

Idaho National Lab (INL) Siting Considerations and Electrical Generation

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INL Siting Considerations

- History
- Process
- Interface
- Benefits
- Constraints

Siting History

- INL is a roughly 890 square mile site
- INL is sparsely developed
- Over 50 previous reactors onsite



Siting Process

- DOE Developed Site Use Permit
- Site Use Permits Issued to Utah Associated Municipal Power System (UAMPS) and Oklo
- Lessons Learned → Need to revise

Siting Process (cont.)

- Expression of Interest
- DOE Evaluation
 - Project Maturity
 - Project Compatibility

Siting Process (cont.)

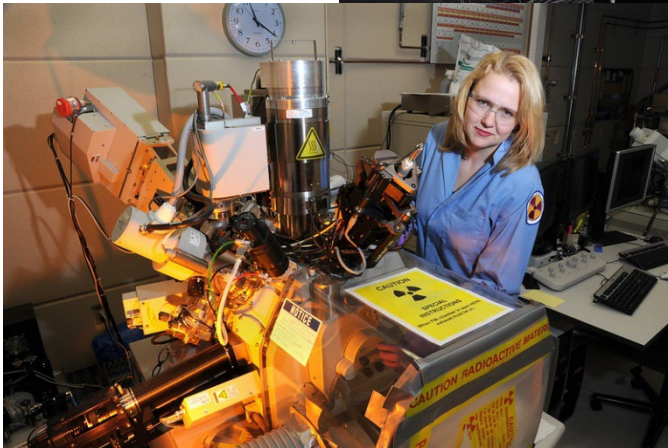
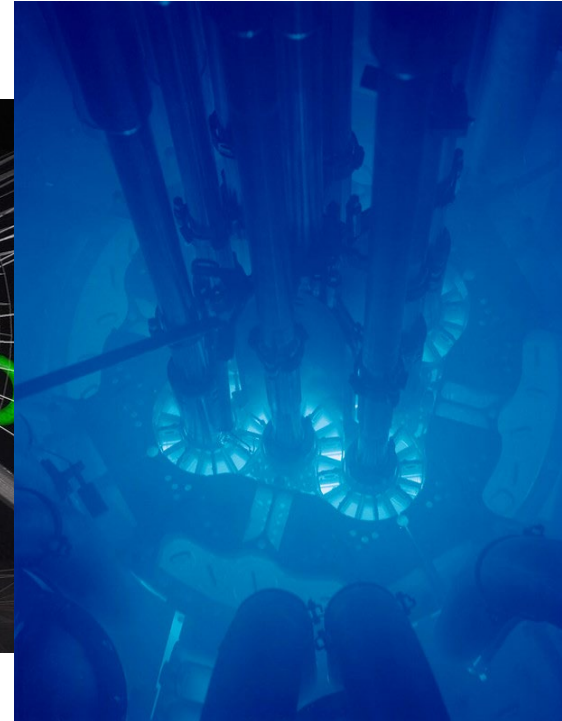
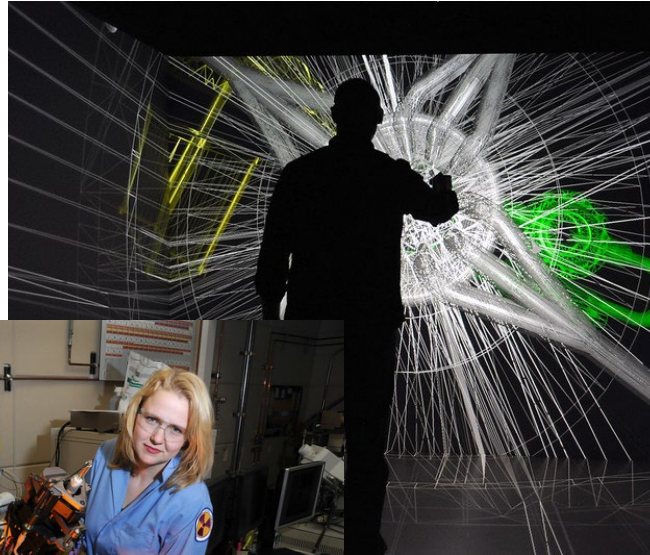
- Initial Memorandum of Understanding
- Lease for Land Use

Siting Interface

- Department of Defense / Department of Homeland Security
- Nuclear Regulatory Commission
- Idaho State
- Shoshone-Bannock Tribes
- National Environmental Policy Act
- National Historic Preservation Act

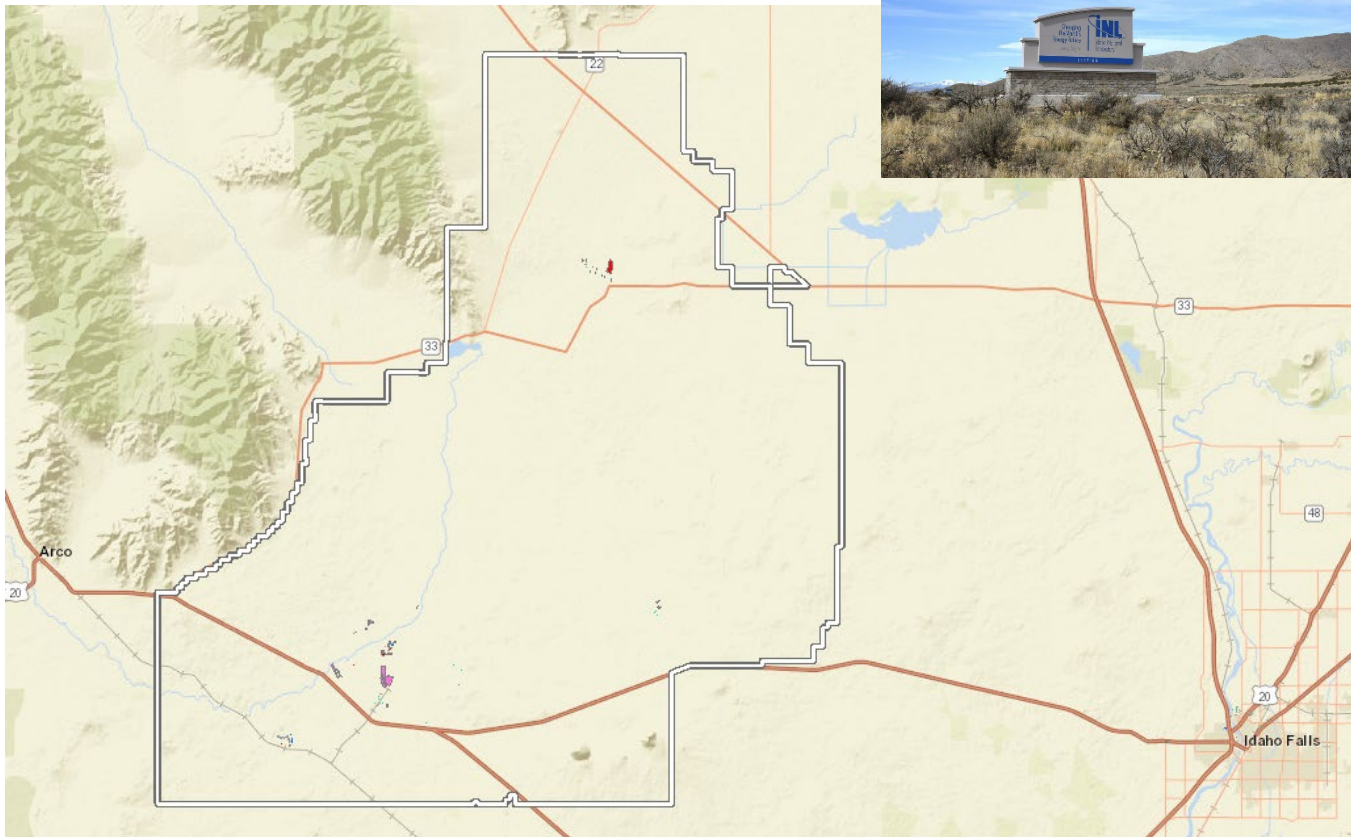
Siting Benefits

- Lab Resources



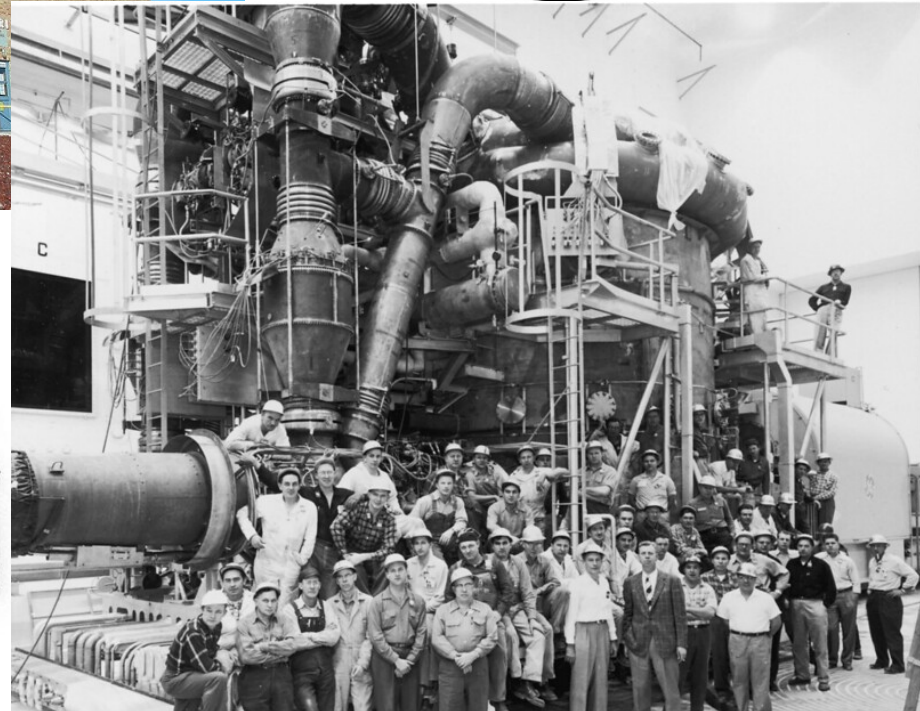
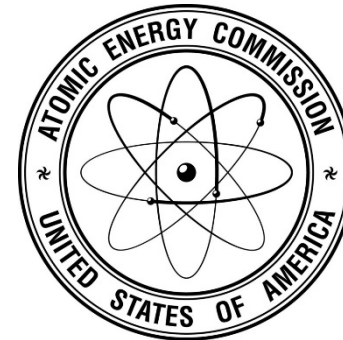
Siting Benefits

- Remote Location



Siting Benefits

History



Siting Benefits

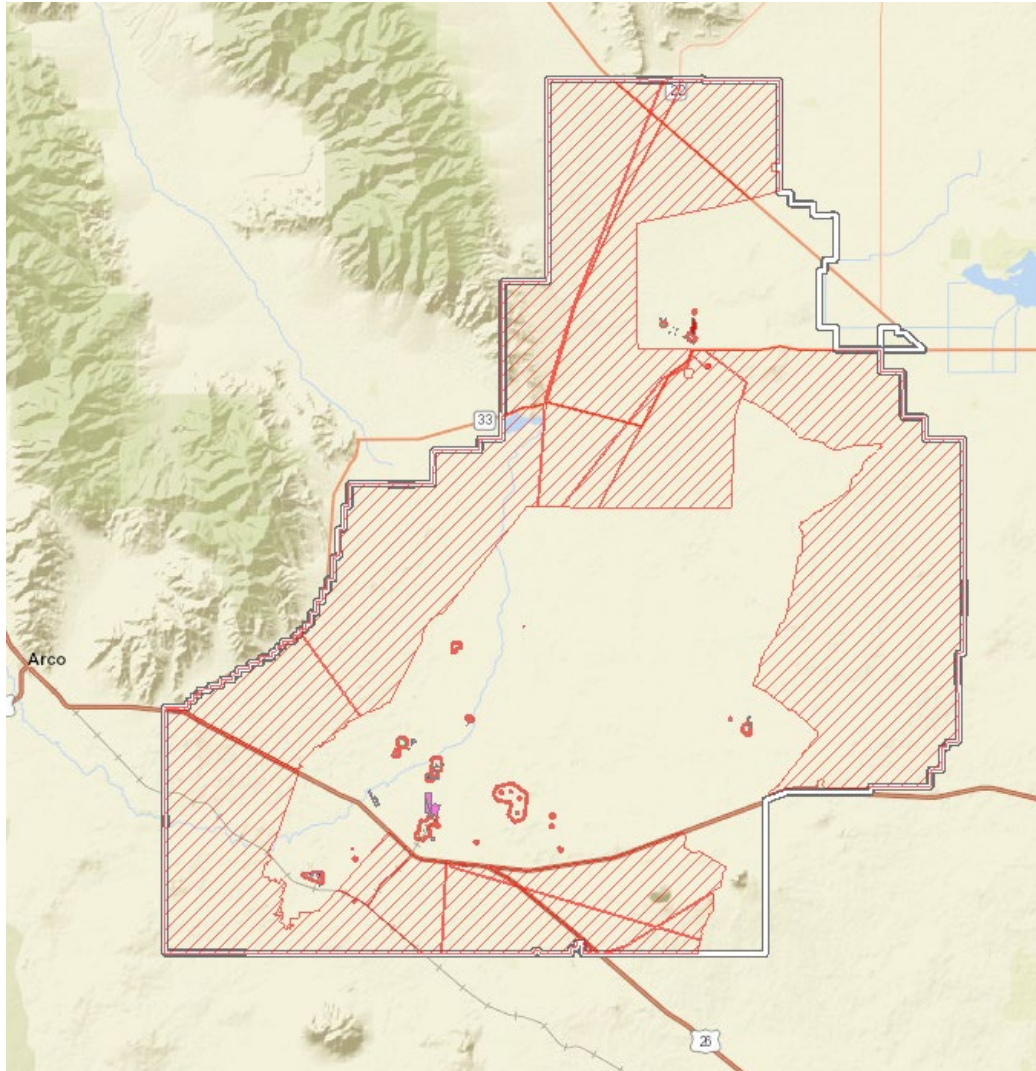
- Community Support



Additional Siting Considerations

- Existing Agreements
 - Regulated Power Market
 - Site Stabilization Agreement
 - Candidate Conservation Agreement

Additional Siting Considerations



Additional Siting Considerations

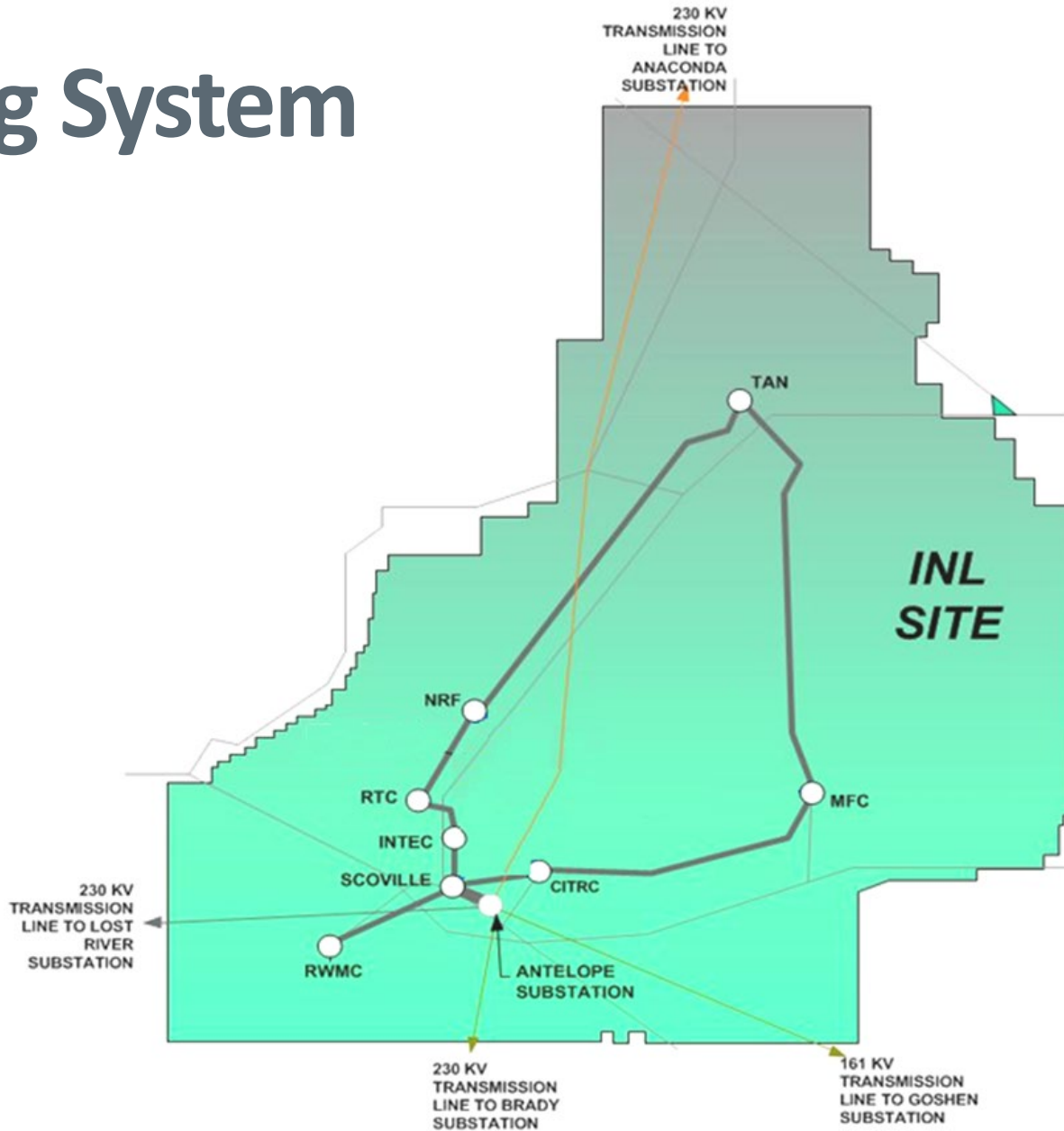
- Grid Capacity
- Water
- NRC-v-DOE Regulation
- Remote Location
- History

QUESTIONS?

Electrical Generation

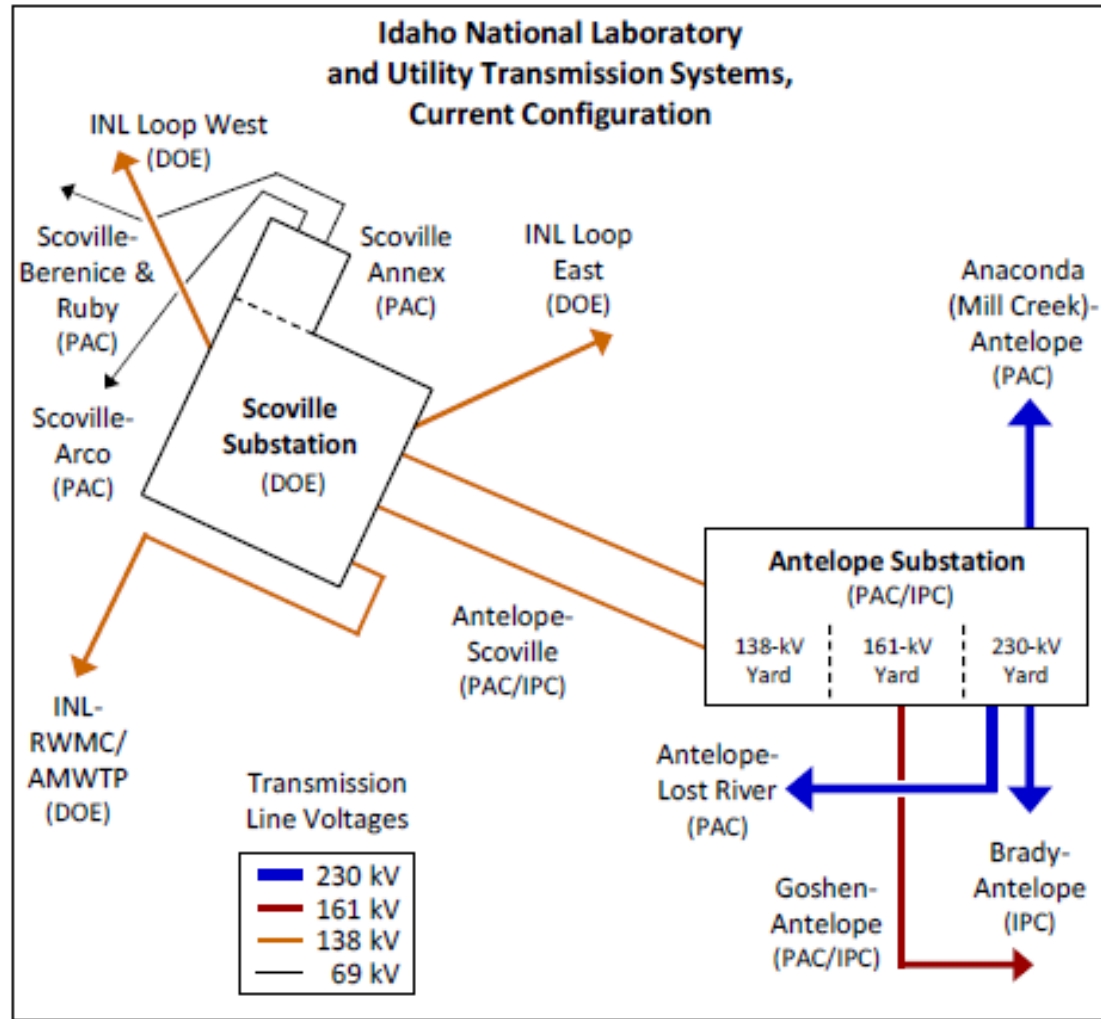
- Existing System
- Regional Grid
- Challenges

Existing System



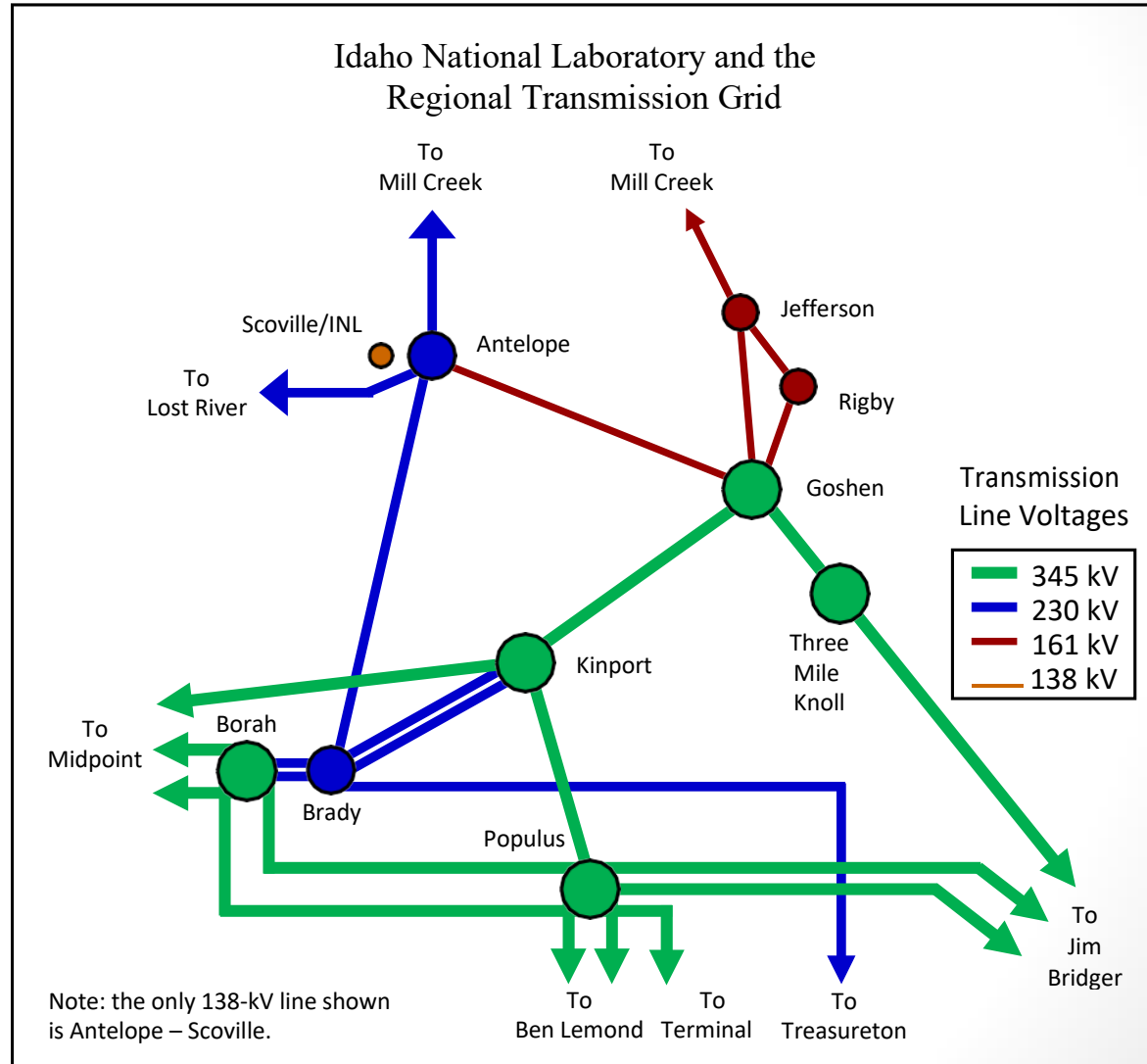
Existing System

Figure 1



Source: Exeter.

Existing System



Challenges

- Regional grid has limited existing capacity
- All new power sources are competitive
- Power generators obtain grid capacity on a first-come first-served basis under the open access transmission model.
- Potential high cost of interconnections for individual reactors

QUESTIONS?