

557 A. Yes. With respect to this table, Mr. Jensen explained that the savings values were  
558 ... based on a simple calculation that multiplies the difference in  
559 wattage between the assumed base technology and the efficient  
560 technology and the number of hours of operation. The operating  
561 hours used in the calculation are shown in Table 7.

562 Ameren Ex. 4.0, p. 41

563 However, when I performed the "simple calculation" described by Mr. Jensen, for  
564 some of the measures, I got different results than those found in the table. In a data  
565 request response<sup>6</sup>, the Company suggested that it would be making several modifications  
566 to Mr. Jensen's testimony and his Tables 6 and 7 (although at the time of this writing, I  
567 have not seen these revisions posted to e-Docket).

568 Q. What revisions to Mr. Jensen's Table 7 "Operating Hours" did the  
569 Company's data request response suggest would be appropriate?

570 A. The original Table 7, which provides input to computations needed to produce  
571 Table 6, included one number for the operating hours for "small retail" lighting.  
572 According to the data request response, the operating hours for this sector should  
573 distinguish between CFL and non-CFL lighting. The revised table would use the  
574 previous value of 3,724 for CFL lighting, but would add a new value of 4,004 for non-  
575 CFL lighting.

576 Q. What revisions to Mr. Jensen's table of "Proposed Deemed Annual kWh  
577 Savings Values" did the Company's data request response suggest would be  
578 appropriate?

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<sup>6</sup> Staff data request EDiv 2.05.

579 A. The revisions to that table would be to the energy savings shown for non-CFL  
580 lighting measures. The suggested revisions are due to three factors identified by the  
581 Company in its response to Staff's data request. First, there is the change in the operating  
582 hour assumptions, as described in the immediately preceding question and answer.

583 Second, the original calculations included "interactive effects." The data request  
584 response indicates that that these effects are a function of the interaction between lighting  
585 and building thermal loads, that such effects can be quite variable, and that, therefore, the  
586 revised table would exclude these effects and would be based solely on the difference in  
587 power consumption between the two technologies and hours of operation. In the study  
588 conducted by Itron that the Company cites as support for these values, the energy  
589 interaction effect for the Retail – Small market sector is 1.11.<sup>7</sup> In excluding this  
590 interaction value of 1.11, the Company is implicitly including the more "conservative"  
591 value of 1.00 (i.e., conservatively avoiding overestimating the energy savings).

592 Third, the Company's response indicates that

593 [T]he difference in power consumption between the base and  
594 efficient technologies is not simply the difference in bulb wattage  
595 between base and efficient technologies. The ballasts themselves  
596 draw varying levels of power. Electronic ballasts draw less power  
597 than magnetic ballasts, with power consumption based on the  
598 "ballast factor," which is lower for more efficient ballasts, higher for  
599 less efficient ones.

600 The Company also provided Staff with a table entitled "Calculations for T-8 Measures,"  
601 which purportedly takes into account both lamp *and ballast* wattage differences.<sup>8</sup>

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<sup>7</sup> 2004-05 Database for Energy Efficient Resources (DEER) Update Study, Final Report (December 2005), Table 3-5, p. 3-9, provided as "ED 1.01\_Attach 16.PDF," in response to Staff data request EDiv 1.01 to ComEd.

<sup>8</sup> "Tn" specifies the diameter of tubular fluorescent bulbs in eighths of an inch. Thus, T8 is equivalent to a 1 inch diameter, while T12 would have a diameter of 12/8ths (or 1.5) inches.

602 Q. What is contained within Table 9 (Ameren Ex 4.0, pp. 42-43)?

603 A. This table contains the Company's proposed deemed values for "Net-to-Gross"  
604 ("NTG") ratios for each of the Company's programs, as well as each of DCEO's  
605 programs. As I am about to describe, an NTG ratio is an adjustment to an otherwise valid  
606 estimate of the energy savings attributable to the installed efficiency measures under  
607 examination. Ideally, an NTG ratio would accurately take into account the following  
608 behavioral phenomena:

609 First an NTG ratio would effectively deduct the portion of savings that would  
610 have occurred even in the absence of the program that encouraged those measures to be  
611 installed, because (a) some of the participants would have installed the same measures at  
612 the same time, (b) some of the participants would have installed the same measures but a  
613 little later, and (c) some of the participants would have installed measures that were not  
614 quite as efficient as those under examination, but would still be greater-than-standard  
615 efficiency measures (with some of those being installed at the same time that the  
616 measures under examination were installed, and others being installed somewhat later).  
617 Some refer to this as "free-rider" effects.

618 Second, an NTG ratio would effectively add savings due to efficiency measures  
619 *other* than those under examination, installed either by program participants or non-  
620 participants, but that would not have been installed in the absence of the efficiency  
621 program. Some refer to this as "spillover effects."

622 Thus, an NTG ratio could be derived as:

623 100%  
624 - a percentage capturing free rider effects  
625 + a percentage capturing spillover effects.

626 Q. Did you identify any potential inaccuracies with the deemed values within  
627 Table 9 (Ameren Ex. 4.0, pp. 42-43)?

628 A. Yes. What initially struck me when I first saw Table 9 in Mr. Jensen's testimony  
629 is that for 21 of the 22 programs for which a value is listed, the proposed value is the  
630 same—0.8. This seemed suspicious to me. It certainly suggests that this particular  
631 deemed value is much more of a guesstimate than the result of years of empirical study,  
632 as suggested by Ameren witness Voytas when he states:

633 The term "deemed" refers to an estimate of an energy savings or  
634 demand savings or a net-to-gross assumption for a single measure or  
635 program that (1) has been developed from data sources and  
636 analytical methods that are widely considered acceptable for the  
637 measure and purpose, and (2) is applicable to the situation being  
638 evaluated.

639 Ameren Ex. 2.0, p. 31.

640 Deemed savings and NTG ratios are used to stipulate energy  
641 efficiency measure savings and NTG ratios for projects with well-  
642 known and documented values.

643 Ameren Ex. 2.0, p. 31.

644 Q. Have you attempted to learn the basis for this 0.8, which the Company seeks  
645 to have deemed for 21 of its 22 programs?

646 A. Yes. I searched the California Energy Efficiency Policy Manual, cited by the  
647 Company as its basis for the proposed NTG ratios. Apparent, the CPUC considers 0.8 to  
648 be a "default value." For instance, Chapter 4 of the CPUC's "Energy Efficiency Policy  
649 Manual" states, in part,

650 Applicants should refer to the SPM to determine the appropriate  
651 manner in which to use NTGRs in submitting program cost-  
652 effectiveness information. Program proposals should use the  
653 applicable NTGRs listed below. If a program is not listed below, or if  
654 a proposed program design deviates substantially from past design of

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related programs, program proposals may utilize a default NTGR of 0.8 until such time as a new, more appropriate, value is determined in the course of program evaluation. All existing programs not listed below shall also use a default value of 0.8.

**Table 4.2. Net-to-Gross Ratios**

Program Area/Program	Net-to-Gross Ratio
<b>Residential</b>	
Appliance early retirement and replacement	0.80
California Home Energy Efficiency Rating System (CHEERS)	0.72
Residential Audits	0.72
Refrigerator Recycling/Freezer Recycling	0.53/0.57 <sup>10</sup>
Residential Contractor Program	0.89
Emerging Technologies	0.83
All other residential programs	0.80
<b>Nonresidential</b>	
Advanced water heating systems	1.00
Agricultural and Dairy Incentives	0.75
Coin Laundry and Dry Cleaner Education	0.70
Commercial and agricultural information, tools, or design assistance services	0.83
Comprehensive Space Conditioning	1.00
Lodging Education	0.70
Express Efficiency (rebates)	0.96
Energy Management Services, including audits (for small and medium customers)	0.83
Food Services Equipment Retrofit	1.00
Industrial Information and Services	0.74
Large Standard Performance Contract	0.70 <sup>11</sup>
All other nonresidential programs	0.80
<b>New Construction</b>	
Industrial and Agricultural Process	0.94
Industrial new construction incentives	0.62
Savings by Design	0.82 <sup>12</sup>
All other new construction programs	0.80

659

CPUC, "Energy Efficiency Policy Manual," Version 2, August 2003, pp. 18-19.<sup>9</sup>

660

661

Of course, this alone does not explain the basis for the 0.8 value, and such an explanation

662

is not to be found in the entire CPUC document.

663

**Q. Do you recommend that, in this docket, the Commission "deem" the values**

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<sup>9</sup> Although this manual is "Prepared by the Energy Division," it purportedly "contains the California Public Utilities Commission's (Commission) policy rules in the development and evaluation of energy efficiency programs in California."

664 **presented in the three tables from Mr. Jensen's testimony, discussed above?**

665 A. No. Even if I believed that "deeming" was a good idea in general (which I  
666 discuss in a later question and answer), based on the various concerns expressed above  
667 about potential inaccuracies in Mr. Jensen's tables, I would recommend against the  
668 Commission approving these values for purposes of Sections 12-103 (i) and (j) of the  
669 Act. Further analysis may reveal my concerns with specific values to be unwarranted,  
670 but, at this time, I cannot endorse these particular values.

671 **Q. Does the DCEO seek Commission approval of deemed values?**

672 A. Yes. DCEO witness Feipel states,

673 DCEO's energy efficiency programs and implementation plan are  
674 currently based on kWh savings values related to individual efficiency  
675 measures, net-to-gross ratios, and realization rates based on  
676 nationwide efficiency data supplied to DCEO and the utilities by ICF  
677 International, Inc. DCEO requests that these kWh savings, net-to-  
678 gross, and realization rate values be approved by the Commission for  
679 use in the first three year planning period. If approved, these values  
680 would apply unless and until the results of the Measurement and  
681 Evaluation process determined that they should be modified based on  
682 information collected in Illinois. To the extent that the evaluator and  
683 the Advisory Group described below should propose different values  
684 than those approved in the plans, those new values, if accepted by the  
685 Commission, would apply on a going forward basis.

686 DCEO Ex. 1.0, p. 54.

687 **Q. Specifically, what values does DCEO seek to have deemed by the**  
688 **Commission?**

689 A. In Staff data request EDiv 2.01(a), Staff sought clarification from DCEO of the  
690 specific values the agency seeks to have deemed. The Department's initial response was  
691 as follows:

692 (a) Please provide tables listing all values for kWh savings, net-to-gross ratios,  
693 realization rates, and all other categories for which DCEO seeks approval by the  
694 Commission for use in the first three year planning period.

695 **RESPONSE:**

696 a) The information requested is contained in DCEO Exhibit 1.01.

697 DCEO initial response to EDiv 2.01(a)

698 To Staff, the Department's initial response to this data request implied that it  
699 sought every number included in DCEO Ex. 1.01 to be deemed. From inspection of  
700 DCEO Ex. 1.01, that meant that the Department seemed to be requesting, among other  
701 things, that the total level of planned kWh savings would be deemed. Since, among other  
702 things, that would obviate the need for any future Commission review of realized energy  
703 savings, Staff sought additional clarification from DCEO. A document entitled,  
704 "Clarification to ... EDiv 2.01(a)," was received by Staff on December 13, 2007. It is  
705 reproduced below:

EDiv 2.01 On page 54 of DCEO Ex. 1.0, DCEO witness Mr. Feipel states,

*DCEO's energy efficiency programs and implementation plan are currently based on kWh savings values related to individual efficiency measures, net-to-gross ratios, and realization rates based on nationwide efficiency data supplied to DCEO and the utilities by ICF International, Inc. DCEO requests that these kWh savings, net-to-gross, and realization rate values be approved by the Commission for use in the first three year planning period. If approved, these values would apply unless and until the results of the Measurement and Evaluation process determined that they should be modified based on information collected in Illinois. To the extent that the evaluator and the Advisory Group described below should propose different values than those approved in the plans, those new values, if accepted by the Commission, would apply on a going forward basis.*

(a) Please provide tables listing all values for kWh savings, net-to-gross ratios, realization rates, and all other categories for which DCEO seeks approval by the Commission for use in the first three year planning period.

**RESPONSE:**

a) After further discussion with Commission staff, it appears that a list of measure-level kWh savings, net-to-gross ratios, and realization rates is being requested. This information is contained in the following exhibits:

706

DCEO Exhibit 1.01 contains the assumed net-to-gross ratios and realization rates for all of DCEO's programs. These were provided to DCEO by ICF, Inc.

Appendix B of ComEd Exhibit 1.0 Docket No. 07-0540 (also Appendix B of Ameren Exhibit 2.1 Docket No. 07-0539) contains the kWh savings for specific measures included in the Public Sector Prescriptive Program. These were provided by ICF, Inc. from the DEER database.

DCEO Exhibits 1.08, 1.09, 1.10, and 1.11 contain kWh savings for specific measures included in the Low Income New Construction and Gut Rehab, Low Income Moderate Rehab, Low Income Energy Efficient Single-family Remodeling, and Low Income Energy Efficiency Direct Install programs. These values were provided by DomusPlus based on the Energy Star calculators.

Table 6 in ComEd Exhibit 6.0 Docket No. 07-0540 (also Table 7 in Ameren Exhibit 4.0 Docket No. 07-0539) contains residential lighting kWh savings.

The attached table contains the lighting kWh savings values for Public Sector buildings. These values were provided to DCEO by ICF, Inc.

Target market	Base Technology	Efficient Technology	Efficient Technology Definition	Annual kWh savings
Public Buildings	2 4' T12 34 watt lamps with magnetic ballast	1 4' T8 32 watt lamps with electronic ballast & reflector	1 4' T* 32 watt lamps	136.4
Public Buildings	2 8' T12 60 watt lamps with magnetic ballast	1 8' T8 59 watt lamps with electronic ballast & reflector	1 8' T* 59 watt lamps	192.3
Public Buildings	40W Incandescent	13 Watt Modular CFL	13 Watt < 800 Lumens - pin based	87.7
Public Buildings	40W Incandescent	13 Watt Integral CFL	13 Watt < 800 Lumens - screw-in	87.7
Public Buildings	60W Incandescent	13 Watt Modular CFL	13 Watt < 800 Lumens - pin based	152.8
Public Buildings	60W Incandescent	13 Watt Integral CFL	13 Watt < 800 Lumens - screw-in	152.8
Public Buildings	60W Incandescent	14 Watt Modular CFL	14 Watt - pin based	149.8
Public Buildings	60W Incandescent	14 Watt Integral CFL	14 Watt - screw-in	149.8
Public Buildings	60W Incandescent	15 Watt Modular CFL	15 Watt - pin based	146.3
Public Buildings	60W Incandescent	15 Watt Integral CFL	15 Watt - screw-in	146.3
Public Buildings	60W Incandescent	16 Watt Modular CFL	16 Watt - pin based	143.1
Public Buildings	60W Incandescent	16 Watt Integral CFL	16 Watt - screw-in	143.1
Public Buildings	60W Incandescent	18 Watt Modular CFL	18 Watt < 1,100 Lumens - pin based	136.6
Public Buildings	60W Incandescent	18 Watt Integral CFL	18 Watt < 1,100 Lumens - screw-in	136.6
Public Buildings	75W Incandescent	18 Watt Modular CFL	18 Watt >= 1,100 Lumens - pin based	185.4
Public Buildings	75W Incandescent	18 Watt Integral CFL	18 Watt >= 1,100 Lumens - screw-in	185.4
Public Buildings	75W Incandescent	19 Watt Modular CFL	19 Watt >= 1,100 Lumens - pin based	182.1
Public Buildings	75W Incandescent	19 Watt Integral CFL	19 Watt >= 1,100 Lumens - screw-in	182.1
Public Buildings	2 4' T12 34 watt lamps with magnetic ballast	2 4' Super T8 28 watt lamps with electronic ballast	2 4' Super T8 28 watt lamps	63.9

Public Buildings	2 4' T12 34 watt lamps with magnetic ballast	2 4' T8 32 watt lamps with electronic ballast	2 4' T8 32 watt lamps	49.0
Public Buildings	2 8' T12 60 watt lamps with magnetic ballast	2 8' Super T8 59 watt lamps with electronic ballast	2 8' Super T8 59 watt lamps	87.4
Public Buildings	2 8' T12 60 watt lamps with magnetic ballast	2 8' T8 59 watt lamps with electronic ballast	2 8' T8 59 watt lamps	49.0
Public Buildings	75W Incandescent	20 Watt Modular CFL	20 Watt - pin based	178.8
Public Buildings	75W Incandescent	20 Watt Integral CFL	20 Watt - screw-in	178.8
Public Buildings	100W Incandescent	23 Watt Modular CFL	23 Watt - pin based	250.3
Public Buildings	100W Incandescent	23 Watt Integral CFL	23 Watt - screw-in	250.3
Public Buildings	75W Incandescent	25 Watt Modular CFL	25 Watt <1,600 Lumens - pin based	162.6
Public Buildings	75W Incandescent	25 Watt Integral CFL	25 Watt <1,600 Lumens - screw-in	162.6
Public Buildings	100W Incandescent	25 Watt Modular CFL	25 Watt >=1,600 Lumens - pin based	243.9
Public Buildings	100W Incandescent	25 Watt Integral CFL	25 Watt >=1,600 Lumens - screw-in	243.9
Public Buildings	75W Incandescent	28 Watt Modular CFL	28 Watt <1,600 Lumens - pin based	159.3
Public Buildings	75W Incandescent	28 Watt Integral CFL	28 Watt <1,600 Lumens - screw-in	159.3
Public Buildings	100W Incandescent	28 Watt Modular CFL	28 Watt >=1,600 Lumens - pin based	240.6
Public Buildings	100W Incandescent	28 Watt Integral CFL	28 Watt >=1,600 Lumens - screw-in	240.6
Public Buildings	100W Incandescent	28 Watt Modular CFL	28 Watt - pin based	234.1
Public Buildings	100W Incandescent	28 Watt Integral CFL	28 Watt - screw-in	234.1
Public Buildings	120W Incandescent	30 Watt Modular CFL	30 Watt - pin based	292.6
Public Buildings	100W Incandescent	30 Watt Integral CFL	30 Watt - screw-in	227.6
Public Buildings	150W Incandescent	36 Watt Integral CFL	36 Watt - screw-in	370.6
Public Buildings	120W Incandescent	40 Watt Modular CFL	40 Watt - pin based	280.1
Public Buildings	150W Incandescent	40 Watt Integral CFL	40 Watt - screw-in	357.6
Public Buildings	200W Incandescent	55 Watt Modular CFL	55 Watt - pin based	471.4
Public Buildings	200W Incandescent	65 Watt Integral CFL	65 Watt - pin based	438.9

709

710 Q. Does the Department's clarification to Staff data request EDiv 2.01(a),  
 711 reproduced above, resolve your uncertainty with the respect to what the  
 712 Department seeks to have deemed?

713 A. No.

714 Q. What uncertainty persists, in your view?

715 A. First, the "Clarification to ... EDiv 2.01(a)" suggests that DCEO seeks for  
716 "realization rates" to be deemed. I would note that Mr. Jensen (from ICF International,  
717 which DCEO cites as being responsible for providing these numbers) states in response  
718 to another Staff data request (EDiv 3.01 to ComEd) that realization rates should not be  
719 deemed, explaining:

720 "Realization rate" is defined in the Plan as "[t]he ratio of *ex post* program savings to *ex ante*  
721 estimates of savings." (ComEd Ex. 1.0, at 121 (Glossary of Terms).) The realization rate is  
used in the analysis of programs to account for uncertainty around *program* performance. The  
rate used in the Plan is used primarily as a parameter in the uncertainty analysis. The value of  
0.95 is based on a subjective assessment of the likelihood that *ex ante* savings will equal *ex post*  
savings.

722 (e) ComEd does not intend for realization rates to be deemed. Realization rates will emerge  
723 from evaluations as the evaluator determines *ex post* net savings. ComEd likely will use that  
information to inform its planning process.

724 Second, the "Clarification to ... EDiv 2.01(a)" suggests that it wants to have  
725 deemed all the numbers for kWh savings associated with the Public Sector Prescriptive  
726 Program measures that are found in Appendix B of the ComEd's plan and Appendix B of  
727 the Ameren plans. ComEd's Appendix B is 70 pages; Ameren's Appendix B is 85 pages.  
728 Only portions of those appendices are associated with the Public Sector Prescriptive  
729 Program measures, though. Specifically, there are 140 Public Sector Prescriptive  
730 Program measures for ComEd and 51 for Ameren. Some of these are measures that are  
731 also included in the utilities' programs, except that the utilities are not seeking to have  
732 the kWh values deemed; these include the following efficient technologies (e.g., Chiller  
733 Efficiency, Packaged Unit Efficiency, and VAV). I am not certain if DCEO seeks to  
734 have deemed the kWh savings of this particular subset of measures. Furthermore, these  
735 Appendices list a considerable amount of information for each measure. I suspect, but  
am not certain, that DCEO seeks just the per installation values (in the front part of these

736 tables) to be deemed, and not the projected total kWh savings (shown further down, next  
737 to what looks like projected installation levels).

738 Third, while DCEO cites DCEO Exhibits 1.08 through 1.11, from the agency's  
739 description, I believe it intended to refer to Exhibits 1.07 through 1.10. Furthermore,  
740 these exhibits include two types of kWh savings values: (A) per installation and (B)  
741 total. From my calculations, the latter are equal to (i) the per-installation values times (ii)  
742 an assumed or projected number of installations times (iii) an assumed realization rate  
743 times (iv) an assumed net-to-gross ratio. Thus, if DCEO seeks to have the *total* kWh  
744 savings values deemed, it would essentially be asking for the deeming of all four sets of  
745 numbers (i-iv). However, DCEO may only be asking for the per-installation kWh  
746 savings values to be deemed. In that case, it is asking for deeming only the following  
747 values:

748 **From DCEO Ex. 1.7:**

Energy Star Refrigerator <sup>1</sup>	79
6 interior FL fixtures & 2 exterior FL fixtures <sup>1</sup>	782
SEER 14 central air conditioner w/ programmable thermostat <sup>1</sup>	366
Reduce required tonnage as a result of thermal envelope improvements <sup>2</sup>	432
Energy Star dishwasher <sup>1</sup>	62
Energy Star rated bathroom exhaust fan <sup>3</sup>	89
90% AFUE furnace with efficient air handler <sup>4</sup>	400

749

750

From DCEO Ex. 1.8:

1. Energy Star Refrigerator <sup>1</sup>	79
2. Six interior FL fixtures & two exterior FL fixtures <sup>1</sup>	782
3. Energy Star rated bathroom exhaust fan <sup>2</sup>	89
4. Energy Star dishwasher <sup>1</sup>	62
5. SEER 16 central air conditioner w/ programmable thermostat <sup>3</sup>	528
6. Energy Star rated room air conditioners <sup>4</sup>	176
7. Reduce required tonnage as a result of thermal envelope improvements <sup>5</sup>	216
8. 90% AFUE furnace with efficient air handler <sup>6</sup>	400

751

752

From DCEO 1.9:

1. Energy Star Refrigerator <sup>1</sup>	79
2. ENERGY STAR Advanced Lighting Package <sup>2</sup>	663
3. Energy Star rated bathroom exhaust fan <sup>3</sup>	89
4. Energy Star dishwasher <sup>1</sup>	62
5. SEER 16 central air conditioner w/ programmable thermostat <sup>4</sup>	528
6. Energy Star rated room air conditioners <sup>4,5</sup>	176
7. Reduce required tonnage as a result of thermal envelope improvements <sup>6</sup>	216
8. 90% AFUE furnace with efficient air handler <sup>7</sup>	400

753

754

From DCEO 1.10:

<b>1. Energy Star Refrigerator<sup>1</sup></b>	<b>554</b>
<b>2. CFL installation<sup>2</sup></b>	<b>594</b>
<b>3. Energy Star rated bathroom exhaust fan<sup>3</sup></b>	<b>89</b>
<b>4. SEER 16 central air conditioner w/ programmable thermostat<sup>4</sup></b>	<b>1643</b>
<b>5. Energy Star rated room air conditioner<sup>5</sup></b>	<b>283</b>
<b>6. 90% AFUE furnace with efficient air handler<sup>6</sup></b>	<b>400</b>

755

756 **Q. Have you had an opportunity to thoroughly examine the bases for the**  
757 **various values that DCEO seeks to have deemed?**

758 **A. No.**

759 **Q. In general, do you recommend that, in this or any other *planning* docket, the**  
760 **Commission “deem” values related to the computation of energy savings for**  
761 **purposes of Sections 12-103 (i) and (j) of the Act?**

762 **A. No. I recommend against deeming in this, or any other *planning* docket; but**  
763 **allow me to clarify this position. Under the sole rubric of “deemed values,” the Company**  
764 **and DCEO actually have raised two issues:**

765 (1) the partial reliance on values derived NOT from evaluation of the Company’s  
766 programs, i.e., NOT by collecting data on the Company’s customers and their usage of  
767 energy, but from external databases and studies performed in other places and at other  
768 times;

769 (2) the *pre-approval* of those values *now*, in *this* docket, as opposed to later, in  
770 future proceedings, when the Commission must make findings pursuant to Sections 12-  
771 103 (i) and (j) of the Act.

772 My most significant concern is with (2) rather than (1). Indeed, there are some  
773 sound and practical reasons for partially relying on values derived NOT from evaluation  
774 of the Company's programs (i.e., NOT by independently collecting unique data on the  
775 Company's customers and their usage of energy), but from external databases and studies  
776 performed in other places and at other times. Simply put, there may very well already be  
777 available a wealth of useful data and sound expert analysis that can be tapped into and  
778 that can help in the process of estimating energy savings in Illinois. Indeed, for the  
779 planning purposes of this docket, the Company has relied upon such databases and  
780 studies, and Staff has not objected to that extent.

781 But that same wealth of useful data and sound expert analysis will still exist one  
782 year from now, two years from now, three years from now, etc. In fact, there may be  
783 even more of such data and studies available. In addition, there will have been  
784 significantly more time for Staff and interveners (in preparation of future Sections 12-103  
785 (i) and (j) proceedings) to have reviewed this wealth of data and studies and to have  
786 determined if some of it is *less* than useful or *less* than sound. Staff may even hire  
787 additional personnel or consultants, specializing in energy efficiency program evaluation,  
788 to cobble together Staff's version of the most reasonable and accurate energy efficiency  
789 databases. On the other hand, while reliance on such databases *may* be reasonable and  
790 even preferable for some programs, measures, and/or variables, such reliance may be  
791 unreasonable in other instances. In either event, the decision to rely on such databases,

792 like the decision to use one set of values versus another, need not and should not be made  
793 at this time, in this docket, or for that matter, in any planning docket.

794 **Q. Ameren witnesses Jensen and Voytas argue that the Commission should**  
795 **deem the values in Mr. Jenson's three tables in order to mitigate the Company's**  
796 **risk. Is that a valid argument for the Company's proposal?**

797 **A.** No. It is true that the law establishes standards that the Company must meet and  
798 penalties for failure to meet these standards. Based on the advice of counsel, it is my  
799 understanding that the Commission's job is to assess whether the standards have been  
800 met and, if warranted, impose the penalties. Certainly, the Commission could make that  
801 job easier simply by deeming values. However, in my view, getting the numbers *right* is  
802 more important than getting them right away. In my view, making a judgment now, with  
803 a bare minimum of review, is not amenable to getting the numbers right.

804 Furthermore, the degree of risk to which the Company is exposed is negligible.  
805 For Ameren, the monetary penalty mentioned in the Act for failure to meet the standards  
806 cannot exceed a total of \$670,000 (\$335,000 if, after 2 years, Ameren fails to meet the  
807 efficiency standard, plus another \$335,000 if, after 3 years, Ameren fails to meet the  
808 efficiency standard). When compared to the Company's annual distribution rate  
809 revenues (at current rates), \$335,000 would amount to a not-very-impressive penalty of  
810 less than 0.05% (That is *not* 5 percent, but 5 *hundredths* of 1 percent!).<sup>10</sup>

811 **C. Stakeholder process**

812 **Q. What is your understanding of the stakeholder process described by Ameren**  
813 **witness Voytas?**

814 A. Mr. Voytas states,

815 It is essential that the Ameren Illinois Utilities work with  
816 stakeholders and the Commission to develop a common  
817 understanding of the ground rules for measurement and verification  
818 of savings attributable to the overall portfolio of energy efficiency  
819 measures.

820 Ameren Ex. 2.0, p. 30.

821 He further states,

822 The charter for the group is to provide input with regard to the M&V  
823 provisions of the Act, including the policy and/or regulatory  
824 framework in which the evaluation results will be reported. Tasks for  
825 the Ameren Illinois Utilities with input from the stakeholder group  
826 include:

- 827 1) Define evaluation objectives
- 828 2) Address scale of evaluation effort
- 829 a. Do well established programs with a history of well-  
830 documented savings require the same level of  
831 evaluation that a new program, with no history,  
832 requires?
- 833 b. How much confidence exists in pre-program savings  
834 estimates?
- 835 3) Are other co-benefits to be evaluated and possibly quantified?
- 836 4) Will persistence of savings be determined?
- 837 5) Develop an RFP to engage a M&V contractor
- 838 6) Evaluate bids to the RFP and select an M&V contractor.

839 Q. **Should the Commission approve the Company's proposed stakeholder**  
840 **process?**

841 A. No. Ultimately, I believe that the Company should be responsible for  
842 implementing the plan approved by the Commission, including but not limited to  
843 providing an "independent evaluation." If the Company wishes to enlist interested

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<sup>10</sup> Computations based on current revenues listed in Ameren's Schedules E-5 in ICC Dockets 07-0585/6/7.

844 parties in that implementation process, that should be left to the Company's discretion,  
845 and need not be approved or ordered by the Commission.

846           However, if the Commission, despite my advice, was inclined to order the utility  
847 to include a stakeholder process as part of its implementation of the plan, then there are  
848 several other questions that should be addressed. First, which organizations would be  
849 eligible and which would be ineligible to be a part of the stakeholder process? Second, to  
850 what extent will the participants in this process be "decision makers" or merely advisors  
851 to the Company? Third, to the extent to which participants would be "decision makers,"  
852 how many votes will each of the eligible participating stakeholders be able to cast?

853           In addition, I am also worried that the Company's plan blurs the line between the  
854 Act's evaluation provisions—those within subsection 12-103(f)(7) on the one hand and  
855 those within subsection 12-103 (i) and (j) on the other. As I noted, above, based on the  
856 advice of counsel, it is my understanding that these two sets of provisions are *not*  
857 inextricably connected in the sense that the Section 12-103(f)(7) "independent  
858 evaluations" arranged by the utilities need not be the basis (or the only basis) upon which  
859 the Commission would make findings under Sections 12-103 (i) and (j).

860 **Q.           Does the Staff intend on participating in the Company's stakeholder**  
861 **process?**

862 **A.           At this juncture, Staff intends on participating in the Company's stakeholder**  
863 **process, but would consider itself to be mostly just an observer. In general, Staff wishes**  
864 **to remain independent. This position could change, however, if the Commission chooses**  
865 **to order the utility to include such a process as part of its implementation of the plan.**  
866 **Specifically, if the Commission grants some form of decision-making powers to non-**

867 utility participants in a stakeholder process, Staff may be compelled to be more active  
868 participants.

869 **Q. Earlier in this testimony, you indicated that you would address in this section**  
870 **the Company's proposal that the Commission grant Ameren flexibility for**  
871 **"Dismissing the Ameren Illinois' Utilities evaluation contractor under the terms of**  
872 **the contracts signed with that contractor, and hiring a new contractor." Should the**  
873 **Company be granted this flexibility?**

874 **A.** First, I am not certain if the Company is actually seeking Commission permission  
875 or not. That is, while the Company mentions using an RFP process to find an evaluation  
876 contractor, I do not believe that the Company's plan contemplates or proposes that the  
877 Commission approve that RFP, let alone the hiring of a specific evaluation contractor. It  
878 is puzzling to me that the Company would seek permission to dismiss an evaluation  
879 contractor that the Commission would have had no hand in selecting in the first place.

880 Second, if the Company is seeking the power to dismiss an "independent"  
881 evaluation contractors, it seems like this power would call into question the  
882 "independence" of that entity. Nevertheless, based on the advice of counsel, it is my  
883 understanding that those independent evaluation contractors' evaluations are not the  
884 equivalent of the evaluation that the Commission must make in subsequent subsection  
885 12-103 (i) and (j) proceedings. Unless it is determined that Company-hired evaluation  
886 contractors are to be considered something more than Company employees and potential  
887 Company witnesses in future proceedings before the Commission, then the Commission  
888 should grant the permission sought (that is, the permission to fire and hire new  
889 contractors). On the other hand, if the Commission wants these Company-hired

890 evaluation contractors to act like agents of the Commission, then I would recommend  
891 against granting the permission sought.

892 **D. Basing percent savings on actual usage versus previously forecast usage**

893 **Q. Following the second and third years of the plan, Sections 12-103 (i) and (j)**  
894 **of the Act seem to require determination of whether the “electric utility fails to meet**  
895 **the efficiency standard specified in subsection (b).” For this determination, should**  
896 **the efficiency standard be “0.4% of [the actual quantity of] energy delivered in the**  
897 **year commencing June 1, 2009” and “0.6% of [the actual quantity of] energy**  
898 **delivered in the year commencing June 1, 2010” or should it be “0.4% of [the**  
899 **previously forecast quantity of] energy delivered in the year commencing June 1,**  
900 **2009” and “0.6% of [the previously forecast quantity of] energy delivered in the**  
901 **year commencing June 1, 2010”?**

902 **A. To the extent to which this calls for a legal opinion or interpretation of the Act, I**  
903 **offer no opinion or interpretation. However, from my own “policy” perspective, the most**  
904 **appropriate method would depend on (1) on the make-up of the portfolio under**  
905 **evaluation (particularly on the portfolio’s share of weather-sensitive versus non-weather**  
906 **sensitive measures) and (2) on how energy savings are determined in these future**  
907 **proceedings. After explaining these considerations, I will offer my policy**  
908 **recommendation.**

909 **Q. What is the significance of the make-up of the portfolio under evaluation?**

910 **A. Notwithstanding the influence of energy efficiency programs, the difference**  
911 **between forecast and actual levels of consumption are due largely to difference between**  
912 **“normal” and actual weather. For instance, a hotter-than-average summer is apt to**

913 induce a higher-than-average consumption of electricity as air-conditioners work  
914 overtime to keep us comfortable. Similarly, a portfolio of energy efficiency measures  
915 directed mostly to weather sensitive energy uses (e.g., air conditioning/cooling) will have  
916 a differential impact depending on actual weather. But a portfolio of energy efficiency  
917 measures directed mostly to non-weather sensitive energy uses (e.g., lighting usage is apt  
918 to be relatively insensitive to weather) will produce about the same level of savings  
919 regardless of weather. Thus, for weather-sensitive measures, perhaps a more meaningful  
920 assessment of the utility's performance in obtaining energy savings would compare  
921 savings to actual usage. But for weather insensitive measures, perhaps a more  
922 meaningful assessment of performance would compare savings to a weather-normalize  
923 level of usage.

924 **Q. What is the significance of how energy savings are determined?**

925 **A.** For purposes of the plan, I would anticipate that the Company would estimate  
926 future energy savings from weather-sensitive efficiency measures under an assumption of  
927 normal weather. Except as part of a sensitivity analysis, it would be inappropriate to  
928 assume extremely cold or extremely warm conditions. However, the after-the-fact  
929 energy savings from these weather-sensitive efficiency measures over any given period  
930 (such as June 2009 to May 2010) could be determined either in light of the weather  
931 conditions that prevailed that year (as implicitly assumed in the previous Q&A), or they  
932 could again be determined under an assumption of normal weather. If after-the-fact  
933 energy savings from weather-sensitive efficiency measures are determined in light of  
934 prevailing weather conditions, then, as previously stated, perhaps a more meaningful  
935 assessment of the utility's performance in obtaining energy savings would compare those

936 savings to actual usage. On the other hand, if after-the-fact energy savings from weather-  
937 sensitive efficiency measures are determined under an assumption of normal weather,  
938 then perhaps a more meaningful assessment of performance would compare those  
939 weather-normalized savings to a weather-normalized level of usage.

940 **Q. What is your recommendation with regard to whether after-the-fact savings**  
941 **should be based on actual or normalized weather conditions and whether the**  
942 **attainment of percentage savings goals should be based on actual or previously**  
943 **determined total consumption?**

944 A. If it is permissible under the Act, then I would recommend using previously  
945 determined total consumption (that is, determined in this proceeding as weather-  
946 normalized, expected usage), and that after-the-fact energy savings determinations be  
947 adjusted if necessary to reflect an assumption of normal weather, as well.

948 ***E. The ability to "bank" excess energy savings in a given Plan year, and apply that***  
949 ***excess to and reduce a subsequent Plan year's goal.***

950 **Q. In the ComEd EE-DR case (Docket 07-0540), ComEd seeks permission from**  
951 **the Commission to "bank" excess energy savings. Are you familiar with that**  
952 **proposal?**

953 A. Yes. ComEd witness Brandt states that the Company is seeking from the  
954 Commission permission to 'bank' excess energy savings in a given Plan year, and apply  
955 that excess to reduce a subsequent Plan year's goal (Docket 07-0540, ComEd Ex. 2.0, p.  
956 2), explaining further that

957 In such a circumstance, forecast costs for the subsequent year of the  
958 Plan would be adjusted downward to reflect the need to achieve a  
959 lower kWh reduction in that year. In such case, not only would the  
960 goal be reduced in the subsequent year, but the projected costs input in  
961 Rider EDA would also be reduced for the subsequent year. This is

962 explained in additional detail in Mr. Crumrine's direct testimony. (See  
963 ComEd Ex. 5.0.) This "banking" concept is very important to the  
964 overall management of ComEd's portfolio.

965 Docket 07-0540, ComEd Ex. 2.0, p. 40.

966 **Q. Should Ameren be authorized to "bank" excess energy savings in a given**  
967 **Plan year, and apply that excess to reduce a subsequent Plan year's goal?**

968 **A.** As an initial matter, I would note that Ameren has not asked for permission to  
969 bank excess energy savings. However, if it is legally permissible, then I would  
970 recommend that the Commission *authorize* such banking. Although I will not provide a  
971 legal opinion, I do offer the following "policy" consideration. In the absence of banking,  
972 in any one plan year, there is little reason for the Company to pursue savings above the  
973 goals set forth in the Act (or at a rate any faster than required by the Act). In fact,  
974 achieving greater energy savings (or achieving energy savings at a faster rate) in one  
975 year, may make it more difficult to achieve the Act's goals in the following year, as the  
976 market for efficiency products and services becomes more saturated. Thus, the lack of  
977 banking privileges may actually constitute a disincentive to achieving greater energy  
978 savings (or achieving energy savings at a faster rate). Furthermore, since there some  
979 uncertainty about future participation levels and future savings cannot be forecast  
980 precisely, this disincentive to achieving greater energy savings (or achieving energy  
981 savings at a faster rate) may actually decrease the ultimate attainment of the Act's  
982 percentage savings goals.

983 **Q. Does this conclude your prepared direct testimony?**

984 **A.** Yes.

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Illinois Department of Commerce and )  
Economic Opportunity )  
Approval of its the Energy Efficiency )  
Portfolio and Plan pursuant to Section )  
12-103(f) of the Public Utilities Act. ))

Docket No. 07-0541

AFFIDAVIT OF RICHARD J. ZURASKI

State of Illinois )  
County of Sangamon )

I, Richard J. Zuraski, being first duly sworn on oath, depose and state that I am the same Richard J. Zuraski identified in the Direct Testimony; that I have caused the following Direct Testimony; the following statements are true and correct to the best of my knowledge and belief as of the date of this Affidavit.

Further affiant sayeth naught.

Richard J. Zuraski  
Richard J. Zuraski

Subscribed and sworn to before me

this 14 day of December 2007

Mary Ellen Ruffner

Notary Public

