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**Molly McIntosh Jagannathan**  
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September 21, 2017

Ms. Lynn Jarvis  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, North Carolina 27699-4325

RE: Proposed Residential New Construction Program  
Docket No. Sub E-7, Sub 1155

Dear Ms. Jarvis:

Enclosed for filing with and approval by the North Carolina Utilities Commission (the "Commission") is Duke Energy Carolinas, LLC's ("DEC" or the "Company") proposed Residential New Construction Program ("Program" or "RNC"), an energy efficiency ("EE") program filed in accordance with Commission Rule R8-68 and the Commission's Orders dated February 29, 2008 and March 13, 2008 in Docket No. E-100, Sub 113, Rulemaking Proceeding to Implement Session Law 2007-397 (Senate Bill 3).

The purpose of this Program is to provide incentives to residential builders in order to encourage the use of energy efficient building practices and equipment/appliances for new home construction. Eligibility is based upon the High Efficiency Residential Option (HERO) standard and upon requirements for energy efficient appliances. In addition, this proposal is intended to mirror Duke Energy Progress, LLC's Residential New Construction proposal, which was filed on September 20, 2017 in Docket No. E-2, Sub 1021.

DEC believes the proposed Program will be cost-effective. The Company has modeled the new RNC Program's cost-effectiveness results which are provided in the following table:

Cost-Effectiveness Tests	Cost-Effectiveness Results
Utility Cost Test ( <i>UCT</i> )	1.56
Total Resource Cost Test ( <i>TRC</i> )	1.41
Rate Impact Measure Test ( <i>RIM</i> )	0.80
Participant Test	2.12

DEC requests that the Commission:

1. Approve the Residential New Construction Program tariff (provided on Attachment G) to become effective on November 1, 2017.
2. Find that the Residential New Construction Program meets the requirements of a “new” EE program consistent with Rule R8-69.
3. Find that all costs incurred by DEC associated with the Residential New Construction Program will be eligible for consideration for cost recovery through the annual Demand-Side Management (“DSM”) and EE rider in accordance with Rule R8-69(b).
4. Approve the proposed utility incentives for inclusion in the annual DSM/EE rider in accordance with Rule R8-69.

The attached filing package contains a more detailed description of this program, prepared in accordance with Rule R8-68(c)(2) and (3).

The Commission’s prompt attention to this matter is appreciated.

Respectfully submitted,

Electronically submitted  
s/ Molly McIntosh Jagannathan  
molly.jagannathan@troutmansanders.com

Enclosures

<b>R8-68 Filing Requirements</b>	
<b>Residential New Construction, Duke Energy Carolinas</b>	
<b>Filing Requirements</b>	
<b>(c)(2)(i)(a)</b>	<p><b>Measure / Program Name</b></p> <p>Residential New Construction (“the “Program”)</p>
<b>(c)(2)(i)(b)</b>	<p><b>Consideration to be Offered</b></p> <p>The purpose of this Program is to provide incentives to encourage residential construction that meets or exceeds the whole house standards of the current Energy Conservation Code High Energy Residential Option (HERO) and the installation of high efficiency appliances.</p>
<b>(c)(2)(i)(c)</b>	<p><b>Anticipated Total Cost of the Measure / Program</b></p> <p>See Attachment B, Line 12.</p>
<b>(c)(2)(i)(d)</b>	<p><b>Source and Amount of Funding Proposed to be Used</b></p> <p>The source of funding will come from from Duke Energy Carolinas’ (“Company” or “DEC”), Demand-Side Management (DSM) and Energy Efficiency (EE) Rider, RiderRider EE.</p> <p>See Attachment B, Line 12.</p>
<b>(c)(2)(i)(e)</b>	<p><b>Proposed Classes of Persons to Whom This Will be Offered</b></p> <p>This Program is available to builders of single and multi-family residential dwellings (three stories or less) that meet or exceed the current HERO standards and are served on a residential retail schedule.</p> <p>This Program is also available to builders installing high efficiency equipment eligible for incentives, which include (but are not limited to) the following:</p> <ul style="list-style-type: none"> <li>• High efficiency electric HVAC equipment and/or services meeting or exceeding minimum Program standards to ensure sufficient energy savings; and</li> <li>• Other high efficiency equipment, products and services as determined by the Company on a case by case basis.</li> </ul> <p>Builders or designated representatives shall receive incentive(s) for either the inclusion of high efficiency equipment or construction meeting the HERO standard, but not both.</p>
<b>(c)(2)(ii)(a)</b>	<p><b>Describe the Measure / Program’s Objective</b></p> <p>This Program provides cash incentives to residential builders to encourage the use of energy efficient building practices and equipment/appliances for new home construction. Eligibility is based upon the HERO standard and upon requirements for energy efficient appliances .</p>
<b>(c)(2)(ii)(b)</b>	<p><b>Describe the Measure / Program Duration</b></p> <p>See Attachment A, Line 1.</p>
<b>(c)(2)(ii)(c)</b>	<p><b>Describe the Measure / Program Sector and Eligibility Requirements</b></p> <p>Residential builders who build new energy efficient homes and multi-family residences within DEC territory are eligible for the Program.</p> <ul style="list-style-type: none"> <li>• Dwellings that do not fall within the current HERO standard are not eligible for whole house incentives; however, incentives may be available for qualifying high efficiency appliances.</li> </ul>

<p><b>(c)(2)(ii)(d)</b></p>	<p><b>Examples of Communication Materials and Related Cost</b></p> <p>Initial marketing for the Program is projected as \$200,020 for 2017 and 2018. Since Residential New Construction is currently offered in the Duke Energy Progress (DEP) territory, the marketing team will leverage existing DEP website content.</p> <div data-bbox="462 378 1307 871" style="border: 1px solid black; padding: 10px; margin: 10px 0;">  <p style="text-align: center;"><b>Cash in with energy-efficient new construction.</b></p> <p>With incentives up to \$9,000, we make it easier than ever for you to build energy-efficient homes. Our Residential New Construction Program provides generous cash incentives to builders and developers who build new energy-efficient homes and multi-family residences in our service territory.</p> <p>You may choose to participate in one of two types of incentives:</p> <p><b>Whole-House Incentives</b></p> <ul style="list-style-type: none"> <li>• Up to \$9,000 for builders in North Carolina and South Carolina who build to or above the 2012 North Carolina Energy Conservation Code's High Efficiency Residential Option (HERO) or the equivalent in South Carolina</li> </ul> <p><b>Equipment Incentives</b></p> <ul style="list-style-type: none"> <li>• An optional three-year Heating and Cooling Energy Usage Limited Guarantee you can offer your home buyers</li> <li>• Available on-site subcontractor training</li> <li>• Marketing support including advertising and promotional campaigns, signage and collateral</li> <li>• Up to \$725 for specific high-efficiency equipment such as water heaters and heating and cooling systems</li> </ul> <p>Find out how energy efficiency can pay off for your business. See below and reverse for more details about the program specifics and builder qualifications.</p> </div> <p>This Program may also be promoted by, but not limited to:</p> <ul style="list-style-type: none"> <li>• Direct Mail</li> <li>• Email</li> <li>• Company website</li> </ul>
<p><b>(c)(2)(ii)(e)</b></p>	<p><b>Estimated Number of Participants</b></p> <p>Estimated Participation – see Attachment A, lines 3-12. Please note the unit of measure is kWh .</p>
<p><b>(c)(2)(ii)(f)</b></p>	<p><b>Impact that each measure or program is expected to have on the electric public utility or electric membership corporation, its customer body as a whole, and its participating North Carolina customers;</b></p> <p>Estimated Program Impact - see Attachment A, lines 13-49</p>
<p><b>(c)(2)(ii)(g)</b></p>	<p><b>Any other information the electric public utility or electric membership corporation believes is relevant to the application, including information on competition known by the electric public utility or the electric membership corporation</b></p> <p>Not applicable.</p>
<p><b>(c)(2)(iii)(a)</b></p>	<p><b>Proposed Marketing Plan Including Market Barriers and how the Electric Public Utility Plans to Address Them</b></p> <p>The Company will market the Program through various channels that may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Email</li> <li>• Direct mail</li> <li>• Company Website</li> </ul>

<p><b>(c)(2)(iii)(a)</b> <i>(Continued)</i></p>	<p>The Company may not be aware of all market barriers or understand the methods that can be used to address these market barriers. Potential market barriers include:</p> <table border="1" data-bbox="349 315 1404 630"> <thead> <tr> <th colspan="2" data-bbox="349 315 1404 357">Residential New Construction, DEC</th> </tr> <tr> <th data-bbox="349 357 868 399">Market Barrier</th> <th data-bbox="876 357 1404 399">Actions to Address</th> </tr> </thead> <tbody> <tr> <td data-bbox="349 399 868 609">Builders who want to participate in the Program may be forced to change some of their existing construction practices or seek alternative equipment vendors in order to comply with the eligibility requirements.</td> <td data-bbox="876 399 1404 609">Incentive to offset portion of incremental cost of upgrade, allows builder to stay ahead of utility Code changes/cycle, provide a more efficient sustainable home, and reduce callbacks.</td> </tr> </tbody> </table>	Residential New Construction, DEC		Market Barrier	Actions to Address	Builders who want to participate in the Program may be forced to change some of their existing construction practices or seek alternative equipment vendors in order to comply with the eligibility requirements.	Incentive to offset portion of incremental cost of upgrade, allows builder to stay ahead of utility Code changes/cycle, provide a more efficient sustainable home, and reduce callbacks.
Residential New Construction, DEC							
Market Barrier	Actions to Address						
Builders who want to participate in the Program may be forced to change some of their existing construction practices or seek alternative equipment vendors in order to comply with the eligibility requirements.	Incentive to offset portion of incremental cost of upgrade, allows builder to stay ahead of utility Code changes/cycle, provide a more efficient sustainable home, and reduce callbacks.						
<p><b>(c)(2)(iii)(b)</b></p>	<p><b>Total Market Potential and Estimated Market Growth throughout the Duration of the Program</b></p> <p>Market potential represents the number of eligible customers based on the projected new residential building permits issued in the DEC territory. Projected new residential construction permits are 110,529 by end of year 2021.</p> <p>Estimated Market Growth (Participation) - see Attachment A, Lines 3-12.</p>						
<p><b>(c)(2)(iii)(c)</b></p>	<p><b>Estimated Summer and Winter Peak Demand Reduction by Unit Metric and in the Aggregate by Year</b></p> <p>Estimated Summer and Winter Peak Demand Reduction – see Attachment A, lines 13-17 and lines 23-24 and Attachment E, lines 1-10.</p>						
<p><b>(c)(2)(iii)(d)</b></p>	<p><b>Estimated Energy Reduction per Appropriate Unit Metric and in the Aggregate by Year</b></p> <p>Estimated Energy Reduction - see Attachment A, lines 18-22 and lines 25-29</p>						
<p><b>(c)(2)(iii)(e)</b></p>	<p><b>Estimated Lost Energy Sales per Appropriate Unit metric and in the Aggregate by Year</b></p> <p>Lost Energy Sales – see Attachment A, lines 30-39.</p>						
<p><b>(c)(2)(iii)(f)</b></p>	<p><b>Estimated Load Shape Impacts</b></p> <p>See sections (c)(2)(iii)(c) and (c)(2)(iii)(d).</p>						
<p><b>(c)(2)(iv)(a)</b></p>	<p><b>Estimated Total and Per Unit Cost and Benefit of the Measure / Program and the Planned Accounting Treatment for Those Costs and Benefits</b></p> <p>Total estimated cost by category- see Attachment B, lines 6-9.                  Total estimated benefit- see Attachment B, line 11.                  Total estimated per unit cost by category – see Attachment D, lines 1-25.                  Data shown on Attachment B represents present value of cost and benefits over the life of the Program.</p>						

**(c)(2)(iv)(b) Type, Amount, and Reason for Any Participation Incentives and Other Consideration and to Whom They Will be Offered, Including Schedules Listing Participation Incentives and Other Consideration to be Offered**

- Cash incentives will be paid for each of the following measures. Incentives are in fixed dollar amounts per measure, with the exception of HERO-Plus, which is paid on a \$/kWh saved basis, with savings to be confirmed by a qualified Home Energy Rating System (HERS) rater recognized by the Residential Energy Services Network (RESNET) or any Company-approved Energy Services Network.

**Whole-House Measures**

	Whole-House Eligibility Requirement	Incentive
HERO	Must meet Energy Conservation Code High Energy Residential Option (HERO).	Up to \$750
HERO-Plus	Must meet HERO Standards and submit confirmed annual kWh savings from a Company-approved Energy Summary Report.	Up to \$0.90/kWh Saved

**Equipment-Only Measures**

	Equipment Incentive Description	Incentive
	High Efficiency Central Air Conditioning ≥ 15 SEER	Up to \$300
	High Efficiency Air Source Heat Pump ≥ 15 SEER	Up to \$300

**(c)(2)(iv)(c) Service Limitations or Conditions Planned to be Imposed on Customers Who do not Participate in the Measure / Program**

None

(c)(2)(v)	<b>Cost-Effectiveness Evaluation (including the results of all cost-effectiveness tests and should include, at a minimum, an analysis of the Total Resource Cost Test, the Participant Test, the Utility Cost Test, and the Ratepayer Impact Measure Test) Description of the Methodology Used to Produce the Impact Estimates, as well as, if Appropriate, Methodologies Considered and Rejected in the Interim Leading to the Final Model Specification</b>
	<p>See Attachment B, line 13 for cost-effectiveness test scores. Savings estimates were derived using the DSMore evaluation tool with inputs based on:</p> <ul style="list-style-type: none"> <li>(1) Actual program costs and deemed savings/impacts as observed from the current DEP Residential New Construction Program; and</li> <li>(2) Current and projected new residential building permits issued in the DEC territory.</li> </ul>
(c)(2)(vi)	<b>Commission Guidelines Regarding Incentive Programs (provide the information necessary to comply with the Commission's Revised Guidelines for Resolution of Issues Regarding Incentive Programs, issued by Commission Order on March 27, 1996, in Docket No. M-100, Sub 124, set out as an Appendix to Chapter 8 of these rules)</b>
	The Program does not provided any inducement or incentive affecting participant's decision to install or adopt natural gas or electric service.
(c)(2)(vii)	<b>Integrated Resource Plan (explain in detail how the measure is consistent with the electric public utility's or electric membership corporation's integrated resource plan filings pursuant to Rule R8-60)</b>
	Energy and capacity reductions from this program will be included for planning purposes in future integrated resource plans.
(c)(2)(viii)	<b>Other (any other information the electric public utility or electric membership corporation believes relevant to the application, including information on competition known by the electric public utility or the electric membership corporation)</b>
	Not applicable.
<b>Additional Filing Requirements</b>	
(c)(3)(i)(a)	<b>Costs and Benefits- Any Costs Incurred or Expected to be Incurred in Adopting and Implementing a Measure / Program to be Considered for Recovery Through the Annual Rider Under G.S. 62-133.9</b>
	See Attachment C, lines 11-35.
(c)(3)(i)(b)	<b>Estimated total costs to be avoided by the measure by appropriate capacity, energy and measure unit metric and in the aggregate by year</b>
	See Attachment A, lines 40-49.
(c)(3)(i)(c)	<b>Estimated participation incentives by appropriate capacity, energy, and measure unit metric and in the aggregate by year</b>
	<p>Incentive per cumulative kW - see Attachment E, lines 21-25  Incentive per cumulative kWh - see Attachment F, lines 16-20  Incentive per participant - see Attachment D, lines 11-15</p>

<b>(c)(3)(i)(d)</b>	<p>How the electric public utility proposes to allocate the costs and benefits of the measure among the customer classes and jurisdictions it serves</p> <p>The program costs for EE programs targeted at North Carolina and South Carolina retail residential customers are allocated to North Carolina retail jurisdiction based on the ratio of North Carolina retail kWh sales to total retail kWh sales, then recovered only from North Carolina residential customers.</p>
<b>(c)(3)(i)(e)</b>	<p><b>The capitalization period to allow the utility to recover all costs or those portions of the costs associated with a new program or measure to the extent that those costs are intended to produce future benefits as provided in G.S. 62-133.9(d)(1)</b></p> <p>No costs from this program will be capitalized.</p>
<b>(c)(3)(i)(f)</b>	<p><b>The electric public utility shall also include the estimated and known costs of measurement and verification activities pursuant to the Measurement and Verification Reporting Plan described in paragraph (ii)</b></p> <p>Total portfolio evaluation costs are estimated to be 5% of total program costs.</p>
<b>(c)(3)(ii)(a)</b>	<p><b>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: Describe the industry-accepted methods to be used to evaluate, measure, verify, and validate the energy and peak demand savings estimated in (2)(iii)c and d above</b></p> <p>Evaluation, measurement and verification (EM&amp;V) actions will provide an independent, third-party report of energy savings attributable to the Program, including an impact analysis and process evaluation.</p> <p>The process evaluation will include program manager interviews to assess current operations and participating builder interviews to assess satisfaction with program operations and incentive redesign structures.</p> <p>The goal of the impact evaluation is to assess the energy savings attributable to the Program. The independent, third-party EM&amp;V consultant will determine the detailed analysis methodologies, sample design and data collection activities.</p> <p>The impact evaluation is expected to consist of reviewing implementer data tracking records, conducting on-site metering and verification as needed, and modeling engineering simulations in association with billing analysis to verify savings. Net-to-gross impacts (free ridership and spillover) will be determined through participant builder surveys, non-participant builder surveys and HERS Raters surveys.</p> <p>Where applicable, a statistically representative sample of participants will be selected for the analysis. The Company intends to follow industry-accepted methodologies for all measurement and verification activities, consistent with International Performance Measurement Verification Protocol (IPMVP) Options A, C or D depending on the measure.</p>

<b>(c)(3)(ii)(b)</b>	<b>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: Provide a schedule for reporting the savings to the Commission</b>
	The Company will report savings associated with this Program in its annual DSM/EE cost recovery proceedings.
<b>(c)(3)(ii)(c)</b>	<b>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: describe the methodologies used to produce the impact estimates, as well as, if appropriate, the methodologies it considered and rejected in the interim leading to final model specification</b>
	See (c)(2)(v).
<b>(c)(3)(ii)(d)</b>	<b>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures: Identify any third party and include all of the costs of that third party, if the electric public utility plans to utilize an independent third party for purposes of measurement and verification</b>
	The Company will use a third party evaluator. See section (c)(3)(i)(f) for cost.
<b>(c)(3)(iii)</b>	<b>Cost Recovery Mechanism- Describe the Proposed Method of Cost Recovery From its Customers</b>
	The Company seeks to recover program costs, net lost revenues and a utility incentive pursuant to the cost recovery mechanism approved by the Commission in Docket No. E-7, Sub 1032, as modified in Docket No. E-7, Sub 1130.
<b>(c)(3)(iv)</b>	<b>Tariffs or Rates- Provide Proposed Tariffs or Modifications to Existing Tariffs That Will be Required to Implement Each Measure / Program</b>
	The tariff proposed by the Company for this Program is included as Attachment G.
<b>(c)(3)(v)</b>	<b>Utility Incentives- Indicate Whether it Will Seek to Recover Any Utility Incentives, Including, if Appropriate, Net Lost Revenues, in Addition to its Costs</b>
	The Company seeks net lost revenues and a utility incentive pursuant to the cost recovery mechanism approved by the Commission in Docket No. E-7 Sub 1032, as modified in Docket No. E-7, Sub 1130.

**Attachment A**  
Participation

<b>Residential New Construction Program</b>		
1	Measure Life (Average)	20
2	Free Rider % (Average)	22.58%
3	Incremental Participants Year 1	1,166,403
4	Incremental Participants Year 2	9,563,124
5	Incremental Participants Year 3	9,706,571
6	Incremental Participants Year 4	9,803,637
7	Incremental Participants Year 5	9,901,673
8	Cumulative Participation Year 1	1,166,403
9	Cumulative Participation Year 2	10,729,528
10	Cumulative Participation Year 3	20,436,099
11	Cumulative Participation Year 4	30,239,736
12	Cumulative Participation Year 5	40,141,409
13	Cumulative Summer Coincident kW w/ losses (net free) Year 1	458
14	Cumulative Summer Coincident kW w/ losses (net free) Year 2	3,874
15	Cumulative Summer Coincident kW w/ losses (net free) Year 3	6,994
16	Cumulative Summer Coincident kW w/ losses (net free) Year 4	10,144
17	Cumulative Summer Coincident kW w/ losses (net free) Year 5	13,327
18	Cumulative kWh w/ losses (net free) Year 1	1,312,044
19	Cumulative kWh w/ losses (net free) Year 2	11,089,187
20	Cumulative kWh w/ losses (net free) Year 3	20,018,225
21	Cumulative kWh w/ losses (net free) Year 4	29,036,553
22	Cumulative kWh w/ losses (net free) Year 5	38,145,064
23	Per Participant Weighted Average Coincident Saved Winter kW w/ losses	0.0004
24	Per Participant Weighted Average Coincident Saved Summer kW w/ losses	0.0004
25	Per Participant Average Annual kWh w/ losses (net free) Year 1	1.125
26	Per Participant Average Annual kWh w/ losses (net free) Year 2	1.034
27	Per Participant Average Annual kWh w/ losses (net free) Year 3	0.980
28	Per Participant Average Annual kWh w/ losses (net free) Year 4	0.960
29	Per Participant Average Annual kWh w/ losses (net free) Year 5	0.950
30	Cumulative Lost Revenue (net free) Year 1	\$119,620
31	Cumulative Lost Revenue (net free) Year 2	\$1,035,964
32	Cumulative Lost Revenue (net free) Year 3	\$1,912,798
33	Cumulative Lost Revenue (net free) Year 4	\$2,837,634
34	Cumulative Lost Revenue (net free) Year 5	\$3,812,487
35	Average Lost Revenue per Participant (net free) Year 1	0.103
36	Average Lost Revenue per Participant (net free) Year 2	0.097
37	Average Lost Revenue per Participant (net free) Year 3	0.094
38	Average Lost Revenue per Participant (net free) Year 4	0.094
39	Average Lost Revenue per Participant (net free) Year 5	0.095
40	Total Avoided Costs/MW saved Year 1	\$132,529
41	Total Avoided Costs/MW saved Year 2	\$134,454
42	Total Avoided Costs/MW saved Year 3	\$137,491
43	Total Avoided Costs/MW saved Year 4	\$140,741
44	Total Avoided Costs/MW saved Year 5	\$144,203
45	Total Avoided Costs/MWh saved Year 1	\$41
46	Total Avoided Costs/MWh saved Year 2	\$43
47	Total Avoided Costs/MWh saved Year 3	\$45
48	Total Avoided Costs/MWh saved Year 4	\$58
49	Total Avoided Costs/MWh saved Year 5	\$60

**Attachment B**  
**Cost-Effectiveness Evaluation**

<b>Residential New Construction Program</b>					
		<b>UCT</b>	<b>TRC</b>	<b>RIM</b>	<b>Participant</b>
1	Avoided T&D Electric	\$11,000,344	\$11,000,344	\$11,000,344	\$0
2	Cost-Based Avoided Elec Production	\$31,755,153	\$31,755,153	\$31,755,153	\$0
3	Cost-Based Avoided Elec Capacity	\$13,329,342	\$13,329,342	\$13,329,342	\$0
4	Participant Elec Bill Savings (gross)	\$0	\$0	\$0	\$60,039,866
5	Net Lost Revenue Net Fuel	\$0	\$0	\$34,470,876	\$0
6	Administration Costs	\$3,603,204	\$3,603,204	\$3,603,204	\$0
7	Implementation Costs	\$3,165,449	\$3,165,449	\$3,165,449	\$0
8	Incentives	\$28,802,924	\$0	\$28,802,924	\$28,802,924
9	Other Utility Costs	\$463,706	\$463,706	\$463,706	\$0
10	Participant Costs	\$0	\$32,507,480	\$0	\$41,830,646
11	<b>Total Benefits</b>	<b>\$56,084,839</b>	<b>\$56,084,839</b>	<b>\$56,084,839</b>	<b>\$88,842,790</b>
12	<b>Total Costs</b>	<b>\$36,035,283</b>	<b>\$39,739,838</b>	<b>\$70,506,159</b>	<b>\$41,830,646</b>
13	<b>Benefit/Cost Ratios</b>	<b>1.56</b>	<b>1.41</b>	<b>0.80</b>	<b>2.12</b>

**Data represents present value of costs and benefits over the life of the program.**

**Attachment C**  
Program Costs by Year

<b>Residential New Construction Program</b>		
1	Incremental Participants Year 1	1,166,403
2	Incremental Participants Year 2	9,563,124
3	Incremental Participants Year 3	9,706,571
4	Incremental Participants Year 4	9,803,637
5	Incremental Participants Year 5	9,901,673
6	Total Participant Costs Year 1	\$1,433,524
7	Total Participant Costs Year 2	\$11,753,199
8	Total Participant Costs Year 3	\$11,929,496
9	Total Participant Costs Year 4	\$12,048,791
10	Total Participant Costs Year 5	\$12,169,279
11	Administration Costs Year 1	\$146,628
12	Administration Costs Year 2	\$1,015,702
13	Administration Costs Year 3	\$1,016,883
14	Administration Costs Year 4	\$1,027,117
15	Administration Costs Year 5	\$1,037,456
16	Implementation Costs Year 1	\$120,193
17	Implementation Costs Year 2	\$885,991
18	Implementation Costs Year 3	\$899,281
19	Implementation Costs Year 4	\$908,274
20	Implementation Costs Year 5	\$917,357
21	Total Incentives Year 1	\$987,068
22	Total Incentives Year 2	\$8,092,786
23	Total Incentives Year 3	\$8,214,178
24	Total Incentives Year 4	\$8,296,320
25	Total Incentives Year 5	\$8,379,283
26	Other Utility Costs Year 1	\$212,521
27	Other Utility Costs Year 2	\$163,454
28	Other Utility Costs Year 3	\$39,402
29	Other Utility Costs Year 4	\$40,387
30	Other Utility Costs Year 5	\$41,397
31	Total Utility Costs Year 1	\$1,466,410
32	Total Utility Costs Year 2	\$10,157,933
33	Total Utility Costs Year 3	\$10,169,745
34	Total Utility Costs Year 4	\$10,272,099
35	Total Utility Costs Year 5	\$10,375,493

**Attachment D**  
Program Costs per Participant

<b>Residential New Construction Program</b>		
1	Average Per Participant Administration Costs Year 1	0.126
2	Average Per Participant Administration Costs Year 2	0.106
3	Average Per Participant Administration Costs Year 3	0.105
4	Average Per Participant Administration Costs Year 4	0.105
5	Average Per Participant Administration Costs Year 5	0.105
6	Average Per Participant Implementation Costs Year 1	0.103
7	Average Per Participant Implementation Costs Year 2	0.093
8	Average Per Participant Implementation Costs Year 3	0.093
9	Average Per Participant Implementation Costs Year 4	0.093
10	Average Per Participant Implementation Costs Year 5	0.093
11	Average Per Participant Incentives Year 1	0.846
12	Average Per Participant Incentives Year 2	0.846
13	Average Per Participant Incentives Year 3	0.846
14	Average Per Participant Incentives Year 4	0.846
15	Average Per Participant Incentives Year 5	0.846
16	Average Per Participant Other Utility Costs Year 1	0.182
17	Average Per Participant Other Utility Costs Year 2	0.017
18	Average Per Participant Other Utility Costs Year 3	0.004
19	Average Per Participant Other Utility Costs Year 4	0.004
20	Average Per Participant Other Utility Costs Year 5	0.004
21	Average Per Participant Total Utility Costs Year 1	1.257
22	Average Per Participant Total Utility Costs Year 2	1.062
23	Average Per Participant Total Utility Costs Year 3	1.048
24	Average Per Participant Total Utility Costs Year 4	1.048
25	Average Per Participant Total Utility Costs Year 5	1.048

**Attachment E**  
Program Costs per kW

<b>Residential New Construction Program</b>		
1	Cumulative Winter Coincident kW w/ losses (net free) Year 1	421
2	Cumulative Winter Coincident kW w/ losses (net free) Year 2	3,559
3	Cumulative Winter Coincident kW w/ losses (net free) Year 3	6,424
4	Cumulative Winter Coincident kW w/ losses (net free) Year 4	9,319
5	Cumulative Winter Coincident kW w/ losses (net free) Year 5	12,242
6	Cumulative Summer Coincident kW w/ losses (net free) Year 1	458
7	Cumulative Summer Coincident kW w/ losses (net free) Year 2	3,874
8	Cumulative Summer Coincident kW w/ losses (net free) Year 3	6,994
9	Cumulative Summer Coincident kW w/ losses (net free) Year 4	10,144
10	Cumulative Summer Coincident kW w/ losses (net free) Year 5	13,327
11	Administration Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$320
12	Administration Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$262
13	Administration Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$145
14	Administration Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$101
15	Administration Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$78
16	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$262
17	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$229
18	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$129
19	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$90
20	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$69
21	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$2,153
22	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$2,089
23	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$1,175
24	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$818
25	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$629
26	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$464
27	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$42
28	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$6
29	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$4
30	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$3
31	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$3,199
32	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$2,622
33	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$1,454
34	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$1,013
35	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$779

**Attachment F**  
Program Costs per kWh

<b>Residential New Construction Program</b>		
1	Cumulative kWh w/ losses (net free) Year 1	1,312,044
2	Cumulative kWh w/ losses (net free) Year 2	11,089,187
3	Cumulative kWh w/ losses (net free) Year 3	20,018,225
4	Cumulative kWh w/ losses (net free) Year 4	29,036,553
5	Cumulative kWh w/ losses (net free) Year 5	38,145,064
6	Administration Costs / Cumulative kWh w/ losses (net free) Year 1	\$0.112
7	Administration Costs / Cumulative kWh w/ losses (net free) Year 2	\$0.092
8	Administration Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.051
9	Administration Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.035
10	Administration Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.027
11	Implementation Costs / Cumulative kWh w/ losses (net free) Year 1	\$0.092
12	Implementation Costs / Cumulative kWh w/ losses (net free) Year 2	\$0.080
13	Implementation Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.045
14	Implementation Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.031
15	Implementation Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.024
16	Incentives / Cumulative kWh w/ losses (net free) Year 1	\$0.752
17	Incentives / Cumulative kWh w/ losses (net free) Year 2	\$0.730
18	Incentives / Cumulative kWh w/ losses (net free) Year 3	\$0.410
19	Incentives / Cumulative kWh w/ losses (net free) Year 4	\$0.286
20	Incentives / Cumulative kWh w/ losses (net free) Year 5	\$0.220
21	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 1	\$0.162
22	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 2	\$0.015
23	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.002
24	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.001
25	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.001
26	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 1	\$1.118
27	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 2	\$0.916
28	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.508
29	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.354
30	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.272

RESIDENTIAL NEW CONSTRUCTION PROGRAM (NC)

PURPOSE

The purpose of this Program is to provide incentives to encourage residential construction that meets or exceeds the whole house standards of the current Energy Conservation Code High Energy Residential Option (HERO).

AVAILABILITY

This Program is available to builders of single and multi-family residential dwellings (three stories or less) that meet or exceed the current HERO standards and are served on a residential retail schedule. Details of the HERO and HERO-Plus standard requirements are available on the Company website, [www.duke-energy.com](http://www.duke-energy.com).

Dwellings that do not fall within the current HERO standard are not eligible for whole house incentives.

At builder's discretion, the qualified builder may offer the home-buyer a Guarantee on the total annual electric HVAC energy consumption of the dwelling.

This Program is also available to builders installing high-efficiency installed equipment eligible for incentives which include (but are not limited to) the following:

High Efficiency electric HVAC equipment and/or services meeting or exceeding minimum Program standards to ensure sufficient energy savings; and

Other high efficiency equipment, products and services as determined by the Company on a case by case basis.

INCENTIVES AVAILABLE TO BUILDERS

The Company's maximum incentives for the installation of high efficiency equipment or meeting HERO/HERO-Plus standards are as follows:

- |   |                  |
|---|------------------|
| 1. High Efficiency Air Source Heat Pump or Central Air Conditioning | Up to \$300      |
| 2. Meet or exceed HERO standard                                     | Up to \$750      |
| 3. Meet or exceed HERO-Plus standard saved                          | Up to \$0.90/kWh |

For installations on and after November 1, 2017, builders or designated representatives shall receive incentive(s) for either the inclusion of high efficiency equipment or construction meeting the HERO standard, but not both.

The Company reserves the right to adjust the incentive(s) on a periodic basis as determined appropriate due to efficiency standard changes or changes to market conditions.

The effective incentive payments for eligible equipment or whole house standards are posted on the Company's website at [www.duke-energy.com](http://www.duke-energy.com).

Upon Company's approval of the builder's application, incentive payment(s) are applicable to the builder or builder's designee.

All energy conservation measures installed shall be subject to inspection by Company for the purposes of Program evaluation, measurement and verification.

**RESIDENTIAL NEW CONSTRUCTION PROGRAM (NC)**

Additional Program requirements such as minimum square footage required, minimum and maximum kWh savings are available on the Company website, [www.duke-energy.com](http://www.duke-energy.com).

**INCENTIVES AVAILABLE TO HOMEOWNERS**

At builder's discretion, the qualified builder may offer the homeowner a Guarantee on the total annual electric HVAC energy consumption of the dwelling.

The Guarantee is applicable solely to the initial homeowner and offers payment based on annual electric heating and cooling energy consumption that exceeds estimated consumption based upon the HERO standard used in constructing the dwelling.

The Guarantee shall apply for no longer than three years from registration. Guarantee incentives are only available at the end of each full year (12 months) of electric service.

Upon Company's review of valid homeowner claims for payments, including a review of prudent energy management practices as defined in the Guarantee, a homeowner shall receive a qualifying payment.

**RESPONSIBILITY OF PARTIES**

The builder or designated representative shall complete and submit an application with supporting documentation. For each qualifying home built by an approved Program participant that meets all of the minimum standards and requirements of the Program, the Guarantee will start on the first day of the second calendar month after the date of sales closing or lease signing.

Applications for equipment incentives must include purchasing and contractor servicing invoices.

Applications for whole house incentives must include HERO compliance verification, and for HERO-Plus, a REM/Rate TM Home Summary Report (or any Company-approved Energy Software modeling report) as assessed by a qualified HERS rater recognized by the Residential Energy Services Network (RESNET) or any Company-approved Energy Services Network.

The homeowner agrees to exercise prudent energy management of the home, as defined in the Responsibilities section of the Heating and Cooling Limited Usage Guarantee.

**COMPANY RETENTION OF PROGRAM BENEFITS**

Incentives and other considerations offered under the terms of this Program are understood to be an essential element in the recipient's decision to participate in the Program. Upon payment of these considerations, Company will be entitled to any and all environmental, energy efficiency, and demand reduction benefits and attributes, including all reporting and compliance rights, associated with participation in the Program.

**GENERAL**

Service rendered under this Program is subject to the provisions of the Service Regulations of the Company on file with the state regulatory commission