



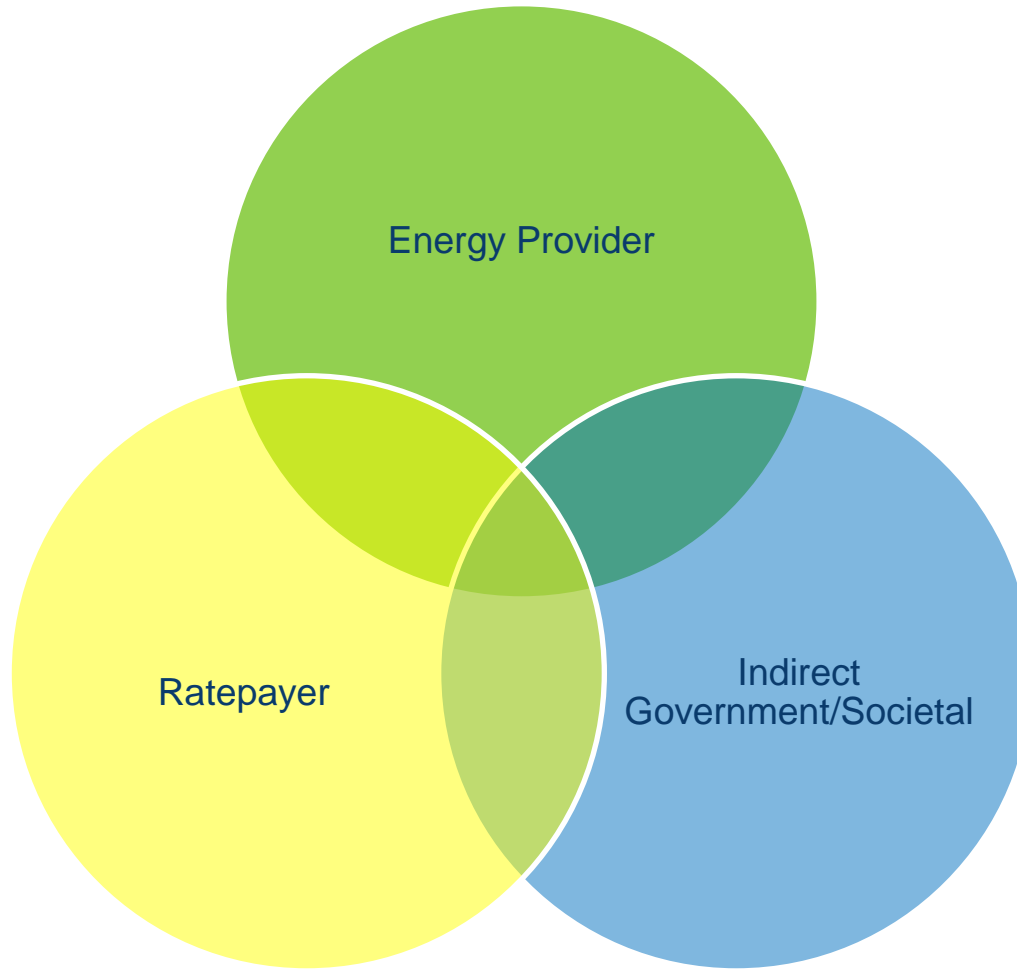
# Overview of Benefits to Energy Providers & Governments

## An Evaluator Perspective

# What are Non-Energy Benefits (NEBS)?

- Low Income Weatherization Programs
- Benefit Subset
- Not Costs
- Differentiated from
  - Documentable Energy Savings
  - Avoided Externalities (e.g., Emissions)

# Categories of NEBs



# Energy Provider NEBs

- Arrearages
- Bad-Deb Write Off
- Terminations
- Reconnections
- Rate Discounts
- Customer Calls
- Collection Activities
- Safety Emergency Calls
- Electrical System Reliability

# Ratepayer NEBs

## ● Ratepayer Benefits

- Comfort Levels
- Sense of Environmentalism
- Quiet
  - Dishwasher
- Lighting Quality
- Lighting Life
- Property Value
- Sale or Lease Ease
- Energy Price Increase Buffer
- Reduced Need to Move
- Reduced Water Usage
- Reduced Detergent Usage
- More Durable Equipment
- More Money for Other Uses
- Health Care
- Health Related
- Fewer Colds
- Improved Indoor Air Quality
- Ease of Maintaining Healthy Humidity
- Improved Safety
- Heat
- Warm Up Delay

# Government NEBs

- Equity
- Inspection Cost Savings
- Health
- Safety
- Resource Preservation – Water
- National Security

# Evaluator Perspective

- Availability of data
- Ability to measure
- Most NEBs are estimated incompletely – it is difficult, impossible, or cost prohibitive to measure every element
- Most NEBs are estimated with little empirical certainty
- Most NEBs are not generalizable, presenting issues of representativeness

# Economic and Non-Economic NEBs

- Economic NEBs (and costs) translate into dollar flows in the economy
  - Reduced sick time
  - Improved property value
  - Improved productivity
- Non-economic NEBs have perceived value but do not result in monetary flows
  - Feelings, perceptions
  - Awareness, knowledge



# NEB Measurement Examples

- Regularly measured/calculated
  - Arrearages
  - Quantifiable reductions in:
    - Illness
    - Lost days of work
    - Fire/safety losses
    - Shut-offs, etc.

# NEB Measurement Challenges

- Not regularly measured/calculated
  - Sense of environmentalism
  - Quiet, comfort
  - Lighting quality
  - Reduction in environmental problems from emissions

# North American Utility Experience with NEBs

- [Still working on these slides should have 2-3 examples – NE utilities, Hydro Quebec, CA]



# Questions?

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