



Joint Illinois Utility Review of Gas PY4 and Electric PY7 Total Resource Cost Test

Energy Efficiency / Demand Response Plan:
Electric Plan Year 7 (PY7) / Gas Plan Year (GPY4)
(6/1/2014-5/31/2015)

Presented to:
Commonwealth Edison Company
Nicor Gas
Peoples Gas
North Shore Gas

FINAL

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APPENDIX A. TRC BENEFIT COST RESULTS FOR JOINTLY IMPLEMENTED PROGRAMS

Six of the energy efficiency programs implemented by Commonwealth Edison (ComEd), Nicor Gas, Peoples Gas (PGL), and North Shore Gas (NSG) in PY7/GPY4 are “joint” programs such that they are designed and operated jointly by ComEd and one or more of the gas utilities for customers who are served both by ComEd (electric service) and Nicor Gas, Peoples Gas, or North Shore Gas (gas service). The intent of the joint programs is to gain efficiencies in the marketing and operations of the programs. Navigant’s analysis shows that each of joint programs were cost-effective based on both the Illinois Total Resource Cost (IL TRC) test and the Utility Cost Test (UCT). Table 1 lists the six programs jointly implemented by ComEd and the gas utilities, and indicates which gas utilities jointly implemented the programs in PY7/GPY4.

Table 1 - Summary of Jointly Implemented Programs in PY7/GPY4

Program	ComEd	Nicor Gas	PGL/NSG
Home Energy Assessment / Home Energy Savings / Home Energy Jumpstart	X	X	X
Multi-Family Retrofit	X	X	X
Elementary Energy Education	X	X	X
Residential New Construction	X	X	
Retro-Commissioning	X	X	X
Business New Construction	X	X	

Source: Navigant analysis

Cost and benefit numbers for each of the joint programs are updated to ensure that there are no instances of double counting while calculating the joint TRC/UCT values. This is one of the main reasons for the joint benefit/cost numbers not always being equal to the sum of the benefit/cost numbers filed separately for each participating utility. Incremental costs for measures that generate both gas and electric savings, such as thermostats and envelope measures, are prone to double counting, especially when based on deemed TRM values. Though double counting is most common for incremental measures, it is also possible for other TRC/UCT calculation components, including estimated avoided costs, interactive effects, and implementation costs.

A summary of the TRC and UCT calculations for each joint program is shown in Table 2 and Table 3 respectively. The tables include values of each benefit and cost component for each program, when aggregated across all utilities that were involved in its joint implementation.

The IL TRC values range from 1.52 for the Home Energy Assessment (HEA) program to 5.05 for the Elementary Energy Education (EEE) program and the UCT values range from 0.86 for the HEA program to 4.03 for the Residential New Construction program. The HEA program has historically had a low TRC and UCT value. This is because the program has a large direct install component leading to higher non-incentive costs. Since EEE is a kits program, it has low cost of implementation and added benefits due to water savings, leading to a higher TRC value of 5.05. As the water savings are not included in the UCT calculations, the UCT value for EEE is relatively low. The Residential New Construction program has low incentive costs leading to a higher UCT value.

Table 2 - Summary of Program Level Benefits, Costs and IL TRC Test – PY7/GPY4 Jointly Implemented Programs

Program	Benefits					Costs				IL Total Resource Cost (TRC) Test			
	Avoided Electric Production	Avoided Electric Capacity	Avoided T&D Electric	Avoided Gas Savings	Other Benefits	Definition of Other Benefits	Non-Incentive Costs	Incentive Costs	Incremental Costs (Net)	IL TRC Benefits	IL TRC Costs	IL TRC Test Net Benefits	IL TRC Test
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k) = (b+c+d+e+f)	(l) = (h+i)	(m) = (k-l)	(n) = (k/l)
Home Energy Assessment / Home Energy Savings / Home Energy Jumpstart	\$866,050	\$91,410	\$250,605	\$4,177,410	\$4,829,502	GHG, NEBs, Water	\$3,259,801	\$2,990,858	\$3,451,839	\$10,214,977	\$6,711,640	\$3,503,337	1.52
Multi-Family Retrofit	\$822,981	\$98,559	\$271,609	\$20,294,784	\$10,329,574	GHG, NEBs, Water	\$1,672,180	\$5,772,093	\$6,786,777	\$31,817,507	\$8,458,957	\$23,358,550	3.76
Elementary Energy Education	\$375,570	\$38,681	\$107,696	\$572,681	\$1,631,776	GHG, NEBs, Water	\$185,417	\$455,905	\$354,160	\$2,726,405	\$539,577	\$2,186,828	5.05
Residential New Construction	\$298,473	\$147,621	\$435,873	\$3,133,839	\$1,049,196	GHG, NEBs	\$474,992	\$521,611	\$2,347,818	\$5,065,001	\$2,822,810	\$2,242,191	1.79
Retro-commissioning	\$6,715,433	\$385,799	\$1,032,240	\$1,354,202	\$98,423	GHG, NEBs, Water	\$2,000,617	\$2,925,678	\$3,566,354	\$9,586,096	\$5,566,971	\$4,019,125	1.72
Business New Construction	\$11,284,847	\$1,455,642	\$4,239,954	\$2,620,822	\$813,393	GHG, NEBs, Water	\$2,523,597	\$3,563,175	\$9,222,940	\$20,414,657	\$11,746,537	\$8,668,120	1.74
Aggregate	\$20,363,353	\$2,217,711	\$6,337,977	\$32,153,738	\$18,751,864	Varies	\$10,116,604	\$16,229,320	\$25,729,890	\$79,824,644	\$35,846,493	\$43,978,150	2.23

Note: The cost-benefit results included here are reflective of only the EEPS portion of the ComEd portfolio and are not inclusive of the Illinois Power Agency (IPA) portion.

Source: Navigant analysis

Table 3 - Summary of Program Level Benefits, Costs and Utility Cost Test (UCT) – PY7/GPY4 Jointly Implemented Programs

Program	Benefits					Costs				IL Total Resource Cost (TRC) Test			
	Avoided Electric Production	Avoided Electric Capacity	Avoided T&D Electric	Avoided Gas Savings	Other Benefits	Definition of Other Benefits	Non-Incentive Costs	Incentive Costs	Incremental Costs (Net)	IL UCT Benefits	IL UCT Costs	IL UCT Test Net Benefits	IL UCT Test
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k) = (b+c+d+e)	(l) = (h+i)	(m) = (k-l)	(n) = (k/l)
Home Energy Assessment / Home Energy Savings / Home Energy Jumpstart	\$866,050	\$91,410	\$250,605	\$4,177,410	\$4,829,502	GHG, NEBs, Water	\$3,259,801	\$2,990,858	\$3,451,839	\$5,385,475	\$6,250,659	-\$865,184	0.86
Multi-Family Retrofit	\$822,981	\$98,559	\$271,609	\$20,294,784	\$10,329,574	GHG, NEBs, Water	\$1,672,180	\$5,772,093	\$6,786,777	\$21,487,933	\$7,444,273	\$14,043,660	2.89
Elementary Energy Education	\$375,570	\$38,681	\$107,696	\$572,681	\$1,631,776	GHG, NEBs, Water	\$185,417	\$455,905	\$354,160	\$1,094,629	\$641,321	\$453,308	1.71
Residential New Construction	\$298,473	\$147,621	\$435,873	\$3,133,839	\$1,049,196	GHG, NEBs	\$474,992	\$521,611	\$2,347,818	\$4,015,805	\$996,604	\$3,019,202	4.03
Retro-commissioning	\$6,715,433	\$385,799	\$1,032,240	\$1,354,202	\$98,423	GHG, NEBs, Water	\$2,000,617	\$2,925,678	\$3,566,354	\$9,487,674	\$4,926,295	\$4,561,379	1.93
Business New Construction	\$11,284,847	\$1,455,642	\$4,239,954	\$2,620,822	\$813,393	GHG, NEBs, Water	\$2,523,597	\$3,563,175	\$9,222,940	\$19,601,265	\$6,086,772	\$13,514,492	3.22
Aggregate	\$20,363,353	\$2,217,711	\$6,337,977	\$32,153,738	\$18,751,864	Varies	\$10,116,604	\$16,229,320	\$25,729,890	\$61,072,780	\$26,345,923	\$34,726,857	2.32

Note: The cost-benefit results included here are reflective of only the EEPS portion of the ComEd portfolio and are not inclusive of the Illinois Power Agency (IPA) portion.

Source: Navigant analysis

Each utility provided its share of both non-incentive and incentive costs for the cost-effectiveness analysis of the joint programs. However, PGL and NSG did not provide individual non-incentive costs for the joint programs shown in the tables below. Instead the non-incentive costs for these programs were combined with other programs implemented by PGL and NSG in GPY4. The non-incentive costs for these programs were assumed proportional to the “Avoided Gas Savings” calculated by Navigant.

Table 4 – GPY4 PGL Non-Incentive Costs

Program	Avoided Gas Savings (\$)	PGL Non-Incentive Costs (\$)	Navigant Estimate Non-Incentive Costs (\$)
Home Energy Reports	\$1,649,317	\$37,316	\$33,742.53
Elementary Energy Education	\$174,669		\$3,573.47
Home Energy Jumpstart	\$1,142,815	\$1,406,163	\$412,782.38
Home Energy Rebate	\$2,750,239		\$993,380.62
Custom	\$7,379,971		\$1,128,174.88
Prescriptive	\$1,539,138	\$1,716,964	\$235,287.73
Gas Optimization	\$1,125,632		\$172,075.10
Retro-Commissioning	\$1,186,802		\$181,426.28

Source: Navigant analysis

Table 5 – GPY4 NSG Non-Incentive Costs

Program	Avoided Gas Savings (\$)	NSG Non-Incentive Costs (\$)	Navigant Estimate Non-Incentive Costs (\$)
Home Energy Reports	\$575,776	\$19,589	\$18,834.10
Elementary Energy Education	\$23,078		\$754.90
Home Energy Jumpstart	\$205,294	\$343,709	\$47,025.39
Home Energy Rebate	\$1,295,200		\$296,683.61

Source: Navigant analysis