

# Fast Feedback Results

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## 2013 Report

*Prepared by*  
Bruins Consulting & Analysis  
May 22, 2014



# Executive Summary

## Overview of Fast Feedback

- Fast Feedback is a short phone survey of a sample of recent program participants to assess satisfaction, understand customer decision making, and gather suggestions for program and process improvements. The survey is generally 10 questions or less, is customized for each program or measure of interest, and is designed to take no more than 5 minutes to complete.
- There are quarterly quotas for each program or measure of interest based on the project volume expected in that quarter. We attempt to survey enough participants to achieve 90% confidence and 10% precision each quarter. Calls are made each month to randomly selected participants whose incentive check was processed in the previous month and who have not been surveyed in the previous 12 months. Results are summarized and distributed quarterly to program staff. There is at least one opportunity in each survey for the respondent to give feedback that is recorded verbatim, and this feedback is provided with anonymity to program staff on a monthly basis (not included in this report).
- A total of 3,026 participants that completed projects between January and December 2013 were surveyed between June 2013 and January 2014. We strive to survey customers about a month after they receive their incentive check, but surveying for the first half of 2013 was delayed due to a transition to a new survey contractor. This means that some customers were surveyed as much as six months after they completed their project.
- We made several changes to Fast Feedback in 2013. Standalone air and duct sealing measures are no longer included in Fast Feedback due to the removal of incentives for these measures in the Existing Homes standard track. Ductless heat pumps are now included in the heat pump quota group, and we added a quota group for gas fireplaces. Also, New Buildings program participants are no longer surveyed through Fast Feedback as of Q1 2013. New Buildings projects often involve numerous market actors (architect, engineer, developer, owner and more) at different project stages, so it is difficult to reach a project representative who is able to respond to questions about satisfaction. Satisfaction with the New Buildings program is obtained from interviews with program participants as part of annual program process evaluations.
- Satisfaction and influence throughout this report are calculated as the percentage of respondents providing a rating of 4 or 5 out of 5, excluding “don’t know” responses.
- Please see Appendix A for a description of changes to methods for calculating free ridership.

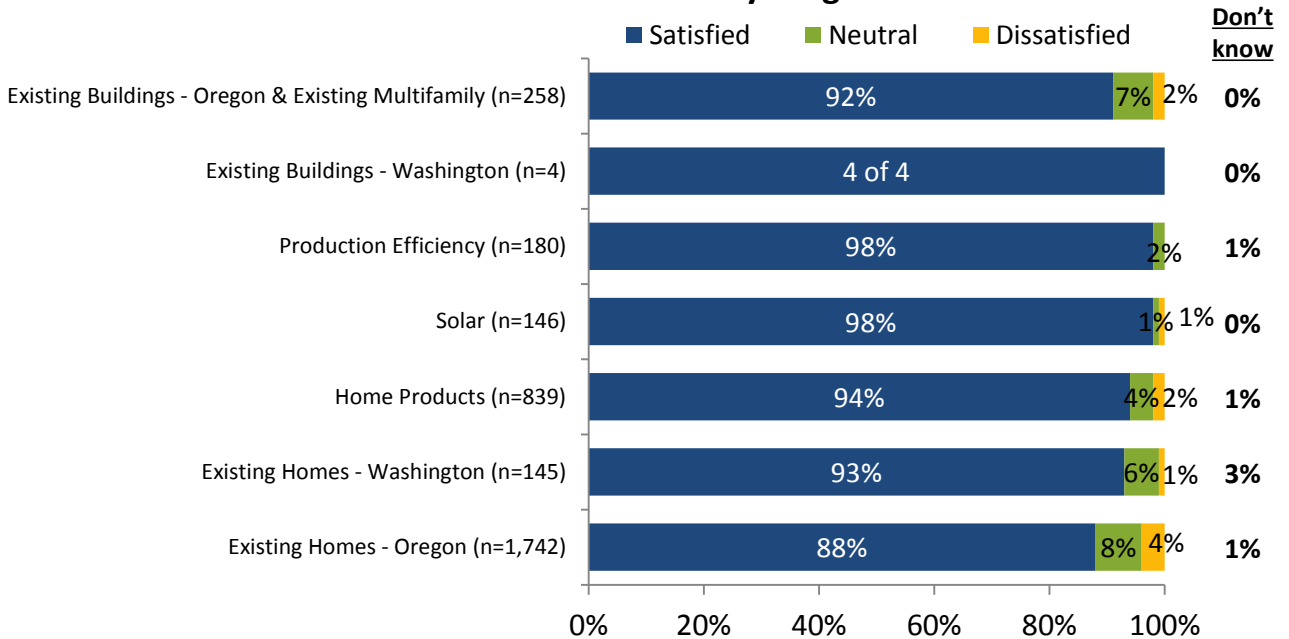
## History of Fast Feedback

- Fast Feedback began as a pilot in mid-2009 for participants in the Existing Buildings and Production Efficiency programs, and was extended to most Energy Trust programs in the second quarter of 2010. A report on methods and results from Q2 2010 is available on the Energy Trust website ([link](#)); Fast Feedback continues to follow the general methods cited in that report.
- From Q2 2011 to Q4 2012, survey calls were made by Gilmore Research Group. As of Q1 2013, AbtSRBI has been making Fast Feedback survey calls.

# Summary of Results

- Satisfaction with overall experience was high for the program groupings shown below, ranging from a high of 98% each for Production Efficiency and Solar to 88% for Existing Homes - Oregon.

## Overall Satisfaction by Program

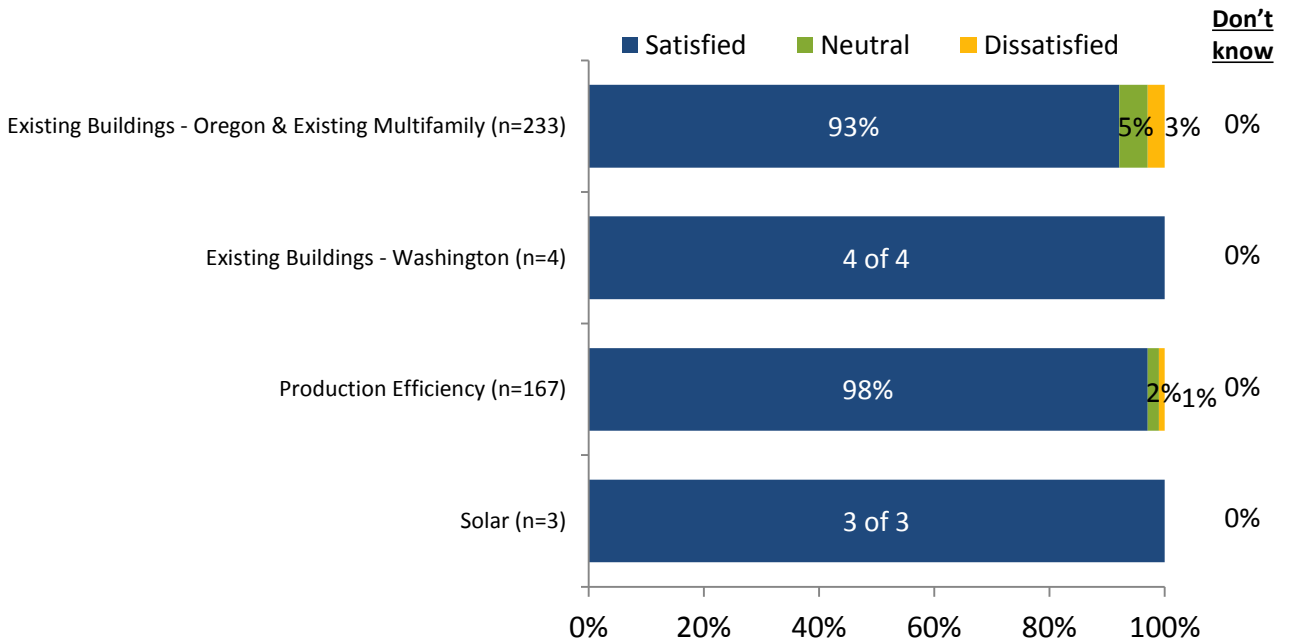


- Free ridership – the portion of participants who would have made energy efficient improvements or upgrades without incentives or information from Energy Trust – was much more variable than satisfaction and ranged from a high of 53% for clothes washers and refrigerators to a low of 18% for Multifamily electric projects. See Appendix A for an explanation of free ridership calculations.
- For many programs and measures, the Energy Trust incentive was the most influential of the program aspects in the decision to undertake an energy efficient improvement or upgrade. Other aspects investigated included information provided by Energy Trust, the contractor, and other features unique to certain programs or measures, such as free pick-up for refrigerator recycling.

# Summary of Results

- Satisfaction with program representatives is only asked of commercial and industrial respondents. Since residential customers have varying degrees of interaction with program representatives (many may not have any interaction), and because it is not possible to identify customers who did have interaction to survey, residential customers are not questioned on this topic. Satisfaction was high for the program groupings shown below. We were not able to survey any Existing Buildings – Washington participants. We were able to survey five commercial solar participants, but two responded that this question was not applicable to them.

### Satisfaction with Program Representative by Program



# Summary of Results

Program	Respondents	Percent Satisfied	Free Ridership‡	
<b>Commercial and Industrial</b>				
			<b>Electric</b>	<b>Gas</b>
Existing Buildings – Oregon	185	90%	38%	28%
Existing Buildings – Washington	4	4 of 4	--†	--†
Existing Multifamily	69	94%	18%	51%*
Production Efficiency	180	98%	20%	23%*
<b>Solar</b>				
Commercial Solar Electric and Water Heating	5	5 of 5	--†	
Residential Solar Electric	133	98%	--†	
Residential Solar Water Heating	8	8 of 8	--†	
<b>Home Products</b>				
Clothes Washers	281	94%		53%
Refrigerators	280	92%		53%
Refrigerator Recycling	280	95%		28%
<b>Existing Homes</b>				
Ceiling Insulation	203	88%		40%
Floor Insulation	204	89%		37%
Wall Insulation	127	81%		40%
Duct Insulation	108	92%		36%
Heat Pumps	123	92%		45%
Ductless Heat Pumps	115	94%		35%
Gas Fireplaces	174	92%		47%
Water Heaters	123	95%		43% <sup>a</sup>
Windows	240	88%		47%
Home Performance	89	85%		33%
Home Energy Review	236	85%		--
Existing Homes – Washington***	145	93%		--†
Existing Homes – Oregon	1,742	88%		--
<b>Other Renewables</b>				
Small Wind	0	--		--

\* Free ridership numbers are calculated using respondents that completed projects in 2011, 2012, and 2013 due to small sample sizes. See Appendix A for more information.

\*\*\*Projects also included in other Existing Homes measure totals.

† Free ridership is not calculated through Fast Feedback.

‡ Free ridership estimates for residential measures are calculated for Oregon respondents only. However, the number of respondents and the satisfaction numbers for Existing Homes measures includes both Oregon and Washington respondents.

<sup>a</sup> 0.67 residential gas water heaters are part of a market transformation effort; free ridership is shown for information only and will not be the basis for programmatic decisions about the measure.

# Summary of Results

- Existing Homes participants were asked about satisfaction with their contractors; 90% were satisfied with their contractor overall. Satisfaction with the quality of installation work was also very high at 92%. Roughly 36% of Existing Homes participants considered Energy Trust's list of approved trade allies when selecting their contractor.

	Percent satisfied with contractor	Percent who considered trade ally list
Ceiling Insulation	87%	36%
Floor Insulation	93%	33%
Wall Insulation	90%	49%
Duct Insulation	94%	38%
Heat Pumps	94%	29%
Ductless Heat Pumps	95%	47%
Gas Fireplaces	91%	29%
Water Heaters	89%	43%
Windows	92%	23%
Home Performance	81%	63%

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# Commercial and Industrial Summary

- Fast Feedback surveys were completed with enough participants for results to meet the criteria of 90% confidence / 10% margin of error for all groups except Existing Buildings – Washington, due to the small population size for that group.
- 90% of Existing Buildings – Oregon respondents rated their overall satisfaction a 4 or 5 out of 5. Satisfaction for Existing Multifamily is very high at 94% (up from 89% in 2012). Satisfaction for Production Efficiency is also very high at 98% (100% in Q3 and Q4 2013).
- Free ridership for Existing Buildings – Oregon electric projects was 38%, while free ridership for gas projects was 28% (up from 16% electric and 18% gas in 2012). Free ridership for Multifamily electric projects was 18% (in line with 17% in 2012). Free ridership for Production Efficiency electric projects was 20% (up slightly from 16% in 2012). Free ridership for Multifamily and Production Efficiency gas projects were estimated using data from 2011, 2012, and 2013 due to small sample sizes. The free ridership rate for Multifamily gas projects was 47% and the free ridership rate for Production Efficiency gas projects was 23%.
- New Buildings program participants are no longer surveyed through Fast Feedback as of Q1 2013. New Buildings projects often involve numerous market actors (architect, engineer, developer, owner and more) at different project stages, so it is difficult to reach a project representative who is able to respond to questions about satisfaction. As of Q2 2012, satisfaction and other information about New Buildings participants is obtained through annual program process evaluations.

Survey Group	2013 Projects <sup>§</sup>	Completed Surveys
Existing Buildings – Oregon*	2,314	185
Existing Buildings – Washington	25	4
Existing Multifamily	299	69
Production Efficiency*	678	180

\*Contains subquotas for program tracks to ensure a variety of project types were surveyed.

<sup>§</sup> Project totals for 2013 only include projects eligible for Fast Feedback, and therefore may not match other Energy Trust reports for 2013.

Program	Percent Satisfied	Free Ridership (savings-weighted)	
		Electric	Gas
Existing Buildings – Oregon	90%	38%	28%
Existing Buildings – Washington	4 of 4	--†	--†
Existing Multifamily	94%	18%	51%*
Production Efficiency	98%	20%	23%*

\* Free ridership numbers are calculated using respondents that completed projects in 2011, 2012, and 2013 due to small sample sizes. See Appendix A for more information. For Multifamily, there were only 15, 14, and 10 respondents that completed projects with gas savings in 2011, 2012, and 2013, respectively. For Production Efficiency, there were only 14, 10, and 13 respondents that completed projects with gas savings in 2011, 2012, and 2013, respectively.

† Free ridership is not calculated through Fast Feedback.

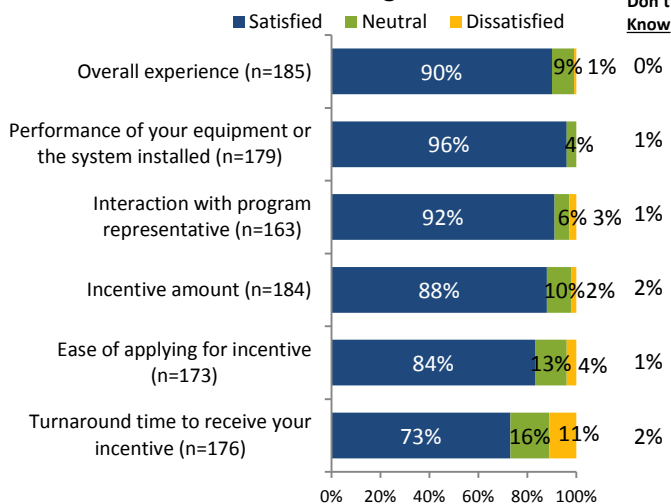


# Existing Buildings

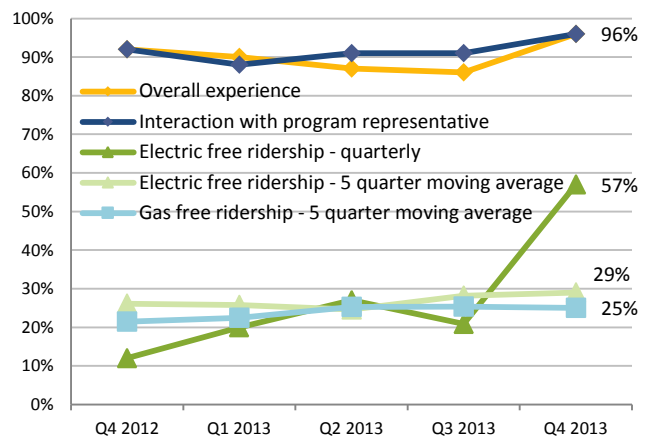
- 90% of respondents rated their satisfaction with Energy Trust a 4 or 5 out of 5, in line with 2012 (92%). Satisfaction was lowest for the turnaround time to receive the incentive.
- The annual electric free ridership rate was 38% (up from 16% in 2012) and the annual gas free ridership rate was 28% (up from 18% in 2012, and just over the 27% seen in 2011). We saw increases in electric free ridership in Q2 (25%) and Q4 (57%) 2013. The jump in Q4 was driven primarily by two projects collectively representing 55% of electric savings of surveyed projects in Q4. Both indicated that they would have done the same they did in the absence of the program. These projects represented 25% of electric savings for all surveyed projects in 2013. In Q2, there was one project representing 15% of electric savings for all surveyed projects in that quarter that said they would have done the same thing they did in the absence of the program. However, this project represented a small portion (2%) of electric savings of surveyed projects in 2013.
- 34% of respondents would have done the project the same way if Energy Trust incentives were not available; 22% would have installed less efficient products.

## Participant Satisfaction

### Satisfaction with Program Elements



### Satisfaction and Free Ridership Over Time



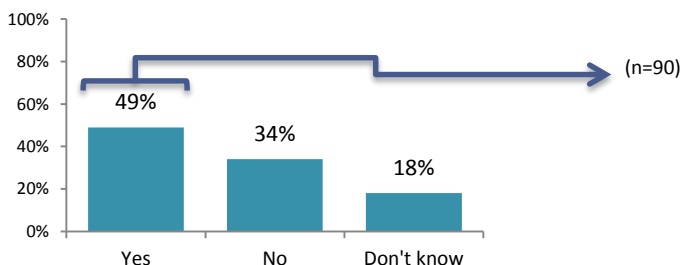
Note: There were fewer than 30 respondents that completed gas Projects in Q4 2012 – Q4 2013, so these quarterly free ridership estimates are omitted from this graph.

Survey question:

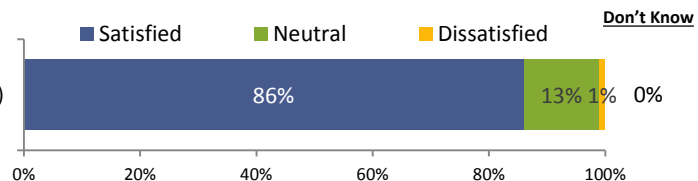
- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Energy Trust-Funded Study

### Did you receive an Energy Trust – funded technical study? (n=185)



### Satisfaction with Study



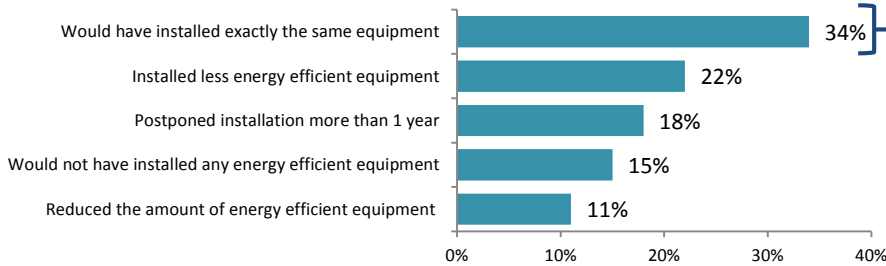
Survey questions:

- Did you receive an Energy Trust – funded technical study?
- Please rate your satisfaction with the quality of the study on a scale of 1 to 5 where 1 means not at all satisfied and 5 means very satisfied.

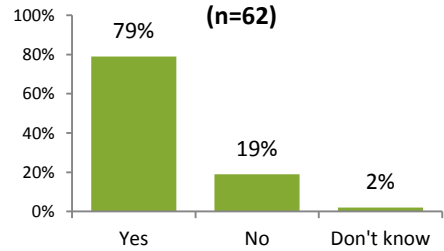
# Existing Buildings

## Impact of Incentives and Information

**Actions Would Have Taken Without Incentive or Information (n=185)\***



**Would project cost have been covered without incentive? (n=62)**

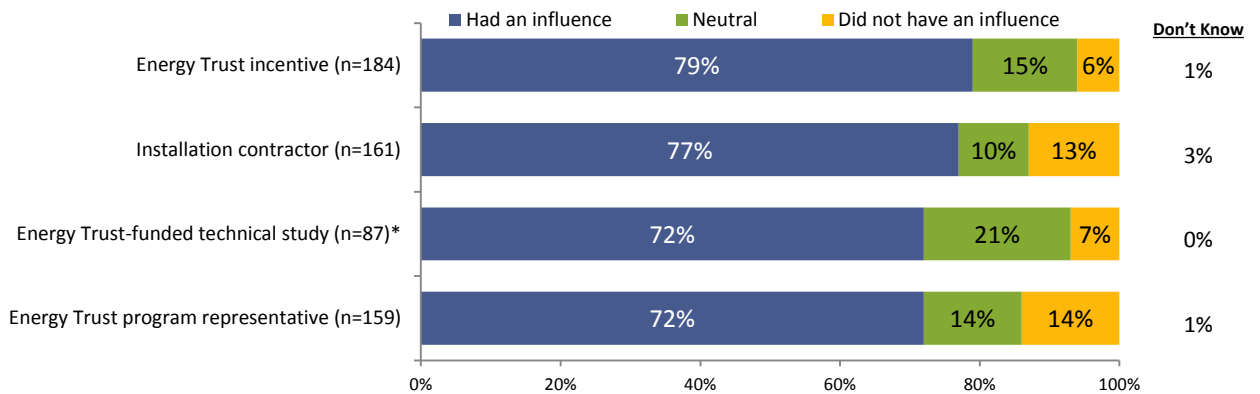


\*Multiple responses possible

Survey questions:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?
- In the absence of the Energy Trust incentive, would your firm have made funds available to cover the entire cost of <improvement>?

## Influences on Decision to Incorporate Energy Efficient Features in Project



\*Only asked of those that reported receiving a study.

Survey question:

- How influential were the following elements on your decision to incorporate energy efficient features in your project?

## Oregon State Tax Credit

Have you applied for the Oregon state tax credit?	
	(n=105)
Yes	9%
No, but plan to	12%
No, do not plan to	27%
Not aware of credit	24%
Don't know	20%
Not applicable	9%

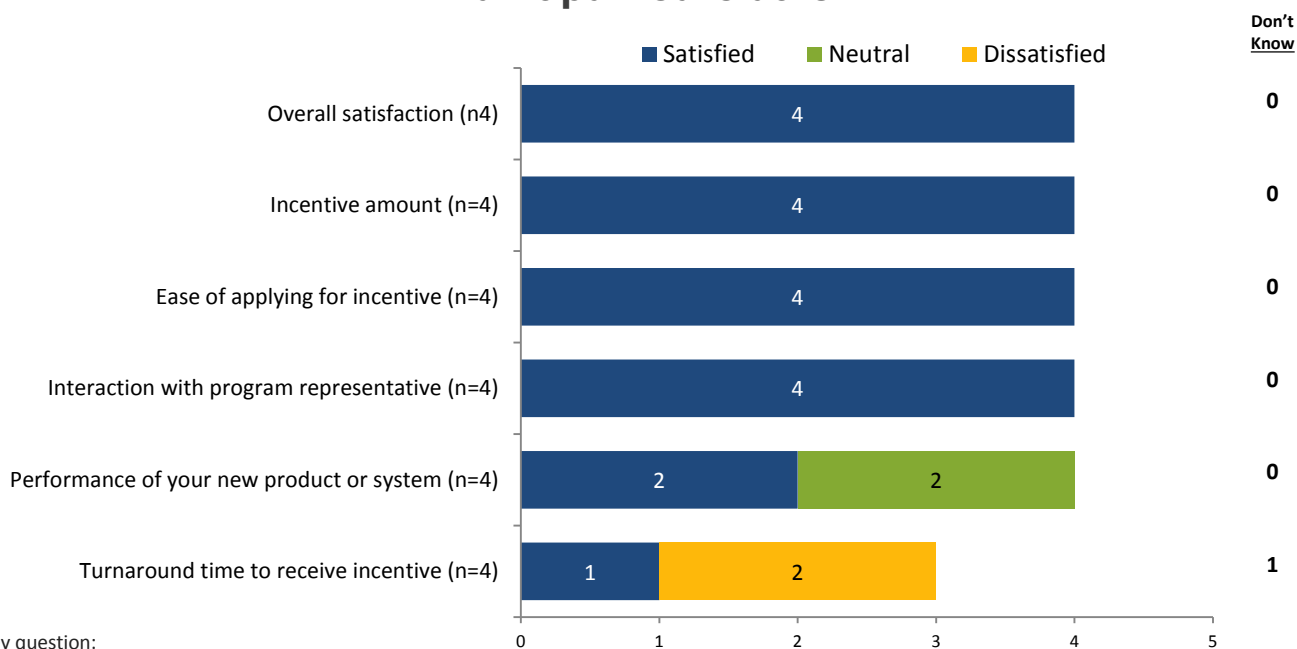
Survey question:

- Have you applied for the Oregon state tax credit, also known as the state Energy Incentives Program, for this project?

# Existing Buildings - Washington

- All four respondents rated their overall satisfaction a 4 or 5 out of 5, and were satisfied with the incentive amount, ease of applying, and their interaction with their program representative.
- Two out of four respondents would have installed exactly the same equipment without the incentive.
- All four respondents reported that Energy Trust incentives were influential on their decision to incorporate energy efficient features in their project.

## Participant Satisfaction

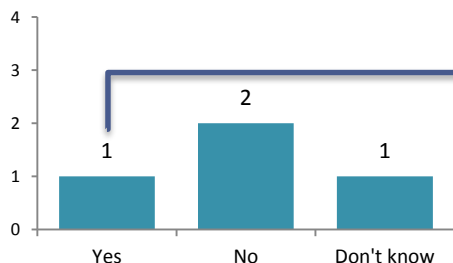


Survey question:

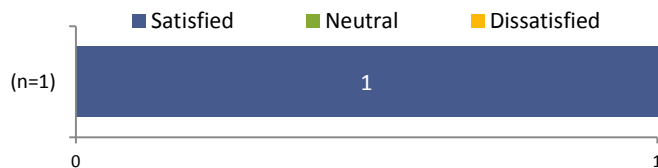
- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Energy Trust-Funded Study

### Did you receive an Energy Trust – funded technical study? (4)



### Satisfaction with Study

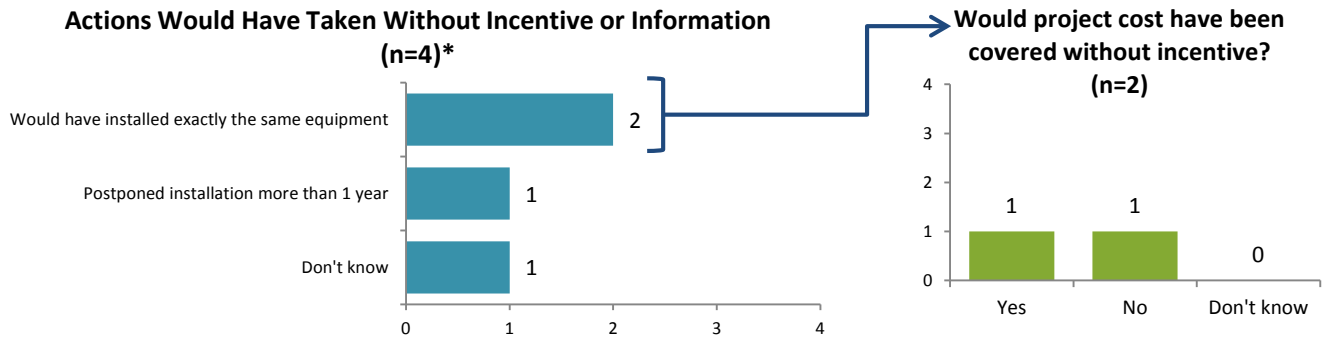


Survey questions:

- Did you receive an Energy Trust – funded technical study?
- Please rate your satisfaction with the quality of the study on a scale of 1 to 5 where 1 means not at all satisfied and 5 means very satisfied.

# Existing Buildings - Washington

## Impact of Incentives and Information

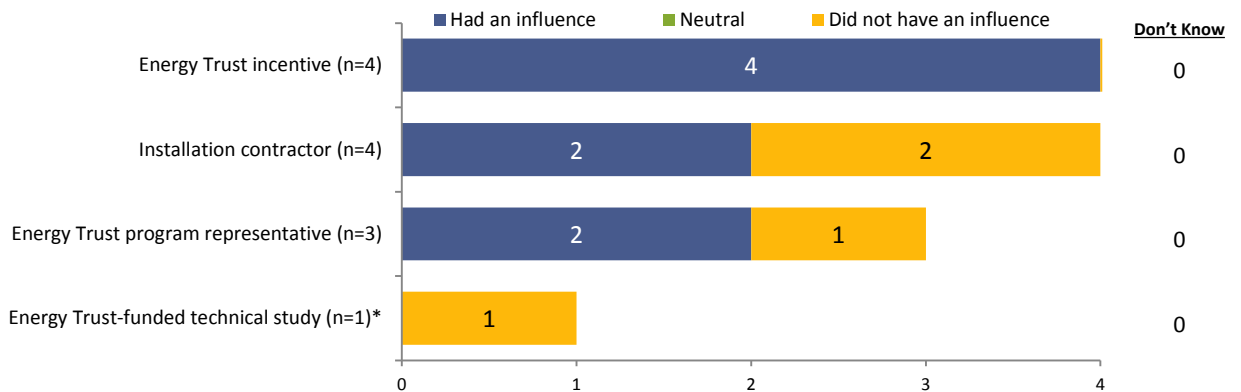


\*Multiple responses possible

Survey questions:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?
- In the absence of the Energy Trust incentive, would your firm have made funds available to cover the entire cost of <improvement>?

## Influences on Decision to Incorporate Energy Efficient Features in Project



\*Only asked of those that reported receiving a study.

Survey question:

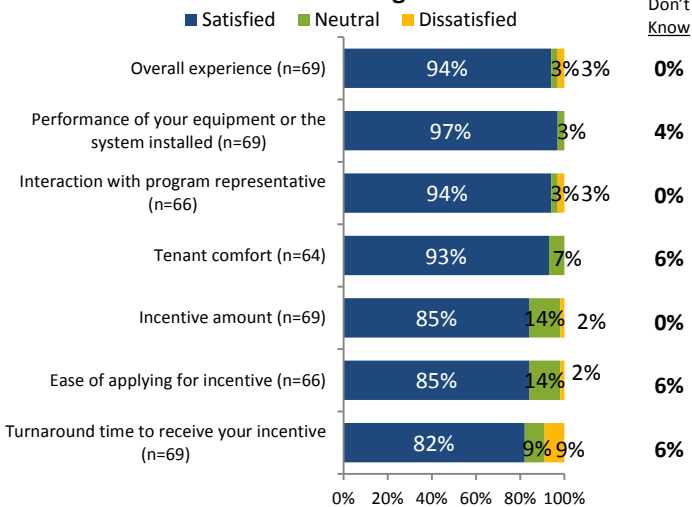
- How influential were the following elements on your decision to incorporate energy efficient features in your project?

# Existing Multifamily

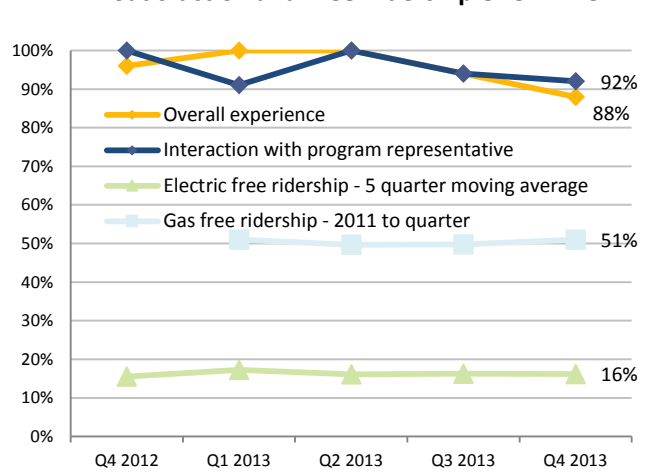
- 94% of respondents rated their overall experience a 4 or 5 out of 5 (up from 2012, 89%). Satisfaction was lowest for turnaround time to receive the incentive. However, satisfaction was high with equipment or system performance and interaction with program representatives.
- The annual electric free ridership rate (2013 data only) was 18% compared to 17% in 2012. The gas free ridership rate, which includes data from 2011-2013 due to small sample sizes, was 51%. It is important to note that two projects collectively representing 62% of gas savings for all surveyed projects in 2011-2013 both reported that they would have done the same they did in the absence of the program. One of these projects was completed in 2013, and the other was completed in 2012.

## Participant Satisfaction

### Satisfaction with Program Elements



### Satisfaction and Free Ridership Over Time



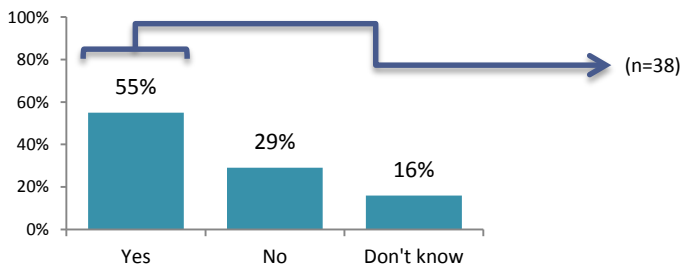
Note: There were fewer than 30 respondents that completed gas and electric projects in each quarter of Q4 2012 – Q4 2013, so these quarterly free ridership estimates are omitted from this graph. We present 5 quarter moving averages for electric, but there are too few respondents to do this for gas. We instead present an estimate of free ridership using data from 2011 to the quarter in question.

Survey question:

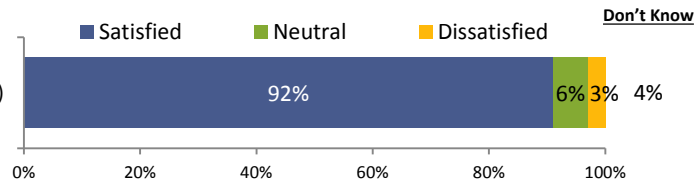
- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Energy Trust-Funded Building Assessment

### Did you receive an Energy Trust – funded building assessment? (n=69)



### Satisfaction with Building Assessment



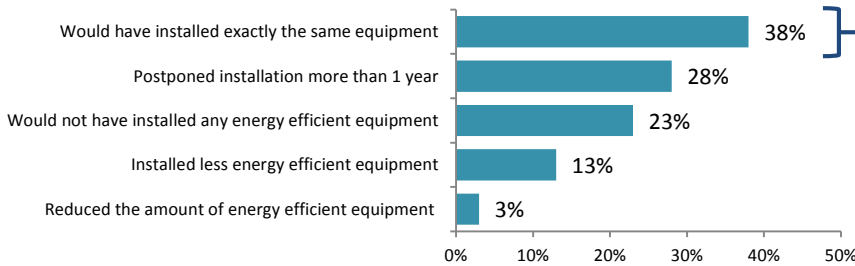
Survey questions:

- Did you receive an Energy Trust – funded building assessment?
- Please rate your satisfaction with the quality of the assessment on a scale of 1 to 5 where 1 means not at all satisfied and 5 means very satisfied.

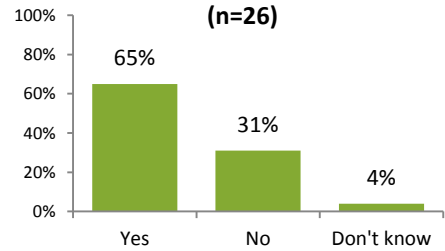
# Existing Multifamily

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=69)\*



### Would project cost have been covered without incentive? (n=26)

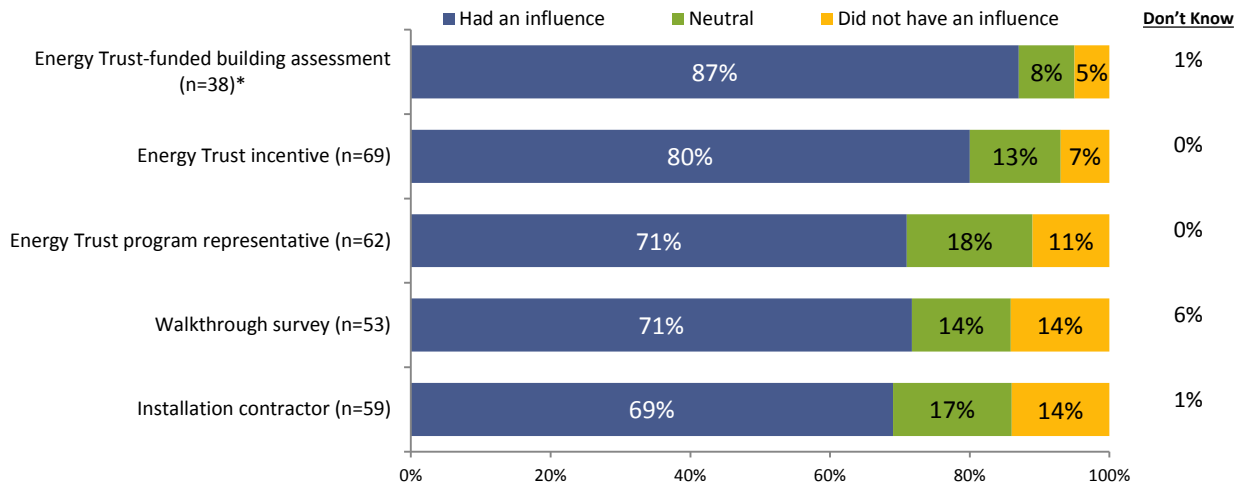


\*Multiple responses possible

Survey questions:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?
- In the absence of the Energy Trust incentive, would your firm have made funds available to cover the entire cost of <improvement>?

## Influences on Decision to Incorporate Energy Efficient Features in Project



\*Only asked of those that reported receiving a building assessment.

Survey question:

- How influential were the following elements on your decision to incorporate energy efficient features in your project?

## Oregon State Tax Credit

Have you applied for the Oregon state tax credit?	
	(n=69)
Yes	26%
No, but plan to	9%
No, do not plan to	22%
Not aware of credit	9%
Don't know	32%
Not applicable	3%

Survey question:

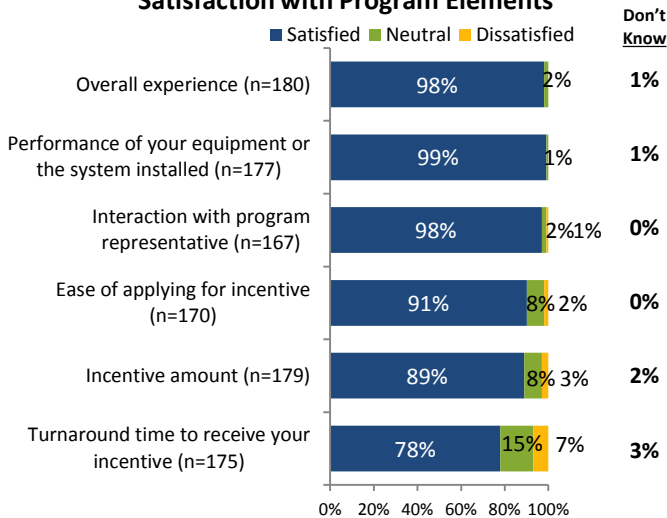
- Have you applied for the Oregon state tax credit, also known as the state Energy Incentives Program, for this project?

# Production Efficiency

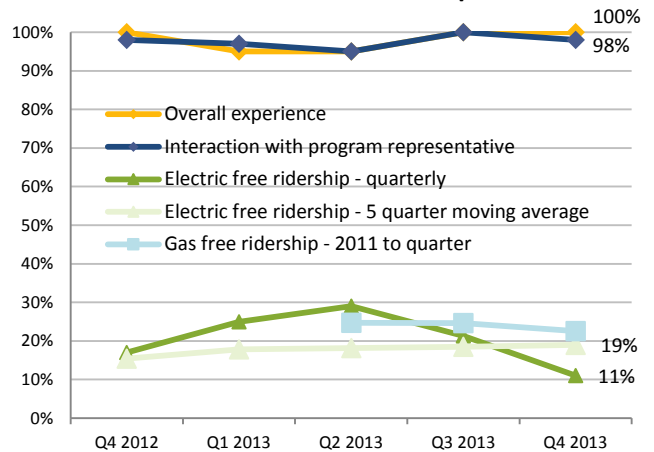
- A high number of respondents (98%) rated their overall satisfaction a 4 or 5 out of 5. Satisfaction was very high for interaction with program representatives and the performance of equipment or systems installed. Respondents that reported receiving an Energy Trust-funded technical study were highly satisfied with the study.
- The annual electric free ridership rate (2013 data only) was 20% compared to 16% in 2012. The annual gas free ridership rate, which includes data from 2011-2013 due to small sample sizes, was 23%.
- 30% of respondents would have postponed the project more than a year in the absence of the program, 28% would have installed less energy efficient equipment, and only 27% would have installed the same equipment or features without the incentive. 80% of respondents said the Energy Trust incentive had an influence on their decision to incorporate energy efficient features in their projects.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time



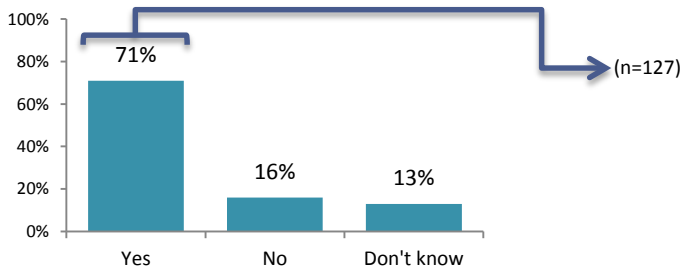
Note: There were fewer than 30 respondents that completed gas and projects in each quarter of Q4 2012 – Q4 2013, so these quarterly free ridership estimates are omitted from this graph. We present quarterly and 5 quarter moving averages for electric, but there are too few respondents to do this for gas. We instead present an estimate of free ridership using data from 2011 to the quarter in question.

Survey question:

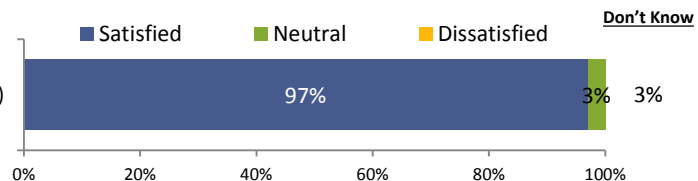
- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Energy Trust-Funded Study

Did you receive an Energy Trust – funded technical study? (n=180)



Satisfaction with Study



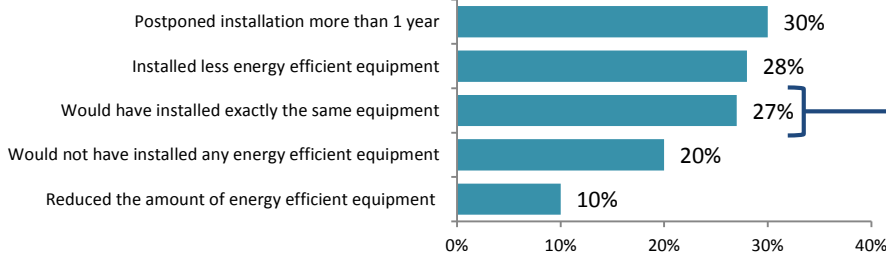
Survey questions:

- Did you receive an Energy Trust – funded technical study?
- Please rate your satisfaction with the quality of the study on a scale of 1 to 5 where 1 means not at all satisfied and 5 means very satisfied.

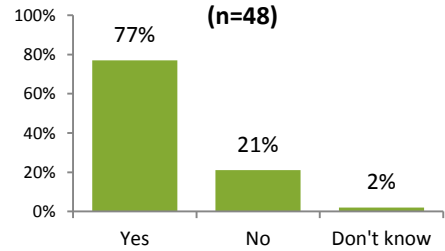
# Production Efficiency

## Impact of Incentives and Information

**Actions Would Have Taken Without Incentive or Information (n=180)\***



**Would project cost have been covered without incentive? (n=48)**

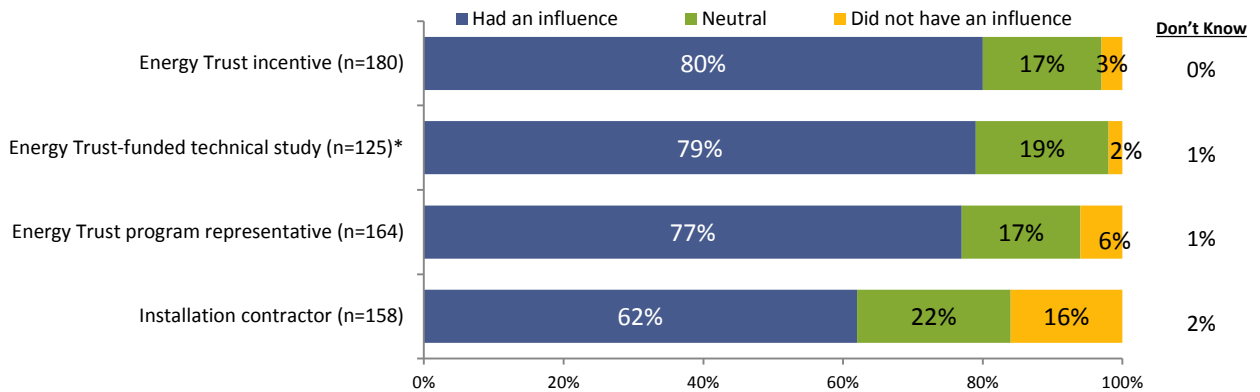


\*Multiple responses possible

Survey questions:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?
- In the absence of the Energy Trust incentive, would your firm have made funds available to cover the entire cost of <improvement>?

## Influences on Decision to Incorporate Energy Efficient Features in Project



\*Only asked of those that reported receiving a study.

Survey question:

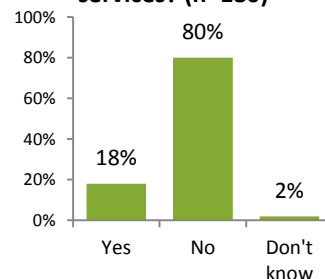
- How influential were the following elements on your decision to incorporate energy efficient features in your project?

## Oregon State Tax Credit & Other Sources of Funding

**Have you applied for the Oregon state tax credit?**

	(n=110)
Yes	16%
No, but plan to	10%
No, do not plan to	26%
Not aware of credit	13%
Don't know	30%
Not applicable	5%

**Did you pursue other external sources of funding/technical services? (n=180)**



Survey questions:

- Have you applied for the Oregon state tax credit, also known as the state Energy Incentives Program, for this project?
- Did you pursue other external sources of funding/technical services?



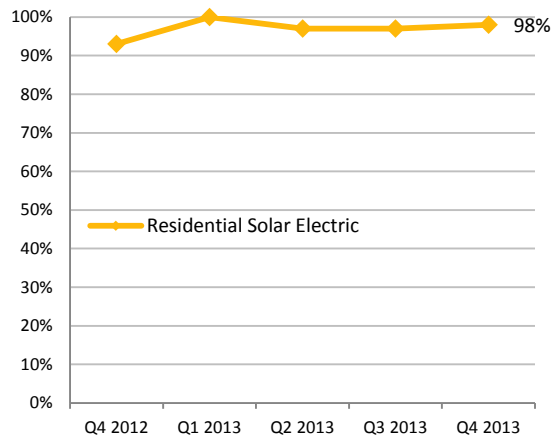
# Solar Summary

- Due to small population sizes, only residential solar electric met the goal of 90% confidence / 10% margin of error.
- All of the commercial solar electric respondents were satisfied; we were unable to complete interviews with any commercial solar water heating participants.
- On the residential side, 98% of solar electric respondents were satisfied, and all eight of the solar water heating respondents were satisfied. These numbers are in line with results from past quarters.

Survey Group	2013 Projects <sup>§</sup>	Surveys Completed	Percent Satisfied
Commercial Solar Electric	13	5	5 of 5
Commercial Solar Water Heating	7	0	--
Residential Solar Electric	278	133	98%
Residential Solar Water Heating	16	8	8 of 8

<sup>§</sup> Project totals for 2013 only include projects eligible for Fast Feedback, and therefore may not match other Energy Trust reports for 2013.

## Satisfaction Over Time

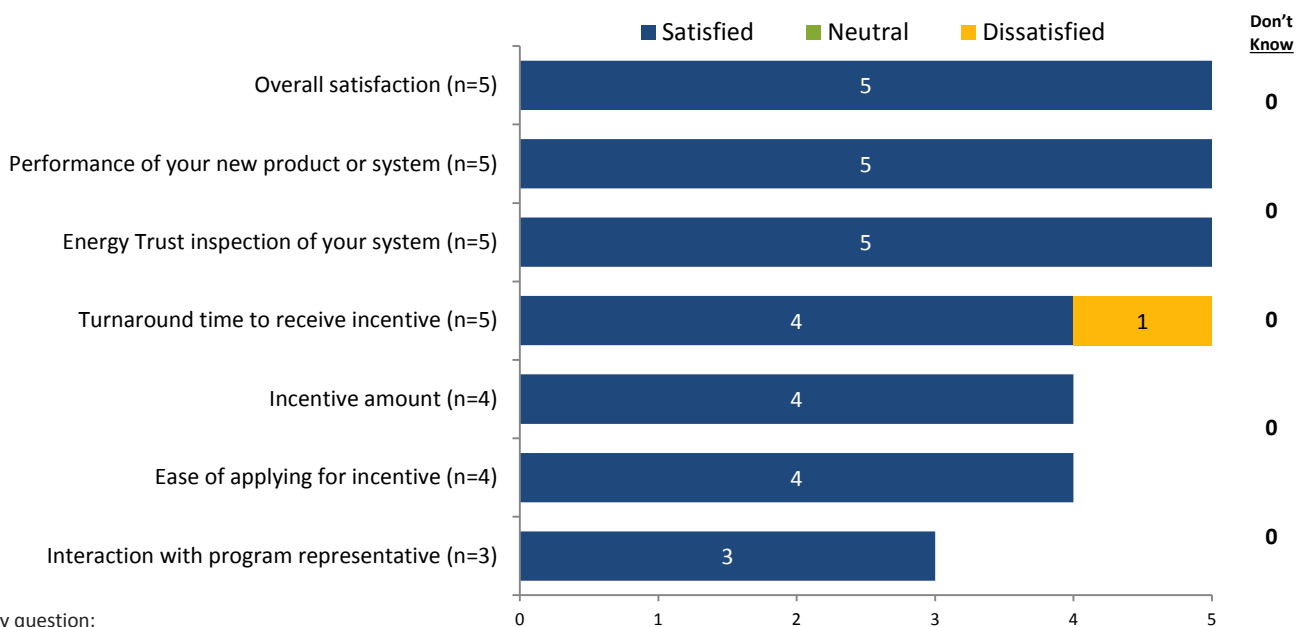


Note: The number of respondents for commercial solar and residential solar water heating was extremely low: each had fewer than 5 respondents per quarter.

# Commercial Solar

- All five respondents rated their overall satisfaction a 4 or 5 out of 5, and were satisfied with the performance of the system as well Energy Trust inspection of the system.
- None of the respondents said they would have installed exactly the same equipment without the incentive.
- Most respondents reported that Energy Trust incentives and their contractor were influential on the decision to install the system.
- Regarding tax credits, 4 of 5 have or will apply for a federal tax credit, and 3 of 5 either have or plan to apply for the Oregon state tax credit.
- Four of five respondents reported that they had heard of the feed-in tariff incentive program prior to the start of their solar project.

## Participant Satisfaction



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Tax Credits

Have you or will you apply for a federal tax credit? (n=5)	
Yes	4
No	0
Don't know	1
Does not apply	0

Have you applied for the Oregon state tax credit? (n=5)	
Yes	2
No, but plan to	1
No, do not plan to	0
Not aware of credit	0
Don't know	1
Not applicable	1

Had you heard of the feed-in tariff incentive program prior to the start of your solar project? (n=5)	
Yes	4
No	1
Don't know	0

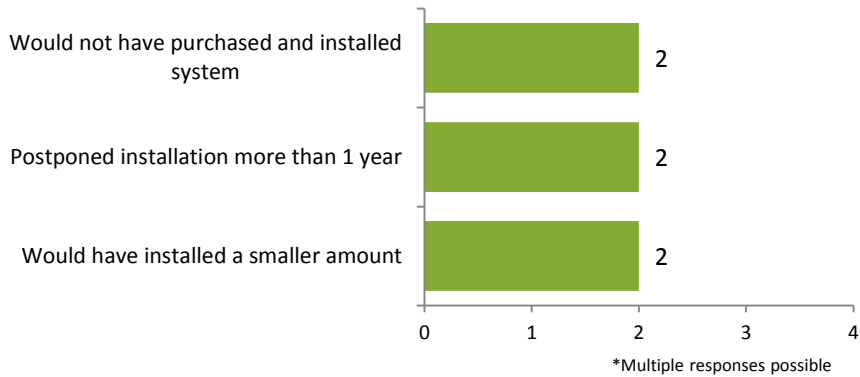
Survey question:

- Have you applied or will you apply for a federal tax credit?
- Have you applied for the Oregon state tax credit?
- Did you heard of the feed-in tariff incentive program prior to the start of your solar project?

# Commercial Solar

## Impact of Incentives and Information

Actions Would Have Taken Without Incentive or Information (n=5)\*

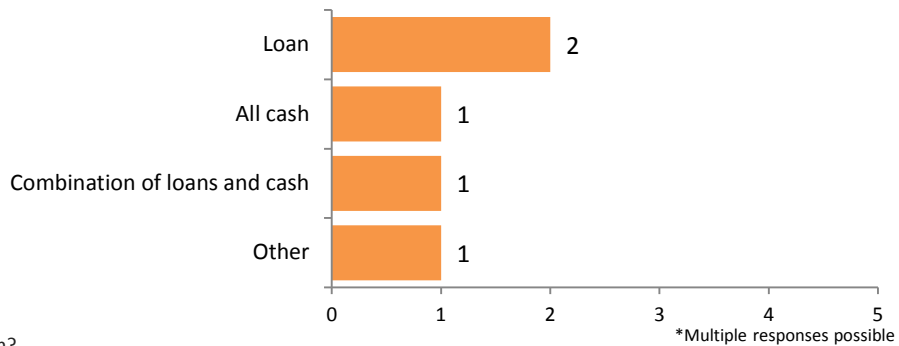


Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Funding for New System

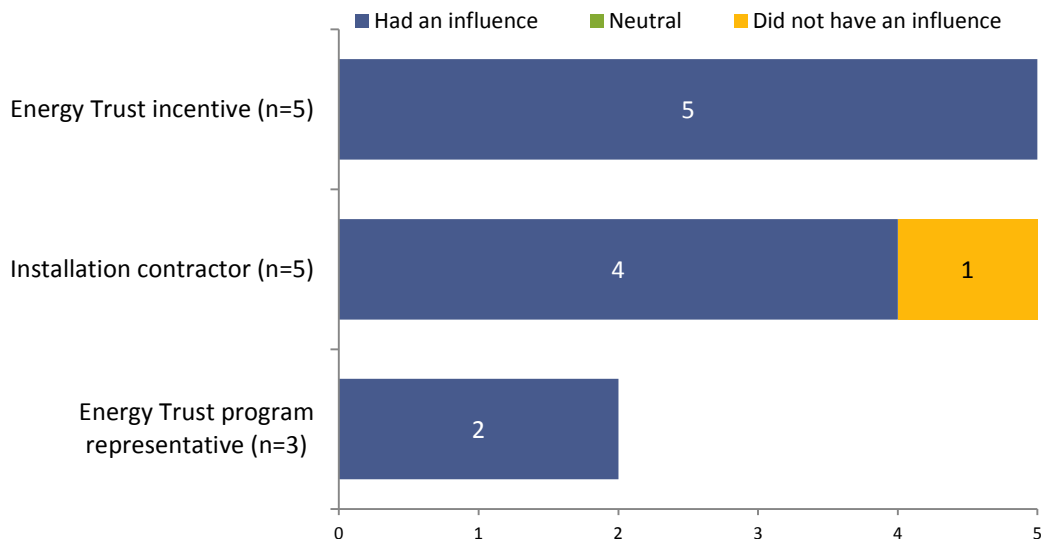
How Respondents Paid for System (n=5)\*



Survey question:

- How did you pay for your system?

## Influences on Decision to Install Solar



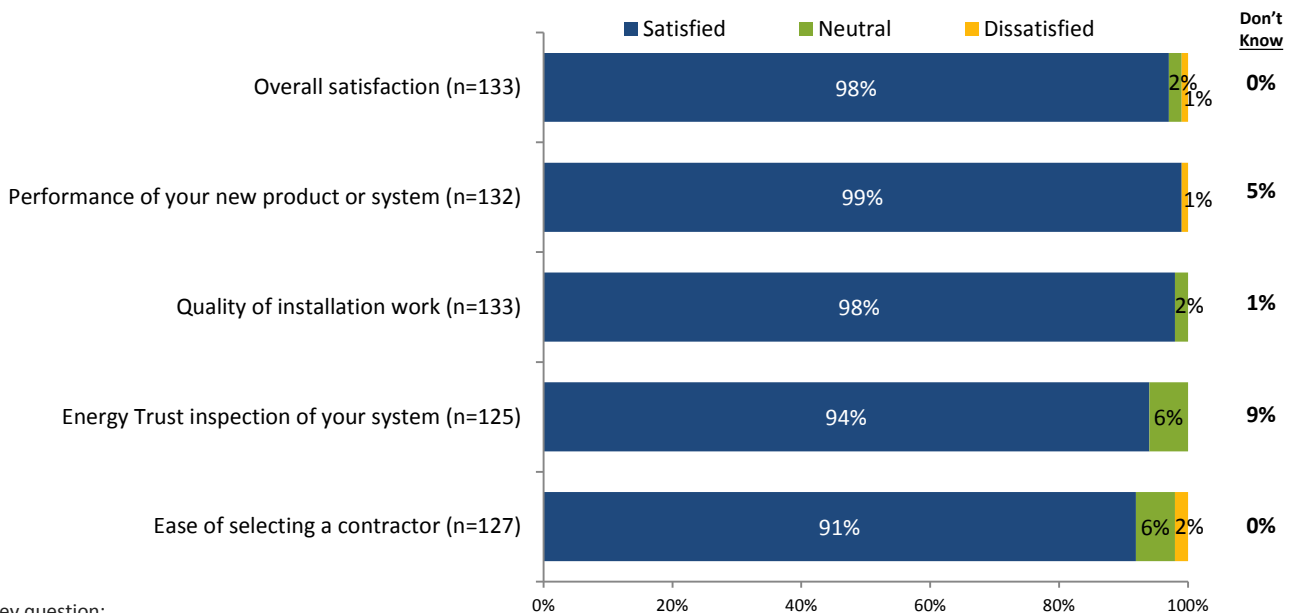
Survey question:

- How influential were the following elements on your decision to purchase your system?

# Residential Solar Electric

- 98% of respondents rated their overall satisfaction a 4 or 5 out of 5 and 99% were satisfied with the performance of the system.
- Half of respondents had visited the website or received a brochure before having their system installed.
- 31% of respondents would not have installed the same system without Energy Trust incentives and information; 35% would have done exactly the same thing.
- The contractor was the most influential element on the decision to install the system, followed by the Energy Trust incentives.
- Two-thirds of respondents paid for their system with cash or savings, while 18% used a loan.
- 65% of respondents had heard of the feed-in-tariff prior to the start of their project.

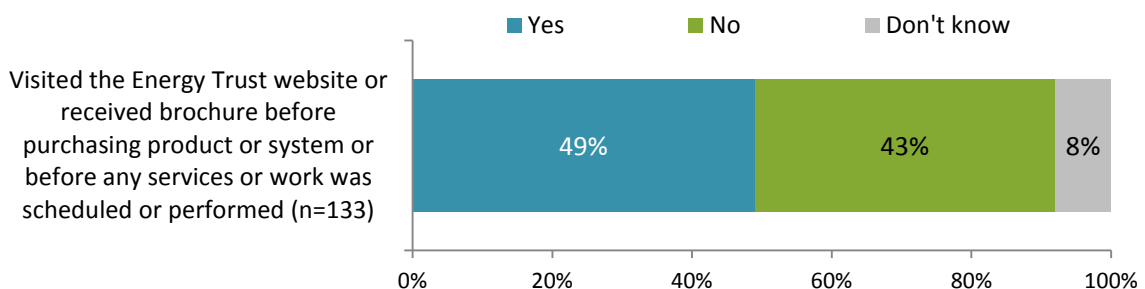
## Participant Satisfaction



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



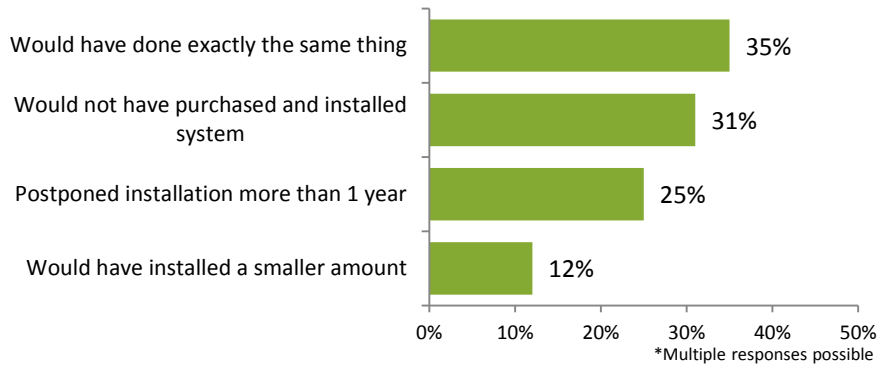
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Residential Solar Electric

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=130)\*



Have you applied/will you apply for the applicable Oregon state tax credit? (n=133)	
Yes	99%
No	1%
Don't know	1%

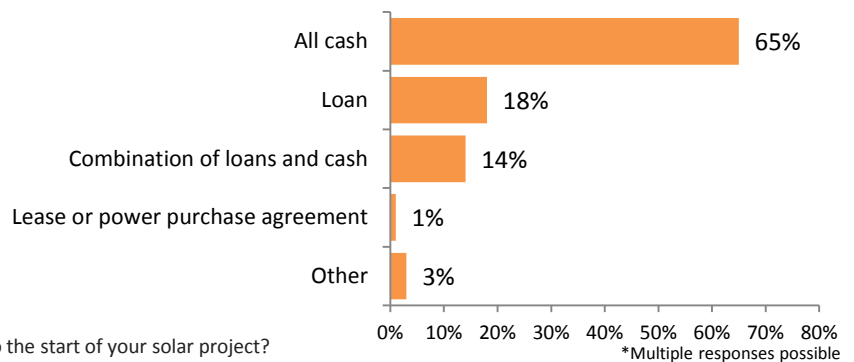
Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Funding for New System

Had you heard of the feed-in tariff incentive program prior to the start of your solar project? (n=133)	
Yes	65%
No	26%
Don't know	8%

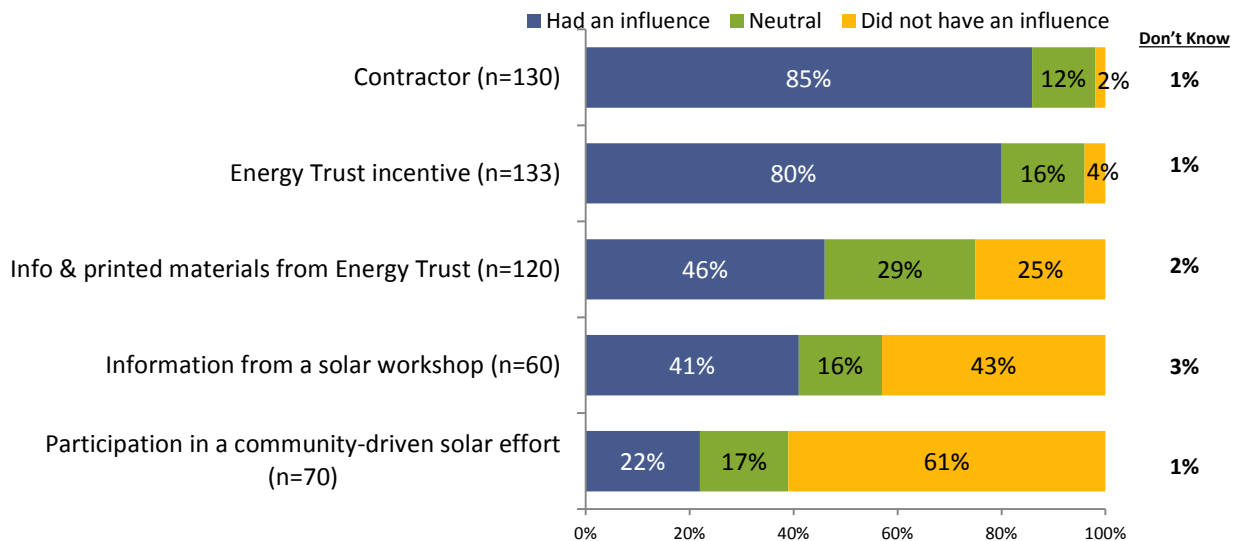
### How Respondents Paid for System (n=130)\*



Survey questions:

- Did you heard of the feed-in tariff incentive program prior to the start of your solar project?
- How did you pay for your system?

## Influences on Decision to Install Solar



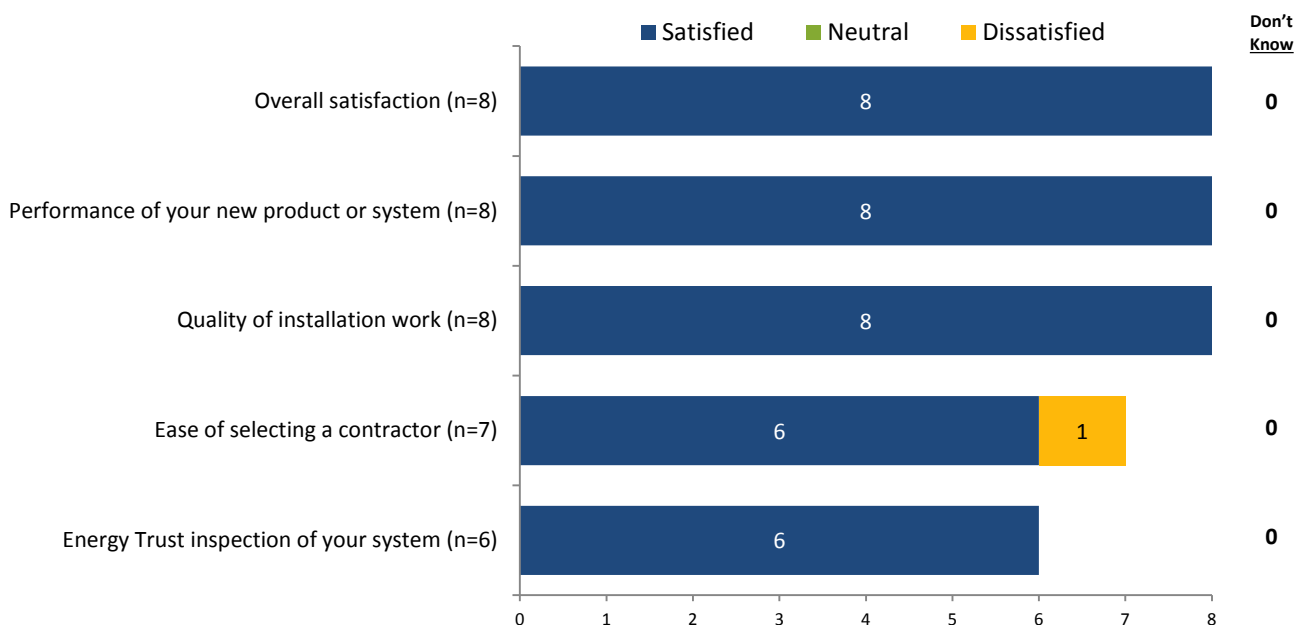
Survey question:

- How influential were the following elements on your decision to purchase your system?

# Residential Solar Water Heating

- All eight respondents rated their overall satisfaction a 4 or 5 out of 5, and were satisfied with the performance of their system as well as the quality of installation work.
- Three of eight respondents had visited the website or received a brochure before having their system installed.
- Half of respondents would have postponed installation more than a year without Energy Trust incentives and information.
- Energy Trust incentives and the contractor were the most influential elements on respondents' decision to install the system.
- Three-quarters of respondents paid for their system with cash or savings, and all eight reported that they have or will apply for the Oregon state tax credit.

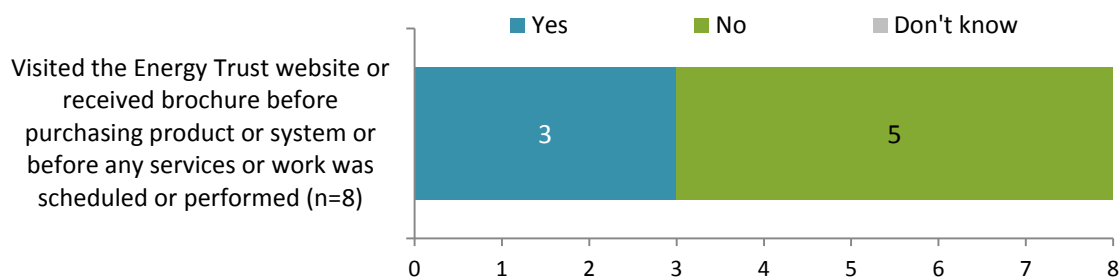
## Participant Satisfaction



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



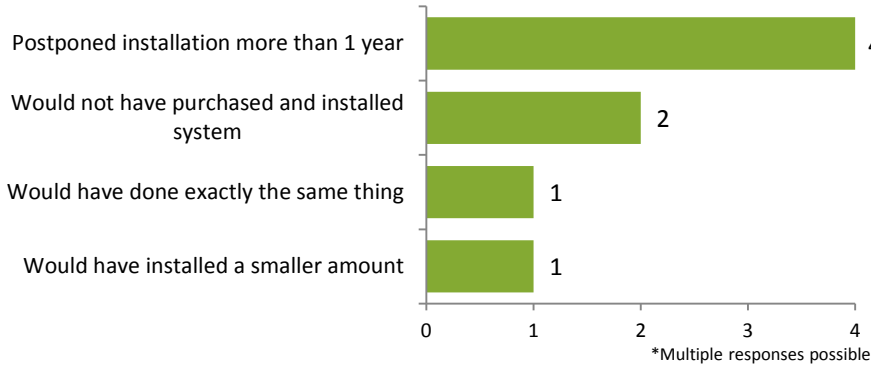
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Residential Solar Water Heating

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=8)\*



Have you or will you apply for the Oregon State Residential Energy Tax Credit? (n=8)

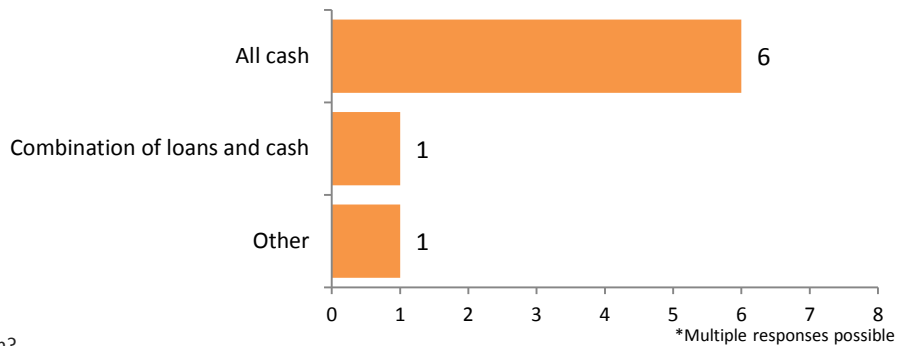
Yes	8
No	0
Don't know	0
Does not apply	0

Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Funding for New System

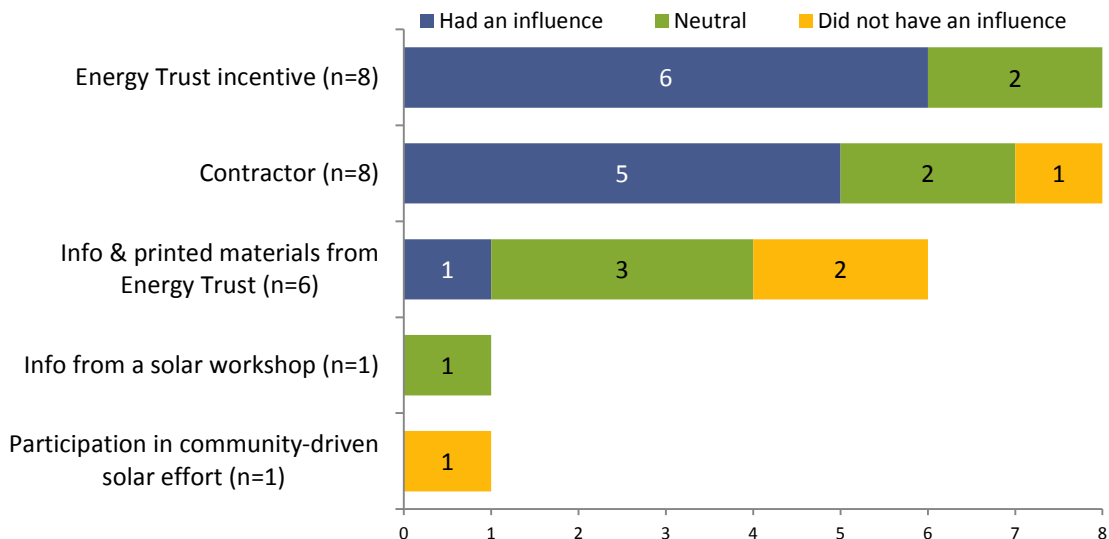
### How Respondents Paid for System (n=8)\*



Survey question:

- How did you pay for your system?

## Influences on Decision to Install Solar



Survey question:

- How influential were the following elements on your decision to purchase your system?

# Home Products Summary

- For all three groups, a sufficient number of surveys were completed for the results to meet the goal of 90% confidence / 10% margin of error.
- Satisfaction for all three groups was relatively high, especially for refrigerator recycling.
- Free ridership rates remained in line with 2012 numbers; refrigerator recycling decreased slightly from 32% to 28%.

Survey Group	2013 Projects <sup>§</sup>	Surveys Completed	Percent Satisfied	Free Ridership
Clothes Washers	15,484	281	94%	53%
Refrigerators	2,605	280	92%	53%
Refrigerator Recycling	15,896	280	95%	28%

<sup>§</sup> Project totals for 2013 only include projects eligible for Fast Feedback, and therefore may not match other Energy Trust reports for 2013.

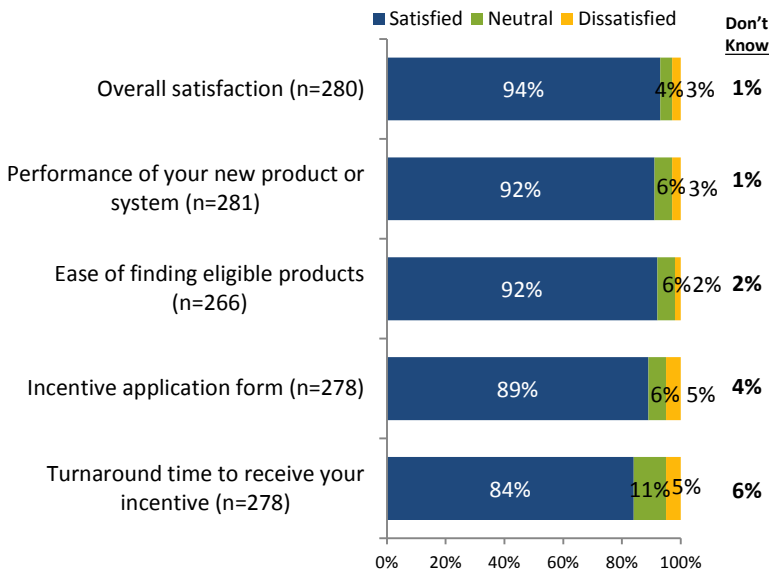


# Clothes Washers

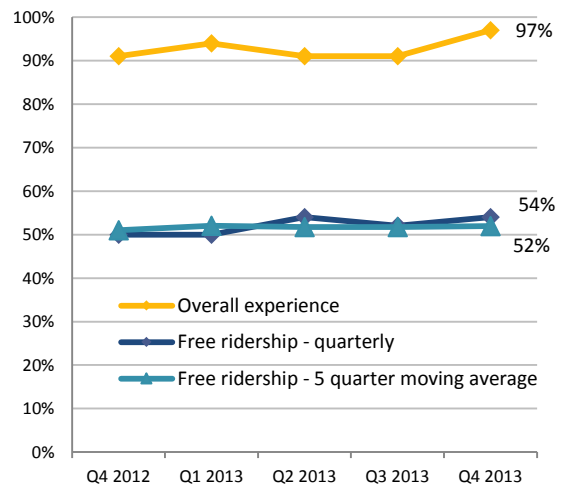
- 94% of respondents rated their overall satisfaction a 4 or 5 out of 5. Satisfaction with turnaround time received the lowest rating (84%).
- 25% of respondents had used the website or received a brochure before purchasing their unit.
- 72% of respondents would have bought the same unit in the absence of Energy Trust incentives and information, however, half rated the influence of the Energy Trust incentive a 4 or 5 out of 5.
- The percent of respondents washing more than 60% of loads in cold water has remained around the half-way mark (47%), in line with previous quarters.

## Participant Satisfaction

Satisfaction with Program Elements



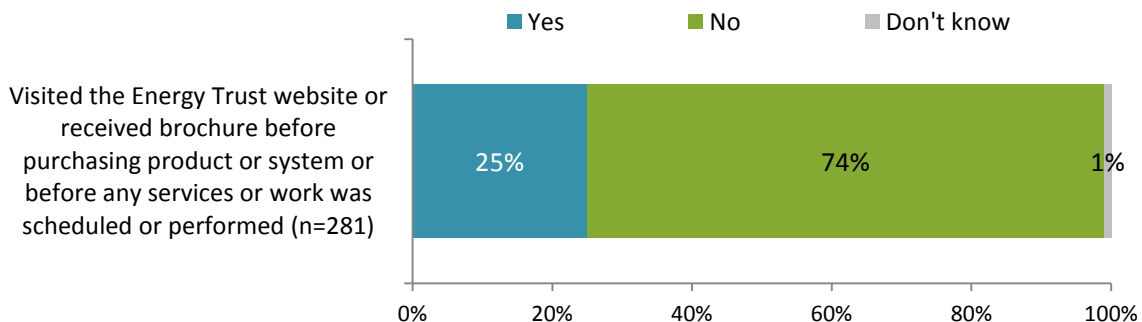
Satisfaction and Free Ridership Over Time



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



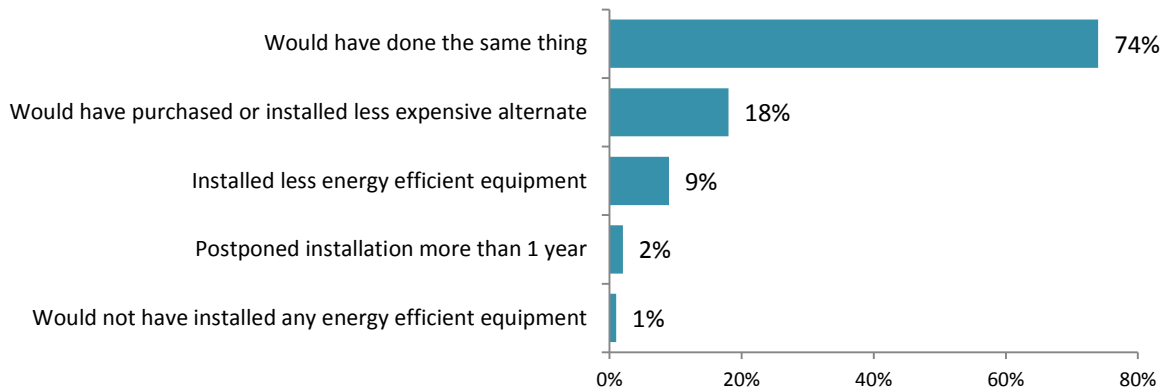
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Clothes Washers

## Impact of Incentives and Information

Actions Would Have Taken Without Incentive or Information (n=278)\*



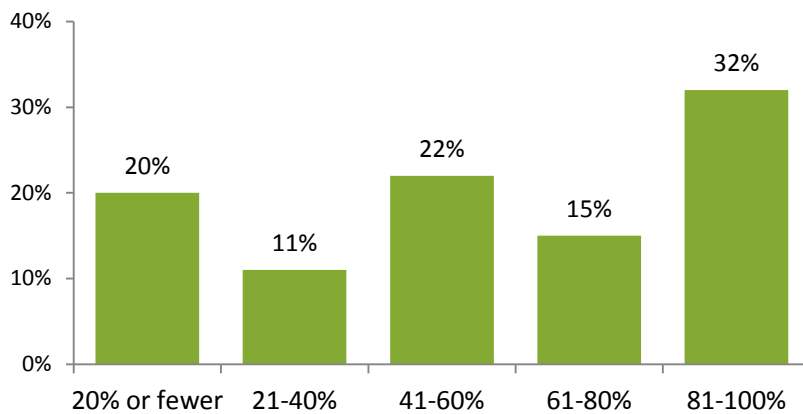
\*Multiple responses possible

Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Percent of Laundry Loads Done in Cold Water

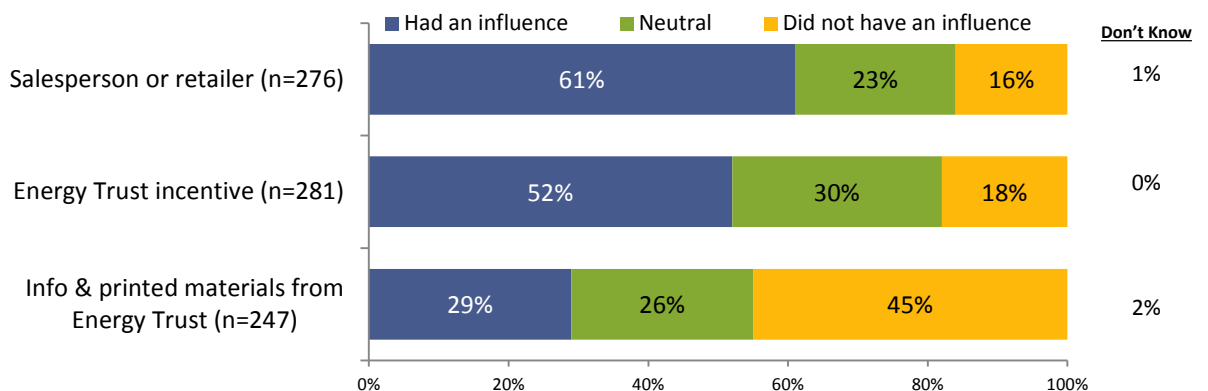
(n=281)



Survey question:

- What percent of laundry loads do you wash in cold water?

## Influences on Decision to Purchase Energy Efficient Unit



Survey question:

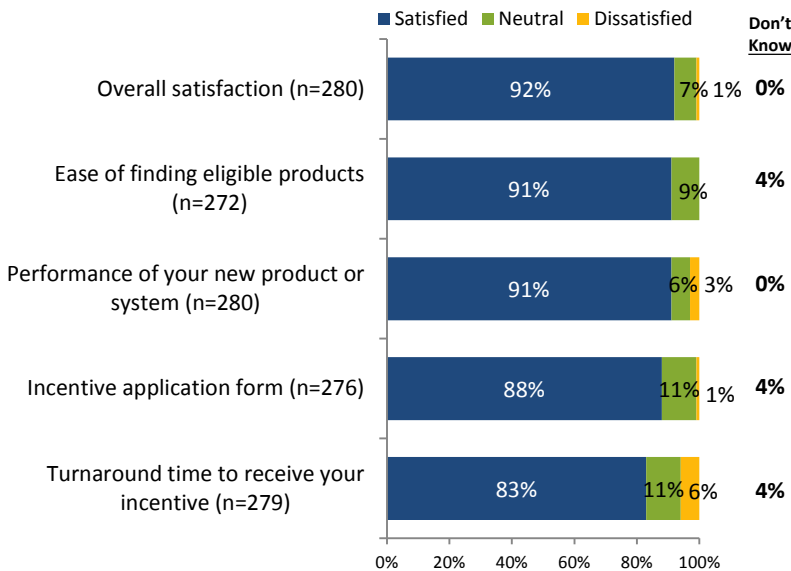
- How influential were the following elements on your decision to purchase your product?

# Refrigerators

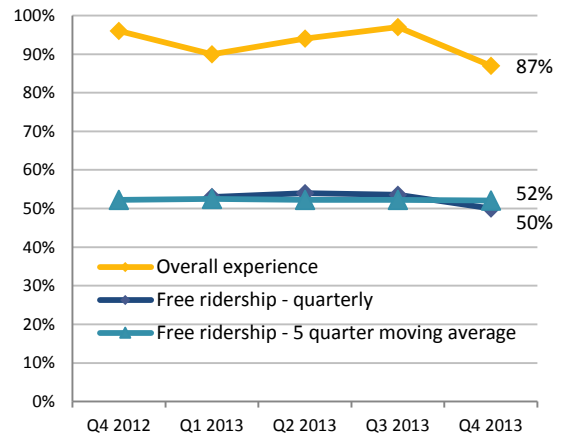
- 92% of respondents rated their overall satisfaction a 4 or 5 out of 5. 91% of respondents were satisfied with the ease of finding eligible products and 91% were satisfied with the performance of their new refrigerator.
- 76% would have gotten the same refrigerator without incentives and information from Energy Trust.
- 79% of respondents said the purchased unit was replacing an old unit. 30% of the old units were recycled through Energy Trust and another 34% had the old unit removed by the retailer that delivered their new refrigerator.
- Respondents reported the salesperson had the greatest influence on their choice of refrigerator.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

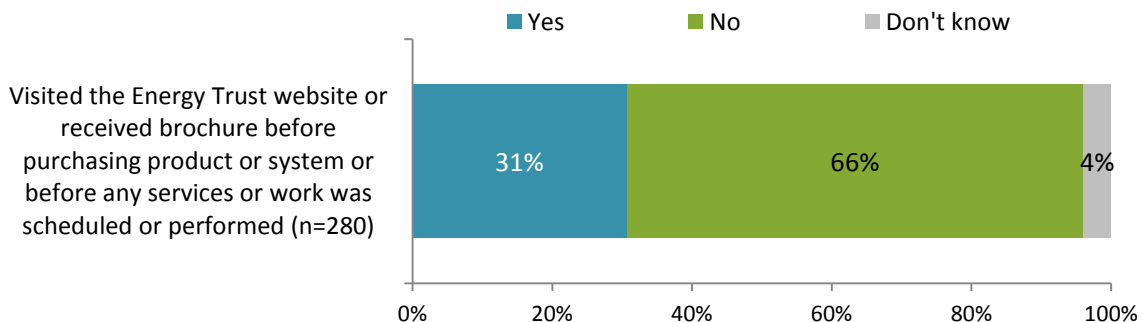


Note: There were fewer than 30 respondents in Q4 2012, so the quarterly free ridership estimate is omitted from this graph.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



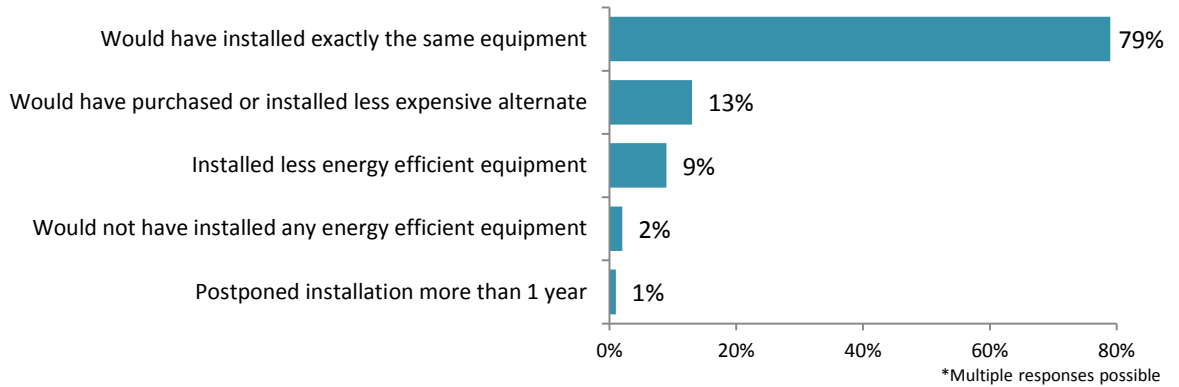
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Refrigerators

## Impact of Incentives and Information

Actions Would Have Taken Without Incentive or Information (n=276)\*

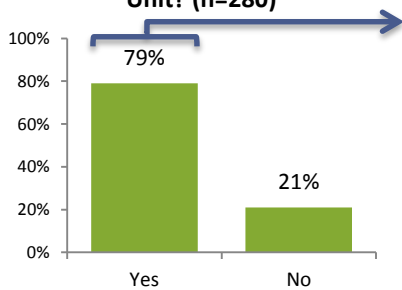


Survey question:

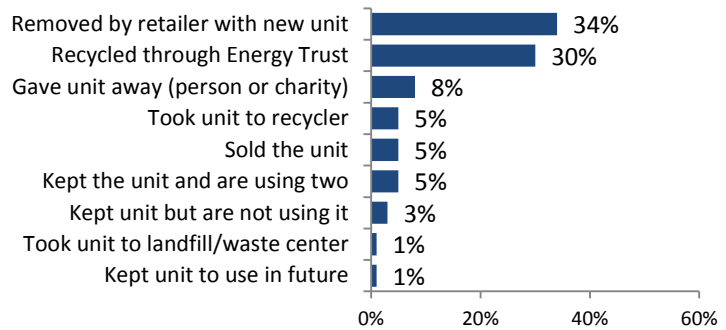
- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Household Refrigerator and Freezer Units

Did Refrigerator Just Purchased Replace an Old Unit? (n=280)



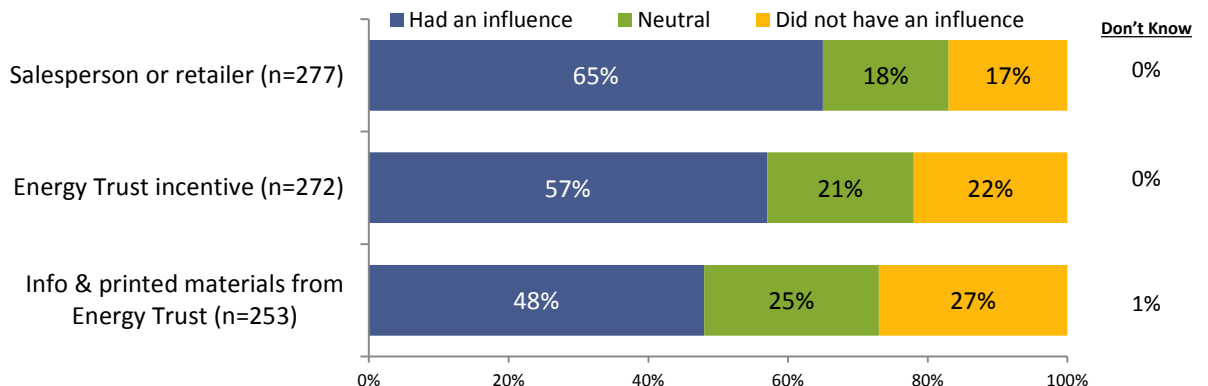
What was done with the old unit? (n=220)



Survey questions:

- Did the refrigerator you purchased replace an old unit?
- What did you do with your old unit?

## Influences on Decision to Purchase Energy Efficient Unit



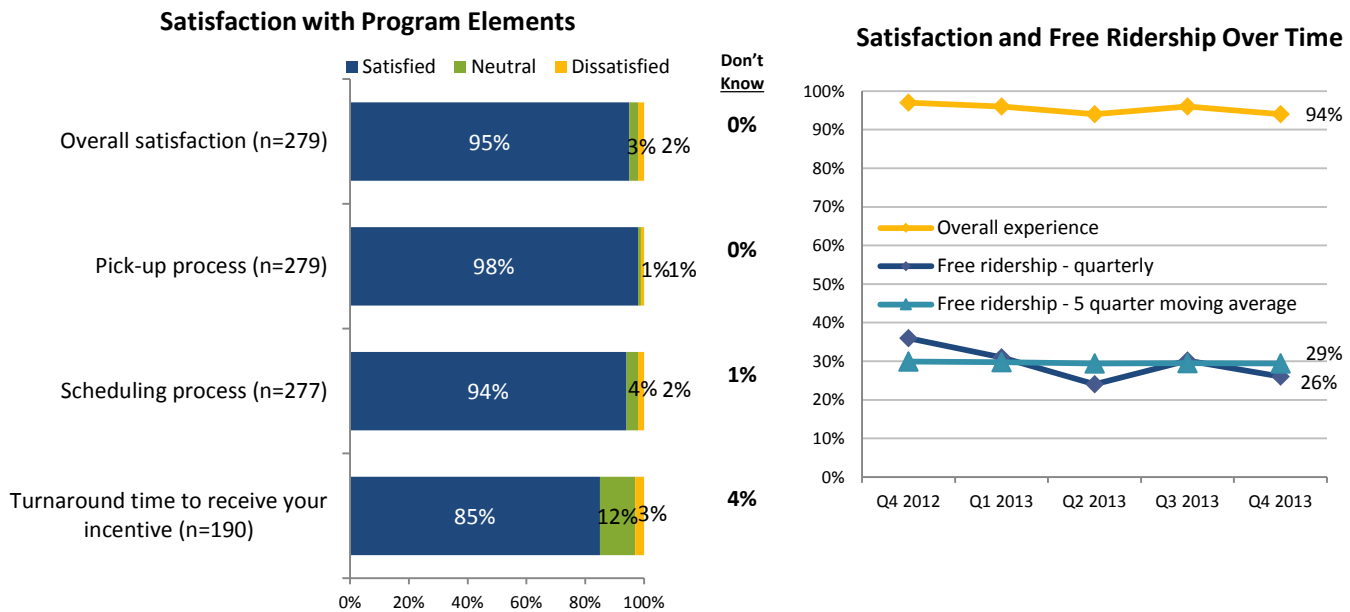
Survey question:

- How influential were the following elements on your decision to purchase your product?

# Refrigerator Recycling

- Starting Q2 2013, the randomly selected sample of refrigerator recycling participants was supplemented with non-randomly selected customers that donated their incentive to the Oregon Food Bank. The goal was to learn more about why customers decided to donate their incentive. 40% of the 280 completed surveys in 2013 were with customers that donated their incentive.
- 95% of respondents rated their overall satisfaction a 4 or 5 out of 5. 98% were satisfied with the pick-up process and 94% were satisfied with the scheduling process.
- 69% of respondents indicated that they were replacing the old unit; the majority of those were replacing with a new unit.

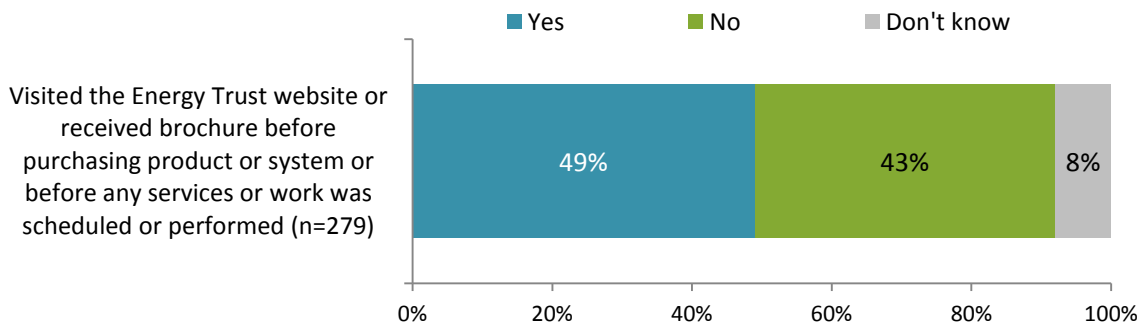
## Participant Satisfaction



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



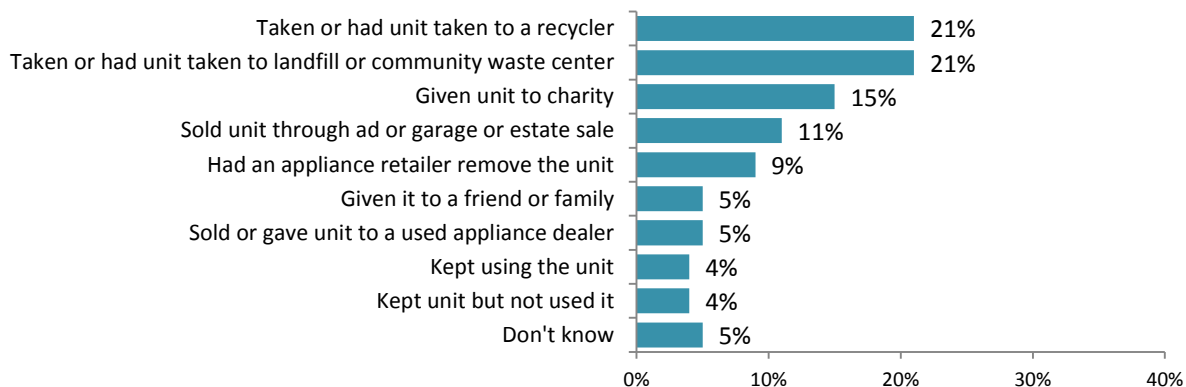
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Refrigerator Recycling

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=280)

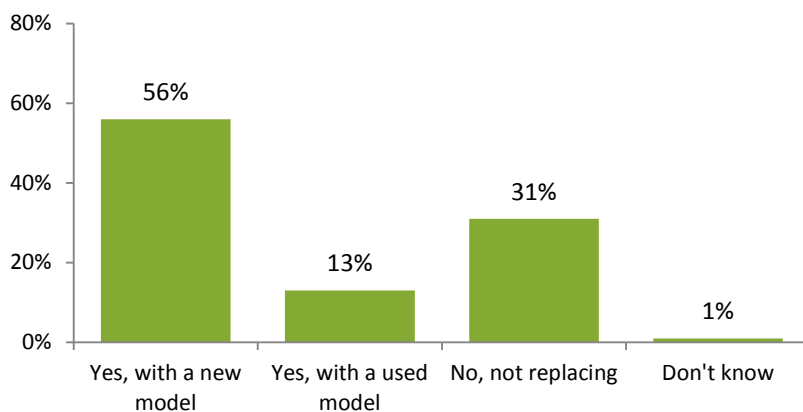


Survey question:

• Please describe the actions you would have taken had the Energy Trust fridge recycling incentive and information not been available....

## Replacing the Refrigerator

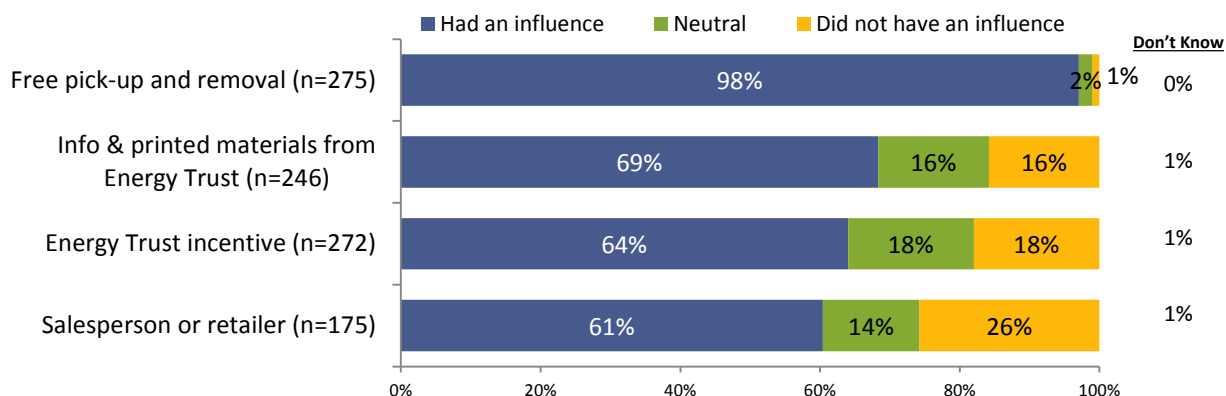
(n=279)



Survey question:

• Are you replacing, or have you replaced the refrigerator that was recycled?

## Influences on Decision to Recycle Refrigerator



Survey question:

• How influential were the following elements on your decision to have services or work performed?

# Existing Homes Summary

- For all groups, sample sizes were sufficient to meet the goal of 90% confidence / 10% margin of error. Standalone air and duct sealing measures are no longer included in Fast Feedback due to the removal of incentives for these measures in the standard Existing Homes track. A quota group was added for gas fireplaces, and ductless heat pumps are now included in the heat pump quota group, although results for heat pumps and ductless heat pumps are reported separately.
- Overall satisfaction with Existing Homes programs varied from a high of 95% (water heaters) to a low of 81% (wall insulation). Satisfaction with turnaround time to receive incentives dropped relative to 2012, and may be related to delays in processing incentive applications early in the year.
- Free ridership is up 5 or more percentage points relative to 2012 for ceiling insulation (6 percentage points), duct insulation (13 percentage points), and home performance (5 percentage points). Free ridership for all other measures was in line with 2012 estimates.

Survey Group	2013 Measures in Oregon <sup>§</sup>	Oregon Surveys Completed	2013 Measures in Washington <sup>§</sup>	Washington Surveys Completed	Percent Satisfied	Free Ridership <sup>‡</sup>
Ceiling Insulation	1,183	203	21	9	88%	40%
Floor Insulation	867	204	7	2	89%	37%
Wall Insulation	398	127	3	1	81%	40%
Duct Insulation	374	108	6	2	92%	36%
Gas Furnaces	--	--	--	43	--	--
Heat Pumps	1,067	123	--	--	92%	45%
Ductless Heat Pumps	991	115	--	--	94%	35%
Gas Fireplaces	1,224	174	64	31	92%	47%
Water Heaters	561	123	31	10	95%	43% <sup>α</sup>
Windows	3,154	240	74	22	88%	47%
Home Performance	226 <sup>α</sup>	89	--	--	85%	33%
Home Energy Review	1,616	236	63	25	85%	--
Existing Homes – Washington	--	--	--	145	93%	-- <sup>†</sup>
Existing Homes – Oregon	--	1,742	--	--	88%	--

Note: There are no measure-level quotas for Existing Homes – Washington.

<sup>†</sup> Free ridership is not calculated through Fast Feedback.

<sup>‡</sup> Free ridership estimates for residential measures are calculated for Oregon respondents only. However, the satisfaction numbers for Existing Homes measures include both Oregon and Washington respondents.

<sup>α</sup> We report number of home performance projects, not measures.

<sup>α</sup> 0.67 residential gas water heaters are part of a market transformation effort; free ridership is shown for information only and will not be the basis for programmatic decisions about the measure.

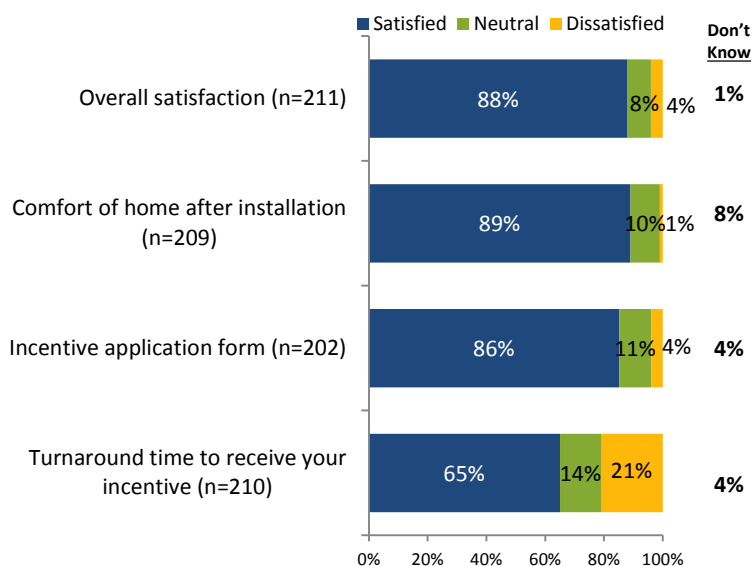
<sup>§</sup> Measure totals for 2013 only include projects eligible for Fast Feedback, and therefore may not match other Energy Trust reports for 2013.

# Ceiling Insulation

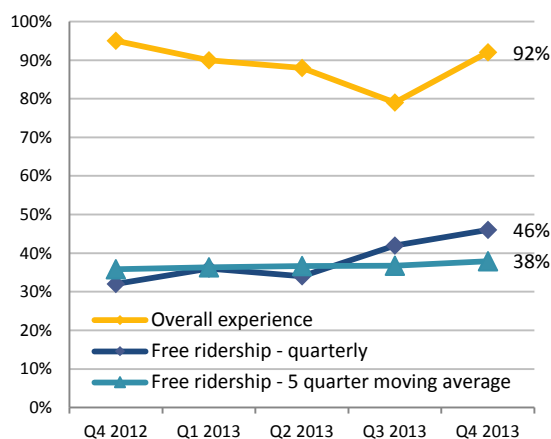
- 88% of respondents rated their overall satisfaction a 4 or 5 out of 5. Satisfaction was lowest with the turnaround time to receive the incentive (65%), but satisfaction with comfort of home post-installation was high (rated 4 or 5 by 89% of respondents).
- 52% of respondents visited the Energy Trust website or received a brochure before installing insulation.
- 59% would have installed insulation without Energy Trust incentives and information, while 22% would have postponed the insulation and 9% would not have installed it at all.
- 87% of respondents were satisfied with their contractor; 36% consulted the approved trade ally list when choosing their contractor. 88% reported that their contractor completed some or all of the incentive paperwork for them.

## Participant Satisfaction

Satisfaction with Program Elements



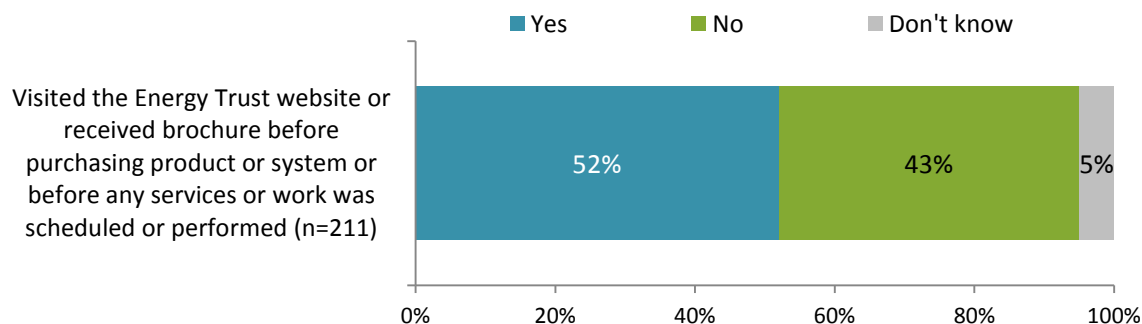
Satisfaction and Free Ridership Over Time



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



Survey question:

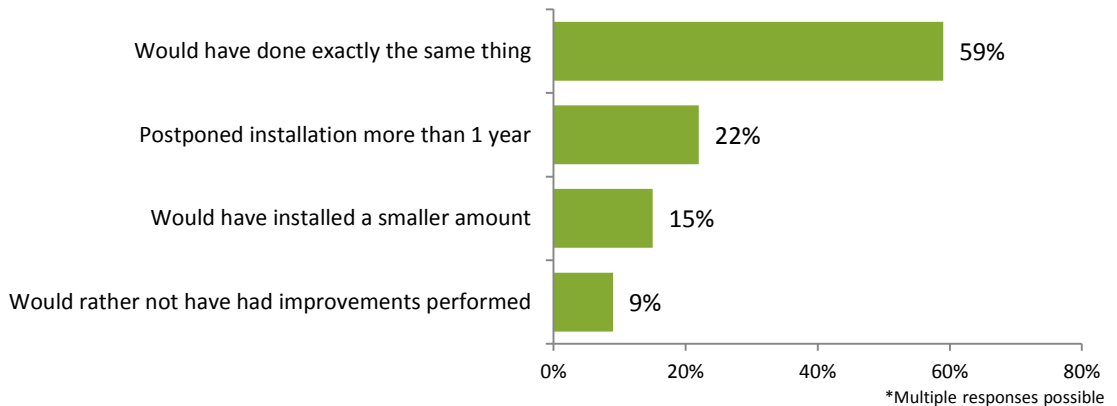
- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?



# Ceiling Insulation

## Impact of Incentives and Information

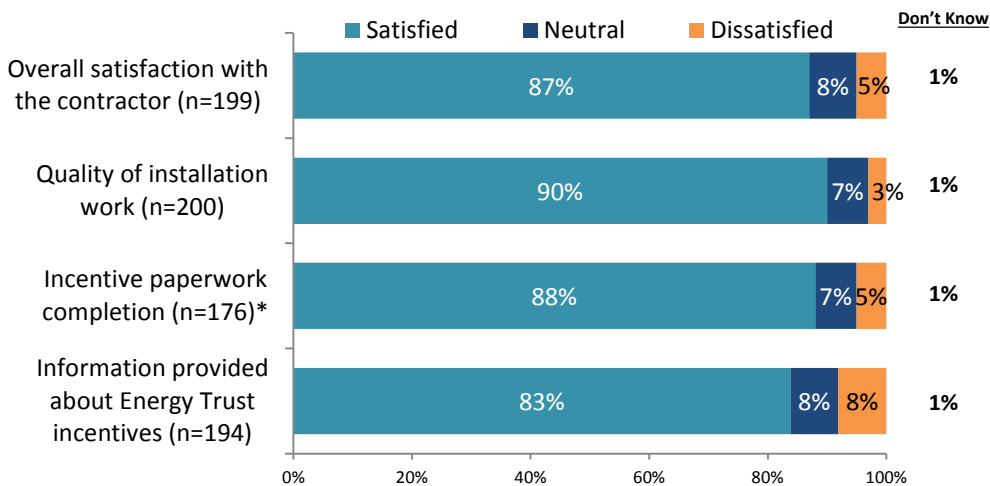
Actions Would Have Taken Without Incentive or Information (n=208)\*



Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



\*Only asked of respondents that said their contractor completed paperwork.

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

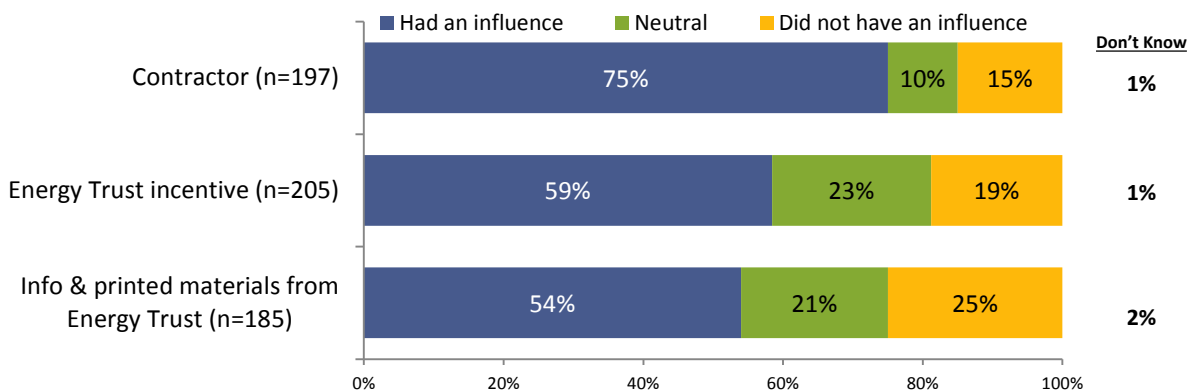
Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=201)

Yes	36%
No	61%
Don't know	4%

Did your contractor complete some or all of the incentive paperwork for you? (n=200)

Yes	88%
No	9%
Don't know	4%

## Influences on Decision to Have Services or Work Performed



Survey question:

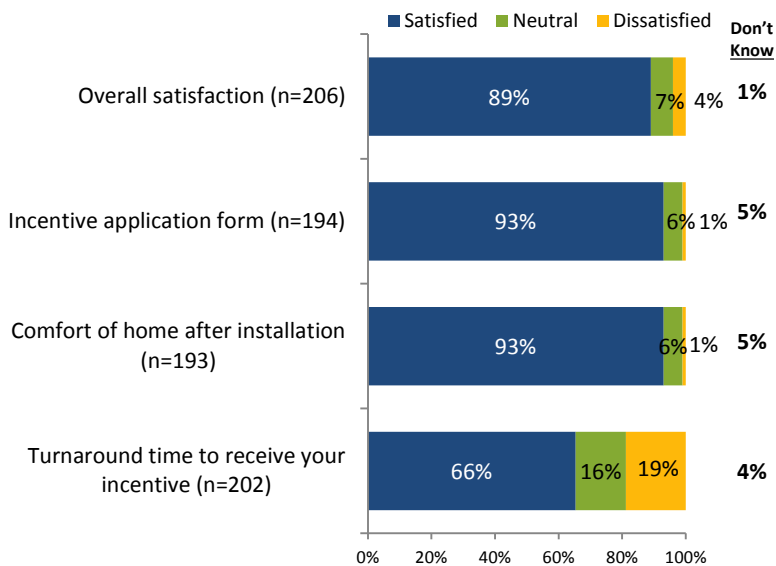
- How influential were the following elements on your decision to have services or work performed?

# Floor Insulation

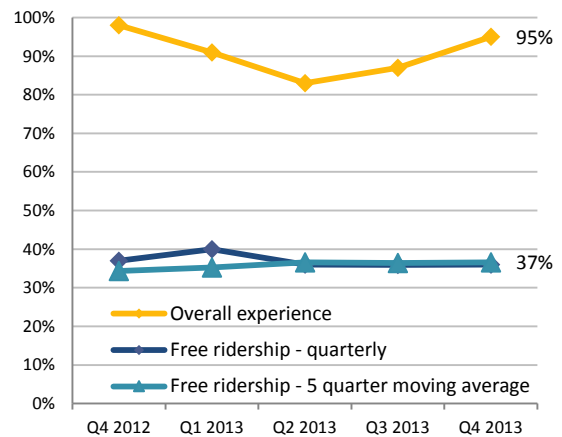
- 89% of respondents rated their overall satisfaction a 4 or 5 out of 5.
- 49% of respondents visited the website or received a brochure before having floor insulation installed.
- 56% would have installed insulation without Energy Trust incentives and information; 22% would have postponed installation for at least a year.
- The contractor was most influential in the decision to have floor insulation installed (rated a 4 or 5 by 82% of respondents).
- 93% of respondents were satisfied with their contractor; 33% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



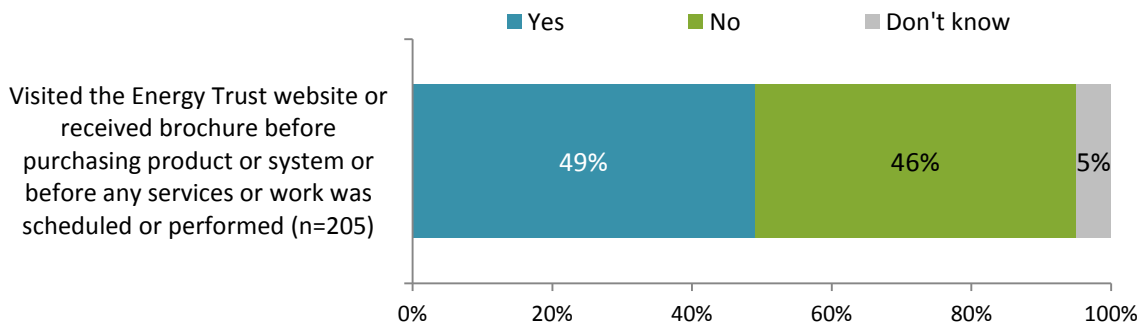
Satisfaction and Free Ridership Over Time



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



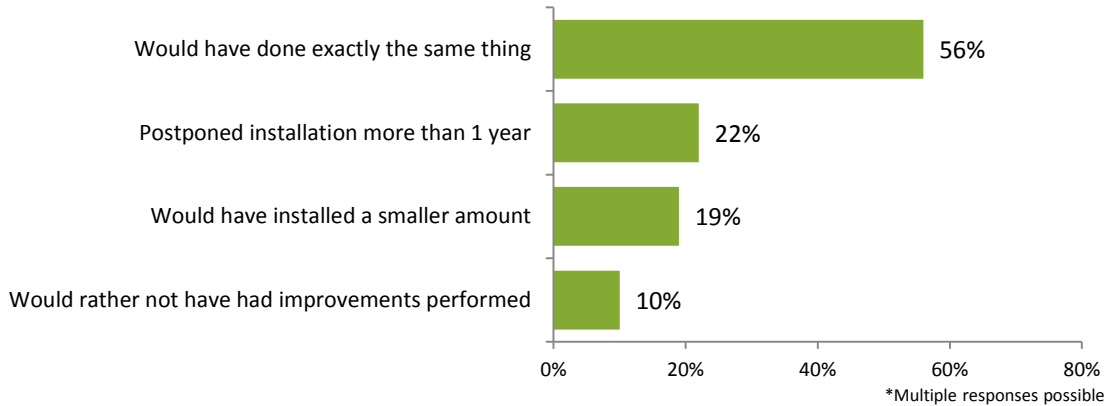
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Floor Insulation

## Impact of Incentives and Information

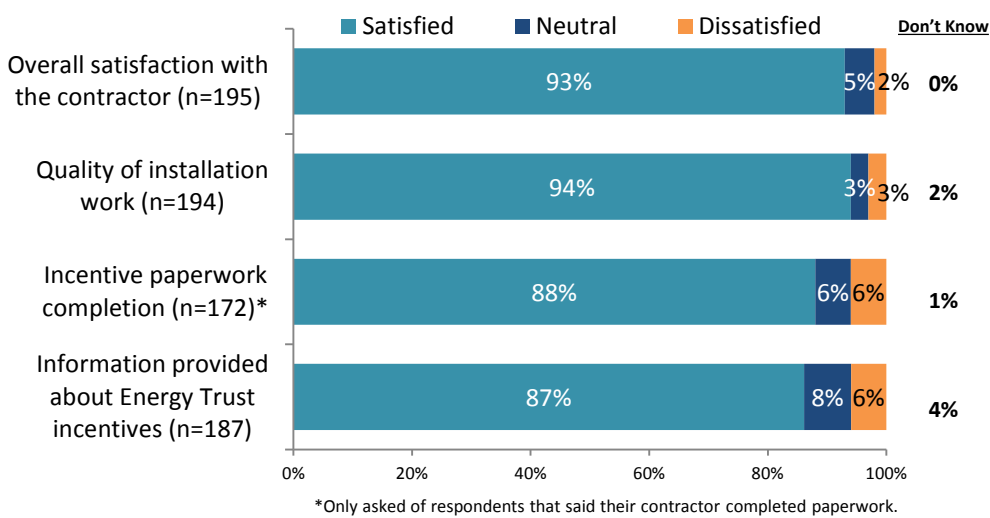
Actions Would Have Taken Without Incentive or Information (n=205)\*



Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=196)

Yes	33%
No	62%
Don't know	5%

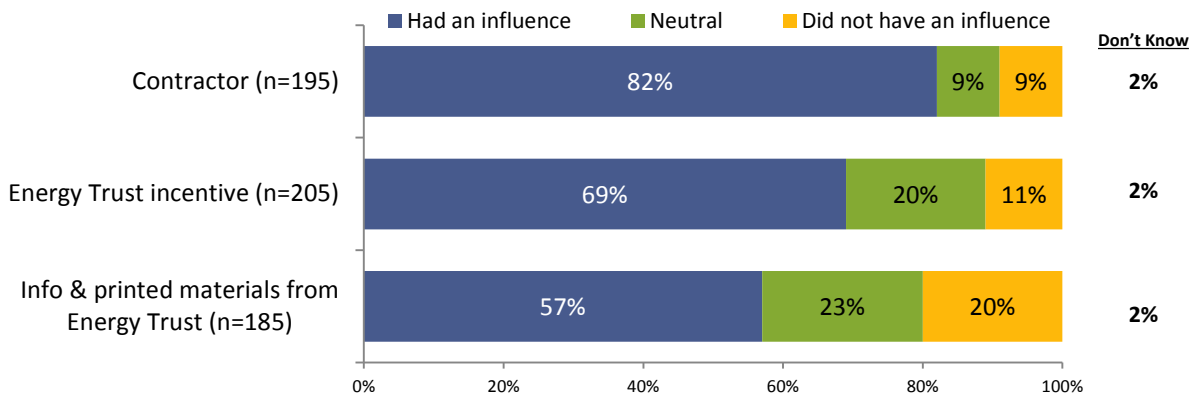
Did your contractor complete some or all of the incentive paperwork for you? (n=195)

Yes	89%
No	8%
Don't know	3%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

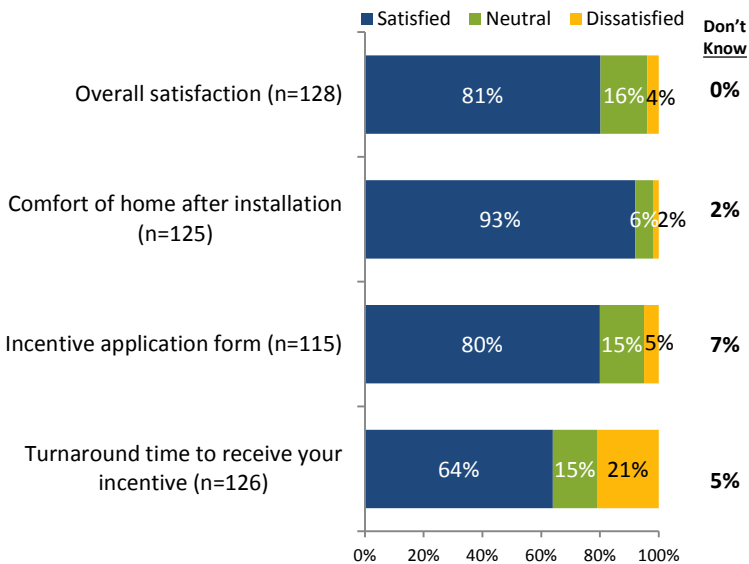
- How influential were the following elements on your decision to purchase your product or system or have services or work performed?

# Wall Insulation

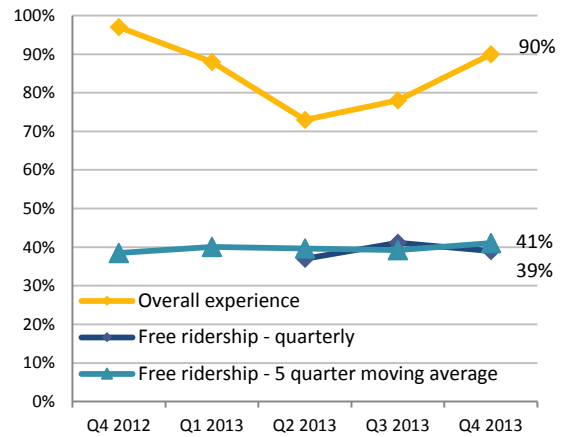
- 81% of respondents rated their overall satisfaction a 4 or 5 out of 5. Satisfaction with comfort of home post-installation was 93% among those who could give a rating.
- 55% of respondents visited our website or received a brochure before having insulation installed.
- 59% reported that they would have installed insulation without the incentive and information.
- The contractor was most influential in the decision to have wall insulation installed (76% rating a 4 or 5).
- 90% of respondents were satisfied with their contractor; 49% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

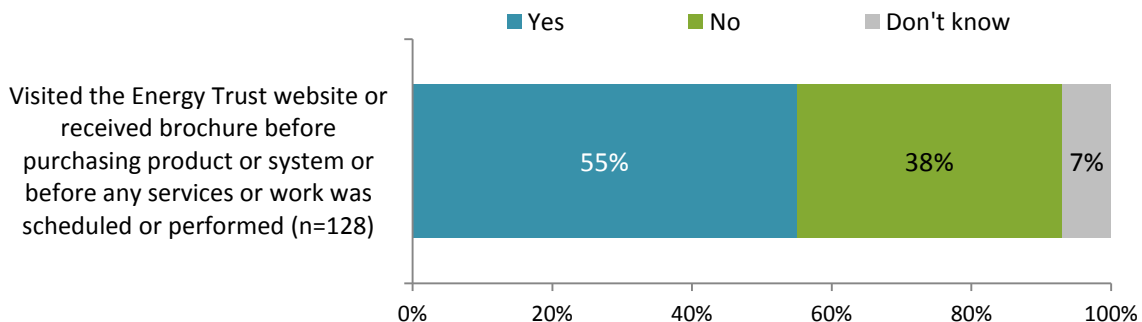


Note: There were fewer than 30 respondents in Q4 2012 and Q1 2013, so these quarterly free ridership estimates are omitted from this graph.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



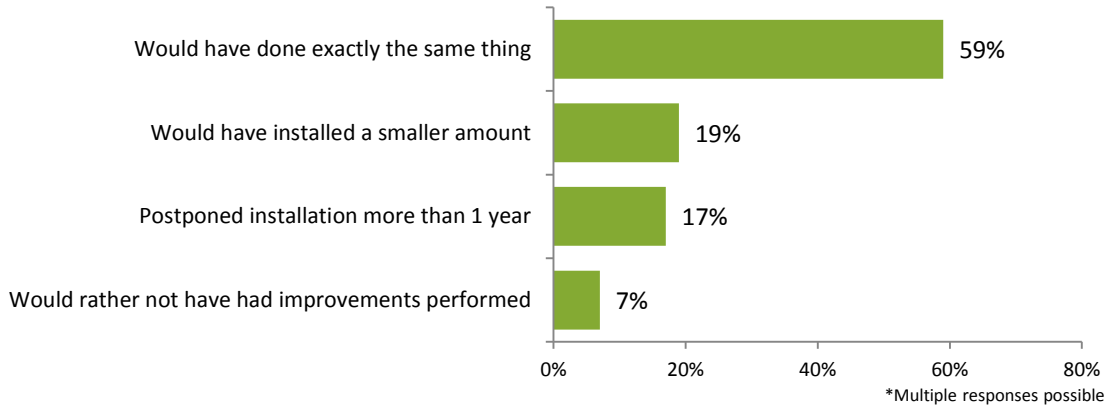
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Wall Insulation

## Impact of Incentives and Information

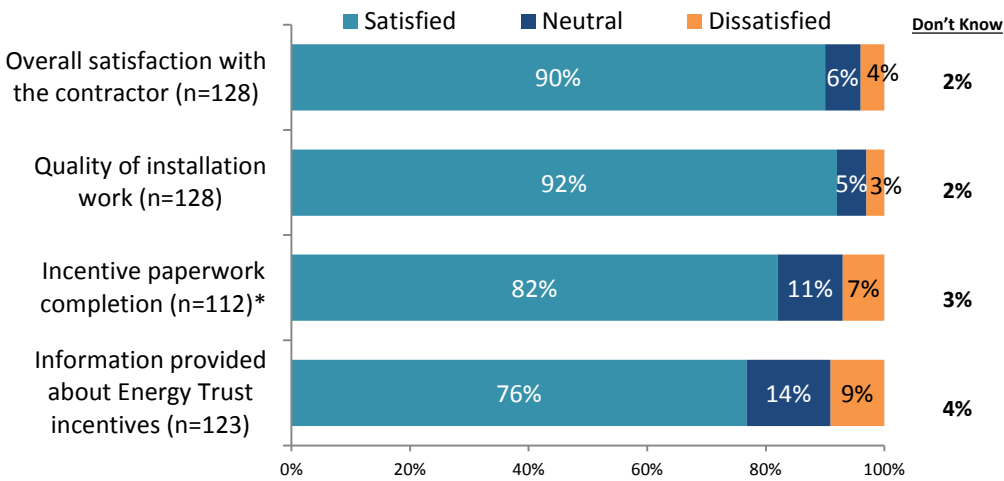
Actions Would Have Taken Without Incentive or Information (n=125)\*



Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



\*Only asked of respondents that said their contractor completed paperwork.

**Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=128)**

Yes	49%
No	48%
Don't know	3%

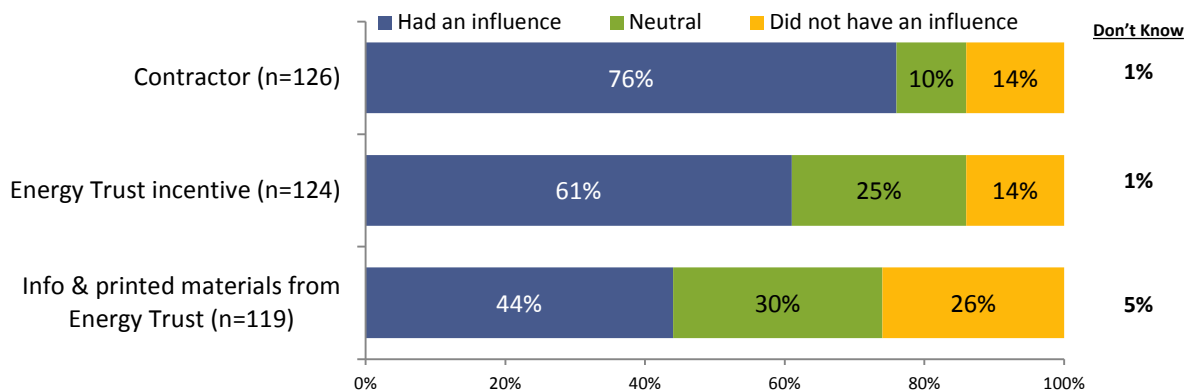
**Did your contractor complete some or all of the incentive paperwork for you? (n=128)**

Yes	88%
No	10%
Don't know	2%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

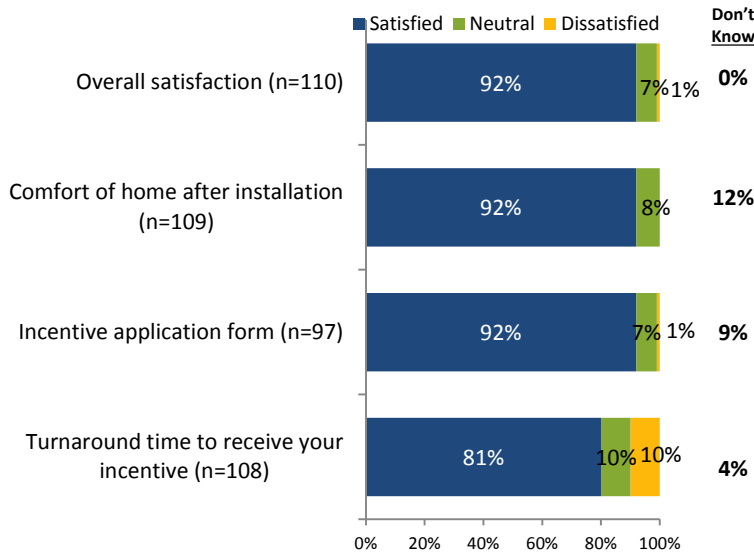
- How influential were the following elements on your decision to have services or work performed?

# Duct Insulation

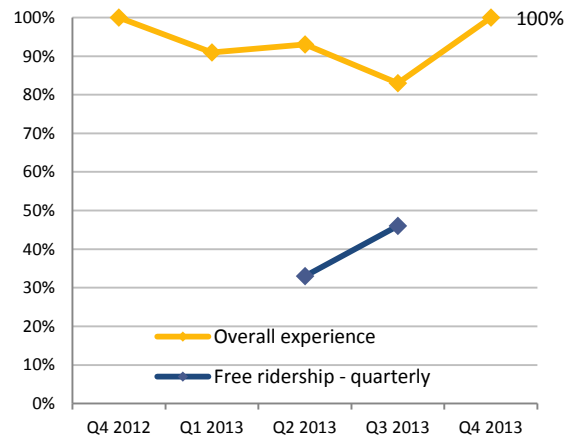
- 92% of respondents rated their overall satisfaction a 4 or 5 out of 5.
- Free ridership for duct insulation in 2013 was higher than in 2012 (36% vs. 23%).
- 58% would have installed the same amount of duct insulation in the absence of Energy Trust incentives and information, and 18% would have postponed the installation at least a year.
- The contractor was the most influential element in the decision to have duct insulation installed (88% rating a 4 or 5 out of 5).
- 94% of respondents were satisfied with their contractor; 38% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

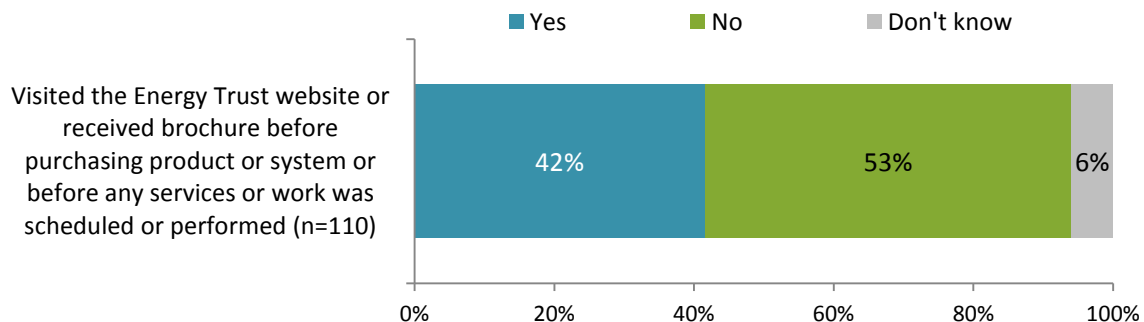


Note: There were fewer than 30 respondents in Q4 2012, Q1 2013, and Q4 2013 so these quarterly free ridership estimates are omitted from this graph.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



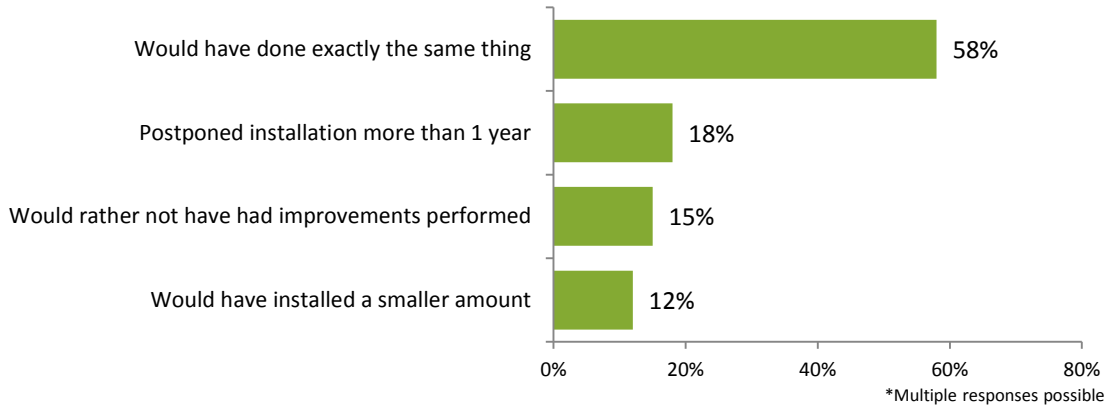
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Duct Insulation

## Impact of Incentives and Information

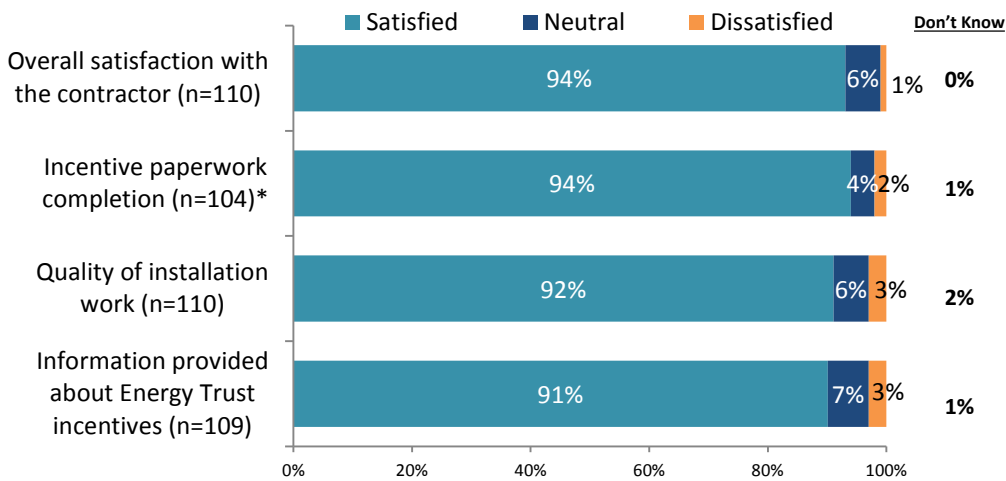
Actions Would Have Taken Without Incentive or Information (n=107)\*



Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



\*Only asked of respondents that said their contractor completed paperwork.

**Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=110)**

Yes	38%
No	55%
Don't know	7%

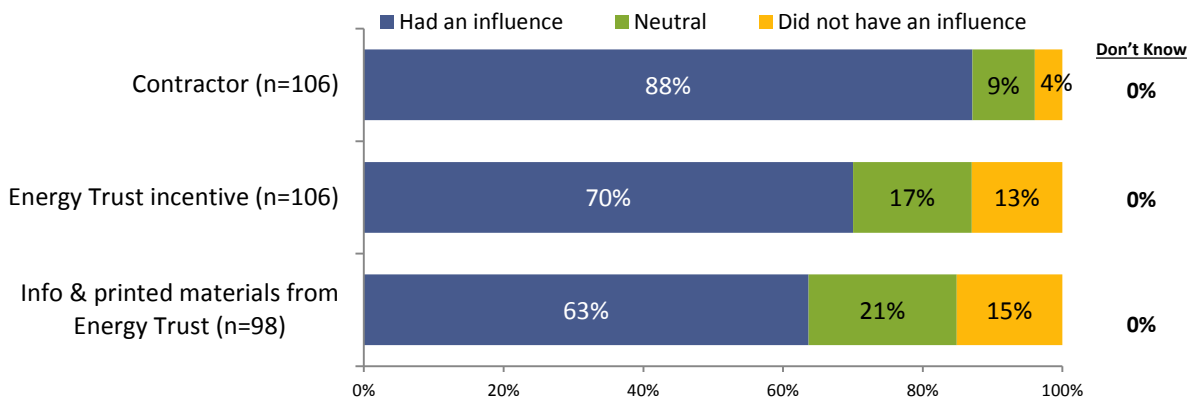
**Did your contractor complete some or all of the incentive paperwork for you? (n=110)**

Yes	96%
No	3%
Don't know	2%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

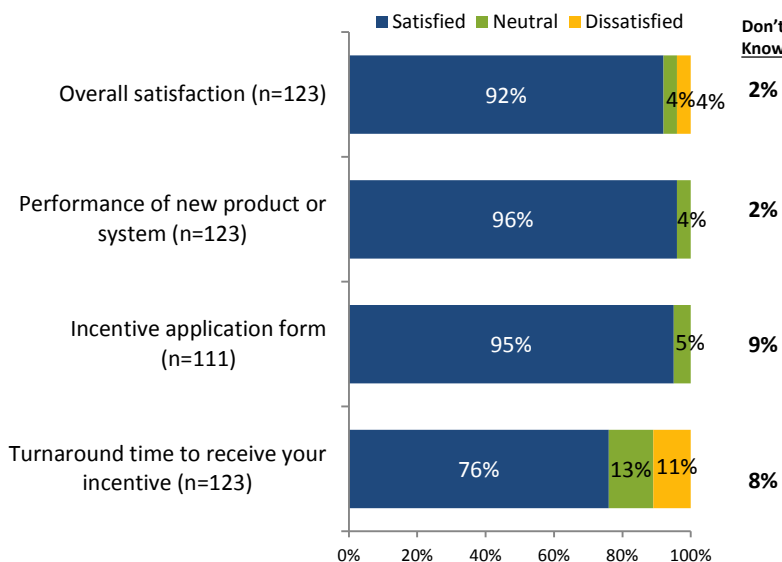
- How influential were the following elements on your decision to have services or work performed?

# Heat Pumps

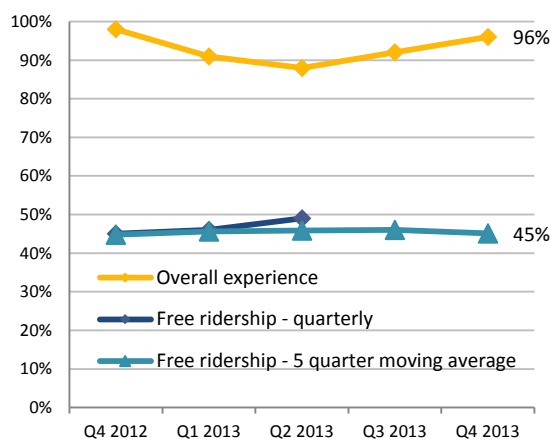
- 92% of respondents rated their overall satisfaction a 4 or 5 out of 5, in line with 2012 results (89%).
- 29% of respondents visited the website or received a brochure before installing their heat pump.
- 68% of respondents would have installed the same heat pump in absence of Energy Trust incentives and information; the contractor had the most influence on the decision to install the heat pump (83% rating 4 or 5 out of 5).
- Most respondents have applied (or will) for the state tax credit (81%).
- 94% of respondents were satisfied with their contractor; 29% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

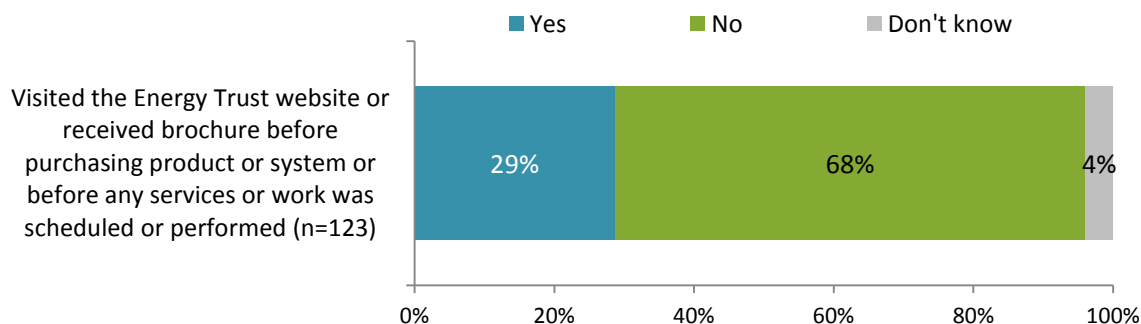


Note: There were fewer than 30 respondents in Q3 2013 and Q4 2013, so these quarterly free ridership estimates are omitted from this graph.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



Survey question:

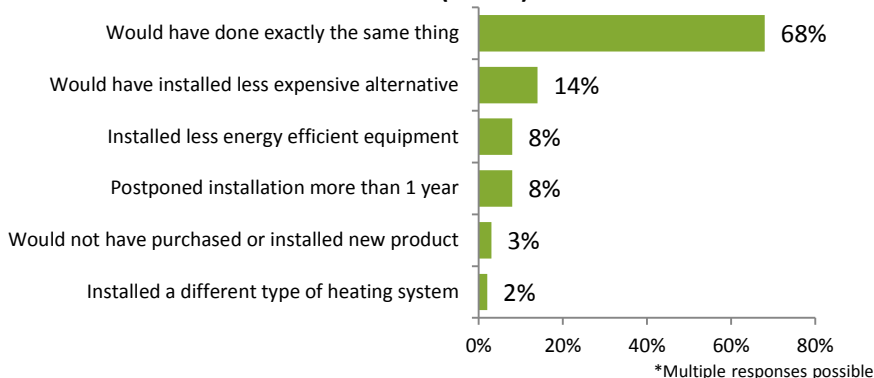
- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?



# Heat Pumps

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=122)\*



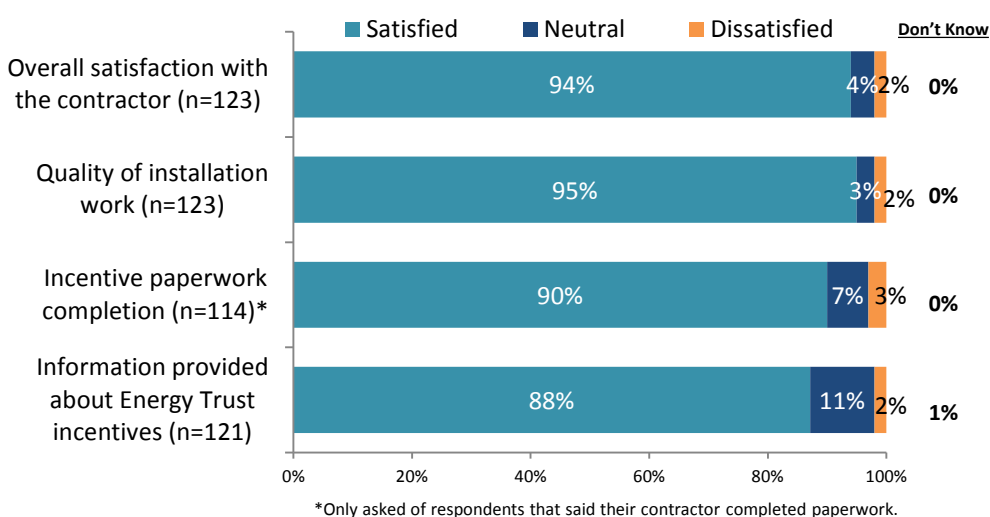
### Have you or will you apply for the Oregon State Residential Energy Tax Credit? (n=120)

Yes	81%
No	8%
Don't know	8%
Not aware of credit	4%

Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



### Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=123)

Yes	29%
No	68%
Don't know	3%

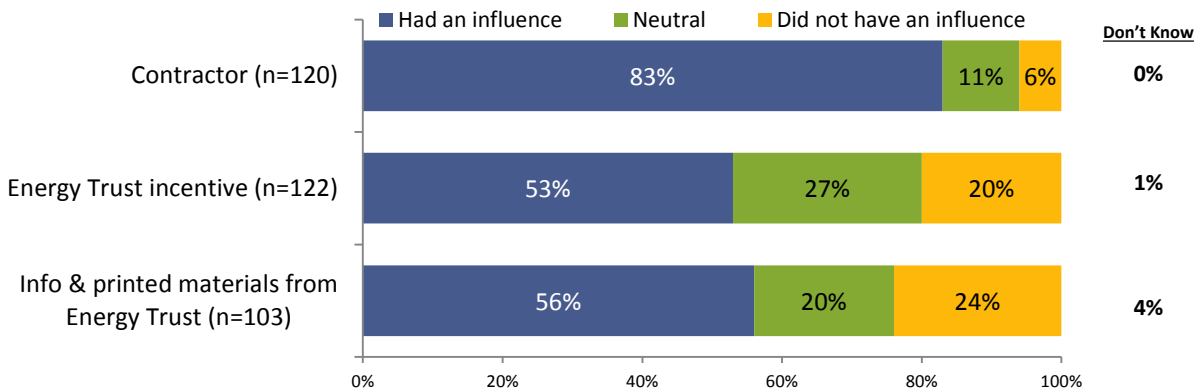
### Did your contractor complete some or all of the incentive paperwork for you? (n=123)

Yes	93%
No	5%
Don't know	2%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

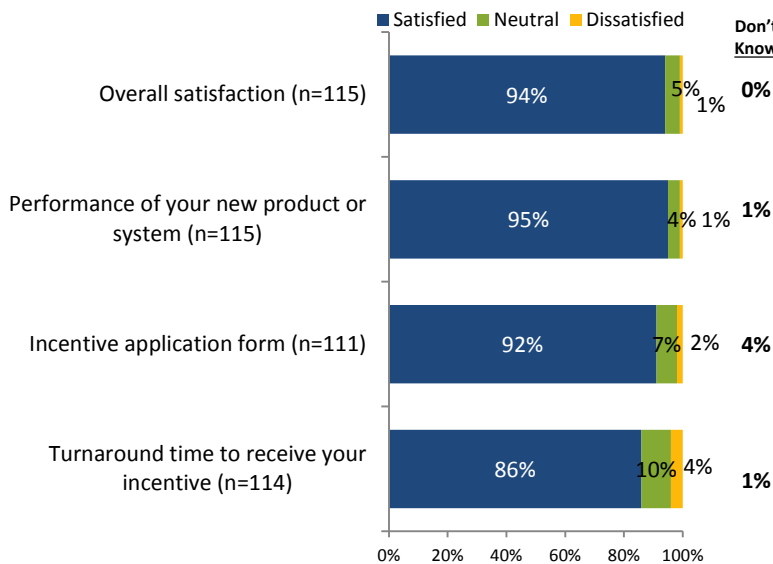
- How influential were the following elements on your decision to have services or work performed?

# Ductless Heat Pumps

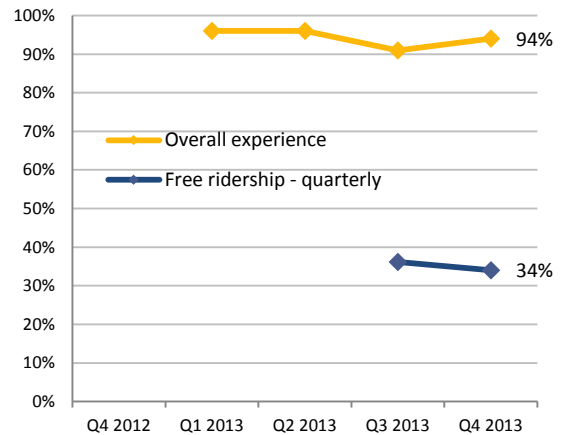
- Ductless heat pumps were added to Fast Feedback starting Q1 2013, and 94% of respondents rated their overall satisfaction a 4 or 5 out of 5.
- 56% would have installed the same equipment in the absence of Energy Trust incentives and information, and 21% would have postponed installation at least one year.
- The contractor was most influential on the decision to install the ductless heat pump (90% rating a 4 or 5 out of 5).
- 95% of respondents were satisfied with their contractor; 47% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

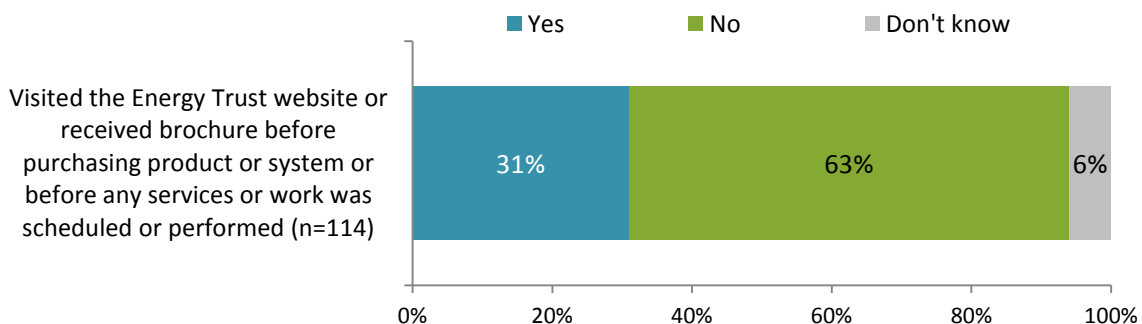


Note: Ductless heat pumps were added to the sample in 2013; there is no data for Q4 2012. We do not have sufficient data to calculate a five-quarter moving average, so only quarterly estimates are provided above. There were fewer than 30 respondents in Q1 and Q2 2013.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



Survey question:

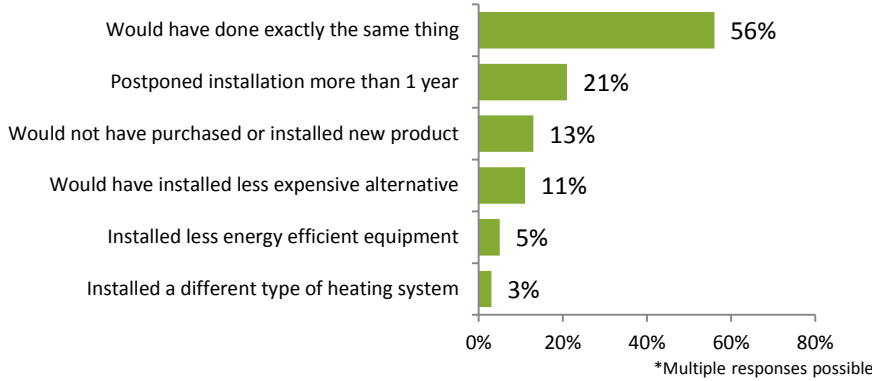
- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Ductless Heat Pumps

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information

(n=113)\*



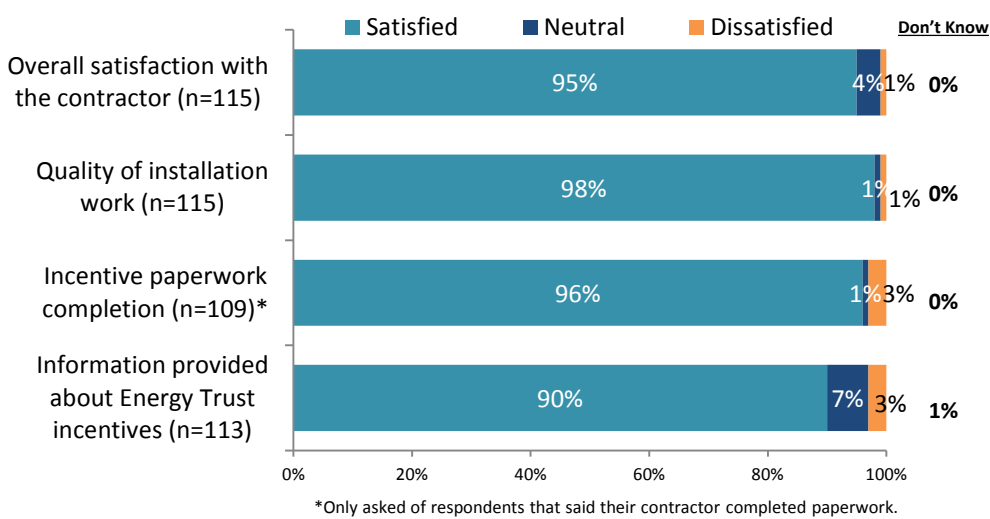
### Have you or will you apply for the Oregon State Residential Energy Tax Credit? (n=112)

Yes	84%
No	4%
Not aware of credit	5%
Don't know	5%

Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



### Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=115)

Yes	47%
No	50%
Don't know	3%

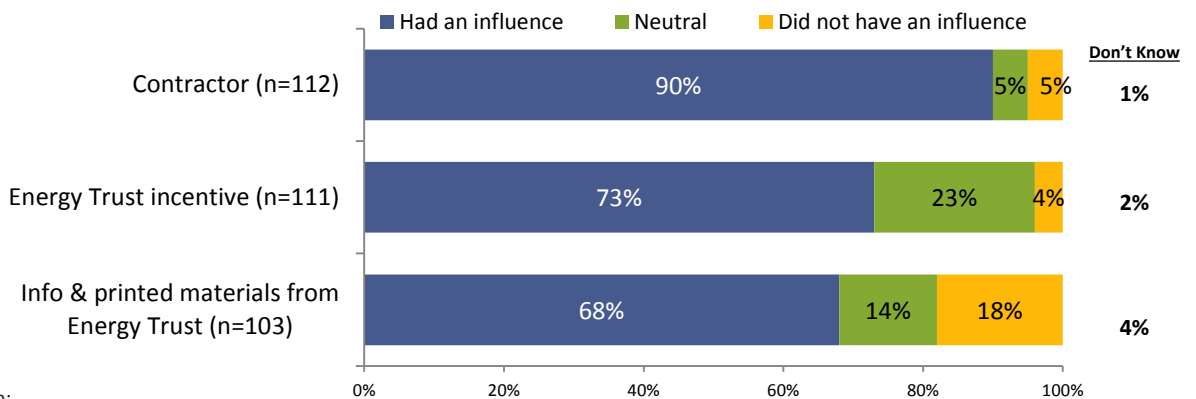
### Did your contractor complete some or all of the incentive paperwork for you? (n=115)

Yes	95%
No	4%
Don't know	2%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

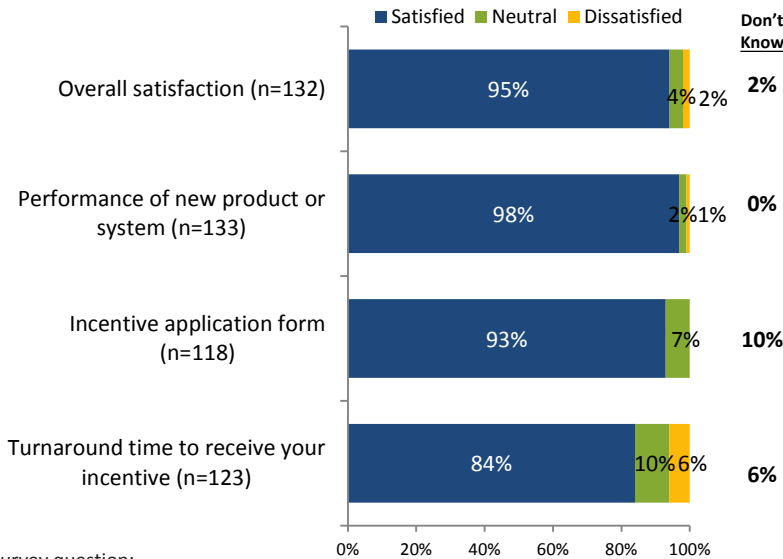
- How influential were the following elements on your decision to have services or work performed?

# Water Heaters

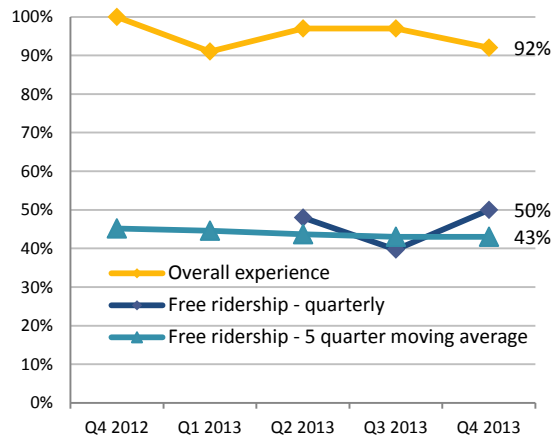
- 95% of respondents rated their overall satisfaction a 4 or 5 out of 5.
- 49% of respondents utilized the website or a brochure before work was scheduled or performed.
- 50% of respondents said that they would have bought the same water heater without Energy Trust incentives; however, the influence of the incentive was rated a 4 or 5 out of 5 by 66% of the respondents.
- Half of respondents have applied (or will) for the state tax credit.
- 89% of respondents were satisfied with their contractor; 43% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

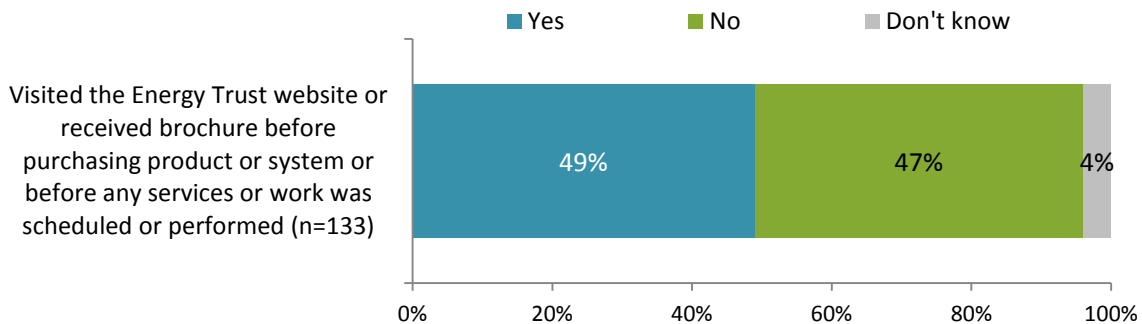


Note: There were fewer than 30 respondents in Q4 2012 and Q1 2013, so these quarterly free ridership estimates are omitted from this graph.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



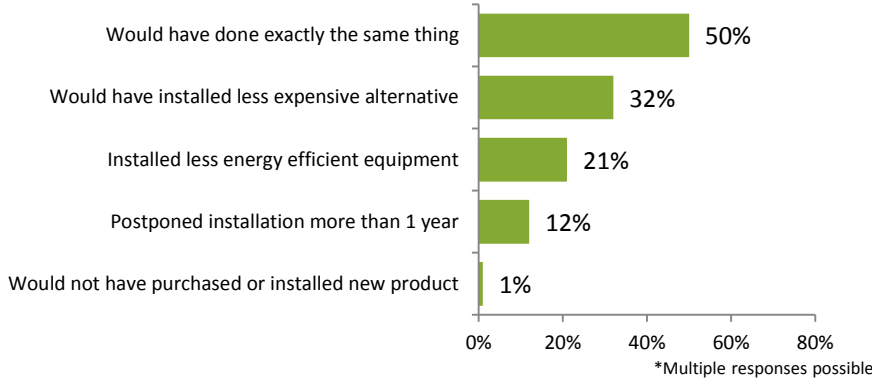
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Water Heaters

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=130)\*



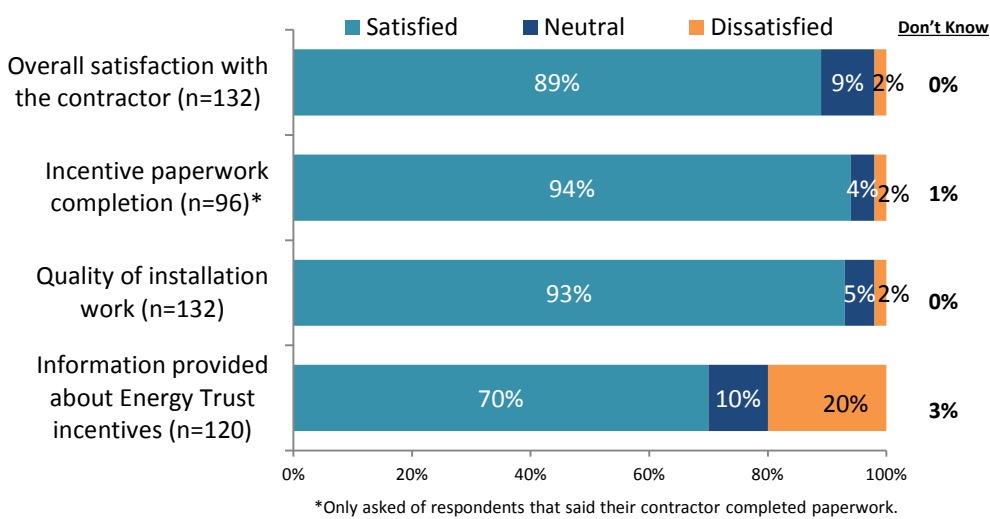
### Have you or will you apply for the Oregon State Residential Energy Tax Credit? (n=115)

Yes	50%
No	24%
Not aware of tax credit	15%
Don't know	11%

Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



### Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=133)

Yes	43%
No	53%
Don't know	4%

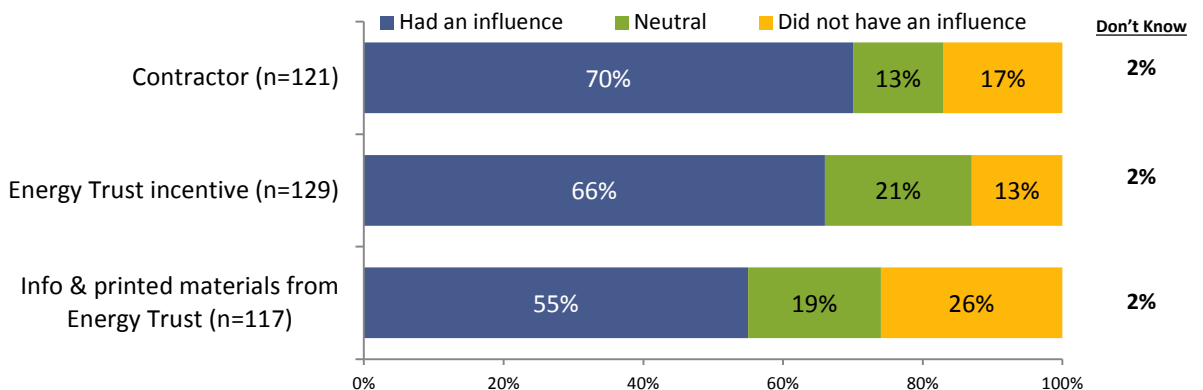
### Did your contractor complete some or all of the incentive paperwork for you? (n=131)

Yes	74%
No	18%
Don't know	8%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

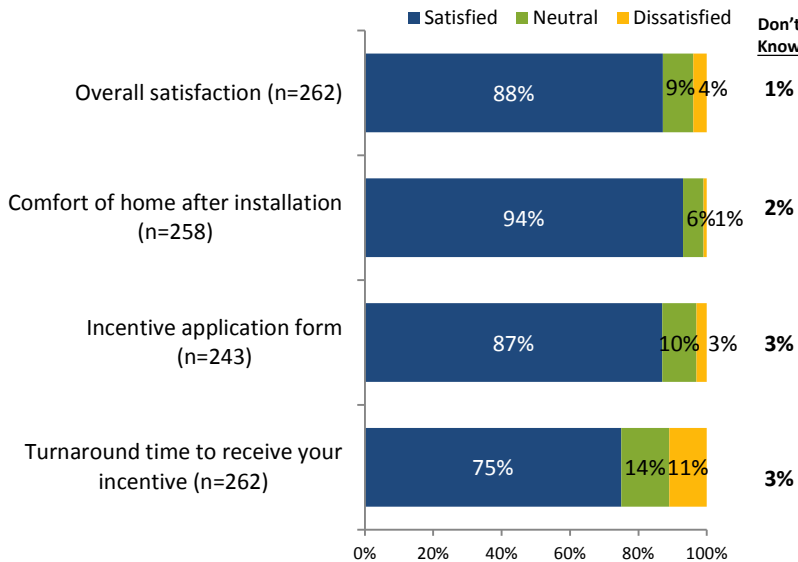
- How influential were the following elements on your decision to have services or work performed?

# Windows

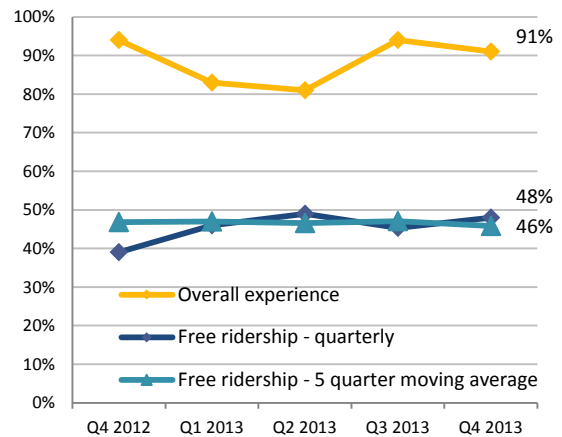
- 88% of respondents rated their overall satisfaction a 4 or 5 out of 5, similar to 2012 results (88%). Respondents were least satisfied with the turnaround time for the incentive (75%), but were very satisfied with comfort (94%).
- 38% of respondents visited the website or received a brochure before having their windows installed.
- 70% of respondents indicated that in the absence of Energy Trust incentives, they would have installed the same windows.
- The contractor was most influential on the decision to install windows (47% rating a 4 or 5 out of 5).
- 92% of respondents were satisfied with their contractor; only 23% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



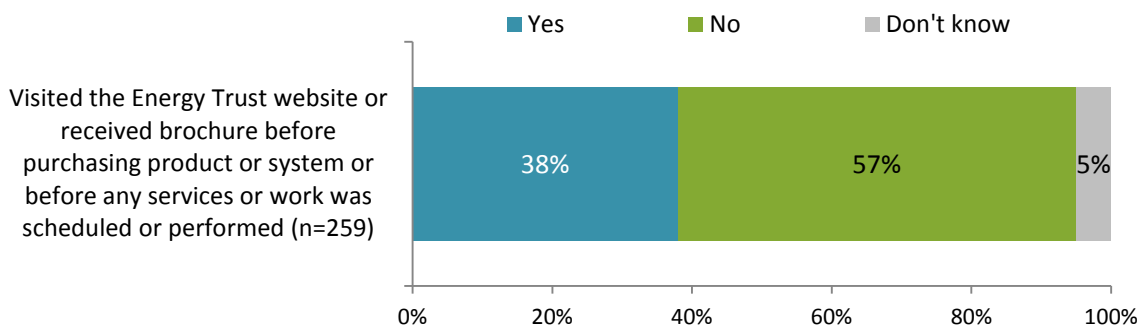
Satisfaction and Free Ridership Over Time



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project

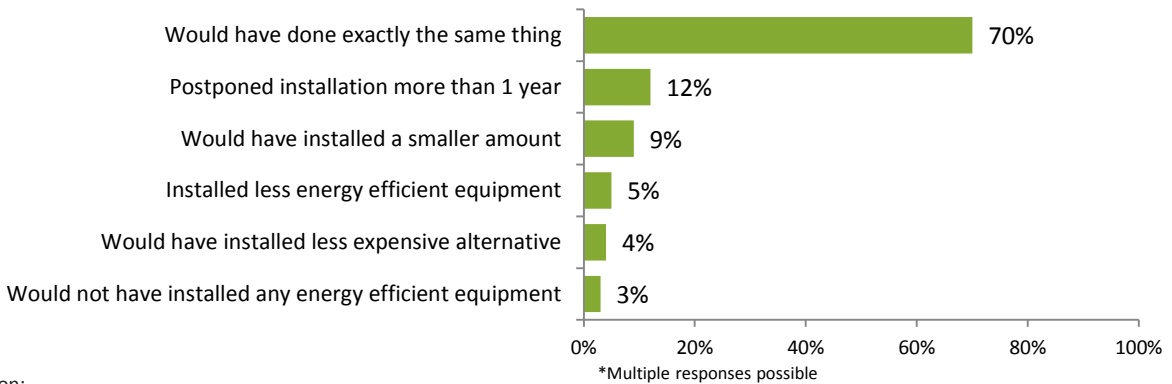


Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

## Impact of Incentives and Information

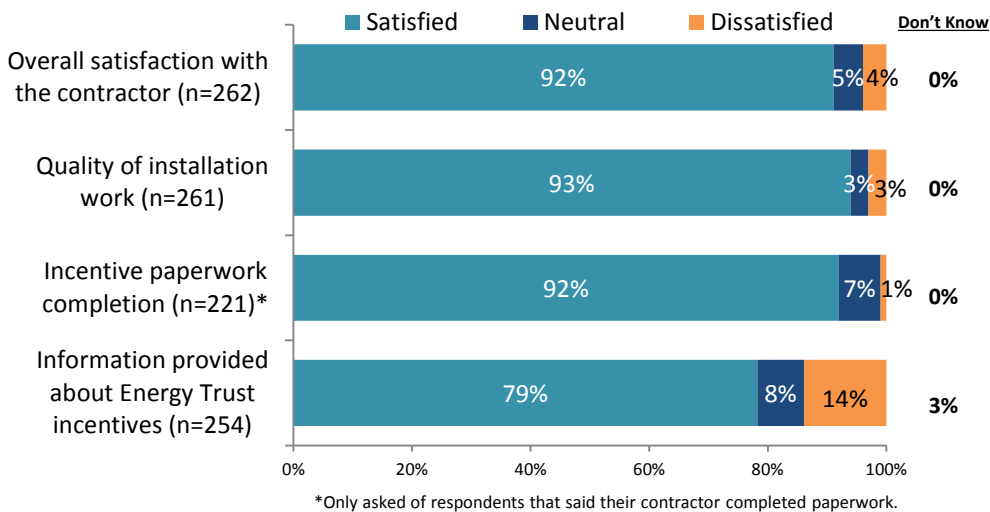
### Actions Would Have Taken Without Incentive or Information (n=260)\*



Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



**Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=262)**

Yes	23%
No	74%
Don't know	3%

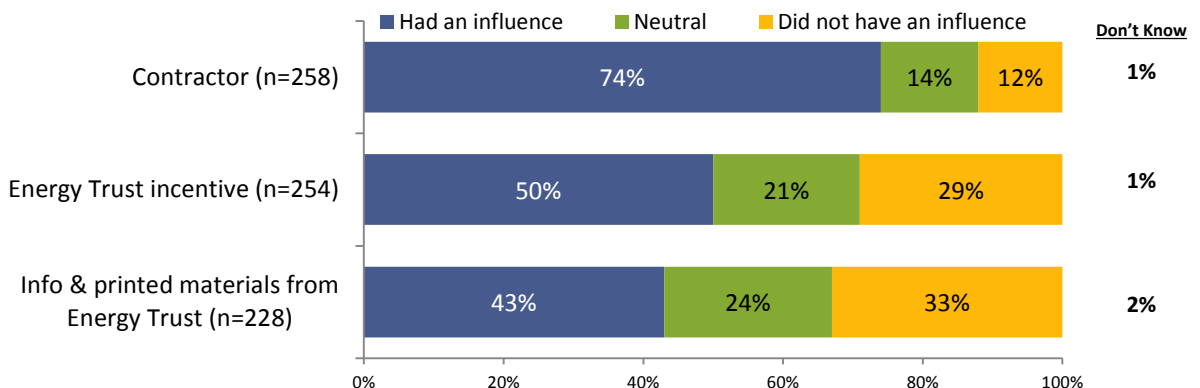
**Did your contractor complete some or all of the incentive paperwork for you? (n=262)**

Yes	84%
No	14%
Don't know	2%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

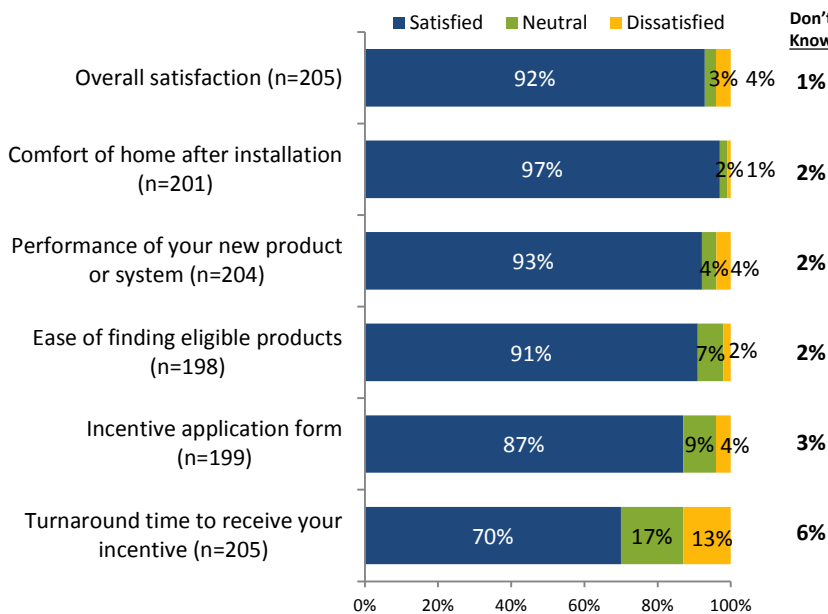
- How influential were the following elements on your decision to have services or work performed?

# Gas Fireplaces

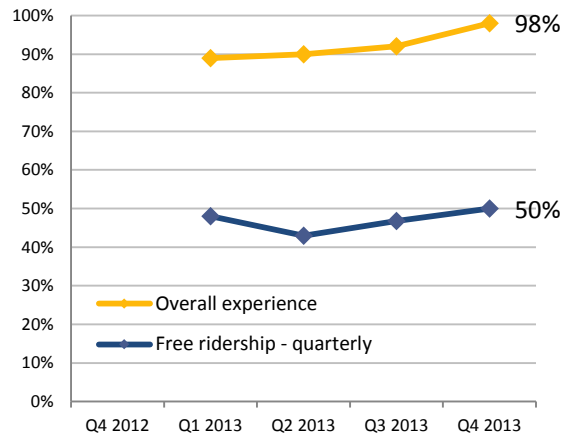
- Gas fireplaces were added to Fast Feedback starting Q1 2013 and 92% of respondents rated their overall satisfaction a 4 or 5 out of 5.
- 75% of respondents said they would have done the same project in absence of the program.
- Just over half of respondents reported that the gas fireplace replaced a wood burning fireplace.
- The appearance of the gas fireplace had the most influence on the decision to install the fireplace (91%). The incentive was influential for half of participants (50%).
- 91% of respondents were satisfied with their contractor; 29% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

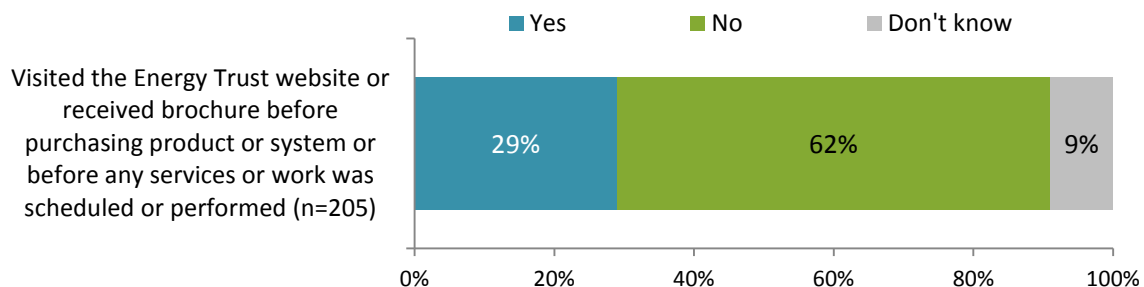


Note: Gas fireplaces were added to the sample in 2013; there is no data for Q4 2012. We do not have sufficient data to calculate a five-quarter moving average, so only quarterly estimates are provided above.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



Survey question:

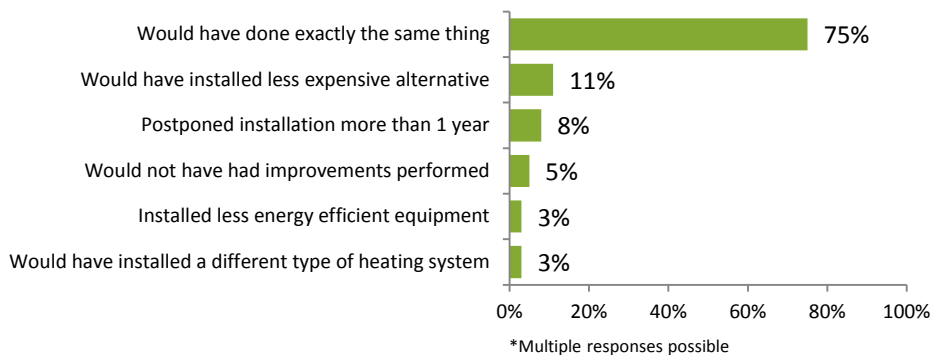
- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?



# Gas Fireplaces

## Impact of Incentives and Information

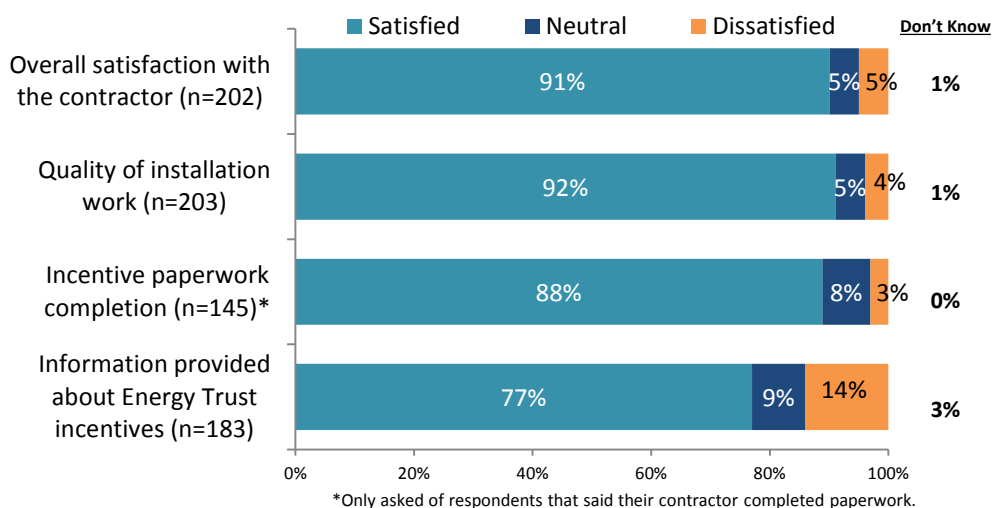
Actions Would Have Taken Without Incentive or Information (n=203)\*



Survey question:

• Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



**Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=205)**

Yes	29%
No	67%
Don't know	4%

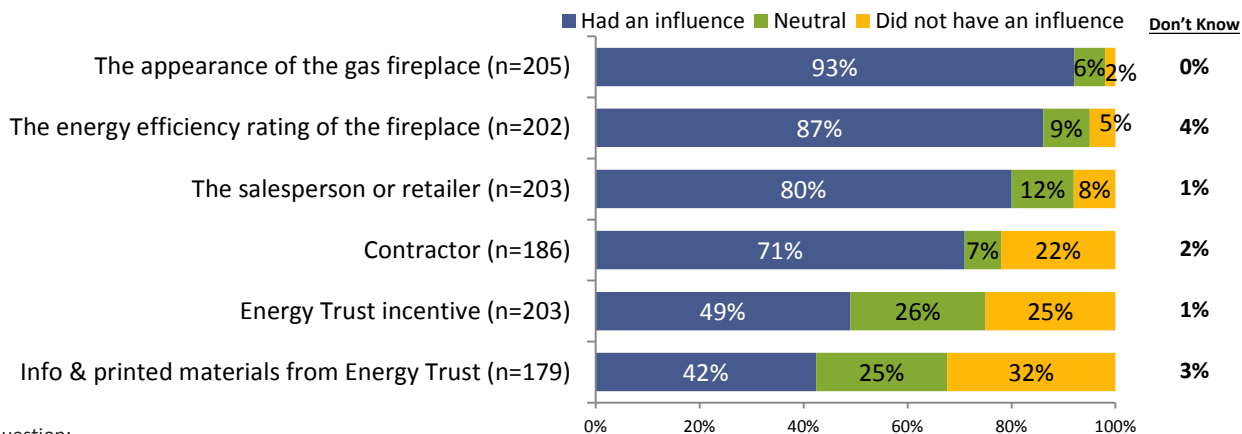
**Did your contractor complete some or all of the incentive paperwork for you? (n=202)**

Yes	72%
No	20%
Don't know	7%

Survey question:

• Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

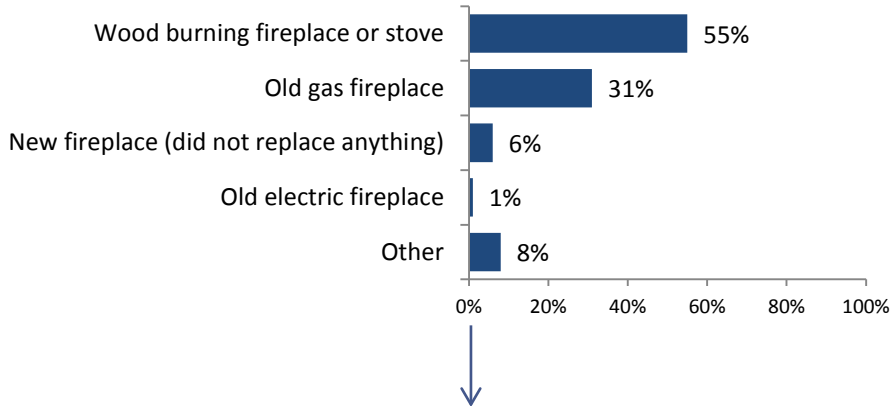
• How influential were the following elements on your decision to have services or work performed?

# Gas Fireplaces

## Fireplace Replacement Information

Note: The following questions changed in Q3 of 2013. Please refer to 2013 Mid-Year report for more information on questions asked in Q1 and Q2.

### Did the gas fireplace you purchased replace... (n=102)



If replaced fireplace was an old gas or electric unit...

### Which of the following statement best describes how you primarily used your old fireplace? (n=32)

For heating, but I also used other systems to heat my home	47%
I did not use the old fireplace	28%
I used the old fireplace, but for purposes other than heating	16%
As the main heating system for my home	9%

### Now that the gas fireplace is installed, are you using / planning to use it as the main heating source for your home? (n=105)

Yes	25%
No	74%
Don't know	1%

If not using or planning to use fireplace as main heating system...

### What do you use / plan to use as your main heating system? (n=75)

Gas furnace	88%
Electric furnace or heat pump	3%
Other	9%

### Thinking of the upcoming / current heating season, which of the following best describes how you primarily use / plan to use the gas fireplace? (n=75)

For heating, but I also use / plan to use other systems to heat my home	87%
I use / plan to use the fireplace, but for purposes other than heating	13%

Survey questions:

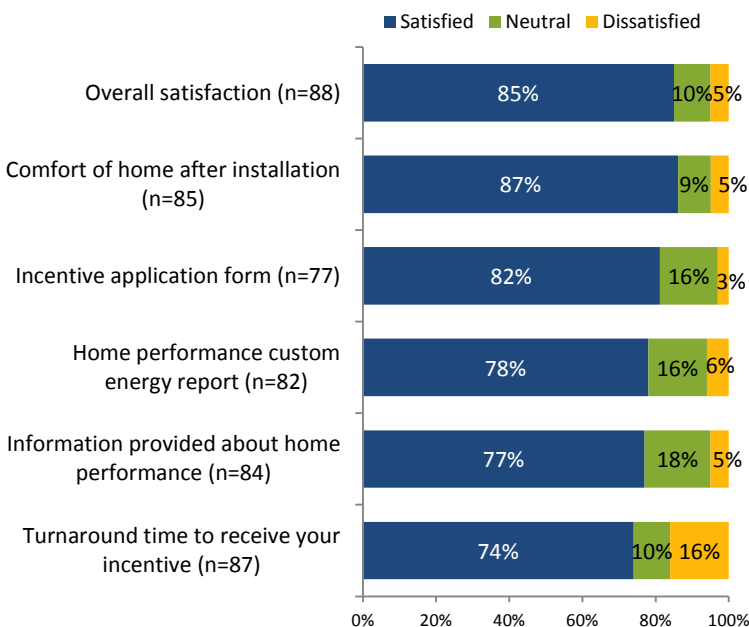
- Did the gas fireplace you purchased replace...
- Now that the gas fireplace is installed, are you <using/planning to use> it as the main heating source for your home?
  - (If no) What do you plan to <use/plan to use> as your main heating system?
  - (If no) Thinking of the current/upcoming heating season, please tell me which of the following statements best describes how you primarily <use/plan to use> the gas fireplace.
- (If replaced fireplace was an old gas or electric unit) Please tell me which of the following statements best describes how you primarily used your old fireplace.

# Home Performance

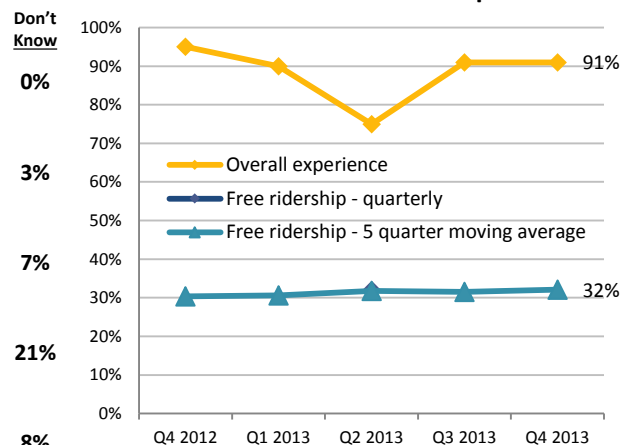
- Satisfaction with most program elements and satisfaction with contractors has fallen for home performance relative to 2012, and was lowest in Q2 2013. 85% of respondents rated their overall satisfaction a 4 or 5 out of 5, a decrease from 2012 results (92%).
- Free ridership for home performance in 2013 was higher than in 2012 (33% vs. 28%).
- 35% of respondents said they would have done the same project in absence of the program.
- The contractor had more influence than the incentive (84% vs. 64%).
- 81% of respondents were satisfied with their contractor; 63% consulted the approved trade ally list when choosing their contractor.

## Participant Satisfaction

Satisfaction with Program Elements



Satisfaction and Free Ridership Over Time

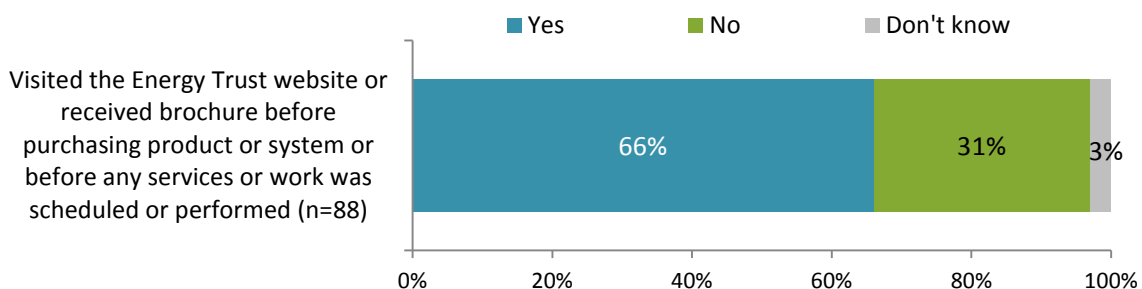


Note: There were fewer than 30 respondents for all quarters except for Q2 2013; these quarterly free ridership estimates are omitted from this graph.

Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



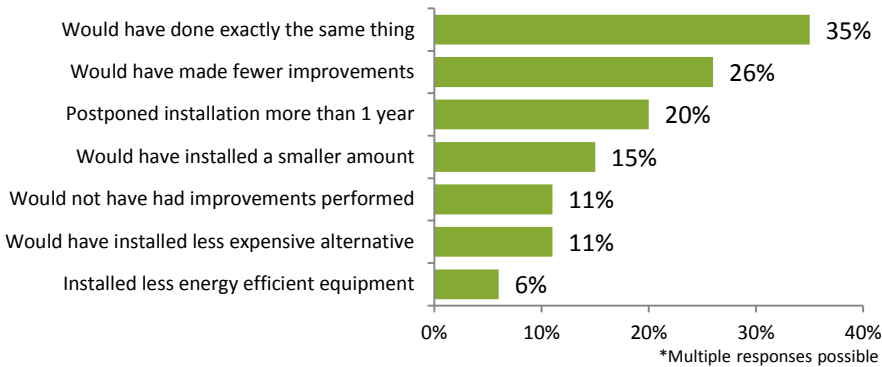
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Home Performance

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=86)\*



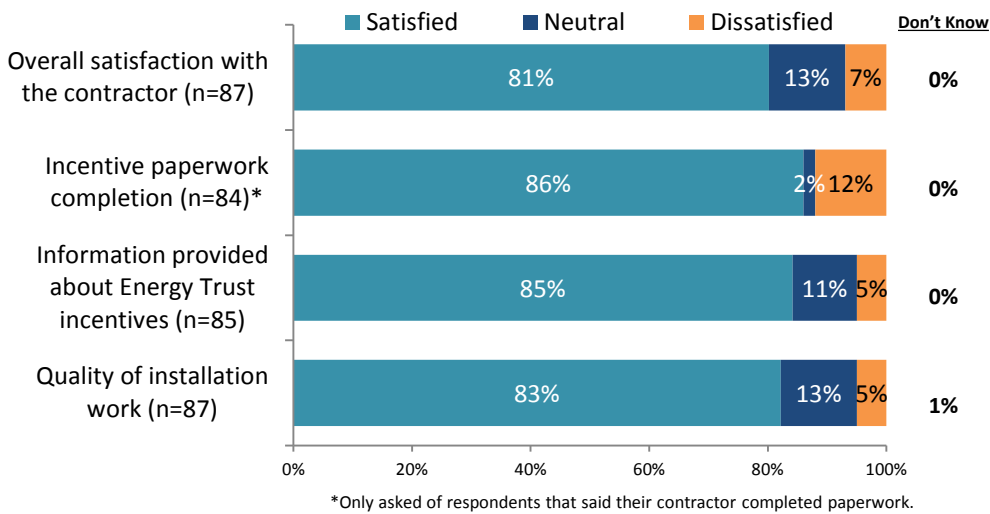
### Have you or will you apply for the Oregon State Residential Energy Tax Credit? (n=85)

Yes	79%
No	6%
Not aware of credit	7%
Don't know	8%

Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



### Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=89)

Yes	63%
No	33%
Don't know	5%

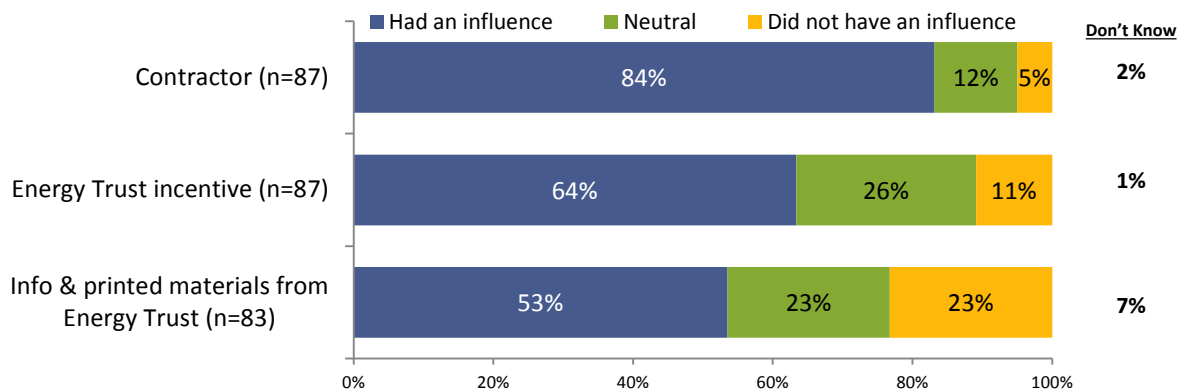
### Did your contractor complete some or all of the incentive paperwork for you? (n=88)

Yes	96%
No	3%
Don't know	1%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision to Have Services or Work Performed



Survey question:

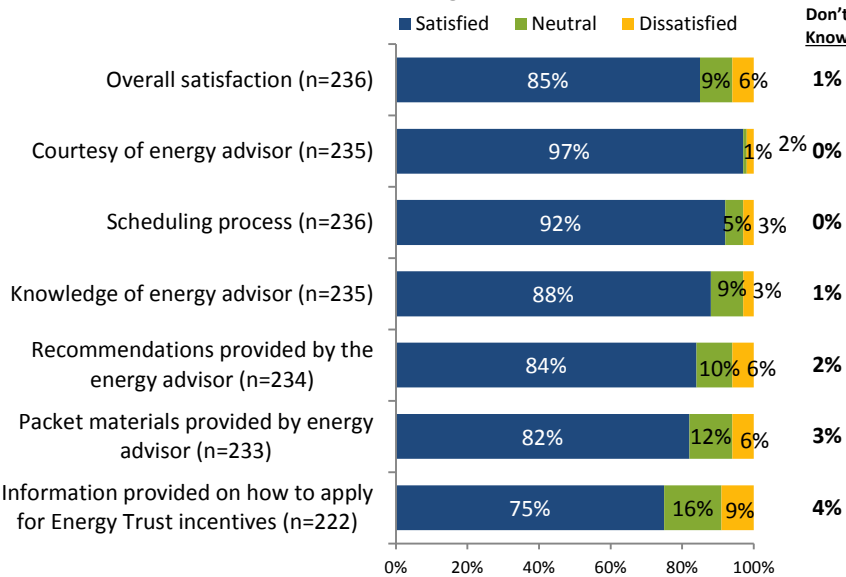
- How influential were the following elements on your decision to have services or work performed?

# Home Energy Review

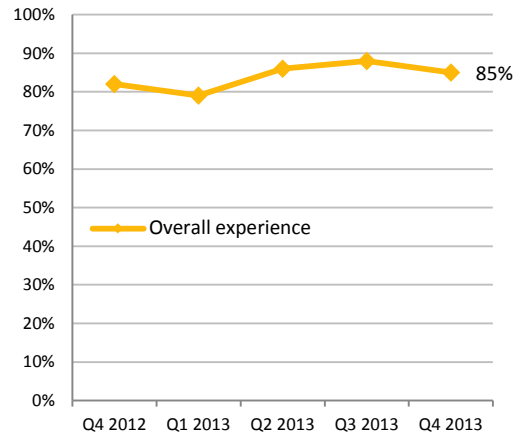
- All respondents received an in-home HER; we were not able to include phone HER respondents in the sample due to a change in the way these activities are tracked.
- 85% of respondents rated their overall satisfaction a 4 or 5 out of 5, slightly lower than 2012 results (89%).
- Self-reported follow-through was 47% of respondents for all actions; this figure has been very stable over time. The most common actions already taken were installing insulation and more CFLs. 60% said they were planning to follow through in the next 12 months. 60% said they were planning to follow through in the next 12 months.

## Participant Satisfaction

### Satisfaction with Program Elements



### Satisfaction Over Time



Survey question:

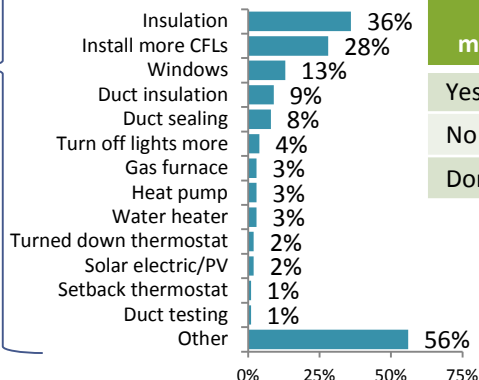
- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Follow Through on Recommendations from Advisor

Have you made any improvements based on recommendations from the advisor? (n=235)

Yes	47%
No	52%
Don't know	1%

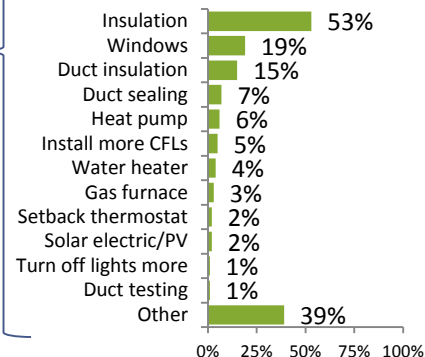
### What did you do? (n=184)\*



Are you planning to make any improvements in the next 12 months? (n=236)

Yes	60%
No	28%
Don't know	12%

### What do you plan to do? (n=213)\*



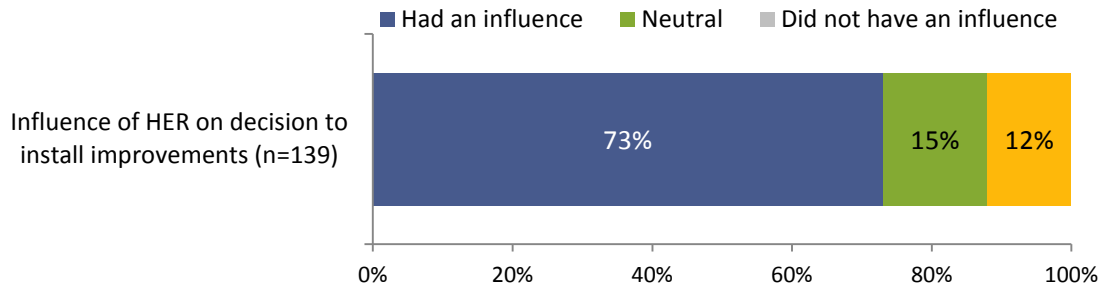
Survey questions:

- Since your Home Energy Review, have you made any of the improvements recommended by the advisor?
- What did you do?
- Are you planning to take any of the recommended actions in the next 12 months?
- What do you plan to do?

\*Multiple responses possible

# Home Energy Review

## Influence of HER on Decision to Install Improvements

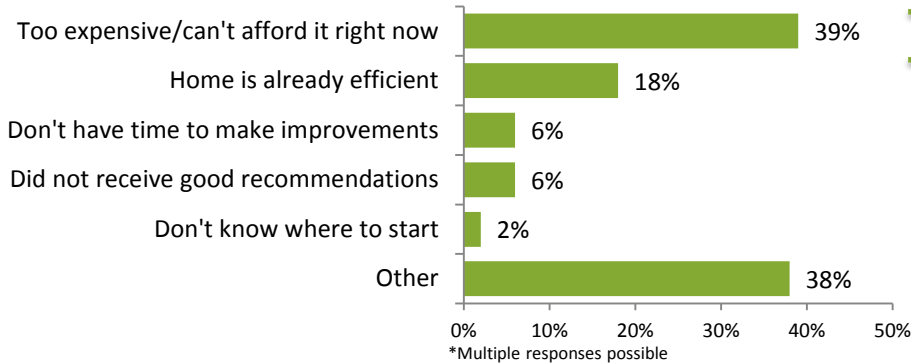


Survey question:

- How influential was the Home Energy Review on your decision to make the improvements you named?

## Reasons for Not Making Improvements

### Main Reasons for Not Making Any Qualifying Improvements (n=72)\*



If you had access to financing, would you make energy saving improvements? (n=26)

Yes	69%
No	27%
Don't know	4%

Survey questions:

- What are your main reasons for not making any improvements that qualify for Energy Trust incentives at this time?
- If you had access to financing, would you make energy saving improvements?

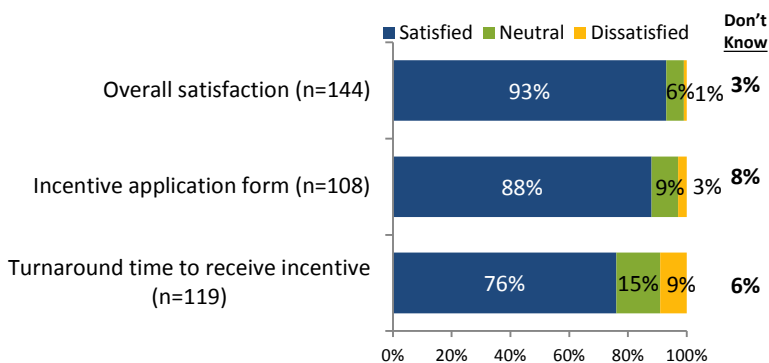
# Existing Homes – Washington

- 93% of respondents rated their overall satisfaction a 4 or 5 out of 5.
- Of the 120 respondents who installed measures, 77% said they would have made the same improvements without Energy Trust incentive and information. Three-quarters said the contractor had an influence on their decision making for the project (77%) and 40% said the incentive influenced their decision.
- For participants that installed measures, 93% were satisfied with their contractor and 28% had consulted the trade ally list when selecting their contractor.
- When asked to rate the importance of various factors in motivating energy efficient improvements, 88% rated improved health and safety of the home a 4 or 5 out of 5. Increased comfort and convenience as well as cost savings were also rated as important by 87% and 85% of respondents, respectively.

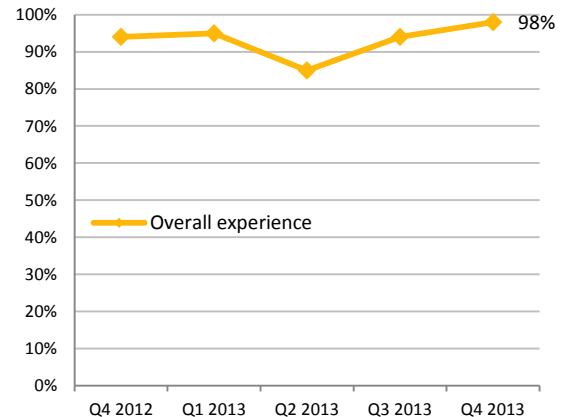
Measure	N
Ceiling Insulation	9
Duct Insulation	2
Gas Fireplaces	31
Gas Furnaces	43
Floor Insulation	2
Wall Insulation	1
Water Heaters	10
Windows	22
Home Energy Review	25
<b>Total</b>	<b>145</b>

## Participant Satisfaction

Satisfaction with Program Elements



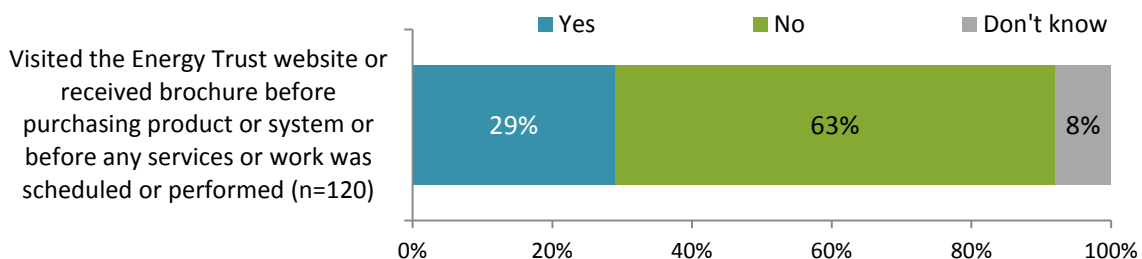
Satisfaction Over Time



Survey question:

- Thinking of your participation with Energy Trust, please rate your satisfaction with each of the following elements on a 5-point scale where 5 is very satisfied and 1 is not at all satisfied.

## Interactions With Energy Trust Prior to Project



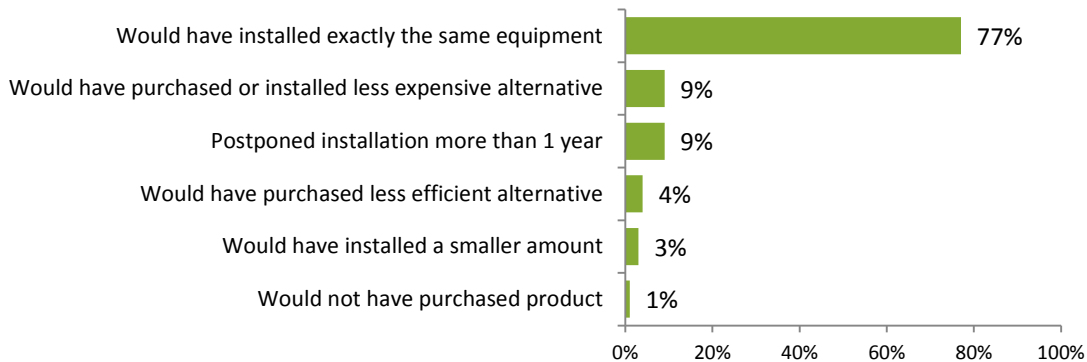
Survey question:

- Did you visit the Energy Trust website or receive one of their brochures before you purchased your product or system or before you had any services or work scheduled and performed?

# Existing Homes – Washington

## Impact of Incentives and Information

### Actions Would Have Taken Without Incentive or Information (n=118)\*

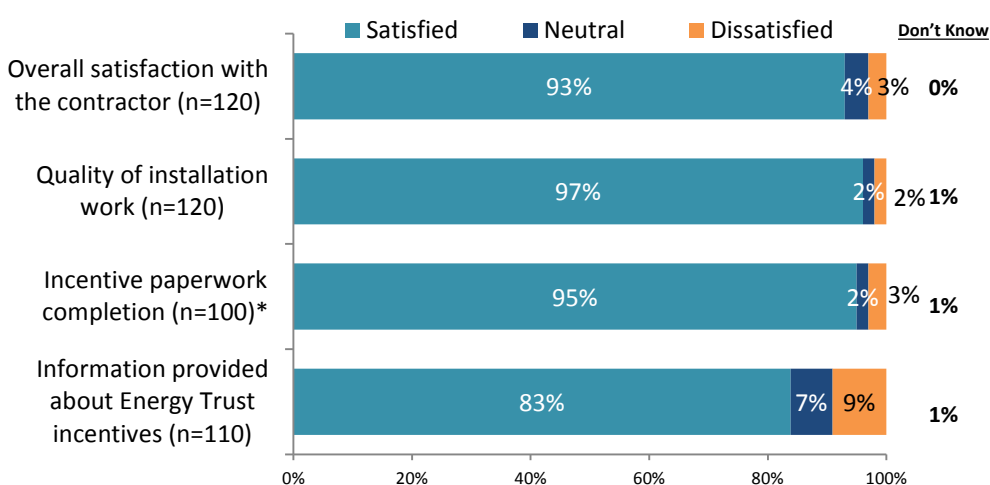


\*Multiple responses possible

Survey question:

- Which of the following statements describe the actions you would have taken had the Energy Trust incentive and information not been available?

## Satisfaction With Contractor



\*Only asked of respondents that said their contractor completed paperwork.

### Did you consider Energy Trust's list of approved trade allies when selecting your contractor? (n=120)

Yes	28%
No	66%
Don't know	6%

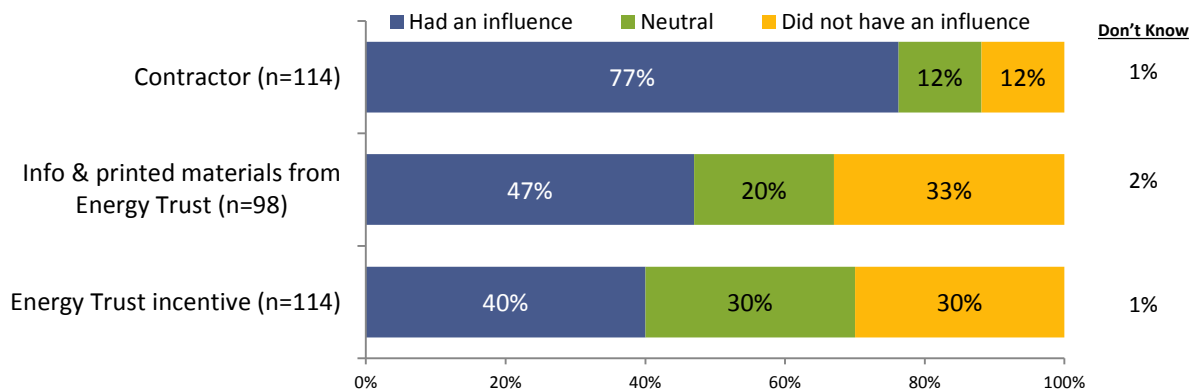
### Did your contractor complete some or all of the incentive paperwork for you? (n=120)

Yes	83%
No	13%
Don't know	4%

Survey question:

- Thinking of your experience with your contractor, please indicate the number that corresponds to your satisfaction with the following service elements, with 1 indicating not at all satisfied and 5 indicating very satisfied.

## Influences on Decision Have Services or Work Performed



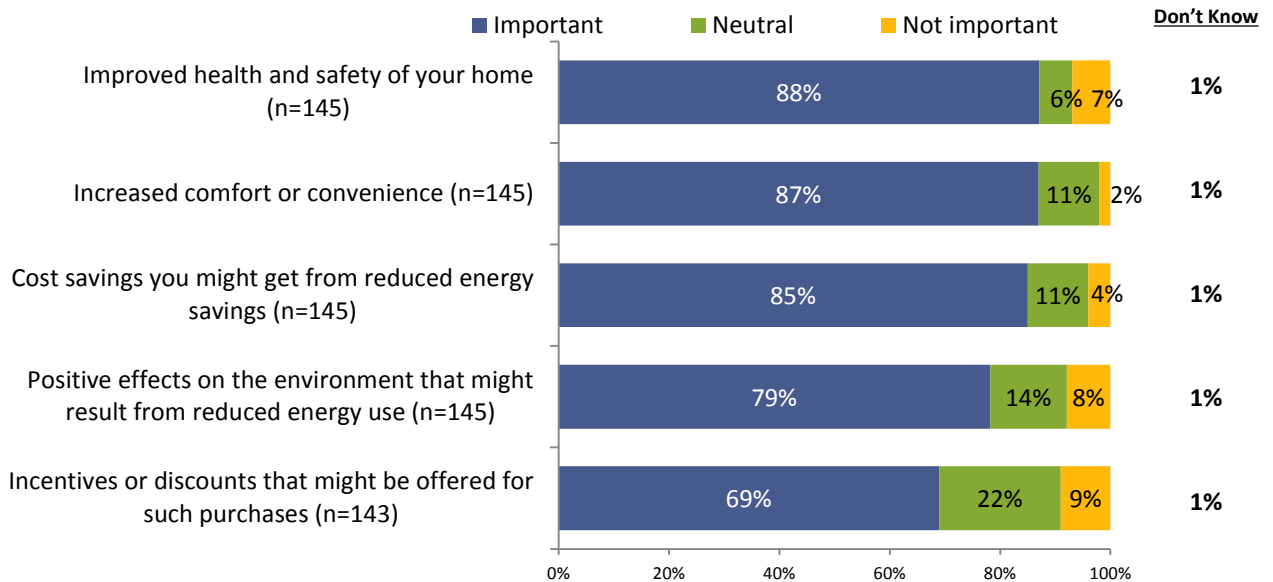
Survey question:

- How influential were the following elements on your decision to have services or work performed?



# Existing Homes – Washington

## Importance of Factors When Making Energy Efficient Improvements



Survey question:

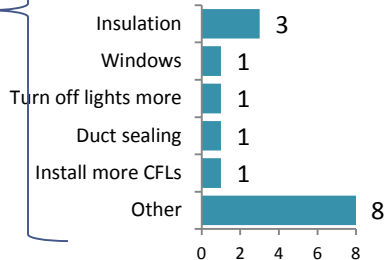
- Please rate the importance of each of the following factors when you plan energy efficient improvements to your home or shop for energy related products or equipment on a 5 point scale, with 1 indicating not at all important and 5 indicating very important.

## Follow Through on Recommendations from Advisor

Have you made any improvements based on recommendations from the advisor? (n=25)

Yes	48%
No	52%

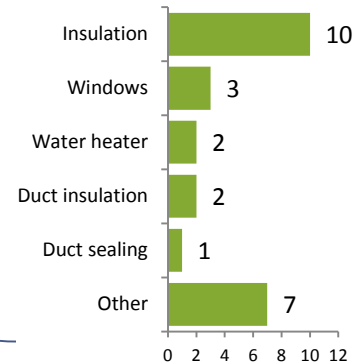
What did you do? (n=15)\*



Are you planning to make any improvements in the next 12 months? (n=24)

Yes	67%
No	33%

What do you plan to do? (n=25)\*



\*Multiple responses possible

Survey questions:

- Since your Home Energy Review, have you made any of the improvements recommended by the advisor?
- What did you do?
- Are you planning to take any of the recommended actions in the next 12 months?
- What do you plan to do?

# Other Renewables

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- We were unable to survey any small wind participants in 2013.

# Appendix A – Free Ridership Calculations

The method used here is described in more detail in the memo “Energy Trust Free Ridership Methodology” by Phil Degens and Sarah Castor, originally dated June 4, 2008 and updated August 7, 2013.

For simplicity, a project’s free ridership score is composed of two elements: a project change score and an influence score. The project change score is based on the respondent’s answer to the question “Which of the following statements describe the actions you would have taken if Energy Trust incentives and information were not available?” Possible answer choices are assigned a number between 0 and 0.5, with 0 indicating no free ridership and 0.5 indicated the project was a full free rider. Since respondents can select multiple responses to the question, their answer choice with the lowest score is selected. If the respondent selects “Don’t know”, two scores are created to account for the range of possible answers (0 and 0.5). For non-residential projects, a follow-up question is asked of respondents who answered that they would not have done anything differently in absence of the program: “If your firm had not received the incentive, would it have made available the funds needed to cover the entire cost of the project?” If the respondent selects “Yes” their project change score is 0.5, if they select “No” it is 0, and if they select “Don’t know” they are given two scores for project change, as described above.

The influence score is based on their answers to the question about the influence of Energy Trust incentives, program representatives, contractor/salesperson, studies and other program elements. The answer choices are given a value between 0 (element’s influence was a 5, extremely influential) and 0.5 (element’s influence was a 1, not at all influential). The score for the most influential element is taken as the influence score. If a respondent answers “Don’t know” for all elements, they are given two influence scores to account for the range of possible answers (0 and 0.5).

The project change and influence scores are added to generate the free ridership score for each project. For respondents not providing any “Don’t know” answers this will be one number between 0 (no free ridership) and 1 (full free ridership). For those who gave a “Don’t know” answer to one of the questions, there are two free ridership scores, one high and one low. For those who answered “Don’t know” to both the project change and influence questions, no score is calculated.

Free ridership scores are averaged for all respondents of each program/measure group and shown as a percent, rather than a decimal. “Low Scenario” is the average of the free ridership scores where the low score is used for those who answered “Don’t know” to a question; “High Scenario” is the average where the high score is used for those who answered “Don’t know” to a question. “Mid Scenario” is the average of the Low and High Scenarios.

For non-residential participants, these scores are multiplied by the project’s share of total working kWh and therm savings for all respondents to get a program-level estimate of free ridership. Gas and electric free-ridership rates are calculated separately; if a project has gas *and* electric savings, its free ridership score factors into the program’s gas and electric free ridership estimates.

# Appendix A – Free Ridership Calculations

Evaluation staff report free ridership on a quarterly basis to provide early feedback and show trends, and once surveying for the calendar year is complete, an annual number is estimated and used in True-Up. In the past, if there were fewer than 10 respondents in a given program and fuel category, or in a given measure category, Evaluation staff did not estimate free ridership due to the small sample size. For as long as Fast Feedback surveys have been conducted, we have been able to meet this sample size requirement for all programs and fuels.

Program staff expressed concern that low numbers of respondents on the gas side may be contributing to variability in the gas free-ridership rate, and requested that Evaluation staff investigate this issue. Evaluation staff agree that the number of respondents required to estimate the annual free-ridership numbers used in True-Up should be increased.

Starting with 2013 results, to estimate annual free ridership numbers, we will pool responses from prior years such that we have 30 or more respondents. For example, there were 13 Production Efficiency (PE) respondents with gas savings in 2013. To estimate the free ridership numbers that would be applied to 2013 PE projects in True-Up, we went back to 2011. These responses for 2011-2013 were pooled, which increased the total number of respondents to 37. We will use this rule for both residential and non-residential groups.

To estimate free ridership on a quarterly basis, if there are more than 30 respondents for a given quarter, we will report the free ridership rate for the quarter. We will also estimate a five-quarter moving average, provided there are more than 30 respondents. For example, duct insulation had 28 respondents in Q4 2013, so we do not report a free ridership estimate for Q4; just an average over the past five quarters. If there are fewer than 30 respondents in the past 5 quarters, we will pool responses from prior years and include the most recent quarter or quarters. For example, as of Q3 2013, there was only one Multifamily respondent that completed a project with gas savings, and over the past five quarters (Q3 2012 – Q3 2013) there were only 12 respondents. To provide program staff with information about what free ridership looks like as of Q3 2013, we went back to Q1 2011 and estimated free ridership using Q1 2011 – Q3 2013 responses (which gives us 34 responses).

Where free ridership is estimated using data from past years, we clearly note this in the report.

# Scenarios

## Commercial and Industrial

Free Ridership (savings-weighted)	Electric			Gas		
	Low Scenario	Mid Scenario	High Scenario	Low Scenario	Mid Scenario	High Scenario
Existing Buildings (n=150, 54)	37%	38%	39%	27%	28%	29%
Existing Multifamily (n=64, 36*)	17%	18%	19%	48%	51%	53%
Production Efficiency (n=170, 37*)	19%	20%	21%	21%	23%	24%

Free ridership numbers with an asterisk (\*) are calculated using respondents that completed projects in 2011, 2012, and 2013 due to small sample sizes. For Multifamily, there were only 15, 14, and 10 respondents that completed projects with gas savings in 2011, 2012, and 2013, respectively. For Production Efficiency, there were only 14, 10, and 13 respondents that completed projects with gas savings in 2011, 2012, and 2013, respectively.

## Home Products

Free Ridership	Low Scenario	Mid Scenario	High Scenario
Clothes Washers (n=281)	49%	53%	57%
Refrigerators (n=280)	50%	53%	56%
Refrigerator Recycling (n=280)	22%	28%	34%

## Existing Homes

Free Ridership	Low Scenario	Mid Scenario	High Scenario
Ceiling Insulation (n=203)	39%	40%	40%
Floor Insulation (n=204)	36%	37%	37%
Wall Insulation (n=126)	40%	40%	41%
Duct Insulation (n=110)	35%	36%	37%
Heat Pumps (n=123)	42%	45%	49%
Ductless Heat Pumps (n=115)	33%	35%	38%
Gas Fireplaces (n=174)	44%	47%	50%
Water Heaters (n=123) <sup>a</sup>	39%	43%	48%
Windows (n=240)	46%	47%	48%
Home Performance (n=88)	31%	33%	35%

<sup>a</sup> 0.67 residential gas water heaters are market of a market transformation effort; free ridership is shown for information only and will not be the basis for programmatic decisions about the measure.