different systems and sectors.

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Visit **PRIMA** online at ***http://prima.pnnl.gov/***

PRIMA fills these knowledge gaps by explicitly resolving key regional-scale processes and interactions in a consistent multiscale modeling framework that also accounts for larger-scale drivers and boundary conditions.

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PRIMA:
Platform for Regional Integrated Modeling and Analysis

U.S. DEPARTMENT OF ENERGY