Fuel Switching Policy Proposal

Illinois Energy Efficiency Policy Manual v3.0 Subcommittee

January 18, 2023

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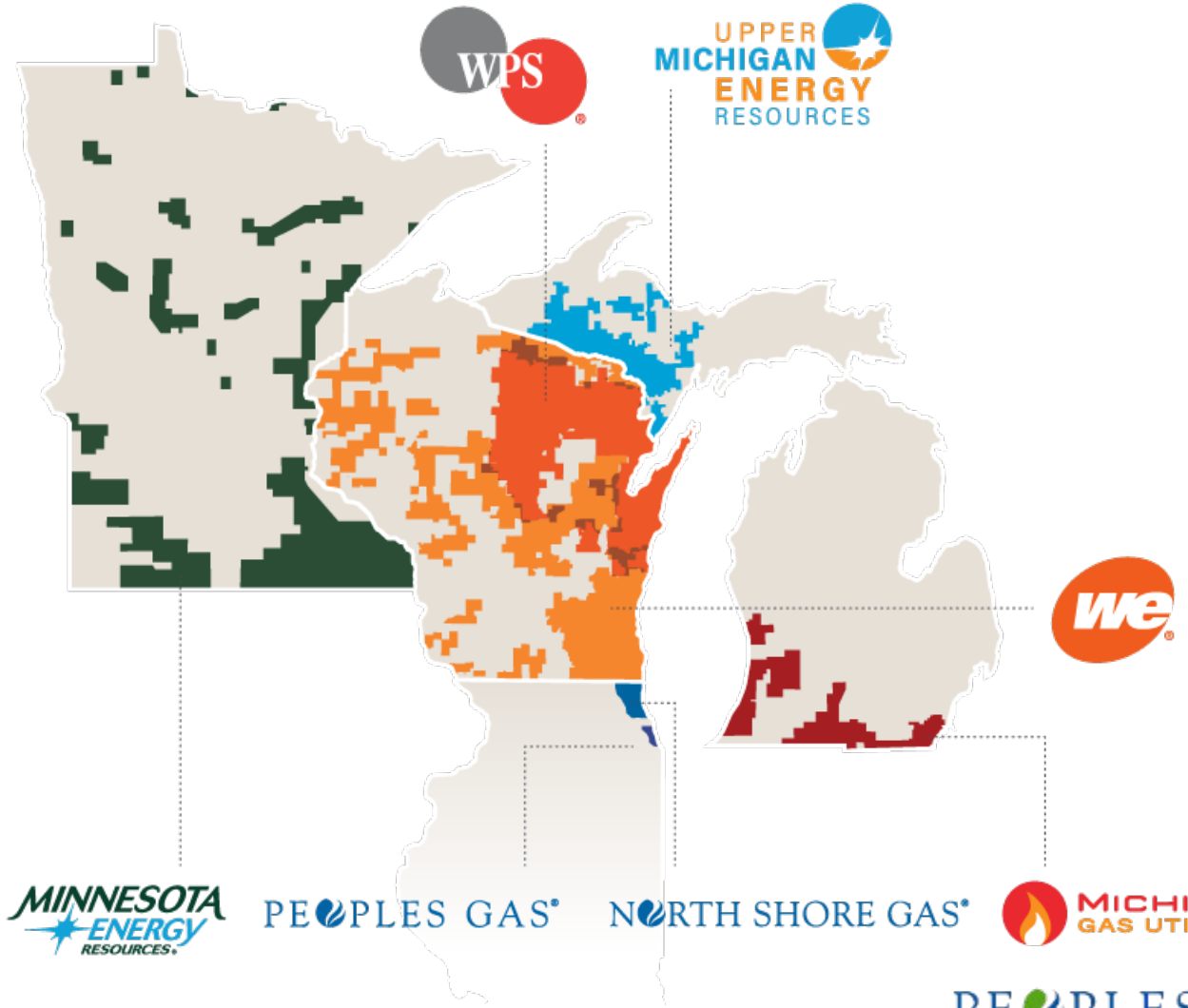
WEC Energy Group



4.6 million
customers

71,400 miles
of electric distribution

52,100 miles
of natural gas distribution and transmission lines (including mains)

7,700 megawatts of power capacity

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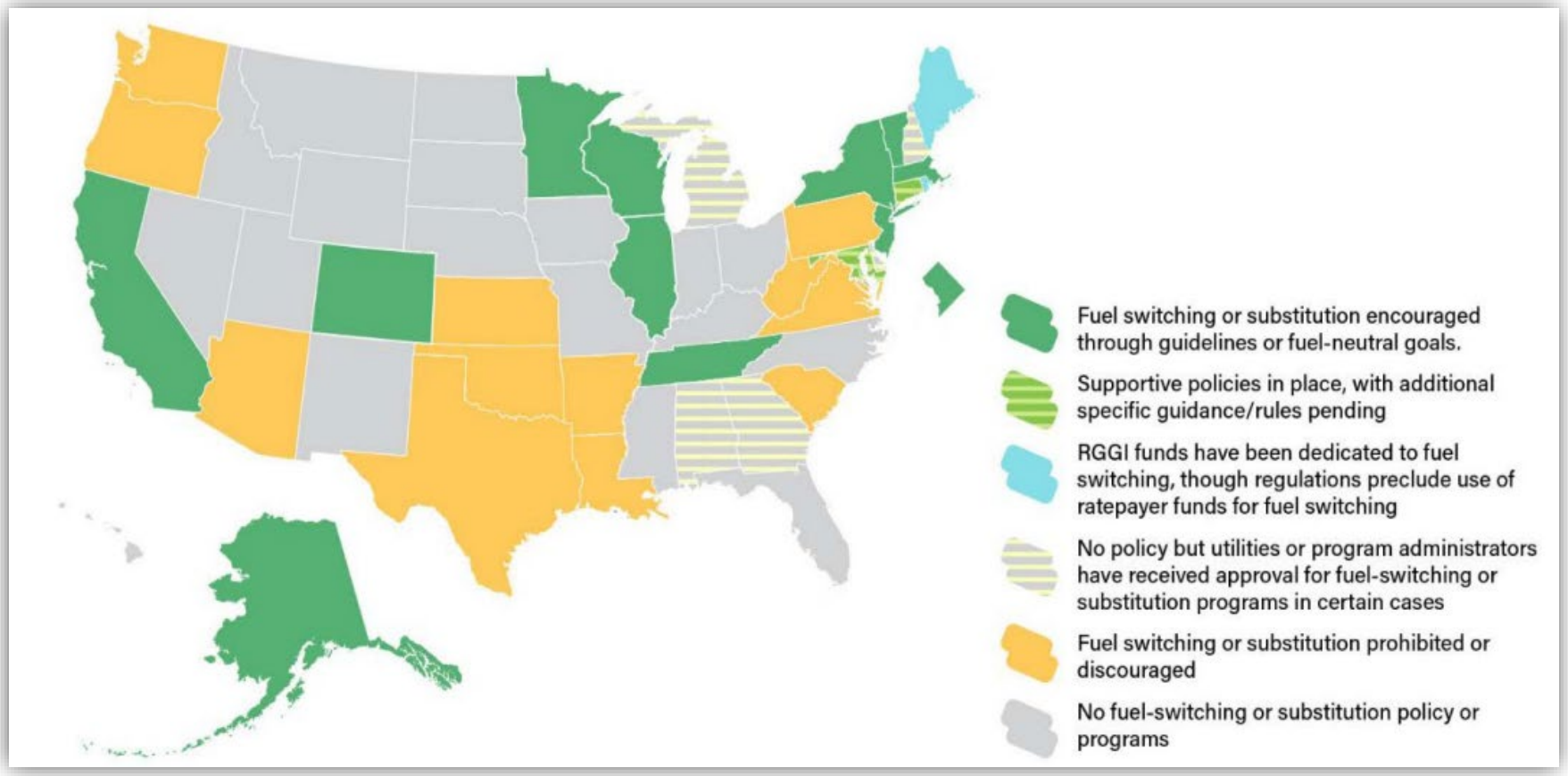
State Fuel Switch Policy Snapshot



- ~30% of states provide guidelines on fuel switching (including D.C.).
- Leading energy efficiency states (CA, CO, MA, NY, MN and VT) have specific criteria for fuel switch projects

Methods:

- State legislation
- Policy manuals
- Technical reference manuals (TRMs)
- Renewable portfolio standards

Berg, W. 2022. *State Policies and Rules to Enable Beneficial Electrification in Buildings through Fuel Switching*. Washington, DC: ACEEE. aceee.org/policy-brief/2022/07/state-policies-and-rules-enable-beneficial-electrification-buildings-through

Common Themes in Fuel Switching Criteria

Criteria	Description
Cost-Effectiveness	• Most states require benefit-cost ratio > 1. • Some also require social cost of methane and other GHG emissions to be included in the benefit-cost analysis (CO, MA, NY).
Reduction in GHG Emissions	• Many states require a reduction in GHG emissions. • Some require the reduction to be over the lifetime of the conversion (CO, VT).
Reduction of Energy Costs	• The reduction of energy costs was often a requirement in many states' criteria for fuel switching.

Fuel Switching Criteria in CEJA

(20 ILCS 627/45)
Sec. 45. Beneficial electrification

(a) It is the intent of the General Assembly to decrease reliance on fossil fuels, reduce pollution from the transportation sector, increase access to electrification for all customers, and ensure that electric vehicle adoption and increased electricity usage and demand do not place significant additional burdens on the electric system and create benefits for Illinois residents.

(b) "Beneficial electrification programs" means programs that lower carbon dioxide emissions, replace fossil fuel use, create cost savings, improve electric grid operations, reduce increases to peak demand, improve electric usage load shape, and align electric usage with times of renewable generation.

(220 ILCS 5/8-103B)
Sec. 8-103B. Energy efficiency and demand-response measures.

(a) it is the policy of the State that electric utilities are required to use cost-effective energy efficiency and demand-response measures to reduce delivery load. Requiring investment in cost-effective energy efficiency and demand-response measures will reduce direct and indirect costs to consumers by decreasing environmental impacts and by avoiding or delaying the need for new generation, transmission, and distribution infrastructure.

Related CEJA Language

(220 ILCS 5/16-111.10)
Sec. 16-111.20. Equitable Energy Upgrade Program.

(b) As used in this Section:

"Commission" means the Illinois Commerce Commission.

"Energy project" mans renewable energy generation systems, including solar projects, energy efficiency upgrades, energy storage systems, demand response equipment, or any combination thereof.

"Program" means the Equitable Energy Upgrade Program established under subsection (c).

(c) The program shall ensure:

(2) eligible projects have sufficient estimated savings and estimated life span to produce significant, immediate net savings;

(e) In the design of the Program, the Commission shall:

(2)(D) Guarantee that conservative estimates of financial savings will immediately and significantly exceed program costs for Program participants.

(j) The calculation of project cost-effectiveness shall be based upon the Pay As You Save system requirements.

(1) The calculation of cost-effectiveness must be conducted by an objective process approved by the Commission and based on rates in effect at the time of installation.

(2) A project shall be considered cost-effective only if it is estimated to produce significant immediate net savings, not counting copayments voluntarily made by customer.

Illinois Fuel Switch Criteria

Proposed Policy Manual Language:

In order to ensure that the benefits to the ratepayers are justly prioritized, fuel switch measures must:

1. Reduce greenhouse gas emissions.
2. Reduce ratepayers' energy costs.
3. Be cost effective, considering the costs and benefits from the perspective of the ratepayers, the utility, and society.

Rationale

- Not all fuel switching is beneficial to the consumer, ratepayers or the utility.
  - ✓ Policies are required to ensure ratepayer funds are only spent on fuel switching measures that benefit all parties.
  - ✓ Consumer protections remove uncertainty from customers as to whether or not the fuel switch measures offered are good for them (financially & environmentally)
- Align EE program implementation with CEJA requirements
- Align Illinois with known fuel switching best practices

States that Include Criteria:

1. **Criteria 1: Reduce GHG Emissions**
   - Alaska
   - California
   - Colorado
   - Massachusetts
   - New York
   - Rhode Island
   - Vermont
   - Washington D.C.
   - Minnesota
2. **Criteria 2: Reduce Ratepayers' Costs**
   - Colorado
   - Maine
   - Massachusetts (language says *minimize* costs)
   - New York
   - Minnesota
3. **Criteria 3: Be Cost-Effective**
   - California (Fuel Substitution Test)
   - Colorado
   - Massachusetts
   - New York
   - Washington D.C. (Societal Cost Test)
   - Minnesota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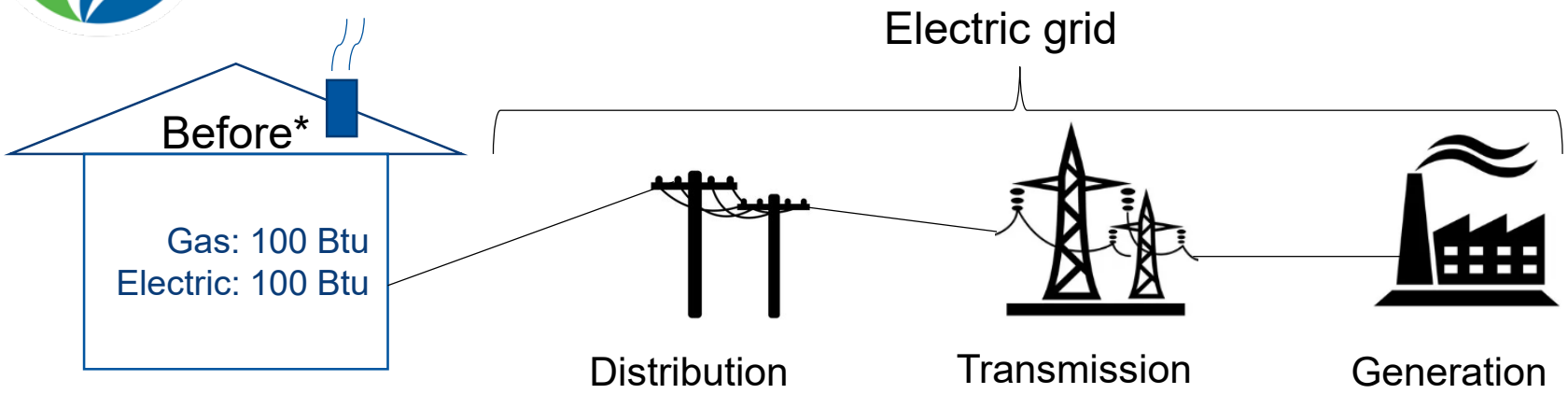
Thank you

Appendix

Potential Emissions Scenario



Energy input*

100 Btu of gas into home

300 Btu of gas into power plant

Total energy required = 400 Btu

Fuel Switch Criteria
1. Reduce emissions
2. Reduce energy costs
3. Be cost effective

*Values are for illustrative purposes only

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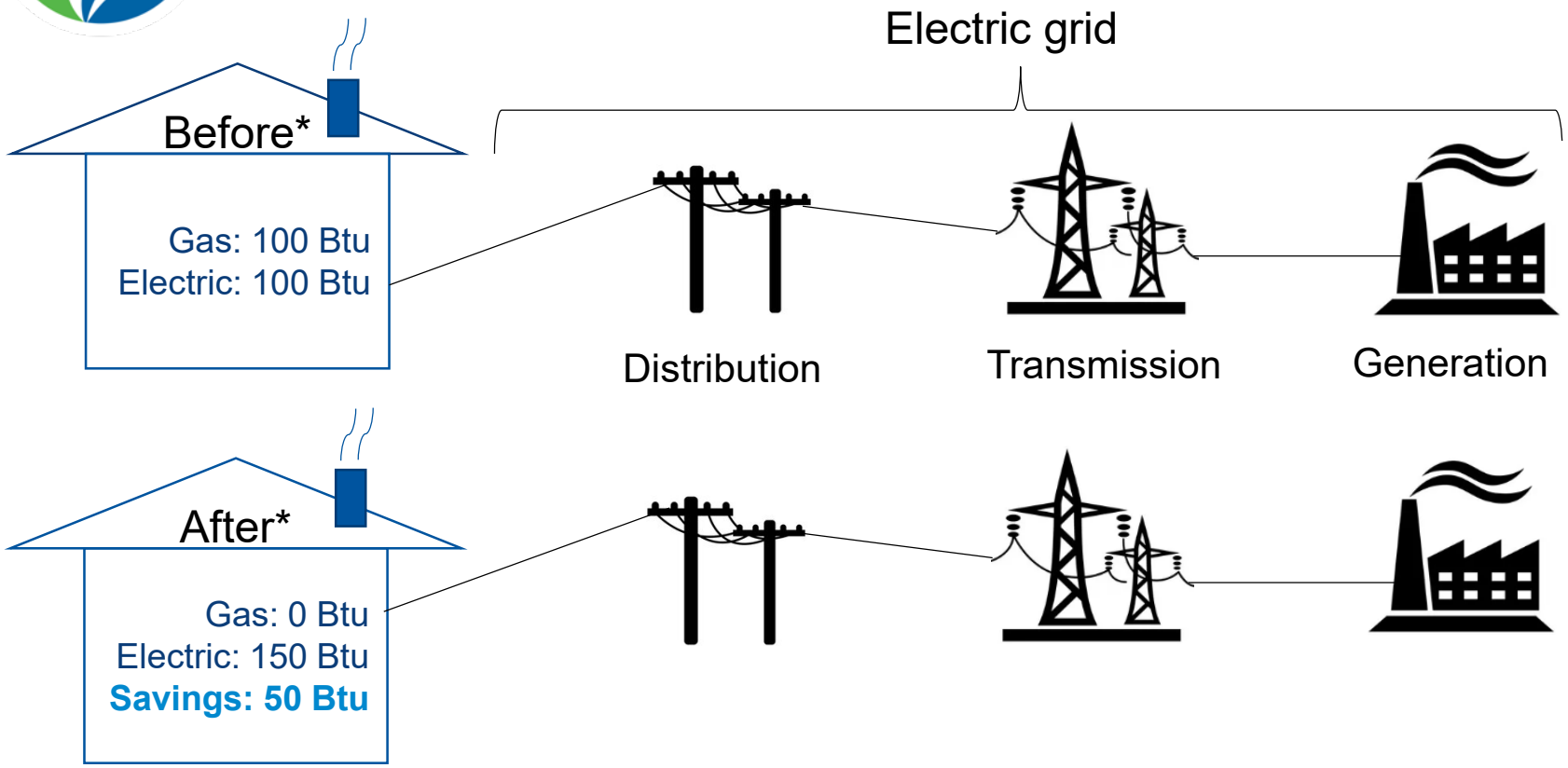
Potential Emissions Scenario



Energy input*

100 Btu of gas into home

300 Btu of gas into power plant

Total energy required = 400 Btu

450 Btu of gas into power plant

Total energy required = 450 Btu

Fuel Switch Criteria

1. Reduce emissions
2. Reduce energy costs
3. Be cost effective

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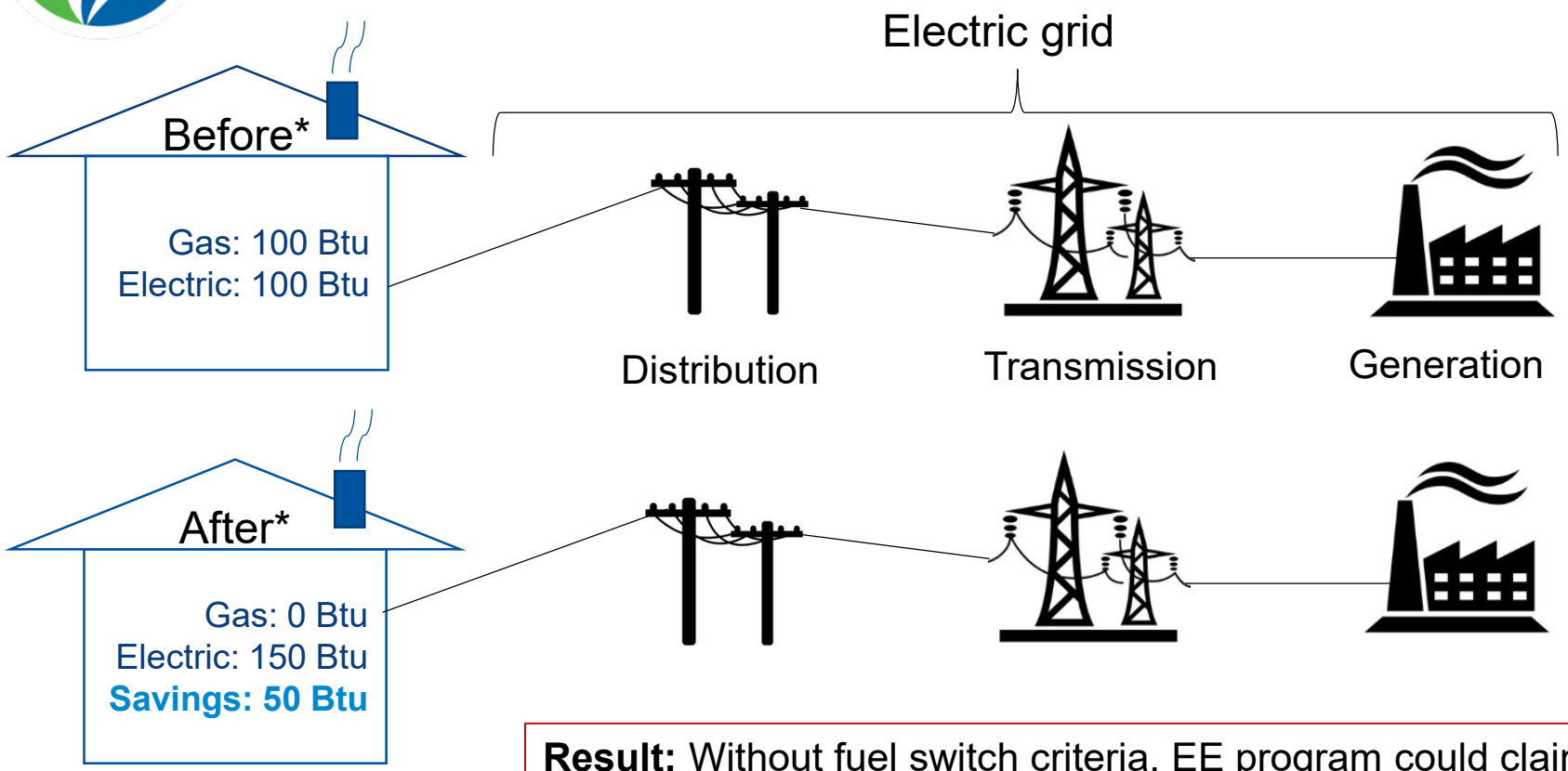
Potential Emissions Scenario



Energy input*

100 Btu of gas into home

300 Btu of gas into power plant

Total energy required = 400 Btu

450 Btu of gas into power plant

Total energy required = 450 Btu

Result: Without fuel switch criteria, EE program could claim energy savings even though total energy required **increased** by 50 Btu. Total natural gas consumption **increased**, which means **total GHG emissions also increased.**

According to the proposed criteria, this **would not be an eligible fuel switch.**

Fuel Switch Criteria

1. Reduce emissions
2. Reduce energy costs
3. Be cost effective

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