

- *When searching for trade allies on the Duke website using zip code, the resulting list should be alphabetized rather than in nonsensical random order.*
- *The Duke rebate and government tax credits are very helpful. I used to sell more equipment when the rebate was higher. Re-institute the rebate offer for high efficient furnaces.*
- *The amount of the rebate often nearly makes up for the difference in cost for buying the next higher efficiency model.*
- *I never had any problems with it. Keep it on.*
- *When gas furnaces were receiving rebates last year that added a greater incentive.*
- *It's a 9, but that's part of the package as a whole. It makes a difference and people are thrilled that Duke gives them a check and not a credit on their bills.*
- *I know people enjoy anything they can get back.*
- *The rebate can be very helpful in persuading people that are 'on the fence' over which model to purchase.*
- *Any money back offers are helpful. The high quality of the energy efficient models is a key selling point also.*
- *The rebate is helpful in persuading people to get the more efficient ECM air circulation blower.*
- *The rebate is very helpful because people are always looking for ways to save money.*
- *It's definitely helpful. I've definitely had customers compare the 80% versus the 90% and the rebate helps them make that decision.*
- *Being able to offer the rebate is an attractive bonus. Duke should reinstate the furnace rebate because they're the most impactful, energy-wise.*
- *The rebate is helpful because it reduces the overall cost of the unit.*
- *It's just a shame it's gone away.*
- *It is a definite benefit and one of the foremost things they wanted, the people who already knew about the program.*
- *Anytime a customer can get a little money back is a good thing.*
- *If someone is on the fence over which model to choose the rebate can often be the deciding factor.*

Trade Ally Satisfaction with the Program

Overall trade allies are satisfied with the program, despite the number of suggestions that they offered in the *Trade Ally Interviews* section above. Survey respondents returned a mean satisfaction rating of 7.8. Most notably, 40.5% rated the program a 10 and a combined 67.1% giving the program a score of 8, 9, or 10 as shown in the figure below.

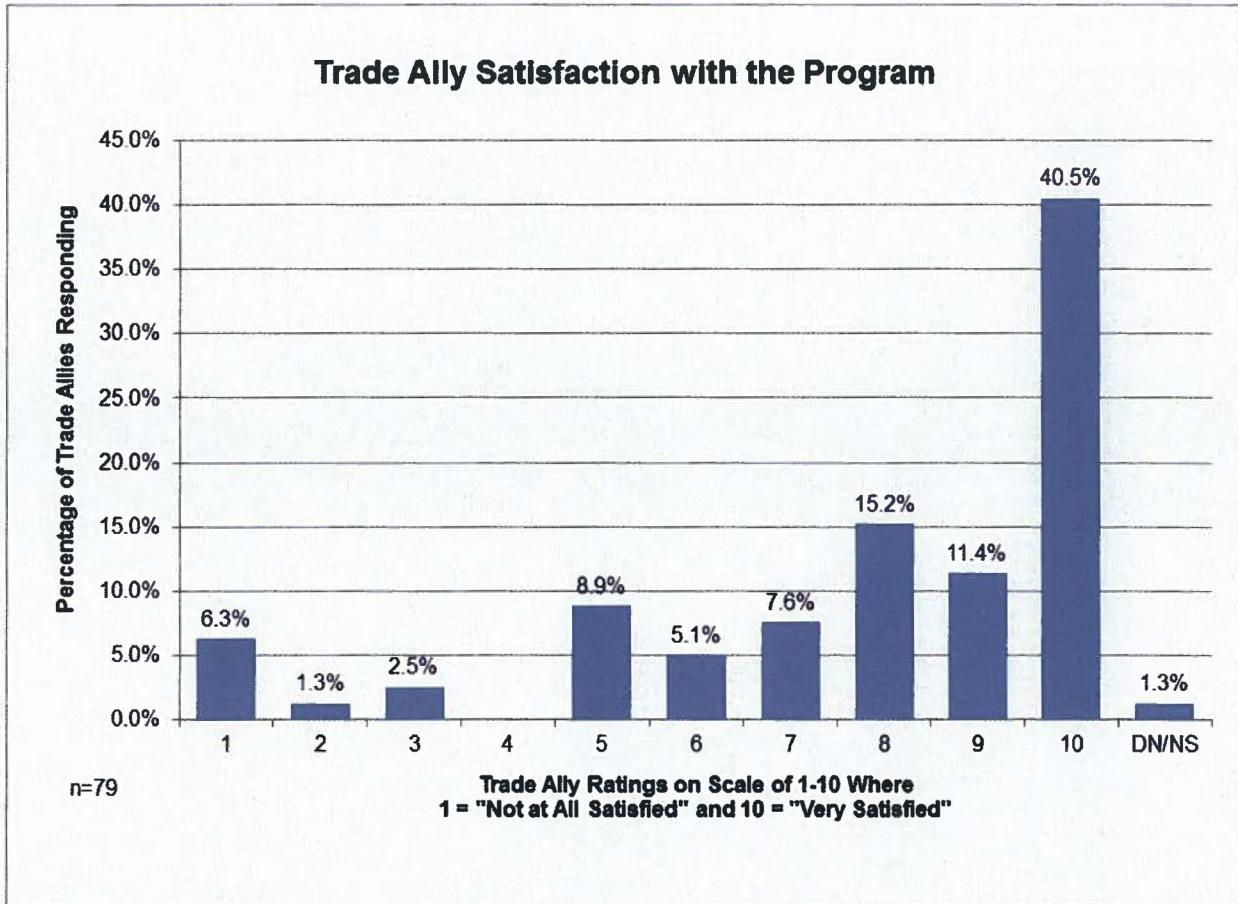


Figure 10. Trade Ally Satisfaction with Program

Difficulty with the rebate applications and associated paperwork was the most commonly cited reason among those who provided lower scores. Other reasons included the need to re-register for the program, difficulty using the web portal, difficulty obtaining help via telephone, response time to email inquiries, and dropping the gas furnace rebates. A list of verbatim replies is shown below.

Scores of 7 or Less

- *It's only a 7 since they've discontinued the gas units.*
- *The forms and a few glitches in getting the rebates bring it down to a 7.*
- *The program was better when it offered rebates for furnaces, heat pumps, AND air conditioners. Also, I disliked rebate process because it lacked information and appropriate feedback in cases when the form wasn't submitted correctly.*
- *It's been a learning process and there's been a lot of rejected applications because of changes. But, customer service in Georgia has been awesome; they're very patient and attentive. It's not their fault that we're having to touch something two or three times on our end.*

- *One, the application is not that simple to get through, and two, the large equipment doesn't qualify, like equipment with a 16 SEER rating. So, I tell my customers about the rebate only to have to come back to them and tell them it didn't qualify.*
- *They cut the commission in half and doubled the paperwork.*
- *For some reason I needed to re-register as a trade ally with Duke. This laborious process required 12 phone calls and 2 emails.*
- *It's only a five because they dropped the gas rebates.*
- *I don't understand why Duke lowered the amount of the rebate.*
- *The Duke website for submitting Smart Saver rebates is outdated and lacks clear instructions and information. I had to call customer service to get help.*
- *The information is not clear on the website about how the customer will receive the rebate. The paperwork instructions could be clarified.*
- *Because of all the paperwork and it's very time-consuming.*
- *I wish the rebate for A/C was higher because once they see what they'll have to spend on equipment related to the furnace, and how it's often connected to their A/C, then realize they should replace the A/C as well, they choose a lower-efficiency A/C unit to help keep the cost lower. The rebate doesn't provide enough incentive.*
- *I just think it's a lot of hoops and stuff to jump through. You've got people like myself who aren't HVAC installers who are try to figure out what the AHRI is for the systems. A lot of times, I don't know what the systems that are being removed, like I don't know type of coil, A/C, furnace, or whatever that proves that the new furnace is an upgrade. I have to get on the guys to give me information before they take the units that are removed for recycle. It's really frustrating.*
- *Duke could improve its customer service. For example; one phone inquiry transferred me 5 or 6 times. Also, there was confusion over which fax number is correct to submit rebate forms through. The latest rebate form requires too much information, a lot of which seems personal and/or proprietary.*
- *This current year I am quite dissatisfied with the program. The second page of the rebate application is cumbersome. Also, eliminate the need for a copy of the paid invoice. The employees that process the applications need to use more common sense.*
- *The old rebate form, in its ease and simplicity, was much better. The new form requires too much information and seems intrusive about the proprietary operations of our business.*
- *Last year, when I was doing the program, it was no problem. This year, I didn't even know we were knocked off the program as of the first of January. I had to reapply and I'm still not sure if we're part of the program. I don't like the new forms. The forms are much longer and they want more information than what's necessary. If we're sending a AHRI certificate along with the information, what more should they need? I've called the Smart Saver Program three times with my concerns and have yet to receive a call back. I've given them ample time to get a hold of me and have heard nothing. I don't know what's*

happening and I haven't even put in anything for the last two months because I haven't heard anything and don't know if we're part of the program anymore. It's pretty sad, isn't it? I wonder how many other companies don't realize that they've been knocked off the list. This is why I'm so dissatisfied.

- *I was much more satisfied before Duke discontinued the furnace rebate.*
- *The amount of the rebate is too small and I dislike doing the paperwork.*

Scores of 8 or Higher

- *I'd really give it an 8.5. Now it's just more cumbersome than it was before.*
- *The program is hassle-free and the customers appreciate the rebate.*
- *The rebate process for new installs is smooth and the \$100 incentives are nice.*
- *I preferred the simplicity of the old rebate form. The new rebate form is too complex; requiring unnecessary information. What is the purpose of asking for the serial # off a 30 year old furnace?*
- *I appreciate the program but it should include more types of equipment and make the form submission process easier.*
- *I have always been treated well and have never had any problems with the program.*
- *We like the program, but the latest rebate form is too confusing. It was better before when it was all on one page. Duke could also be quicker to respond to inquiries. It shouldn't take 1-2 weeks to receive a response to an email.*
- *The rebate form can be challenging, requiring model and serial numbers. It's hard to keep up with all the information supplied by our manufacturers and the requests from Duke.*
- *It's not quite a perfect 10 since there was a learning curve with the new paperwork.*
- *Overall I like it, but I'd like an easier process for submitting the data. Online is easier than faxing, but still it's a pain.*
- *I am satisfied, though the program has become more intrusive, requiring more documentation. Also, the new online form submission process keeps erring out and needs to be fixed.*
- *The program has steadily improved though it could provide more education about any changes so that customers are more clearly informed as to what qualifies and what they can expect to receive.*
- *I am very satisfied. In fact we just re-applied with Duke to continue offering the program.'*
- *I have been working with the program for a couple years and think it's great. There have been steady improvements made to it over that time.*
- *The forms aren't that easy.*
- *I am very satisfied because the rebate form submission process (via mail) is easy.*

- *I am very satisfied because the rebate offer helps us make sales.*
- *I don't have any problems with the program though I did prefer the old rebate form more than the newer one.*
- *The rebates help us sell the equipment.*
- *I am very satisfied because I enjoy participating in the program and getting money back.*
- *The program is easy to use and we get money back.*
- *The rebate helps the consumer to get a little something back and helps us to sell them. Everybody likes to get money.*
- *It's something you guys don't have to do and it's definitely good customer relations.*
- *I never have to deal with Duke Energy after sending in the paperwork. The process is simple and the customers really hate getting the post-inspections from DP&L, which Duke Energy doesn't do. I mean, it doesn't really bother us, but customers really don't like being inspected.*
- *We are very satisfied because Duke is quick to respond to inquiries and they work well with us.*
- *I love the program but the paperwork could be improved. The little checkbox squares are too small and the entire form should be on one page.*
- *When I submit it, they pay it. It's not a big deal. Their forms could be a little easier.*
- *I am very satisfied with the program and my customers appreciate the rebates.*
- *I am very satisfied because I have never had any problems with the program and it helps increase business.*
- *I am very satisfied because the program is easy to participate in.*
- *I am very satisfied because the program is very user friendly, though I did have difficulties finding out who my proper Duke contact person was when we started doing Commercial rebates.*
- *The program is quick, easy, and it's a good selling point.*
- *I never had any problems with it. I would like to see that come back. I was very disappointed to see it go. It was a nice incentive.*
- *It's a nice program.*
- *I have never had any problems with the program.*
- *They've improved quite significantly since they first started offering the program. Way back when, they were just terrible. If you didn't dot an 'i' or cross a 't,' they threw out your application and didn't notify you that they were doing it.*
- *I am very satisfied because the program is easy to use online.*
- *Form works well for us now that we figured out the unit they want is the coil and not the furnace. We'd like a one page form though. They told us what we need so that's good.*

Evaluation Findings and Survey Recommendations

Evaluation Findings

According to the trade allies we spoke with, a near majority (47%) indicated that they filed less than 20 rebate applications per year, while 20% of trade allies filed 100 or more per year, including one trade ally that filed 1,302 rebate applications. The median number of applications filed was 20. Some trade allies reported that their rebate volumes had waned since the rebates for gas furnaces in Ohio had been eliminated.

Roughly an even amount customers were replacing failed units versus still functioning units. The distribution differences appeared to be influenced by the levels of income in the communities that the trade allies worked in, with less affluent customers preferring to wait until their units failed while more affluent customers were more inclined to opt for upgrades of still functioning equipment. A small number of trade allies dealt in new construction and thus were not involved with replacements.

When asked to estimate the percentage of their efficiency sales that were rebated through the program, trade ally responses spanned the spectrum from 1% to 100%. Distribution was skewed toward both ends of the spectrum with 30% of respondents rebating at least 9 out of 10 high efficiency units, while more than a third of trade allied filed applications for fewer than 3 in 10 of their high efficiency sales. Reasons for this included working predominantly in other utility service areas; the elimination of the furnace rebate hurt their applications numbers; and a dislike for the new rebate paperwork.

Trade allies generally felt that customer awareness of the program was low (mean estimated awareness of 28%). Most trade allies said that they regularly mention every rebate and tax credit available. So if a customer was not aware of Duke Energy's offering before talking with one trade ally, then they were aware by the time of they received a bid from the next trade ally they spoke with. A few trade allies mentioned that their customers knew about the program because they "did their research in advance," particularly when considering heat pumps.

A majority (52%) of trade allies estimated at 9 out 10 of their customers would have made a similar purchase without the Duke Energy rebate. This finding makes the program appear to have high freeridership, but there are complicating factors involved, including monies from other incentives, limited customer awareness of the rebate's existence, and offsetting findings from other survey questions, including those noted in the paragraph below.

Nearly one third (32%) of trade allies scored the influence of the rebate on customer purchases of high efficiency equipment as an 8, 9, or 10. Other factors considered more influential than the rebate included: the final purchase price, the reputation of the trade ally, the unit's efficiency rating, potential monthly bill reductions, and operating costs for equipment.

Twenty one percent of trade allies ranked the helpfulness of the rebate for making a high efficiency sale with a 9 or 10, and a combined 58% rated the rebate's helpfulness as a 7 or higher. Trade allies estimated that few than one quarter (23%) of their customers had opted for a lower efficiency unit after learning of the rebate.

Although trade ally representatives and phone support providers scored well in the interview section above, their timeliness and responsiveness to customer requests were cited among reasons for dissatisfaction among survey participants. Nonetheless, overall trade allies report that they are satisfied with the program, with two thirds (67%) rating the program an 8, 9 or 10, and rendering a mean satisfaction score of 7.8. Difficulty of paperwork was the primary reason cited for diminished scores. Other reasons included the need to re-register for the program, difficulty using the web portal, difficulty obtaining help via telephone, response time to email inquiries, and dropping the gas furnace rebates.

Recommendations

Based upon the above mentioned survey findings TecMarket Works recommends the following:

- Simplification of the rebate application— or at least better explanations about what is required and why— may help to improve satisfaction among trade allies. It may also increase rebate levels since a small number of trade allies reported discontinuing their participation due to their dislike of the new paperwork.

Participant Surveys

Participation in Duke Energy's HVAC Smart Saver Program

As indicated in Table 4, about half of surveyed participants in Ohio and Kentucky received rebates for installing heat pumps (50.3% or 81 out of 161) and about half received rebates for central air conditioning (49.7% or 80 out of 161), due to quotas established to interview at least 80 customers who received rebates for each type of cooling unit. By state, 15.5% (25 out of 161) of surveyed participants live in Kentucky and 84.5% (136 out of 161) live in Ohio. All surveyed participants in Ohio and Kentucky received one rebate per household.

Table 4. Rebated Units Installed by Participants by State

Participants by unit installed	Ohio Participants (N=136)		Kentucky Participants (N=25)		All Surveyed Participants (N=161)	
	N	%	N	%	N	%
Installed Heat Pump	71	52.2%	10	40.0%	81	50.3%
Installed Central Air Conditioning	65	47.8%	15	60.0%	80	49.7%

Awareness of the Smart Saver Program

All surveyed customers in Ohio and Kentucky recall participating in the Smart Saver HVAC program (100% or 161 out of 161); this was a requirement for participating in the survey.

As Table 5 indicates, overall about three-quarters of participants first found out about this program from a contractor or salesperson (78.9% or 127 out of 161). Another 13.0% (21 out of 161) learned about the program through brochures from Duke Energy, and 5.6% (9 out of 161) became aware of the program via the Duke Energy website. Compared to those who installed central air conditioning, customers who received rebates for installing heat pumps are more likely to mention the website (8.6% or 7 out of 81) and work experience (3.7% or 3 out of 81), and are less likely to mention trade allies (69.1% or 56 out of 81; all differences significant at $p < .05$ using student's t-test).

Table 5. Source of Awareness of the Program

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
From a trade ally (contractor or salesperson)	69.1%	88.8%	78.9%
Brochure from Duke Energy	14.8%	11.3%	13.0%
Duke Energy Web site	8.6%	2.5%	5.6%
Word of mouth (friends, family, neighbors, etc.)	4.9%	1.3%	3.1%
Current or previous work experience (HVAC, contracting, lighting, etc.)	3.7%	0.0%	1.9%
Manufacturer's website	2.5%	0.0%	1.2%
Advertising	0.0%	0.0%	0.0%
Other source (listed below)	1.2%	3.8%	2.5%
Don't Know/Can't Recall	2.5%	2.5%	2.5%

Percentages may total to more than 100% because participants could give multiple responses.

Four survey respondents (2.5% of 161) mentioned other sources of awareness, which are listed below by rebated unit.

Rebate for heat pump (N=1)

- *We attended the Cincinnati Home and Garden Show where we saw information from The Greater Cincinnati Energy Alliance.*

Rebate for central air conditioning (N=3)

- *Radio.*
- *A marketing company called me.*
- *When I got the rebate check in the mail.*

Gathering Information about Duke Energy’s Smart \$aver Program

Once aware of Smart \$aver, most program participants did not seek additional information, as seen in Table 6. Overall, 85.7% (138 out of 161) felt they had enough information about the program, and only 13.0% (21 out of 161) sought out more information. The most common method of gaining additional information about the program is to visit the Duke Energy website (overall 6.2% or 10 out of 161, which is 47.6% of 21 participants who sought additional information).

The only significant difference between heat pump and central air conditioner rebate recipients seeking more information is that heat pump installers were more likely to have contacted a trade ally (6.2% or 5 out of 81; significantly higher than 0.0% of 81 air conditioning installers at $p < .05$ using student’s t-test).

Table 6. Did You Do Any Additional Investigation to Confirm the Program’s Offering?

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Total not needing additional info	82.7%	88.8%	85.7%
The information provided was adequate	74.1%	86.3%	80.1%
Didn't need to confirm anything	23.5%	7.5%	15.5%
Total seeking additional info	16.0%	10.0%	13.0%
Went to the Duke Energy web site	7.4%	5.0%	6.2%
Called or emailed Duke Energy	2.5%	2.5%	2.5%
Called or emailed a trade ally	6.2%	0.0%	3.1%
Other (listed below)	3.7%	2.5%	3.1%
Don't know	1.2%	1.3%	1.2%

Percentages may total to more than 100% because participants could give multiple responses.

Five out of 161 survey respondents (2.5%) volunteered “other” forms of investigation into Smart \$aver, which are listed below.

Rebate for heat pump (N=3)

- *As a contractor, I went to the Duke Energy training on it.*
- *I called Dayton Power & Light.*
- *The contractor told me to look online for more information.*

Rebate for central air conditioning (N=2)

- *I asked friends, neighbors, and coworkers about their experience with the program.*
- *We were already aware of the program because we had participated in the past.*

The 21 surveyed customers who sought out more information are unanimous (100% of 21) in reporting that they were able to acquire a more complete understanding of the program through their efforts, as seen in Table 7. Overall, after seeking additional information if needed, only 1.9% (3 out of 161) of all survey respondents felt they still had unanswered questions about Smart Saver.

Table 7. Acquiring a More Complete Understanding of the Program by Seeking Additional Information, and Unanswered Questions about the Program

Base: survey respondents who sought additional information	Heat Pump (N=13)	Central Air Conditioning (N=8)	All Surveyed Participants (N=21)
Was able to acquire a more complete understanding of the program	100.0%	100.0%	100.0%
Was NOT able to acquire a more complete understanding	0.0%	0.0%	0.0%
Don't know	0.0%	0.0%	0.0%
Base: all survey respondents	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Had additional questions that were not answered	3.7%	0.0%	1.9%

Three Smart Saver participant in this survey (1.9% of 161) said they still had additional questions about the program; their descriptions of these additional questions are listed below.

- *I had a few more questions about the program incentive forms.*
- *The Duke website needs to more clearly specify that only Duke-approved contractors are qualified to offer the incentive program.*
- *The unanswered questions I had were mainly about the competing energy providers that are constantly vying for my business.*

Overall, 92.5% (149 out of 161) of participants did not contact Duke Energy with questions during their participation in the Residential Smart Saver program as indicated in Table 8. Only 0.6% (1 out of 161) reported that they contacted Duke Energy and still had unanswered questions, while 6.2% (10 out of 161) reported contacting Duke Energy and having their questions handled effectively. Of the eleven participants in this survey who contacted Duke

Energy during participation, overall ten (90.9%) reported that their questions were answered effectively.

Table 8. Contacting Duke Energy While Participating in Smart Saver

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Contacted Duke Energy during participation in Smart Saver and questions were handled effectively	9.9%	2.5%	6.2%
Contacted Duke Energy during participation in Smart Saver and still had unanswered questions	1.2%	0.0%	0.6%
Did not contact Duke Energy during participation in Smart Saver	87.7%	97.5%	92.5%
Don't know / can't recall	1.2%	0.0%	0.6%

Receiving Rebates for Participation in Smart Saver

When it came to filling out the incentive forms for Smart Saver, the pattern is very similar to where respondents indicated they first became aware of the program: most mentioned trade allies (80.1% or 129 out of 161).

Only 11.2% (18 out of 161) of program participants filled out the forms themselves. Among those who did fill out the form themselves, participants were unanimous (100% of 18) in their opinion that the form is easy to understand.

Customers who installed central air conditioning were more likely to have a trade ally fill out the forms (86.3% or 69 out of 80), while those who installed heat pumps were more likely to do it themselves or have another member of the household do it (combined 21.0% or 17 out of 81; these differences are both significant at $p < .05$ using student's t-test).

Table 9. Who Filled Out the Incentive Forms

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Trade allies (contractor or salesperson)	74.1%	86.3%	80.1%
Survey respondent ("I did")	13.6%	8.8%	11.2%
Another member of the household	7.4%	1.3%	4.3%
Someone from Duke Energy	1.2%	0.0%	0.6%
Trade ally and customer together	2.5%	2.5%	2.5%
Don't know	1.2%	1.3%	1.2%
Of those who filled out the incentive form themselves:	N=11	N=7	N=18
Incentive form was easy to understand	100%	100%	100%

Table 10 shows that trade allies were also the most likely to submit the incentive forms for Smart Saver participants in this study (80.7% or 130 out of 161). Another 13.0% (21 out of 161) of

surveyed customers submitted the forms themselves, which is not significantly different than the percentage of customers who filled out the forms themselves (11.2% or 18 out of 161, as seen in Table 9).

Table 10. Who Submitted the Incentive Forms

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Trade allies (contractor or salesperson)	77.8%	83.8%	80.7%
Survey respondent ("I did")	12.3%	13.8%	13.0%
A family member	6.2%	1.3%	3.7%
Someone from Duke Energy	1.2%	0.0%	0.6%
Don't know	2.5%	1.3%	1.9%

Overall, 87.6% (141 out of 161) of program participants reported no problems receiving their rebates, as seen in Table 11. Nearly equal numbers of survey respondents were certain they received additional federal or state tax credits (39.1% or 63 out of 161) and certain they did not (38.5% or 62 out of 161), while 22.4% (36 out of 161) were not sure if they received any tax credits or not. Customers who installed heat pumps were more certain that they had received tax credits (49.4% or 40 out of 81), though this is partly due to air conditioner rebate recipients being more likely to not be sure if they received tax credits or not (30.0% or 24 out of 80; both differences significant at $p < .05$ using student's t-test).

Table 11. Receiving Rebates and Tax Credits

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Did NOT have problems receiving the rebate	87.7%	88.8%	87.6%
Had problems receiving the rebate	11.1%	6.3%	8.7%
Did not receive a rebate ⁷	1.2%	2.5%	1.9%
Don't know	0.0%	2.5%	1.2%
Received state or federal rebate as well	49.4%	28.8%	39.1%
Did NOT receive state or federal rebate as well	35.8%	41.3%	38.5%
Don't know	14.8%	30.0%	22.4%

Fourteen respondents (8.7% of 161) reported that they had a problem receiving their Smart Saver HVAC rebate. Their verbatim descriptions of these problems are listed below; customer complaints generally involve delays getting rebates due to delays getting the paperwork approved, which in turn is frequently due to delays with the contractors submitting the forms. All fourteen surveyed customers who reported problems receiving their rebates report that these issues were eventually resolved.

Rebate for heat pump (N=9)

- *The contractor had problems filling out his part. He took so long Duke said I couldn't*

⁷ The evaluation team and Duke Energy have confirmed that these customers have all been issued rebate checks.

- get the rebate anymore. Thankfully, Duke customer service helped and I got the rebate.*
- *Our contractor did not submit our paperwork in a timely manner. Eventually they did and the rebate arrived promptly.*
 - *The contractor needed to clarify with Duke that the new heat pump qualified for the incentive program.*
 - *I think we had to amend and re-send our rebate paperwork at least four times before Duke finally approved it.*
 - *The woman who filled out and submitted my information entered something incorrectly, I think it had to do with my source of back-up fuel, or she just did not have the proper information, and she had to resubmit my form. After that was corrected and resubmitted, everything was fine, but it did set back my application by about 3 weeks.*
 - *I was put in between my contractor and Duke Energy and fed differing information on each front. The rebate situation was eventually resolved but it was time-consuming and unpleasant.*
 - *I only received half. I had to call and found out half was coming from Duke and half was coming from another company: Carrier. I got the other half and it was resolved.*
 - *It took a while, around 3 months, but we did get the rebate.*
 - *There was confusion over which name the account was in. This supposedly delayed the rebate check, but was eventually resolved.*

Rebate for central air conditioning (N=5)

- *Our application seemed to have fallen through the cracks with our contracting company, they submitted it much later than when we had originally filled out the application. This was not the fault of Duke Energy. Eventually our contractor had the application sent in and we did receive our rebate in due time.*
- *I did not get my rebate in the time the salesperson said I would have received it, so I called the salesperson about it. After I did that follow-up call with the salespeople I did receive my rebate check. Perhaps they were slow on submitting my application.*
- *The rebate took a little longer than I had expected so I did call the contractor. The check did arrive shortly afterwards. I received the check within a month of the installation of the A/C unit.*
- *There was a breakdown between Duke and the contractor. There were problems with how the paperwork was being handled between Duke and the contractor. The air conditioner was replaced in 2011, and we did not receive the rebate until a year later. Eventually, everything was resolved.*
- *Rebate was initially denied because post office had marked our residence as an apartment, and I had to correct the information and say it was a condominium. After calling, they sent the rebate.*

Problems Receiving Rebates by Quarter

The installation dates for the rebated units are shown in Table 12 categorized by quarters of the

year. The largest number of surveyed customers installed units during the second quarter of 2013 (33 customers), and the smallest number during the first quarter of 2012 (14 customers), though the numbers per quarter on the whole are quite consistent (averaging 27 customers per quarter).

Table 12. Number of Survey Respondents by Quarter Rebated Unit Was Installed

Number of Respondents per Quarter Rebated Unit Was Installed	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Q1 2012	10	4	14
Q2 2012	17	14	31
Q3 2012	11	19	30
Q4 2012	12	17	29
Q1 2013	15	9	24
Q2 2013	16	17	33
Missing data	0	0	0

Recall from Table 11 that overall 8.7% (14 out of 161) of surveyed program participants reported problems receiving their rebates. Figure 11 charts the percentage of rebates with “problems” according to the quarter the rebated unit was installed. The overall rate of survey respondents reporting problems with rebates per quarter installed ranged from 0% (first quarter of 2012) to 16.7% (first quarter of 2013). Based on this very small sample of six quarters, the average rate of problems reported per quarter is 8.2% and the 90% confidence interval is +/-4.7%; both the highest (16.7%) and lowest (0.0%) quarters fall outside of the 90% confidence interval. This indicates that the rate per quarter across these six quarters is highly variable.

Furthermore, there is extremely high variability by rebated unit, with 26.7% (4 out of 15) of heat pump installers reporting rebate problems with Q1 2013 installations while none (0 out of 9) of the customers who installed central air during that same quarter reported a problem. Similarly, there were no customers (0 out of 23) who installed heat pumps during the last half of 2012 who reported rebate problems, while 11.1% (4 out of 36) of air conditioner installers during the same period reported having problems.

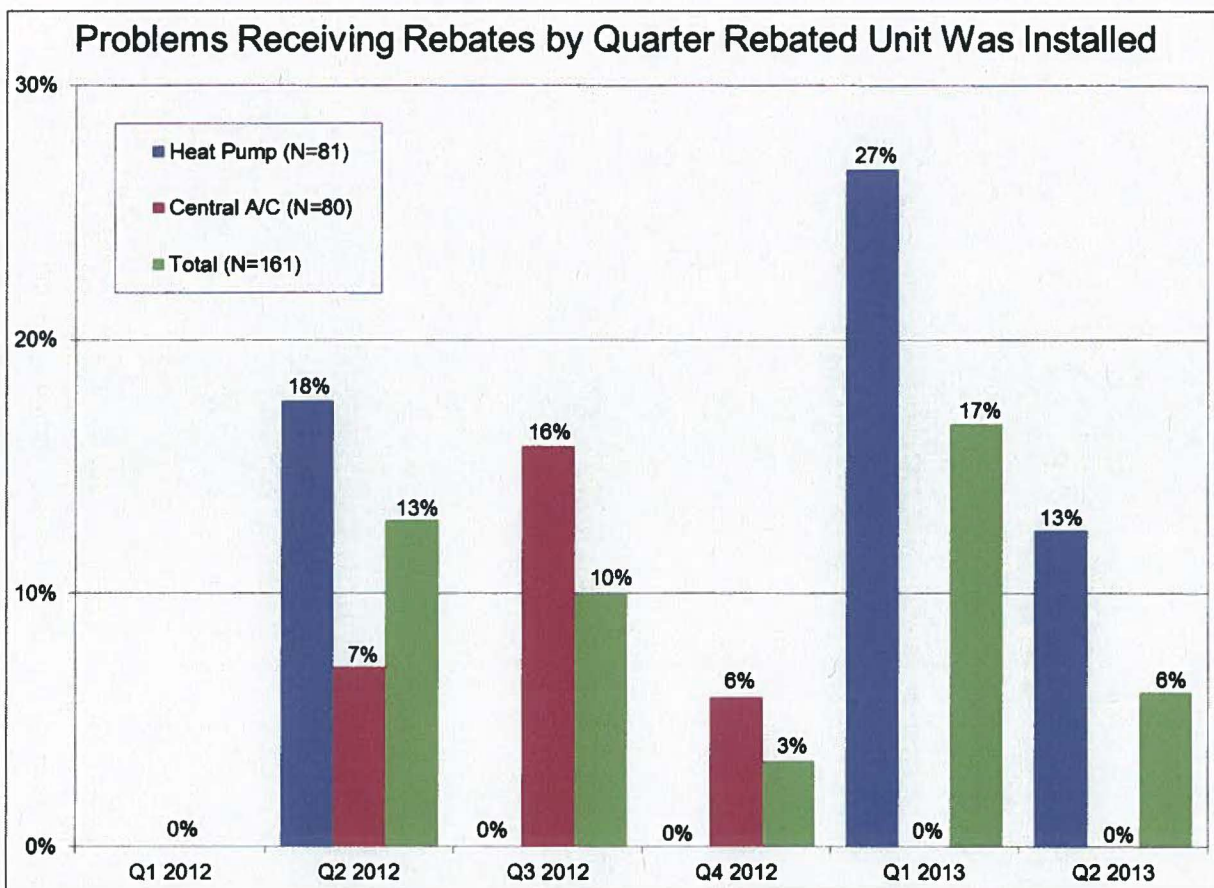


Figure 11. Problems Receiving Rebates by Quarter Rebated Unit Was Installed

Customer Satisfaction with the Residential Smart Saver Program

Table 13 shows the average satisfaction ratings for five aspects of this program, as well as overall satisfaction with the program and with Duke Energy. On a 10-point scale where “10” means very satisfied, customers give Smart Saver high satisfaction ratings, averaging between 8.2 and 8.5 for all aspects inquired about and 8.83 for the program overall. Satisfaction with Duke Energy overall is also high, averaging 8.47 across all surveyed participants.

There are two statistically significant difference by the type of unit purchased; customers who received rebates for air conditioning (8.60) were more satisfied with the amount of the rebate than customers who received rebates for heat pumps (7.86; this difference is significant at $p < .05$ using ANOVA), and among those who were involved in filling out the paperwork air conditioner installers were also more satisfied with the ease of filling out forms (9.56) compared to heat pump installers (7.84; this difference is significant at $p < .10$ using ANOVA, although only a minority of customers answered this question, since the forms were more often completed by

contractors and salespeople⁸).

Table 13. Average Satisfaction Ratings for Smart Saver and Duke Energy

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Satisfaction with the information provided explaining the program	8.46	8.54	8.50
Satisfaction with the number and kind of technologies covered	8.38	8.55	8.45
Satisfaction with the ease of filling out the form to receive the rebate <i>(Base: N=28 respondents involved in filling out forms)</i>	7.84 (N=19)	9.56 (N=9)	8.39 (N=28)
Satisfaction with the time it took to receive the rebate check	8.27	8.37	8.32
Satisfaction with the amount of rebate provided by the program	7.86	8.60	8.23
Overall satisfaction with Smart Saver HVAC Program	8.75	8.91	8.83
Overall satisfaction with Duke Energy	8.37	8.58	8.47

Surveyed customers who gave ratings for specific aspects of the program of “7” or lower a 10-point scale were asked what could be done to improve the situation. These responses are listed below by rebated unit.

Four survey respondents (14.3% of 28 who were involved in filling out forms) rated the ease of filling out the rebate form at “7” or lower on a 10-point scale. Their suggestions for improving this aspect of the program are listed below.

Ease of Filling Out Form: Received rebate for heat pump (N=4)

- *For me, as a contractor, it does not pay with the amount of time it takes to complete. There is too much detailed information required, the form needs to be more streamlined and organized. It's crazy all the things you have to do to get the rebate. I see it as doing double the amount of work and getting not even half the commission.*
- *Streamline the entire program. A customer sending a copy of the sales receipt including model and serial numbers should be sufficient enough to process the rebate.*
- *The contractor had problems.*
- *The Duke website should be improved so that the incentive form is easier to fill out. The website should also show the projected long-term operating costs for units of different efficiency ratings.*

Twenty-three survey respondents (14.3% of 161) rated information explaining the program at “7” or lower on a 10-point scale. Their suggestions for improving this aspect of the program are

⁸ Twenty-eight surveyed customers were involved in filling out rebate forms. In addition to the 18 customers who filled out forms by themselves, this total also includes 6 cases where someone else in the respondent’s household filled out the forms, and 4 cases where the customer and contractor filled out the forms together.

listed below. Many claim that they never got much information about the program in the first place and often fault the contractors for this, thus the most common suggestions are for more information and less dependence on contractors.

Program Information: Received rebate for heat pump (N=12)

- *Contractors could provide more information about the program.*
- *My contractor informed me of my eligibility, otherwise I would not have known anything about this program.*
- *I would have liked some more direct information to me personally. The contractor informed me; otherwise I did not know anything about this opportunity.*
- *There needs to be more information out there about the advantages of the Smart Saver program for Duke Energy's customers. I had no clue that this rebate existed, fortunately my contractor gave me the information.*
- *There was no information given to me. My contractor or salesperson or whoever filled out the forms for me did not tell me anything about the program or that they had applied for the program. I had no knowledge the program even existed. I was not expecting any sort of rebate.*
- *More education for vendors to avoid confusion and misinformation. At first, our vendor misstated the amount of rebate we would be paid as being \$300.*
- *The vendors could improve their professionalism and provide more information about the equipment and the incentive program.*
- *The MyHER could provide homeowners with more information about the Smart Saver program.*
- *There should be multiple mailings promoting the program.*
- *Don't know (N=3)*

Program Information: Received rebate for central air conditioning (N=11)

- *I didn't get any information. My contractor did it all.*
- *I didn't get much information from the salesperson; he was too busy trying to sell me his furnace and air conditioner.*
- *I like printed literature, so I can grasp it and read it a couple of times. The contractor did not have any printed literature and did not tell me about the rebate until after installation. I trust this contractor's judgment.*
- *I really didn't know much about the program. Before I spoke to the salesperson I wasn't even aware that the program existed. So an increase in advertising would probably help get more people interested.*
- *I really don't know any of the program details but the information I got from the salesperson was enough to get me to let them fill out the paperwork.*
- *I'd suggest more information be given at the point of sale so that we understood the variety of units covered and also the incentive that was offered for those particular systems.*
- *If the salesperson had some printed materials that I could look at, that would have been*

good. As it is, I took him at his word.

- *We did not know anything about the Smart Saver Program until after we spoke with the salesperson. This program should offer more information to their customers so they know about it before they go out and start looking at new heating or air conditioning units.*
- *We didn't get very much information about the program.*
- *Don't know (N=2)*

Twenty-three survey respondents (14.3% of 161) rated the number and type of technologies covered by the program at "7" or lower on a 10-point scale. Their suggestions for improving this aspect of the program are listed below. About a third of these customers (30.4% or 7 out of 23) had no comments or suggestions for improving this aspect of the program; the most frequently mentioned items customers recommend for inclusion in the program include water heaters and furnaces.

Number/Type of Technologies Covered: Received rebate for heat pump (N=13)

- *I would have liked if my new gas furnace had qualified for the Smart Saver rebate as well.*
- *Duke could include other types of technologies in the program, such as tankless water heaters and programmable thermostats.*
- *There could be more crossover with other Duke energy efficiency programs such as the Home Energy House Call.*
- *There should be a push to raise awareness of the program and make the information available.*
- *There should be more information provided by the program.*
- *Duke could provide more information about available technologies covered by the program.*
- *Duke Energy has a lot of stuff covered. I don't know why they have to get into all these small home energy efficiency programs. I suggest they do one thing and do it well, they should focus on larger projects that would have a larger impact on saving power, they should be more selective and efficient.*
- *Don't know (N=6)*

Number/Type of Technologies Covered: Received rebate for central air conditioning (N=10)

- *I thought my gas furnace would have qualified as an energy efficient heating source but it was not covered. I was actually expecting the gas furnace to qualify for the rebate because it is very efficient, and I was surprised that it did not qualify.*
- *Include more major appliances, like furnace or water heaters.*
- *Include other appliances like water heaters and refrigerators*
- *Include water heaters.*
- *It would be great if the program would cover more technologies, like water heaters.*
- *The program only covered certain kinds of A/C, when it could have covered more A/C*

units that were just as efficient.

- *Have more units and more sizes available and eligible for rebates.*
- *You can't expect the energy company to do it all. There are no incentives for other appliances.*
- *I didn't even know there was a program.*
- *Don't know*

Thirty-one survey respondents (19.3% of 162) rated the time it took to receive the rebate check at a "7" or lower on a 10-point scale. Their suggestions for improving this aspect of the program are listed below. Some customers blame the contractors for taking too long with the paperwork, some blame Duke Energy, and some blame both.

Time it Took to Receive Check: Received rebate for heat pump (N=14)

- *I think the paperwork needs to be more informative. The person filling out my application was unclear of what information exactly was wanted. There was confusion as to a source of back-up fuel used in the heating system, I think, and the information the woman submitted was incorrect. My application and rebate process took an extra three weeks to be completed because of the set back.*
- *It could have arrived a little quicker, it took about one month or maybe a little longer before I received my rebate. I actually kind of forgot about it and nearly threw the envelope out which contained the check when I finally received it in the mail.*
- *The rebate turnaround should be within 30 days.*
- *There needs to be better communication between contractors and Duke Energy. It should take no more than six weeks to receive the rebate.*
- *It took me three or four months of back and forth communication with Duke to finally receive the rebate. The process should only take, at most, six weeks.*
- *The ideal rebate turnaround would be two weeks.*
- *The rebate turnaround could be three weeks or less.*
- *I waited roughly eight weeks to receive my check. Optimally, the rebate should arrive within one month.*
- *An ideal rebate turnaround would be two weeks.*
- *I think it should take no more than 60-90 days to receive the rebate.*
- *Applications take too long to be processed. Duke Energy needs something more streamlined. I suggest that they make it so that the form is only needed to be completed online, so all of the information is in one place and it will be easy to view the status of the application. There should be less paperwork, there is too much useless paperwork and printing and scanning of information. It's a very frustrating process.*
- *I would like to be able to take the entire rebate amount off the cost of the unit upfront.*
- *With a reputable contractor, there should be little need for Duke to send out an inspector to verify the installation of the new unit.*
- *Don't know*

Time it Took to Receive Check: Received rebate for central air conditioning (N=17)

- *It took too long to receive the rebate. I waited months.*
- *It took a while; a few months.*
- *It took a while.*
- *It should take less time.*
- *If you cut the turnaround time in half, that would be great. Maybe three weeks instead of six; this is my only complaint about the program.*
- *Send the check out sooner, like as soon as make someone makes the purchase, so it is automatic.*
- *Send it sooner; but, I'm not sure how long it took Herman's Services to submit the paperwork.*
- *The rebate could have come sooner, maybe two or three weeks instead of months.*
- *The rebate could have come quicker*
- *You should get people their rebates quicker.*
- *I did not get my rebate in the time the salesperson said I would have received it, so I called the salesperson about it. After I did that follow-up call with the salespeople I did receive my rebate check. Perhaps they were slow on submitting my application.*
- *I don't know if there was a problem with our contractor or if there was an issue with Duke Energy but it took many months for us to get the rebate check.*
- *I had to contact Duke directly when we were not getting answers from the contractor who was supposed to have submitted the paperwork. It took us a year to get paid.*
- *The contractor had forgotten to put our account number on the forms so we didn't get it for quite some time. Once the error had been taken care of we got the check in three weeks.*
- *I don't know. I thought that the time it took to get the rebate check was average.*
- *Don't know (N=2)*

Forty-one survey respondents (25.5% of 162) rated the amount of the incentive at “7” or lower on a 10-point scale. Virtually all of them wish for the incentives to be higher, though some customers had additional ideas about how to improve the incentive payment amounts.

Rebate Amount: Received rebate for heat pump (N=25)

- *Incentive should be higher (N=9)*
- *A \$500 rebate would be preferable.*
- *The rebate should be between \$250 to \$500, depending on the unit.*
- *The rebate should be increased to \$500 for Geothermal units.*
- *If Duke Energy would increase the rebate, it would make it more enticing to replace both the A/C and the furnace. The increase should be \$300 for an air conditioner or \$700 to \$800 for the complete heating and cooling system. Also, I suggest to maybe double or triple what the contractor gets, if the incentive is larger for the contractor, they will push*

the program more.

- *A larger rebate incentive would have increased my satisfaction, especially considering that I purchased four units. Some rebates will give you more money back when you purchase multiple or larger items, this logic could be applied to the Smart Saver program.*
- *A larger rebate would have been nice. A new heating and cooling system is very expensive but if the rebate was larger perhaps more people would consider upgrading their system.*
- *Duke could offer a rebate based on a percentage of and/or the prorated cost of the system.*
- *The amount of rebate should be 10% of the unit purchase price.*
- *The amount of rebate should be between 10-15% of the total cost of the unit.*
- *The rebate could be 10% of the purchase price.*
- *The rebate should be, at minimum, 5% of the purchase price.*
- *The rebate could be higher, say 5% of the purchase price. There should also be an option take the rebate as an energy bill credit.*
- *The amount of the rebate could be based on a percentage of the sale.*
- *The amount of rebate could be based on the efficiency and cost of the unit.*
- *The amount the rebate should be proportionate to the efficiency rating of the unit purchased.*
- *Don't know*

Rebate Amount: Received rebate for central air conditioning (N=16)

- *Incentive should be higher (N=4)*
- *The rebate wasn't enough; they cut it down since last year. They may be because of the government.*
- *The salesperson said that the amount of the rebate was supposed to be much more. The rebate amount from Duke seemed to be what they had said but then the Federal rebate was much smaller than we were told.*
- *Have the rebate be a percentage of the overall cost, like 10% of the overall cost of the unit would have been really nice.*
- *I could have purchased a \$7,000 unit or a \$10,000 unit and the rebate would have been the same. It would be better if the rebate amount went up with the energy efficiency of the unit*
- *People will not spent thousands on a \$200 rebate; they buy it because they need it. It is nice that it's there, but the \$200 isn't a sway on a \$7,000 system.*
- *The A/C I installed was very expensive compared to some of the other ones that I could have gotten so I would have liked to get a larger rebate.*
- *The new A/C was very expensive compared to the rebate.*
- *I was completely surprised by the rebate, so I don't know how it could have been done better. It's not like I researched the program. I was taken completely by surprise.*

- The rebate could have been higher when compared to the amount of the A/C.
- Don't know (N=3)

As Figure 12 indicates, a plurality of Smart \$aver participants surveyed gave the highest possible "10 out of 10" score for their overall satisfaction with the program: 43.2% (35 out of 81) of heat pump rebate recipients and 50.0% (40 out of 80) for central air conditioning rebate recipients. Only ten participants surveyed (6.2% of 161) gave ratings of "5" or lower for their satisfaction with the program overall.

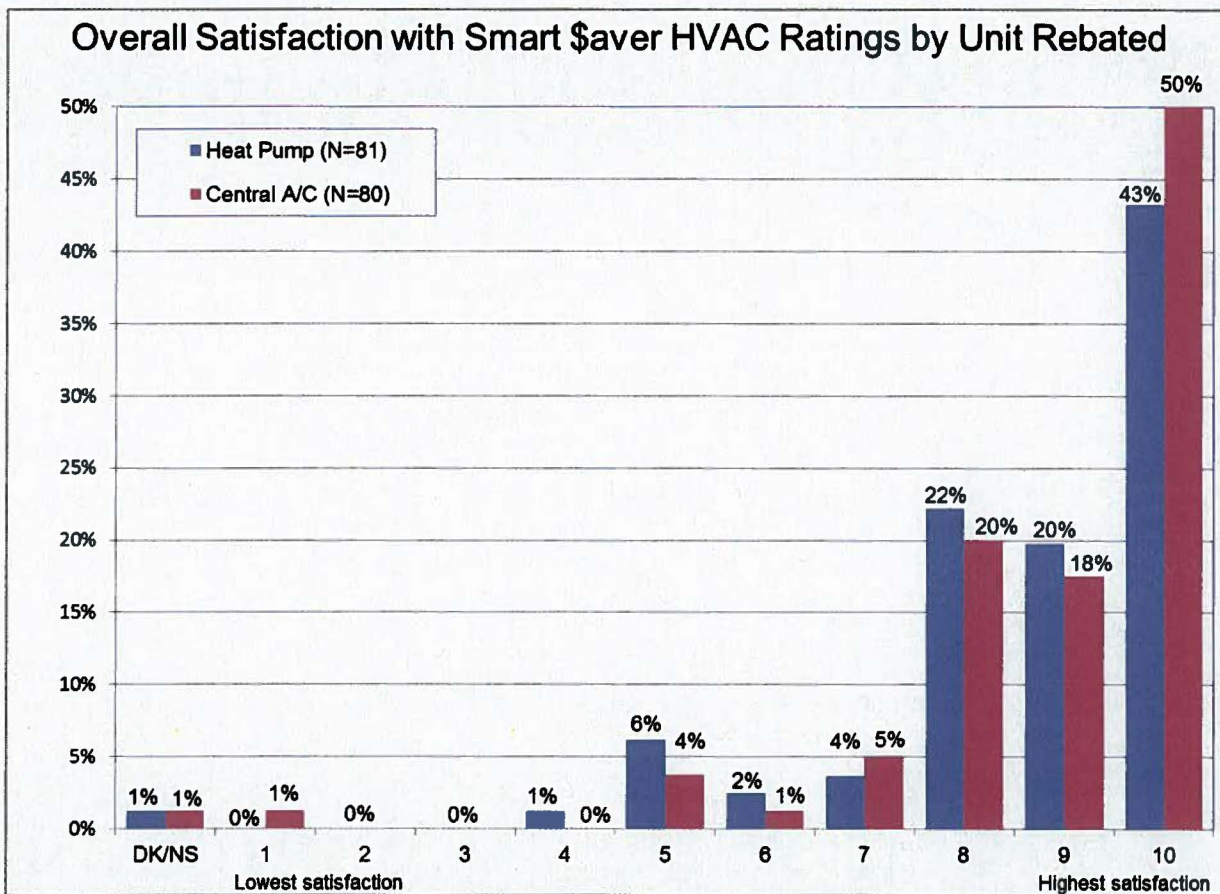


Figure 12. Respondents' Overall Satisfaction Ratings for the Smart Saver Program

Twenty respondents (12.4% of 161) gave a rating of "7" or lower for their overall experience participating in the Smart \$aver program. The reasons they give for their lower satisfaction are listed below; most of these customers' complaints are about the incentive rebate.

Rebate for heat pump (N=11)

- The amount of rebate could be slightly higher.
- Again, the rebate could have been larger.
- A larger rebate incentive would have increased my satisfaction, especially considering that I purchased four units.

- *I think if we got to where it was a larger incentive or rebate amount, especially for the contractors, my satisfaction with the program would improve. If Duke Energy would increase the rebate, it would make it more enticing to replace both the A/C and the furnace. The increase should be \$300 for an air conditioner or \$700 to \$800 for the complete heating and cooling system. I suggest doubling or tripling what the contractor gets, if the incentive is larger for the contractor, they will push the program more.*
- *I would have been more satisfied if I had been more informed about the program.*
- *I would like the rebate to be 10% of the unit purchase price.*
- *The amount of the rebate is so small that it is hardly worth jumping through all the hoops to get it.*
- *There were countless delays and many hoops to jump through regarding the paperwork.*
- *There could be more effective contractor education about the program.*
- *Duke should offer standardized training and form alliances with organizations such as the Greater Cincinnati Energy Alliance.*
- *I had no expectations, because I had not known anything about the program, so that is why I rate it as a "5".*

Rebate for central air conditioning (N=9)

- *I had to call Duke Energy several times before receiving my rebate check.*
- *I really don't know much about the program, and I think the rebate could have come to me faster, but I'm pretty happy just to get the rebate.*
- *I didn't receive the rebate.*
- *Even though I purchased what was supposed to be an efficient system, I haven't seen any difference in my bill.*
- *Instead of a one-time rebate, I would like see a program that provided a decrease in my monthly bill over the course of the year after purchasing a new unit: say, 10% one month, 20% the following, and so on. A bill reduction would be much better for people who work.*
- *I thought the program was pretty average. There wasn't anything that was bad about the program, but there really wasn't anything awesome about it either.*
- *I'm more neutral about the program. Increase advertisement for the program to let people know about it.*
- *I don't remember the program as well as I could, but we had the A/C installed almost two years ago. I wouldn't say that I'm less than satisfied at a "7". I would say that I feel more neutral about the program than "less than satisfied".*
- *Don't know*

Figure 13 shows the distribution of ratings of satisfaction with Duke Energy overall. Pluralities of 34.6% (28 out of 81) of heat pump rebate recipients and 38.8% (31 out of 80) of central air conditioning rebate recipients gave Duke Energy the highest possible "10 out of 10" score. Only fourteen survey respondents (8.7% of 161) gave ratings of "5" or lower on a 10-point scale.

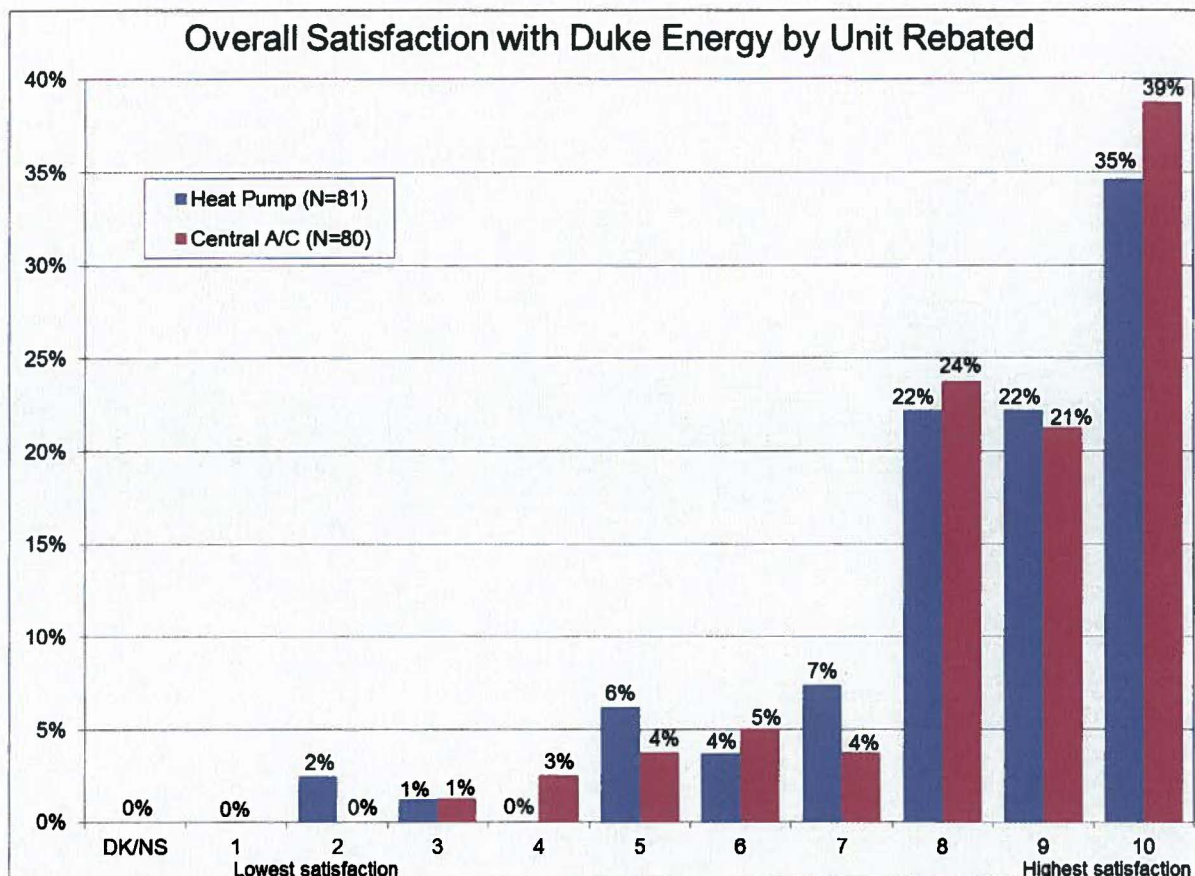


Figure 13. Respondents' Satisfaction Ratings for Duke Energy Overall

Thirty respondents (18.6% of 161) gave a rating of “7” or lower for their overall satisfaction with Duke Energy. The reasons they give for their lower satisfaction are listed below; rates, billing and power outages are the most frequent complaints, with customer service and business issues also getting some mentions. Only one surveyed customer (an air conditioner rebate recipient) mentioned a complaint against Duke Energy stemming from the Smart Saver HVAC program: they did not receive their rebate check.

Rebate for heat pump (N=17)

- *I find that Duke Energy's rates are too high, the rates should go down on kilowatts used.*
- *Duke should lower their rates, be more customer-orientated when you call with questions, and improve their overall integrity.*
- *I think Duke could do better at estimating peak energy use to make Equal Billing more consistent.*
- *We have a lot of power outages. I've lived in other places and have never experienced so many outages. We sometimes don't know even know why they occur. It happens even when there isn't a storm. We are told that a car hit a pole and reasons like that. The power outages are way too frequent.*
- *Duke is a big company and they are the only choice. It seems like a monopoly. I don't know how honest they are, and can't compare their rates.*

- *Duke should cease being a sociopathic corporate monopoly. Lessen the amount of pay for its executives and CEO. Provide more help to the homeless.*
- *I was less than satisfied because I question the accuracy of the new remotely-readable energy meters. Duke could improve customer relations, provide callbacks regarding service visits, improve meter accuracy, and repair gas leaks in a timely manner.*
- *My house got a new meter and it took a while, speaking to two or three supervisors, to straighten it out.*
- *I'm in a rural area that has more power outages. Last year it took seven or eight days to get the outage fixed. Duke could do more preventative things to avoid outages like cut down dead trees before a wind storm knocks them over.*
- *Duke charged a \$75 inspection fee for our gas line installation. I would have appreciated more clarity and communication regarding that, plus they should be able to add that directly to our monthly bill rather than sending a separate invoice.*
- *Duke should invest more in infrastructure upkeep and sustainable alternative energies.*
- *I had a problem with the power saving device installed on my cooling unit for Power Manager. When they installed the new heat pump the Power Manager device was deactivated or it just was not working. I was on the phone forever with customer service, and I ended up being transferred back to the same gal who answered my call and in the beginning and she was of no help at all. I found the customer service unsatisfactory.*
- *It was a pain dealing with Duke Energy during the renovation of my home. I had problems while installing the electricity. Duke Energy and their customer service have also given me trouble while I was trying to update my address information, it's still not totally correct. Also, during renovation, Duke refused to put a large enough gas line in for my house, so I was refused the option of having natural gas supplied to my house. Overall, their customer service is a pain the ass.*
- *When they come to do my home's meter readings, they don't schedule or let me know that I need to be there. I'd prefer an email notification of when they plan on coming to the house to read the meter. Also, about two years ago I was either trying to get my power turned off or on again during the renovation of my house and the customer service was very bad. I kept on getting passed off from one customer service representative to the next, I think I was on the phone cumulatively for over five hours. Duke's customer service made this all very difficult, yet it should have been a simple fix.*
- *I believe that Duke Energy's customer service stinks.*
- *Lower the rates.*
- *Don't know*

Rebate for central air conditioning (N=13)

- *I didn't receive a rebate for my new A/C. Also, there's something wrong with my bill because there's other companies listed on my Duke Energy bill: Direct Energy and Future Now Energy, and I'm getting charged by three different power companies. I don't understand what's going on and when I call no one is able to help me.*
- *I am having trouble with trying to figure out my bill. I am receiving two bills. One from Duke and one from Cinergy. Why am I paying two companies?*

- *Partially, I think they overcharge for the services provided. On a national scale, Ohio still has pretty low rates, but comparatively, they're overcharging by what I think is about 15%.*
- *After Progressive Energy took over, Duke was supposed to be better organized and less likely to raise rates. They're talking about a rate increase and when there is destructive weather, Duke's fix-it groups are always out of state so it takes longer to get power back than it should.*
- *I don't like that our bills have to go all the way to North Carolina, they should be going to Cincinnati.*
- *I'm not satisfied with Duke's business practices. But I'm not going to go into that with you, that's all I'm going to say.*
- *I'm still remembering when I was moving out of our old house and Duke Energy turned off our electric a couple days before we were supposed to move out and they would not send somebody back out to turn the power back on. I'm still a little upset about that past service and how Duke never did anything to fix our problem.*
- *My parents accidentally missed a payment while they were on vacation and when they got home their power had been turned off. They were late with their payment by about two weeks and they hadn't missed or been late with a payment before and they've had the same account for more than 30 years. It seems very callous to turn the power off on customers who hadn't made any transgressions in 30 years so quickly.*
- *For twenty years we were on the budget plan, and for the last two years we were getting \$600 back. This year we asked to have the monthly amount knocked down by \$50, since we didn't want to loan Duke free money, and we've also replaced the A/C system. The customer service person said there was nothing she could do; the calculation was based on a set formula. I wish she would have been given more authority to make that change, but instead we went back to pay-as-you-go monthly billing and since then have not had a monthly bill higher than the budget plan, even during peak use. If Duke were to reduce the monthly payment, we'd consider going back to the budget plan, but we won't let Duke have a \$600 loan for free. Also, we get a lot of energy company calls, not just Duke but from many other companies.*
- *We used to live in Indianapolis, and we did the budget program, and it generally worked very well. When we moved to Ohio, I did the budget program under CG&E. When Duke took over, they way overcharged me under the budget program. I asked Duke for the credit balance, and they gave me a hard time. Duke did finally send me a check, but in subsequent years Duke continued to be really bad about providing me with the balance; I had to fight them every time. I will never do the budget program with Duke again, even though I like it better. Duke just was not good about providing the balance. It has given me a negative attitude toward Duke Energy. I also did a job for years that involved a lot of accounting. I am good at budgeting. It was offensive dealing with Duke, they accused me of being wrong.*
- *Rates are too high / lower the rates (N=3)*

Program Satisfaction Ratings in Ohio

Program participants in Ohio were also asked to rate their overall satisfaction with Smart \$aver HVAC using a five-point Likert scale; these responses are shown in Figure 14.

A majority of surveyed Ohio customers give the highest possible “very satisfied” rating for the program (60.6% or 43 out of 71 heat pump rebate recipients and 69.2% or 45 out of 65 central air conditioning rebate recipients). Only two customers (1.5% of 136 Ohio customers surveyed) rated themselves as “somewhat dissatisfied” or “very dissatisfied” with the program.

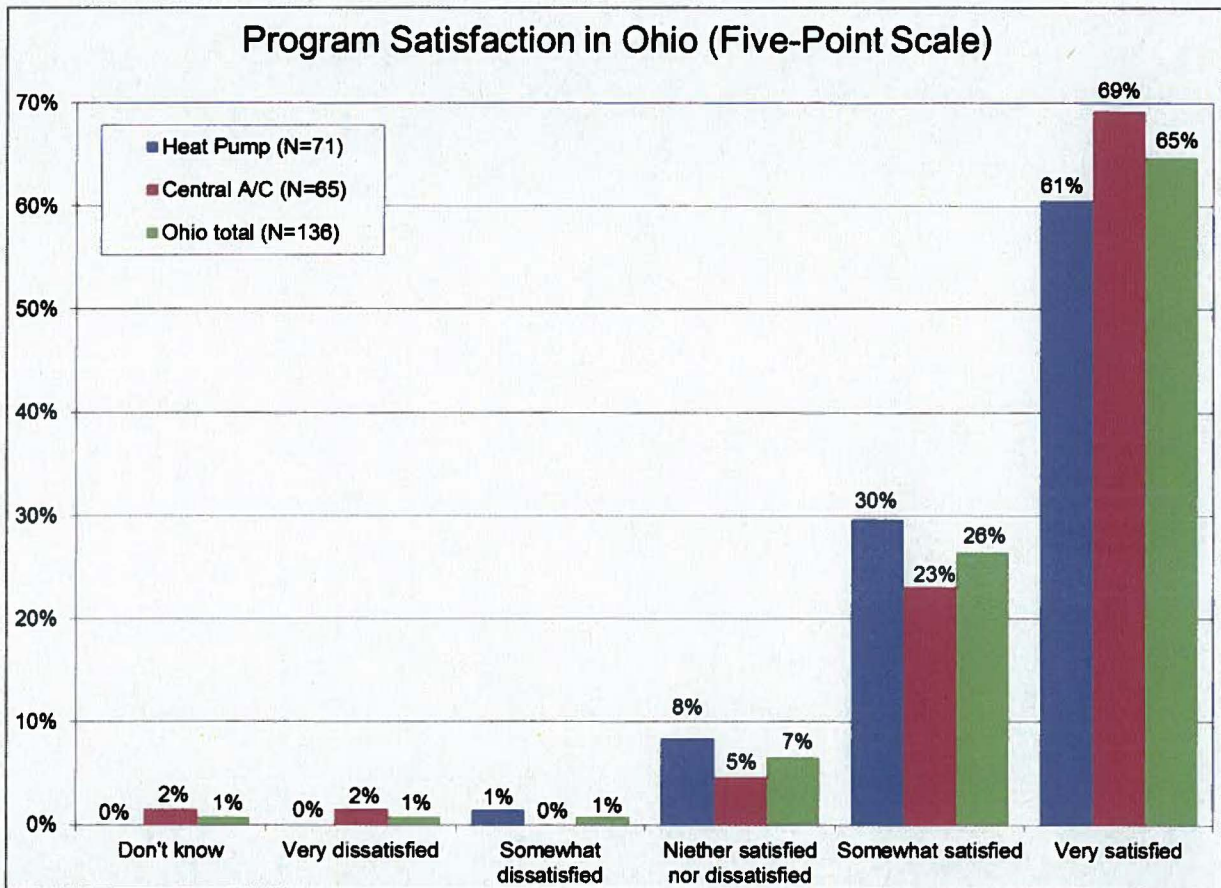


Figure 14. Ohio Respondents’ Overall Satisfaction Ratings for the Smart Saver Program (Five-Point Likert Scale)

Customers surveyed in Ohio were also asked to explain why they gave the program the satisfaction ratings they gave; these 136 responses are categorized and listed in *Appendix F: Ohio Participants’ Reasons for Program Satisfaction Ratings*.

Customer’s Favorite and Least Favorite Aspects of Smart \$aver

The most popular feature of the Smart \$aver program, by a large margin, is the fact that it saves participants money immediately through a rebate from Duke Energy, mentioned by seven out of

ten survey respondents (70.8% or 114 out of 161). The next most frequently mentioned favorite things about the program are the ease of participation (11.8% or 19 out of 161) and that it allowed the purchase of a better unit (10.6% or 17 out of 161).

There are two statistically significant differences in Table 14: air conditioning rebate recipients were more likely to mention the incentive payment (76.3% or 61 out of 80), while heat pump rebate recipients were more likely to mention the ease of participation (18.5% or 15 out of 81; both of these differences are significant at $p < .10$ or better using student's t-test).

Table 14. What Customers Like Best about the Smart Saver Program

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Incentive rebate / money off cost of new unit	65.4%	76.3%	70.8%
Ease of participation	18.5%	5.0%	11.8%
Allowed the purchase of a better unit	8.6%	12.5%	10.6%
Saving money on bills	9.9%	8.8%	9.3%
Contractor or salesperson was helpful / did paperwork for me	4.9%	8.8%	6.8%
Saving energy / conservation	4.9%	7.5%	6.2%
That this program exists	3.7%	2.5%	3.1%
Duke Energy's concern for customers	3.7%	1.3%	2.5%
Like having a new unit / qualities of new unit	2.5%	1.3%	1.9%
Educational information provided	2.5%	1.3%	1.9%
Inspires other energy efficiency actions	1.2%	1.3%	1.2%
Quick payment turnaround	2.5%	0.0%	1.2%
Improved comfort in home	0.0%	1.3%	0.6%
Participation is free	1.2%	0.0%	0.6%
Don't know	1.2%	1.3%	1.2%

Percentages may total to more than 100% because participants could give multiple responses.

As seen in Table 15, overall 77.6% (125 out of 161) of respondents had no complaints about their participation in the Smart Saver HVAC program. The most-mentioned least favorite things about the program have to do with rebates not being large enough (6.8% or 11 out of 161) and rebates taking too long to arrive (5.0% or 8 out of 161).

Table 15. What Customers Like Least about the Smart Saver Program

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Nothing / No Complaints / Don't Know	75.3%	80.0%	77.6%
Not enough money / rebate too small	8.6%	5.0%	6.8%
Took too long to receive rebate	4.9%	10.0%	5.0%
Could have been better informed / more publicity	3.7%	1.3%	2.5%
Have not received rebate / don't recall if received	0.0%	2.5%	1.2%
Having to verify / clarify details for Duke Energy	2.5%	1.3%	1.9%
Disliked paperwork / too confusing / too much	1.2%	1.3%	1.2%
Problems with the contractor (listed below)	2.5%	0.0%	1.2%
Other items should be covered (listed below)	1.2%	1.3%	1.2%
Other complaints, listed below	4.9%	3.8%	4.3%

Percentages may total to more than 100% because participants could give multiple responses.

Two survey respondents mentioned that their least favorite part of the program was due to the contractor; these comments are listed below.

Rebate for heat pump (N=2)

- *I disliked that I was misled by my contractor into believing that I would receive an additional \$200 rebate.*
- *I disliked the fact that the contractor had problems filling out his part of the paperwork.*

Two survey respondents mentioned that their least favorite part of the program was that it did not cover other items; these comments listed below.

Rebate for heat pump (N=1)

- *I did not like that my new furnace did not qualify for the rebate; it's a gas central air furnace.*

Rebate for central air conditioning (N=1)

- *I didn't like that the program doesn't cover water heaters.*

Seven survey respondents mentioned "other" things about the program that they liked the least, which are listed below.

Rebate for heat pump (N=4)

- *My time is very important to me, so I guess the time involved was something I did not like.*
- *I disliked the inability to choose to receive the rebate as a bill credit.*
- *I dislike the costs associated with receiving so many notifications about the program in my mail.*
- *I disliked having to request that Duke send a replacement check.*

Rebate for central air conditioning (N=3)

- *They try to sell you on a program when you've already made your decision.*
- *I did not get a tax credit, but that is of no fault to Duke Energy or this program.*
- *I think, just in general, rebates are kind of a hassle. But, this program was the most hassle-free rebate program I've done. The contractor took care of everything. I really can't complain.*

Improving Participation in Residential Smart \$aver

The top two suggestions from customers for increasing interest and participation in the program are to increase general advertising (36.0% or 58 out of 161) and including more information with monthly bills (28.0% or 45 out of 161). About one in four heat pump rebate recipients wants

more involvement from trade allies (24.7% or 20 out of 81), while fewer than one in ten air conditioner rebate recipients says the same (7.5% or 6 out of 80; this difference is significant at $p < .05$ using student's t-test). Customers who installed air conditioning are also more likely not to have any suggestions (38.8% or 31 out of 80) compared to those who installed heat pumps (8.6% or 7 out of 81; this difference is also significant at $p < .05$ using student's t-test).

There are many other significant differences between the two types of rebate recipient; all differences which are significant at $p < .10$ or better using student's t-test are marked in Table 16 below with bold italics.

Table 16. What Could Help Increase Interest and Participation in Smart Saver

	Heat Pump (N=81)	Central Air Conditioning (N=80)	All Surveyed Participants (N=161)
Increase general advertising	37.0%	35.0%	36.0%
Include more information with monthly bills	38.3%	17.5%	28.0%
Increase involvement with contractors / vendors	24.7%	7.5%	16.1%
Offer larger incentives	16.0%	6.3%	11.2%
Increase advertising in trade media	9.9%	3.8%	6.8%
Offer incentives on other items/include other items	7.4%	5.0%	6.2%
Promote with direct mail (not bill inserts)	8.6%	3.8%	6.2%
Emails promotions	7.4%	3.8%	5.6%
Include more community outreach and community events	3.7%	7.5%	5.6%
Promote on television	8.6%	2.5%	5.6%
Educate customers / more info to more people	2.5%	6.3%	4.3%
Better / more promotion through the Duke Energy website	3.7%	5.0%	4.3%
Increase awareness of savings / comparisons	4.9%	2.5%	3.7%
Have program staff call residential customers	4.9%	0.0%	2.5%
Newspaper / local magazines (print)	1.2%	2.5%	1.9%
Increase word-of-mouth	2.5%	1.3%	1.9%
Customer referrals / testimonials	2.5%	0.0%	1.2%
Make the process more streamlined for trade allies	2.5%	0.0%	1.2%
Make the process more streamlined for customers	1.2%	0.0%	0.6%
Other (listed below)	6.2%	6.3%	6.2%
Don't Know / Nothing	8.6%	38.8%	23.6%

Percentages may total to more than 100% because participants could give multiple responses.

Ten surveyed customers gave "other" suggestions for how to increase participation in the program; these are listed below.

Rebate for heat pump (N=5)

- *Advertise in school; get kids involved.*
- *Increase involvement with HVAC service technicians.*