EPS

EnergyPerformanceScore

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Energy Performance Score
Existing Homes – A Path Forward

April 18, 2012

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Requirements

- Did not want to start over
- Need something quick to the market
- Fuel neutral
- Need a clear exit strategy
- Limit program budget
- Stakeholder agreement

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The Issue – An absolute MPG rating is problematic

1) Site-based MM BTU scores can not be a comparative measure of operating costs across fuels. Confuses the “save energy, save money” message.

2) Lack of fuel neutral EPS for existing homes

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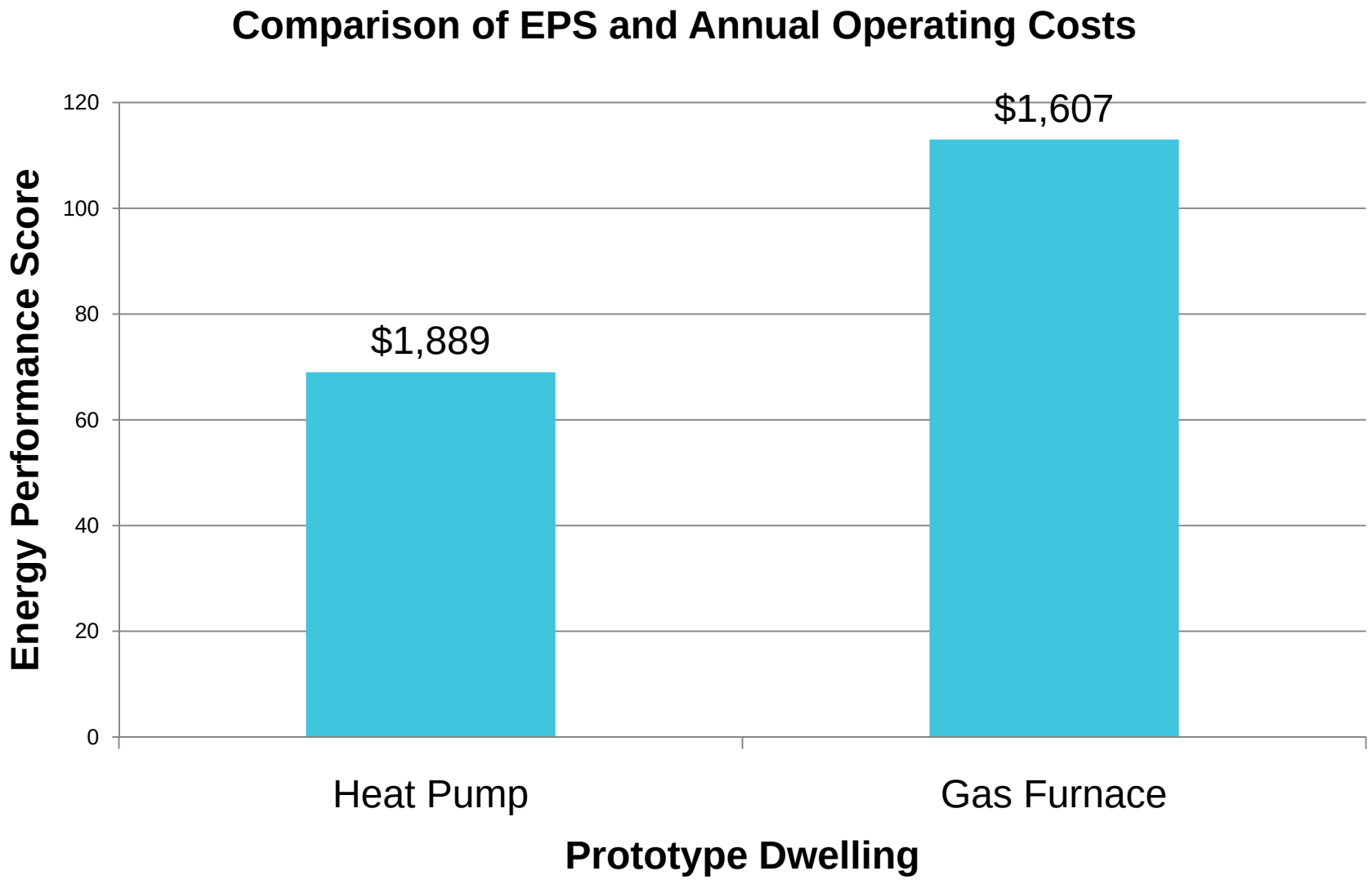
Save Money or Save Energy?



Current Metric

Table 1: Gas Furnace Home

	Usage	MM BTU Mult.	MM BTUs
SPHT (Therms)	464	0.1	46
DHW (Therms)	194	0.1	19
Other (kWh)	5,996	.003412	20
EPS Score			**86**

Table 2: Heat Pump Home

	Usage	MM BTU Mult.	MM BTUs
SPHT Electric	6,694	.003412	23
DHW Electric	3,380	.003412	12
Other Electric	6,074	.003412	20
EPS Score			**55**

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The Solution - Fuel Weights

- Simple to implement is any modeling tool
- Does not change the way EPS is communicated to customers

Table 4:Fuel Weights

Fuel Weights	
Space Heat	217%
Water Heat	141%

Table 5: Equipment Efficiencies

Assumptions	
Space Heating Efficiencies:	
Heat Pump	200%
Gas Furnace	92%
Water Heating Efficiencies:	
Electric	92%
Gas	65%

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New Metric

Table 1: Gas Furnace Home

	Usage	MM BTU Mult.	MM BTUs
SPHT (Therms)	464	0.1	46
DHW (Therms)	194	0.1	19
Other (kWh)	5,996	.003412	20
EPS Score			**86**

Table 5: Heat Pump Home w/ Fuel Weights

	Usage	MM BTU Mult.	Fuel Weight	**Adj**. MM BTUs
SPHT Electric	6,694	.003412	217%	46
DHW Electric	3,380	.003412	141%	19
Other Electric	6,074	.003412		20
EPS Score				**86**

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Implementation

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Implementation - Phase 1

- July launch
- Home Performance Contractors
  - Established trade ally network
  - Trained in modeling and building science
- EPS provided as part of comprehensive audit
- Duration of about 1 year (500-1000 scores)
- Will work with CSG and EA audit tools
- Cost structure - $40-$60/Official EPS
- Clear exit strategy

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Energy Trust Phase 1 Role

- Oversee modeling tool requirements
- Facilitate QA/QC services
- Develop and vet fuel weights
- Help offset training costs
- Facilitate Phase II stakeholder group
- Evaluation

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Modeling software

- Phase 1 will work with CSG and EA models
  - Engage in final review of software
  - Fuel weights
  - Calibration factor(s)
  - Provide EPS data to Energy Trust
  - Populate EPS visual scorecard

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Phase 2 and beyond

- Need positive evaluation findings for Energy Trust support
- Potential expansion beyond HP contractors
- Potential for additional modeling tools
- Potential to expand to other utility service territories
- Roles of other key stakeholders

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Evaluation Plan

- Homeowner surveys
- Contractor surveys
- Analysis of follow through rates

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Thank you!

Questions or comments.

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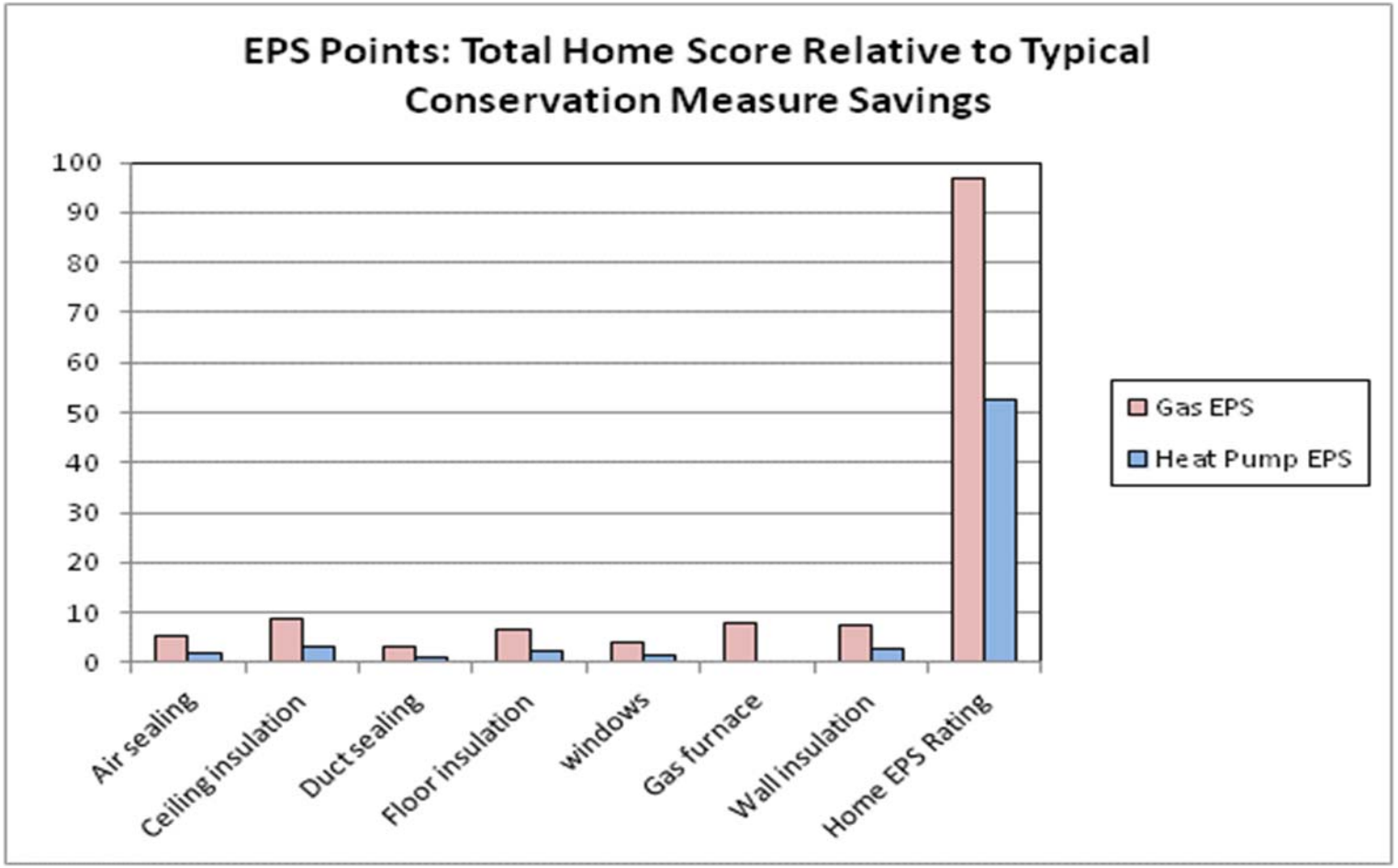

- Conservation measures will have only small impacts on scores unless several are done at once

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Weights increase impact

	Original		Proposed	
Measure	**EPS Score Change**	**% EPS Score Change**	**EPS Score Change**	**% EPS Score Change**
Air sealing	2	4%	4	5%
Ceiling insulation	3	6%	7	8%
Duct sealing	1	2%	2	3%
Floor insulation	2	4%	4	5%
Windows	2	4%	4	5%
Wall insulation	3	6%	7	8%
Base Home EPS	53		86	

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