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Applied Energy Programs

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Sandia National Laboratory

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Applied Energy Programs



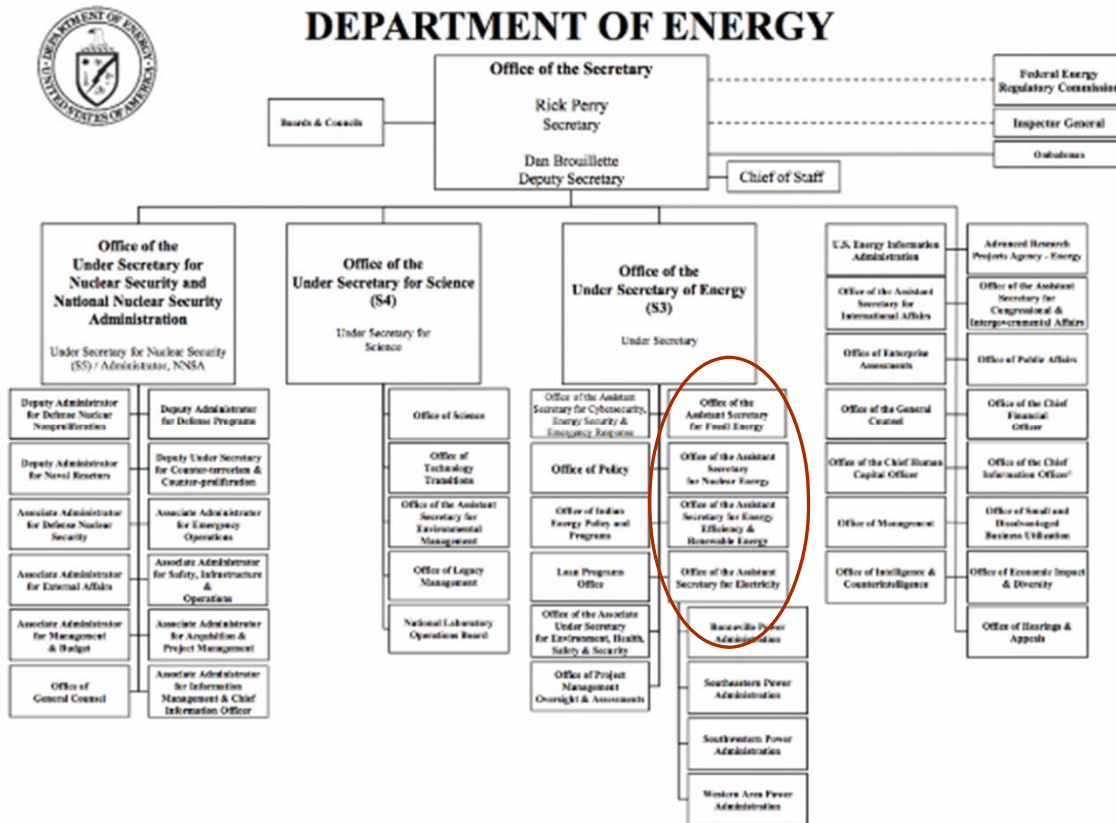
Vincent Tidwell, Sandia National Laboratories

PRESENTED BY Montana Labs Day
October 8, 2019



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Applied Energy Programs

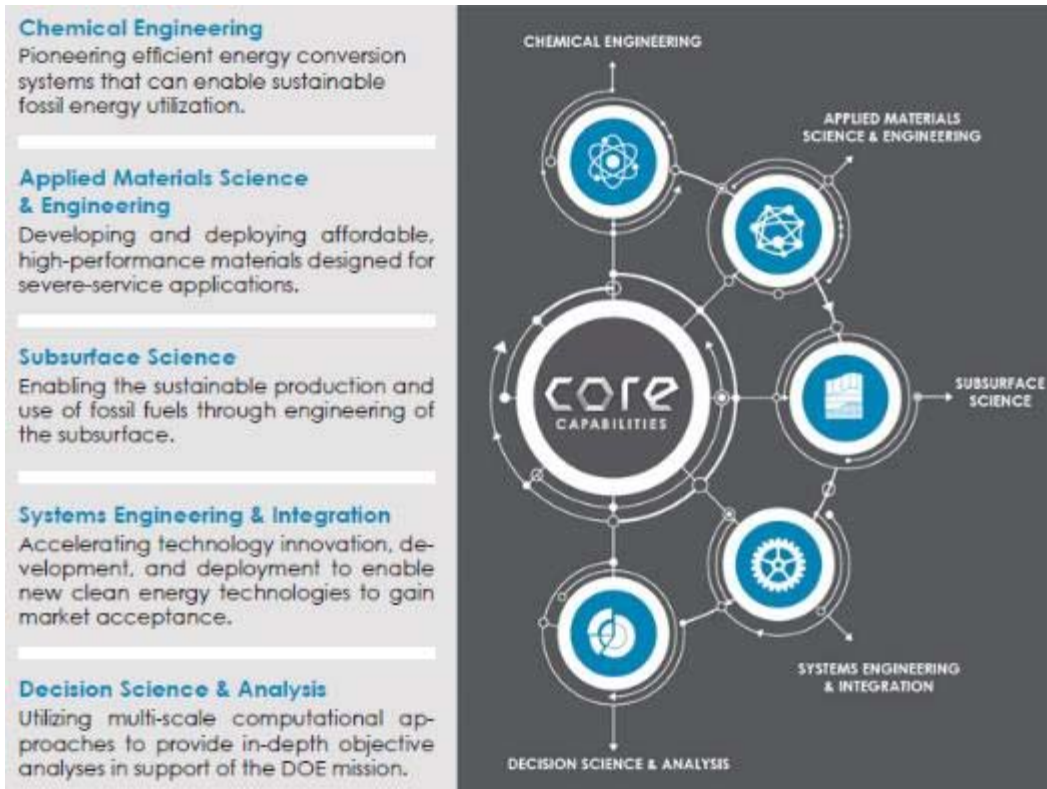


- Office of Electricity
- Energy Efficiency and Renewable Energy
- Fossil Energy
- Nuclear Energy



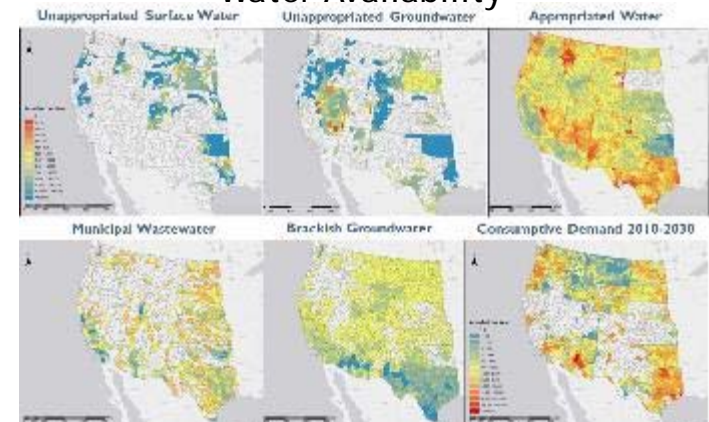
Fossil Energy

NETL Water Crosscut Program



- Advanced Cooling Technology
- Non-traditional Water Use
- Water Treatment and Detection Technology
- Decision Science and Modeling

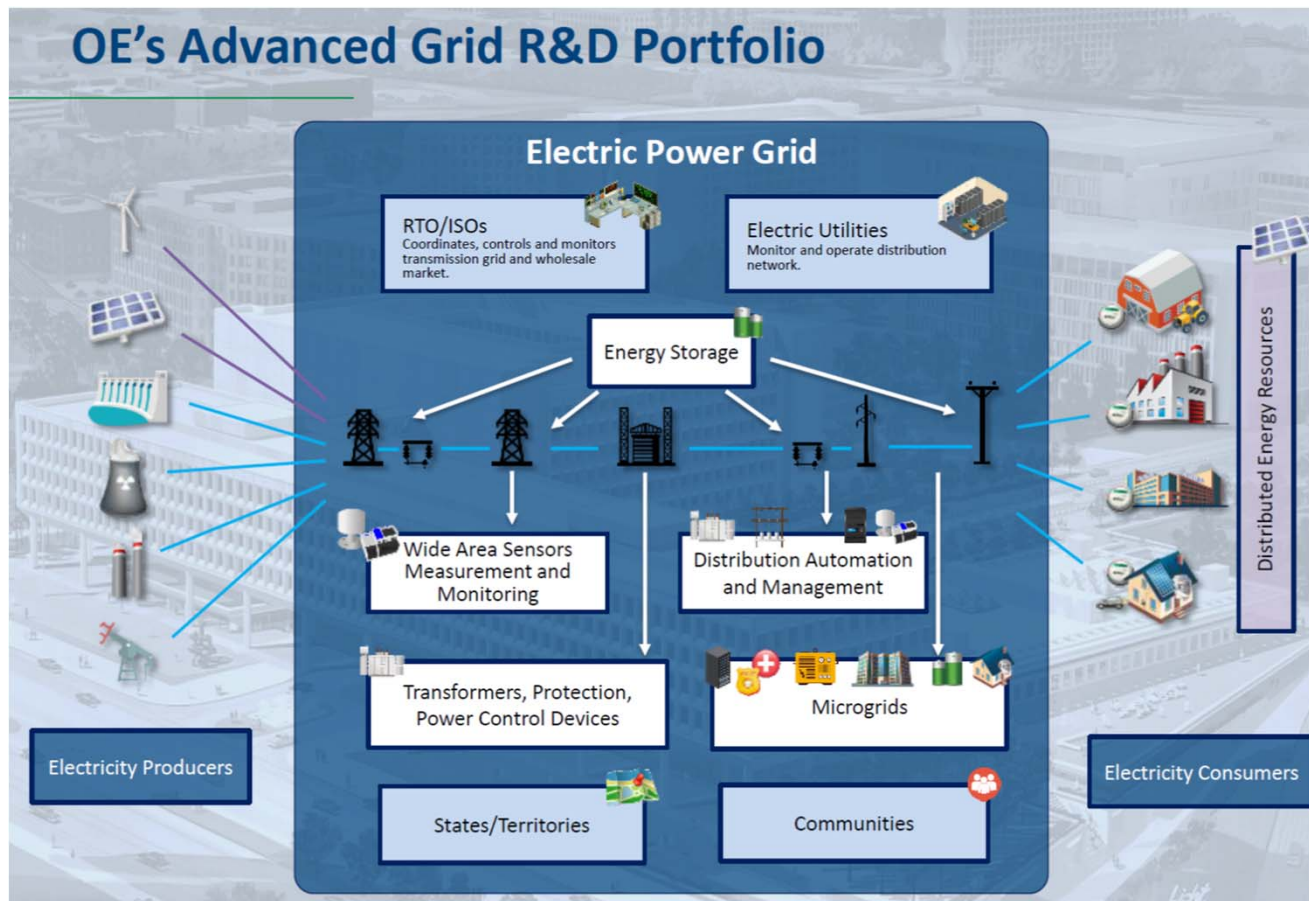
Water Availability



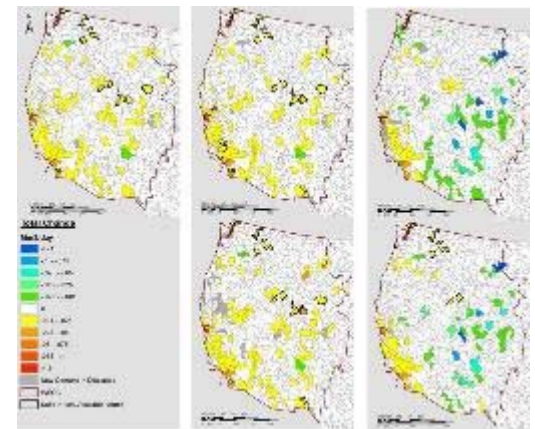
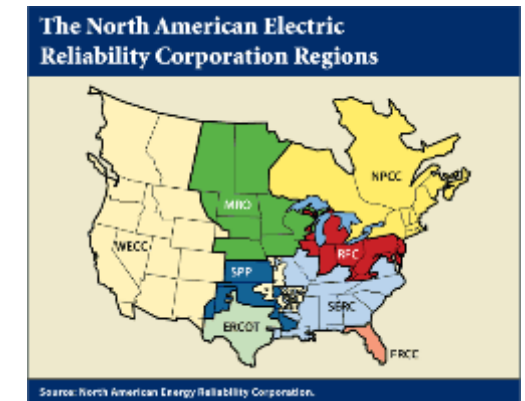
Source: Tidwell et al. 2014

Office of Electricity

OE's Advanced Grid R&D Portfolio



Transmission Expansion Planning

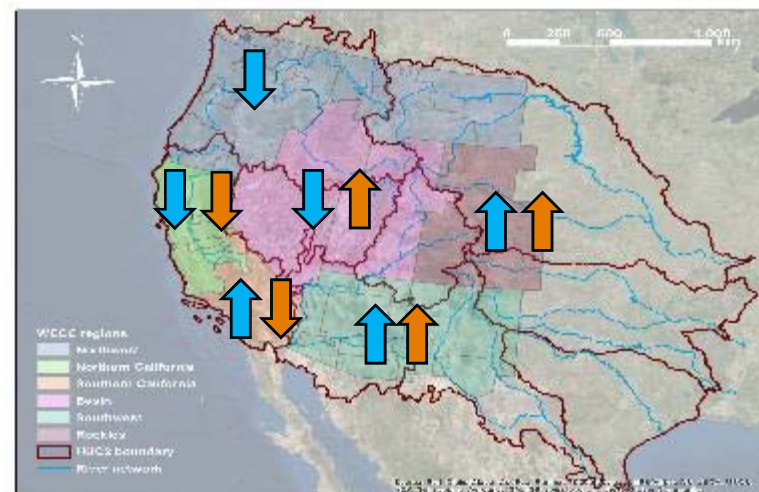


Source: Tidwell et al. 2017

Water Power Technologies Office



Climate Impacts on Hydropower and Relation to Broader Grid



- Changes in total regional generation for **drought conditions** and for **higher fuel prices**
- Effects of water availability and fuel prices on power systems vary by sub-region and can be of the same magnitude.

Source: Voisin et al. 2018

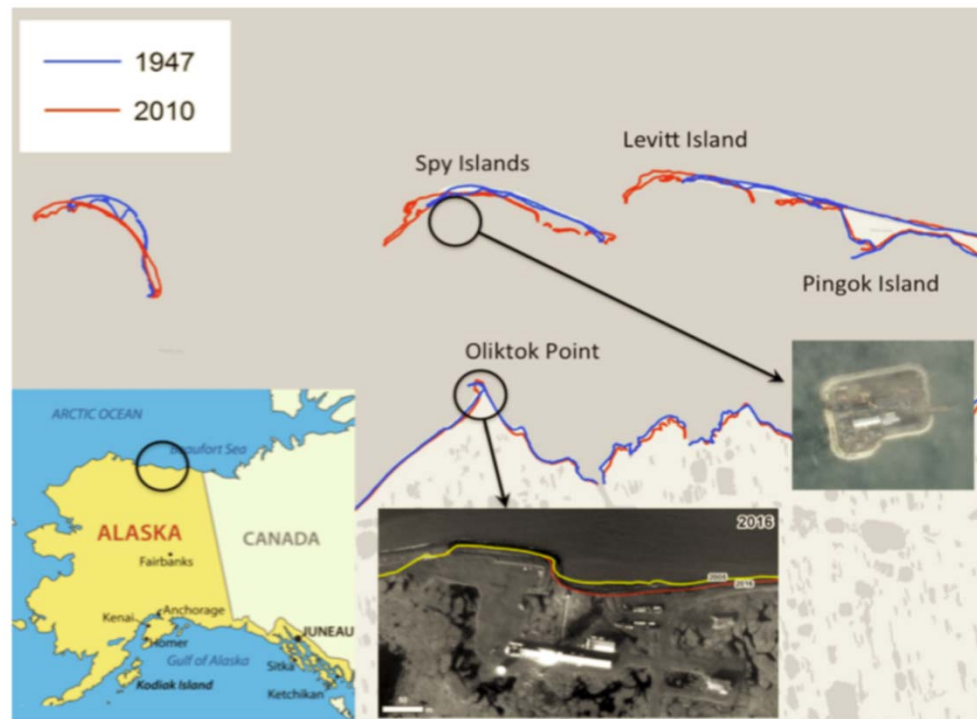
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U.S. DEPARTMENT OF
ENERGY

Office of Science

Eligible States



Decadal-scale barrier island migration and tundra bluff erosion

Other Agencies

