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**NON-ENERGY BENEFITS / NON-ENERGY IMPACTS (NEBS/NEIS)
FOR SELECTED PROGRAMS IN THE
DUKE ENERGY CAROLINAS (DEC) AND
DUKE ENERGY PROGRESS (DEP) PORTFOLIOS**

FINAL REPORT

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Final Report
April 25, 2023

NEB/NEI Multipliers Relative to Program Energy Bill Savings

The more important multiplier, or “adder” value calculated from the NEB/NEI results is the value of the benefits relative to the energy bill savings.⁶ This is important because it helps show whether NEB/NEI benefits are significant and may be useful for better representing the full return on investment received from participation in the program, and identifies whether there are strong marketing angles available beyond energy savings. Most importantly, these multipliers are direct influences on the program’s performance regarding benefit cost assessments (BCA) or cost-effectiveness tests. If the NEBs/NEIs are included in the numerator, to represent benefits beyond just energy savings, and the denominator (costs) stays the same, these multipliers are the amount by which the BCA is increased due to the NEBs/NEIs.

More than half the states around the country have taken various approaches to incorporate NEBs/NEIs to reduce bias into the BCA or cost-effectiveness tests. A common approach is to establish “adders” that stand in for directly-measured NEBs/NEIs.⁷ These adder values used around the US range from 5-30% for gas or electric programs, and often a 5-15% adder on top of that value is appended of low-income programs. The averages (not the ranges) for programs are about 11-12%, with a 13% adder for low income. The results shown in this report are substantially higher than this value. The currently-adopted values are low because many were negotiated on the order of a decade ago when there was less literature on the NEBs/NEIs topic, and negotiations were preliminary and conservative. The literature can clearly support higher values.

The multipliers that the study can support with its conservative estimation approaches, are shown in Figure ES.7. Note that the values vary by program.

- The average multiplier values are about 1.26 for the SCT test.
- The average multipliers are about 0.74 for the benefits associated with the TRC test.
- The adder “bump” for low income is estimated at about 0.14 (14%, and comparable to the number in the state level adders mentioned above (see the results under utility NEBs for Income-Qualified Programs DEP IQ NES, DEC IQ NES, and DEC IQ Wx).

Figure ES.7: Estimated Multiplicative “Adders” by Perspective for the Programs - (Ratio of NEBs/NEIs) over Program Bill Savings

NEBs Included	Utility + Societal + Participant (SCT)	Utility + Participant (TRC)	Utility NEBs only (UCT)
DEP SS	1.09	0.62	0
DEC SS	1.59	1.01	0
DEP HEHC	1.02	0.55	0
DEC HEHC	1.42	0.85	0

⁶ Electric-only for this report, as the gas savings data were not available.

⁷ As mentioned later in the report, a few examples include Colorado, Washington DC, Illinois, Maryland, Oregon, and Vermont.

NEBs Included	Utility + Societal + Participant (SCT)	Utility + Participant (TRC)	Utility NEBs only (UCT)
DEP My HER	0.47	0	0
DEC My HER	0.57	0	0
DEP MFDI	1.38	0.91	0
DEC MFDI	1.85	1.28	0
DEP IQ NES	1.51	1.04	0.14
DEC IQ NES	2.37	1.8	0.28
DEC IQ Wx	1.21	0.64	0.07
Simple Average	1.32	0.79	0.045
Saving-weighted average	1.26	0.74	0.004
DEC Weighted	1.56	0.98	0.004
DEP Weighted	1.04	0.57	0.001

Source: SERA "NEB-It" Computations, 2023

Explanation of How These Multipliers would be Applied in a Benefit-Cost Test

In general, the multiplier would be applied to the value of energy savings in the numerator of the Cost-effectiveness test or benefit-cost ratio (BCR). More specifically, however, the multipliers provided in this report are based on customer bill savings (specifically electricity bill savings). These ratios represent dollar values to participants and other beneficiaries (utility and society) ratcheted off the retail bill savings. However, in many cases, BCR tests include the energy savings in the numerator in wholesale terms. If that is true in the DEC / DEP territories, then the ratio between retail and wholesale energy savings must also be applied in order to preserve the dollar savings that are being represented by these multipliers.⁸

Monetized Results for Specific NEB Categories for Each Program

To make tables easier to read, most of the figures in the body of this report show the NEB group values, rather than values for individual NEB/NEI categories. Figure ES.8 and Figure ES.9 show the dollar value estimates of the NEBs/NEIs for each of the programs studied for the year 2023. For data for all years, see the appendices.

⁸ Specifically, [(Retail rates over wholesale rates) x NEB multiplier shown] is multiplied times the wholesale electric savings for the measure, program, or portfolio.