Illinois Commerce Commission

Docket No. 13-0495

Direct Testimony of Chris Neme

Submitted on behalf of the Natural Resources Defense Council

I. INTRODUCTIONS AND QUALIFICATIONS

Q: Please state your name, employer and business address.

A: My name is Chris Neme. I am a co-founder and Principal of Energy Futures Group, a consulting firm that provides specialized expertise on energy efficiency markets, programs and policies. My business address is P.O. Box 587, Hinesburg, VT 05461.

Q: Please describe your educational background.

A: I received a Master of Public Policy (MPP) degree from the University of Michigan (Ann Arbor) in 1986. That is a two-year, multi-disciplinary degree focused on applied economics, statistics and policy development. I also received a Bachelor's degree in Political Science from the University of Michigan (Ann Arbor) in 1985. My first year of graduate school counted towards both my Masters' and Bachelor's degrees.

Q: Please summarize your business and professional experience.

A: As a Principal in Energy Futures Group, I play major roles in a variety of energy efficiency consulting projects. Recent examples include:

- helping the Michigan Public Service Commission staff to assess the relative merits of alternative approaches to defining savings goals for utility efficiency programs (focusing on lifetime rather than just first year savings);
- supporting the redesign of a portfolio of efficiency programs for a southern utility;
- helping develop a Technical Reference Manual of deemed savings assumptions for Ohio and the Mid-Atlantic states;
- representing NRDC in consultations with utilities and other parties in both Illinois and Michigan;
- serving as an elected stakeholder representative on an Ontario gas utility's annual Audit Committee as well as a province-wide Technical Evaluation Committee;
- serving as co-chair of the Research and Evaluation Committee of the Northeast Energy Efficiency Partnership's (NEEP's) regional Evaluation, Measurement and Verification forum; and
- providing guidance to key stakeholders in Germany, the United Kingdom and other European countries on the design of efficiency policies and programs (on behalf of the Regulatory Assistance Project).

Prior to co-founding Energy Futures Group in 2010 I worked for 17 years for the Vermont Energy Investment Corporation (VEIC), the last 10 as Director of its Consulting Division managing a group of 30 professionals with offices in three states. Most of our consulting work involved critically reviewing, developing and/or supporting the implementation of electric, gas, and multi-fuel energy efficiency programs for clients across North America and beyond. As a member of VEIC's Senior Management Team, I also helped launch Efficiency Vermont in 2000 – a then new statewide "efficiency utility" VEIC was selected to operate – and became intimately familiar with a myriad of issues associated with the day-to-day delivery of energy efficiency programs. I also helped shape the New England ISO's rules for inclusion of demand resources in its Forward Capacity Market and led the development of VEIC's first bids of peak savings from efficiency programs into that market.

All told, during my career in energy efficiency I have played major roles in developing energy efficiency potential studies in five states and provinces, served as a technical advisor to utility-stakeholder "collaboratives" in ten states, negotiated or supported development of efficiency program performance incentive mechanisms in six different jurisdictions and reviewed or developed efficiency programs for clients in more than 20 states and provinces as well as parts of Europe. I have also led courses on efficiency program design, published widely on a range of efficiency topics and served on numerous national and regional efficiency committees, working groups and forums. A copy of my curriculum vitae is attached as NRDC Ex. 1.1.

Q: Are you an active participant in the Illinois Stakeholder Advisory Group (SAG) deliberations on the Illinois utilities' and DCEO's programs and related regulatory policies?

A: Yes. I have represented NRDC in SAG meetings and processes for the past three years. During that time I have attended most of the monthly SAG meetings as well as numerous additional conference calls regarding the state's Technical Reference Manual and other matters.

Q: Have you previously filed expert witness testimony in a proceeding before the Illinois Commerce Commission (ICC)?

A: Yes, three years ago I filed testimony on Commonwealth Edison's 2nd three-year energy efficiency plan in Docket 10-0570. I also just filed testimony on DCEO's 3rd three-year energy efficiency plan in Docket 13-0499.

Q: Have you been an expert witness on energy efficiency matters before other regulatory commissions?

A: Yes, I have filed expert witness testimony on more than 30 other occasions before similar regulatory bodies in nine other states and provinces, including the neighboring jurisdictions of Michigan and Ohio during the past couple of years.

II. TESTIMONY OVERVIEW

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to address three aspects of Commonwealth Edison's (Com Ed's) 3rd Energy Efficiency Portfolio Plan:

1. The reasonableness of Com Ed's proposed savings for each of the three years of its plan (PY7 through PY9);
2. The reasonableness of Com Ed's policy proposals on Evaluation, Measurement and Verification (EM&V); and
3. The reasonableness of Com Ed's policy proposals regarding banking of savings.

Q: Please summarize your views on the reasonableness of Com Ed's proposed energy savings targets.

A: Com Ed's proposed savings goals are too low. They should be increased by approximately 90,000 MWh per year so that they (excluding DCEO savings) are equal to approximately 0.80% of annual sales.

Q: Please summarize your views on Com Ed's EM&V proposals.

A: I support most of Com Ed's proposals. There are three exceptions.

First, while I support deeming of net-to-gross (NTG) assumptions, the deeming should not remain in effect if there are substantial changes to the design of the program which evaluators would expect to have a significant impact on actual NTGs (in either direction).

Second, while I agree that evaluators have a critically important role to play in establishing deemed NTG values, I believe it would be appropriate for the SAG to have an opportunity to attempt to reach consensus on those values, considering input from the evaluators in its deliberations. If it can reach consensus in a timely manner, the consensus values should be used. If it cannot reach consensus by March 1, then I would support having the evaluators be the final arbiters so that deemed NTG values can be established with enough time to allow the utilities to adjust plans for the coming year.

Third, while I support Com Ed's suggestion that NTG ratios should reflect both free ridership and spillover effects, and that evaluation work should – in aggregate – attempt to address both factors, I disagree that every individual evaluation study must address both. There may be circumstances in which, from either a timing or methodological perspective, it would not be ideal to address both factors in the same study.

Q: Please summarize your views on whether Com Ed should be able to bank excess savings (above approved goals) for a given three-year plan and use them to help meet goals in a subsequent three-year plan.

A: Com Ed has proposed that it have a single savings goal for PY7 through PY9. Among other things, that would allow unlimited banking of savings across the three year plan period. I am supportive of that proposal. It gives the utility greater flexibility in how to manage its efficiency program portfolio to best meet ratepayer needs. Such flexibility should translate to greater benefits for ratepayers. A three-year savings goal also lowers disincentives to invest in measures and/programs that may not have good initial returns (i.e. savings per dollar spent in the first year of a plan), but have good medium to long-term payoffs.

On the other hand, I oppose allowing the Company to apply savings banked in PY1 through PY6 to goals set for this plan (or to apply savings banked in this plan to goals for the 4th plan to be filed in three years). Such inter-plan banking might be appropriate if Com Ed were proposing to meet its statutory savings targets in PY7 through PY9. However, the Company is proposing goals for PY7 through PY9 that are well below the statutory targets, and basing its proposed goals on what it says it can comfortably achieve given available budget (i.e. within the spending caps) without relying on savings banked in previous plan years. Thus, allowing the Company to apply savings banked in previous years to PY7 through PY9 is tantamount to lowering goals to levels below what they should be, with significant adverse consequences for ratepayers and the environment.

Alternatively, if inter-plan banking is to be permitted, then – consistent with the Commission’s order on banking in its approval of Com Ed’s 2nd plan – the goals for PY7 through PY9 need to be increased by the amount of banked savings available from PY1 through PY6, at least up to point at which the statutory savings targets are met.

III. COM ED's PROPOSED SAVINGS GOALS

Q: What are Com Ed's proposed budget and savings goals for PY7 through PY9?

A: Com Ed is proposing to spend an average of approximately $158 million per year during the next three year plan (PY7 through PY9). 25% of the budget is allocated to DCEO, so Com Ed would spend approximately $118 million per year on its programs.

As shown in Table 1, Com Ed is proposing an average annual savings goal, including DCEO savings, of approximately 615,000 MWh, or 0.68% of sales, from PY7 through PY9. That is an average of just 35% of the statutory goal.

Table 1: Statutory Savings Target and Com Ed Savings Goals

	PY7	PY8	PY9	3-Yr Total	Annual Average
Statutory Target (MWh)	1,605,000	1,803,000	1,811,000	5,219,000	1,739,667
Proposed Goals (MWh)					
Com Ed	535,500	522,750	498,000	1,556,250	518,750
DCEO	94,500	92,250	102,000	288,750	96,250
Total	630,000	615,000	600,000	1,845,000	615,000
Total as % of statutory	39%	34%	33%	35%	35%
Total as % of sales	0.71%	0.68%	0.66%		0.68%

Q: How do those budget and savings levels compare to Com Ed's actual experience in the Plan 2 years which are concluded (PY4 and PY5)?

A: The budget levels are very similar to (i.e. about 2% lower than) the approved budgets for Plan 2 (PY4 through PY6). However, Com Ed has not been fully spending its available Plan 2 approved budgets. For example, in both PY4 and PY5 the Company spent only about 88% of its budget, including only 89% of its PY4 program budget (i.e. excluding portfolio-wide costs such as evaluation, general education and administration) and only 86% of its PY5 program budget.[1]

On the other hand, the Company achieved approximately 50% greater savings in PY4 and PY5 than it is proposing for PY7 through PY9.[2]

Q: Are there reasons to expect savings in PY7 through PY9 to be lower than in PY4 and PY5 despite the availability of more budget dollars than were spent in those years?

A: Yes. For example, in PY5 the Company acquired about 93,000 MWh from its Home Energy Reports program at a cost per first year MWh of just $37.[3] That program has been shifted out of Com Ed's proposed 8-103 portfolio and into the IPA plan. In other words, savings are still be acquired through the program, but are not counting towards Com Ed's 8-103 goals. That is important because it was the least expensive savings in Com Ed's 8-103 portfolio in PY5. Thus, even though the budget for the program has been freed up, one would expect those freed up dollars to acquire less 8-103 savings.

Another important change is a substantial reduction in savings from the Company's residential lighting program due to a combination of lower gross savings per CFL, the result of new federal efficiency standards improving the efficiency of the baseline lamps, and lower net to gross (NTG) ratios.

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[1] Com Ed response to NRDC 4.04, Attachment 1.
[2] Com Ed response to NRDC 4.04, Attachment 1.
[3] Com Ed response to NRDC 4.04, Attachment 1.

Q: Are NTG assumption changes for other programs also likely to have made substantial contributions to the proposed reduction in savings?

A: No. There are certainly differences between NTG assumptions used to estimate savings in PY5 and the NTG estimates Com Ed has used to forecast savings for PY7 through PY9. However, some of the changes are increases rather than decreases. For example, the PY7-9 NTG assumption for refrigerator and freezer recycling (77%), the second largest source of residential savings in PY7-9 after CFLs, is actually higher than the PY5 values (67% for refrigerators and 75% for freezers). On the business side of things, the PY7-9 NTG for Retro-Commissioning (104%) is substantially higher than the PY5 value (71%). The Custom program NTG is also higher in PY7-9 (61%) than in PY5 (56%). While there have been forecast reductions in NTGs for some other programs, particularly on the business side of things, the reductions have not been dramatic. For example, for the Prescriptive program, which accounted for over half of all business sector savings in PY5, the lighting NTG is forecast to decline slightly from 74% in PY5 to 70% in PY7-9 while the NTG for non-lighting measures is forecast to increase slightly from 62% to 63%.[4]

Q: You have said that you expected savings to decline from PY5 to PY7 through PY9. Is the magnitude of the reduction reflected in Com Ed's proposed goals for PY7 to PY9 reasonable?

[4] See response to NRDC 1.04 (Attachment 1) for historic and planned NTG ratios by program and, where applicable, by measure.

A: No. The proposed goals are too low. I would expect the savings to be lower in PY7 through PY9 than in PY5, but they should not be as low as those proposed by Com Ed.

Q: What changes to Com Ed's plan would lead to greater savings goals?

A: There are several:

- Assigning savings to its large C&I Pilot program;
- Proper accounting for CFL carry-over savings (from previous years);
- Re-allocating a portion of an unreasonably high general education and outreach budget;
- Re-allocating a portion of an unreasonably high R&D budget;
- Re-allocating a portion of portfolio-wide (non-program-specific) labor costs; and
- Funding its PY1-PY3 legacy Air Conditioning Cycling participants through other means.

Q: Please explain what you mean by assigning savings to its large C&I pilot program.

A: In its plan, Com Ed has forecast that it will spend $5.2 million per year – more than 5% of its total program budget – on its proposed new large C&I pilot program. However, it did not forecast any savings for it. That is inappropriate. Com Ed has stated that it did not estimate savings for the program because it was new and a pilot. However, that is not an excuse for effectively assuming "zero" savings.

If the Company was able to acquire savings at the same cost per first year MWh saved as its business Incentives program – about $200/MWh – it would add about 25,000 MWh a year, or about 75,000 MWh over the three year plan, to its savings goals.

Q: What are CFL carry-over savings? How are they different from banked savings?

A: Com Ed's residential lighting program is designed to encourage customers to purchase more efficient lighting bulbs. Most of the CFLs and other efficient lighting products that customers purchase as a result of the program are installed in the year in which they are purchased. However, evaluation studies have documented that a non-trivial portion of the purchased products (nearly 30% of standard CFLs) are installed one or two years after they are purchased, and therefore do not start generating savings until one or two years after they are purchased. Under the current protocol for counting savings towards goals, the utilities only get to claim savings in the year that rebates are paid for the portion of CFLs estimated to be installed in that year. They then get to claim additional savings in the two years following. For example, though the majority of CFLs rebated in PY6 will provide savings in PY6 that count towards the PY6 goal, a portion will not be installed until PY7 and PY8 and the savings from those bulbs cannot be counted by Com Ed until PY7 and PY8. That (i.e. the savings claimed in the two years after the rebates are paid) is what is meant by the term CFL carry-over savings.

CFL carry-over savings are not in any way related to banked savings. Banked savings are savings that result from a utility exceeding its goal in a given year.

Q: Please explain what you mean by proper accounting for CFL carry-over savings.

A: In estimating savings from its PY7 through PY9 plan, Com Ed assumed that all CFLs rebated under its residential lighting program would produce savings in the year they were rebated (other than the 2% that are assumed to never be installed). However, as discussed above, some portion of the CFLs rebated in PY5 will produce savings that count towards the PY7 goal; similarly, some rebated in PY6 will produce savings that count towards the PY7 and PY8 goals. Of course, some of the products rebated in PY8 and PY9 would not produce savings until the years covered by Plan 4.

Com Ed has suggested that its approach of assuming that all savings from rebated products accrue in the year they are rebated produces an accurate estimate of each year's savings because the gain in savings from carry-over from previous years is essentially offset by the loss in savings from products whose savings would be pushed off to future years. That might be essentially true if the same number of the same types of products was rebated each year. However, there are some important differences. In particular, the Company rebated more CFLs in the years from which savings would be carried over from Plan 2 into Plan 3 (an annual average of about 9.3 million over PY5 and PY6) than it is forecasting would be rebated in the years from which savings would be carried out of Plan 3 and into Plan 4 (an annual average of 6.0 million from PY8 and PY9).[5] Thus, the Company has underestimated CFL savings from its residential lighting program. As Table 2 shows, the total underestimate is approximately 19,000 MWh over the three years of the plan, with most of the underestimation occurring in PY9.

[5] Com Ed response to NRDC 3.01a

Table 2: Estimated CFL Savings with Correct Accounting for Carry-Over[6]

	PY5	PY6	PY7	PY8	PY9	3rd plan total
Number of CFLs rebated	10,897,894	7,733,000	8,050,000	7,350,000	4,570,000	19,970,000
MWh at 98% lifetime install rate	383,470	215,800	123,333	107,654	65,391	296,378
MWh at 100% install rate	391,296	220,204	125,850	109,851	66,726	302,427
Avg kWh/CFL	36	28	16	15	15	15
Assumed % CFLs that are standard	89%	89%	89%	88%	91%	89%
MWh claimable in rebated year	276,252	155,462	88,795	77,617	46,958	213,370
MWh claimable from previous year	n.a.	n.a.	17,900	17,842	15,856	51,599
MWh claimable from two years ago	n.a.	n.a.	21,457	14,556	14,826	50,840
Total claimable savings	n.a.	n.a.	128,152	110,015	77,641	315,808
Com Ed Plan Savings	n.a.	n.a.	123,333	107,654	65,391	296,378
Com Ed Plan Underestimate of Savings	n.a.	n.a.	**4,819**	**2,361**	**12,250**	**19,430**

Q: Please explain your concern about Com Ed's proposed general education budget?

A: Com Ed has proposed to spend approximately $6 million per year over the next three years on general, portfolio-wide, education and outreach. In contrast, the Company spent only $4.5 million on such general education in PY4 and only $4.4 million on general education in PY5.[7] The Company's explanation for increasing the general education budget by one-third – at a time when total available budgets are 2% lower than in recent years – is that it is intended to increase efficiency awareness and that "increasing customers' awareness of energy efficiency must be a key component" of its efficiency efforts in the future.[8] However, they do not explain why such

[6] Number of rebated CFLs and savings at 98% lifetime installation rate are from Com Ed Response to NRDC 3.01a. Percent of CFLs that are standard spirals in PY7 through PY9 is from Com Ed Response to JLH 1.02 Attachment 6; estimates for PY5 are from Com Ed response to NRDC 4.05, Attachment 1 (the PY6 value was assumed to be the same as PY5). Results are not very sensitive to changes in assumptions regarding PY5 and PY6 percent of CFLs that were standard spirals.
[7] Com Ed response to NRDC 2.18.
[8] Com Ed response to NRDC 2.10.

general awareness is so important, what benefits it provides or why it is more important in the future than it has been in the past.

The principal purpose of the 8-103 portfolio is to generate tangible, cost-effective energy savings. It would only be appropriate to invest in general education or awareness building to the extent it can help drive customers to specific efficiency programs in the short and medium term or to demonstrably lead to market transformation in the long-term. The Company does not offer a compelling case for why either of those outcomes will result from its general education proposal. Thus, particularly in the context of a plan that has proposed savings goals that are 65% lower than the statutory targets because of the statutory spending cap, it is inappropriate to increase general education spending. In fact, one could make a legitimate case for reducing general education spending.

If the Company simply kept its general education spending in PY7 through PY9 at the levels experienced in PY4 and PY5, there would be about $1.5 million in additional funds available each year for generating savings through other programs. If the Company were to use those funds to acquire additional savings at the average program cost per MWh of its proposed portfolio, it would generate approximately 9,000 MWh in savings per year, or 27,000 MWh over three years.

Q: Please explain your concern about Com Ed's proposed R&D budget.

A: The Company has proposed spending an average of about $3.6 million on R&D over the next three years. That is similar to the PY4 and PY5 budgets. However, the Company has significantly underspent those budgets – spending only $1.0 million in PY4 and $1.1 million in PY5. Indeed, the Company has never spent more than $1.4 million in one year (PY3) on R&D. Put another way, the Company's proposed R&D spending is nearly three and a half times more than it actually spent on R&D in PY4 and PY5 and more than two and a half times more than it has ever spent on R&D. Thus, the proposed $3.6 million R&D budget could be viewed as a "cash reserve" the company can draw upon to help meet goals that are set assuming such funds are not available. Moreover, even if the Company would spend all the funds on R&D, the kind of increase the Company is proposing seems inappropriate in the context of a plan with tight overall budget constraints and proposed near-term savings goals that are 65% below statutory targets.

If the Company's R&D budget were set at $1.4 million per year – the most it has ever spent – it would have approximately $2.2 million per year in additional funds available for program spending. If the Company were to use those funds to acquire additional savings at the average program cost per MWh of its proposed portfolio, it would generate approximately 13,000 MWh in savings per year, or 39,000 MWh over three years.

Q: Please explain your concern about Com Ed's proposed portfolio-wide labor costs.

A: Com Ed has proposed an average annual portfolio-wide labor budget of about $4.0 million. That is roughly double the Plan 2 budget levels. The Company has suggested that this increase is due to two factors: "(1) headcount increased during Plan 2; and (2) Plan 3 corrects an omission in Plan 2 to ensure that payroll costs are fully reflected."[9] However, those two factors do not fully explain the difference. The proposed budget for PY7 to PY9 is still $0.5 million more than the Company actually spent in PY5, even though both factors are reflected in PY5 actuals[10] and even after adjusting the PY5 spending levels to account for inflation. One other difference is that the Company is actually budgeting for a higher non-program head count in PY7 through PY9 than it actually employed in PY5 or than it is currently employing in PY6.[11] Given that the total budgets for PY7 through PY9 are 2% lower than in recent years, there does not appear to be a good reason to increase what are essentially cross-cutting administrative expenses.

If the Company's non-program specific labor budget were reduced by an average of $0.5 million per year (i.e. to levels comparable to PY5, after adjusting for inflation), and it were to instead spend those funds to acquire additional savings at the average program cost per MWh of its proposed portfolio, it would generate approximately 3,000 MWh in savings per year, or 9,000 MWh over three years.

Q: Please explain your concern about Com Ed's proposal to continue spending 8-103 funds on A/C Cycling program participants who enrolled in the program in PY1 through PY3.

A: Com Ed operates a residential demand response program – or A/C Cycling program. Some of the participants in that program were enrolled using 8-103 funds in Plan 1. Additional participants have been enrolled since then, but the funding for those additional enrollees was

[9] Com Ed response to NRDC 2.18.
[10] Com Ed response to NRDC 4.03.
[11] Com Ed response to NRDC 4.03.

provided through base rates.[12] Com Ed is expecting even more participants to be enrolled in the program during Plan 3, but again the cost of those enrollments will be provided through base rates rather than through 8-103 budgets.[13] However, the Company is proposing to continue to recover the costs of "maintaining" the participants enrolled in Plan 1 under the 8-103 budgets. As a matter of policy, I question whether that is appropriate.

There are more than enough peak savings from efficiency programs to meet 8-103 peak savings requirements.[14] Furthermore, we are at a point in time when the 8-103 spending cap clearly precludes the utility meeting its statutory energy savings targets. Finally, A/C cycling investments appear to fit better under base rates since nearly a quarter of the maintenance costs for Plan 1 enrollees is "return on rate base".[15] Thus, as a policy matter, it would seem more appropriate to fund the maintenance of Plan 1 program enrollees through base rates – just as other A/C Cycling program costs are funded – rather than through limited 8-103 funds.

If Com Ed were to shift funding of the maintenance of Plan 1 A/C cycling participants ($1.23 million per year) to base rates and spend the freed up funds to acquire additional savings at the average program cost per MWh of its proposed portfolio, it would generate approximately 7,000 MWh in savings per year, or 21,000 MWh over three years.

Q: What would be the total impact of all of your proposed modifications on Com Ed's proposed savings goals?

[12] Com Ed response to NRDC 4.02.
[13] Com Ed response to NRDC 4.02.
[14] Com Ed response to NRDC 2.03.
[15] Com Ed response to ELPC 1.33.

A: As Table 3 shows, the total impact would be to increase Com Ed's savings goals by an average of more than 90,000 MWh per year. That would mean a three-year savings target of 0.80% of sales rather than the Company's proposed 0.68%. Both of those values exclude the impact of DCEO efforts in Com Ed's service territory.

Table 3: Impact of all NRDC Proposed Changes on Com Ed Savings Goals

	PY7	PY8	PY9	3-Year Total
Com Ed				
Estimated Savings (excl. DCEO)	565,593	548,664	523,856	1,638,113
Proposed Goal w/5% risk adjustment	535,500	522,750	498,000	1,556,250
Goal as % of Sales	0.71%	0.68%	0.66%	0.68%
NRDC				
Estimated Savings Adjustments				
Large C&I pilot program	25,000	25,000	25,000	75,000
CFL carry-over adjustment	5,000	2,000	12,000	19,000
Reduce general education spending	9,000	9,000	9,000	27,000
Reduce R&D spending	13,000	13,000	13,000	39,000
Reduce portfolio-wide labor spending	3,000	3,000	3,000	9,000
Fund A/C cycling outside 8-103 portfolio	7,000	7,000	7,000	21,000
Total Adjustments	62,000	59,000	69,000	190,000
Estimated Savings with Adjustments	**628,000**	**608,000**	**593,000**	**1,829,000**
Goal as % of Sales	**0.83%**	**0.79%**	**0.79%**	**0.80%**

Q: Your proposed goals do not include the same 5% downward adjustment for risk (of not meeting targets) that Com Ed proposed. Why do you not apply that adjustment?

A: I accept Com Ed's suggestion that there would be some risk in setting a goal that is the utility's best estimate of what it will achieve. However, even after making the adjustments discussed above, there are still several risk mitigating assumptions embedded in the savings goals.

First, the Company will be able to augment its budget through revenues from PJM's capacity market. I have not accounted for those revenues – and the savings they could be used to produce – in the revised savings goals I present above. Nor did Com Ed in its development of its proposed goals. It is worth noting that the Company is forecasting that it will receive $5.14 million from PJM for PY6.[16] That is a little more than 5% of its proposed average annual budget for PY7 to PY9. In other words, if PJM capacity market revenues just remained at the level from PY7 through PY9, they would provide the same 5% risk relief that Com Ed has suggested it needs.

Second, the Company has suggested that it be allowed to claim savings generated from its R&D spending towards its goals. I support that request. However, neither Com Ed's nor my proposed goals include any accounting for likely savings from R&D efforts.

Third, the Company has the potential to leverage successful programs that will be funded through the IPA. For example, if the Small Business Direct Install program achieves its IPA goal and could exceed it with additional funding, Com Ed could fund the acquisition of such additional savings through its 8-103 budget.

There may well be other risk mitigating factors that I have not been able to identify in the time and budget available for me to delve into the details of Com Ed's proposed plan. It is worth

[16] Com Ed response to NRDC 4.01b

noting that Com Ed acquired more savings per dollar spent in PY4 and PY5 (combined) than it budgeted in Plan 2 for every single one of its seven biggest programs (which collectively accounted for nearly 90% of its budgeted savings).[17] In other words, Com Ed has some history of being conservative in its estimates of what it can achieve given available budgets – not only at a portfolio level, but for individual programs as well.

[17] Com Ed response to NRDC 4.04, Attachment 1.

IV. COM ED'S PROPOSED EM&V POLICIES

Q: What are Com Ed's proposals with respect to EM&V policies?

A: As articulated in Michael Brandt's testimony, Com Ed has four proposals:

1. That the current process for selecting and managing the independent evaluators continue;
2. That a modified NTG framework be adopted;
3. That NTG evaluations must address both free ridership and spillover; and
4. That the realization rate framework adopted for Plan 2 be continued.

Q: Do you concur that the current process for selecting and managing the independent evaluators should continue?

A: Yes.

Q: What is the modified NTG framework Com Ed is proposing?

A: For existing programs, Com Ed is proposing that the "prevailing NTG ratio" provided by the evaluation contractor on March 1 of any year will apply to the following program year (i.e. June 1 through May 31). For new programs, a planning NTG ratio provided by the evaluator will be used initially. In both cases, any new evaluation-based NTG estimate will only apply, if recommended by the evaluator, to subsequent years. In other words, there will be no retrospective application of NTG values.

Q: What is your view of the proposal that there be no retrospective application of NTG values?

This proposal essentially eliminates three conditions from the previous NTG framework under which new evaluated NTG estimates could be applied retrospectively: (1) if the market changed substantially, (2) if the program changed substantially, and/or (3) if a program was new.

I agree that is appropriate to eliminate the first and third reasons for retrospective application of NTG estimates. With respect to changes in the market, I agree with Com Ed's conclusion that though the concept seems simple at first blush, its implementation has been fraught with confusion and differing interpretations among stakeholders and possibly even among evaluators. Plus, any substantial market change is one that the utilities, stakeholders and evaluators should be able to anticipate far enough in advance to inform an NTG assumption by March 1. With respect to new programs, I have come to believe that the threat of retrospective application of an unknown value could dampen interest by the utilities in new approaches to acquiring savings. Thus, deeming a planning value is appropriate for the early year(s) of a new program.

However, I do not agree with the suggestion implicit in Com Ed's proposal that deemed NTG values would be used prospectively even in the event of a significant program design change – something over which the utilities have complete control. For example, it would be inappropriate for an NTG value that was estimated for a program whose rebates were covering

90% of the incremental cost of efficiency measures to continue to apply if the utility reduced its rebate level mid-year to just 10% of the incremental cost.

I appreciate that requiring retrospective application of NTG evaluation results for cases in which program designs have been changed begs the question of how substantial a change is required and how that requirement should be interpreted by evaluators. There have been different interpretations of that requirements under the existing NTG framework. Going forward, the answer should be that the change was large enough that the evaluators have a compelling reason to believe that the change is likely to result in a substantial change (e.g. 15 percentage points or more) in the program NTG. A substantial program design change which evaluators do not have grounds to believe would have a substantial impact on NTG estimates would not trigger retrospective application of NTG evaluation results. In other words, I recommend putting some burden on the evaluators to pass judgment on and document reasons for why they believe that the program NTG is likely to change significantly as a result of a design change. They do not currently have that obligation.

Q: What is your view of Com Ed's proposal that prospective NTG assumptions be provided by evaluators by March 1?

A: I support the suggestion that prospective NTGs should be nailed down before the program year begins on June 1. However, while I think that the independent evaluators should have an important role in establishing those values, I believe it would be appropriate for the SAG to play a role in the process as well. Specifically, I would propose that the SAG endeavor to reach consensus on program-specific, prospective NTG values – informed by the work and opinions of the independent evaluators – by March 1. In the event that the SAG is not able to reach consensus by that date, the evaluators would decide what prospective NTG values should adopted – perhaps by March 15. Their decisions would presumably be informed by the previous SAG discussions as well as available local data and their own experience and expertise.

This approach would ensure that prospective NTGs best reflect a wide range of data, experience and expertise. Though the evaluators are certainly knowledgeable and have access to critically important data, there are others in the SAG – including both utilities and other stakeholders – that can bring important data, expertise and perspectives to NTG decisions as well. However, by making the evaluators the final arbiters in the event consensus is not possible, my proposed approaches ensures that decisions on prospective NTG assumptions are made in a timely enough manner to ensure that the utilities can properly plan for the coming year.

Q: What specifically has Com Ed proposed with respect to the inclusion of both free ridership and spillover in NTG studies?

A: Com Ed has proposed that all future NTG evaluations must address free ridership and both participant and non-participant spillover. It further proposes that "if an evaluation does not account for spillover, then the free rider effect should also be ignored."[18]

Q: What is your view of that proposal?

[18] Direct Testimony of Michael Brandt, p. 66, lines 1429-1433.

A: I agree that the NTG *adjustments* that are applied to programs to produce an estimate of net savings should include the net effects of both free ridership and spillover. Failing to do often will result in underestimation of savings. However, that is not the same as saying that every NTG *study* should address both effects, or that the results of studies that examined only one effect (whether free ridership or spillover) should be ignored.

There may be times or situations in which it is appropriate to study either free ridership or spillover, but not both at the same time or in the same study. The best methodology for studying free ridership may not always be the same as the best methodology for studying spillover. The timing of when free ridership is studied may also occasionally need to be different than the timing of when spillover is studied – either for budgetary or methodological reasons. For example, the best time to assess free ridership among program participants may be immediately after they made an efficiency investment (when the reasons for their decision are freshest in their minds). Alternatively, the best time to assess spillover effects might be a year or more after a program supported efficiency investment, as it can take time for the impact of that investment (and related discussions with the utility, its implementation contractors and/or its trade allies) to affect other investments in the same facility, in sister facilities and even in other customers' facilities. In such an instance, it may be appropriate to initially pair the results of a study of just free ridership in Com Ed territory with an estimate of spillover effects from different sources, perhaps based on studies of similar programs in other jurisdictions, to produce an NTG that covered both effects. A future "spillover-only" assessment in a subsequent year could then be used to update the NTG adjustment factor.

In short, I would propose an amendment to Com Ed’s proposal. First, rather than saying that every NTG *study* must address both free ridership and spillover effects, it would be more appropriate to say that every NTG *factor* must reflect expected free ridership and spillover effects. Second, the evaluation contractors should recommend the NTG factors that would be used, based on both evaluation results in Com Ed’s territory and, where necessary, experience in other jurisdictions regarding components of NTG (whether free ridership or spillover) that have not yet been studied in Com Ed’s territory. Finally, Com Ed’s evaluation resources should be devoted to better understanding both components of NTG – through the same study where and when appropriate, and through different studies where and when that is most appropriate (budgetarily or methodologically).

Q: What is the realization rate framework that Com Ed has proposed?

A: Com Ed is essentially proposing that some realization rate adjustments be treated identically to NTG adjustments. That is, for existing programs, “prevailing realization rates” provided by evaluators by March 1 would be “locked in” for the purpose of estimating savings in the following program year (June 1 through May 31). For new programs, planning realization rates, again as provided by evaluators by March 1, would be locked in. In both cases, new realization rates estimated through evaluation would only apply in subsequent years. However, Com Ed has made clear that, consistent with the Commission’s order in Docket No. 10-0570, those rules would only apply to components of realization rates over which Com Ed has no control. It would not apply to components of realization rates that are within the control of the Company (e.g. data entry errors or custom engineering calculations).[19]

Q: What is your view of this proposal?

A: I support it. It is reasonable to eliminate risks over which the Company has no control.

[19] Com Ed response to NRDC 2.16.

V. COM ED'S PROPOSED BANKING POLICIES

Q: What has Com Ed proposed with respect to banking of savings *within* the proposed 3rd plan (covering PY7 through PY9)?

A: Com Ed suggests that recent legislative changes allow it to comply with Section 8-103 either 'by meeting the annual incremental savings goal in the applicable year or by showing that the total cumulative annual savings within the 3-year planning period…was equal to the sum of each annual incremental savings requirement…' The Company has proposed the following as consistent with that new framework:

- Unlimited banking of savings over the three year plan period;
- Annual savings goals and spending screens should "be fixed at values set forth in this plan and not subject to revision or recalculation in future years of the plan"; and
- There be a single evaluation docket at the end of PY9.

Q: What is your view of this proposal?

A: I offer no comment with respect to Com Ed's interpretation of the law. That said, as a matter of policy, I prefer a single, three-year savings goals to three one-year goals. A three year goal gives the utility greater flexibility in managing its efficiency program portfolio to meet ratepayer needs. More importantly, a three-year goal provides greater incentives to consider longer-term (or at least medium-term) benefits of promoting certain efficiency measures and programs.

Under one-year goals, the utility has a strong incentive to invest only in measures and programs that will provide substantial savings quickly. One-year goals discourage alternative investments that might not generate much savings (for a given budget) in the first year, even if they would provide better returns (per dollar spent) over a three year period. Thus, three-year goals align better with ratepayers' interests.

As Com Ed has stated, a cumulative three-year goal implicitly allows unlimited banking of savings over the three-year period (the reverse is also true – it allows for lower levels of savings in year 1 to be offset by greater savings in years 2 and/or 3). Thus, I support unlimited *intra-plan* banking (i.e. banking within a three-year plan period).

I also support fixing of goals and spending levels over the three-year period. This removes some uncertainty for the utility, enabling it to more effectively follow through on a three year plan.

However, I do not support the suggestion that there be only one evaluation docket every three years. Even with a three year goal, it is important to be clear about what progress is being made towards goals. It is also important that savings assumptions be updated over the course of the three year plan based on on-going evaluation work. Thus, annual evaluation dockets during which savings achieved the previous year are "nailed down" and evaluation results are used to adjust assumptions for the following year should remain important. It is worth noting that my home state of Vermont, which is the only state of which I am aware that currently has a three-year savings goal, still has an annual savings verification process. The sum of the results of the three annual savings verification processes is then used to determine whether goals were met. The same approach is warranted in Illinois.

Q: What has Com Ed proposed with respect to banking of savings across different three year plans?

A: Com Ed has also proposed that the Commission support *inter-plan* banking. The Company states its proposal as follows:

> *"…consistent with the Commission's Plan 2 order, Com Ed further proposes that the Commission again approve…that kWh savings banked during PY1 through PY6 can be applied to the proposed goals set forth in this plan…"*[20]

It is unclear whether that means that the Company is proposing that there be no limits to the amount of banked savings from PY1 through PY6 that could be applied PY7 to PY9 goals or, alternatively, that the Company is proposing that the limits on banking articulated in the Commission's Plan 2 order be adopted for Plan 3 as well.

Q: If the Company is proposing that there be no limits to the amount of banked savings from PY1 through PY6 that could be applied to PY7 to PY9 goals, would that a reasonable proposal?

A: No. It would be highly problematic. Under the law, if the statutory savings targets cannot be met within the statutory spending cap, different targets must be established. Those new savings

[20] Com Ed Exh 1.0, p. 13.

targets should be as close to the statutory targets as possible, while still being reasonably achievable within the available budget. Otherwise, the intent of the law would be undermined, economic benefits to ratepayers would be less than they should be and environmental harm from electricity production would be greater than it should be. In that context, it would be inappropriate to set a revised target that is based solely on what could be achieved within the budget available for a given year or years and then allow savings generated from previous years' budgets to count towards the savings target. That would be tantamount to setting a target that is too easy to meet, particularly if the utility has significant "excess savings" or "banked savings" from previous years that it could otherwise apply to its PY7 through PY9 goals.

Q: How much savings over and above goals has Com Ed "banked" in previous years?

A: Com Ed estimates that it had banked 416,594 MWh through PY4; it is currently estimating that it will bank an additional 75,101 MWh in PY5 and PY6.[21] Thus, by the end of PY6, it estimates that it will have nearly 500,000 MWh of banked savings.[22] That is nearly equal to its entire proposed PY7 savings goal (excluding DCEO's contribution)! Thus, if Com Ed's proposed PY7 goal was approved and an unlimited amount of banked savings from PY1 through PY6 could be applied to the goal, the Company could almost do nothing and meet its proposed goal. That is clearly inappropriate.

Q: What limits did the Commission's Plan 2 order place on banking?

[21] Response to NRDC 2.02.
[22] Note that this estimate appears to be based on the assumption that the cumulative amount of savings banked through the end of PY5 could remain "unspent" as long as the PY6 goal, as revised down to reflect constraints of the spending cap, was met. However, as discussed below, the Commission's Plan 2 order requires that banked savings be used to increase any annual goal that was set lower than a statutory savings target. Com Ed's response to NRDC 2.02 does not appear consistent with that order.

A: The order placed the following two limits on banking:

1. *"In any given Plan year, no more than 15% of that year's compliance obligation should be met with banked savings from previous Plan years.*
2. *Except that, in any Plan year for which the statutory target has been adjusted downward to accommodate the rate impact screen, if the availability of banked savings, including banked savings in excess of 15% of the current year's target, plus planned program savings, would allow ComEd to come closer to reaching the statutory target, the target shall be readjusted upward accordingly."*[23]

Under the second condition, if the savings target for a given year is less than the statutory target because of the spending cap), then the effect of the banked savings is to increase the target rather than to make it easier to meet the target. Put another way, banked savings are only allowed to help meet a target if the target is set at the statutory level.

Q: What would be the implications of adopting those limits for this 3rd Plan?

A: The second limitation would clearly apply to all three years of Com Ed's 3rd Plan. In each of those years Com Ed's proposed savings goals are 60% to 70% below the statutory savings target. Thus, if the Plan 2 order was applied to Plan 3, the effect of using savings banked in Plan 2 would be simply to increase the Plan 3 goals.

Q: Should the banking conditions in the Plan 2 order be applied to Plan 3?

[23] Illinois Commerce Commission, Order approving the Commonwealth Edison Energy Efficiency and Demand Response Plan, Docket No. 10-0570, December 21, 2010, pp. 53-54.

A: Now that we have reached a point where all annual savings goals are well below statutory savings targets, it no longer makes any sense to allow *inter-plan* banking of savings. That is, savings banked in PY1 through PY6 should not be allowed to count towards goals for PY7 through PY9.

The only acceptable alternative is to re-adopt the Commission’s Plan 2 order on banking, under which Com Ed’s goals for PY7 through PY9 would be automatically increased by the amount of banked savings available, at least up to the point where the statutory savings targets are met. For Plan 3, given how much below statutory targets the savings goals will be, the net effect of that approach is the same as not permitting inter-plan banking of savings.

Q: Does this conclude your testimony?

A: Yes.