



Opinion **Dynamics**

Introduction to Net-to-Gross

Presentation to Illinois
EE SAG and IQ North and
South EE Committees

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Key Terminology

- A core component of energy program evaluation is impact evaluation, which is the assessment of the energy savings achieved by energy efficiency programs
- When we conduct impact evaluation we estimate energy savings in two categories: **gross** and **net**

Gross Savings

- Changes in energy consumption that directly result from program-related actions taken by an energy consumer

Net Savings

- Changes in energy consumption directly influenced by program

Net-to-Gross Ratio (NTGR)

- The share of gross savings considered to be net savings

Gross Savings

- **Gross savings** measure the changes in energy consumption that directly result from *program-related* actions taken by an energy consumer.
 - For example, a customer purchases an efficient clothes washer and receives a rebate from Ameren Illinois for that appliance through an energy efficiency program
 - The difference between the energy used by that efficient clothes washer and the energy used by a less efficient alternative in a typical year are **gross savings** achieved by that energy efficiency program

Net Savings

- Net savings measure changes in energy consumption that are *directly influenced* by an energy efficiency program
 - Some customers would have taken program promoted actions even if the program had not existed, which we refer to as free-ridership (FR)
 - Some customers take other energy efficient actions due to the influence of the program, but without receiving a program incentive; this is referred to as spillover (SO)
 - Net savings estimates account for both FR and SO in estimating what energy savings were actually caused by the energy efficiency program

Did the program intervention cause the outcome of interest?

Net-to-Gross

- In Illinois, evaluators conduct **net-to-gross** research to estimate free-ridership and spillover and determine **net-to-gross ratios (NTGRs)**

$$\text{NTGR} = 1 - \text{FR} + \text{SO}$$

- Net-to-gross ratios represent the share of **gross savings** that are considered to be **net savings**
- Evaluators estimate gross savings for energy efficiency programs each year and apply net-to-gross ratios to determine net savings
- Utility savings goals are set in terms of **net** savings
- By Illinois policy, net-to-gross ratios of 100% are applied to almost all low-income residential energy efficiency programs



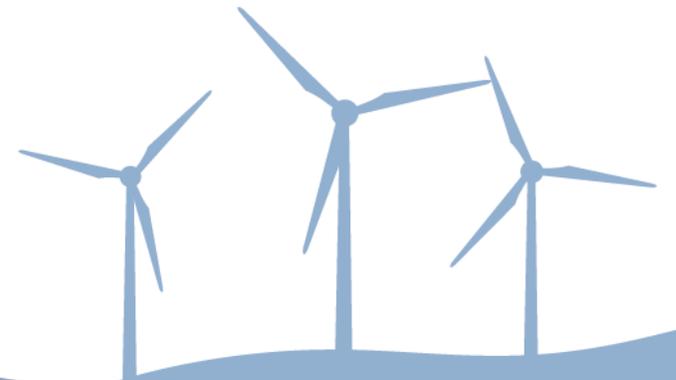
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