



# RD&D Benefits

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## Observations on How Two Organizations Assess Benefits

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# Outline



- Observations on two organizations
  - Energy Trust of Oregon
  - Iowa (Iowa Power Fund)
- Panel questions applied to these organizations
  - What benefit assessment activities have they undertaken?
  - What did they measure?
  - How have they addressed attribution (public and private sector)?
  - What are their future plans for benefits assessment?

# Energy Trust of Oregon



- Energy Trust of Oregon is nonprofit organization
- Energy Trust provides incentives and information to facilitate energy savings and renewable energy solutions
- Energy Trust also investigates new measures, approaches, strategies, and techniques

# Energy Trust – What was Measured



- For each project, Energy Trust determines
  - Average MW (aMW) of electricity saved or of new renewable resources installed
  - Average therms of gas saved
  - Total project cost

# Energy Trust – Benefits Attribution



- At least 12 agencies promoting energy savings in Oregon
- Energy Trust has studied program attribution, with these conclusions:
  - It is sometimes appropriate to consider costs and benefits from all agencies in combination
  - This sometimes requires analysis of costs and effects that cross program boundaries, budget line items, and organizations
  - This is particularly true when rebate-based resource acquisition programs are tied closely to more long-term market transformation initiatives
  - It is useful for such complex models to test sensitivity to the “most uncertain” variables; and those programs that show good cost-benefit analysis across range of assumptions are most attractive

# Energy Trust Future Plans



- What are future plans for benefits assessment?
  - Main plan is to do more market transformation analysis
  - Continue to do in-house large sample statistical billing analyses
    - External independent review of work plan and results

- Iowa Power Fund

- State agency funding energy R&D, early stage commercialization, and education
- Evaluates proposals
- Disburses funds appropriated by legislature
  - *No “public goods charge”*

# Iowa Benefits Assessments



- Benefits of every project are evaluated (31 through 2010)
  - Data on benefits of every project is collected
    - Project applicants submit data
    - Project managers collect economic impact data
  - Three types of economic impacts were determined for each project
    - Direct (at the facility)
    - Indirect (at businesses that supply goods and services to the facility)
    - Induced (at business that supply goods and services to workers and their families)
- Data was analyzed to forecast benefits to 2033
  - Considered economic output, employment, and workers' earnings during term of project
  - Considered possible economic output, employment, and workers' earnings impacts through 2033 resulting directly from projects



# Iowa - What was Measured



- Project Impacts
  - Economic output, employment and workers' earnings
    - Includes direct, indirect, induced and retained job impacts
  - Impacted industry analysis
  - Fiscal impact (tax base analysis)
  - Value of research
- Plant construction Impacts (if appropriate)
  - Economic output, employment and workers' earnings
  - Fiscal impact for the State

# Iowa Benefits Attribution & Future Plans



- How has attribution been addressed?
  - At the funding level (i.e., Iowa Power Fund's contribution represents ~10.4% of total project funding)
  - Power Fund project are carefully screened and vetted
  - Hence, estimating fraction of savings attributable to the program is very close to 1
- What are future plans for benefits assessment?
  - Iowa Legislature is considering merging Office of Energy Independence (including Power Fund) with Department of Economic Development
  - Changes in benefits assessment process may result



Thank You

**Panel: Ongoing RD&D benefits assessments used by other state and federal agencies and research organizations**



**Question 1:** What benefit assessment activities has your organization undertaken?

**Question 2:** What did you measure?

**Question 3:** How has your organization addressed attribution (public and private sector)?

**Question 4:** What are your future plans for benefits assessment?