

# EPY5/GPY2 Cost Effectiveness Summary Report:

June 2012 through May 2013

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Prepared for:  
Illinois Department of Commerce and Economic Opportunity

Prepared by:



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# Total Resource Cost (TRC) Test Results

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This report presents the results of the cost effectiveness evaluation of all programs offered by the Illinois Department of Commerce and Economic Opportunity (DCEO) during electric program year five and natural gas program year two (EPY5/GPY2), which is defined as the period from June 2012 through May 2013.

## 1. TRC Definition and Modeling Inputs

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Illinois statues 220 ILCS 5/8-103 and 220 ILCS 5/8-104 require an annual evaluation of DCEO's portfolio of measures. This report presents the Total Resource Cost (TRC) test score for each of the programs implemented by the Illinois DCEO during EPY5/GPY2.

The TRC measures the net costs of a demand-side management program as a resource option based on the total costs of the program, including both participant and utility costs. The Illinois Power Authority Act defines the TRC test as follows<sup>1</sup>:

*"Total resource cost test" or "TRC test" means a standard that is met if, for an investment in energy efficiency or demand-response measures, the benefit-cost ratio is greater than one. The benefit-cost ratio is the ratio of the net present value of the total benefits of the program to the net present value of the total costs as calculated over the lifetime of the measures. A total resource cost test compares the sum of avoided electric utility costs, representing the benefits that accrue to the system and the participant in the delivery of those efficiency measures, as well as other quantifiable societal benefits, including avoided natural gas utility costs, to the sum of all incremental costs of end-use measures that are implemented due to the program (including both utility and participant contributions), plus costs to administer, deliver, and evaluate each demand-side program, to quantify the net savings obtained by substituting the demand-side program for supply resources. In calculating avoided costs of power and energy that an electric utility would otherwise have had to acquire, reasonable estimates shall be included of financial costs likely to be imposed by future regulations and legislation on emissions of greenhouse gases.*

ADM utilized modeling software called DSMore to perform the cost effectiveness testing. To test the DCEO portfolio of programs, ADM valued utility-specific net savings using the corresponding cost, loss and discount rates. The output of each utility model is a dollar figure that represents the discounted present value of the benefits over the lifetime of each measure. Total costs are the sum of net incremental measure costs<sup>2</sup>, program administration and evaluation

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<sup>1</sup> While this definition applies to evaluation of electric energy efficiency and demand response measures, the definition can be readily modified to apply to evaluation of natural gas efficiency measures.

<sup>2</sup> "Net incremental measure costs" is defined as the sum of 1) the portion of the program incentive that defrays the incremental cost faced by program participants and 2) the portion of incremental cost borne by non-free rider program participants. The portion of incremental cost borne by free rider program participants is not included as a cost in TRC, because the program did not cause that cost to occur.

costs, and incentives paid in excess of incremental measure costs. The TRC score is the ratio of total benefits to total costs (Total Benefits/Total Costs).

In addition to the set of utility inputs, program and measure specific inputs, and discount rates used in the model are specified in Table 1. EPY5/GPY2 was the second program year that included funds for measures targeting natural gas savings. The evaluation of any program inducing both electric and natural gas savings includes the benefits associated with both natural gas and electric energy savings.

*Table 1 Inputs to the TRC Model*

| <i>Category</i>  | <i>Input</i>  | <i>Source(s)</i>   |
|------------------|---|--|
| Utility-Specific | Avoided Cost of Energy Projections (\$/kWh) (2012 - 2035)                                   | Ameren, ComEd, Nicor, North Shore, and Peoples                       |
|                  | Avoided Electric Capacity Cost Projections (\$/kW) (2012 - 2035)                            |  |
|                  | Avoided Procurement Cost of Natural Gas Projections (\$/Therm) (2012 - 2035)                |  |
|                  | Electric Line Loss Percentage (Rates Vary by Customer Type, i.e. Residential vs Commercial) |  |
|                  | Gas Distribution Loss Percentage  |  |
| Measure Specific | Realized Net kWh Savings  | ADM  |
|                  | Realized Net Peak kW Savings  | ADM  |
|                  | Realized Net Therm Savings  | ADM  |
|                  | Measure-level Effective Useful Life   | Illinois Technical Reference Manual (TRM), ADM                       |
|                  | Incremental Costs   | Illinois TRM, ADM  |
|                  | Program Incentives  | DCEO   |
|                  | Administration and Evaluation Costs   | DCEO   |
|                  | Avoided Electric Environmental Impacts  | ComEd Plan Year 3 Summary Evaluation Report <sup>3</sup>             |
|                  | Non-Energy Benefits   | IL Cost Effectiveness Screening Issues SAG Presentation <sup>4</sup> |
| Discount Rates   | Weighted Average Cost of Capital  | Ameren, ComEd, Nicor, North Shore, and Peoples                       |
|                  | 10-Year Treasury Discount Rate  | 10-Year Treasury Yields  |

<sup>3</sup>[http://ilsagfiles.org/SAG\\_files/Evaluation\\_Documents/ComEd/ComEd%20EPY3%20Evaluation%20Reports/ComEd\\_Summary\\_PY3\\_Evaluation\\_Report\\_Final.pdf](http://ilsagfiles.org/SAG_files/Evaluation_Documents/ComEd/ComEd%20EPY3%20Evaluation%20Reports/ComEd_Summary_PY3_Evaluation_Report_Final.pdf)

<sup>4</sup>[http://ilsagfiles.org/SAG\\_files/Subcommittees/IPA-TRC\\_Subcommittee/3-17-2015\\_Meeting/NRDC\\_cost-eff\\_presentation\\_2015-03-17.pdf](http://ilsagfiles.org/SAG_files/Subcommittees/IPA-TRC_Subcommittee/3-17-2015_Meeting/NRDC_cost-eff_presentation_2015-03-17.pdf)

## 1.1 Utility-Specific Inputs

Avoided energy cost projections (kWh, kW and therms) were acquired from each utility. Electric line loss, and natural gas loss rates are also specific to each utility.

## 1.2 Program and Measure Specific Inputs

Annualized first year net energy savings values are based on the EPY5/GPY2 program evaluations completed by ADM, modified by the inclusion of measure interactive effects that were not included in the annualized first year energy savings values. ADM applied effective useful life (EUL) values found in the Illinois Technical Reference Manual (TRM) Version 4.0 for each applicable measure included in the TRM. For measures not included in the Illinois TRM, ADM referenced other secondary data sources to develop appropriate EULs. In order to appropriately develop lifetime energy savings and peak impacts of measures designated in the TRM as having a dual baseline, ADM adjusted savings and peak impacts at the appropriate point in the measure life. ADM developed incremental costs estimates based on guidance contained in the Illinois TRM; in cases in which the Illinois TRM could not be used to estimate incremental costs, incremental costs were estimated based on a payback method that is dependent on verified energy savings. Program incentives, administrative costs, and evaluation, measurement, and verification costs were provided by DCEO. Environmental benefits of avoided CO<sub>2</sub> emissions from electricity generation were valued at \$0.013875 / kWh and included in the calculation of benefits.

Participant non-energy benefit (NEB) adders were applied to calculated benefits. A 15% default non-low income benefits adder was applied to Public Sector and Market Transformation Programs. A 30% default low-income benefits adder was applied to Low Income Programs. TRC scores were calculated with and without the non-energy benefit adders.

## 1.3 Discount Rates

Sets of TRC scores were calculated using two discount rates: 1) utility-specific weighted average cost of capital (WACC) and 2) a societal discount rate of 2% based on 10-Year Treasury yield rates.

## 1.4 Analysis

To evaluate the DCEO portfolio of programs, ADM valued utility-specific net savings. The output of each utility model is a dollar value that represents the estimated net present value of the benefits over the lifetime of each measure. For each unit of analysis, benefits were calculated in four ways: 1) with a 10-Year Treasury Yield discount rate and without application of a NEB adder, 2) with a 10-Year Treasury Yield discount rate and with application of a NEB adder, 3) with a WACC discount rate and without application of a NEB adder, 4) with a WACC discount rate and with application of a NEB adder.

Total costs are the sum of net incremental costs, program administration and evaluation costs, and incentives paid in excess of incremental costs.



The TRC score is the ratio of total benefits to total costs (Total Benefits/Total Costs). Because benefits were calculated in four ways, there are four TRC scores for each unit of analysis.

## 2. TRC Results

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This section presents TRC results in two ways: 1) summary results that include total benefits and costs and 2) detailed results that break down benefits and costs into various categories.

### 2.1 Summary TRC Results

Gross and net program energy savings at the utility level are presented in Table 2 and Table 3, respectively.

Program benefits, costs, and TRC scores are shown for each utility in Table 4 through Table 9. Table 10 shows benefits, costs and TRC scores for all utilities combined. Using the four ways of calculating benefits outlined above, the portfolio-level TRC scores range from 1.27 to 1.97.<sup>5</sup>

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<sup>5</sup> While the portfolio-level TRC score exceeds 1 in all instances, note that per 220 ILCS 5/8-103 and 220 ILCS 5/8-104, DCEO's programs "targeted to households with incomes at or below 80% of area median income" shall not be accounted for in the demonstration that DCEO's "overall portfolio of energy efficiency and demand-response measures ... are cost-effective" using the total resource cost test.

Table 2 Portfolio Gross Savings

| Program                         | Gross Realized kWh |                    |                    | Gross Realized Therms |                  |                |                |                  |
|---------------------------------|--------------------|--------------------|--------------------|-----------------------|------------------|----------------|----------------|------------------|
|                                 | Ameren Elec        | ComEd              | Total Elec         | Ameren Gas            | Nicor            | North Shore    | Peoples        | Total Gas        |
| Custom                          | 9,331,747          | 19,377,084         | 28,708,831         | 725,799               | 367,669          | 78,964         | 101,657        | 1,274,089        |
| Standard (Prescriptive)         | 19,473,481         | 62,741,259         | 82,214,740         | 133,324               | 380,727          | 5,717          | 6,935          | 526,703          |
| New Construction                | 1,675,224          | 1,991,479          | 3,666,703          | 355                   | 43,625           | 0              | 0              | 43,980           |
| Retro Commissioning             | 1,714,495          | 9,727,651          | 11,442,146         | 75,794                | 313,507          | 145,113        | 335,624        | 870,038          |
| Boiler Tune-Up                  | 0                  | 0                  | 0                  | 638,397               | 100,220          | 10,497         | 102,373        | 851,487          |
| Green Nozzle                    | 0                  | 0                  | 0                  | 127,762               | 111,847          | 442            | 2,653          | 242,704          |
| STEP                            | 29,707             | 83,873             | 113,580            | 732                   | 2,433            | 0              | 0              | 3,165            |
| <b>Total Public Sector</b>      | <b>32,224,654</b>  | <b>93,921,346</b>  | <b>126,146,000</b> | <b>1,702,163</b>      | <b>1,320,028</b> | <b>240,733</b> | <b>549,242</b> | <b>3,812,166</b> |
| Residential Retrofit            | 902,680            | 3,123,292          | 4,025,972          | 96,474                | 229,655          | 28,067         | 318,421        | 672,617          |
| Affordable Housing Construction | 1,193,170          | 1,856,647          | 3,049,817          | 38,910                | 11,649           | 744            | 29,179         | 80,482           |
| Public Housing Authority        | 2,075,177          | 3,365,811          | 5,440,988          | 75,482                | 93,635           | 14,465         | 2,564          | 186,146          |
| <b>Total Low Income Sector</b>  | <b>4,171,027</b>   | <b>8,345,750</b>   | <b>12,516,777</b>  | <b>210,866</b>        | <b>334,939</b>   | <b>43,276</b>  | <b>350,164</b> | <b>939,245</b>   |
| SEDAC                           | N/A                | N/A                | N/A                | N/A                   | N/A              | N/A            | N/A            | N/A              |
| Lights for Learning             | 59,026             | 588,142            | 647,168            | 0                     | 0                | 0              | 0              | 0                |
| Building Operator Certification | N/A                | N/A                | N/A                | N/A                   | N/A              | N/A            | N/A            | N/A              |
| <b>Market Transformation</b>    | <b>59,026</b>      | <b>588,142</b>     | <b>647,168</b>     | <b>0</b>              | <b>0</b>         | <b>0</b>       | <b>0</b>       | <b>0</b>         |
| <b>Total Portfolio</b>          | <b>36,454,707</b>  | <b>102,855,238</b> | <b>139,309,945</b> | <b>1,913,029</b>      | <b>1,654,967</b> | <b>284,009</b> | <b>899,406</b> | <b>4,751,411</b> |

Table 3 Portfolio Net Savings

| Program                         | Net Realized kWh  |                   |                    | Net Realized Therms |                  |                |                |                  |
|---------------------------------|-------------------|-------------------|--------------------|---------------------|------------------|----------------|----------------|------------------|
|                                 | Ameren Elec       | ComEd             | Total Elec         | Ameren Gas          | Nicor            | North Shore    | Peoples        | Total Gas        |
| Custom                          | 8,733,505         | 18,135,382        | 26,868,887         | 663,936             | 336,331          | 72,233         | 92,992         | 1,165,492        |
| Standard (Prescriptive)         | 18,682,420        | 60,192,555        | 78,874,975         | 103,315             | 295,033          | 4,430          | 5,374          | 408,152          |
| New Construction                | 817,129           | 971,390           | 1,788,519          | 348                 | 42,712           | 0              | 0              | 43,060           |
| Retro Commissioning             | 1,593,286         | 9,039,939         | 10,633,225         | 69,065              | 285,671          | 132,229        | 305,824        | 792,789          |
| Boiler Tune-Up                  | 0                 | 0                 | 0                  | 614,559             | 91,377           | 9,873          | 93,537         | 809,346          |
| Green Nozzle                    | 0                 | 0                 | 0                  | 127,762             | 111,847          | 442            | 2,653          | 242,704          |
| STEP                            | 29,707            | 83,873            | 113,580            | 732                 | 2,433            | 0              | 0              | 3,165            |
| <b>Total Public Sector</b>      | <b>29,856,047</b> | <b>88,423,139</b> | <b>118,279,186</b> | <b>1,579,717</b>    | <b>1,165,404</b> | <b>219,207</b> | <b>500,380</b> | <b>3,464,708</b> |
| Residential Retrofit            | 902,680           | 3,123,292         | 4,025,972          | 96,474              | 229,655          | 28,067         | 318,421        | 672,617          |
| Affordable Housing Construction | 1,193,170         | 1,856,647         | 3,049,817          | 38,910              | 11,649           | 744            | 29,179         | 80,482           |
| Public Housing Authority        | 2,075,177         | 3,365,811         | 5,440,988          | 75,482              | 93,635           | 14,465         | 2,564          | 186,146          |
| <b>Total Low Income Sector</b>  | <b>4,171,027</b>  | <b>8,345,750</b>  | <b>12,516,777</b>  | <b>210,866</b>      | <b>334,939</b>   | <b>43,276</b>  | <b>350,164</b> | <b>939,245</b>   |
| SEDAC                           | 544,028           | 1,210,654         | 1,754,682          | 36,377              | 57,408           | 9,094          | 23,304         | 126,183          |
| Lights for Learning             | 51,352            | 511,683           | 563,035            | 0                   | 0                | 0              | 0              | 0                |
| Building Operator Certification | 101,446           | 452,603           | 554,049            | 9,179               | 5,163            | 287            | 11,187         | 25,816           |
| <b>Market Transformation</b>    | <b>696,826</b>    | <b>2,174,940</b>  | <b>2,871,766</b>   | <b>45,556</b>       | <b>62,571</b>    | <b>9,381</b>   | <b>34,491</b>  | <b>151,999</b>   |
| <b>Total Portfolio</b>          | <b>34,723,900</b> | <b>98,943,829</b> | <b>133,667,729</b> | <b>1,836,139</b>    | <b>1,562,914</b> | <b>271,864</b> | <b>885,035</b> | <b>4,555,952</b> |

Table 4 Ameren Electric Benefits, Costs, and TRC Scores by Program

| Sector                | Program                         | Total Benefits<br>(10-Year<br>Treasury<br>Discount Rate,<br>Without NEBs) | Total Benefits<br>(10-Year<br>Treasury<br>Discount<br>Rate, With<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, Without<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, With<br>NEBs) | Total Costs         | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>With<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>With<br>NEBs) |
|-----------------------|---------------------------------|---|---|---|--|---------------------|--|---|---|--|
| Public Sector         | Custom                          | \$7,315,257   | \$8,412,545   | \$5,577,452   | \$6,414,069  | \$4,159,502         | 1.76   | 2.02  | 1.34  | 1.54   |
|                       | Standard                        | \$18,260,892  | \$21,000,026  | \$13,689,162  | \$15,742,536   | \$5,461,269         | 3.34   | 3.85  | 2.51  | 2.88   |
|                       | New Construction                | \$1,619,494   | \$1,862,418   | \$1,026,635   | \$1,180,630  | \$411,099           | 3.94   | 4.53  | 2.50  | 2.87   |
|                       | Retro-Commissioning             | \$636,133   | \$731,553   | \$559,112   | \$642,979  | \$229,972           | 2.77   | 3.18  | 2.43  | 2.80   |
|                       | Boiler Tune-up                  | \$0   | \$0   | \$0   | \$0  | \$0                 |  |   |   |  |
|                       | STEP                            | \$31,854  | \$36,632  | \$22,513  | \$25,889   | \$19,290            | 1.65   | 1.90  | 1.17  | 1.34   |
|                       | Green Nozzle                    | \$0   | \$0   | \$0   | \$0  | \$0                 |  |   |   |  |
|                       | <b>Total</b>                    | <b>\$27,863,630</b>   | <b>\$32,043,174</b>   | <b>\$20,874,873</b>   | <b>\$24,006,104</b>  | <b>\$10,281,131</b> | <b>2.71</b>  | <b>3.12</b>   | <b>2.03</b>   | <b>2.33</b>  |
| Low Income            | Residential Retrofit            | \$560,022   | \$728,028   | \$444,185   | \$577,441  | \$2,017,929         | 0.28   | 0.36  | 0.22  | 0.29   |
|                       | Affordable New Construction     | \$1,699,644   | \$2,209,537   | \$1,169,740   | \$1,520,663  | \$2,713,011         | 0.63   | 0.81  | 0.43  | 0.56   |
|                       | Public Housing Authority        | \$2,099,643   | \$2,729,536   | \$1,550,162   | \$2,015,210  | \$1,192,571         | 1.76   | 2.29  | 1.30  | 1.69   |
|                       | <b>Total</b>                    | <b>\$4,359,309</b>  | <b>\$5,667,101</b>  | <b>\$3,164,087</b>  | <b>\$4,113,314</b>   | <b>\$5,923,511</b>  | <b>0.74</b>  | <b>0.96</b>   | <b>0.53</b>   | <b>0.69</b>  |
| Market Transformation | SEDAC                           | \$719,551   | \$827,484   | \$487,421   | \$560,534  | \$47,847            | 15.04  | 17.29   | 10.19   | 11.72  |
|                       | Lights for Learning             | \$25,255  | \$29,043  | \$20,616  | \$23,708   | \$15,323            | 1.65   | 1.90  | 1.35  | 1.55   |
|                       | Building Operator Certification | \$130,059   | \$149,567   | \$94,178  | \$108,305  | \$21,786            | 5.97   | 6.87  | 4.32  | 4.97   |
|                       | <b>Total</b>                    | <b>\$874,865</b>  | <b>\$1,006,095</b>  | <b>\$602,215</b>  | <b>\$692,547</b>   | <b>\$84,955</b>     | <b>10.30</b>   | <b>11.84</b>  | <b>7.09</b>   | <b>8.15</b>  |
| <b>Grand Total</b>    |                                 | <b>\$33,097,804</b>   | <b>\$38,716,370</b>   | <b>\$24,641,175</b>   | <b>\$28,811,965</b>  | <b>\$16,289,598</b> | <b>2.03</b>  | <b>2.38</b>   | <b>1.51</b>   | <b>1.77</b>  |

Table 5 ComEd Benefits, Costs, and TRC Scores by Program

| Sector                | Program                         | Total Benefits<br>(10-Year<br>Treasury<br>Discount Rate,<br>Without NEBs) | Total Benefits<br>(10-Year<br>Treasury<br>Discount<br>Rate, With<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, Without<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, With<br>NEBs) | Total Costs         | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>With<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>With<br>NEBs) |
|-----------------------|---------------------------------|---|---|---|--|---------------------|--|---|---|--|
| Public Sector         | Custom                          | \$12,281,058  | \$14,123,217  | \$9,680,116   | \$11,132,133   | \$7,754,973         | 1.58   | 1.82  | 1.25  | 1.44   |
|                       | Standard                        | \$41,487,605  | \$47,710,746  | \$32,839,427  | \$37,765,341   | \$22,036,621        | 1.88   | 2.17  | 1.49  | 1.71   |
|                       | New Construction                | \$1,457,229   | \$1,675,813   | \$1,009,829   | \$1,161,303  | \$444,573           | 3.28   | 3.77  | 2.27  | 2.61   |
|                       | Retro-Commissioning             | \$3,697,449   | \$4,252,066   | \$3,335,655   | \$3,836,004  | \$1,717,262         | 2.15   | 2.48  | 1.94  | 2.23   |
|                       | Boiler Tune-up                  | \$0   | \$0   | \$0   | \$0  | \$0                 |  |   |   |  |
|                       | STEP                            | \$39,746  | \$45,708  | \$32,132  | \$36,952   | \$58,414            | 0.68   | 0.78  | 0.55  | 0.63   |
|                       | Green Nozzle                    | \$0   | \$0   | \$0   | \$0  | \$0                 |  |   |   |  |
|                       | <b>Total</b>                    | <b>\$58,963,087</b>   | <b>\$67,807,550</b>   | <b>\$46,897,159</b>   | <b>\$53,931,733</b>  | <b>\$32,011,843</b> | <b>1.84</b>  | <b>2.12</b>   | <b>1.46</b>   | <b>1.68</b>  |
| Low Income            | Residential Retrofit            | \$1,631,450   | \$2,120,885   | \$4,871,824   | \$6,333,371  | \$7,326,240         | 0.22   | 0.29  | 0.66  | 0.86   |
|                       | Affordable New Construction     | \$1,219,576   | \$1,585,448   | \$1,160,616   | \$1,508,801  | \$4,947,705         | 0.25   | 0.32  | 0.23  | 0.30   |
|                       | Public Housing Authority        | \$1,559,599   | \$2,027,478   | \$1,579,733   | \$2,053,653  | \$1,968,683         | 0.79   | 1.03  | 0.80  | 1.04   |
|                       | <b>Total</b>                    | <b>\$4,410,624</b>  | <b>\$5,733,812</b>  | <b>\$7,612,173</b>  | <b>\$9,895,825</b>   | <b>\$14,242,628</b> | <b>0.31</b>  | <b>0.40</b>   | <b>0.53</b>   | <b>0.69</b>  |
| Market Transformation | SEDAC                           | \$463,294   | \$532,788   | \$396,626   | \$456,120  | \$292,049           | 1.59   | 1.82  | 1.36  | 1.56   |
|                       | Lights for Learning             | \$140,897   | \$162,032   | \$154,886   | \$178,119  | \$181,813           | 0.77   | 0.89  | 0.85  | 0.98   |
|                       | Building Operator Certification | \$222,630   | \$256,024   | \$325,255   | \$374,043  | \$115,578           | 1.93   | 2.22  | 2.81  | 3.24   |
|                       | <b>Total</b>                    | <b>\$826,821</b>  | <b>\$950,845</b>  | <b>\$876,767</b>  | <b>\$1,008,282</b>   | <b>\$589,440</b>    | <b>1.40</b>  | <b>1.61</b>   | <b>1.49</b>   | <b>1.71</b>  |
| <b>Grand Total</b>    |                                 | <b>\$64,200,533</b>   | <b>\$74,492,206</b>   | <b>\$55,386,099</b>   | <b>\$64,835,840</b>  | <b>\$46,843,911</b> | <b>1.37</b>  | <b>1.59</b>   | <b>1.18</b>   | <b>1.38</b>  |

Table 6 Ameren Gas Benefits, Costs, and TRC Scores by Program

| Sector                | Program                         | Total Benefits<br>(10-Year<br>Treasury<br>Discount Rate,<br>Without NEBs) | Total Benefits<br>(10-Year<br>Treasury<br>Discount<br>Rate, With<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, Without<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, With<br>NEBs) | Total Costs        | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>With<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>With<br>NEBs) |
|-----------------------|---------------------------------|---|---|---|--|--------------------|--|---|---|--|
| Public Sector         | Custom                          | \$5,415,026   | \$6,227,280   | \$4,056,815   | \$4,665,338  | \$2,491,952        | 2.17   | 2.50  | 1.63  | 1.87   |
|                       | Standard                        | \$1,349,249   | \$1,551,636   | \$946,123   | \$1,088,042  | \$696,088          | 1.94   | 2.23  | 1.36  | 1.56   |
|                       | New Construction                | \$6,036   | \$6,941   | \$3,853   | \$4,431  | \$992              | 6.08   | 7.00  | 3.88  | 4.47   |
|                       | Retro-Commissioning             | \$476,901   | \$548,436   | \$367,077   | \$422,138  | \$65,464           | 7.28   | 8.38  | 5.61  | 6.45   |
|                       | Boiler Tune-up                  | \$6,132,915   | \$7,052,852   | \$4,496,194   | \$5,170,623  | \$631,448          | 9.71   | 11.17   | 7.12  | 8.19   |
|                       | STEP                            | \$3,869   | \$4,449   | \$3,301   | \$3,796  | \$10,977           | 0.35   | 0.41  | 0.30  | 0.35   |
|                       | Green Nozzle                    | \$464,932   | \$534,672   | \$422,136   | \$485,457  | \$138,347          | 3.36   | 3.86  | 3.05  | 3.51   |
|                       | <b>Total</b>                    | <b>\$13,848,927</b>   | <b>\$15,926,266</b>   | <b>\$10,295,499</b>   | <b>\$11,839,824</b>  | <b>\$4,035,268</b> | <b>3.43</b>  | <b>3.95</b>   | <b>2.55</b>   | <b>2.93</b>  |
| Low Income            | Residential Retrofit            | \$1,216,496   | \$1,581,445   | \$809,432   | \$1,052,262  | \$820,102          | 1.48   | 1.93  | 0.99  | 1.28   |
|                       | Affordable New Construction     | \$248,350   | \$322,855   | \$163,837   | \$212,988  | \$494,974          | 0.50   | 0.65  | 0.33  | 0.43   |
|                       | Public Housing Authority        | \$867,080   | \$1,127,205   | \$592,550   | \$770,314  | \$1,151,031        | 0.75   | 0.98  | 0.51  | 0.67   |
|                       | <b>Total</b>                    | <b>\$2,331,926</b>  | <b>\$3,031,504</b>  | <b>\$1,565,819</b>  | <b>\$2,035,565</b>   | <b>\$2,466,107</b> | <b>0.95</b>  | <b>1.23</b>   | <b>0.63</b>   | <b>0.83</b>  |
| Market Transformation | SEDAC                           | \$76,839  | \$88,365  | \$73,238  | \$84,223   | \$47,629           | 1.61   | 1.86  | 1.54  | 1.77   |
|                       | Lights for Learning             | \$0   | \$0   | \$0   | \$0  | \$0                |  |   |   |  |
|                       | Building Operator Certification | \$113,652   | \$130,699   | \$81,276  | \$93,468   | \$37,274           | 3.05   | 3.51  | 2.18  | 2.51   |
|                       | <b>Total</b>                    | <b>\$190,491</b>  | <b>\$219,064</b>  | <b>\$154,514</b>  | <b>\$177,691</b>   | <b>\$84,903</b>    | <b>2.24</b>  | <b>2.58</b>   | <b>1.82</b>   | <b>2.09</b>  |
| <b>Grand Total</b>    | <b>\$16,371,344</b>             | <b>\$19,176,834</b>   | <b>\$12,015,832</b>   | <b>\$14,053,080</b>   | <b>\$6,586,277</b>   | <b>2.49</b>        | <b>2.91</b>  | <b>1.82</b>   | <b>2.13</b>   |  |

Table 7 Nicor Benefits, Costs, and TRC Scores by Program

| Sector                | Program                         | Total Benefits<br>(10-Year<br>Treasury<br>Discount Rate,<br>Without NEBs) | Total Benefits<br>(10-Year<br>Treasury<br>Discount<br>Rate, With<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, Without<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, With<br>NEBs) | Total Costs        | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>With<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>With<br>NEBs) |
|-----------------------|---------------------------------|---|---|---|--|--------------------|--|---|---|--|
| Public Sector         | Custom                          | \$1,857,638   | \$2,136,284   | \$1,266,880   | \$1,456,912  | \$1,435,803        | 1.29   | 1.49  | 0.88  | 1.01   |
|                       | Standard                        | \$1,963,178   | \$2,257,655   | \$1,287,134   | \$1,480,204  | \$1,701,597        | 1.15   | 1.33  | 0.76  | 0.87   |
|                       | New Construction                | \$326,656   | \$375,655   | \$204,198   | \$234,828  | \$202,135          | 1.62   | 1.86  | 1.01  | 1.16   |
|                       | Retro-Commissioning             | \$702,543   | \$807,925   | \$571,858   | \$657,637  | \$463,321          | 1.52   | 1.74  | 1.23  | 1.42   |
|                       | Boiler Tune-up                  | \$127,724   | \$146,882   | \$114,386   | \$131,544  | \$267,464          | 0.48   | 0.55  | 0.43  | 0.49   |
|                       | STEP                            | \$6,643   | \$7,639   | \$5,526   | \$6,355  | \$38,245           | 0.17   | 0.20  | 0.14  | 0.17   |
|                       | Green Nozzle                    | \$188,468   | \$216,738   | \$170,683   | \$196,285  | \$196,494          | 0.96   | 1.10  | 0.87  | 1.00   |
|                       | <b>Total</b>                    | <b>\$5,172,850</b>  | <b>\$5,948,777</b>  | <b>\$3,620,665</b>  | <b>\$4,163,765</b>   | <b>\$4,305,059</b> | <b>1.20</b>  | <b>1.38</b>   | <b>0.84</b>   | <b>0.97</b>  |
| Low Income            | Residential Retrofit            | \$1,897,098   | \$2,466,228   | \$1,116,480   | \$1,451,425  | \$1,811,455        | 1.05   | 1.36  | 0.62  | 0.80   |
|                       | Affordable New Construction     | \$81,472  | \$105,914   | \$52,529  | \$68,287   | \$830,698          | 0.10   | 0.13  | 0.06  | 0.08   |
|                       | Public Housing Authority        | \$531,602   | \$691,082   | \$355,010   | \$461,513  | \$868,750          | 0.61   | 0.80  | 0.41  | 0.53   |
|                       | <b>Total</b>                    | <b>\$2,510,172</b>  | <b>\$3,263,224</b>  | <b>\$1,524,020</b>  | <b>\$1,981,225</b>   | <b>\$3,510,903</b> | <b>0.71</b>  | <b>0.93</b>   | <b>0.43</b>   | <b>0.56</b>  |
| Market Transformation | SEDAC                           | \$137,855   | \$158,533   | \$107,684   | \$123,836  | \$104,796          | 1.32   | 1.51  | 1.03  | 1.18   |
|                       | Lights for Learning             | \$0   | \$0   | \$0   | \$0  | \$0                |  |   |   |  |
|                       | Building Operator Certification | \$28,746  | \$33,058  | \$20,176  | \$23,202   | \$24,447           | 1.18   | 1.35  | 0.83  | 0.95   |
|                       | <b>Total</b>                    | <b>\$166,600</b>  | <b>\$191,590</b>  | <b>\$127,860</b>  | <b>\$147,038</b>   | <b>\$129,243</b>   | <b>1.29</b>  | <b>1.48</b>   | <b>0.99</b>   | <b>1.14</b>  |
| <b>Grand Total</b>    | <b>\$7,849,622</b>              | <b>\$9,403,591</b>  | <b>\$5,272,544</b>  | <b>\$6,292,028</b>  | <b>\$7,945,205</b>   | <b>0.99</b>        | <b>1.18</b>  | <b>0.66</b>   | <b>0.79</b>   |  |

Table 8 North Shore Benefits, Costs, and TRC Scores by Program

| <i>Sector</i>         | <i>Program</i>                  | <i>Total Benefits<br/>(10-Year<br/>Treasury<br/>Discount Rate,<br/>Without NEBs)</i> | <i>Total Benefits<br/>(10-Year<br/>Treasury<br/>Discount<br/>Rate, With<br/>NEBs)</i> | <i>Total Benefits<br/>(WACC<br/>Discount<br/>Rate, Without<br/>NEBs)</i> | <i>Total Benefits<br/>(WACC<br/>Discount<br/>Rate, With<br/>NEBs)</i> | <i>Total Costs</i> | <i>TRC<br/>(10-Year<br/>Treasury<br/>Discount<br/>Rate,<br/>Without<br/>NEBs)</i> | <i>TRC<br/>(10-Year<br/>Treasury<br/>Discount<br/>Rate,<br/>With<br/>NEBs)</i> | <i>TRC<br/>(WACC<br/>Discount<br/>Rate,<br/>Without<br/>NEBs)</i> | <i>TRC<br/>(WACC<br/>Discount<br/>Rate,<br/>With<br/>NEBs)</i> |
|-----------------------|---------------------------------|--|---|--|---|--------------------|---|--|---|--|
| Public Sector         | Custom                          | \$617,657  | \$710,306   | \$502,875  | \$578,306   | \$316,332          | 1.95  | 2.25   | 1.59  | 1.83   |
|                       | Standard                        | \$68,769   | \$79,084  | \$51,434   | \$59,149  | \$61,698           | 1.11  | 1.28   | 0.83  | 0.96   |
|                       | New Construction                | \$0  | \$0   | \$0  | \$0   | \$0                |   |  |   |  |
|                       | Retro-Commissioning             | \$469,697  | \$540,151   | \$440,681  | \$506,783   | \$102,143          | 4.60  | 5.29   | 4.31  | 4.96   |
|                       | Boiler Tune-up                  | \$50,598   | \$58,188  | \$42,974   | \$49,421  | \$24,272           | 2.08  | 2.40   | 1.77  | 2.04   |
|                       | STEP                            | \$0  | \$0   | \$0  | \$0   | \$0                |   |  |   |  |
|                       | Green Nozzle                    | \$1,561  | \$1,795   | \$1,466  | \$1,686   | \$401              | 3.89  | 4.47   | 3.65  | 4.20   |
|                       | <b>Total</b>                    | <b>\$1,208,282</b>   | <b>\$1,389,524</b>  | <b>\$1,039,430</b>   | <b>\$1,195,345</b>  | <b>\$504,846</b>   | <b>2.39</b>   | <b>2.75</b>  | <b>2.06</b>   | <b>2.37</b>  |
| Low Income            | Residential Retrofit            | \$559,295  | \$727,083   | \$387,312  | \$503,505   | \$517,014          | 1.08  | 1.41   | 0.75  | 0.97   |
|                       | Affordable New Construction     | \$8,118  | \$10,554  | \$6,291  | \$8,178   | \$12,080           | 0.67  | 0.87   | 0.52  | 0.68   |
|                       | Public Housing Authority        | \$233,087  | \$303,013   | \$173,269  | \$225,249   | \$40,184           | 5.80  | 7.54   | 4.31  | 5.61   |
|                       | <b>Total</b>                    | <b>\$800,500</b>   | <b>\$1,040,650</b>  | <b>\$566,871</b>   | <b>\$736,933</b>  | <b>\$569,278</b>   | <b>1.41</b>   | <b>1.83</b>  | <b>1.00</b>   | <b>1.29</b>  |
| Market Transformation | SEDAC                           | \$108,233  | \$124,468   | \$77,775   | \$89,442  | \$15,897           | 6.81  | 7.83   | 4.89  | 5.63   |
|                       | Lights for Learning             | \$0  | \$0   | \$0  | \$0   | \$0                |   |  |   |  |
|                       | Building Operator Certification | \$3,268  | \$3,758   | \$2,629  | \$3,023   | \$1,115            | 2.93  | 3.37   | 2.36  | 2.71   |
|                       | <b>Total</b>                    | <b>\$111,501</b>   | <b>\$128,226</b>  | <b>\$80,404</b>  | <b>\$92,465</b>   | <b>\$17,012</b>    | <b>6.55</b>   | <b>7.54</b>  | <b>4.73</b>   | <b>5.44</b>  |
| <b>Grand Total</b>    |                                 | <b>\$2,120,282</b>   | <b>\$2,558,399</b>  | <b>\$1,686,706</b>   | <b>\$2,024,742</b>  | <b>\$1,091,136</b> | <b>1.94</b>   | <b>2.34</b>  | <b>1.55</b>   | <b>1.86</b>  |



Table 9 Peoples Benefits, Costs, and TRC Scores by Program

| <i>Sector</i>         | <i>Program</i>                  | <i>Total Benefits<br/>(10-Year<br/>Treasury<br/>Discount Rate,<br/>Without NEBs)</i> | <i>Total Benefits<br/>(10-Year<br/>Treasury<br/>Discount<br/>Rate, With<br/>NEBs)</i> | <i>Total Benefits<br/>(WACC<br/>Discount<br/>Rate, Without<br/>NEBs)</i> | <i>Total Benefits<br/>(WACC<br/>Discount<br/>Rate, With<br/>NEBs)</i> | <i>Total Costs</i> | <i>TRC<br/>(10-Year<br/>Treasury<br/>Discount<br/>Rate,<br/>Without<br/>NEBs)</i> | <i>TRC<br/>(10-Year<br/>Treasury<br/>Discount<br/>Rate,<br/>With<br/>NEBs)</i> | <i>TRC<br/>(WACC<br/>Discount<br/>Rate,<br/>Without<br/>NEBs)</i> | <i>TRC<br/>(WACC<br/>Discount<br/>Rate,<br/>With<br/>NEBs)</i> |
|-----------------------|---------------------------------|--|---|--|---|--------------------|---|--|---|--|
| Public Sector         | Custom                          | \$854,948  | \$983,190   | \$706,049  | \$811,956   | \$272,316          | 3.14  | 3.61   | 2.59  | 2.98   |
|                       | Standard                        | \$82,504   | \$94,879  | \$62,186   | \$71,514  | \$71,736           | 1.15  | 1.32   | 0.87  | 1.00   |
|                       | New Construction                | \$0  | \$0   | \$0  | \$0   | \$0                |   |  |   |  |
|                       | Retro-Commissioning             | \$1,465,154  | \$1,684,927   | \$1,299,567  | \$1,494,502   | \$485,385          | 3.02  | 3.47   | 2.68  | 3.08   |
|                       | Boiler Tune-up                  | \$566,372  | \$651,328   | \$489,112  | \$562,479   | \$167,900          | 3.37  | 3.88   | 2.91  | 3.35   |
|                       | STEP                            | \$0  | \$0   | \$0  | \$0   | \$0                |   |  |   |  |
|                       | Green Nozzle                    | \$9,492  | \$10,916  | \$8,923  | \$10,261  | \$4,566            | 2.08  | 2.39   | 1.95  | 2.25   |
|                       | <b>Total</b>                    | <b>\$2,978,470</b>   | <b>\$3,425,240</b>  | <b>\$2,565,837</b>   | <b>\$2,950,713</b>  | <b>\$1,001,903</b> | <b>2.97</b>   | <b>3.42</b>  | <b>2.56</b>   | <b>2.95</b>  |
| Low Income            | Residential Retrofit            | \$5,696,615  | \$7,405,600   | \$4,067,612  | \$5,287,896   | \$2,276,859        | 2.50  | 3.25   | 1.79  | 2.32   |
|                       | Affordable New Construction     | \$376,842  | \$489,894   | \$287,362  | \$373,571   | \$745,007          | 0.51  | 0.66   | 0.39  | 0.50   |
|                       | Public Housing Authority        | \$30,133   | \$39,173  | \$23,902   | \$31,072  | \$536,422          | 0.06  | 0.07   | 0.04  | 0.06   |
|                       |                                 | <b>Total</b>   | <b>\$6,103,590</b>  | <b>\$7,934,667</b>   | <b>\$4,378,876</b>  | <b>\$5,692,539</b> | <b>\$3,558,288</b>  | <b>1.72</b>  | <b>2.23</b>   | <b>1.23</b>  |
| Market Transformation | SEDAC                           | \$191,330  | \$220,030   | \$160,817  | \$184,939   | \$59,678           | 3.21  | 3.69   | 2.69  | 3.10   |
|                       | Lights for Learning             | \$0  | \$0   | \$0  | \$0   | \$0                |   |  |   |  |
|                       | Building Operator Certification | \$129,195  | \$148,574   | \$104,119  | \$119,737   | \$52,572           | 2.46  | 2.83   | 1.98  | 2.28   |
|                       |                                 | <b>Total</b>   | <b>\$320,525</b>  | <b>\$368,604</b>   | <b>\$264,936</b>  | <b>\$304,677</b>   | <b>\$112,250</b>  | <b>2.86</b>  | <b>3.28</b>   | <b>2.36</b>  |
| <b>Grand Total</b>    |                                 | <b>\$9,402,585</b>   | <b>\$11,728,511</b>   | <b>\$7,209,649</b>   | <b>\$8,947,928</b>  | <b>\$4,672,440</b> | <b>2.01</b>   | <b>2.51</b>  | <b>1.54</b>   | <b>1.92</b>  |

Table 10 Portfolio Benefits, Costs, and TRC Scores by Program

| Sector                | Program                         | Total Benefits<br>(10-Year<br>Treasury<br>Discount Rate,<br>Without NEBs) | Total Benefits<br>(10-Year<br>Treasury<br>Discount<br>Rate, With<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, Without<br>NEBs) | Total Benefits<br>(WACC<br>Discount<br>Rate, With<br>NEBs) | Total Costs         | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(10-Year<br>Treasury<br>Discount<br>Rate,<br>With<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>Without<br>NEBs) | TRC<br>(WACC<br>Discount<br>Rate,<br>With<br>NEBs) |
|-----------------------|---------------------------------|---|---|---|--|---------------------|--|---|---|--|
| Public Sector         | Custom                          | \$28,341,584  | \$32,592,821  | \$21,790,186  | \$25,058,714   | \$16,430,877        | 1.72   | 1.98  | 1.33  | 1.53   |
|                       | Standard                        | \$63,212,197  | \$72,694,027  | \$48,875,466  | \$56,206,786   | \$30,029,008        | 2.11   | 2.42  | 1.63  | 1.87   |
|                       | New Construction                | \$3,409,415   | \$3,920,827   | \$2,244,515   | \$2,581,192  | \$1,058,798         | 3.22   | 3.70  | 2.12  | 2.44   |
|                       | Retro-Commissioning             | \$7,447,877   | \$8,565,058   | \$6,573,951   | \$7,560,043  | \$3,063,547         | 2.43   | 2.80  | 2.15  | 2.47   |
|                       | Boiler Tune-up                  | \$6,877,609   | \$7,909,250   | \$5,142,667   | \$5,914,067  | \$1,091,084         | 6.30   | 7.25  | 4.71  | 5.42   |
|                       | STEP                            | \$82,111  | \$94,428  | \$63,472  | \$72,992   | \$126,926           | 0.65   | 0.74  | 0.50  | 0.58   |
|                       | Green Nozzle                    | \$664,452   | \$764,120   | \$603,208   | \$693,689  | \$339,808           | 1.96   | 2.25  | 1.78  | 2.04   |
|                       | <b>Total</b>                    | <b>\$110,035,245</b>  | <b>\$126,540,532</b>  | <b>\$85,293,464</b>   | <b>\$98,087,484</b>  | <b>\$52,140,049</b> | <b>2.11</b>  | <b>2.43</b>   | <b>1.64</b>   | <b>1.88</b>  |
| Low Income            | Residential Retrofit            | \$16,932,245  | \$22,011,919  | \$11,696,846  | \$15,205,900   | \$14,769,599        | 1.15   | 1.49  | 0.79  | 1.03   |
|                       | Affordable New Construction     | \$3,952,220   | \$5,137,886   | \$2,840,375   | \$3,692,487  | \$9,743,475         | 0.41   | 0.53  | 0.29  | 0.38   |
|                       | Public Housing Authority        | \$5,651,011   | \$7,346,314   | \$4,274,625   | \$5,557,013  | \$5,757,641         | 0.98   | 1.28  | 0.74  | 0.97   |
|                       | <b>Total</b>                    | <b>\$26,535,476</b>   | <b>\$34,496,119</b>   | <b>\$18,811,846</b>   | <b>\$24,455,400</b>  | <b>\$30,270,716</b> | <b>0.88</b>  | <b>1.14</b>   | <b>0.62</b>   | <b>0.81</b>  |
| Market Transformation | SEDAC                           | \$1,703,860   | \$1,959,439   | \$1,303,560   | \$1,499,094  | \$567,896           | 3.00   | 3.45  | 2.30  | 2.64   |
|                       | Lights for Learning             | \$207,533   | \$238,663   | \$175,502   | \$201,827  | \$197,137           | 1.05   | 1.21  | 0.89  | 1.02   |
|                       | Building Operator Certification | \$823,511   | \$947,037   | \$627,633   | \$721,778  | \$252,771           | 3.26   | 3.75  | 2.48  | 2.86   |
|                       | <b>Total</b>                    | <b>\$2,734,905</b>  | <b>\$3,145,140</b>  | <b>\$2,106,695</b>  | <b>\$2,422,699</b>   | <b>\$1,017,803</b>  | <b>2.69</b>  | <b>3.09</b>   | <b>2.07</b>   | <b>2.38</b>  |
| <b>Grand Total</b>    | <b>\$139,305,625</b>            | <b>\$164,181,791</b>  | <b>\$106,212,005</b>  | <b>\$124,965,583</b>  | <b>\$83,428,568</b>  | <b>1.67</b>         | <b>1.97</b>  | <b>1.27</b>   | <b>1.50</b>   |  |

## 2.2 Detailed TRC Results

Detailed program-level and program sector-level<sup>6</sup> TRC results are presented below. The following tables present lifetime benefits discounted to present value using the 10-Year Treasury yield rate and utility WACC rates. The program benefits are presented in these categories:

1. *Avoided Electric Production*: Determined by using each IOUs projections for average annual costs of electric production.
2. *Avoided Electric Environmental*: The environmental benefits stemming from avoided CO<sub>2</sub> emissions valued at \$0.013875/kWh
3. *Avoided Electric Capacity*: A projection of the market price each IOU will have to pay during the peak hours of each year. An applicable load shape is applied to the savings for each program, and the resulting peak kW savings are matched up with the IOU-specific cost projection.
4. *Avoided Transmission and Distribution (T&D) Electric*: Also IOU-specific, this takes into account the amount of energy loss that exists between the power generation and the customer's residence.
5. *Avoided Ancillary*: Defined by the US Federal Energy Regulatory Commission as "those services necessary to support the transmission of electric power from seller to purchaser given the obligations of control areas and transmitting utilities within those control areas to maintain reliable operations of the interconnected transmission system."
6. *Avoided Gas Production*: The projected average annual cost of natural gas, applied for each IOU.
7. *Avoided Gas Capacity*: The cost of providing gas when the system is at peak demand. IOU specific values that are projected into the future.
8. *Non-Energy Benefits*: An adder included to account for non-energy benefits to participants from implementing energy efficiency measures valued at 15% for public sector and market transformation programs and 30% for low-income programs.

Three separate categories of program-induced costs are reported:

1. *Net Incremental Costs*: These are costs that include total incremental cost of program non-free riders and program-borne share of free riders incremental costs.
2. *Administration/Program Costs*: These are costs attributable to the implementation of each program. These include payments to contractors (in the case of direct install programs), salaries for program managers, EM&V costs. This category does not include any incentive payments that defray the incremental cost borne by program participants.
3. *Incentives in Excess of Incremental Cost*: This category includes incentive costs in excess of measure incremental costs.

Program benefits, costs, and TRC scores are shown for each program in Table 12 through Table 24. Table 24 shows benefits, costs and TRC scores for all public sector programs. Table 25 shows benefits, costs and TRC scores for all low-income programs. Table 26 shows benefits,

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<sup>6</sup> The program sectors are public sector, low-income, and market transformation.

costs and TRC scores for all market transformation programs. Table 27 shows benefits, costs and TRC scores for all programs in the portfolio. The portfolio TRC scores range from 1.27 to 1.97.

Table 11 Custom Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele   | ComEd        | Ameren-Gas  | Nicor       | North Shore | Peoples      | Total        |
|--|--------------------------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|
| Net kWh                                  |                                | 8,733,505    | 18,135,382   | 0           | 0           | 0           | 0            | 26,868,887   |
| Net kW                                   |                                | 878.89       | 1,680.13     | 0.00        | 0.00        | 0.00        | 0.00         | 2,559.02     |
| Net Therms                               |                                | -5,866       | -48,677      | 663,936     | 336,331     | 72,233      | 92,992       | 1,110,951    |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$5,112,961  | \$7,848,287  | \$0         | \$0         | \$0         | \$0          | \$12,961,247 |
|  | Avoided Electric Environmental | \$907,066    | \$2,340,617  | \$0         | \$0         | \$0         | \$0          | \$3,247,684  |
|  | Avoided Electric Capacity      | \$893,503    | \$122,694    | \$0         | \$0         | \$0         | \$0          | \$1,016,197  |
|  | Avoided Electric T&D           | \$272,345    | \$2,180,701  | \$0         | \$0         | \$0         | \$0          | \$2,453,046  |
|  | Avoided Electric Ancillary     | \$184,596    | \$451,470    | \$0         | \$0         | \$0         | \$0          | \$636,066    |
|  | Avoided Gas Production         | (\$52,992)   | (\$635,815)  | \$5,179,860 | \$1,695,120 | \$584,576   | \$809,063    | \$7,579,813  |
|  | Avoided Gas Capacity           | (\$2,222)    | (\$26,896)   | \$235,166   | \$162,518   | \$33,081    | \$45,885     | \$447,532    |
|  | Total Benefits (Without NEBs)  | \$7,315,257  | \$12,281,058 | \$5,415,026 | \$1,857,638 | \$617,657   | \$854,948    | \$28,341,584 |
|  | Non-Energy Benefits            | \$1,097,288  | \$1,842,159  | \$812,254   | \$278,646   | \$92,649    | \$128,242    | \$4,251,238  |
| Total Benefits (With NEBs)               | \$8,412,545                    | \$14,123,217 | \$6,227,280  | \$2,136,284 | \$710,306   | \$983,190   | \$32,592,821 |              |
| WACC Discount Rate                       | Avoided Electric Production    | \$3,912,750  | \$6,189,490  | \$0         | \$0         | \$0         | \$0          | \$10,102,241 |
|  | Avoided Electric Environmental | \$724,271    | \$1,871,372  | \$0         | \$0         | \$0         | \$0          | \$2,595,644  |
|  | Avoided Electric Capacity      | \$624,919    | \$96,010     | \$0         | \$0         | \$0         | \$0          | \$720,929    |
|  | Avoided Electric T&D           | \$214,599    | \$1,679,055  | \$0         | \$0         | \$0         | \$0          | \$1,893,655  |
|  | Avoided Electric Ancillary     | \$141,245    | \$354,385    | \$0         | \$0         | \$0         | \$0          | \$495,630    |
|  | Avoided Gas Production         | (\$38,710)   | (\$489,491)  | \$3,880,634 | \$1,156,045 | \$475,941   | \$668,156    | \$5,652,575  |
|  | Avoided Gas Capacity           | (\$1,623)    | (\$20,707)   | \$176,181   | \$110,834   | \$26,933    | \$37,894     | \$329,512    |
|  | Total Benefits (Without NEBs)  | \$5,577,452  | \$9,680,116  | \$4,056,815 | \$1,266,880 | \$502,875   | \$706,049    | \$21,790,186 |
|  | Non-Energy Benefits            | \$836,618    | \$1,452,017  | \$608,522   | \$190,032   | \$75,431    | \$105,907    | \$3,268,528  |
| Total Benefits (With NEBs)               | \$6,414,069                    | \$11,132,133 | \$4,665,338  | \$1,456,912 | \$578,306   | \$811,956   | \$25,058,714 |              |
| Net Incremental Costs*                   |                                | \$3,376,011  | \$5,678,350  | \$2,164,869 | \$1,043,439 | \$293,415   | \$167,130    | \$12,723,214 |
| Program-Borne Share                      |                                | \$2,688,254  | \$4,054,884  | \$1,862,425 | \$905,983   | \$262,234   | \$131,428    | \$9,905,209  |
| Participant-Borne Share                  |                                | \$687,757    | \$1,623,466  | \$302,443   | \$137,456   | \$31,181    | \$35,702     | \$2,818,005  |
| Program Administrative Costs             |                                | \$599,120    | \$2,076,623  | \$327,083   | \$392,364   | \$22,917    | \$105,186    | \$3,523,293  |
| Incentives in Excess of Incremental Cost |                                | \$184,371    | \$0          | \$0         | \$0         | \$0         | \$0          | \$184,371    |
| Total Costs                              |                                | \$4,159,502  | \$7,754,973  | \$2,491,952 | \$1,435,803 | \$316,332   | \$272,316    | \$16,430,877 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 1.76         | 1.58         | 2.17        | 1.29        | 1.95        | 3.14         | 1.72         |
|  | TRC (With NEBs)                | 2.02         | 1.82         | 2.50        | 1.49        | 2.25        | 3.61         | 1.98         |
| WACC Discount Rate                       | TRC (Without NEBs)             | 1.34         | 1.25         | 1.63        | 0.88        | 1.59        | 2.59         | 1.33         |
|  | TRC (With NEBs)                | 1.54         | 1.44         | 1.87        | 1.01        | 1.83        | 2.98         | 1.53         |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 12 Standard Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele    | ComEd         | Ameren-Gas  | Nicor       | North Shore | Peoples  | Total         |
|--|--------------------------------|---------------|---------------|-------------|-------------|-------------|----------|---------------|
| Net kWh                                  |                                | 18,682,420    | 60,192,555    | 0           | 0           | 0           | 0        | 78,874,975    |
| Net kW                                   |                                | 3,673.72      | 9,596.68      | 0.00        | 0.00        | 0.00        | 0.00     | 13,270.40     |
| Net Therms                               |                                | -114,107      | -689,528      | 103,315     | 295,033     | 4,430       | 5,374    | -395,481      |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$12,490,172  | \$29,628,614  | \$0         | \$0         | \$0         | \$0      | \$42,118,786  |
|  | Avoided Electric Environmental | \$2,011,920   | \$7,440,095   | \$0         | \$0         | \$0         | \$0      | \$9,452,016   |
|  | Avoided Electric Capacity      | \$3,044,712   | \$513,163     | \$0         | \$0         | \$0         | \$0      | \$3,557,875   |
|  | Avoided Electric T&D           | \$925,781     | \$9,063,809   | \$0         | \$0         | \$0         | \$0      | \$9,989,590   |
|  | Avoided Electric Ancillary     | \$873,699     | \$2,939,833   | \$0         | \$0         | \$0         | \$0      | \$3,813,532   |
|  | Avoided Gas Production         | (\$1,039,934) | (\$7,753,422) | \$1,290,653 | \$1,791,427 | \$65,086    | \$78,076 | (\$5,568,114) |
|  | Avoided Gas Capacity           | (\$45,457)    | (\$344,487)   | \$58,596    | \$171,751   | \$3,683     | \$4,428  | (\$151,487)   |
|  | Total Benefits (Without NEBs)  | \$18,260,892  | \$41,487,605  | \$1,349,249 | \$1,963,178 | \$68,769    | \$82,504 | \$63,212,197  |
|  | Non-Energy Benefits            | \$2,739,134   | \$6,223,141   | \$202,387   | \$294,477   | \$10,315    | \$12,376 | \$9,481,830   |
| Total Benefits (With NEBs)               |                                | \$21,000,026  | \$47,710,746  | \$1,551,636 | \$2,257,655 | \$79,084    | \$94,879 | \$72,694,027  |
| WACC Discount Rate                       | Avoided Electric Production    | \$9,396,157   | \$23,492,803  | \$0         | \$0         | \$0         | \$0      | \$32,888,959  |
|  | Avoided Electric Environmental | \$1,589,677   | \$5,985,010   | \$0         | \$0         | \$0         | \$0      | \$7,574,687   |
|  | Avoided Electric Capacity      | \$2,122,020   | \$405,989     | \$0         | \$0         | \$0         | \$0      | \$2,528,009   |
|  | Avoided Electric T&D           | \$727,777     | \$7,058,709   | \$0         | \$0         | \$0         | \$0      | \$7,786,486   |
|  | Avoided Electric Ancillary     | \$655,493     | \$2,333,259   | \$0         | \$0         | \$0         | \$0      | \$2,988,753   |
|  | Avoided Gas Production         | (\$768,378)   | (\$6,162,606) | \$905,035   | \$1,174,528 | \$48,679    | \$58,849 | (\$4,743,894) |
|  | Avoided Gas Capacity           | (\$33,584)    | (\$273,736)   | \$41,089    | \$112,606   | \$2,755     | \$3,338  | (\$147,533)   |
|  | Total Benefits (Without NEBs)  | \$13,689,162  | \$32,839,427  | \$946,123   | \$1,287,134 | \$51,434    | \$62,186 | \$48,875,466  |
|  | Non-Energy Benefits            | \$2,053,374   | \$4,925,914   | \$141,918   | \$193,070   | \$7,715     | \$9,328  | \$7,331,320   |
| Total Benefits (With NEBs)               |                                | \$15,742,536  | \$37,765,341  | \$1,088,042 | \$1,480,204 | \$59,149    | \$71,514 | \$56,206,786  |
| Net Incremental Costs*                   |                                | \$3,820,387   | \$10,609,520  | \$646,819   | \$1,361,893 | \$60,362    | \$65,742 | \$16,564,723  |
| Program-Borne Share                      |                                | \$2,403,449   | \$8,030,123   | \$558,243   | \$980,516   | \$36,264    | \$55,618 | \$12,064,212  |
| Participant-Borne Share                  |                                | \$1,416,939   | \$2,579,398   | \$88,577    | \$381,377   | \$24,098    | \$10,124 | \$4,500,511   |
| Program Administrative Costs             |                                | \$1,271,567   | \$6,860,070   | \$49,269    | \$339,536   | \$1,336     | \$5,994  | \$8,527,772   |
| Incentives in Excess of Incremental Cost |                                | \$369,315     | \$4,567,031   | \$0         | \$168       | \$0         | \$0      | \$4,936,513   |
| Total Costs                              |                                | \$5,461,269   | \$22,036,621  | \$696,088   | \$1,701,597 | \$61,698    | \$71,736 | \$30,029,008  |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 3.34          | 1.88          | 1.94        | 1.15        | 1.11        | 1.15     | 2.11          |
|  | TRC (With NEBs)                | 3.85          | 2.17          | 2.23        | 1.33        | 1.28        | 1.32     | 2.42          |
| WACC Discount Rate                       | TRC (Without NEBs)             | 2.51          | 1.49          | 1.36        | 0.76        | 0.83        | 0.87     | 1.63          |
|  | TRC (With NEBs)                | 2.88          | 1.71          | 1.56        | 0.87        | 0.96        | 1.00     | 1.87          |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 13 New Construction Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele  | ComEd       | Ameren-Gas | Nicor     | North Shore | Peoples     | Total       |
|--|--------------------------------|-------------|-------------|------------|-----------|-------------|-------------|-------------|
| Net kWh                                  |                                | 817,129     | 971,390     | 0          | 0         | 0           | 0           | 1,788,519   |
| Net kW                                   |                                | 94.14       | 158.63      | 0.00       | 0.00      | 0.00        | 0.00        | 252.77      |
| Net Therms                               |                                | 0           | 0           | 348        | 42,711    | 0           | 0           | 43,059      |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$1,113,178 | \$800,050   | \$0        | \$0       | \$0         | \$0         | \$1,913,228 |
|  | Avoided Electric Environmental | \$155,327   | \$192,090   | \$0        | \$0       | \$0         | \$0         | \$347,417   |
|  | Avoided Electric Capacity      | \$250,076   | \$19,361    | \$0        | \$0       | \$0         | \$0         | \$269,437   |
|  | Avoided Electric T&D           | \$56,494    | \$369,901   | \$0        | \$0       | \$0         | \$0         | \$426,395   |
|  | Avoided Electric Ancillary     | \$44,419    | \$75,826    | \$0        | \$0       | \$0         | \$0         | \$120,246   |
|  | Avoided Gas Production         | \$0         | \$0         | \$5,773    | \$298,078 | \$0         | \$0         | \$303,852   |
|  | Avoided Gas Capacity           | \$0         | \$0         | \$262      | \$28,578  | \$0         | \$0         | \$28,840    |
|  | Total Benefits (Without NEBs)  | \$1,619,494 | \$1,457,229 | \$6,036    | \$326,656 | \$0         | \$0         | \$3,409,415 |
|  | Non-Energy Benefits            | \$242,924   | \$218,584   | \$905      | \$48,998  | \$0         | \$0         | \$511,412   |
| Total Benefits (With NEBs)               | \$1,862,418                    | \$1,675,813 | \$6,941     | \$375,655  | \$0       | \$0         | \$3,920,827 |             |
| WACC Discount Rate                       | Avoided Electric Production    | \$705,559   | \$557,037   | \$0        | \$0       | \$0         | \$0         | \$1,262,597 |
|  | Avoided Electric Environmental | \$106,494   | \$138,340   | \$0        | \$0       | \$0         | \$0         | \$244,834   |
|  | Avoided Electric Capacity      | \$148,634   | \$13,381    | \$0        | \$0       | \$0         | \$0         | \$162,015   |
|  | Avoided Electric T&D           | \$37,782    | \$248,276   | \$0        | \$0       | \$0         | \$0         | \$286,058   |
|  | Avoided Electric Ancillary     | \$28,165    | \$52,794    | \$0        | \$0       | \$0         | \$0         | \$80,960    |
|  | Avoided Gas Production         | \$0         | \$0         | \$3,686    | \$186,334 | \$0         | \$0         | \$190,019   |
|  | Avoided Gas Capacity           | \$0         | \$0         | \$167      | \$17,865  | \$0         | \$0         | \$18,032    |
|  | Total Benefits (Without NEBs)  | \$1,026,635 | \$1,009,829 | \$3,853    | \$204,198 | \$0         | \$0         | \$2,244,515 |
|  | Non-Energy Benefits            | \$153,995   | \$151,474   | \$578      | \$30,630  | \$0         | \$0         | \$336,677   |
| Total Benefits (With NEBs)               | \$1,180,630                    | \$1,161,303 | \$4,431     | \$234,828  | \$0       | \$0         | \$2,581,192 |             |
| Net Incremental Costs*                   |                                | \$211,667   | \$279,345   | \$504      | \$75,717  | \$0         | \$0         | \$567,233   |
| Program-Borne Share                      |                                | \$142,659   | \$204,573   | \$296      | \$58,132  | \$0         | \$0         | \$405,660   |
| Participant-Borne Share                  |                                | \$69,008    | \$74,772    | \$208      | \$17,586  | \$0         | \$0         | \$161,573   |
| Program Administrative Costs             |                                | \$81,506    | \$141,486   | \$488      | \$88,805  | \$0         | \$0         | \$312,285   |
| Incentives in Excess of Incremental Cost |                                | \$117,926   | \$23,743    | \$0        | \$37,612  | \$0         | \$0         | \$179,281   |
| Total Costs                              |                                | \$411,099   | \$444,573   | \$992      | \$202,135 | \$0         | \$0         | \$1,058,798 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 3.94        | 3.28        | 6.08       | 1.62      |             |             | 3.22        |
|  | TRC (With NEBs)                | 4.53        | 3.77        | 7.00       | 1.86      |             |             | 3.70        |
| WACC Discount Rate                       | TRC (Without NEBs)             | 2.50        | 2.27        | 3.88       | 1.01      |             |             | 2.12        |
|  | TRC (With NEBs)                | 2.87        | 2.61        | 4.47       | 1.16      |             |             | 2.44        |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 14 Retro-Commissioning Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele  | ComEd       | Ameren-Gas | Nicor     | North Shore | Peoples     | Total       |
|--|--------------------------------|-------------|-------------|------------|-----------|-------------|-------------|-------------|
| Net kWh                                  |                                | 1,593,286   | 9,039,939   | 0          | 0         | 0           | 0           | 10,633,225  |
| Net kW                                   |                                | 90.12       | 1,424.95    | 0.00       | 0.00      | 0.00        | 0.00        | 1,515.07    |
| Net Therms                               |                                | 0           | -6,643      | 69,065     | 285,671   | 132,229     | 305,824     | 786,146     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$481,543   | \$2,126,333 | \$0        | \$0       | \$0         | \$0         | \$2,607,876 |
|  | Avoided Electric Environmental | \$97,365    | \$590,880   | \$0        | \$0       | \$0         | \$0         | \$688,245   |
|  | Avoided Electric Capacity      | \$30,858    | \$47,173    | \$0        | \$0       | \$0         | \$0         | \$78,031    |
|  | Avoided Electric T&D           | \$16,332    | \$782,825   | \$0        | \$0       | \$0         | \$0         | \$799,157   |
|  | Avoided Electric Ancillary     | \$10,035    | \$207,230   | \$0        | \$0       | \$0         | \$0         | \$217,265   |
|  | Avoided Gas Production         | \$0         | (\$54,698)  | \$456,190  | \$641,081 | \$444,540   | \$1,386,512 | \$2,873,624 |
|  | Avoided Gas Capacity           | \$0         | (\$2,293)   | \$20,711   | \$61,463  | \$25,156    | \$78,642    | \$183,679   |
|  | Total Benefits (Without NEBs)  | \$636,133   | \$3,697,449 | \$476,901  | \$702,543 | \$469,697   | \$1,465,154 | \$7,447,877 |
|  | Non-Energy Benefits            | \$95,420    | \$554,617   | \$71,535   | \$105,382 | \$70,454    | \$219,773   | \$1,117,182 |
| Total Benefits (With NEBs)               | \$731,553                      | \$4,252,066 | \$548,436   | \$807,925  | \$540,151 | \$1,684,927 | \$8,565,058 |             |
| WACC Discount Rate                       | Avoided Electric Production    | \$424,322   | \$1,922,413 | \$0        | \$0       | \$0         | \$0         | \$2,346,736 |
|  | Avoided Electric Environmental | \$87,200    | \$535,880   | \$0        | \$0       | \$0         | \$0         | \$623,080   |
|  | Avoided Electric Capacity      | \$24,507    | \$42,437    | \$0        | \$0       | \$0         | \$0         | \$66,945    |
|  | Avoided Electric T&D           | \$14,379    | \$698,187   | \$0        | \$0       | \$0         | \$0         | \$712,567   |
|  | Avoided Electric Ancillary     | \$8,703     | \$186,303   | \$0        | \$0       | \$0         | \$0         | \$195,006   |
|  | Avoided Gas Production         | \$0         | (\$47,571)  | \$351,135  | \$521,828 | \$417,079   | \$1,229,813 | \$2,472,284 |
|  | Avoided Gas Capacity           | \$0         | (\$1,994)   | \$15,942   | \$50,030  | \$23,602    | \$69,755    | \$157,334   |
|  | Total Benefits (Without NEBs)  | \$559,112   | \$3,335,655 | \$367,077  | \$571,858 | \$440,681   | \$1,299,567 | \$6,573,951 |
|  | Non-Energy Benefits            | \$83,867    | \$500,348   | \$55,062   | \$85,779  | \$66,102    | \$194,935   | \$986,093   |
| Total Benefits (With NEBs)               | \$642,979                      | \$3,836,004 | \$422,138   | \$657,637  | \$506,783 | \$1,494,502 | \$7,560,043 |             |
| Net Incremental Costs*                   |                                | \$118,578   | \$670,247   | \$28,780   | \$119,056 | \$55,100    | \$127,681   | \$1,119,442 |
| Program-Borne Share                      |                                | \$0         | \$0         | \$0        | \$0       | \$0         | \$0         | \$0         |
| Participant-Borne Share                  |                                | \$118,578   | \$670,247   | \$28,780   | \$119,056 | \$55,100    | \$127,681   | \$1,119,442 |
| Program Administrative Costs             |                                | \$111,394   | \$1,047,015 | \$36,684   | \$344,265 | \$47,043    | \$357,704   | \$1,944,105 |
| Incentives in Excess of Incremental Cost |                                | \$0         | \$0         | \$0        | \$0       | \$0         | \$0         | \$0         |
| Total Costs                              |                                | \$229,972   | \$1,717,262 | \$65,464   | \$463,321 | \$102,143   | \$485,385   | \$3,063,547 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 2.77        | 2.15        | 7.28       | 1.52      | 4.60        | 3.02        | 2.43        |
|  | TRC (With NEBs)                | 3.18        | 2.48        | 8.38       | 1.74      | 5.29        | 3.47        | 2.80        |
| WACC Discount Rate                       | TRC (Without NEBs)             | 2.43        | 1.94        | 5.61       | 1.23      | 4.31        | 2.68        | 2.15        |
|  | TRC (With NEBs)                | 2.80        | 2.23        | 6.45       | 1.42      | 4.96        | 3.08        | 2.47        |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.



Table 15 Boiler Tune-up Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele | ComEd | Ameren-Gas  | Nicor     | North Shore | Peoples   | Total       |
|--|--------------------------------|------------|-------|-------------|-----------|-------------|-----------|-------------|
| Net kWh                                  |                                | 0          | 0     | 0           | 0         | 0           | 0         | 0           |
| Net kW                                   |                                | 0.00       | 0.00  | 0.00        | 0.00      | 0.00        | 0.00      | 0.00        |
| Net Therms                               |                                | 0          | 0     | 614,559     | 91,376    | 9,873       | 93,537    | 809,345     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric Environmental | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric Capacity      | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric T&D           | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric Ancillary     | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Gas Production         | \$0        | \$0   | \$5,866,573 | \$116,550 | \$47,888    | \$535,975 | \$6,566,985 |
|  | Avoided Gas Capacity           | \$0        | \$0   | \$266,343   | \$11,174  | \$2,710     | \$30,397  | \$310,624   |
|  | Total Benefits (Without NEBs)  | \$0        | \$0   | \$6,132,915 | \$127,724 | \$50,598    | \$566,372 | \$6,877,609 |
|  | Non-Energy Benefits            | \$0        | \$0   | \$919,937   | \$19,159  | \$7,590     | \$84,956  | \$1,031,641 |
|  | Total Benefits (With NEBs)     | \$0        | \$0   | \$7,052,852 | \$146,882 | \$58,188    | \$651,328 | \$7,909,250 |
| WACC Discount Rate                       | Avoided Electric Production    | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric Environmental | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric Capacity      | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric T&D           | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Electric Ancillary     | \$0        | \$0   | \$0         | \$0       | \$0         | \$0       | \$0         |
|  | Avoided Gas Production         | \$0        | \$0   | \$4,300,932 | \$104,379 | \$40,673    | \$462,862 | \$4,908,845 |
|  | Avoided Gas Capacity           | \$0        | \$0   | \$195,262   | \$10,007  | \$2,302     | \$26,251  | \$233,822   |
|  | Total Benefits (Without NEBs)  | \$0        | \$0   | \$4,496,194 | \$114,386 | \$42,974    | \$489,112 | \$5,142,667 |
|  | Non-Energy Benefits            | \$0        | \$0   | \$674,429   | \$17,158  | \$6,446     | \$73,367  | \$771,400   |
|  | Total Benefits (With NEBs)     | \$0        | \$0   | \$5,170,623 | \$131,544 | \$49,421    | \$562,479 | \$5,914,067 |
| Net Incremental Costs*                   |                                | \$0        | \$0   | \$164,418   | \$143,782 | \$16,293    | \$22,732  | \$347,226   |
| Program-Borne Share                      |                                | \$0        | \$0   | \$156,173   | \$131,529 | \$15,060    | \$22,501  | \$325,262   |
| Participant-Borne Share                  |                                | \$0        | \$0   | \$8,246     | \$12,253  | \$1,233     | \$231     | \$21,963    |
| Program Administrative Costs             |                                | \$0        | \$0   | \$349,180   | \$113,502 | \$3,878     | \$112,868 | \$579,428   |
| Incentives in Excess of Incremental Cost |                                | \$0        | \$0   | \$117,850   | \$10,180  | \$4,101     | \$32,300  | \$164,431   |
| Total Costs                              |                                | \$0        | \$0   | \$631,448   | \$267,464 | \$24,272    | \$167,900 | \$1,091,084 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             |            |       | 9.71        | 0.48      | 2.08        | 3.37      | 6.30        |
|  | TRC (With NEBs)                |            |       | 11.17       | 0.55      | 2.40        | 3.88      | 7.25        |
| WACC Discount Rate                       | TRC (Without NEBs)             |            |       | 7.12        | 0.43      | 1.77        | 2.91      | 4.71        |
|  | TRC (With NEBs)                |            |       | 8.19        | 0.49      | 2.04        | 3.35      | 5.42        |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 16 STEP Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele | ComEd      | Ameren-Gas | Nicor    | North Shore | Peoples | Total     |
|--|--------------------------------|------------|------------|------------|----------|-------------|---------|-----------|
| Net kWh                                  |                                | 29,707     | 83,873     | 0          | 0        | 0           | 0       | 113,580   |
| Net kW                                   |                                | 2.08       | 5.22       | 0.00       | 0.00     | 0.00        | 0.00    | 7.30      |
| Net Therms                               |                                | -493       | -1,353     | 732        | 2,433    | 0           | 0       | 1,318     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$27,947   | \$36,130   | \$0        | \$0      | \$0         | \$0     | \$64,077  |
|  | Avoided Electric Environmental | \$4,352    | \$9,603    | \$0        | \$0      | \$0         | \$0     | \$13,955  |
|  | Avoided Electric Capacity      | \$3,860    | \$372      | \$0        | \$0      | \$0         | \$0     | \$4,232   |
|  | Avoided Electric T&D           | \$972      | \$6,587    | \$0        | \$0      | \$0         | \$0     | \$7,559   |
|  | Avoided Electric Ancillary     | \$715      | \$1,478    | \$0        | \$0      | \$0         | \$0     | \$2,192   |
|  | Avoided Gas Production         | (\$5,731)  | (\$13,798) | \$3,701    | \$6,061  | \$0         | \$0     | (\$9,766) |
|  | Avoided Gas Capacity           | (\$260)    | (\$626)    | \$168      | \$581    | \$0         | \$0     | (\$137)   |
|  | Total Benefits (Without NEBs)  | \$31,854   | \$39,746   | \$3,869    | \$6,643  | \$0         | \$0     | \$82,111  |
|  | Non-Energy Benefits            | \$4,778    | \$5,962    | \$580      | \$996    | \$0         | \$0     | \$12,317  |
| Total Benefits (With NEBs)               |                                | \$36,632   | \$45,708   | \$4,449    | \$7,639  | \$0         | \$0     | \$94,428  |
| WACC Discount Rate                       | Avoided Electric Production    | \$19,785   | \$29,415   | \$0        | \$0      | \$0         | \$0     | \$49,200  |
|  | Avoided Electric Environmental | \$3,254    | \$7,917    | \$0        | \$0      | \$0         | \$0     | \$11,170  |
|  | Avoided Electric Capacity      | \$2,524    | \$292      | \$0        | \$0      | \$0         | \$0     | \$2,815   |
|  | Avoided Electric T&D           | \$708      | \$5,083    | \$0        | \$0      | \$0         | \$0     | \$5,791   |
|  | Avoided Electric Ancillary     | \$501      | \$1,167    | \$0        | \$0      | \$0         | \$0     | \$1,668   |
|  | Avoided Gas Production         | (\$4,074)  | (\$11,232) | \$3,157    | \$5,043  | \$0         | \$0     | (\$7,106) |
|  | Avoided Gas Capacity           | (\$185)    | (\$510)    | \$143      | \$483    | \$0         | \$0     | (\$68)    |
|  | Total Benefits (Without NEBs)  | \$22,513   | \$32,132   | \$3,301    | \$5,526  | \$0         | \$0     | \$63,472  |
|  | Non-Energy Benefits            | \$3,377    | \$4,820    | \$495      | \$829    | \$0         | \$0     | \$9,521   |
| Total Benefits (With NEBs)               |                                | \$25,889   | \$36,952   | \$3,796    | \$6,355  | \$0         | \$0     | \$72,992  |
| Net Incremental Costs*                   |                                | \$2,901    | \$8,293    | \$260      | \$968    | \$0         | \$0     | \$12,422  |
| Program-Borne Share                      |                                | \$2,901    | \$8,293    | \$260      | \$968    | \$0         | \$0     | \$12,422  |
| Participant-Borne Share                  |                                | \$0        | \$0        | \$0        | \$0      | \$0         | \$0     | \$0       |
| Program Administrative Costs             |                                | \$16,389   | \$50,121   | \$10,717   | \$37,277 | \$0         | \$0     | \$114,504 |
| Incentives in Excess of Incremental Cost |                                | \$0        | \$0        | \$0        | \$0      | \$0         | \$0     | \$0       |
| Total Costs                              |                                | \$19,290   | \$58,414   | \$10,977   | \$38,245 | \$0         | \$0     | \$126,926 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 1.65       | 0.68       | 0.35       | 0.17     |             |         | 0.65      |
|  | TRC (With NEBs)                | 1.90       | 0.78       | 0.41       | 0.20     |             |         | 0.74      |
| WACC Discount Rate                       | TRC (Without NEBs)             | 1.17       | 0.55       | 0.30       | 0.14     |             |         | 0.50      |
|  | TRC (With NEBs)                | 1.34       | 0.63       | 0.35       | 0.17     |             |         | 0.58      |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 17 Green Nozzle Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele | ComEd | Ameren-Gas | Nicor     | North Shore | Peoples  | Total     |
|--|--------------------------------|------------|-------|------------|-----------|-------------|----------|-----------|
| Net kWh                                  |                                | 0          | 0     | 0          | 0         | 0           | 0        | 0         |
| Net kW                                   |                                | 0.00       | 0.00  | 0.00       | 0.00      | 0.00        | 0.00     | 0.00      |
| Net Therms                               |                                | 0          | 0     | 127,762    | 111,847   | 442         | 2,652    | 242,703   |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric Environmental | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric Capacity      | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric T&D           | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric Ancillary     | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Gas Production         | \$0        | \$0   | \$444,741  | \$171,979 | \$1,477     | \$8,982  | \$627,179 |
|  | Avoided Gas Capacity           | \$0        | \$0   | \$20,191   | \$16,488  | \$84        | \$509    | \$37,273  |
|  | Total Benefits (Without NEBs)  | \$0        | \$0   | \$464,932  | \$188,468 | \$1,561     | \$9,492  | \$664,452 |
|  | Non-Energy Benefits            | \$0        | \$0   | \$69,740   | \$28,270  | \$234       | \$1,424  | \$99,668  |
|  | Total Benefits (With NEBs)     | \$0        | \$0   | \$534,672  | \$216,738 | \$1,795     | \$10,916 | \$764,120 |
| WACC Discount Rate                       | Avoided Electric Production    | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric Environmental | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric Capacity      | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric T&D           | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Electric Ancillary     | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
|  | Avoided Gas Production         | \$0        | \$0   | \$403,804  | \$155,750 | \$1,388     | \$8,444  | \$569,386 |
|  | Avoided Gas Capacity           | \$0        | \$0   | \$18,333   | \$14,932  | \$79        | \$479    | \$33,822  |
|  | Total Benefits (Without NEBs)  | \$0        | \$0   | \$422,136  | \$170,683 | \$1,466     | \$8,923  | \$603,208 |
|  | Non-Energy Benefits            | \$0        | \$0   | \$63,320   | \$25,602  | \$220       | \$1,338  | \$90,481  |
|  | Total Benefits (With NEBs)     | \$0        | \$0   | \$485,457  | \$196,285 | \$1,686     | \$10,261 | \$693,689 |
| Net Incremental Costs*                   |                                | \$0        | \$0   | \$28,900   | \$25,300  | \$100       | \$600    | \$54,900  |
| Program-Borne Share                      |                                | \$0        | \$0   | \$28,900   | \$25,300  | \$100       | \$600    | \$54,900  |
| Participant-Borne Share                  |                                | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
| Program Administrative Costs             |                                | \$0        | \$0   | \$109,447  | \$171,194 | \$301       | \$3,966  | \$284,908 |
| Incentives in Excess of Incremental Cost |                                | \$0        | \$0   | \$0        | \$0       | \$0         | \$0      | \$0       |
| Total Costs                              |                                | \$0        | \$0   | \$138,347  | \$196,494 | \$401       | \$4,566  | \$339,808 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             |            |       | 3.36       | 0.96      | 3.89        | 2.08     | 1.96      |
|  | TRC (With NEBs)                |            |       | 3.86       | 1.10      | 4.47        | 2.39     | 2.25      |
| WACC Discount Rate                       | TRC (Without NEBs)             |            |       | 3.05       | 0.87      | 3.65        | 1.95     | 1.78      |
|  | TRC (With NEBs)                |            |       | 3.51       | 1.00      | 4.20        | 2.25     | 2.04      |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 18 Residential Retrofit Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele  | ComEd       | Ameren-Gas  | Nicor       | North Shore | Peoples     | Total        |
|--|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Net kWh                                  |                                | 902,680     | 3,123,292   | 0           | 0           | 0           | 0           | 4,025,972    |
| Net kW                                   |                                | 159.49      | 2,304.76    | 0.00        | 0.00        | 0.00        | 0.00        | 2,464.25     |
| Net Therms                               |                                | -12,973     | -16,979     | 96,474      | 229,655     | 28,067      | 318,421     | 642,666      |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$410,578   | \$2,128,008 | \$0         | \$0         | \$0         | \$0         | \$2,538,586  |
|  | Avoided Electric Environmental | \$69,805    | \$480,981   | \$0         | \$0         | \$0         | \$0         | \$550,786    |
|  | Avoided Electric Capacity      | \$80,715    | \$188,906   | \$0         | \$0         | \$0         | \$0         | \$269,621    |
|  | Avoided Electric T&D           | \$31,631    | \$3,601,320 | \$0         | \$0         | \$0         | \$0         | \$3,632,951  |
|  | Avoided Electric Ancillary     | \$17,532    | \$714,109   | \$0         | \$0         | \$0         | \$0         | \$731,641    |
|  | Avoided Gas Production         | (\$47,757)  | (\$105,141) | \$1,156,395 | \$1,707,910 | \$524,895   | \$5,345,525 | \$8,581,827  |
|  | Avoided Gas Capacity           | (\$2,482)   | (\$5,464)   | \$60,101    | \$189,188   | \$34,400    | \$351,091   | \$626,833    |
|  | Total Benefits (Without NEBs)  | \$560,022   | \$7,002,719 | \$1,216,496 | \$1,897,098 | \$559,295   | \$5,696,615 | \$16,932,245 |
|  | Non-Energy Benefits            | \$168,007   | \$2,100,816 | \$364,949   | \$569,129   | \$167,788   | \$1,708,985 | \$5,079,674  |
| Total Benefits (With NEBs)               |                                | \$728,028   | \$9,103,535 | \$1,581,445 | \$2,466,228 | \$727,083   | \$7,405,600 | \$22,011,919 |
| WACC Discount Rate                       | Avoided Electric Production    | \$331,570   | \$1,518,835 | \$0         | \$0         | \$0         | \$0         | \$1,850,406  |
|  | Avoided Electric Environmental | \$58,820    | \$357,709   | \$0         | \$0         | \$0         | \$0         | \$416,529    |
|  | Avoided Electric Capacity      | \$58,530    | \$133,673   | \$0         | \$0         | \$0         | \$0         | \$192,202    |
|  | Avoided Electric T&D           | \$26,334    | \$2,449,980 | \$0         | \$0         | \$0         | \$0         | \$2,476,314  |
|  | Avoided Electric Ancillary     | \$14,124    | \$509,694   | \$0         | \$0         | \$0         | \$0         | \$523,817    |
|  | Avoided Gas Production         | (\$42,960)  | (\$93,222)  | \$769,442   | \$1,005,139 | \$363,490   | \$3,816,919 | \$5,818,810  |
|  | Avoided Gas Capacity           | (\$2,233)   | (\$4,845)   | \$39,990    | \$111,341   | \$23,822    | \$250,693   | \$418,768    |
|  | Total Benefits (Without NEBs)  | \$444,185   | \$4,871,824 | \$809,432   | \$1,116,480 | \$387,312   | \$4,067,612 | \$11,696,846 |
|  | Non-Energy Benefits            | \$133,256   | \$1,461,547 | \$242,830   | \$334,944   | \$116,194   | \$1,220,284 | \$3,509,054  |
| Total Benefits (With NEBs)               |                                | \$577,441   | \$6,333,371 | \$1,052,262 | \$1,451,425 | \$503,505   | \$5,287,896 | \$15,205,900 |
| Net Incremental Costs*                   |                                | \$291,163   | \$5,135,653 | \$746,268   | \$1,183,915 | \$487,716   | \$1,566,955 | \$9,411,669  |
| Program-Borne Share                      |                                | \$281,274   | \$1,876,397 | \$735,663   | \$452,699   | \$36,165    | \$308,561   | \$3,690,759  |
| Participant-Borne Share                  |                                | \$9,889     | \$3,259,256 | \$10,605    | \$731,215   | \$451,550   | \$1,258,394 | \$5,720,910  |
| Program Administrative Costs             |                                | \$64,248    | \$365,679   | \$54,805    | \$285,240   | \$11,022    | \$384,197   | \$1,165,191  |
| Incentives in Excess of Incremental Cost |                                | \$1,662,518 | \$1,824,908 | \$19,029    | \$342,301   | \$18,277    | \$325,707   | \$4,192,739  |
| Total Costs                              |                                | \$2,017,929 | \$7,326,240 | \$820,102   | \$1,811,455 | \$517,014   | \$2,276,859 | \$14,769,599 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 0.28        | 0.96        | 1.48        | 1.05        | 1.08        | 2.50        | 1.15         |
|  | TRC (With NEBs)                | 0.36        | 1.24        | 1.93        | 1.36        | 1.41        | 3.25        | 1.49         |
| WACC Discount Rate                       | TRC (Without NEBs)             | 0.22        | 0.66        | 0.99        | 0.62        | 0.75        | 1.79        | 0.79         |
|  | TRC (With NEBs)                | 0.29        | 0.86        | 1.28        | 0.80        | 0.97        | 2.32        | 1.03         |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 19 Affordable New Construction Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele  | ComEd       | Ameren-Gas | Nicor     | North Shore | Peoples     | Total       |
|--|--------------------------------|-------------|-------------|------------|-----------|-------------|-------------|-------------|
| Net kWh                                  |                                | 1,193,170   | 1,856,647   | 0          | 0         | 0           | 0           | 3,049,817   |
| Net kW                                   |                                | 156.77      | 308.99      | 0.00       | 0.00      | 0.00        | 0.00        | 465.76      |
| Net Therms                               |                                | -12,542     | -21,494     | 38,910     | 11,649    | 744         | 29,179      | 46,446      |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$1,022,782 | \$1,004,466 | \$0        | \$0       | \$0         | \$0         | \$2,027,248 |
|  | Avoided Electric Environmental | \$153,240   | \$246,777   | \$0        | \$0       | \$0         | \$0         | \$400,017   |
|  | Avoided Electric Capacity      | \$262,674   | \$24,407    | \$0        | \$0       | \$0         | \$0         | \$287,081   |
|  | Avoided Electric T&D           | \$65,326    | \$446,763   | \$0        | \$0       | \$0         | \$0         | \$512,089   |
|  | Avoided Electric Ancillary     | \$37,910    | \$81,132    | \$0        | \$0       | \$0         | \$0         | \$119,041   |
|  | Avoided Gas Production         | \$149,306   | (\$253,963) | \$236,080  | \$73,347  | \$7,619     | \$353,616   | \$566,006   |
|  | Avoided Gas Capacity           | \$8,407     | (\$11,787)  | \$12,270   | \$8,125   | \$499       | \$23,225    | \$40,739    |
|  | Total Benefits (Without NEBs)  | \$1,699,644 | \$1,537,794 | \$248,350  | \$81,472  | \$8,118     | \$376,842   | \$3,952,220 |
|  | Non-Energy Benefits            | \$509,893   | \$461,338   | \$74,505   | \$24,442  | \$2,436     | \$113,052   | \$1,185,666 |
| Total Benefits (With NEBs)               | \$2,209,537                    | \$1,999,132 | \$322,855   | \$105,914  | \$10,554  | \$489,894   | \$5,137,886 |             |
| WACC Discount Rate                       | Avoided Electric Production    | \$719,553   | \$769,388   | \$0        | \$0       | \$0         | \$0         | \$1,488,941 |
|  | Avoided Electric Environmental | \$114,848   | \$192,997   | \$0        | \$0       | \$0         | \$0         | \$307,845   |
|  | Avoided Electric Capacity      | \$166,024   | \$18,187    | \$0        | \$0       | \$0         | \$0         | \$184,212   |
|  | Avoided Electric T&D           | \$46,705    | \$325,499   | \$0        | \$0       | \$0         | \$0         | \$372,204   |
|  | Avoided Electric Ancillary     | \$25,750    | \$60,559    | \$0        | \$0       | \$0         | \$0         | \$86,309    |
|  | Avoided Gas Production         | \$91,625    | (\$196,877) | \$155,743  | \$47,290  | \$5,904     | \$269,652   | \$373,337   |
|  | Avoided Gas Capacity           | \$5,235     | (\$9,138)   | \$8,094    | \$5,238   | \$387       | \$17,711    | \$27,527    |
|  | Total Benefits (Without NEBs)  | \$1,169,740 | \$1,160,616 | \$163,837  | \$52,529  | \$6,291     | \$287,362   | \$2,840,375 |
|  | Non-Energy Benefits            | \$350,922   | \$348,185   | \$49,151   | \$15,759  | \$1,887     | \$86,209    | \$852,112   |
| Total Benefits (With NEBs)               | \$1,520,663                    | \$1,508,801 | \$212,988   | \$68,287   | \$8,178   | \$373,571   | \$3,692,487 |             |
| Net Incremental Costs*                   |                                | \$2,293,704 | \$3,717,793 | \$348,970  | \$569,674 | \$11,008    | \$569,639   | \$7,510,787 |
| Program-Borne Share                      |                                | \$658,042   | \$925,166   | \$69,721   | \$198,248 | \$5,611     | \$261,885   | \$2,118,674 |
| Participant-Borne Share                  |                                | \$1,635,662 | \$2,792,627 | \$279,249  | \$371,426 | \$5,397     | \$307,753   | \$5,392,113 |
| Program Administrative Costs             |                                | \$104,960   | \$248,556   | \$17,825   | \$20,200  | \$658       | \$49,563    | \$441,762   |
| Incentives in Excess of Incremental Cost |                                | \$314,347   | \$981,357   | \$128,180  | \$240,824 | \$414       | \$125,805   | \$1,790,926 |
| Total Costs                              |                                | \$2,713,011 | \$4,947,705 | \$494,974  | \$830,698 | \$12,080    | \$745,007   | \$9,743,475 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 0.63        | 0.31        | 0.50       | 0.10      | 0.67        | 0.51        | 0.41        |
|  | TRC (With NEBs)                | 0.81        | 0.40        | 0.65       | 0.13      | 0.87        | 0.66        | 0.53        |
| WACC Discount Rate                       | TRC (Without NEBs)             | 0.43        | 0.23        | 0.33       | 0.06      | 0.52        | 0.39        | 0.29        |
|  | TRC (With NEBs)                | 0.56        | 0.30        | 0.43       | 0.08      | 0.68        | 0.50        | 0.38        |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 20 Public Housing Authority Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele  | ComEd       | Ameren-Gas  | Nicor     | North Shore | Peoples     | Total       |
|--|--------------------------------|-------------|-------------|-------------|-----------|-------------|-------------|-------------|
| Net kWh                                  |                                | 2,075,177   | 3,365,811   | 0           | 0         | 0           | 0           | 5,440,987   |
| Net kW                                   |                                | 397.24      | 549.79      | 0.00        | 0.00      | 0.00        | 0.00        | 947.03      |
| Net Therms                               |                                | -9,025      | -26,365     | 75,482      | 93,635    | 14,465      | 2,564       | 150,757     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$1,405,148 | \$1,259,747 | \$0         | \$0       | \$0         | \$0         | \$2,664,896 |
|  | Avoided Electric Environmental | \$217,960   | \$315,850   | \$0         | \$0       | \$0         | \$0         | \$533,809   |
|  | Avoided Electric Capacity      | \$361,770   | \$24,165    | \$0         | \$0       | \$0         | \$0         | \$385,935   |
|  | Avoided Electric T&D           | \$109,714   | \$416,689   | \$0         | \$0       | \$0         | \$0         | \$526,403   |
|  | Avoided Electric Ancillary     | \$63,454    | \$94,129    | \$0         | \$0       | \$0         | \$0         | \$157,584   |
|  | Avoided Gas Production         | (\$55,518)  | (\$210,191) | \$824,242   | \$478,588 | \$218,751   | \$28,276    | \$1,284,148 |
|  | Avoided Gas Capacity           | (\$2,885)   | (\$10,924)  | \$42,838    | \$53,014  | \$14,336    | \$1,857     | \$98,236    |
|  | Total Benefits (Without NEBs)  | \$2,099,643 | \$1,889,466 | \$867,080   | \$531,602 | \$233,087   | \$30,133    | \$5,651,011 |
|  | Non-Energy Benefits            | \$629,893   | \$566,840   | \$260,124   | \$159,481 | \$69,926    | \$9,040     | \$1,695,303 |
| Total Benefits (With NEBs)               | \$2,729,536                    | \$2,456,306 | \$1,127,205 | \$691,082   | \$303,013 | \$39,173    | \$7,346,314 |             |
| WACC Discount Rate                       | Avoided Electric Production    | \$1,046,351 | \$1,055,788 | \$0         | \$0       | \$0         | \$0         | \$2,102,139 |
|  | Avoided Electric Environmental | \$172,252   | \$268,074   | \$0         | \$0       | \$0         | \$0         | \$440,327   |
|  | Avoided Electric Capacity      | \$245,123   | \$20,147    | \$0         | \$0       | \$0         | \$0         | \$265,270   |
|  | Avoided Electric T&D           | \$85,215    | \$341,753   | \$0         | \$0       | \$0         | \$0         | \$426,968   |
|  | Avoided Electric Ancillary     | \$47,276    | \$78,854    | \$0         | \$0       | \$0         | \$0         | \$126,130   |
|  | Avoided Gas Production         | (\$43,781)  | (\$175,749) | \$563,275   | \$319,607 | \$162,612   | \$22,429    | \$848,393   |
|  | Avoided Gas Capacity           | (\$2,275)   | (\$9,134)   | \$29,275    | \$35,403  | \$10,657    | \$1,473     | \$65,399    |
|  | Total Benefits (Without NEBs)  | \$1,550,162 | \$1,579,733 | \$592,550   | \$355,010 | \$173,269   | \$23,902    | \$4,274,625 |
|  | Non-Energy Benefits            | \$465,049   | \$473,920   | \$177,765   | \$106,503 | \$51,981    | \$7,171     | \$1,282,388 |
| Total Benefits (With NEBs)               | \$2,015,210                    | \$2,053,653 | \$770,314   | \$461,513   | \$225,249 | \$31,072    | \$5,557,013 |             |
| Net Incremental Costs*                   |                                | \$832,792   | \$1,032,752 | \$524,833   | \$347,774 | \$20,265    | \$212,735   | \$2,971,151 |
| Program-Borne Share                      |                                | \$535,877   | \$600,193   | \$521,286   | \$250,937 | \$20,265    | \$6,956     | \$1,935,514 |
| Participant-Borne Share                  |                                | \$296,915   | \$432,559   | \$3,547     | \$96,837  | \$0         | \$205,779   | \$1,035,637 |
| Program Administrative Costs             |                                | \$158,003   | \$410,785   | \$53,861    | \$129,919 | \$7,785     | \$3,467     | \$763,820   |
| Incentives in Excess of Incremental Cost |                                | \$201,776   | \$525,146   | \$572,337   | \$391,057 | \$12,134    | \$320,220   | \$2,022,670 |
| Total Costs                              |                                | \$1,192,571 | \$1,968,683 | \$1,151,031 | \$868,750 | \$40,184    | \$536,422   | \$5,757,641 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 1.76        | 0.96        | 0.75        | 0.61      | 5.80        | 0.06        | 0.98        |
|  | TRC (With NEBs)                | 2.29        | 1.25        | 0.98        | 0.80      | 7.54        | 0.07        | 1.28        |
| WACC Discount Rate                       | TRC (Without NEBs)             | 1.30        | 0.80        | 0.51        | 0.41      | 4.31        | 0.04        | 0.74        |
|  | TRC (With NEBs)                | 1.69        | 1.04        | 0.67        | 0.53      | 5.61        | 0.06        | 0.97        |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 21 SEDAC Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele | ComEd       | Ameren-Gas | Nicor     | North Shore | Peoples     | Total       |
|--|--------------------------------|------------|-------------|------------|-----------|-------------|-------------|-------------|
| Net kWh                                  |                                | 544,028    | 1,210,654   | 0          | 0         | 0           | 0           | 1,754,682   |
| Net kW                                   |                                | 9.60       | 21.30       | 0.00       | 0.00      | 0.00        | 0.00        | 30.90       |
| Net Therms                               |                                | 0          | -13,693     | 36,377     | 57,408    | 9,094       | 23,304      | 112,490     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$585,982  | \$440,327   | \$0        | \$0       | \$0         | \$0         | \$1,026,309 |
|  | Avoided Electric Environmental | \$87,982   | \$112,047   | \$0        | \$0       | \$0         | \$0         | \$200,029   |
|  | Avoided Electric Capacity      | \$32,849   | \$1,824     | \$0        | \$0       | \$0         | \$0         | \$34,673    |
|  | Avoided Electric T&D           | \$7,019    | \$34,327    | \$0        | \$0       | \$0         | \$0         | \$41,346    |
|  | Avoided Electric Ancillary     | \$5,720    | \$20,826    | \$0        | \$0       | \$0         | \$0         | \$26,545    |
|  | Avoided Gas Production         | \$0        | (\$133,539) | \$73,502   | \$125,794 | \$102,436   | \$181,062   | \$349,255   |
|  | Avoided Gas Capacity           | \$0        | (\$5,758)   | \$3,337    | \$12,060  | \$5,797     | \$10,269    | \$25,704    |
|  | Total Benefits (Without NEBs)  | \$719,551  | \$470,052   | \$76,839   | \$137,855 | \$108,233   | \$191,330   | \$1,703,860 |
|  | Non-Energy Benefits            | \$107,933  | \$70,508    | \$11,526   | \$20,678  | \$16,235    | \$28,700    | \$255,579   |
| Total Benefits (With NEBs)               | \$827,484                      | \$540,560  | \$88,365    | \$158,533  | \$124,468 | \$220,030   | \$1,959,439 |             |
| WACC Discount Rate                       | Avoided Electric Production    | \$398,322  | \$374,196   | \$0        | \$0       | \$0         | \$0         | \$772,518   |
|  | Avoided Electric Environmental | \$63,789   | \$95,921    | \$0        | \$0       | \$0         | \$0         | \$159,710   |
|  | Avoided Electric Capacity      | \$17,728   | \$1,321     | \$0        | \$0       | \$0         | \$0         | \$19,049    |
|  | Avoided Electric T&D           | \$4,293    | \$23,920    | \$0        | \$0       | \$0         | \$0         | \$28,213    |
|  | Avoided Electric Ancillary     | \$3,289    | \$17,144    | \$0        | \$0       | \$0         | \$0         | \$20,433    |
|  | Avoided Gas Production         | \$0        | (\$111,097) | \$70,057   | \$98,263  | \$73,610    | \$152,186   | \$283,018   |
|  | Avoided Gas Capacity           | \$0        | (\$4,779)   | \$3,181    | \$9,421   | \$4,166     | \$8,631     | \$20,619    |
|  | Total Benefits (Without NEBs)  | \$487,421  | \$396,626   | \$73,238   | \$107,684 | \$77,775    | \$160,817   | \$1,303,560 |
|  | Non-Energy Benefits            | \$73,113   | \$59,494    | \$10,986   | \$16,153  | \$11,666    | \$24,123    | \$195,534   |
| Total Benefits (With NEBs)               | \$560,534                      | \$456,120  | \$84,223    | \$123,836  | \$89,442  | \$184,939   | \$1,499,094 |             |
| Net Incremental Costs*                   |                                | \$1,439    | \$133,199   | \$11,905   | \$9,727   | \$8,561     | \$21,913    | \$186,744   |
| Program-Borne Share                      |                                | \$0        | \$0         | \$0        | \$0       | \$0         | \$0         | \$0         |
| Participant-Borne Share                  |                                | \$1,439    | \$133,199   | \$11,905   | \$9,727   | \$8,561     | \$21,913    | \$186,744   |
| Program Administrative Costs             |                                | \$46,408   | \$158,850   | \$35,724   | \$95,069  | \$7,336     | \$37,765    | \$381,152   |
| Incentives in Excess of Incremental Cost |                                | \$0        | \$0         | \$0        | \$0       | \$0         | \$0         | \$0         |
| Total Costs                              |                                | \$47,847   | \$292,049   | \$47,629   | \$104,796 | \$15,897    | \$59,678    | \$567,896   |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 15.04      | 1.61        | 1.61       | 1.32      | 6.81        | 3.21        | 3.00        |
|  | TRC (With NEBs)                | 17.29      | 1.85        | 1.86       | 1.51      | 7.83        | 3.69        | 3.45        |
| WACC Discount Rate                       | TRC (Without NEBs)             | 10.19      | 1.36        | 1.54       | 1.03      | 4.89        | 2.69        | 2.30        |
|  | TRC (With NEBs)                | 11.72      | 1.56        | 1.77       | 1.18      | 5.63        | 3.10        | 2.64        |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 22 Lights for Learning Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele | ComEd      | Ameren-Gas | Nicor | North Shore | Peoples   | Total      |
|--|--------------------------------|------------|------------|------------|-------|-------------|-----------|------------|
| Net kWh                                  |                                | 51,352     | 511,683    | 0          | 0     | 0           | 0         | 563,036    |
| Net kW                                   |                                | 3.62       | 35.77      | 0.00       | 0.00  | 0.00        | 0.00      | 39.39      |
| Net Therms                               |                                | -735       | -7,280     | 0          | 0     | 0           | 0         | -8,015     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$22,531   | \$162,461  | \$0        | \$0   | \$0         | \$0       | \$184,991  |
|  | Avoided Electric Environmental | \$3,874    | \$41,037   | \$0        | \$0   | \$0         | \$0       | \$44,912   |
|  | Avoided Electric Capacity      | \$832      | \$965      | \$0        | \$0   | \$0         | \$0       | \$1,797    |
|  | Avoided Electric T&D           | \$541      | \$15,911   | \$0        | \$0   | \$0         | \$0       | \$16,453   |
|  | Avoided Electric Ancillary     | \$276      | \$3,915    | \$0        | \$0   | \$0         | \$0       | \$4,191    |
|  | Avoided Gas Production         | (\$2,661)  | (\$39,935) | \$0        | \$0   | \$0         | \$0       | (\$42,597) |
|  | Avoided Gas Capacity           | (\$138)    | (\$2,076)  | \$0        | \$0   | \$0         | \$0       | (\$2,214)  |
|  | Total Benefits (Without NEBs)  | \$25,255   | \$182,278  | \$0        | \$0   | \$0         | \$0       | \$207,533  |
|  | Non-Energy Benefits            | \$3,788    | \$27,342   | \$0        | \$0   | \$0         | \$0       | \$31,130   |
| Total Benefits (With NEBs)               | \$29,043                       | \$209,620  | \$0        | \$0        | \$0   | \$0         | \$238,663 |            |
| WACC Discount Rate                       | Avoided Electric Production    | \$18,403   | \$138,685  | \$0        | \$0   | \$0         | \$0       | \$157,088  |
|  | Avoided Electric Environmental | \$3,287    | \$35,419   | \$0        | \$0   | \$0         | \$0       | \$38,706   |
|  | Avoided Electric Capacity      | \$709      | \$880      | \$0        | \$0   | \$0         | \$0       | \$1,588    |
|  | Avoided Electric T&D           | \$490      | \$14,395   | \$0        | \$0   | \$0         | \$0       | \$14,885   |
|  | Avoided Electric Ancillary     | \$248      | \$3,563    | \$0        | \$0   | \$0         | \$0       | \$3,811    |
|  | Avoided Gas Production         | (\$2,396)  | (\$36,175) | \$0        | \$0   | \$0         | \$0       | (\$38,572) |
|  | Avoided Gas Capacity           | (\$125)    | (\$1,880)  | \$0        | \$0   | \$0         | \$0       | (\$2,005)  |
|  | Total Benefits (Without NEBs)  | \$20,616   | \$154,886  | \$0        | \$0   | \$0         | \$0       | \$175,502  |
|  | Non-Energy Benefits            | \$3,092    | \$23,233   | \$0        | \$0   | \$0         | \$0       | \$26,325   |
| Total Benefits (With NEBs)               | \$23,708                       | \$178,119  | \$0        | \$0        | \$0   | \$0         | \$201,827 |            |
| Net Incremental Costs*                   |                                | \$2,764    | \$33,181   | \$0        | \$0   | \$0         | \$0       | \$35,946   |
| Program-Borne Share                      |                                | \$0        | \$0        | \$0        | \$0   | \$0         | \$0       | \$0        |
| Participant-Borne Share                  |                                | \$2,764    | \$33,181   | \$0        | \$0   | \$0         | \$0       | \$35,946   |
| Program Administrative Costs             |                                | \$12,559   | \$148,632  | \$0        | \$0   | \$0         | \$0       | \$161,191  |
| Incentives in Excess of Incremental Cost |                                | \$0        | \$0        | \$0        | \$0   | \$0         | \$0       | \$0        |
| Total Costs                              |                                | \$15,323   | \$181,813  | \$0        | \$0   | \$0         | \$0       | \$197,137  |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 1.65       | 1.00       |            |       |             |           | 1.05       |
|  | TRC (With NEBs)                | 1.90       | 1.15       |            |       |             |           | 1.21       |
| WACC Discount Rate                       | TRC (Without NEBs)             | 1.35       | 0.85       |            |       |             |           | 0.89       |
|  | TRC (With NEBs)                | 1.55       | 0.98       |            |       |             |           | 1.02       |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.



Table 23 Building Operator Certification Program Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele | ComEd     | Ameren-Gas | Nicor    | North Shore | Peoples   | Total     |
|--|--------------------------------|------------|-----------|------------|----------|-------------|-----------|-----------|
| Net kWh                                  |                                | 101,445    | 452,603   | 0          | 0        | 0           | 0         | 554,048   |
| Net kW                                   |                                | 14.69      | 65.54     | 0.00       | 0.00     | 0.00        | 0.00      | 80.23     |
| Net Therms                               |                                | -147       | -656      | 9,179      | 5,163    | 287         | 11,187    | 25,014    |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$85,007   | \$244,113 | \$0        | \$0      | \$0         | \$0       | \$329,120 |
|  | Avoided Electric Environmental | \$13,529   | \$62,793  | \$0        | \$0      | \$0         | \$0       | \$76,322  |
|  | Avoided Electric Capacity      | \$22,249   | \$5,142   | \$0        | \$0      | \$0         | \$0       | \$27,391  |
|  | Avoided Electric T&D           | \$5,932    | \$91,711  | \$0        | \$0      | \$0         | \$0       | \$97,643  |
|  | Avoided Electric Ancillary     | \$4,423    | \$21,263  | \$0        | \$0      | \$0         | \$0       | \$25,686  |
|  | Avoided Gas Production         | (\$1,038)  | (\$6,171) | \$108,716  | \$26,231 | \$3,093     | \$122,261 | \$253,092 |
|  | Avoided Gas Capacity           | (\$44)     | (\$259)   | \$4,936    | \$2,515  | \$175       | \$6,934   | \$14,257  |
|  | Total Benefits (Without NEBs)  | \$130,059  | \$418,592 | \$113,652  | \$28,746 | \$3,268     | \$129,195 | \$823,511 |
|  | Non-Energy Benefits            | \$19,509   | \$62,789  | \$17,048   | \$4,312  | \$490       | \$19,379  | \$123,527 |
| Total Benefits (With NEBs)               | \$149,567                      | \$481,381  | \$130,699 | \$33,058   | \$3,758  | \$148,574   | \$947,037 |           |
| WACC Discount Rate                       | Avoided Electric Production    | \$61,935   | \$190,387 | \$0        | \$0      | \$0         | \$0       | \$252,322 |
|  | Avoided Electric Environmental | \$10,332   | \$49,707  | \$0        | \$0      | \$0         | \$0       | \$60,039  |
|  | Avoided Electric Capacity      | \$15,074   | \$3,984   | \$0        | \$0      | \$0         | \$0       | \$19,058  |
|  | Avoided Electric T&D           | \$4,468    | \$69,914  | \$0        | \$0      | \$0         | \$0       | \$74,381  |
|  | Avoided Electric Ancillary     | \$3,235    | \$16,626  | \$0        | \$0      | \$0         | \$0       | \$19,861  |
|  | Avoided Gas Production         | (\$831)    | (\$5,148) | \$77,746   | \$18,411 | \$2,488     | \$98,531  | \$191,198 |
|  | Avoided Gas Capacity           | (\$35)     | (\$216)   | \$3,530    | \$1,765  | \$141       | \$5,588   | \$10,773  |
|  | Total Benefits (Without NEBs)  | \$94,178   | \$325,255 | \$81,276   | \$20,176 | \$2,629     | \$104,119 | \$627,633 |
|  | Non-Energy Benefits            | \$14,127   | \$48,788  | \$12,191   | \$3,026  | \$394       | \$15,618  | \$94,145  |
| Total Benefits (With NEBs)               | \$108,305                      | \$374,043  | \$93,468  | \$23,202   | \$3,023  | \$119,737   | \$721,778 |           |
| Net Incremental Costs*                   |                                | \$7,252    | \$29,956  | \$12,670   | \$7,127  | \$396       | \$15,442  | \$72,842  |
| Program-Borne Share                      |                                | \$0        | \$0       | \$0        | \$0      | \$0         | \$0       | \$0       |
| Participant-Borne Share                  |                                | \$7,252    | \$29,956  | \$12,670   | \$7,127  | \$396       | \$15,442  | \$72,842  |
| Program Administrative Costs             |                                | \$14,534   | \$85,622  | \$24,604   | \$17,320 | \$719       | \$37,130  | \$179,929 |
| Incentives in Excess of Incremental Cost |                                | \$0        | \$0       | \$0        | \$0      | \$0         | \$0       | \$0       |
| Total Costs                              |                                | \$21,786   | \$115,578 | \$37,274   | \$24,447 | \$1,115     | \$52,572  | \$252,771 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 5.97       | 3.62      | 3.05       | 1.18     | 2.93        | 2.46      | 3.26      |
|  | TRC (With NEBs)                | 6.87       | 4.17      | 3.51       | 1.35     | 3.37        | 2.83      | 3.75      |
| WACC Discount Rate                       | TRC (Without NEBs)             | 4.32       | 2.81      | 2.18       | 0.83     | 2.36        | 1.98      | 2.48      |
|  | TRC (With NEBs)                | 4.97       | 3.24      | 2.51       | 0.95     | 2.71        | 2.28      | 2.86      |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 24 Public Sector Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele    | ComEd         | Ameren-Gas   | Nicor       | North Shore | Peoples      | Total         |
|--|--------------------------------|---------------|---------------|--------------|-------------|-------------|--------------|---------------|
| Net kWh                                  |                                | 29,856,047    | 88,423,139    | 0            | 0           | 0           | 0            | 118,279,186   |
| Net kW                                   |                                | 4,738.95      | 12,865.61     | 0.00         | 0.00        | 0.00        | 0.00         | 17,604.56     |
| Net Therms                               |                                | -120,466      | -746,201      | 1,579,717    | 1,165,403   | 219,208     | 500,380      | 2,598,040     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$19,225,801  | \$40,439,414  | \$0          | \$0         | \$0         | \$0          | \$59,665,215  |
|  | Avoided Electric Environmental | \$3,176,031   | \$10,573,285  | \$0          | \$0         | \$0         | \$0          | \$13,749,316  |
|  | Avoided Electric Capacity      | \$4,223,009   | \$702,762     | \$0          | \$0         | \$0         | \$0          | \$4,925,771   |
|  | Avoided Electric T&D           | \$1,271,923   | \$12,403,825  | \$0          | \$0         | \$0         | \$0          | \$13,675,747  |
|  | Avoided Electric Ancillary     | \$1,113,464   | \$3,675,837   | \$0          | \$0         | \$0         | \$0          | \$4,789,300   |
|  | Avoided Gas Production         | (\$1,098,657) | (\$8,457,733) | \$13,247,491 | \$4,720,297 | \$1,143,567 | \$2,818,608  | \$12,373,573  |
|  | Avoided Gas Capacity           | (\$47,939)    | (\$374,303)   | \$601,436    | \$452,553   | \$64,714    | \$159,862    | \$856,323     |
|  | Total Benefits (Without NEBs)  | \$27,863,630  | \$58,963,087  | \$13,848,927 | \$5,172,850 | \$1,208,282 | \$2,978,470  | \$110,035,245 |
|  | Non-Energy Benefits            | \$4,179,544   | \$8,844,463   | \$2,077,339  | \$775,927   | \$181,242   | \$446,770    | \$16,505,287  |
|  | Total Benefits (With NEBs)     | \$32,043,174  | \$67,807,550  | \$15,926,266 | \$5,948,777 | \$1,389,524 | \$3,425,240  | \$126,540,532 |
| WACC Discount Rate                       | Avoided Electric Production    | \$14,458,574  | \$32,191,159  | \$0          | \$0         | \$0         | \$0          | \$46,649,733  |
|  | Avoided Electric Environmental | \$2,510,897   | \$8,538,518   | \$0          | \$0         | \$0         | \$0          | \$11,049,415  |
|  | Avoided Electric Capacity      | \$2,922,604   | \$558,110     | \$0          | \$0         | \$0         | \$0          | \$3,480,714   |
|  | Avoided Electric T&D           | \$995,246     | \$9,689,311   | \$0          | \$0         | \$0         | \$0          | \$10,684,556  |
|  | Avoided Electric Ancillary     | \$834,107     | \$2,927,909   | \$0          | \$0         | \$0         | \$0          | \$3,762,016   |
|  | Avoided Gas Production         | (\$811,162)   | (\$6,710,900) | \$9,848,383  | \$3,303,907 | \$983,759   | \$2,428,122  | \$9,042,110   |
|  | Avoided Gas Capacity           | (\$35,392)    | (\$296,948)   | \$447,117    | \$316,758   | \$55,671    | \$137,715    | \$624,921     |
|  | Total Benefits (Without NEBs)  | \$20,874,873  | \$46,897,159  | \$10,295,499 | \$3,620,665 | \$1,039,430 | \$2,565,837  | \$85,293,464  |
|  | Non-Energy Benefits            | \$3,131,231   | \$7,034,574   | \$1,544,325  | \$543,100   | \$155,915   | \$384,876    | \$12,794,020  |
| Total Benefits (With NEBs)               | \$24,006,104                   | \$53,931,733  | \$11,839,824  | \$4,163,765  | \$1,195,345 | \$2,950,713 | \$98,087,484 |               |
| Net Incremental Costs*                   |                                | \$7,529,544   | \$17,245,754  | \$3,034,550  | \$2,770,156 | \$425,270   | \$383,885    | \$31,389,159  |
| Program-Borne Share                      |                                | \$5,237,263   | \$12,297,872  | \$2,606,296  | \$2,102,428 | \$313,659   | \$210,147    | \$22,767,665  |
| Participant-Borne Share                  |                                | \$2,292,282   | \$4,947,882   | \$428,253    | \$667,728   | \$111,612   | \$173,738    | \$8,621,494   |
| Program Administrative Costs             |                                | \$2,079,976   | \$10,175,315  | \$882,868    | \$1,486,943 | \$75,475    | \$585,718    | \$15,286,295  |
| Incentives in Excess of Incremental Cost |                                | \$671,611     | \$4,590,773   | \$117,850    | \$47,960    | \$4,101     | \$32,300     | \$5,464,595   |
| Total Costs                              |                                | \$10,281,131  | \$32,011,843  | \$4,035,268  | \$4,305,059 | \$504,846   | \$1,001,903  | \$52,140,049  |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 2.71          | 1.84          | 3.43         | 1.20        | 2.39        | 2.97         | 2.11          |
|  | TRC (With NEBs)                | 3.12          | 2.12          | 3.95         | 1.38        | 2.75        | 3.42         | 2.43          |
| WACC Discount Rate                       | TRC (Without NEBs)             | 2.03          | 1.46          | 2.55         | 0.84        | 2.06        | 2.56         | 1.64          |
|  | TRC (With NEBs)                | 2.33          | 1.68          | 2.93         | 0.97        | 2.37        | 2.95         | 1.88          |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 25 Low Income Sector Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele   | ComEd        | Ameren-Gas  | Nicor       | North Shore | Peoples      | Total        |
|--|--------------------------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|
| Net kWh                                  |                                | 4,171,027    | 8,345,750    | 0           | 0           | 0           | 0            | 12,516,776   |
| Net kW                                   |                                | 713.50       | 3,163.54     | 0.00        | 0.00        | 0.00        | 0.00         | 3,877.04     |
| Net Therms                               |                                | -34,540      | -64,837      | 210,867     | 334,939     | 43,276      | 350,165      | 839,869      |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$2,838,508  | \$4,392,221  | \$0         | \$0         | \$0         | \$0          | \$7,230,730  |
|  | Avoided Electric Environmental | \$441,004    | \$1,043,608  | \$0         | \$0         | \$0         | \$0          | \$1,484,612  |
|  | Avoided Electric Capacity      | \$705,158    | \$237,478    | \$0         | \$0         | \$0         | \$0          | \$942,636    |
|  | Avoided Electric T&D           | \$206,671    | \$4,464,772  | \$0         | \$0         | \$0         | \$0          | \$4,671,443  |
|  | Avoided Electric Ancillary     | \$118,896    | \$889,370    | \$0         | \$0         | \$0         | \$0          | \$1,008,266  |
|  | Avoided Gas Production         | \$46,031     | (\$569,294)  | \$2,216,717 | \$2,259,845 | \$751,265   | \$5,727,417  | \$10,431,981 |
|  | Avoided Gas Capacity           | \$3,040      | (\$28,176)   | \$115,209   | \$250,327   | \$49,235    | \$376,173    | \$765,808    |
|  | Total Benefits (Without NEBs)  | \$4,359,309  | \$10,429,979 | \$2,331,926 | \$2,510,172 | \$800,500   | \$6,103,590  | \$26,535,476 |
|  | Non-Energy Benefits            | \$1,307,793  | \$3,128,994  | \$699,578   | \$753,052   | \$240,150   | \$1,831,077  | \$7,960,643  |
| Total Benefits (With NEBs)               | \$5,667,101                    | \$13,558,973 | \$3,031,504  | \$3,263,224 | \$1,040,650 | \$7,934,667 | \$34,496,119 |              |
| WACC Discount Rate                       | Avoided Electric Production    | \$2,097,474  | \$3,344,011  | \$0         | \$0         | \$0         | \$0          | \$5,441,485  |
|  | Avoided Electric Environmental | \$345,921    | \$818,781    | \$0         | \$0         | \$0         | \$0          | \$1,164,701  |
|  | Avoided Electric Capacity      | \$469,677    | \$172,007    | \$0         | \$0         | \$0         | \$0          | \$641,684    |
|  | Avoided Electric T&D           | \$158,254    | \$3,117,232  | \$0         | \$0         | \$0         | \$0          | \$3,275,486  |
|  | Avoided Electric Ancillary     | \$87,150     | \$649,107    | \$0         | \$0         | \$0         | \$0          | \$736,257    |
|  | Avoided Gas Production         | \$4,885      | (\$465,847)  | \$1,488,460 | \$1,372,036 | \$532,006   | \$4,108,999  | \$7,040,539  |
|  | Avoided Gas Capacity           | \$727        | (\$23,117)   | \$77,359    | \$151,983   | \$34,866    | \$269,876    | \$511,694    |
|  | Total Benefits (Without NEBs)  | \$3,164,087  | \$7,612,173  | \$1,565,819 | \$1,524,020 | \$566,871   | \$4,378,876  | \$18,811,846 |
|  | Non-Energy Benefits            | \$949,226    | \$2,283,652  | \$469,746   | \$457,206   | \$170,061   | \$1,313,663  | \$5,643,554  |
| Total Benefits (With NEBs)               | \$4,113,314                    | \$9,895,825  | \$2,035,565  | \$1,981,225 | \$736,933   | \$5,692,539 | \$24,455,400 |              |
| Net Incremental Costs*                   |                                | \$3,417,659  | \$9,886,197  | \$1,620,071 | \$2,101,362 | \$518,989   | \$2,349,329  | \$19,893,607 |
| Program-Borne Share                      |                                | \$1,475,193  | \$3,401,756  | \$1,326,670 | \$901,884   | \$62,042    | \$577,402    | \$7,744,947  |
| Participant-Borne Share                  |                                | \$1,942,466  | \$6,484,442  | \$293,400   | \$1,199,478 | \$456,947   | \$1,771,927  | \$12,148,660 |
| Program Administrative Costs             |                                | \$327,211    | \$1,025,020  | \$126,491   | \$435,359   | \$19,465    | \$437,227    | \$2,370,773  |
| Incentives in Excess of Incremental Cost |                                | \$2,178,642  | \$3,331,410  | \$719,545   | \$974,182   | \$30,824    | \$771,732    | \$8,006,336  |
| Total Costs                              |                                | \$5,923,511  | \$14,242,628 | \$2,466,107 | \$3,510,903 | \$569,278   | \$3,558,288  | \$30,270,716 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 0.74         | 0.73         | 0.95        | 0.71        | 1.41        | 1.72         | 0.88         |
|  | TRC (With NEBs)                | 0.96         | 0.95         | 1.23        | 0.93        | 1.83        | 2.23         | 1.14         |
| WACC Discount Rate                       | TRC (Without NEBs)             | 0.53         | 0.53         | 0.63        | 0.43        | 1.00        | 1.23         | 0.62         |
|  | TRC (With NEBs)                | 0.69         | 0.69         | 0.83        | 0.56        | 1.29        | 1.60         | 0.81         |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 26 Market Transformation Sector Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele  | ComEd       | Ameren-Gas | Nicor     | North Shore | Peoples   | Total       |
|--|--------------------------------|-------------|-------------|------------|-----------|-------------|-----------|-------------|
| Net kWh                                  |                                | 696,826     | 2,174,940   | 0          | 0         | 0           | 0         | 2,871,766   |
| Net kW                                   |                                | 27.91       | 122.61      | 0.00       | 0.00      | 0.00        | 0.00      | 150.52      |
| Net Therms                               |                                | -882        | -21,629     | 45,556     | 62,571    | 9,381       | 34,491    | 129,489     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$693,520   | \$846,900   | \$0        | \$0       | \$0         | \$0       | \$1,540,420 |
|  | Avoided Electric Environmental | \$105,385   | \$215,878   | \$0        | \$0       | \$0         | \$0       | \$321,263   |
|  | Avoided Electric Capacity      | \$55,930    | \$7,930     | \$0        | \$0       | \$0         | \$0       | \$63,861    |
|  | Avoided Electric T&D           | \$13,493    | \$141,948   | \$0        | \$0       | \$0         | \$0       | \$155,441   |
|  | Avoided Electric Ancillary     | \$10,419    | \$46,004    | \$0        | \$0       | \$0         | \$0       | \$56,422    |
|  | Avoided Gas Production         | (\$3,700)   | (\$179,645) | \$182,218  | \$152,025 | \$105,529   | \$303,323 | \$559,749   |
|  | Avoided Gas Capacity           | (\$182)     | (\$8,093)   | \$8,273    | \$14,575  | \$5,972     | \$17,203  | \$37,748    |
|  | Total Benefits (Without NEBs)  | \$874,865   | \$1,070,923 | \$190,491  | \$166,600 | \$111,501   | \$320,525 | \$2,734,905 |
|  | Non-Energy Benefits            | \$131,230   | \$160,638   | \$28,574   | \$24,990  | \$16,725    | \$48,079  | \$410,236   |
| Total Benefits (With NEBs)               |                                | \$1,006,095 | \$1,231,561 | \$219,064  | \$191,590 | \$128,226   | \$368,604 | \$3,145,140 |
| WACC Discount Rate                       | Avoided Electric Production    | \$478,661   | \$703,268   | \$0        | \$0       | \$0         | \$0       | \$1,181,928 |
|  | Avoided Electric Environmental | \$77,408    | \$181,048   | \$0        | \$0       | \$0         | \$0       | \$258,455   |
|  | Avoided Electric Capacity      | \$33,511    | \$6,185     | \$0        | \$0       | \$0         | \$0       | \$39,695    |
|  | Avoided Electric T&D           | \$9,250     | \$108,229   | \$0        | \$0       | \$0         | \$0       | \$117,479   |
|  | Avoided Electric Ancillary     | \$6,771     | \$37,334    | \$0        | \$0       | \$0         | \$0       | \$44,105    |
|  | Avoided Gas Production         | (\$3,227)   | (\$152,421) | \$147,803  | \$116,674 | \$76,098    | \$250,717 | \$435,644   |
|  | Avoided Gas Capacity           | (\$159)     | (\$6,875)   | \$6,710    | \$11,186  | \$4,306     | \$14,219  | \$29,387    |
|  | Total Benefits (Without NEBs)  | \$602,215   | \$876,767   | \$154,514  | \$127,860 | \$80,404    | \$264,936 | \$2,106,695 |
|  | Non-Energy Benefits            | \$90,332    | \$131,515   | \$23,177   | \$19,179  | \$12,061    | \$39,740  | \$316,004   |
| Total Benefits (With NEBs)               |                                | \$692,547   | \$1,008,282 | \$177,691  | \$147,038 | \$92,465    | \$304,677 | \$2,422,699 |
| Net Incremental Costs*                   |                                | \$11,454    | \$196,336   | \$24,575   | \$16,854  | \$8,957     | \$37,355  | \$295,531   |
| Program-Borne Share                      |                                | \$0         | \$0         | \$0        | \$0       | \$0         | \$0       | \$0         |
| Participant-Borne Share                  |                                | \$11,454    | \$196,336   | \$24,575   | \$16,854  | \$8,957     | \$37,355  | \$295,531   |
| Program Administrative Costs             |                                | \$73,501    | \$393,104   | \$60,328   | \$112,389 | \$8,055     | \$74,895  | \$722,272   |
| Incentives in Excess of Incremental Cost |                                | \$0         | \$0         | \$0        | \$0       | \$0         | \$0       | \$0         |
| Total Costs                              |                                | \$84,955    | \$589,440   | \$84,903   | \$129,243 | \$17,012    | \$112,250 | \$1,017,803 |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 10.30       | 1.82        | 2.24       | 1.29      | 6.55        | 2.86      | 2.69        |
|  | TRC (With NEBs)                | 11.84       | 2.09        | 2.58       | 1.48      | 7.54        | 3.28      | 3.09        |
| WACC Discount Rate                       | TRC (Without NEBs)             | 7.09        | 1.49        | 1.82       | 0.99      | 4.73        | 2.36      | 2.07        |
|  | TRC (With NEBs)                | 8.15        | 1.71        | 2.09       | 1.14      | 5.44        | 2.71      | 2.38        |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.

Table 27 Portfolio Benefits, Costs, and TRC Scores by IOU

| Values                                   |                                | Ameren-Ele    | ComEd         | Ameren-Gas   | Nicor       | North Shore | Peoples      | Total         |
|--|--------------------------------|---------------|---------------|--------------|-------------|-------------|--------------|---------------|
| Net kWh                                  |                                | 34,723,900    | 98,943,828    | 0            | 0           | 0           | 0            | 133,667,728   |
| Net kW                                   |                                | 5,480.37      | 16,151.75     | 0.00         | 0.00        | 0.00        | 0.00         | 21,632.12     |
| Net Therms                               |                                | -155,888      | -832,667      | 1,836,139    | 1,562,913   | 271,865     | 885,035      | 3,567,398     |
| 10-Year Treasury Discount Rate           | Avoided Electric Production    | \$22,757,829  | \$45,678,535  | \$0          | \$0         | \$0         | \$0          | \$68,436,364  |
|  | Avoided Electric Environmental | \$3,722,420   | \$11,832,771  | \$0          | \$0         | \$0         | \$0          | \$15,555,191  |
|  | Avoided Electric Capacity      | \$4,984,098   | \$948,171     | \$0          | \$0         | \$0         | \$0          | \$5,932,268   |
|  | Avoided Electric T&D           | \$1,492,087   | \$17,010,545  | \$0          | \$0         | \$0         | \$0          | \$18,502,632  |
|  | Avoided Electric Ancillary     | \$1,242,779   | \$4,611,210   | \$0          | \$0         | \$0         | \$0          | \$5,853,989   |
|  | Avoided Gas Production         | (\$1,056,326) | (\$9,206,672) | \$15,646,426 | \$7,132,167 | \$2,000,361 | \$8,849,347  | \$23,365,303  |
|  | Avoided Gas Capacity           | (\$45,082)    | (\$410,571)   | \$724,918    | \$717,455   | \$119,921   | \$553,237    | \$1,659,878   |
|  | Total Benefits (Without NEBs)  | \$33,097,804  | \$70,463,989  | \$16,371,344 | \$7,849,622 | \$2,120,282 | \$9,402,585  | \$139,305,625 |
|  | Non-Energy Benefits            | \$5,618,567   | \$12,134,095  | \$2,805,490  | \$1,553,969 | \$438,117   | \$2,325,926  | \$24,876,165  |
|  | Total Benefits (With NEBs)     | \$38,716,370  | \$82,598,084  | \$19,176,834 | \$9,403,591 | \$2,558,399 | \$11,728,511 | \$164,181,791 |
| WACC Discount Rate                       | Avoided Electric Production    | \$17,034,709  | \$36,238,437  | \$0          | \$0         | \$0         | \$0          | \$53,273,147  |
|  | Avoided Electric Environmental | \$2,934,225   | \$9,538,347   | \$0          | \$0         | \$0         | \$0          | \$12,472,572  |
|  | Avoided Electric Capacity      | \$3,425,792   | \$736,301     | \$0          | \$0         | \$0         | \$0          | \$4,162,093   |
|  | Avoided Electric T&D           | \$1,162,750   | \$12,914,771  | \$0          | \$0         | \$0         | \$0          | \$14,077,521  |
|  | Avoided Electric Ancillary     | \$928,028     | \$3,614,349   | \$0          | \$0         | \$0         | \$0          | \$4,542,378   |
|  | Avoided Gas Production         | (\$809,504)   | (\$7,329,167) | \$11,484,646 | \$4,792,617 | \$1,591,863 | \$6,787,839  | \$16,518,293  |
|  | Avoided Gas Capacity           | (\$34,825)    | (\$326,940)   | \$531,187    | \$479,927   | \$94,843    | \$421,811    | \$1,166,002   |
|  | Total Benefits (Without NEBs)  | \$24,641,175  | \$55,386,099  | \$12,015,832 | \$5,272,544 | \$1,686,706 | \$7,209,649  | \$106,212,005 |
|  | Non-Energy Benefits            | \$4,170,789   | \$9,449,741   | \$2,037,248  | \$1,019,485 | \$338,037   | \$1,738,279  | \$18,753,578  |
|  | Total Benefits (With NEBs)     | \$28,811,965  | \$64,835,840  | \$14,053,080 | \$6,292,028 | \$2,024,742 | \$8,947,928  | \$124,965,583 |
| Net Incremental Costs*                   |                                | \$10,958,657  | \$27,328,288  | \$4,679,195  | \$4,888,372 | \$953,216   | \$2,770,568  | \$51,578,297  |
| Program-Borne Share                      |                                | \$6,712,455   | \$15,699,628  | \$3,932,967  | \$3,004,312 | \$375,700   | \$787,549    | \$30,512,612  |
| Participant-Borne Share                  |                                | \$4,246,202   | \$11,628,660  | \$746,228    | \$1,884,060 | \$577,515   | \$1,983,019  | \$21,065,685  |
| Program Administrative Costs             |                                | \$2,480,688   | \$11,593,439  | \$1,069,687  | \$2,034,691 | \$102,995   | \$1,097,840  | \$18,379,340  |
| Incentives in Excess of Incremental Cost |                                | \$2,850,253   | \$7,922,184   | \$837,395    | \$1,022,142 | \$34,925    | \$804,032    | \$13,470,931  |
| Total Costs                              |                                | \$16,289,598  | \$46,843,911  | \$6,586,277  | \$7,945,205 | \$1,091,136 | \$4,672,440  | \$83,428,568  |
| 10-Year Treasury Discount Rate           | TRC (Without NEBs)             | 2.03          | 1.50          | 2.49         | 0.99        | 1.94        | 2.01         | 1.67          |
|  | TRC (With NEBs)                | 2.38          | 1.76          | 2.91         | 1.18        | 2.34        | 2.51         | 1.97          |
| WACC Discount Rate                       | TRC (Without NEBs)             | 1.51          | 1.18          | 1.82         | 0.66        | 1.55        | 1.54         | 1.27          |
|  | TRC (With NEBs)                | 1.77          | 1.38          | 2.13         | 0.79        | 1.86        | 1.92         | 1.50          |

\* Includes total incremental cost of non-free riders and program-borne share of free riders incremental costs.