



# Decision Making for Demonstration Funding

Metrics

March 30, 2023



# Metrics



# Metrics

- What are they?
- How do they relate to the goals of demonstration funding?
- Lessons learned from history of demonstration funding



# Metrics – What are they?

- Costs
  - DOE expenditures
  - Government Expenditures (incl. tax expenditures)
  - Public + Private Expenditures
- Benefits
  - Decrease in emissions (GHGs, other pollutants) – can be monetized
  - Others



# Why do we do demonstration projects?

- Demonstration funding will induce further deployment
- How to think about knowledge spillovers/derisking?
- How to think about network benefits?



# Spillover Benefits

- Benefits must incorporate the impacts of the additional deployment due to the demonstration
  - Emissions
  - Reduced costs
- Do these benefits dwarf the direct costs and benefits of the project itself?



# Risks

- Any demonstration project will have a probability of failure
- The expected benefits will depend on the probability of failure
- Trade-off between risk and reward addressed in next session
- What are the right metrics for the risk of a project?



# Qualitative Criteria

- While the direct costs and benefits of a project can be measured directly, most other objectives here are immensely difficult to quantify
- Are there proxy metrics that can get at these issues?
- Many of the scored criteria in the FOA are related to project quality, which can be a proxy for risk
- What are proxies for knowledge spillovers? Network benefits?





# Jobs

**Jobs are a cost**



# Jobs

Well, maybe.

- Jobs are a cost for an individual project
- Can jobs be a benefit in the presence of un/underemployment?
- What are the benefits of “job creation”?
- Also figures into community benefits session later



# Our Speakers

## Greg Nemet

- Professor at the University of Wisconsin–Madison in the La Follette School of Public Affairs
- Research focuses on “understanding the process of technological change and the ways in which public policy can affect it”

## Linda Cohen

- Professor Emeritus of Economics and Law at the University of California Irvine
- Research focuses on “the relationship between regulatory policy and innovation policy in addressing climate change and on the feasibility and effectiveness of alternative innovation policies in the absence of strong markets”





# Thank you.

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