

Minneapolis Climate Action Plan: Opportunities in Residential Buildings

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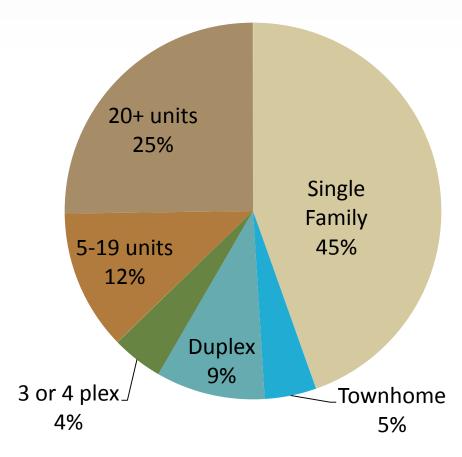


Energy Efficiency is Best Opportunity

- There are large energy efficiency opportunities that are cost-effective even w/out incentives
- Utilities all have significant programs that can leverage City efforts



Single-family through 4-plex is largest opportunity; but large multi-family segment in Mpls



SOURCE: Estimated 2010 Census data



Where Energy is Used (Single Family)

Heating and Air Conditioning – 55%

~ 10 000 Wh alactri

≈100 Dth gas

(\$700)

≈ 10,000 kWh electric (\$1,100)

Lights and Electronics – 20%

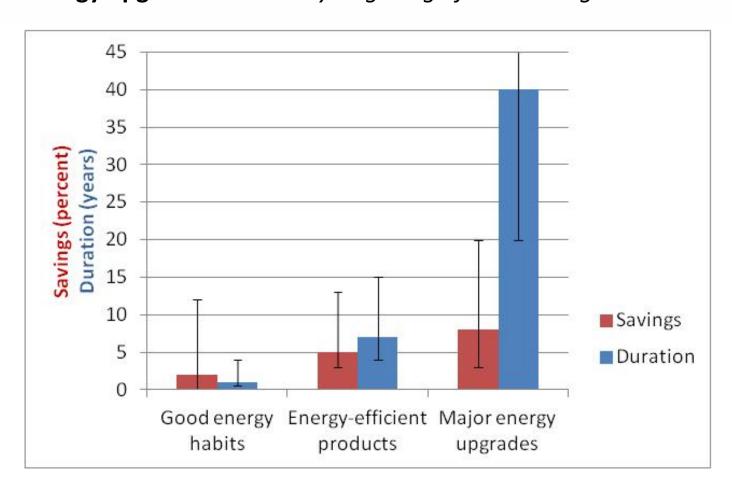
Appliances – 15%

Water Heating – 10%



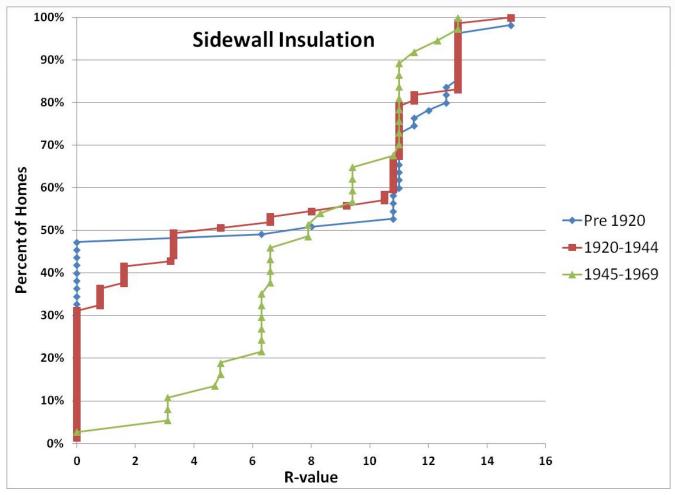
... Three Basic Opportunities

Good energy habits – need to have ongoing intervention to have long-term impact Energy-efficient products - low-cost way to get savings Major energy upgrades – best way to get significant savings over the long-run





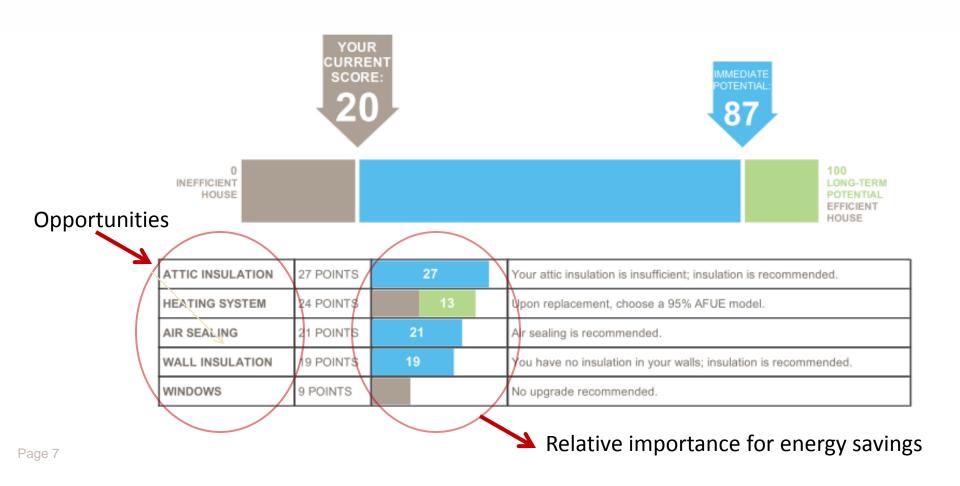
Minneapolis homes still have large retrofit opportunity





Opportunities in typical low-efficiency home

Visualization of opportunities using CEE's Home Energy Index





Solar is emerging opportunity

Break-even point (simple payback) is about 25+ yrs w/out incentives

Large incentives (50%-80% or more) required to make it a cost-effective investment for homeowners; not viable on larger scale

Economics expected to improve over next 10-15 years



Potential strategies for Action Plan

Get 75% of Minneapolis homeowners to participate in whole-house energy-efficiency retrofit programs

Investigate time-of-sale energy label disclosure

Supplement selected Xcel/CenterPoint rebates



More strategies

Inspections department initiative to promote EE

Ensure City rehab meets high standards

Implement streamlined solar permitting and provide solar assessment map