



ENERGY FUTURES  
— INITIATIVE —

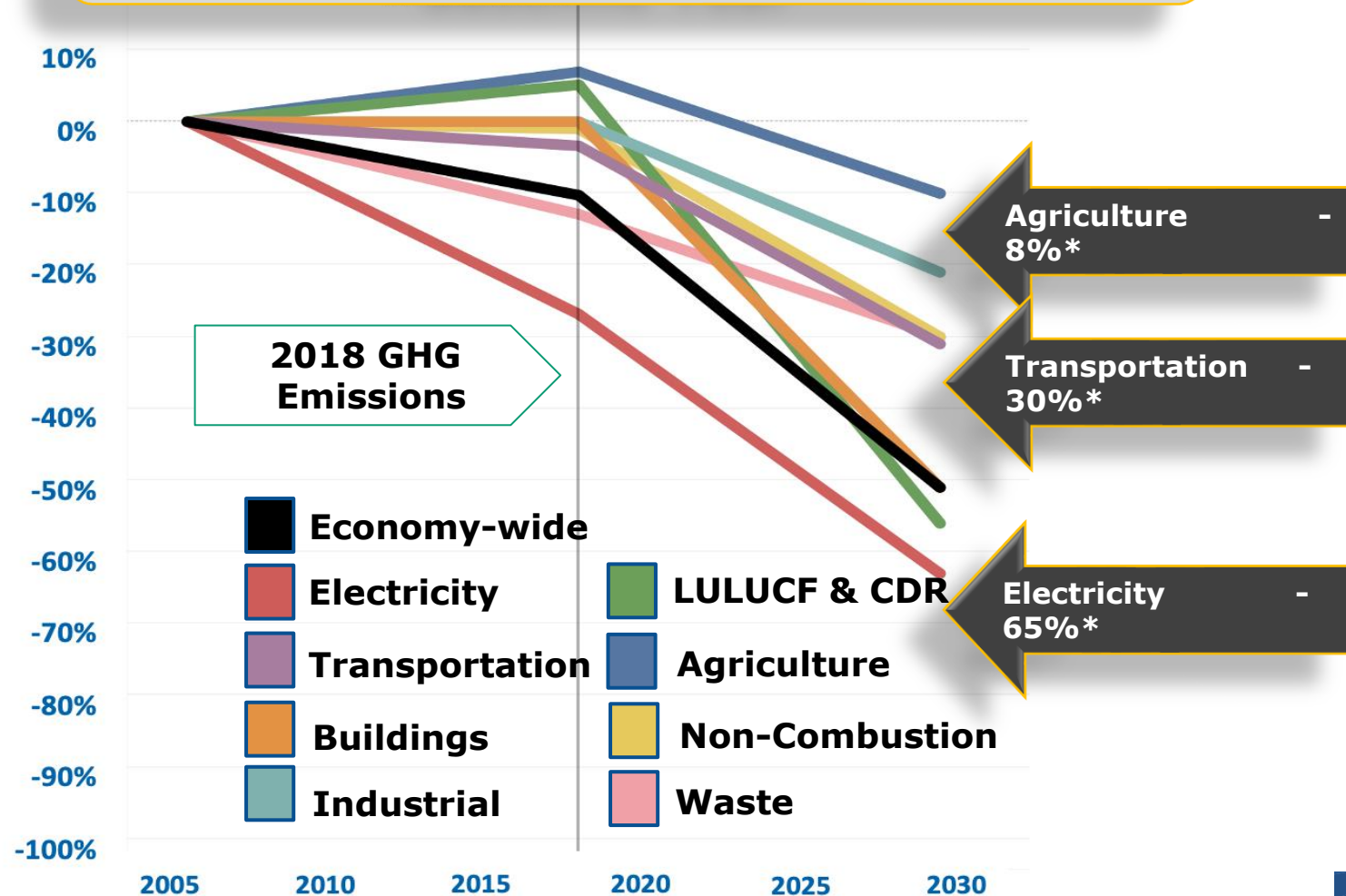
# Examining the role of utilities and the power sector in the low carbon transition

EPRI Resource Planning Seminar  
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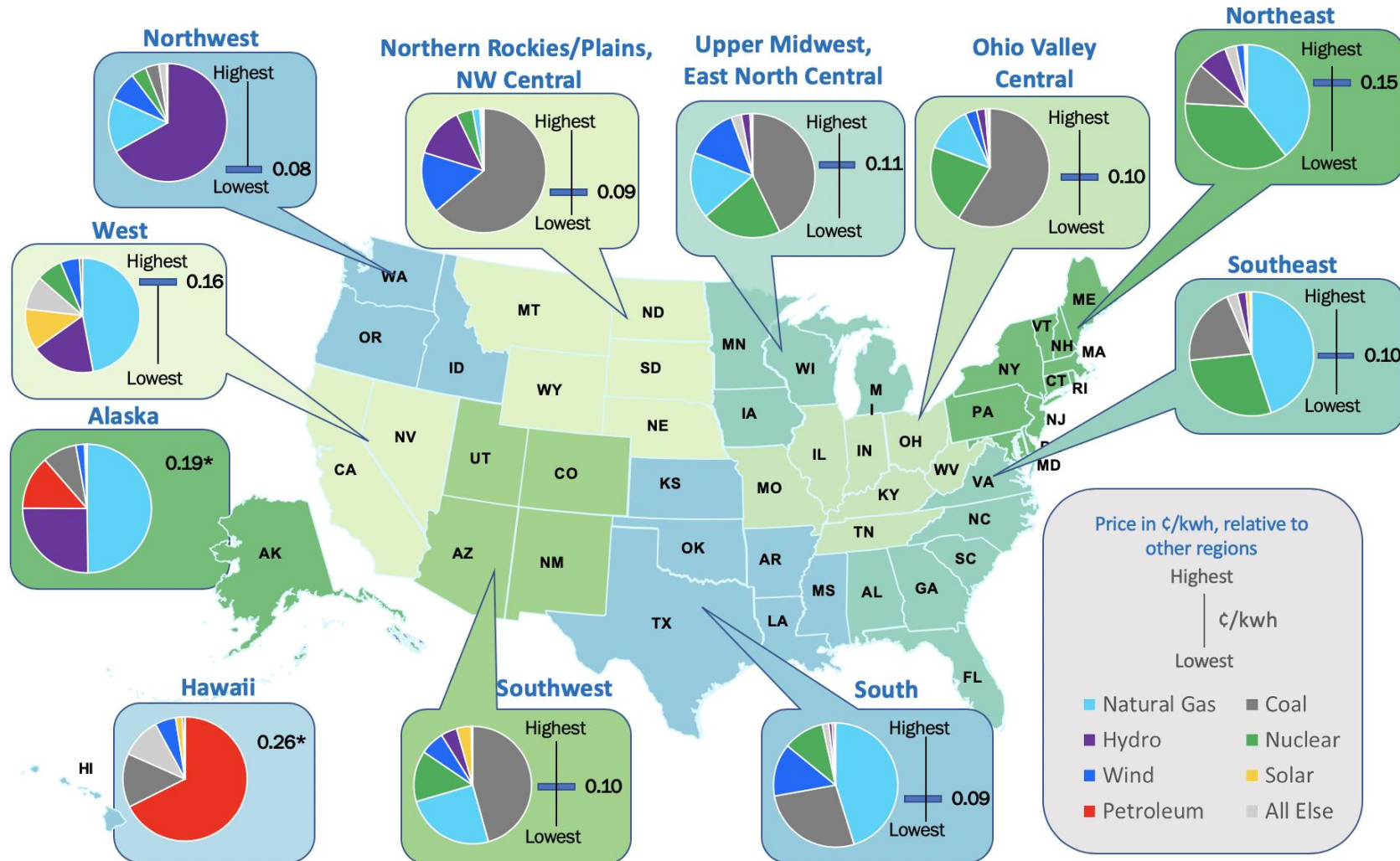
# The pressure's on electricity

- NDC's call out electric sector targets. Most analyses show that electricity decarbonization is relatively straightforward (see figure)
- On the other hand, there are major boundary conditions that make the transition particularly difficult
- Navigating the IRA and IIJA can be challenging for a regulated sector

## Emissions Reductions from the 2005 Baseline Year



# Regional resource and market dynamics are key



# Navigating the IRA and IIJA \$

- The Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), and the Inflation Reduction Act (IRA), offer over \$1 trillion for infrastructure and clean energy.
- Accessing these funds can be highly complex for anyone, especially for utilities and power producers:
  - New technology evaluations (e.g., does this work on my system?, hydrogen vs. battery storage?)
  - Regulator approval (before and/or after awards), alignment with partners and customers
  - Permits, permits, permits...
  - Slow (and clunky) competition and awards processes (e.g., can someone explain how this works?)
- Finally, organization's strategy development for perusing grants, loans, tax credits
  - What is stackable? Do we need tax equity markets? Grants vs. loans, what phase of the project is eligible?

# Navigating the co-dependencies

- Energy system “boundary conditions,” including considerable system inertia that works against rapid change, complex supply chains, long-duration of technology development, and commodity business models must be taken into consideration when developing decarbonization strategies.
- Utilities must navigate a range of issues directly, and in-directly, in their control
  - Regional resources
  - Permits and regulations (e.g., especially for new builds)
  - Labor force readiness
  - Aligned EJ/Frontline Communities
  - Partnerships
- On the bright side, utilities have access to large customer bases (i.e., source of demand), experience navigating technology change, hold existing rights-of-way, are accustomed to co-dependencies, and may be the best shot to bend the emissions curve (again!)