COLORADO

Anticipating Smart Technologies in Low-income Energy Assistance Programs

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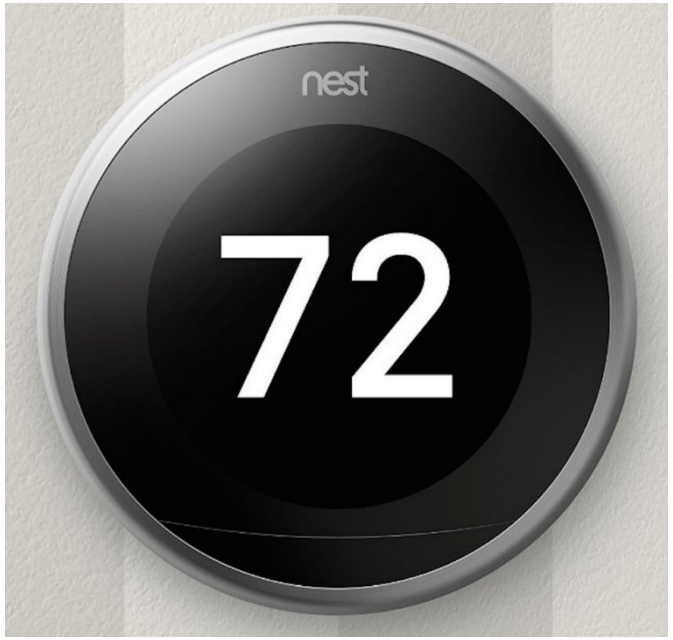
Presentation Caveats

- Just food for thought
- Smart technologies are not panacea
- Real benefits are unknown

Smart Technologies

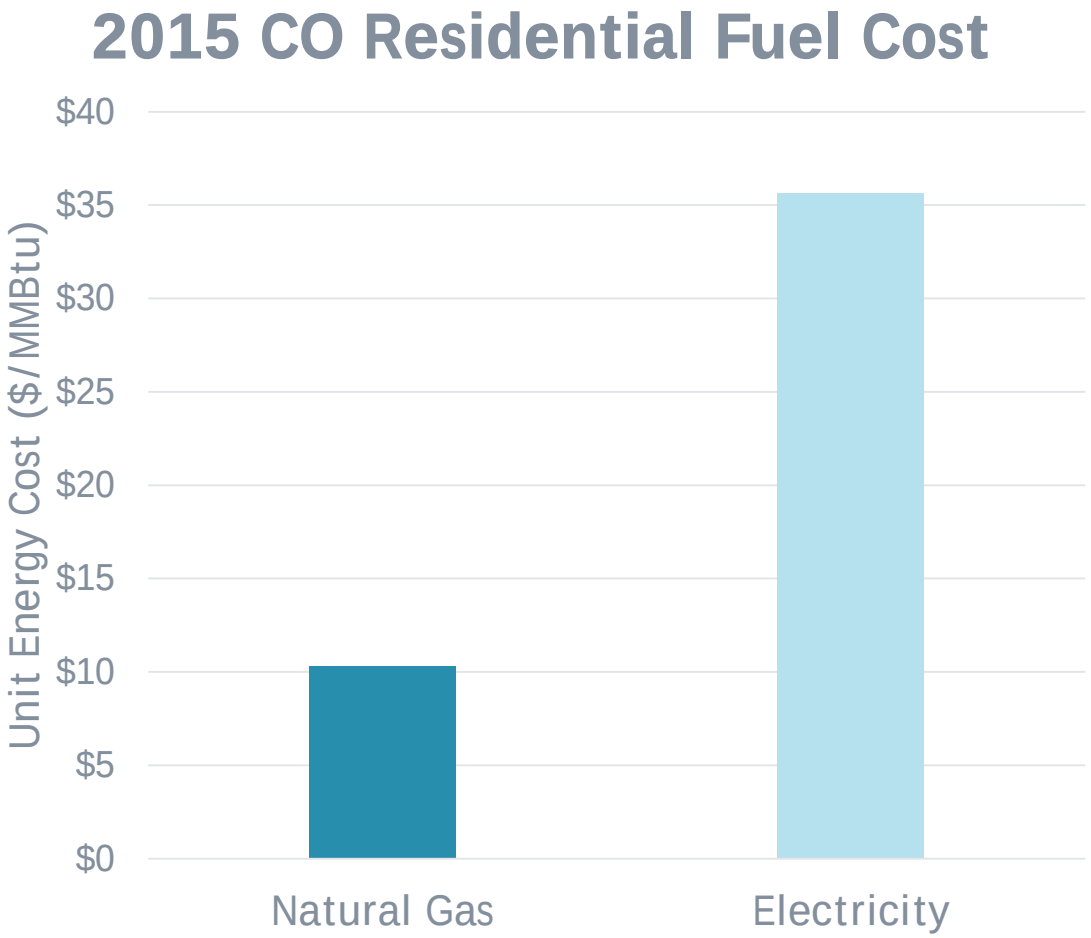
- Smart outlets
- Smart lightbulbs
- Smart thermostats
- Other non-EE smart stuff



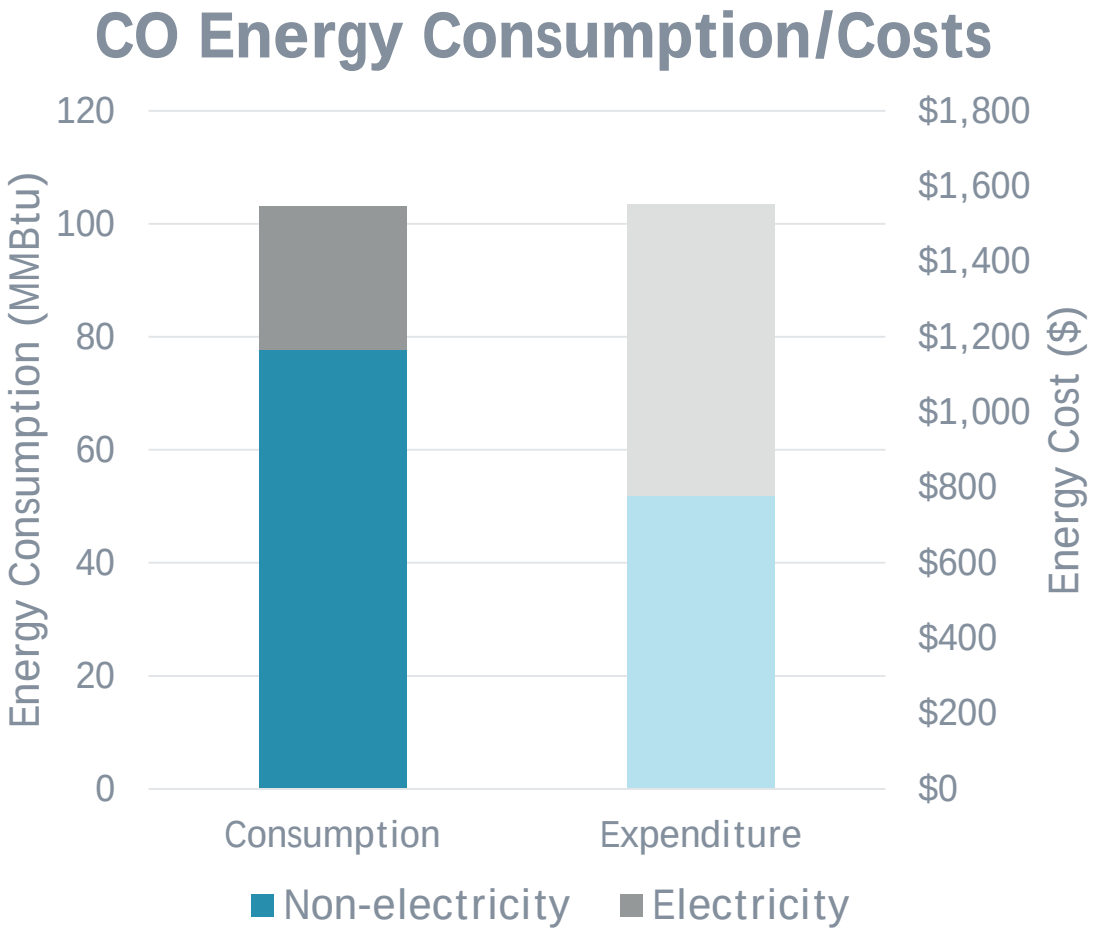
Potential Benefits

- Potential for actual, long-term “behavior” change
- Smart bulbs and outlets target electric usage which is relatively expensive and often difficult to target in CO
- Smart thermostats control largest energy consumer in CO homes: the furnace
- Smart thermostats may be easier for clients to use than programmable thermostats

Electricity is Much More Expensive than Gas in CO

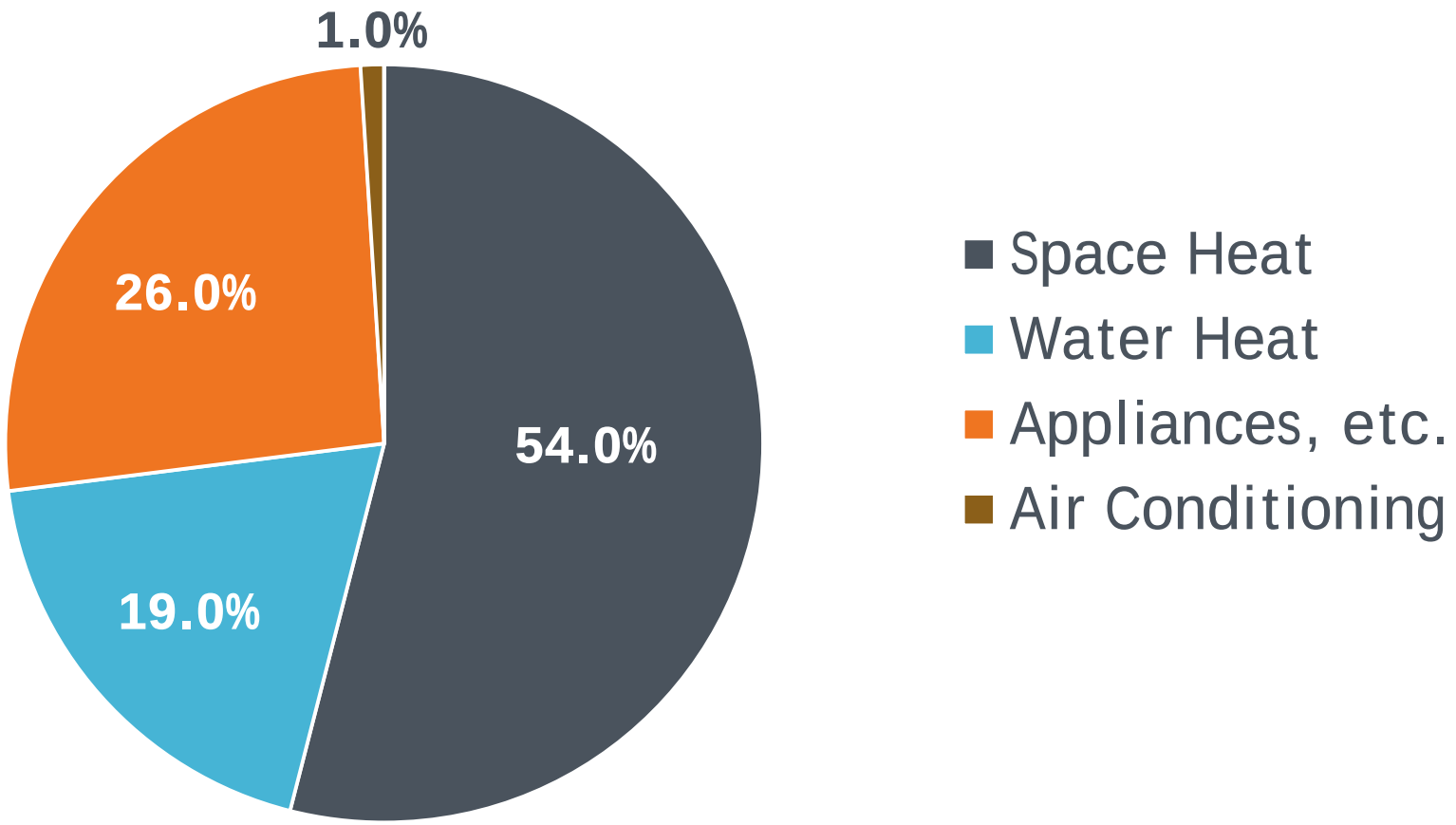


*EIA.gov



*EIA.gov RECS 2009

Household Fuel Usage in Colorado



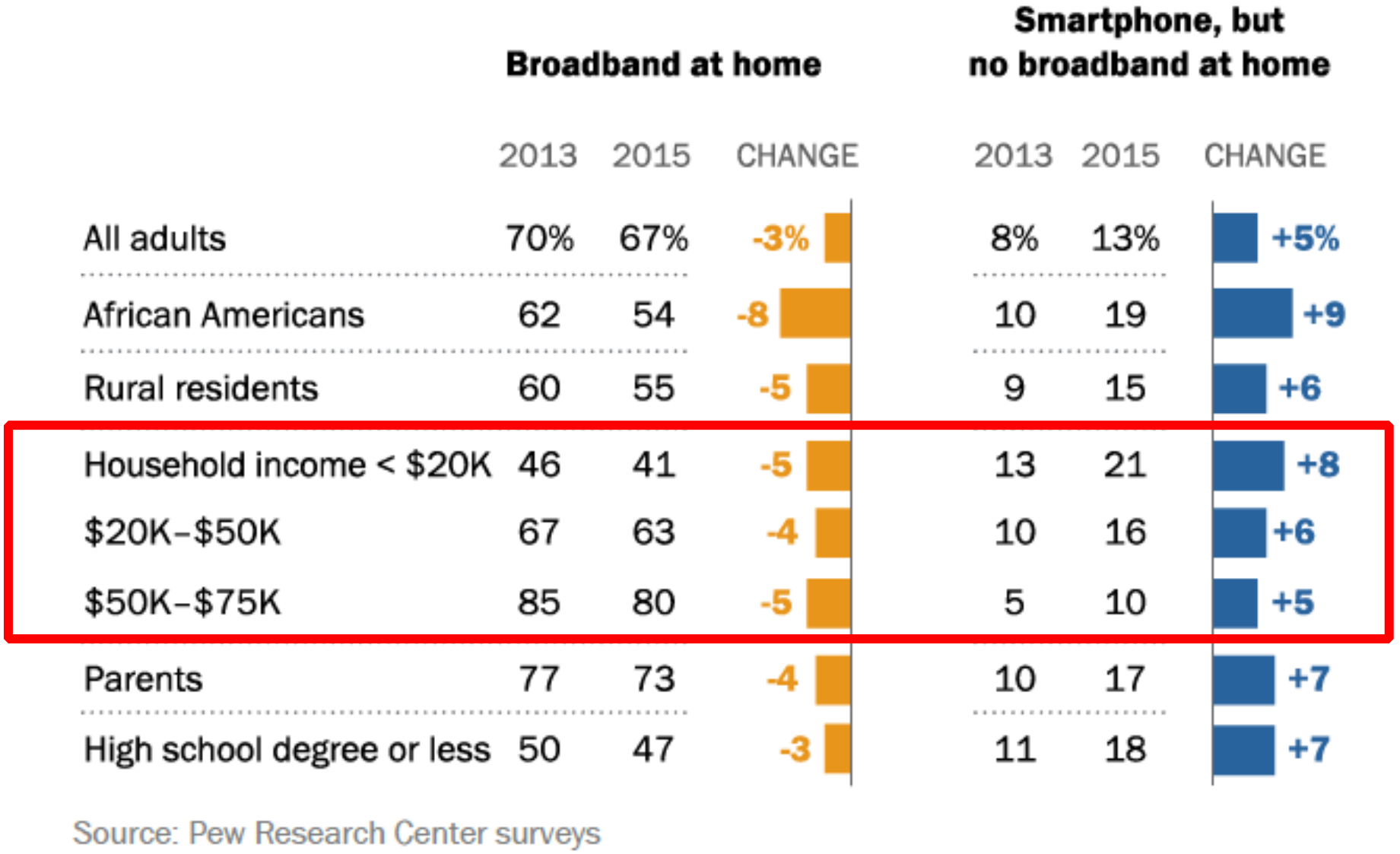
*EIA.gov RECS 2009

Thermostats: Programmable vs. Smart

Challenges

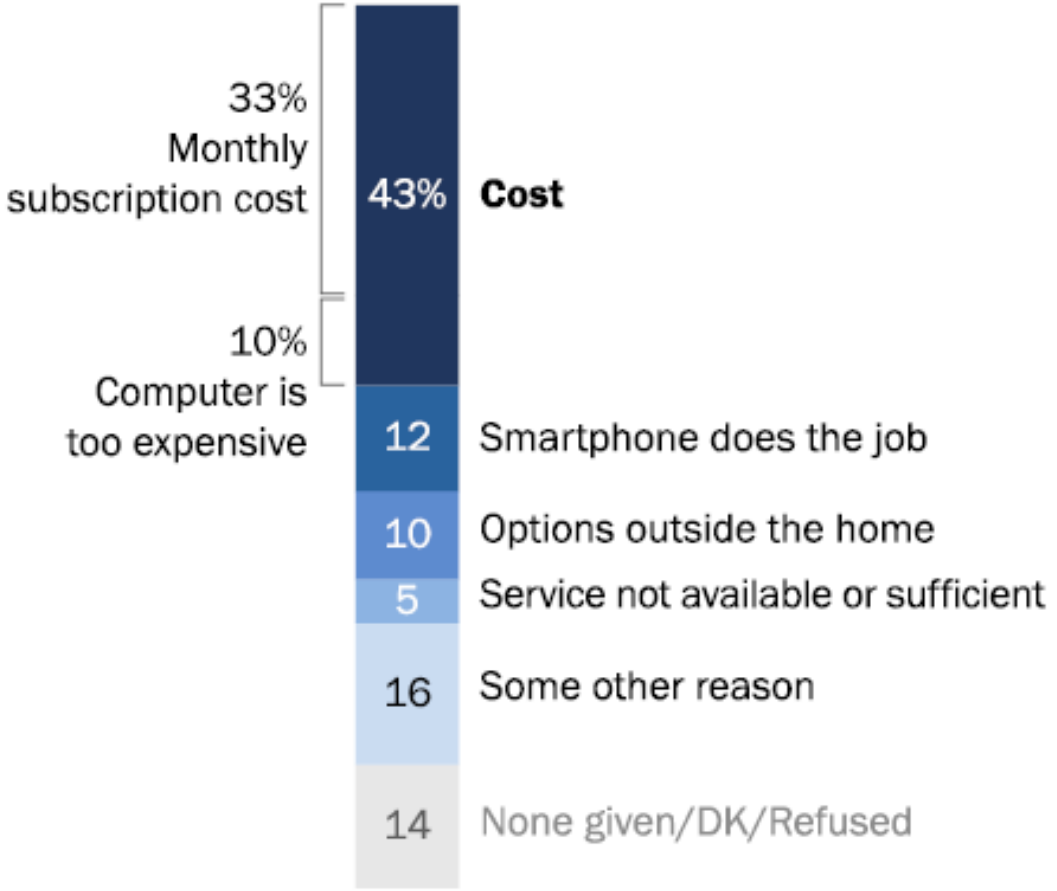
- Energy savings impact is unknown
- Cost is relatively high
- Technology is not fully mature nor standardized
- Basic internet connectivity is still evolving
- We don’t have a lot of knowledge about low-income internet technology capabilities and choices

Broadband vs. Smartphone



Source: Pew Research Center surveys

Cost is Main Factor in Avoiding Broadband



Source: Survey conducted June 10-July 12, 2015. Sample size = 2,001

Pathways Forward

- Start thinking about how to collect low-income client internet technology choice data now
- Wait for changing technology landscape to stabilize before fully deploying technologies
- Use pilot programs to test technologies and acceptance

CEO Weatherization Nest Pilot

- 250 homes
- Compare pre- and post-weatherization energy consumption
- Compare Nest homes to non-Nest homes
- Recording information about internet capabilities and choices

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