

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

OFFICIAL COPY

Sep 11 2023

R8-68 Filing Requirements	
Income-Qualified Energy Efficiency and Weatherization Assistance Program	
Filing Requirements	
(c)(2)(i)(a)	<b>Measure / Program Name.</b> Income-Qualified Energy Efficiency and Weatherization Assistance Program ("Program").
(c)(2)(i)(b)	<b>Consideration to be Offered.</b> <p>The existing, Commission-approved Program provides funding to local agencies and non-profit organizations providing weatherization services and energy efficiency upgrades which result in energy savings to income-qualified residential households in the Duke Energy Carolinas, LLC's (the "Company" or "DEC") service territory.</p> <p>This modification aligns the Program with Duke Energy Progress, LLC's ("DEP") Income-Qualified Energy Efficiency and Weatherization Assistance Program, and it will:</p> <ul style="list-style-type: none"> <li>(i) expand the class of customers eligible for the Program to include income-qualified homeowners and renters that occupy existing individually metered single-family residences, multifamily residences, or manufactured homes;</li> <li>(ii) require the Weatherization and/or HVAC replacement of an electric heating system with a heat pump to have a Seasonal Energy Efficiency Ratio ("SEER") exceeding federal standards;</li> <li>(iii) increase the maximum amount of the HVAC Replacement payment from \$6,000 to \$6,500;</li> <li>(iv) modify the maximum amount of the Refrigerator Replacement payment from \$1,080 to \$1,000 to increase cost-effectiveness while still providing a meaningful incentive; and</li> <li>(v) clarify current practice with respect to benefits, attributes, reporting rights, and compliance rights associated with the Program.</li> </ul>
(c)(2)(i)(c)	<b>Anticipated Total Cost of the Measure / Program.</b> See Attachment B, line 13.
(c)(2)(i)(d)	<b>Source and Amount of Funding Proposed to be Used.</b> All Program costs will be funded by DEC and subject to recovery through DEC's annual Demand-Side Management ("DSM") and Energy Efficiency ("EE") cost recovery rider consistent with Commission Rule R8-69(b). See Attachment B, Line 13.
(c)(2)(i)(e)	<b>Proposed Classes of Persons to Whom This Will be Offered.</b> Funding will be provided to local agencies and non-profit organizations providing weatherization services and energy efficiency upgrades to income-qualified residential households in the DEC service territory. Weatherization and HVAC measures will be available to qualified homeowners and renters that occupy existing individually-metered, single-family residences, multifamily residences, or manufactured homes. Refrigerator Replacement is available to qualified customers in individually-metered residences irrespective of whether the property owner or tenant owns the refrigerator.
(c)(2)(ii)(a)	<b>Describe the Measure / Program's Objective.</b>

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

	<p>The objective of this Program is to increase income-qualified weatherization and resulting energy savings through payments made to local agencies and non-profit organizations providing weatherization services and energy efficiency upgrades. This funding is intended to assist these agencies and non-profits in expanding the number of customers served through their weatherization programs, as well as to leverage additional funding from third party sources. Energy savings will be made possible by DEC funding, as well as state weatherization and third-party funding.</p> <p>The Program modifications proposed herein will:</p> <ul style="list-style-type: none"> <li>(i) expand the class of customers eligible for the Program to include income-qualified homeowners and renters that occupy existing individually metered single-family residences, multifamily residences, or manufactured homes;</li> <li>(ii) require the Weatherization and/or HVAC replacement of an electric heating system with a heat pump to have a Seasonal Energy Efficiency Ratio ("SEER") exceeding federal standards;</li> <li>(iii) increase the maximum amount of the HVAC Replacement payment from \$6,000 to \$6,500;</li> <li>(iv) modify the maximum amount of the Refrigerator Replacement payment from \$1,080 to \$1,000 to increase cost-effectiveness while still providing a meaningful incentive; and</li> <li>(v) clarify current practice with respect to benefits, attributes, reporting rights, and compliance rights associated with the Program.</li> </ul> <p>Measures that will be offered under and through this Program, as modified, may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Funding for weatherization measures and/or HVAC replacement of an electric heating system with a heat pump having a SEER that exceeds federal standards; and</li> <li>• Funding for refrigerator replacement.</li> </ul>
(c)(2)(ii)(b)	<p><b>Describe the Measure / Program Duration.</b></p> <p>The average measure life is 15 years - see Attachment A, line 1.</p>
(c)(2)(ii)(c)	<p><b>Describe the Measure / Program Sector and Eligibility Requirements.</b></p> <p>Weatherization Assistance Program providers and non-profit organizations who provide weatherization upgrades to income-qualified DEC customers are eligible to receive funding under the Program. For the purpose of this Program, the customer receiving the measure(s) must be certified, through appropriate means, to have a household income that qualifies for the State of North Carolina Weatherization Assistance Program.</p>

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

(c)(2)(ii)(d)	<p><b>Examples of Communication Materials and Related Cost.</b></p> <p>Cost associated with communications materials for this Program through direct mail is estimated at \$9,000 and is embedded in the cost displayed in Attachment B, line 9.</p> <p>This Program may be promoted by the program administrator through:</p> <ul style="list-style-type: none"> <li>• Direct mail offers to customers</li> <li>• Webinars</li> <li>• DEC's website</li> </ul>
(c)(2)(ii)(e)	<p><b>Estimated Number of Participants.</b></p>
	<p>Note the term "participant" as it appears in Attachment A does not represent the term "customer." Each customer may have multiple measures installed. Participation will be tracked by each installed measure and is represented in Attachment A, lines 3-12.</p>
(c)(2)(ii)(f)	<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 13-54.</p>
(c)(2)(ii)(g)	<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>
(c)(2)(iii)(a)	<p><b>Proposed Marketing Plan Including Market Barriers and how the Electric Public Utility Plans to Address Them.</b></p> <p>The Company will communicate through an administrator to program providers and income-qualified households. The Company will send out Weatherization Cards and flyers to potential participant households to help Weatherization Assistance Program providers and local non-profit organizations identify clients to serve.</p> <p>The Company is currently unaware of any market barriers associated with this Program as designed.</p>
(c)(2)(iii)(b)	<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 eligibility requirements defined in the Program tariff. There are approximately 579,966 residential customers who meet the criteria for this Program.</p> <p>Estimated Market Growth (Participation) - see Attachment A, lines 3-12.</p>
(c)(2)(iii)(c)	<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 13-22 and lines 28-29.</p>
(c)(2)(iii)(d)	<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 23-27 and lines 30-34.</p>

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

OFFICIAL COPY

Sep 11 2023

(c)(2)(iii)(e)	<b>Estimated Lost Energy Sales per Appropriate Unit metric and in the Aggregate by Year.</b>
	Lost Energy Sales - see Attachment A, lines 35-44.
(c)(2)(iii)(f)	<b>Estimated Load Shape Impacts.</b>
	See responses to (c)(2)(iii)(c) and (c)(c)(iii)(d).
(c)(2)(iv)(a)	<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>Costs associated with this Program will be subject to deferral and amortization. DEC is also eligible to recovery a return on any outstanding deferred balance pursuant to R8-68(b)(6).</p> <p>Total estimated cost by category- see Attachment B, lines 6-9.  Total estimated benefit- see Attachment B, line 12.  Total estimated per unit cost by category – see Attachment D, lines 1-25.</p> <p>Data shown on Attachment B represents present value of cost and benefits over the life of the Program.</p>
(c)(2)(iv)(b)	<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.</b>
	<p>Program participants will receive a free energy audit. Based on the findings from the energy audit, Program participants may be eligible to receive the following:</p> <ul style="list-style-type: none"> <li>• <b><u>Weatherization Tier I.</u></b> Homes with energy usage up to 7 kWh per square foot of conditioned space can receive up to \$600 for weatherization measures. The proposed modification does not change Tier 1 requirements or incentive levels.</li> <li>• <b><u>Weatherization Tier II.</u></b> Homes with energy usage greater than 7 kWh per square foot of conditioned space can receive up to \$4,000 for weatherization measures. The proposed modification does not change Tier 2 requirements or incentive levels.</li> <li>• <b><u>HVAC Replacement.</u></b> Replacement cost of an electric heating system, up to \$6,500, with a heat pump having a Seasonal Energy Efficiency Ratio (“SEER”) exceeding federal standards. The proposed modification increases this incentive amount from \$6,000.</li> <li>• <b><u>Refrigerator Replacement.</u></b> Replacement cost, up to \$1,000, for a replacement of a qualifying less efficient refrigerator with a new Energy Star rated refrigerator and responsible disposal of the old unit. The proposed modification decreases this incentive amount from \$1,080.</li> </ul>
(c)(2)(iv)(c)	<b>Service Limitations or Conditions Planned to be Imposed on Customers Who do not Participate in the Measure / Program.</b>
	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</b>

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

OFFICIAL COPY

Sep 11 2023

	<p><b>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> <p>See Attachment B, line 14 for cost-effectiveness test scores.</p> <p>Savings estimates were derived using the DSMore evaluation tool with inputs based on: (1) Estimated program costs and deemed savings/impacts; and (2) Current and projected weatherization measures completed by community action groups active in the DEC territory.</p>
(c)(2)(vi)	<p><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></p> <p>The Program does not provide any inducement or incentive affecting a residential customer's decision to install or adopt natural gas or electric service.</p>
(c)(2)(vii)	<p><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></p> <p>Energy and capacity reductions from this Program will be included for planning purposes in future integrated resource plans.</p>
(c)(2)(viii)	<p><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></p> <p>Not applicable.</p>
<b>Additional Filing Requirements</b>	
(c)(3)(i)(a)	<p><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></p> <p>See Attachment C, lines 11-35.</p>
(c)(3)(i)(b)	<p><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></p> <p>See Attachment A, lines 45-54.</p>
(c)(3)(i)(c)	<p><b>Estimated participation incentives by appropriate capacity, energy, and measure unit metric and in the aggregate by year.</b></p> <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>
(c)(3)(i)(d)	<p><b>How the electric public utility proposes to allocate the costs and benefits of the measure among the customer classes and jurisdictions it serves.</b></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>

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

(c)(3)(i)(e)	<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>
(c)(3)(i)(f)	<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>The evaluation costs are estimated to be 5% of total Program costs.</p>
(c)(3)(ii)(a)	<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>EM&amp;V actions will provide an independent, third-party report of energy savings attributable to the Program, including gross impact analysis, a Net-to-Gross analysis where applicable, and a process evaluation. The Company intends to follow industry-accepted methodologies for all measurement and verification activities.</p> <p>The process evaluation will examine process changes, measure program satisfaction, and develop recommendations for Program improvements. The evaluator will conduct Program and implementation staff/agency interviews and participant surveys. The evaluator will also review program materials and past evaluation reports.</p> <p>The Program impact evaluation is planned to be measured by a consumption analysis using a linear fixed effects regression (LFER) consumption analysis approach. This methodology will assess energy changes in energy consumption attributable to the Program, using comparison group data to determine the energy savings for Tier 1, Tier 2, and HVAC Replacement measures. This methodology will provide inherently net impacts.</p> <p>An engineering analysis will also be performed by reviewing documentation for impacts of all measures to assess whether the savings algorithms and inputs are reasonable using TRMs from neighboring states as references, prioritizing the Mid-Atlantic TRM, and referencing other TRMs (e.g., Arkansas TRM, Illinois TRM, Indiana TRM). The engineering analysis will also incorporate participant survey responses to capture measure installation and persistence rates. The evaluator will also verify the installation and operation of individual measures based on responses from the participant phone survey to develop an ISR for measures. A combination of consumption analysis results and engineering analysis will be used to estimate peak demand savings. The engineering analysis will be the default for Tier 1 measures if there is insufficient sample to perform a consumption analysis on these measures.</p> <p>It is also anticipated that since this is considered an income-qualified program the net-to-gross ratio is deemed at 1.0. This is standard industry practice for income-qualified programs.</p>
(c)(3)(ii)(b)	<p><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></p>
	<p>The Company will report savings associated with this Program in its annual DSM/EE cost recovery proceedings.</p>



# Income-Qualified Energy Efficiency and Weatherization Assistance Program

(c)(3)(ii)(c)	<p><b>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures:</b> 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.</p> <p>See (c)(2)(v).</p>
(c)(3)(ii)(d)	<p><b>Measurement and Verification Reporting Plan for New Demand-Side Management and Energy Efficiency Measures:</b> 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.</p> <p>The Company intends to use a third-party evaluator. See section (c)(3)(i)(f) for cost.</p>
(c)(3)(iii)	<p><b>Cost Recovery Mechanism- Describe the Proposed Method of Cost Recovery From its Customers.</b></p> <p>The Company seeks to recover Program costs and net lost revenues pursuant to DEC's Commission-approved DSM/EE cost recovery mechanism.</p>
(c)(3)(iv)	<p><b>Tariffs or Rates- Provide Proposed Tariffs or Modifications to Existing Tariffs That Will be Required to Implement Each Measure / Program.</b></p> <p>The tariff proposed by the Company for this Program is included as Attachment G.</p>
(c)(3)(v)	<p><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></p> <p>The Company seeks to recover Program costs, net lost revenues, and a utility incentive pursuant to DEC's Commission-approved DSM/EE cost recovery mechanism approved by the Commission in Docket E-7, Sub 1032 on October 20, 2020.</p>

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

## Attachment A Participation

Income Qualified Energy Efficiency and Weatherization Assistance		
1	Measure Life (Average)	15
2	Free Rider % (Average)	0.0%
3	Incremental Participants Year 1	691
4	Incremental Participants Year 2	691
5	Incremental Participants Year 3	691
6	Incremental Participants Year 4	691
7	Incremental Participants Year 5	691
8	Cumulative Participation Year 1	691
9	Cumulative Participation Year 2	1,382
10	Cumulative Participation Year 3	2,073
11	Cumulative Participation Year 4	2,764
12	Cumulative Participation Year 5	3,455
13	Cumulative Summer Coincident kW w/ losses (net free) Year 1	111
14	Cumulative Summer Coincident kW w/ losses (net free) Year 2	222
15	Cumulative Summer Coincident kW w/ losses (net free) Year 3	333
16	Cumulative Summer Coincident kW w/ losses (net free) Year 4	444
17	Cumulative Summer Coincident kW w/ losses (net free) Year 5	555
18	Cumulative Winter Coincident kW w/ losses (net free) Year 1	258
19	Cumulative Winter Coincident kW w/ losses (net free) Year 2	515
20	Cumulative Winter Coincident kW w/ losses (net free) Year 3	773
21	Cumulative Winter Coincident kW w/ losses (net free) Year 4	1,031
22	Cumulative Winter Coincident kW w/ losses (net free) Year 5	1,288
23	Cumulative kWh w/ losses (net free) Year 1	821,232
24	Cumulative kWh w/ losses (net free) Year 2	1,642,465
25	Cumulative kWh w/ losses (net free) Year 3	2,463,697
26	Cumulative kWh w/ losses (net free) Year 4	3,284,930
27	Cumulative kWh w/ losses (net free) Year 5	4,106,162
28	Per Participant Weighted Average Coincident Saved Winter kW w/ losses	0.3728
29	Per Participant Weighted Average Coincident Saved Summer kW w/ losses	0.1607
30	Per Participant Average Annual kWh w/ losses (net free) Year 1	1,188
31	Per Participant Average Annual kWh w/ losses (net free) Year 2	1,188
32	Per Participant Average Annual kWh w/ losses (net free) Year 3	1,188
33	Per Participant Average Annual kWh w/ losses (net free) Year 4	1,188
34	Per Participant Average Annual kWh w/ losses (net free) Year 5	1,188
35	Cumulative Lost Revenue (net free) Year 1	\$74,978
36	Cumulative Lost Revenue (net free) Year 2	\$153,284
37	Cumulative Lost Revenue (net free) Year 3	\$235,020
38	Cumulative Lost Revenue (net free) Year 4	\$320,471
39	Cumulative Lost Revenue (net free) Year 5	\$409,944
40	Average Lost Revenue per Participant (net free) Year 1	\$108.51
41	Average Lost Revenue per Participant (net free) Year 2	\$110.91
42	Average Lost Revenue per Participant (net free) Year 3	\$113.37
43	Average Lost Revenue per Participant (net free) Year 4	\$115.94
44	Average Lost Revenue per Participant (net free) Year 5	\$118.65
45	Total Avoided Costs/MW saved Year 1	\$177,076
46	Total Avoided Costs/MW saved Year 2	\$180,152
47	Total Avoided Costs/MW saved Year 3	\$185,881
48	Total Avoided Costs/MW saved Year 4	\$191,763
49	Total Avoided Costs/MW saved Year 5	\$198,063
50	Total Avoided Costs/MWh saved Year 1	\$35
51	Total Avoided Costs/MWh saved Year 2	\$33
52	Total Avoided Costs/MWh saved Year 3	\$33
53	Total Avoided Costs/MWh saved Year 4	\$34
54	Total Avoided Costs/MWh saved Year 5	\$35



# Income-Qualified Energy Efficiency and Weatherization Assistance Program

## Attachment B Cost-Effectiveness Evaluation

Income Qualified Energy Efficiency and Weatherization Assistance					
		UCT	TRC	RIM	Participant
1	Avoided T&D Electric	\$1,753,204	\$1,753,204	\$1,753,204	\$0
2	Cost-Based Avoided Elec Production	\$1,658,885	\$1,658,885	\$1,658,885	\$0
3	Cost-Based Avoided Elec Capacity	\$998,671	\$998,671	\$998,671	\$0
4	Participant Elec Bill Savings (gross)	\$0	\$0	\$0	\$4,027,891
5	Net Lost Revenue Net Fuel	\$0	\$0	\$2,962,499	\$0
6	Administration (EM&V) Costs	\$486,437	\$486,437	\$486,437	\$0
7	Implementation Costs	\$1,318,781	\$1,318,781	\$1,318,781	\$0
8	Incentives	\$8,242,380	\$0	\$8,242,380	\$8,242,380
9	Other Utility Costs	\$167,571	\$167,571	\$167,571	\$0
10	Participant Costs	\$0	\$8,242,380	\$0	\$8,242,380
11	Participant Costs (net)	\$0	\$8,242,380	\$0	\$8,242,380
12	Total Benefits	\$4,410,760	\$4,410,760	\$4,410,760	\$12,270,271
13	Total Costs	\$10,215,168	\$10,215,168	\$13,177,667	\$8,242,380
14	<b>Benefit/Cost Ratios</b>	<b>0.43</b>	<b>0.43</b>	<b>0.33</b>	<b>1.49</b>
Data represents present value of costs and benefits over the life of the program.					

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

## Attachment C Program Costs by Year

Income Qualified Energy Efficiency and Weatherization Assistance		
1	Incremental Participants Year 1	691
2	Incremental Participants Year 2	691
3	Incremental Participants Year 3	691
4	Incremental Participants Year 4	691
5	Incremental Participants Year 5	691
6	Total Participant Costs Year 1	\$1,866,630
7	Total Participant Costs Year 2	\$1,866,630
8	Total Participant Costs Year 3	\$1,866,630
9	Total Participant Costs Year 4	\$1,866,630
10	Total Participant Costs Year 5	\$1,866,630
11	Administration (EM&V) Costs Year 1	\$110,162
12	Administration (EM&V) Costs Year 2	\$110,162
13	Administration (EM&V) Costs Year 3	\$110,162
14	Administration (EM&V) Costs Year 4	\$110,162
15	Administration (EM&V) Costs Year 5	\$110,162
16	Implementation Costs Year 1	\$298,661
17	Implementation Costs Year 2	\$298,661
18	Implementation Costs Year 3	\$298,661
19	Implementation Costs Year 4	\$298,661
20	Implementation Costs Year 5	\$298,661
21	Total Incentives Year 1	\$1,866,630
22	Total Incentives Year 2	\$1,866,630
23	Total Incentives Year 3	\$1,866,630
24	Total Incentives Year 4	\$1,866,630
25	Total Incentives Year 5	\$1,866,630
26	Other Utility Costs Year 1	\$37,950
27	Other Utility Costs Year 2	\$37,950
28	Other Utility Costs Year 3	\$37,950
29	Other Utility Costs Year 4	\$37,950
30	Other Utility Costs Year 5	\$37,950
31	Total Utility Costs Year 1	\$2,313,403
32	Total Utility Costs Year 2	\$2,313,403
33	Total Utility Costs Year 3	\$2,313,403
34	Total Utility Costs Year 4	\$2,313,403
35	Total Utility Costs Year 5	\$2,313,403

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

## Attachment D Program Costs per Participant

Income Qualified Energy Efficiency and Weatherization Assistance		
1	Average Per Participant Administration (EM&V) Costs Year 1	\$159.42
2	Average Per Participant Administration (EM&V) Costs Year 2	\$159.42
3	Average Per Participant Administration (EM&V) Costs Year 3	\$159.42
4	Average Per Participant Administration (EM&V) Costs Year 4	\$159.42
5	Average Per Participant Administration (EM&V) Costs Year 5	\$159.42
6	Average Per Participant Implementation Costs Year 1	\$432.22
7	Average Per Participant Implementation Costs Year 2	\$432.22
8	Average Per Participant Implementation Costs Year 3	\$432.22
9	Average Per Participant Implementation Costs Year 4	\$432.22
10	Average Per Participant Implementation Costs Year 5	\$432.22
11	Average Per Participant Incentives Year 1	\$2,701.35
12	Average Per Participant Incentives Year 2	\$2,701.35
13	Average Per Participant Incentives Year 3	\$2,701.35
14	Average Per Participant Incentives Year 4	\$2,701.35
15	Average Per Participant Incentives Year 5	\$2,701.35
16	Average Per Participant Other Utility Costs Year 1	\$54.92
17	Average Per Participant Other Utility Costs Year 2	\$54.92
18	Average Per Participant Other Utility Costs Year 3	\$54.92
19	Average Per Participant Other Utility Costs Year 4	\$54.92
20	Average Per Participant Other Utility Costs Year 5	\$54.92
21	Average Per Participant Total Utility Costs Year 1	\$3,347.91
22	Average Per Participant Total Utility Costs Year 2	\$3,347.91
23	Average Per Participant Total Utility Costs Year 3	\$3,347.91
24	Average Per Participant Total Utility Costs Year 4	\$3,347.91
25	Average Per Participant Total Utility Costs Year 5	\$3,347.91

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

## Attachment E Program Costs per kW

Income Qualified Energy Efficiency and Weatherization Assistance		
1	Cumulative Winter Coincident kW w/ losses (net free) Year 1	258
2	Cumulative Winter Coincident kW w/ losses (net free) Year 2	515
3	Cumulative Winter Coincident kW w/ losses (net free) Year 3	773
4	Cumulative Winter Coincident kW w/ losses (net free) Year 4	1,031
5	Cumulative Winter Coincident kW w/ losses (net free) Year 5	1,288
6	Cumulative Summer Coincident kW w/ losses (net free) Year 1	111
7	Cumulative Summer Coincident kW w/ losses (net free) Year 2	222
8	Cumulative Summer Coincident kW w/ losses (net free) Year 3	333
9	Cumulative Summer Coincident kW w/ losses (net free) Year 4	444
10	Cumulative Summer Coincident kW w/ losses (net free) Year 5	555
11	Administration Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 1	992
12	Administration Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 2	496
13	Administration Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 3	331
14	Administration Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 4	248
15	Administration Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 5	\$198
16	Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$2,689
17	Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$1,345
18	Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$896
19	Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$672
20	Administration (EM&V) Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$538
21	Implementation Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 1	\$16,806
22	Implementation Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 2	\$8,403
23	Implementation Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 3	\$5,602
24	Implementation Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 4	\$4,202
25	Implementation Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 5	\$3,361
26	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$342
27	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$171
28	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$114
29	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$85
30	Implementation Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$68
31	Incentives / Cumulative Winter Coincident kW w/ losses (net free) Year 1	\$20,829
32	Incentives / Cumulative Winter Coincident kW w/ losses (net free) Year 2	\$10,414
33	Incentives / Cumulative Winter Coincident kW w/ losses (net free) Year 3	\$6,943
34	Incentives / Cumulative Winter Coincident kW w/ losses (net free) Year 4	\$5,207
35	Incentives / Cumulative Winter Coincident kW w/ losses (net free) Year 5	\$4,166
36	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$428
37	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$214
38	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$143
39	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$107
40	Incentives / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$86
41	Other Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 1	\$1,159
42	Other Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 2	\$580
43	Other Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 3	\$386
44	Other Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 4	\$290
45	Other Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 5	\$232
46	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$7,245
47	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$3,623
48	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$2,415
49	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$1,811
50	Other Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$1,449
51	Total Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 1	\$147
52	Total Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 2	\$74
53	Total Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 3	\$49
54	Total Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 4	\$37
55	Total Utility Costs / Cumulative Winter Coincident kW w/ losses (net free) Year 5	\$29
56	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 1	\$8,979
57	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 2	\$4,490
58	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 3	\$2,993
59	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 4	\$2,245
60	Total Utility Costs / Cumulative Summer Coincident kW w/ losses (net free) Year 5	\$1,796

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

## Attachment F Program Costs per kWh

OFFICIAL COPY

Sep 11 2023

Income Qualified Energy Efficiency and Weatherization Assistance		
1	Cumulative kWh w/ losses (net free) Year 1	821,232
2	Cumulative kWh w/ losses (net free) Year 2	1,642,465
3	Cumulative kWh w/ losses (net free) Year 3	2,463,697
4	Cumulative kWh w/ losses (net free) Year 4	3,284,930
5	Cumulative kWh w/ losses (net free) Year 5	4,106,162
6	Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 1	\$0.134
7	Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 2	\$0.067
8	Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.045
9	Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.034
10	Administration (EM&V) Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.027
11	Implementation Costs / Cumulative kWh w/ losses (net free) Year 1	\$0.364
12	Implementation Costs / Cumulative kWh w/ losses (net free) Year 2	\$0.182
13	Implementation Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.121
14	Implementation Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.0909
15	Implementation Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.0727
16	Incentives / Cumulative kWh w/ losses (net free) Year 1	\$2.273
17	Incentives / Cumulative kWh w/ losses (net free) Year 2	\$1.136
18	Incentives / Cumulative kWh w/ losses (net free) Year 3	\$0.758
19	Incentives / Cumulative kWh w/ losses (net free) Year 4	\$0.568
20	Incentives / Cumulative kWh w/ losses (net free) Year 5	\$0.455
21	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 1	\$0.046
22	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 2	\$0.023
23	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.015
24	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.012
25	Other Utility Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.009
26	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 1	\$2.817
27	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 2	\$1.408
28	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 3	\$0.939
29	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 4	\$0.704
30	Total Utility Costs / Cumulative kWh w/ losses (net free) Year 5	\$0.563

# Income-Qualified Energy Efficiency and Weatherization Assistance Program

---

Attachment G  
Tariff

OFFICIAL COPY

Sep 11 2023



## RESIDENTIAL INCOME-QUALIFIED ENERGY EFFICIENCY AND WEATHERIZATION ASSISTANCE FOR INDIVIDUALS (NC)

### PURPOSE

The purpose of this program is to assist income-qualified customers with energy efficiency measures in their homes to reduce energy usage. The program provides funding to local agencies and non-profit organizations providing weatherization services and energy efficiency upgrades which result in energy savings to income-qualified residential households in the Duke Energy Carolinas' service territory.

### PROGRAM

This program is available for residences served on a residential rate schedule from Duke Energy Carolinas' retail distribution system.

To qualify for this program, the customer must be certified, through appropriate means, to have a household income that qualifies for the State of North Carolina Weatherization Assistance Program.

Under this program, the measures eligible for funding will be determined by an energy audit of the residence which will be performed at no charge to the customer.

This program will be administered in coordination with local agencies that administer state weatherization programs, or other agencies selected by Duke Energy.

Participants are not eligible for payments under any other Duke Energy Carolinas' Energy Efficiency Programs for the same energy efficiency measures provided under this program.

Assistance may be provided to qualifying customers in the following areas:

Weatherization and/or HVAC replacement of an electric heating system with a heat pump having a Seasonal Energy Efficiency Ratio (SEER) exceeding federal standards and is available to homeowners and renters that occupy existing individually metered, single-family residences, multifamily residences or manufactured homes.

Refrigerator Replacement is available to qualified customers in individually metered residences irrespective of whether the property owner or the tenant owns the refrigerator.

### PAYMENT

Payments will be made to the administering agency on behalf of the customer as follows:

#### Weatherization

Tier 1 Homes with energy usage up to 7 kWh per square foot of conditioned space can receive up to \$600 for weatherization measures.

Tier 2 Homes with energy usage more than 7 kWh per square foot of conditioned space can receive assistance of up to \$4,000 for weatherization measures.

#### HVAC Replacement

Replacement cost of an electric heating system, up to \$6,500, with a heat pump having a Seasonal Energy Efficiency Ratio (SEER) exceeding federal standards.

#### Refrigerator Replacement

Replacement cost, up to \$1,000, for a refrigerator with an Energy Star rating.

### 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.

RESIDENTIAL INCOME-QUALIFIED ENERGY EFFICIENCY AND  
WEATHERIZATION ASSISTANCE FOR INDIVIDUALS (NC)PURPOSE

The purpose of this program is to assist ~~low-income~~income-qualified customers with energy efficiency measures in their homes to reduce energy usage. The program provides funding to local agencies and non-profit organizations providing weatherization services and energy efficiency upgrades which result in energy savings to income-qualified residential households in the Duke Energy Carolinas' service territory.

PROGRAM

This program is available for residences served on a residential rate schedule from Duke Energy Carolinas' retail distribution system.

To qualify for this program, the customer must be certified, through appropriate means, to have a household income that qualifies for the State of North Carolina Weatherization Assistance Program.

Under this program, the measures eligible for funding will be determined by an energy audit of the residence which will be performed at no charge to the customer.

This program will be administered in coordination with local agencies that administer state weatherization programs, or other agencies selected by Duke Energy.

Participants are not eligible for payments under any other Duke Energy Carolinas' Energy Efficiency Programs for the same energy efficiency measures provided under this program.

Assistance may be provided to qualifying customers in the following areas:

Weatherization and/or HVAC replacement of an electric heating system with a heat pump having a Seasonal Energy Efficiency Ratio (SEER) ~~of 14 or greater~~exceeding federal standards and is available to ~~qualified customers in exhibiting~~homeowners and renters that occupy existing individually-metered, ~~owner-occupied~~—single-family residences, multifamily residences~~condominiums~~ or manufactured homes.

Refrigerator Replacement is available to qualified customers in individually-metered residences irrespective of whether the property owner or the tenant owns the refrigerator.

PAYMENT

Payments will be made to the administering agency on behalf of the customer as follows:

## Weatherization

Tier 1 Homes with energy usage up to 7 kWh per square foot of conditioned space can receive up to \$600 for weatherization measures.

Tier 2 Homes with energy usage more than 7 kWh per square foot of conditioned space can receive assistance of up to \$4,000 for weatherization measures.

## HVAC Replacement

Replacement cost of an electric heating system, up to ~~\$6000~~\$6,500, with a heat pump having a Seasonal Energy Efficiency Ratio (SEER) ~~of 14 or greater~~exceeding federal standards.

## Refrigerator Replacement

Replacement cost, up to ~~\$1080~~\$1,000, for a refrigerator with an Energy Star ~~refrigerator~~rating.

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.