

Programs Encouraging Energy Efficiency through Behavior Change: A Review

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Behavior, Energy, and Climate Change

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American Council for an Energy-Efficient Economy



(A Guide to Behavior Change Programs using Pokémon Go)

What is a Behavior Change Program?



- ▶ What do you think?
 - ▶ Small habitual behaviors? One-time behaviors? Small investments? Large investments?
 - ▶ Incentives or rebates? Policies?
- ▶ What we included
 - ▶ Any habitual, one-time or investment behaviors
 - ▶ Evaluated for energy savings or change in specific behaviors
 - ▶ Applied behavioral insights (not primarily financial or policy)

Behavior Change Programs



Home Energy Reports



Games and Competitions



Education Programs

Home Energy Reports



Home Energy Reports

- ▶ Regular reports, in addition to bills
 - ▶ Includes social comparison info
- ▶ Strong evaluation methods

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Home Energy Report

May 20, 2015

Account number 8249865991

We've put together this report to help you understand your energy use and what you can do to save.

Find a list of rebates and energy-saving products and services you can buy.

▶ www.utilityco.com/rebates

Here's how you compare to neighbors



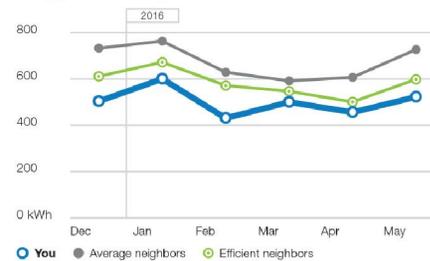
Apr 21, 2015 - May 20, 2015

This is based on 87 similar homes within approx. 4 miles. Efficient neighbors are the 20% who use the least amount of electricity. See back for details.

Great
 😊 Good
 😐 Using more than average

14% less electricity
 than efficient neighbors

Neighbor comparison over time



Over the last 6 months, you used less than your efficient neighbors.

\$58 saved

Tips from efficient neighbors



Unplug electronics when they're not in use
 Save up to \$75 per year



Replace your inefficient light bulbs
 Save up to \$30 over the bulb life

Turn over →

Home Energy Reports

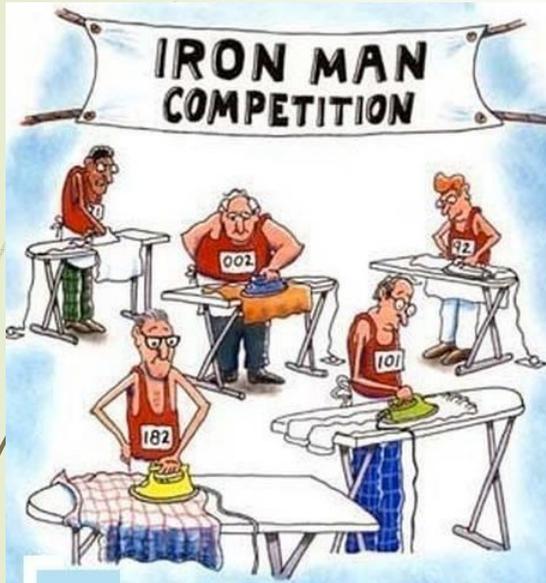


- ▶ Energy Savings
 - ▶ Opt-out programs: 1-2% electricity, 0.5-1% gas by year 2
 - ▶ Opt-in programs: up to 16% (many fewer participants and lower absolute savings)
- ▶ Findings
 - ▶ Savings ramp up over two years
 - ▶ Ongoing programs remain effective at least 5 years
 - ▶ Discontinued programs still save for at least two years (about 20% decay per year)
 - ▶ Affects small repeated behaviors
 - ▶ Increases rebate program participation

Games and Competitions



Games and Competitions



- Savings
 - Residential: 0.7-14% electricity, 0.4-10% gas (gross)
 - Commercial: 1.8-21% electricity (gross)
 - Most programs: 5% or less electricity
 - BUT! Some winners save over 30%
- Persistence of savings?

K-12 Education Programs



K-12 Education Programs

- ▶ Teaching children “energy literacy” in school
 - ▶ Teaching about energy use
- ▶ Short term savings at school and home
 - ▶ Hands-on activities (e.g., energy audit)
 - ▶ Home energy kits (sometimes)
- ▶ Long term savings?
 - ▶ Small changes over long period
 - ▶ Model behavior for others
 - ▶ Change culture of energy use



School-based Energy Education: Savings

- ▶ Electricity savings at school: 13-37%, usually about 20% (gross)
- ▶ Methods of evaluation often weak or unknown



Recommendations: Design



- ▶ Design for specific audience and behavior
- ▶ Design for evaluation
- ▶ Design for persistence
 - ▶ Change habits and provide intrinsic motivation
- ▶ Use a systematic approach to design
 - ▶ E.g., community-based social marketing

Thank you

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