NW Washington Case Study: The Economic Impact of $1 Spent on Community Energy Efficiency

Alex Ramel
Energy and Policy Director
Sustainable Connections

Graham Marmion
Recent graduate,
Western Washington University
Economics and Energy Policy

Sustainable Connections
opportunity council
Agenda

• Overview of the Community Energy Challenge
• Measuring our impact
• Economic analysis
• What we can do with that analysis
• How we talk about it
Community Energy Challenge

Making energy efficiency, **accessible, affordable, and attractive** by creating a One Stop Shop for Energy Efficiency in Northwest Washington
Overview the CEC process
Results to Date: Residential Retrofits

Since 2010:

• 1542 Home Energy Assessments Complete
• 1148 completed energy efficiency projects in 881 homes

• Average 23% energy savings ($470/year) at a total cost of $6,662/project.
Results to Date: Business Retrofits

• Since 2010:
  – 404 business assessments
  – 179 major energy projects at 115 businesses
Results from Customer Satisfaction Survey

How likely are you to recommend the Community Energy Challenge program to others?

- Already have
- Definitely will
- Probably will
- Probably will not
- Definitely will not
- Don't know

N=287

94% of customers already have or will recommend the CEC to others
Results to Date

- Energy savings of over $649,000/year
- Equivalent to taking 1319 cars off the road
- $16 million in total economic activity
Results to Date: Job Creation

- The Community Energy Challenge regularly works with more than 25 contractors.
- In 2013, the CEC generated more than $5 million in direct economic activity for local businesses.
Using Program Data to Conduct Evaluation

• Good data systems pay dividends
• Analyze and revise metrics over time
• This supports both program improvement and budgeting but also future funding requests
• Collaborate with higher ed. for deeper analysis – economic analysis, surveys, etc.
Economic Impact Analysis

Results

$1 = $5.27

- Public funding is more than matched by private investment and utility rebate.
- When local contractors are used, there is an economic multiplier effect (indirect and induced spending) from purchase of supplies and equipment and employees with more money in their pockets.
- Money spent making efficiency improvements reduces future energy costs which have a significant net present value.
Local Economic Impacts

- **Public Spending**
  - $1.6 M

- **Direct Economic Impact**
  - $3.2 M

- **Gross Local Impact**
  - $5.6 M

- **Future Energy Savings**
  - $8.5 M

- **Net Local Impact**
  - $5.4 M

- **Change in Tax Revenue**
  - $600,000

**Funding Sources**

- **Additional Federal Taxes**
- **Additional State and Local Taxes**
- **Reduced Energy Costs (NPV)**
- **Indirect and Induced Spending**
- **Private Investments**
- **Public Funds**
Key Assumptions

- Local base impacts – what would have happened with the money if we didn’t do this?
- 3% discount rate
- Cost of energy
- IMPLAN model assumptions: economic activity by sector for each county
- Utility responses to reduced energy consumption
- Solar production credit
So is this any good?

- Limitation on how this model can be used:
  - Apples to apples comparison figures for other uses of public funds don’t really exist
  - Doesn’t suggest ways to improve our multiplier
- This tool is best for starting a conversation that allows us to describe the details.
Communicating about Economic Impacts

- Audience: funders, budget writers, community leaders, business people
- Methodology probably isn’t interesting.
- Think of statistics as a way to tell a story, not the story itself.
Communicating about Economic Impacts

Keep it simple, even for sophisticated audiences

Economic Results

- A recent economic analysis found that public funds invested in CEEP in Whatcom County have an economic multiplier greater than 5:1.

- This results from three factors:
  - Public investment makes it easy for building owners to upgrade their homes and businesses, and is more than matched by private investment and utility rebate programs.
  - Indirect and induced spending (economic multiplier effect) from purchase of supplies and equipment as well as employees with more money in their pockets.
  - Money spent making energy efficiency improvements reduces future costs with a positive net present value.

- Public funds invested in Matchmakers leverages utility and landlord funds at a better than 1:1.
Questions