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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Examine the Commission's post-2005 Energy Efficiency Policies, Programs, Evaluation, Measurement and Verification, and Related Issues.	Rulemaking 06-04-010 (Filed April 13, 2006)

ASSIGNED COMMISSIONER'S RULING ADDRESSING NET-TO-GROSS RATIO TRUE-UP AND METHODOLOGY FOR LIGHTING PROGRAMS IN THE 2006-2008 ENERGY EFFICIENCY PORTFOLIOS

This ruling summarizes prior Commission decisions regarding evaluation, measurement, and verification (EM&V) of program impacts and the calculation of performance earnings basis of the utilities' 2006-2008 portfolios, which ensure that the Commission independently verifies savings by measuring key parameters (*e.g.*, net-to-gross or NTG ratios[1]) after program implementation, based on adopted EM&V protocols. This ruling also sets forth a process through which the methodology and results from the most recent EM&V study of the utilities' 2004-2005 upstream lighting programs will be vetted to inform the evaluation plans for similar programs in the 2006-2008 portfolios.

The purpose of this ruling is not to modify the Commission's determinations on how ratepayers and shareholders both will face risks that the

[1] As defined in the Energy Efficiency Policy Manual, v.3, Attachment 3 (Appendix B) to D.05-04-051, NTG is a ratio or percentage of net program impacts divided by gross or total impacts. NTG ratios are used to estimate and describe the free-ridership that may be occurring within energy efficiency programs.

portfolio savings assumptions are higher or lower than initially projected. Rather, it is to ensure that our EM&V work moving forward reflects the best possible practices, and builds upon the lessons learned from the 2004-2005 EM&V efforts.

Ex-post NTG Ratio True-Up and Performance Basis

Through its decisions and rulings the Commission has historically provided a consistent direction and approach with respect to the treatment of NTG ratios in the evaluation of energy efficiency programs. Namely, in evaluating the net benefits (resource savings minus costs) produced by energy efficiency portfolios, NTG ratios would be fully "trued-up" based on ex post study results in the calculation of the performance earnings basis (net benefits) for shareholder incentives. The Commission uses the term "performance basis" or "performance earnings basis" to refer to these portfolio net benefits.

Attachment A to this ruling provides a summary of Commission decisions and rulings that indicate the Commission's longstanding direction on this issue.

Forecasting uncertainties are borne not just by ratepayers or (under adopted incentive mechanism) just by shareholders. A balance has been reached in prior decisions by the direction to true up load impacts (including NTG ratios) and program costs, but not other parameters (like avoided costs and savings persistence) that are used to measure portfolio performance.

The utilities were directed to consider forecasting risks in developing their portfolio plans (and expected to conduct prudent risk management) as part of their 2006-2008 compliance filings and implementation plans. In D.05-09-043, the Commission identified NTG as a potential risk and ordered the utilities to manage their portfolios to minimize this risk. As the Commission noted in D.05-09-043:

> Our decision today on how best to bound the uncertainty associated with this key savings parameter for planning purposes is predicated on the expectation that **NTGs *will* in fact be adjusted (trued-up) on an *ex post* basis when we evaluate actual portfolio performance**. We believe that this is entirely consistent with the resolution of threshold EM&V issues in D.05-04-051.
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> In that decision, we determined that *ex-ante* savings estimates should be trued up based on the results of *ex post* load impact studies. As NRDC observes, we did not explicitly state whether or not that would include a true up of net-to-gross ratios to reflect free ridership. However, since many load impact studies evaluate the free ridership parameter as an integral component of their evaluation methodology (*e.g.*, through the use of a non-participant control group in billing analyses), we did not consider it necessary to specify that the NTG assumptions would be trued up as part of that process. **So that there is no further confusion on this issue, we clarify today that NTG assumptions should be trued-up in evaluating the performance basis of resource programs**. (pp. 97-98, emphasis added.)

In presenting their portfolio plans in 2005 to the Commission and to their peer review groups, the utilities generally used NTG ratio of 0.80 as the default value for lighting measures. During the peer review process, several peer review group members, as well as Energy Division consultants, noted that the NTG values for a variety of strategies were probably too high. At least one utility committed to using "more realistic and updated" NTG ratios for lighting in program implementation and all utilities conducted sensitivity analysis around this and other parameters in their advice letter compliance filings in early 2006 (see Attachment A). In addition, in recognition that the utilities would need to manage their portfolio plans including forecasting risk throughout the program cycle to maximize performance, the Commission specifically authorized funding

flexibility, authority to modify program design and to pursue new program strategies, as part of D.05-09-043 (see Table 8, Adopted Fund-Shifting Rules).

Notwithstanding the above, I recognize that there are real concerns expressed by the utilities about the forecasting uncertainties they face with respect to "truing up" NTG ratios in particular.[2] These concerns, in large part, arise from the recent evaluation study that Itron, Inc. conducted on the utilities' 2004-2005 Statewide Residential Retrofit Single Family Energy Efficiency Rebate (SFEER) program; more specifically, the evaluation of the upstream/midstream lighting component of the said program.[3] The final evaluation report estimates that the statewide *ex post* NTG ratio across lighting measures is close to 0.62. This NTG is a weighted average of market channel and technology NTG estimates that varied from 0.25 for general merchandise big box retailers to 0.97 for discount stores, and from 0.36 for compact fluorescent fixtures to 0.72 for specialty CFLs. From the utilities' standpoint, some of the market channel and technology level NTG ratios are significantly lower than the planning assumptions they used in developing their 2006-2008 portfolio plans.[4]

The above-referenced Itron study for the 2004-2005 SFEER program will not be used to true-up 2006-2008 portfolio savings for the purpose of the

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[2] Utilities expressed their concerns at the September 17, 2007, all-party meeting regarding the Interim Opinion of Phase I Issues: Shareholder Risk/Reward Incentive Mechanism for Energy Efficiency Programs, as well as in the October 2, 2007, letter they sent to the Commissioners.

[3] Itron's report for the 2004-2005 SFEER program evaluation is posted at http://www.calmac.org/NewPubs.asp.

[4] The utilities generally used NTG ratio of 0.80 as the default value for lighting measures, but then conducted sensitivity analysis around this and other parameters in their advice letter compliance filings in early 2006.

shareholder incentive mechanism. Instead, EM&V studies undertaken during 2006-2008 will be used for that purpose. Nonetheless, the nature of *ex post* EM&V means that there will be uncertainties facing both ratepayers and shareholders in the deployment of energy efficiency in 2006 and beyond, and managing these uncertainties is part of the energy efficiency portfolio administrators' responsibility. Due to the utilities' heavy emphasis on lighting measures, particularly compact fluorescent lamps (CFLs) in their portfolios, even moderate *ex post* adjustments to the NTG could have a magnified impact.

Workshop on NTG Study Methodology

Because lighting measures for both residential and non residential customers account for a very large component of the utilities' 2006-2008 portfolio strategies (*i.e.*, 76% of projected kWh savings and 67% of projected kW reduction), it serves both ratepayer and shareholder interests to examine carefully the Itron 2004-2005 SFEER evaluation study methodology and results, as Energy Division now proceeds to develop and finalize the evaluation plans for its evaluation of similar programs in the 2006-2008 program cycle.

This ruling directs the Energy Division to hold a workshop to discuss the NTG methodology employed in the assessment of energy savings impacts, particularly those of upstream/midstream lighting programs, in October or November 2007. Parties should review the lighting NTG methodology and results in the Itron's 2004-2005 SFEER evaluation report and provide pre-workshop comments to Energy Division and the R.06-04-010 service list. Energy Division will provide a schedule for comments when the workshop date is announced. The purpose of this workshop is to assist Energy Division and their contractors with formulating their evaluation plans for upstream/midstream lighting programs. The workshop will also provide a mechanism for Energy Division to solicit feedback from EM&V expertise and among stakeholders to

identify areas where there may be legitimate disagreements over survey techniques or interpretation of survey results. The information gathered from the workshop will assist the Energy Division and its contractors in conducting the evaluations of such programs in the 2006-2008 portfolios.

IT IS RULED that:

1. A series of Commission decisions and EM&V protocol rulings have established that net-to-gross (NTG) assumptions will be "trued-up" based on *ex post* study results in evaluating the performance basis and performance earnings basis of resource programs.

2. Energy Division shall hold a workshop in October or November 2007 to discuss the NTG methodology employed in the assessment of energy savings impacts particularly of upstream/midstream lighting programs. The purpose of the workshop is to solicit feedback from EM&V experts and stakeholders to assist Energy Division and its contractors in conducting the evaluations of such programs in the 2006-2008 portfolios.

Dated October 5, 2007, at San Francisco, California.

/s/ DIAN M. GRUENEICH
Dian M. Grueneich
Assigned Commissioner

INFORMATION REGARDING SERVICE

I have provided notification of filing to the electronic mail addresses on the attached service list.

Upon confirmation of this document's acceptance for filing, I will cause a Notice of Availability of the filed document to be served upon the service list to this proceeding by U.S. mail. The service list I will use to serve the Notice of Availability of the filed document is current as of today's date.

Dated October 5, 2007, at San Francisco, California.

/s/ ROSCELLA GONZALEZ
Roscella Gonzalez