



Renewable Energy in the Future Power System

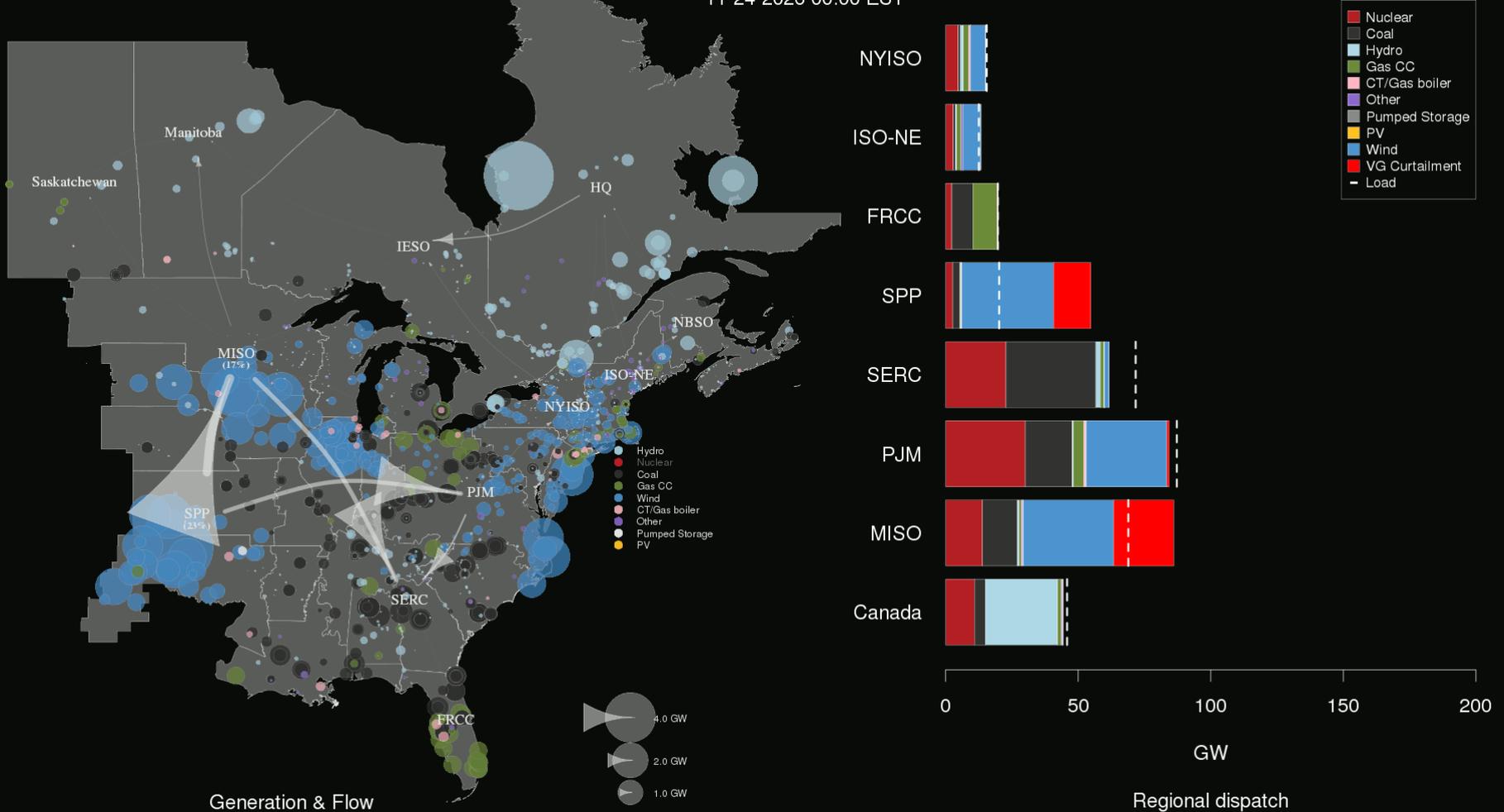
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January 30, 2018

What We Do: Renewable Energy Integration

Eastern Renewable Generation Integration Study (ITx30)

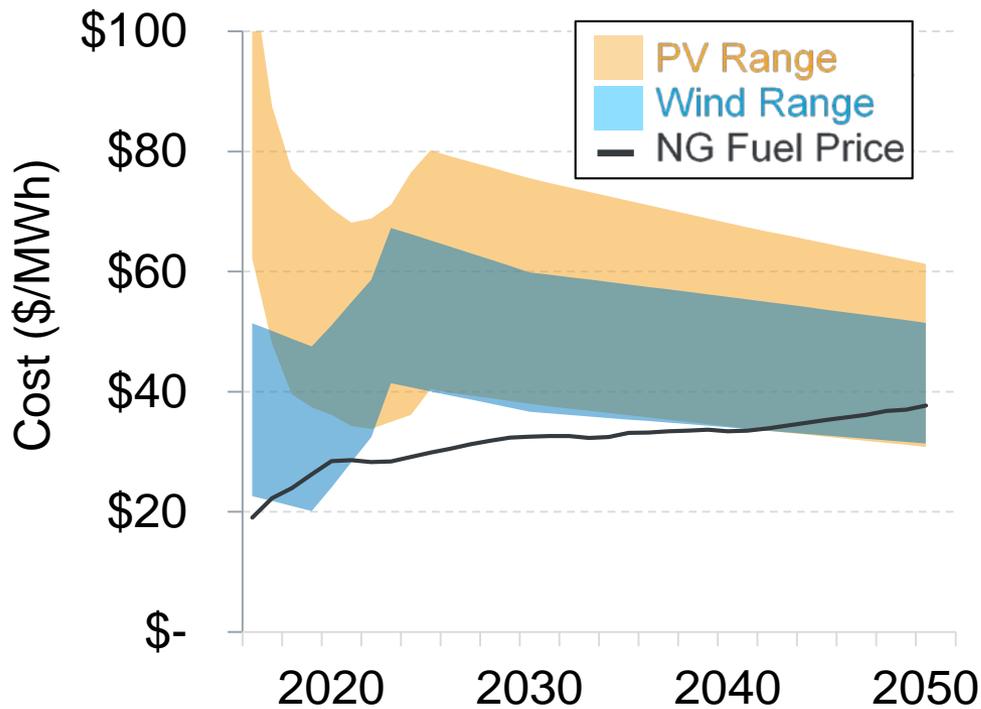
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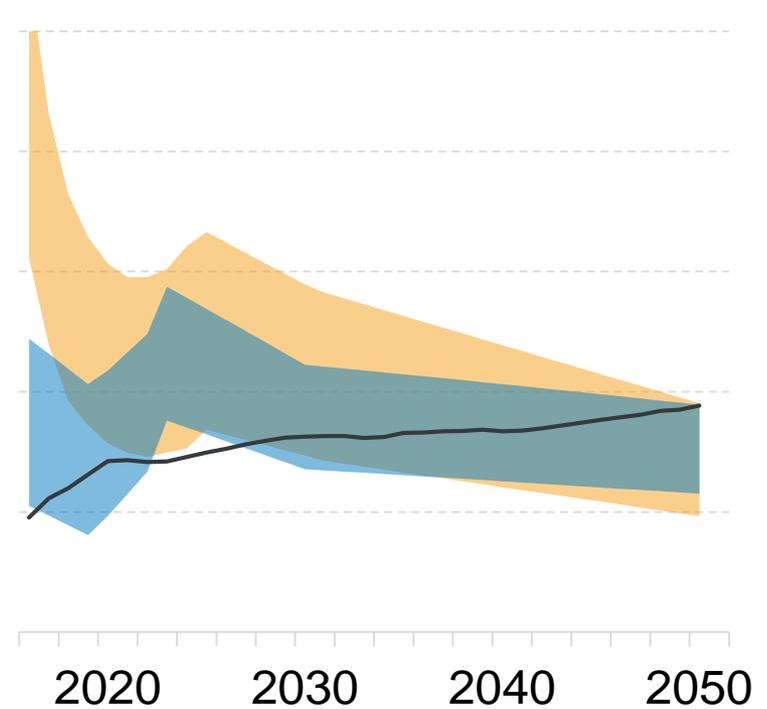
Source: <https://www.nrel.gov/grid/ergis.html>

What We See Coming: Natural Gas and Renewable Energy

Mid-Case RE Costs



Low RE Costs



Source: <https://www.nrel.gov/docs/fy18osti/68548.pdf>

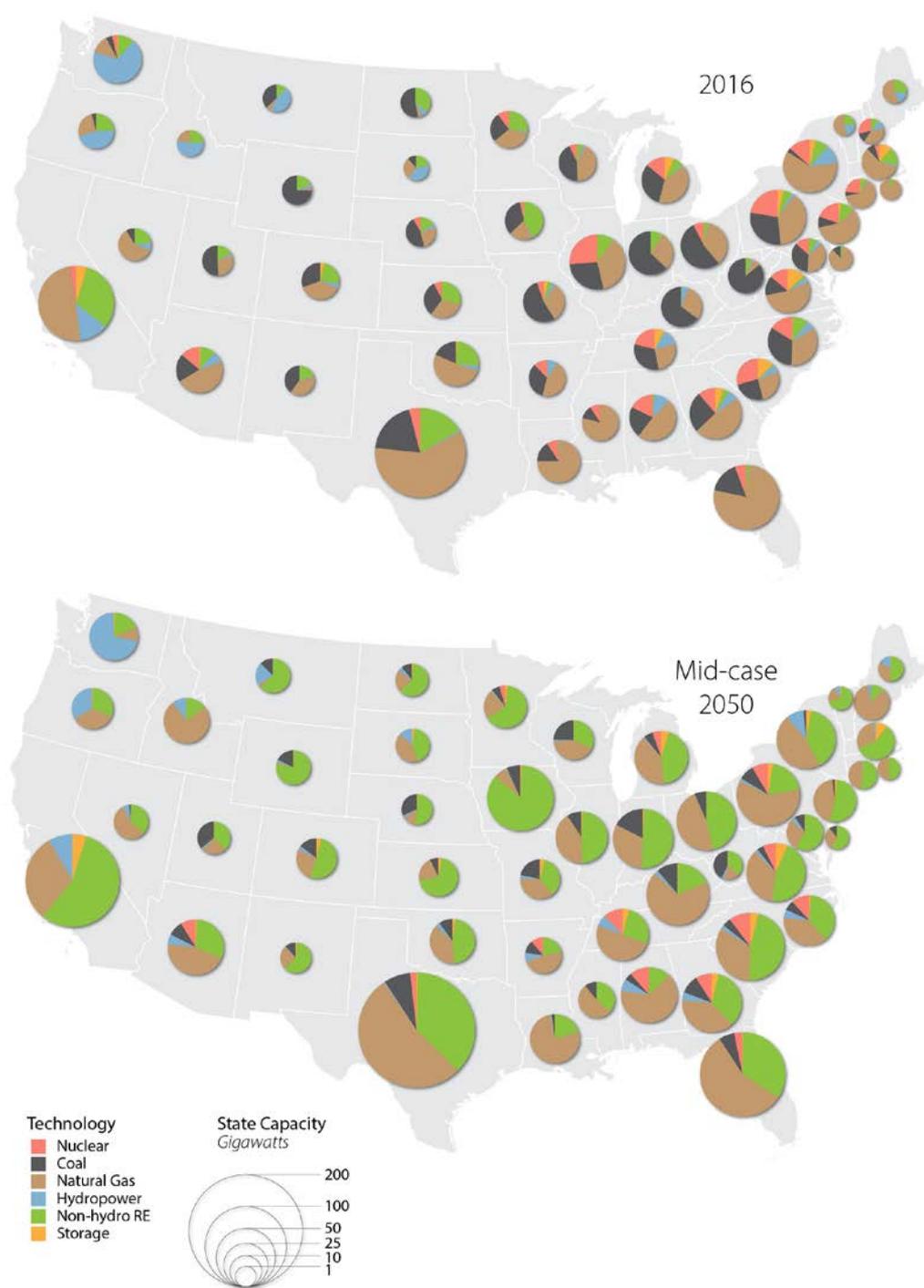
The U.S. power system evolves to a system primarily powered by natural gas and renewable energy

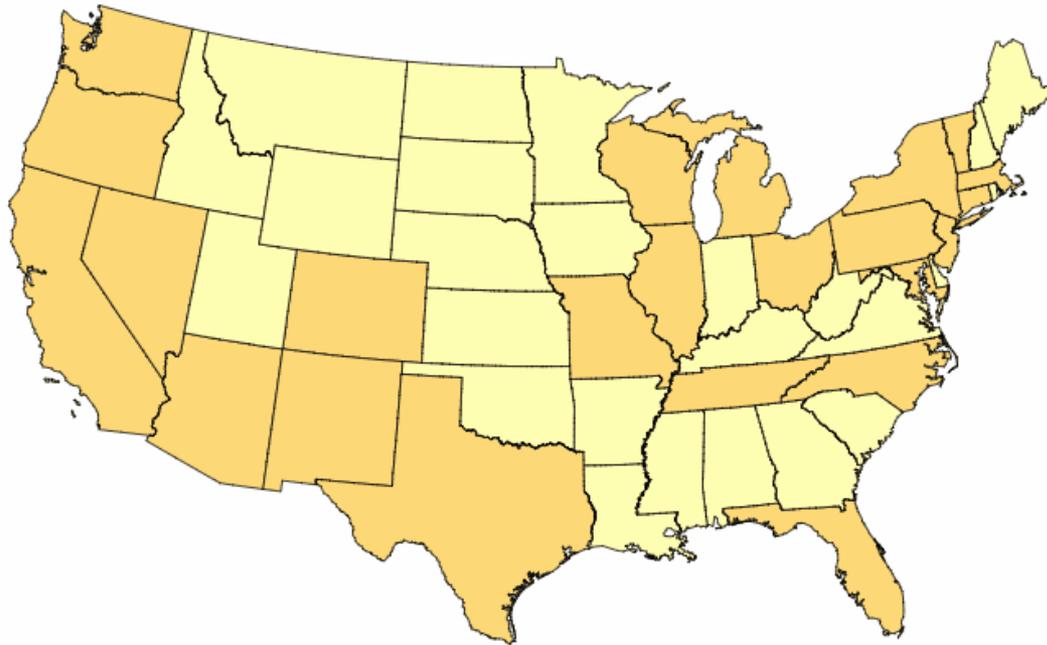
Upper figure: 2016

Renewable Energy Generation: 15%
Natural Gas Generation: 34%

Lower figure: 2050

Renewable Energy Generation: 45%
Natural Gas Generation: 30%





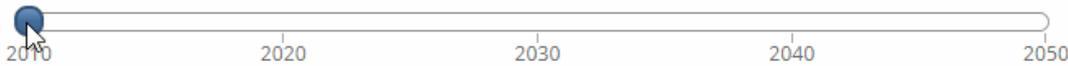
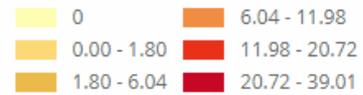
Publication Year
 2017 ▾

Scenario 1:
 Mid-Case Scenario ▾

Scenario 2:
 None ▾

Capacity (2010):
 Utility PV (GW)

Capacity ▾ Utility PV ▾

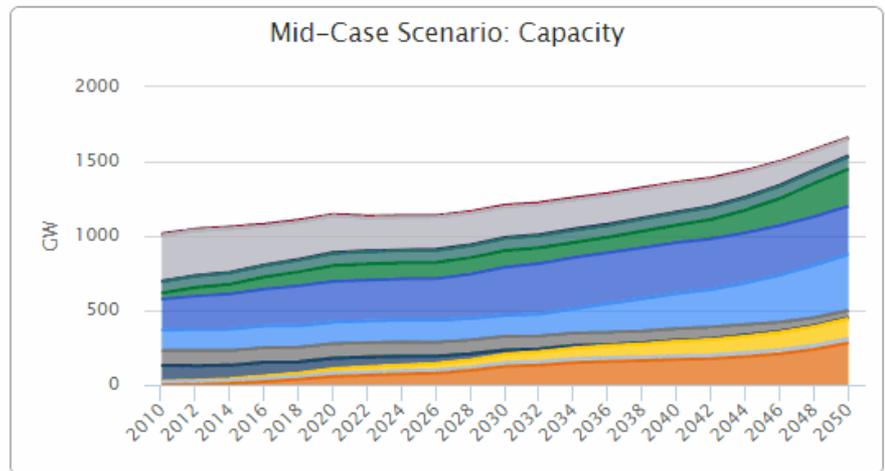


Compare Technologies System Metrics

View and compare the contributions of each technology category to the total estimated generation or capacity.

Select All Clear All

- | | |
|---------------|-----------------|
| Biopower | CSP |
| Coal | Geothermal |
| Hydro | Land-based Wind |
| NG-CC | NG-CT |
| Nuclear | Offshore Wind |
| Oil-Gas-Steam | Rooftop PV |
| Storage | Utility PV |



Follow Up!
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Scenario Viewer at
<https://openei.org/apps/reeds/>

www.nrel.gov

