**PENNSYLVANIA**

**PUBLIC UTILITY COMMISSION**

**Harrisburg, PA 17105-3265**

 Public Meeting held January 28, 2010

Commissioners Present:

 James H. Cawley, Chairman

 Tyrone J. Christy, Vice Chairman

 Kim Pizzingrilli

 Wayne E. Gardner, Statement

 Robert F. Powelson

|  |  |
| --- | --- |
| Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company for Consolidation of Proceedings and Approval of Energy Efficiency and Conservation Plans | Docket Nos. M-2009-2092222, M-2009-2112952 and M-2009-2112956 |

**TABLE OF CONTENTS**

[I. Introduction 1](#_Toc251764077)

[II. Procedural History 2](#_Toc251764078)

[III. Description of the Revised Plans 6](#_Toc251764079)

[IV. Discussion 8](#_Toc251764080)

[A. Act 129 Conservation and Demand Reduction Requirements 8](#_Toc251764081)

[1. Overall Conservation Requirements 8](#_Toc251764082)

[a. 2011 Requirements 9](#_Toc251764083)

[b. 2013 Requirements 10](#_Toc251764084)

[2. Overall Demand Reduction Requirements 11](#_Toc251764085)

[a. *October 2009 Order* 12](#_Toc251764086)

[b. Positions of the Parties 12](#_Toc251764087)

[c. Disposition 13](#_Toc251764088)

[3. Requirements for a Variety of Programs Equitably Distributed 13](#_Toc251764089)

[a. *October 2009 Order* 13](#_Toc251764090)

[b. Positions of the Parties 14](#_Toc251764091)

[c. Disposition 14](#_Toc251764092)

[4. Ten Percent Government/Non-Profit Requirement 14](#_Toc251764093)

[a. *October 2009 Order* 14](#_Toc251764094)

[b. Positions of the Parties 15](#_Toc251764095)

[c. Disposition 15](#_Toc251764096)

[5. Low-Income Program Requirements 15](#_Toc251764097)

[a. *October 2009 Order* 16](#_Toc251764098)

[b. Positions of the Parties 17](#_Toc251764099)

[c. Disposition 17](#_Toc251764100)

[6. Issues Relating to Individual Conservation and Demand Reduction Programs -- Fuel Switching 18](#_Toc251764101)

[a. *October 2009 Order* 18](#_Toc251764102)

[b. Positions of the Parties 18](#_Toc251764103)

[c. Disposition 19](#_Toc251764104)

[7. Proposals for Improvement of EDC Plan 19](#_Toc251764105)

[a. Industrial 20](#_Toc251764106)

[b. Generic Issues -- Continuing Stakeholder Process 21](#_Toc251764107)

[B. Cost Issues 22](#_Toc251764108)

[1. Plan Cost Issues 22](#_Toc251764109)

[a. Consumer Education Outreach Costs 23](#_Toc251764110)

[b. Compliance with the Two Percent Cap 25](#_Toc251764111)

[2. Cost Effectiveness/Cost-Benefit Issues 26](#_Toc251764112)

[a. *October 2009 Order* 28](#_Toc251764113)

[b. Positions of the Parties 28](#_Toc251764114)

[c. Disposition 29](#_Toc251764115)

[3. Cost Allocation Issues 29](#_Toc251764116)

[4. Cost Recovery Issues 30](#_Toc251764117)

[a. Customer Class Allocations 30](#_Toc251764118)

[b. Cost Recovery through a Separate Surcharge or Within Distribution Rates 35](#_Toc251764119)

[c. Interest Associated with the Recovery of Start-up Costs 37](#_Toc251764120)

[d. Required Bidding of Met Ed and Penelec’s Demand Response Measures into PJM’s Reliability Pricing Model Auction 38](#_Toc251764121)

[e. EE&C Plans and Rate Base Proceedings 39](#_Toc251764122)

[f. Contingency Reserve 40](#_Toc251764123)

[C. Conservation Service Provider Issues 43](#_Toc251764124)

[1. Issues Pertaining only to Met Ed and Penelec 45](#_Toc251764125)

[a. Met Ed and Penelec as Curtailment Service Providers 45](#_Toc251764126)

[b. Credit Requirements 46](#_Toc251764127)

[2. Issues Pertaining only to Penn Power -- Penn Power’s Proposal to Use Electricity Generation Suppliers 47](#_Toc251764128)

[a. *October 2009 Order* 47](#_Toc251764129)

[b. Positions of the Parties 48](#_Toc251764130)

[c. Disposition 48](#_Toc251764131)

[D. Implementation and Evaluation Issues 48](#_Toc251764132)

[1. Monitoring and Reporting Issues 48](#_Toc251764133)

[a. *October 2009 Order* 49](#_Toc251764134)

[b. Positions of the Parties 49](#_Toc251764135)

[c. Disposition 50](#_Toc251764136)

[2. Evaluation Issues 50](#_Toc251764137)

[a. *October 2009 Order* 51](#_Toc251764138)

[b. Positions of the Parties 51](#_Toc251764139)

[c. Disposition 53](#_Toc251764140)

[E. Other Issues 54](#_Toc251764141)

[1. Projects Installed Between July 1, 2009, and Commission Approval of the Plans 54](#_Toc251764142)

[a. *October 2009 Order* 54](#_Toc251764143)

[b. Positions of the Parties 55](#_Toc251764144)

[c. Disposition 56](#_Toc251764145)

[2 Met Ed’s Request for a Modification of its Residential Direct Load Control Program 58](#_Toc251764146)

[a. *October 2009 Order* 58](#_Toc251764147)

[b. Positions of the Parties 58](#_Toc251764148)

[c. Disposition 59](#_Toc251764149)

[V. Conclusion 60](#_Toc251764150)

**OPINION AND ORDER**

**BY THE COMMISSION:**

# I. Introduction

In *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company for Consolidation of Proceedings and Approval of Energy Efficiency and Conservation Plans*, Docket No. M-2009-2092222 *et al.* (Order entered October 28, 2009) (*October 2009 Order*), the Pennsylvania Public Utility Commission (Commission) approved in part and rejected in part the Energy Efficiency and Conservation Plans (Plans) filed by Metropolitan Edison Company (Met Ed), Pennsylvania Electric Company (Penelec) and Pennsylvania Power Company (Penn Power) (collectively, FirstEnergy or the Companies) pursuant to Act 129 of 2008 (Act 129 or the Act). The Commission required the Companies to submit revised Plans within sixty days. Now before the Commission for consideration and disposition are the Companies’ revised Energy Efficiency and Conservation Plans (Revised Plans[[1]](#footnote-1)). For the reasons set forth herein, we will approve in part and reject in part the Revised Plans and direct the Companies to file further Revised Plans within sixty days of the entry of this Opinion and Order.

# II. Procedural History

A detailed history of this proceeding, together with that of our various other Act 129 proceedings, was set forth in the *October 2009 Order*. Consequently, this section summarizes the procedural history of this matter.

FirstEnergy filed the Plans on July 1, 2009. On July 31, 2009, FirstEnergy filed Plan supplements. FirstEnergy modified the Plans again by way of supplemental testimony submitted on August 31, 2009. FirstEnergy filed additional modifications to the Plans on September 21, 2009.

The Parties to this proceeding are: the Office of Consumer Advocate (OCA); the Office of Trial Staff (OTS); the Office of Small Business Advocate (OSBA); the Department of Environmental Protection (DEP); the Met-Ed Industrial Users Group (MEIUG), the Penelec Industrial Customer Alliance (PICA) and the Penn Power Users Group (PPUG) (collectively, MEIUG *et al*.);[[2]](#footnote-2) Field Diagnostic Services, Inc. (FDSI);[[3]](#footnote-3) Direct Energy Business, LLC (Direct Energy);[[4]](#footnote-4) the Association of Community Organizations for Reform Now (ACORN);[[5]](#footnote-5) Rep. Camille “Bud” George (Rep. George);[[6]](#footnote-6) UGI Utilities, Inc., - Gas Div., UGI Penn Natural Gas, Inc. and UGI Central Penn Gas, Inc. (collectively, UGI Distribution Companies);[[7]](#footnote-7) Peoples Natural Gas Company d/b/a Dominion Peoples (Dominion Peoples);[[8]](#footnote-8) National Fuel Gas Distribution Corporation (NFG);[[9]](#footnote-9) Constellation New Energy, Inc. (Constellation);[[10]](#footnote-10) EnerNOC, Inc. (EnerNOC);[[11]](#footnote-11) and Comperio Energy LLC, d/b/a ClearChoice Energy (ClearChoice).[[12]](#footnote-12)

As stated previously, the *October 2009 Order* approved in part and rejected in part the Plans. *Inter alia*, the *October 2009 Order* directed the Companies to file revised Plans within sixty days. On November 12, 2009, the OSBA filed a Petition for Reconsideration (Petition) of the *October 2009 Order.* By Opinion and Order entered November 19, 2009, the Commission granted reconsideration pending review of, and consideration on, the merits. FirstEnergy filed an Answer to the Petition on November 23, 2009, and the Commission denied the Petition by Opinion and Order entered on December 17, 2009 (*December 2009 Order)*.

The Companies filed Revised Plans on December 2, 2009. The Revised Plans purported to be red-lined[[13]](#footnote-13) to show all changes that the Companies had made in the September 21, 2009 versions of the Plans. The *December 2009 Order* noted, however, that the Revised Plans did not show that many of the numbers in the tables/charts had been changed. The Companies were directed to file corrected red-lined versions of the Revised Plans and to provide information supporting the data in the Plan. The Parties were permitted to file Comments on the corrected Revised Plans.

Comments on the December 2, 2009 versions of the Revised Plans were submitted by OSBA. Reply Comments were submitted by the Companies.

The Companies submitted corrected red-lined copies of the Revised Plans on December 23, 2009. The Companies stated that these Revised Plans complied with the Commission’s directives in the *December 2009 Order*. The Companies also stated that these Revised Plans corrected certain errors contained in the December 2, 2009 version of the Revised Plans. OSBA and OCA submitted Comments on the December 23, 2009 version of the Revised Plans.

On January 19, 2010, the Companies filed further corrected black-lined versions of the Revised Plans. The Companies explained that the OSBA’s comments expressed concern that the December 23, 2009 versions of the Revised Plans failed to black-line all of the changes that had been made in the Companies’ Plans. In response, the Companies reviewed the December 23, 2009 versions of the Revised Plans and determined that, in fact, certain changes had been made that were not black-lined. The Companies further explained that certain tables in the body of Penelec’s Revised Plan were not identical to the same tables which were included in the Appendix to that filing. Penelec represents that its calculations were based on the correct data included in the Appendix. All three Companies represent that the changes that were not shown in prior black-lined versions of their Revised Plans were insignificant and do not affect the end results in any Plan. Consequently, the Companies asked the Commission to approve their Revised Plans (as corrected) at the January 28, 2010 Public Meeting.

# III. Description of the Revised Plans

The Plans were described in detail in the *October 2009 Order.* As a result, the Plans will not be described in detail here.

The Revised Plans propose numerous changes in response to the *October 2009 Order*. The Revised Plans also propose other changes. One new proposal for all three Companies is to make certain programs retroactive to July 1, 2009.[[14]](#footnote-14) All three Companies also propose substantial changes in their budgets.[[15]](#footnote-15) Another new proposal, which is unique to Met Ed, would increase that Company’s budget for Residential Direct Load Control Programs from approximately $13.5 million to approximately $15.4 million to provide matching funds for a grant that FirstEnergy anticipates receiving from the U.S. Department of Energy.[[16]](#footnote-16)

The Companies state that the Revised Plans:

* attempt to develop greater statewide consistency with programs;
* continue stakeholder meetings;
* continue developing program evaluation processes and procedures;
* track consumer education costs for appropriate allocation;
* eliminate interest on start-up costs;
* exclude energy efficiency and conservation (EE&C) costs, net of tax, recovered through the EEC-C Rider from distribution rate base as appropriate;
* create separate cost recovery group for certain government and non-profit rates;
* adopt a demand charge for the industrial customer class;
* increase budget amount for Met-Ed residential direct load control;
* increase budget amount for certain low income measures;
* support HVAC tune-up and re-commissioning measures;
* bid residential direct load control programs into the applicable PJM[[17]](#footnote-17) RPM auctions for Met Ed, Penelec and Penn Power (upon entry into PJM)[[18]](#footnote-18);
* track amounts received from PJM for curtailments for Met-Ed and Penelec;
* change commercial and industrial demand response program from electric generation suppliers as curtailment providers to conservation service providers as curtailment providers for Penn Power;
* eliminate credit requirements for demand reduction programs;
* incorporate recovery of the approved EE&C costs through distribution rates for residential customers;
* collect approved EE&C costs through a separate line item on customers’ bills for commercial and industrial customers;
* remove contingency funds from cost recovery mechanism;
* request retroactivity to July 1, 2009 for certain programs;
* increase budget amount and provide update regarding tracking and reporting system;
* track participation by low-income customers to support reporting and evaluation;
* remove energy savings from existing LIURP/WARM funds;
* clarify the costs for common costs (e.g., evaluation); and
* collect the cost of the statewide evaluator outside the 2% cap for Plan spending.

Cover letter to Revised Plans at 1 (note omitted).

# IV. Discussion

In Commission proceedings, the proponent of a rule or order bears the burden of proof. 66 Pa. C.S. § 332(a). To satisfy that burden, the proponent of a rule or order must prove each element of its case by a preponderance of the evidence. *Samuel J. Lansberry, Inc. v. Pa. PUC*, 578 A.2d 600 (Pa. Cmwlth. 1990). A preponderance of the evidence is established by presenting evidence that is more convincing, by even the smallest amount, than that presented by the other parties to the case. *Se-Ling Hosiery v. Margulies*, 364 Pa. 45, 70 A.2d 854 (1950). Additionally, this Commission’s decision must be supported by substantial evidence in the record. More is required than a mere trace of evidence or a suspicion of the existence of a fact sought to be established. *Norfolk & Western Ry. Co. v. Pa. PUC,* 489 Pa. 109, 413 A.2d 1037 (1980).

We note that any issue that we do not specifically address herein has been duly considered and will be denied without further discussion. It is well settled that we are not required to consider expressly or at length each contention or argument raised by the Parties. [Consolidated Rail Corporation v. Pa. PUC, 625 A.2d 741 (Pa. Cmwlth. 1993);](file://C:\research\buttonTFLink?_m=69761b6202cb4178e2a6e6fe02f5751b&_xfercite=%3ccite%20cc=%22USA%22%3e%3c!%5bCDATA%5b2000%20Pa.%20PUC%20LEXIS%2067%20%5d%5d%3e%3c\cite%3e&_butType=3&_butStat=242&_butNum=5&_butInline=1&_butinfo=%3ccite%20cc=%22USA%22%3e%3c!%5bCDATA%5b625%20A.2d%20741%5d%5d%3e%3c\cite%3e&_fmtstr=FULL&docnum=5&_startdoc=1&_startchk=1&wchp=dGLSzS-lSlbz&_md5=ad2b02d95c2a9216e83b92a3570d4785) see also, generally, [University of Pennsyl­vania v. Pa. PUC, 485 A.2d 1217 (Pa. Cmwlth. 1984).](file://C:\research\buttonTFLink?_m=69761b6202cb4178e2a6e6fe02f5751b&_xfercite=%3ccite%20cc=%22USA%22%3e%3c!%5bCDATA%5b2000%20Pa.%20PUC%20LEXIS%2067%20%5d%5d%3e%3c\cite%3e&_butType=3&_butStat=242&_butNum=6&_butInline=1&_butinfo=%3ccite%20cc=%22USA%22%3e%3c!%5bCDATA%5b485%20A.2d%201217%5d%5d%3e%3c\cite%3e&_fmtstr=FULL&docnum=5&_startdoc=1&_startchk=1&wchp=dGLSzS-lSlbz&_md5=9b1cc8319afd12440738bb82d74455ef)

## A. Act 129 Conservation and Demand Reduction Requirements

### 1. Overall Conservation Requirements

In *Energy Efficiency and Conservation Program*, Docket No.
M-2008-2069887 (Order entered January 16, 2009) (*Implementation Order)*, at 8, we noted that both the 1% consumption reduction, to be met by May 31, 2011, and the 3% consumption reduction, to be met by May 31, 2013, are to be measured against the electric distribution company’s (EDC’s) expected consumption as forecasted by the Commission for the period June 1, 2009, through May 31, 2010. 66 Pa. C.S.
§ 2806.1(c)(1). Each EDC that was required to file an EE&C plan was required to file its consumption forecast for the period June 1, 2009, through May 31, 2010, by February 9, 2009.

In *Energy Consumption and Peak Demand Reduction Targets,* Docket No. M-2008-2069887 (Order entered March 30, 2009) (*Reduction Target Order*), the Commission approved the forecasts of Met Ed, Penelec and Penn Power of 14,865,036 MWh, 14,399,289 MWh and 4,772,937 MWh, respectively, and in turn approved their respective 1% reduction targets of 148,650 MWh, 143,993 MWh and 47,729 MWh as of May 31, 2011. The *Reduction Target Order* also approved the 3% reduction targets of Met Ed, Penelec and Penn Power of 445,951 MWh, 431,979 MWh and 143,188 MWh, respectively, as of May 31, 2013.

The Plan must include specific proposals to achieve or exceed these required reductions in consumption. 66 Pa. C.S. § 2806.1(b)(1)(i)(A) . The Commission is required to analyze how the program and individual plans will enable the EDC to meet or exceed the required reductions in consumption. 66 Pa. C.S. § 2806.1(a)(4). The Commission is also required to develop procedures to ensure compliance with these requirements. 66 Pa. C.S. § 2806.1(a)(9).

#### a. 2011 Requirements

##### (1) *October 2009 Order*

In our *October 2009 Order*, we found that the Plans projected total energy savings that will meet or exceed the 2011 targets set forth in the *Reduction Target Order.* Nevertheless, for the reasons set forth in the *October 2009 Order*, we required the Companies to recalculate the projected energy savings and resubmit the Plans in accordance with that Order. *October 2009 Order* at 22-23.

##### (2) Positions of the Parties

The Revised Plans of Met Ed, Penelec and Penn Power propose total energy savings of 177,962 MWh, 173,331 MWh and 56,666 MWh, respectively, by the end of Program Year 2010 (May 31, 2011). Met Ed’s Revised Plan at 22, Penelec’s Revised Plan at 23, and Penn Power’s Revised Plan at 21.

No Parties commented on the 2011 total energy savings projections.

#####

##### (3) Disposition

We find that the recalculated figures contained in the Revised Plans project total energy savings that will meet or exceed the 2011 targets set forth in the *Reduction Target Order.*

####

#### b. 2013 Requirements

##### (1) *October 2009 Order*

In our *October 2009 Order*, we found that the Plans projected total energy savings that will meet or exceed the 2013 targets set forth in the *Reduction Target Order.* Nevertheless, for the reasons set forth in that *October 2009 Order*, we required the Companies to recalculate the projected energy savings and resubmit the Plans in accordance with that Order. *October 2009 Order* at 23.

##### (2) Positions of the Parties

Total energy savings expected at the end of Program Year 2012 (May 31, 2013) total 458,243 MWh, 447,917 MWh and 146,032 MWh for Met Ed, Penelec and Penn Power, respectively. Met Ed’s Revised Plan at 22, Penelec’s Revised Plan at 23, and Penn Power’s Revised Plan at 21.

No Parties filed any comments on the 2013 total energy savings projections.

#####  (3) Disposition

We find that the Revised Plans project total energy savings that will meet or exceed the 2013 targets set forth in the *Reduction Target Order.*

### 2. Overall Demand Reduction Requirements

The *Implementation Order*, at 9, noted that the 4.5% reduction in peak demand, to be met by May 31, 2013, is to be measured against the EDC’s historical peak load for the period June 1, 2007, through May 31, 2008. 66 Pa. C.S. § 2806.1(d). To be in compliance with this directive, each EDC must demonstrate that its Plan produces demand savings during the 100 hours of highest demand for the period June 1, 2012, through September 30, 2012, equal to at least 4.5% of the average of the 100 highest peak hours during the period from June 1, 2007, to September 30, 2007*. Implementation Order* at 29; s*ee also, Energy Efficiency and Conservation Program*, Docket No.
M-2008-2069887 (Order entered June 2, 2009) (*Reconsideration Order)*, at 4-8.

Each EDC that was required to file an EE&C plan was required to file, by February 9, 2009, certain peak load data for the period June 1, 2007, through May 31, 2008. In the *Reduction Target Order*, the Commission approved the calculations of Met Ed, Penelec and Penn Power of their average historical peak loads for the top 100 hours as 2,644 MW, 2,395 MW and 980 MW, respectively, and their respective proposed 4.5% reductions of 119 MW, 108 MW and 44 MW as of May 31, 2013.

The plans must include specific proposals to meet or exceed this required reduction in consumption. 66 Pa. C.S. § 2806.1(b)(1)(i)(A) . The Commission is required to analyze how the program and individual plans will enable the EDC to meet or exceed the required reduction in consumption. 66 Pa. C.S. § 2806.1(a)(4). The Commission is also required to develop procedures to ensure compliance with this requirement. 66 Pa. C.S. § 2806.1(a)(9).

####

#### a. *October 2009 Order*

In the *October 2009 Order*, we found that the Plans projected total energy savings that would meet or exceed the 4.5% peak demand reduction target by September 30, 2012, as mandated by the Act and the *Implementation Order.* Nevertheless, for the reasons set forth in that Order, we required the Companies to recalculate the projected energy savings and resubmit the Plans in accordance with that Order. *October 2009 Order* at 25.

#### b. Positions of the Parties

The Revised Plans of Met Ed, Penelec and Penn Power project peak demand savings of 128.6 MW, 110.4 MW and 45.9 MW, respectively, by May 31, 2013. Met Ed’s Revised Plan at 22, Penelec’s Revised Plan at 23, and Penn Power’s Revised Plan at 21.

No Parties filed comments on the Companies’ peak demand reduction projections.

#### c. Disposition

We find that the recalculated figures contained in the Revised Plans project total energy savings that will meet or exceed the 4.5% peak demand reduction target by September 30, 2012, as mandated by the Act and the *Implementation Order*.

### 3. Requirements for a Variety of Programs Equitably Distributed

The Commission’s EE&C Program must include “standards to ensure that each plan includes a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers.” 66 Pa. C.S.
§ 2806.1(a)(5). Each EDC is required to demonstrate that its plan “provides a diverse cross section of alternatives for customers of all rate classes.” 66 Pa. C.S.
§ 2806.1(b)(1)(i)(I).

#### a. *October 2009 Order*

In the *October 2009 Order*, we concluded that the Companies’ Plans met the requirement of the Act to provide a variety of measures to all customer classes in an equitable manner. The record evidence showed that the Plans contained nineteen different programs distributed across all customer classes. In addition, the Companies provided at least one energy efficiency program and one demand response program for each class. *October 2009 Order* at 29-30.

#### b. Positions of the Parties

The Revised Plans again provide for nineteen programs to serve the needs of the residential, commercial, industrial, and government/non-profit classes. Met Ed’s Revised Plan at 5-8, Penelec’s Revised Plan at 4-8, and Penn Power’s Revised Plan at 4‑7.

No Parties submitted comments on this aspect of the Revised Plans.

#### c. Disposition

We conclude that the Companies’ Revised Plans meet the requirement of the Act to provide a variety of measures to all customer classes in an equitable manner. The Revised Plans contain nineteen programs distributed across all customer classes. The Companies have provided at least one energy efficiency program and one demand response program for each class in accordance with the Commission’s *Implementation Order*. Therefore, we conclude that the Revised Plans comply with the provisions of 66 Pa. C.S. § 2806.1(b)(1)(i)(B).

### 4. Ten Percent Government/Non-Profit Requirement

The Act requires that “a minimum of 10% of the required reductions in consumption . . . shall be obtained from units of federal, state and local government, including municipalities, school districts, institutions of higher education and nonprofit entities.” 66 Pa. C.S. § 2806.1(b)(1)(i)(B).

#### a. *October 2009 Order*

The *October 2009 Order* stated that the Plans included programs anticipated to exceed the government/non-profit requirement and found no reason to modify this aspect of the Plans. *October 2009 Order* at 33.

####

#### b. Positions of the Parties

Met Ed forecasts that from the government/non-profit sector it will save 21,403 MWh out of its required 2011 MWh reduction target of 148,650 MWh, and it will save 51,255 MWh out of its required 2013 MWh reduction target of 445,951 MWh. MetEd’s Revised Plan, Appendix G at 2. Penelec forecasts that from the government/non-profit sector it will save 23,541 MWh out of its required 2011 MWh reduction target of 143,993 MWh, and it will save 55,623 MWh out of its required 2013 MWh reduction target of 431,979 MWh. Penelec’s Revised Plan, Appendix G at 2. Penn Power forecasts that from the government/non-profit sector it will save 7,990 MWh out of its required 2011 MWh reduction target of 47,729 MWh, and it will save 18,640 MWh out of its required 2013 MWh reduction target of 143,188 MWh. Penn Power’s Revised Plan, Appendix G at 2.

No Parties commented on this aspect of the Revised Plans.

#### c. Disposition

We find that the Revised Plans comply with the Act’s ten percent government/non-profit requirement.

### 5. Low-Income Program Requirements

Act 129 provides:

The plan shall include specific energy efficiency measures for households at or below 150% of the federal poverty income guidelines. The number of measures shall be proportionate to those households’ share of the total energy usage in the service territory. The electric distribution company shall coordinate measures under this clause with other programs administered by the commission or another federal or state agency. The expenditures of an electric distribution company under this clause shall be in addition to expenditures made under Pa. Code Ch. 58 (relating to residential low income usage reduction programs).

66 Pa. C.S. § 2806.1(b)(1)(i)(G).

#### a. *October 2009 Order*

In the *October 2009 Order*, we found that the Companies’ Plans included a “number of measures” proportionate to the low-income households’ share of total energy usage. One program was specifically directed at low-income households, and eight other residential programs were available to low-income customers. In the *October 2009 Order*, we directed the Companies to track instances in which low-income customers participate in residential and other programs that are not specifically directed toward low-income customers and to include this information in the Companies’ annual report to the Commission. *October 2009 Order* at 38.

The *October 2009 Order* stated that the Commission would form a working group to identify the standardized data to be used in determining the proper proportion for low-income households and clarify other matters affecting the annual reconciliation process. The Companies are required to participate in the working group. *October 2009 Order* at 37-38 and 132-133.

Finally, the *October 2009 Order* found that the energy savings from the Companies’ existing low-income usage program (the WARM program) funds are not derived from Act 129 programs and should not be attributed to the Companies’ low-income energy efficiency and demand reduction obligations under Act 129. The Commission consequently rejected the calculations in the Plans and ordered the Companies to revise and resubmit the Plans with updated calculations. *October 2009 Order* at 38.

#### b. Positions of the Parties

The Revised Plans state that the Companies will track instances in which low-income customers participate in programs that are not specifically directed toward low-income customers, including: appliance turn-in programs, direct load control programs, and in-home and online energy audits. This information will be included in the Companies’ annual reports to the Commission. Met Ed’s Revised Plan at 16, Penelec’s Revised Plan at 16, and Penn Power’s Revised Plan at 15.

The first meeting of the Working Group was held on January 6, 2010. Representatives of the Companies attended.

The Revised Plans include updated program calculations. The existing WARM program energy savings are not included in the Act 129 program savings. The Revised Plans of Met Ed, Penelec and Penn Power project low-income program savings of 113,789 MWh (0.76% of portfolio and total lifetime MWh savings), 164,719 MWh (1.3%) and 47,336 MWh (0.9%), respectively, by May 31, 2013. Met Ed’s Revised Plan at 30, Penelec’s Revised Plan at 30, and Penn Power’s Revised Plan at 29.

No Parties commented on the Companies’ tracking of low-income customer program usage or their low-income program calculations.

#### c. Disposition

With regard to the Low-Income Program Requirements, we find that the Revised Plans continue to include a “number of measures” proportionate to the low-income households’ share of total energy usage. We also find that the Companies have revised this portion of their Plans in compliance with our directives in the *October 2009 Order*.

### 6. Issues Relating to Individual Conservation and Demand Reduction Programs -- Fuel Switching

#### a. *October 2009 Order*

Our *October 2009 Order* rejected the proposal of the NGDCs and IOGA that the Companies be required to utilize fuel switching (i.e., switching from the use of electric power to natural gas) as an energy efficiency or demand reduction measure. We noted that a fuel switching working group had been convened and directed to report back to the Commission with recommendations by June 1, 2010. To expedite the resolution of this issue, the *October 2009 Order* directed the fuel switching working group to submit its report by March 31, 2010. *October 2009 Order* at 42-44.

 Nevertheless, we found merit in the NGDC’s suggestion that relevant data be collected. We therefore directed the Companies to track appropriate data, in coordination with the Statewide Evaluator, including at least the following: the type of appliance or equipment being replaced; the availability of natural gas at the customer’s location or immediate area, and whether electric appliances or equipment were installed in areas where natural gas is available. *October 2009 Order* at 44.

#### b. Positions of the Parties

The Revised Plans state that the Companies are currently considering proposals received from nine suppliers for a reporting and tracking system. Regardless of the vendor selected, the Companies intend to utilize a comprehensive system to report and track activities and results associated with EE&C programs. Met Ed’s Revised Plan at 107; Penelec’s Revised Plan at 107; PennPower’s Revised Plan at 99.

The Companies are currently considering certain data fields for information to be collected in the reporting and tracking system, including type of appliance or equipment being replaced for fuel switching; availability of natural gas at the customer’s location or immediate area; and whether electric appliances or equipment were installed in areas where natural gas is available. Met Ed’s Revised Plan at 108; Penelec’s Revised Plan at 108; PennPower’s Revised Plan at 100.

#### c. Disposition

The Companies’ reporting and tracking system is still being designed and the information to be collected is not yet determined. The Companies are directed to provide updated information in the Revised Plans that must be filed within sixty days of entry of this Opinion and Order. We find that the Companies will comply with the *October 2009 Order* if the reporting and tracking system includes data regarding the type of appliance or equipment being replaced, the availability of natural gas at the customer’s location or immediate area, and whether electric appliances or equipment were installed in areas where natural gas is available. The Companies are advised that additional guidance on tracking fuel switching may be provided in the report of the fuel switching working group and our disposition thereof.

### 7. Proposals for Improvement of EDC Plan

The Commission’s EE&C Program must include “procedures to make recommendations as to additional measures that will enable an electric distribution company to improve its plan and exceed the required reductions in consumption.” 66 Pa. C.S. § 2806.1(a)(6). This section discusses specific proposals for improving programs targeted toward industrial customers. It then discusses generic issues that affect multiple programs proposed by FirstEnergy, regardless of customer class.

#### a. Industrial

##### (1) *October 2009 Order*

 FDSI proposed improving the Plans by including certain HVAC programs for commercial and industrial customers. We noted that FirstEnergy’s witness Fitzpatrick testified that the Companies have included small commercial HVAC tune-up programs in their plans. Our review of the Plans, however, did not find evidence to support Mr. Fitzpatrick’s statement. The Companies were directed to address this discrepancy in their Revised Plans by including language clearly stating whether those Plans include small commercial HVAC tune-up programs. *October 2009 Order* at 52.

##### (2) Positions of the Parties

 The Companies added new language to each of the Plans stating:

The Company currently supports HVAC tune-up and re-commissioning measures targeting existing buildings with packaged commercial HVAC systems for small commercial and industrial customers. Tenants in rental properties will be eligible with appropriate approvals from the property owner.

Met Ed’s Revised Plan at 67, Penelec’s Revised Plan at 68, and Penn Power’s Revised Plan at 66. The additional language was added to the C/I Equipment Program as part of the Implementation strategy.

 No Parties submitted comments on this aspect of the Revised Plans.

##### (3) Disposition

 We find that the Companies have addressed the discrepancy identified in the *October 2009 Order* by adding appropriate language to their Revised Plans. There is no reason to further modify the Companies’ Plans regarding small commercial and industrial customer HVAC tune-up and re‑commissioning measures.

#### b. Generic Issues -- Continuing Stakeholder Process

##### (1) October 2009 Order

Our *October 2009 Order* commended the Companies’ commitment to meet with stakeholders quarterly and encouraged them to do so. Nevertheless, the Companies were only required to meet with stakeholders as needed, but no less than twice annually until May 31, 2013, unless otherwise ordered by the Commission. *October 2009 Order* at 55. In the Order, we rejected FirstEnergy’s argument that the stakeholder process be restricted to the Parties to the Act 129 EE&C Plan proceeding and directed that the stakeholder process should be open to all who wish to participate. *Id.* Although we noted that the Companies were generally responsible for all aspects of the stakeholder process, we directed the Companies to consider certain proposals in the stakeholder process (including, but not limited to, the OCA’s proposals for programs directed toward new commercial and industrial construction, agricultural customers, and high-value market subsets such as supermarkets and data centers). *Id*. at 51.

##### (2) Positions of the Parties

The Companies’ Revised Plans each contain added language addressing their commitment to the stakeholder process. The following paragraph was added to each of the plans:

The Company will continue [its] commitment to an ongoing stakeholder process. FirstEnergy will meet with interested parties as needed, but not less than twice annually until May 31, 2013. The Company agrees to explore Plan improvements as suggested by the Office of Consumer Advocate. The Company will utilize the stakeholder process to seek input regarding possible improvements including a program for new commercial/industrial construction, implementing measures geared toward agricultural customers, and initiatives targeted toward high-value market subsets such as supermarkets or data centers. Since the Company faces the risk of penalties in the event of noncompliance with the mandates of Act 129, the Company may not implement all Plan improvements as suggested by parties participating in collaborative discussions.

Met Ed’s Revised Plan at 17, Penelec’s Revised Plan at 17, and Penn Power’s Revised Plan at 16. This paragraph was included in section 1.1 of each Revised Plan under the subheading Stakeholder Input.

No comments were received pertaining to this aspect of the Revised Plans.

##### (3) Disposition

We find that the language included in the Revised Plans of Met Ed, Penelec and PennPower complies with the directives contained in our *October 2009 Order* regarding the stakeholder process. Therefore, we see no reason to modify the Companies’ Revised Plans with regard to the stakeholder process.

## B. Cost Issues

### 1. Plan Cost Issues

Each EE&C plan must include an analysis of the EDC’s administrative costs, 66 Pa. C.S. § 2806.1(b)(1)(i)(K), as well as an estimate of the total cost of implementing the measures in the plan. 66 Pa. C.S. § 2806.1(b)(1)(i)(F). The total cost of the plan cannot exceed 2% of the EDC’s total annual revenue as of December 31, 2006. 66 Pa. C.S. § 2806.1(g). In addition, Act 129 states “no more than 2% of funds available to implement a plan under this subsection shall be allocated for experimental equipment or devices.” 66 Pa. C.S. § 2806.1(b)(1)(iii).

#### a. Consumer Education Outreach Costs

##### (1) *October 2009 Order*

The OCA objected to the Companies’ original proposals regarding consumer education outreach costs. The OCA argued that the costs of implementing a consumer education program are costs of implementing the Plans and should be funded by monies collected pursuant to the Act 129 cost recovery mechanism, subject to the 2% cap. Under FirstEnergy’s proposal, however, the Companies would collect some consumer education costs outside of the 2% cap. *October 2009 Order* at 69.

We determined that, to the extent that an EDC educates consumers about its EE&C Plan, those costs are marketing expenses that should be included in the Companies’ Act 129 Plans. These costs are subject to the 2% cap. *October 2009 Order* at 70.

We noted that, for Penn Power, the Plans’ consumer education program focused entirely on the Company’s EE&C Plan. As a result, we directed this company to include all of the costs of its consumer education program in the costs of implementing Act 129. For Met Ed and Penelec, in contrast, the consumer education campaign served a dual purpose: increasing consumer awareness about the transition to market-based rates and educating consumers about the availability of EE&C programs. As a result, we found that only a portion of these costs are properly attributed to the implementation of Act 129 Plans. Therefore, we directed Met Ed and Penelec to track these expenses proportionally for reporting and reconciliation purposes. *October 2009 Order* at 70.

##### (2) Positions of the Parties

 Each of the Revised Plans includes the following statement:

The Company will track consumer education expenses to determine the portion attributable to the transition to market-based rates and the portion attributable to the implementation of Act 129 Plans, only the portion which educates consumers about the availability of EE&C programs will be recovered through the EEC-C Rider and subject to the 2% cap.

Met Ed’s Revised Plan at 16, Penelec’s Revised Plan at 16, Penn Power’s Revised Plan at 15.

No Parties filed comments regarding this aspect of the Revised Plans.

##### (3) Disposition

We find that the Revised Plans’ provisions regarding consumer education and outreach costs comply with the *October 2009 Order*. We see no need to order further modifications to this aspect of the Revised Plans, but we note that the Companies’ allocation methodology will be reviewed by the Commission at each of the interim annual cost recovery filings.

#### b. Compliance with the Two Percent Cap

##### (1) *October 2009 Order*

In our *October 2009 Order*, we approved the Companies’ proposed levelized cost recovery plan (with certain modifications) after finding that a levelized cost recovery plan is consistent with the applicable sections of Act 129 as well as Section 1307(e) of the Public Utility Code (Code), 66 Pa. C.S. § 1307(e)(3). *October 2009 Order* at 72-73.

The Companies’ September 21, 2009 Plans included a contingency reserve for unforeseen events that might arise during the effective period of the Plans. We disallowed the Companies’ contingency reserve after finding that the inclusion within rates of such unmeasurable and unforeseen costs would be unjust and unreasonable. We also observed that the existence of a contingency reserve might conflict with the Commission’s holding that an EDC cannot shift program funds within a customer class, or between customer classes without prior Commission approval.[[19]](#footnote-19) *October 2009 Order* at 94-95.

 We further found that the Plans of Met Ed and Penelec complied with the 2% cap as defined by the Act, but it found that the Plan of Penn Power did not appear to comply with the 2% cap. We noted, however, that the removal of the contingency reserve from Penn Power’s total cost might bring Penn Power’s Plan into compliance with the 2% cap as defined by the Act. We specifically directed the Companies to address this issue in their Revised Plans and noted that we would address this topic further in the instant Opinion and Order. *October 2009 Order* at 94-95.

##### (2) Positions of the Parties

The following chart presents the Companies’ Revised total plan costs as compared to the 2% cap.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Met Ed | Penelec | Penn Power |
| 2% Cap[[20]](#footnote-20) | $99,467,577 | $91,898,968 | $26,639,155 |
| Total Revised Claim[[21]](#footnote-21) | $89,248,131 | $79,002,630 | $26,217,152 |
| $ Under 2% Cap | $10,183,446 | $12,896,338 | $422,003 |

No Parties filed comments regarding this aspect of the Revised Plans.

##### (3) Disposition

Based upon our review of the Companies’ Revised Plans, we conclude that the total cost of each Company’s Revised Plan is under the 2% statutory cap. Accordingly, we find that this aspect of the Revised Plans is in compliance with the Act and the directives contained in the *October 2009 Order* regarding this issue.

### 2. Cost Effectiveness/Cost-Benefit Issues

Each EDC must demonstrate that the plan is cost effective using a Total Resource Cost (TRC) Test approved by the Commission. 66 Pa. C.S.
§ 2806.1(b)(1)(i)(I). In addition, the Commission’s EE&C Program must include an analysis of the cost and benefit of each plan, in accordance with the TRC Test approved by the Commission. 66 Pa. C.S. § 2806.1(a)(3).

 In the *Implementation Order*, we addressed the TRC Test and its role in the design of the EDC’s EE&C plans as follows:

The Commission directs that EDCs evaluate the cost effectiveness of each of its energy efficiency or demand reduction programs using the TRC test to be set forth in the version of the *California Manual* adopted by this Commission. The TRC test will take into account the combined effects of a program on both participating and non‑participating customers based on the costs incurred by the EDC and participating customers. In addition, the Commission expects the benefits calculated in the TRC test will include the avoided supply costs, such as the reduction in transmission, distribution, generation and capacity costs valued at marginal cost for the periods when there is a consumption reduction. The avoided supply costs should be calculated using net program savings, savings net of changes in energy use that would have happened in the absence of the program. The persistence of savings over time should also be considered in the net savings.

The Commission further expects that the costs calculated in this test will include the program costs paid by the utility and the participants, plus the increase in supply costs for the periods in which consumption is increased. Thus, for example, all equipment, installation, operation and maintenance costs, cost of removal (less salvage value), and administrative costs, regardless of who pays for them, should be included.

*Implementation Order* at 15.

 The particular requirements and testing constraints for the EDCs’ application of the TRC Test to their respective EE&C Plans are set forth in *Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test*, Docket No.

M-2009-2108601 (Order entered June 23, 2009)*.* Also, it must be verified that the FirstEnergy Companies’ EE&C Plans pass the TRC Test with a total plan cost benefit ratio greater than 1.0. *Implementation Order* at 16.

#### a. *October 2009 Order*

 In the *October 2009 Order*, we found that the Plans satisfied the required methodology for TRC calculations and that the resulting TRC values passed the Commission’s TRC Test as set forth in the *Implementation Order*. In the *October 2009 Order*, we noted that issues related to the TRC Test, such as net-to-gross ratio, would require ongoing adjustments to the Plans’ TRC Tests. We also determined that these issues would be dealt with by a stakeholder process convened by Commission staff. Due to this commitment to resolve ongoing issues, we found that it would be reasonable to require the Companies to supply updated TRC analyses as part of the annual reporting process. *October 2009 Order* at 76-78.

#### b. Positions of the Parties

The Revised Plans did not change the methodology for calculating the TRC. The Revised Plans of Met Ed, Penelec and Penn Power calculate overall TRC Test values of 2.46, 2.32, and 2.08, respectively. Met Ed’s Revised Plan at 21, Penelec’s Revised Plan at 22, and Penn Power’s Revised Plan at 20. The Companies also provided updated TRC calculations for all programs and customer classes. Met Ed’s Revised Plan at 124-129 (Tables 7A-7E), Penelec’s Revised Plan at 125-130 (Tables 7A-7E), and Penn Power’s Revised Plan at 116-122 (Tables 7A-7E).

No Parties filed any comments regarding the Plans’ TRC Test calculations.

#### c. Disposition

We find that the Revised Plans’ overall and programmatic TRC calculations continue to meet the requirements of the TRC Test as set forth in the *Implementation Order* at 16. The overall TRC for Met Ed’s Revised Plan increased slightly, while the overall TRCs for Penelec’s and Penn Power’s Revised Plans remained unchanged. Several program-specific TRCs changed minimally in the Revised Plans due to modifications required by our *October 2009 Order*, but they continued to meet the TRC requirements. We also find that the Revised Plans have complied with our requirement that updated TRC calculations be included in the Companies’ annual reporting process. Met Ed’s Revised Plan at 111-112, Penelec’s Revised Plan at 111-112, Penn Power’s Revised Plan at 103-104.

We note, however, that the Revised Plans include two additional rate classes, street lighting and non-profit. We find that the Companies’ TRC calculations should provide more programmatic detail regarding these additional rate classes. The Companies are directed to include specific line items in the TRC calculations for Governments/Non-profits for: (a) programs aimed at the street lighting customer class,
(b) programs aimed at the non-profit customer class, and (c) programs aimed at all remaining government/non-profit customers. Met Ed’s Revised Plan at 129 (Tables 7E); Penelec’s Revised Plan at 130 (Tables 7E); Penn Power’s Revised Plan at 122 (Tables 7E).

### 3. Cost Allocation Issues

With regard to cost allocation, the Commission’s EE&C Program is required to “ensure that measures approved are financed by the same customer class that will receive the direct energy and conservation benefits.” 66 Pa. C.S. § 2806.1(a)(11). The Parties addressed this issue in the context of cost recovery. As a result, cost allocation will be addressed below.

### 4. Cost Recovery Issues

Act 129 provides that an EDC “shall recover on a full and current basis from customers, through a reconcilable adjustment clause under Section 1307, all reasonable and prudent costs incurred in the provision or management of [an EE&C] plan.” 66 Pa. C.S. § 2806.1(k). The Act also states:

The plan shall include a proposed cost-recovery tariff mechanism, in accordance with Section 1307 (relating to sliding scale or rates; adjustments), to fund the energy efficiency and conservation measures and to ensure full and current recovery of the prudent and reasonable costs of the plan, including administrative costs, as approved by the commission.

66 Pa. C.S. § 2806.1(b)(1)(i)(H).

#### a. Customer Class Allocations

##### (1) Government/Non-Profit Costs

###### (A) *October 2009 Order*

Section 2806.1(a)(11) of the Act requires EE&C measures to be financed by the same customer class that receives the direct energy and conservation benefits of those measures. In the *October 2009 Order*, we interpreted Section 2806.1(a)(11) to mean that the costs of measures benefitting governments, school districts, institutions of higher education and non-profit entities must be assigned in a reasonable manner to the rate class(es) in which those customers are embedded. If a utility did not have a separate rate class that only included units of government, school districts, institutions of higher education and non-profit entities prior to the effective date of Act 129, the Commission would not mandate that the utility re-write its tariff to create such a rate class because such an undertaking would impose costs on utilities (and their ratepayers) without enhancing energy efficiency or reducing energy consumption. *October 2009 Order* at 80-81.

We found that FirstEnergy had not complied with Section 2806.1(a)(11) because the residential customer class included customers receiving service under tariffs that only apply to certain non-profit entities, whereas the costs of programs for such entities were assigned to the commercial customer class. We directed FirstEnergy to establish a separate cost recovery group for Government/Non-Profit customers in its Revised Plans. *October 2009 Order* at 81-82.

The OSBA’s Petition for Reconsideration argued that the *October 2009 Order* was ambiguous. The OSBA asked the Commission to find that, if the *October 2009 Order* does not require a separate cost recovery group to include all government/non-profit customers, the Commission should recognize Lighting as a separate class for purposes of cost recovery. Petition for Reconsideration at 3, 6. We denied reconsideration, finding that the allocation of lighting costs was not ripe for determination at that time. *December 2009 Order* at 6.

###### (B) Positions of the Parties

The Companies’ Revised Plans establish two additional cost recovery classes that include costs associated with EE&C programs for Government/Non-Profit customers currently receiving service on rate schedules that only apply to governments or non-profit organizations. According to the Companies, the remainder of the EE&C measures benefitting governments, school districts, institutions of higher education and non-profit entities are assigned in a reasonable manner to the rate class(es) in which those customers are embedded. FirstEnergy’s Reply Comments at 5.

The first new recovery group is for nonprofit organizations[[22]](#footnote-22) and is comprised of the following:

Penn Power: Community and Customer Partnership Provision Public or Non-Profit Organization Rate (System Rate PNP) and Rate GS Special Provision for Volunteer Fire Companies, (System Rate GSR) Non-Profit Senior Citizens Centers, (System Rate GSR) Non-Profit Rescue Squads and Non-Profit Ambulance Services.

Penelec: Rate H-All Electric School, Church and Hospital Rate (grandfathered since March 29, 1971) and Rate GS-Volunteer Fire Company and Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate.

Met Ed: Rate MS-Municipal Service Rate (grandfathered since October 19, 1983) and Rate GS - Volunteer Fire Company and Non-Profit Ambulance Service; Rescue Squad and Senior Center Service Rate.

FirstEnergy’s Reply Comments at 6.

The second new recovery group is for municipal street lighting and is comprised of the following:

Penn Power: Tariff Schedules SV (Sodium Vapor), SVD (Sodium Vapor – Dividend Ownership) and SM (Mercury Vapor).

Penelec: High Pressure Sodium Vapor Street Lighting and Municipal Street Lighting.

Met Ed: Street Lighting and Ornamental Street Lighting.

FirstEnergy’s Reply Comments at 6, note 11.

The OSBA filed Comments on the Revised Plan before we issued the *December 2009 Order*. Those comments state “if the Commission did not intend that the Companies create separate classes for all Government/Non-Profit entities, the OSBA is satisfied with the changes made by the Companies.” OSBA Comments at 8.

###### (C) Disposition

The *December 2009 Order* stated that the “*October 2009 Order* specifically rejected the OSBA’s broad argument that 66 Pa. C.S. § 2806.1(a)(11) requires the creation of a separate rate class for Government/Non-Profit entities.” *December 2009 Order* at 6. Therefore, we believe OSBA has no objection to the Revised Plans’ allocation of costs among customer classes.

Based upon our review of the Companies’ Revised Plans, we find that the Companies have complied with our *October 2009 Order.* Non-profit and municipal customers currently receiving service under tariffs that only apply to such customers are no longer included in other rate classes. As a result, those energy and conservation benefit measures that directly benefit these customer classes will be financed by these customers. The remainder of the EE&C measures benefitting governments, school districts, institutions of higher education and non-profit entities are assigned in a reasonable manner to the rate classes in which those customers are embedded.

##### (2) kWh Energy Charge Versus a kW Demand Charge for Large C&I Customers

###### (A) *October 2009 Order*

 FirstEnergy’s initial cost assignments to Large C&I customers were based upon a kWh energy charge. FirstEnergy had also proposed to file customer class specific 1307(e) reconciliation statements annually to address the cumulative over/under collections of the EE&C charges on a customer class basis. FirstEnergy Statement No.
3-R at 7-8; *October 2009 Order* at 83.

 We rejected the Companies’ proposed kWh recovery methodology, as it pertains to Large C&I customers, *inter alia*, because it would assign a greater cost burden to an EDC’s largest customers regardless of the actual benefit received through energy efficiency and demand reduction programs designed for their class. *October 2009 Order* at 84. We directed Met Ed and Penelec to adopt an EE&C Plan demand charge based on a customer’s PJM Peak Load Contribution (PLC) as the cost recovery mechanism for its Large C&I customers.[[23]](#footnote-23) The Commission then directed Penn Power to adopt a comparable cost recovery mechanism when it joins PJM. In the meantime, Penn Power’s demand charge is to be based on the monthly kW used by Large C&I customers, or a Peak Load Contribution (PLC) equivalent should such determinant become available in the future in the MISO market. *October 2009 Order* at 85-86.

###### (B) Positions of the Parties

Met Ed and Penelec assert in their Revised Plan that they adopted a demand charge for the industrial customer class. Cover letter to Revised Plans at 2. The revised tariff sheets for Met Ed and Penelec state that the Peak Load Contribution (PLC) is a customer’s contribution to a zone’s normalized summer peak load, as estimated by the Company. Met Ed’s Revised Plan, Appendix H at 4 and Penelec’s Revised Plan, Appendix H at 4. The billing rate is calculated on a kW basis.

###### (C) Disposition

We find that Met Ed and Penelec have complied with our directive on this issue. The *October 2009 Order* stated that the PJM PLC is determined based on the customer’s electricity demand during the five PJM peaks of the prior year. The two Companies’ definition of Peak Load Contribution as “A Customer’s contribution to a zone’s normalized summer peak load, as estimated by the Company” is acceptable. It should be noted that it is the responsibility of each Company to allocate the PJM-provided PLC among its customer classes. Therefore, we shall accept Met Ed’s and Penelec’s revision.

#### b. Cost Recovery through a Separate Surcharge or Within Distribution Rates

####

##### (1) *October 2009 Order*

FirstEnergy proposed three separate line item surcharges for each of its distribution companies to recover the costs of their respective EE&C Plans. *October 2009 Order* at 86. We found that, consistent with the current Commission-approved approach regarding Section 1307(e) cost recovery mechanisms, such as the Universal Service Funding Mechanism and the Universal Service Program Long Term Evaluator, FirstEnergy’s EE&C Plan costs instead should be recovered in the distribution rate on customers’ bills. *October 2009 Order* at 88.

We did, however, make an exception for both the commercial and industrial customer classes. The Commission reasoned that the EE&C program costs are material and may result in a significant rate increase. Therefore, commercial and industrial customers might view this as a distribution rate increase if the charge is buried in the distribution rate. In order to address the need in the current economic environment for the itemization and identification of costs for sophisticated business operators, the Commission approved the Companies’ proposal to list its EEC-C Rider as a separate line item on commercial and industrial customers’ bills. *October 2009 Order* at 88-89.

##### (2) Positions of the Parties

In the Overview section of the Revised Plans, the Companies state that each Revised Plan (a) incorporates recovery of the approved EE&C costs through distribution rates for residential customers, and (b) collects approved EE&C costs through a separate line item on customers’ bills for commercial and industrial (but not residential) customers. Met Ed’s Revised Plan at 2, Penelec’s Revised Plan at 2, and Penn Power’s Revised Plan at 2.

##### (3) Disposition

We will require the Companies to revise and resubmit their Revised Plans with regard to this issue. Although the Companies revised their Plans to create two additional cost recovery classes, our review of the Revised Plans fails to locate any provision indicating how approved EE&C costs will be recovered for the new non-profit and street lighting customer classes. The Companies shall address this deficiency in the Revised Plan that is to be filed within sixty days of the date of entry of this Opinion and Order.

#### c. Interest Associated with the Recovery of Start-up Costs

##### (1) *October 2009 Order*

FirstEnergy proposed to collect interest on administrative start-up costs through the EEC-C Riders. Specifically, FirstEnergy proposed amortizing the start-up costs for each of the Companies, with interest compounded at the legal rate of 6%, 41 P.S.§ 202, over the seven-month period ending May 31, 2010. FirstEnergy St. 3 at 7-8. The *October 2009 Order* denied recovery of interest on FirstEnergy’s start-up costs. The Commission agreed with the OCA that it is unreasonable to charge interest on this one cost component without also crediting customers with interest on over-collections in the early years of the Companies’ Plans. *October 2009 Order* at 90-91.

##### (2) Positions of the Parties

The Companies modified their Plans to remove the computation of interest on administrative start-up costs. Specifically, each of the Companies has stricken the following language from its EEC-C Rider:

Interest will be calculated monthly on the average of the beginning and ending of month balance of these costs incurred in the determination of the monthly amortized amount. The interest shall be computed at the legal rate determined pursuant to 41 P.S. § 202.

Met Ed’s Revised Plan, Appendix H at 3; Penelec’s Revised Plan, Appendix H at 3; Penn Power’s Revised Plan, Appendix H at 3.

No Parties filed comments relating to this aspect of the Revised Plans.

##### (3) Disposition

We find that the Companies have complied with our directive to exclude the computation of interest on administrative start-up costs. Accordingly, we approve the Companies’ Revised Plans with regard to the recovery of start-up costs.

#### d. Required Bidding of Met Ed and Penelec’s Demand Response Measures into PJM’s Reliability Pricing Model Auction

#####  (1) *October 2009 Order*

Beginning with the Auction conducted in May 2009, PJM has modified its RPM auction process to allow for the inclusion of energy efficiency and demand response resources. Qualifying energy efficiency and demand response resources can now bid into the PJM auction as a capacity resource and, if cleared, receive capacity payments. First Energy agreed with the OCA’s recommendation that Met Ed and Penelec (and Penn Power, when it joins PJM) should bid their demand response measures into the PJM RPM. It was also agreed that Met Ed and Penelec should recover the reasonable costs of participation in the PJM RPM auction, and that the savings credited to ratepayers as a result of their participation should be reduced accordingly. FirstEnergy estimated that approximately 15% of the total RPM capacity payments received will be retained to cover its administrative and credit requirement costs. The Commission stated that it agreed with the OCA’s recommendation and expects that these Companies will take full advantage of savings made available from PJM programs. *October 2009 Order* at 92.

##### (2) Positions of the Parties

The Overview to each Revised Plan states that the plan bids residential direct load control programs into the applicable PJM RPM auctions. Met Ed’s Revised Plan at 2; Penelec’s Revised Plan at 2; Penn Power’s Revised Plan at 2. In addition, the description of each Company’s residential sector programs states:

The Company will bid their Residential Direct Load Control programs into the PJM Reliability Pricing Model (RPM). The revenues received by the Company, if any, from bidding and clearing [R]esidential Direct Load Control programs into the applicable RPM auctions will be netted against the program costs, including but not limited to, administration, contracted services, credits provided to customers, and PJM penalties for underperformance.

Met Ed’s Revised Plan at 41, Penelec’s Revised Plan at 41, and Penn Power’s Revised Plan at 39.

##### (3) Disposition

We find that the Revised Plans of Met Ed and Penelec comply with the *October 2009 Order’s* directive on this issue. We simply note that Penn Power is not currently in the PJM. We direct Penn Power to revise its EE&C Plan to indicate that this provision will apply when Penn Power joins the PJM.

#### e. EE&C Plans and Rate Base Proceedings

##### (1) *October 2009 Order*

The OTS recommended that all capital assets (and associated depreciation) funded by EE&C revenues should be excluded from base rates and not included in any future rate base claim. FirstEnergy responded that all EE&C Plan costs and revenues included in the Companies’ EEC-C Riders will be excluded from distribution base rate treatment and subject to Commission review and audit. The *October 2009 Order* clarified that capital costs recovered by the Companies through the EEC-C rider will not be included in future rate case proceedings. *October 2009 Order* at 93.

##### (2) Positions of the Parties

The Companies have added the following language to their respective Plans regarding this issue:

All Plan costs (net of tax) and revenues included in the Company’s EE&C revenues will be excluded from distribution base rate treatment and subject to Commission review and audit. To the extent that the Company is reimbursed through the EEC-C Rider for Company-owned property, it will be treated as a contribution-in-aid-of-construction resulting in a net-of-tax reduction in amounts capitalized for those assets. As a result, these costs will be excluded from rate base in determining future distribution base rate case revenue requirements.

Met Ed’s Revised Plan at 120, Penelec’s Revised Plan at 121, and Penn Power’s Revised Plan at 112.

No Parties commented on this aspect of the Revised Plan.

##### (3) Disposition

We find that the Companies have complied with our *October 2009 Order* on this issue.

#### f. Contingency Reserve

##### (1) *October 2009 Order*

In the *October 2009* Order, we realized that the vast majority of all administrative and common costs are estimated. However, we did not agree with assessing ratepayers for contingencies that the Companies have characterized as unforeseen. We concluded that including unmeasurable, unforeseen costs within rates to be recovered from ratepayers is unjust and unreasonable. Moreover, permitting FirstEnergy to have a contingency reserve would undermine the Commission’s holding prohibiting an EDC from shifting program funds within a customer class, or between customer classes, without prior Commission approval. Accordingly, we disallowed the proposed contingency reserve and ordered the Companies to revise their Plans and their cost recovery mechanisms to remove the contingency reserve from the estimated cost of the Plans and the calculation of the recovery rate. *October 2009 Order* at 94-95.

##### (2) Positions of the Parties

The Overview to each Revised Plan states that the pertinent Company has removed the contingency reserve from the cost recovery mechanism. Met Ed’s Revised Plan at 2, Penelec’s Revised Plan at 2, Penn Power’s Revised Plan at 2. The red-lining in the Revised Plans demonstrates that the Companies deleted several references to the contingency reserve. For example, the Companies deleted a footnote indicating that certain funds were being held back for the purpose of financing changes in the Plan. Met Ed’s Revised Plan at 1, note 2; Penelec’s Revised Plan at 1, note 3; and Penn Power’s Revised Plan at 1, note 3.

The OSBA’s Comments note that the Companies reserve the right to spend up to the 2% cap as necessary to achieve their energy savings targets. Met Ed’s Revised Plan at 2, note 4; Penelec’s Revised Plan at 2, note 4; and Penn Power’s Revised Plan at 2, note 4. The OSBA states that it is not clear what, if any, Commission approval is required prior to the additional spending. The OSBA argues “by reserving the right to spend up to the 2% cap without prior Commission approval, the Companies’ have recreated a *de facto* contingency reserve.” OSBA Comments at 10.

In reply, the Companies state that they agree with the OSBA and that they will follow the process set forth by the Commission in the *October 2009 Order* to request prior Commission approval of Plan modifications, such as increasing the budget of any previously-approved amount or adding a program not previously approved by the Commission. Reply Comments at 7-8.

##### (3) Disposition

In our *October 2009 Order*, we specifically rejected the creation of a contingency reserve. Although the Revised Plans are largely consistent with this conclusion, we conclude that the following language must be stricken from each of the Revised Plans.

The Company has held back a portion of the funds that became available predominantly from the changes in the [Direct Load Control] budgets for the purpose of financing: (i) important programmatic changes; (ii) potential additions that are found to be necessary and/or desirable as the Company and its stakeholders collect and assess key program performance metrics over the course of each program’s deployment and operation; and (iii) unforeseen events that may arise over the next four years. Given the current economic conditions a the State, Federal and global levels, as well as the newness of this entire Act 129 process, this may prove to be a valuable risk management tool that will help to ensure that the Company meets its demand reduction targets.

Met Ed’s Revised Plan at 94; Penelec’s Revised Plan at 94; Penn Power’s Revised Plan at 85. The Companies shall make this change in the Revised Plans to be submitted within sixty days of the entry of this Opinion and Order.

With regard to the OSBA’s argument regarding a *de facto* contingency reserve, in order to avoid ambiguity about the Companies’ ability to modify its Revised Plans without prior Commission approval, we believe it is prudent to require the Companies to include language in the Revised Plans stating that they will seek Commission approval before increasing the cost of their EE&C Plans.

## C. Conservation Service Provider Issues

The Commission’s EE&C Program must include a requirement for the participation of conservation service providers in the implementation of all or part of a plan. 66 Pa. C.S. § 2806.1(a)(10). The Commission is required to establish procedures requiring EDCs to competitively bid all contracts with conservation service providers. 66 Pa. C.S. § 2806.1(a)(7). The Commission is also required to establish procedures to review all proposed contracts with conservation service providers prior to the execution of the contract. 66 Pa. C.S. § 2806.1(a)(8). The Commission has the authority to order the modification of a contract to ensure that plans meet consumption reduction requirements.

Consequently, each EDC must include in its plan a contract with one or more conservation service providers selected by competitive bid to implement all or part of the plan as approved by the Commission. 66 Pa. C.S. § 2806.1(b)(1)(i)(E). The *Implementation Order*, at 25*,* noted that, due to the aggressive design and implementation schedule set forth in Act 129, EDCs were not expected to have all bids for and contracts with conservation service providers completed by the July 1, 2009 plan filing. However, the Commission stated that each filed plan was expected to include at least one contract with a conservation service provider. The *Implementation Order* established the criteria that the Commission will use in approving request for proposals (RFP) procedures and standard form contracts for conservation service providers. *Implementation Order* at 25.

As stated in the *October 2009 Order*, much unnecessary confusion has been caused in this case by the use of the abbreviation “CSP.” This is because “CSP” stands for two distinct terms. A “CSP” under Act 129 is a “conservation service provider,” which is:

An entity that provides information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption and that has no direct or indirect ownership, partnership or other affiliated interest with an electric distribution company.

66 Pa. C.S. § 2806.1(m).

A “CSP” under PJM demand response programs is a “curtailment service provider.” We take judicial notice of PJM’s website pursuant to 52 Pa. Code § 5.408(a), which explains this term:[[24]](#footnote-24)

PJM’s Economic Load Response program enables demand resources to voluntarily respond to PJM locational marginal prices (LMP) by reducing consumption and receiving a payment for the reduction.

\* \* \*

The economic program provides access to the wholesale market to end-use customers through CSPs to curtail consumption when PJM LMPs reach a level where it makes economic sense.

To reduce confusion, this section will refrain from using the abbreviation “CSP.”

Considering that Met Ed and Penelec are located in PJM, but Penn Power is not, the Companies’ Plans are different with regard to conservation service providers and curtailment service providers. This section will discuss the issues that pertain only to Met Ed and Penelec before discussing the issues that pertain only to Penn Power.

### 1. Issues Pertaining only to Met Ed and Penelec

#### a. Met Ed and Penelec as Curtailment Service Providers

##### (1) *October 2009 Order*

In the Plans, Met Ed and Penelec proposed the selection of curtailment service providers to secure and manage demand response programs. These curtailment service providers will register load for commercial, industrial and government sector customers for Met Ed’s and Penelec’s demand response programs. In addition, Met Ed and Penelec proposed acting as curtailment service providers themselves. *October 2009 Order* at 100-101. EnerNOC objected, arguing that Act 129 does not allow an EDC to act as a conservation service provider, as that term is defined in the Act. ClearChoice also objected, claiming that this program will have an adverse impact on competition among curtailment service providers. *Id*. at 102.

The *October 2009 Order* approved the proposal for Met Ed and Penelec to act as curtailment service providers within their demand response programs. It also ordered these Companies to track the amounts received in payments from PJM, the amounts retained for administrative and other costs, the amounts passed on to customers, and the actual administrative, marketing and credit costs associated with this program. We ordered Met Ed and Penelec to include this data in their annual reports. *Id*. at 103.

##### (2) Positions of the Parties

The Revised Plans of Met Ed and Penelec state:

The Company will track the amount it receives in payments from PJM, the amounts it retains for administrative and other costs, the amounts passed on to customers, and the actual administrative, marketing and credit costs associated with this program. This information will be included as part of the Company’s annual filing.

Met Ed’s Revised Plan at 86, Penelec’s Revised Plan at 86.

##### (3) Disposition

With regard to Met Ed and Penelec acting as curtailment service providers in PJM, we find that Met Ed and Penelec have revised their Plans in accordance with the *October 2009 Order*.

#### b. Credit Requirements

##### (1) *October 2009 Order*

Met Ed and Penelec proposed credit requirements for curtailment service providers who participate in their demand response programs. EnerNOC supported these credit requirements, but ClearChoice and MEIUG *et al.* opposed them on the ground that the credit requirements might limit the number of curtailment service providers who participate in the programs. We rejected the credit requirements because the Companies failed to prove that they are reasonable. We specifically noted that this conclusion was based on the evidence in the record and was without prejudice to the Companies’ right to propose credit requirements in the Revised Plans so long as the Companies provide adequate justification for these requirements. *October 2009 Order* at 111-112.

#####  (2) Positions of the Parties

 Met Ed and Penelec deleted the credit requirements for their demand response programs. Met Ed’s Revised Plan at 76, and Penelec’s Revised Plan at 77-78. No Parties commented on this aspect of the Revised Plans.

#####  (3) Disposition

 We find that the Revised Plans of Met Ed and Penelec comply with the *October 2009 Order’s* directive to delete the credit requirement from their demand response programs.

###

### 2. Issues Pertaining only to Penn Power -- Penn Power’s Proposal to Use Electricity Generation Suppliers

#### a. *October 2009 Order*

#####

Penn Power proposed entering into agreements with Electricity Generation Suppliers (EGSs) providing peak load reductions up to the contracted MWs. Penn Power stated that it would use the PJM protocol for Economic Load Response to measure implementation of the program, unless and until MISO adopts a demand response program. EnerNOC recommended using curtailment service providers rather than EGSs. The Companies responded that this recommendation should not be adopted because Penn Power is currently a member of MISO, which does not recognize the concept of a curtailment service provider. The Commission rejected Penn Power’s proposal because the Commission favors an inclusive policy regarding the types of conservation service providers, as that term is defined in Act 129, who can serve as demand response providers. The Commission directed Penn Power to revise its Plan to open its demand response program to conservation service providers. *October 2009 Order* at 114-115.

#### b. Positions of the Parties

 In its Revised Plan, Penn Power struck all pertinent references to EGSs and replaced them with a reference to conservation service providers. Penn Power Revised Plan at 75-78. No Parties commented on this aspect of the Revised Plan.

#### c. Disposition

 We accept the revisions made to Penn Power’s Commercial Industrial CSP Mandatory and Voluntary Curtailment Program. As previously noted, Penn Power intends to join PJM in the near future. Penn Power is directed to modify its demand response program to mirror those of Met Ed and Penelec when it joins PJM.

## D. Implementation and Evaluation Issues

### 1. Monitoring and Reporting Issues

The Commission’s EE&C Program is to include an evaluation process, including a process to monitor and verify data collection, quality assurance and the results of each plan and the program. 66 Pa. C.S. § 2806.1(a)(2). Consistent with this requirement, each EDC’s Plan is to “explain how quality assurance and performance will be measured, verified and evaluated.” 66 Pa. C.S. § 2806(b)(1)(i)(C). Each EDC is also required to submit an annual report to the Commission relating to the results of its EE&C Plan. 66 Pa. C.S. § 2806.1(i)(1).

#### a. *October 2009 Order*

 In our *October 2009 Order*, we noted that the Companies were still in the process of developing their tracking and reporting systems. According to the Plans, these systems were expected to be in place by November 1, 2009. We directed the Companies to provide the Commission with an update on the process of developing their tracking and reporting systems. *October 2009 Order* at 119-120.

#### b. Positions of the Parties

 According to the Revised Plans, on May 15, 2009, the Companies issued a Request for Information (RFI) to ten potential bidders for services relating to reporting and tracking activities. Responses were received from seven potential bidders. Upon review of the RFI responses and additional information gathered from the industry, the Companies developed a Request for Proposal (RFP) with more defined requirements. Proposals were solicited from the list of conservation service providers registered in the Commonwealth. The Companies are currently evaluating proposals received from nine suppliers. Met Ed Revised Plan at 107, Penelec Revised Plan at 107, and Penn Power Revised Plan at 99.

 The Revised Plans indicate an increase in costs for tracking and reporting. According to Table 6B in the respective plans, Met Ed’s costs increased from $177,765 to $914,220, Penelec’s costs increased from $147,105 to $756,540, and Penn Power’s costs increased from $25,130 to $129,240. Met Ed’s Revised Plan at 117-118, Penelec’s Revised Plan at 118-119, and Penn Power’s Revised Plan at 109-110. The Companies state that the increased budget is a result of additional cost information obtained through bids to provide a tracking and reporting system.

 OCA commented that this is a substantial increase from the original estimate of costs. OCA Comments at 2-3. OCA submits that the Companies should be prepared to explain the reasons for the changes, and the best way to move forward, as part of the first stakeholder collaborative meeting regarding their EE&C Plans. *Id*. at 1.

#### c. Disposition

As required in our *October 2009 Order*, the Companies provided the Commission with an update on the development of their reporting and tracking systems. *October 2009 Order* at 119-120. Considering that the reporting and tracking systems are not yet in place, the Companies are directed to provide the Commission with a further update on these systems in the Revised Plans that must be filed within sixty days of the date of entry of this Opinion and Order. We will address this topic further based on the information in the Revised Plans.

With regard to the projected cost of these systems, we conclude that, although the costs are significantly higher than first estimated, the revised cost information is a result of more recent information regarding what vendors are charging for reporting and tracking system services of this magnitude. We note, however, that actual expenditures for these systems will be subject to review during the annual review and reconciliation process.

### 2. Evaluation Issues

As stated above, the Commission’s EE&C Program is to include an evaluation process, including a process to monitor and verify data collection, quality assurance and the results of each plan and the program. 66 Pa. C.S. § 2806.1(a)(2). Consistent with this requirement, each EDC’s Plan must require an annual independent evaluation of its cost-effectiveness as well as a full review of each five-year plan. To the extent possible, the Plan must also state how it will be adjusted on a going-forward basis as a result of the evaluation. 66 Pa. C.S. § 2806.1(b)(1)(i)(J).

#### a. *October 2009 Order*

####

In our *October 2009 Order*, we directed FirstEnergy to provide more detailed information in the Revised Plans concerning evaluation activities. We stated that we would address this topic further based on the information contained in the Revised Plans. *October 2009 Order* at 123.

We also addressed DEP’s concerns about plan adjustments outside the annual review process. We found that an EDC cannot shift program funds within a customer class, or between customer classes, without prior Commission approval. We outlined the procedures for obtaining Commission approval of a change in an EE&C Plan. *October 2009 Order* at 123-124.

#### b. Positions of the Parties

FirstEnergy increased the evaluation, measurement and verification (EM&V) budget for its three companies from $6 million in the or+iginal Plans to $8 million in the Revised Plans. Met Ed’s and Penelec’s EM&V budgets both increased from $2.6 million to $3.5 million. Met Ed’s Revised Plan at 3, and Penelec’s Revised Plan at 2. Penn Power’s EM&V budget increased from $800,000 to $1 million. Penn Power’s Revised Plan at 2-3. According to the Companies, the increased budget is a result of additional cost information obtained through bids to provide EM&V services, as well as the responsibilities of EDCs and EM&V providers as depicted in the draft statewide evaluation audit plan prepared in conjunction with the Commission staff, the statewide evaluator, and the EDCs.

The Companies state that they will continue to work with the EE&C statewide evaluator to review the assumptions regarding penetration rates, rebate levels, and free ridership associated with compact fluorescent lamp programs. The Companies also state that they will provide updated TRC analyses as part of their annual reporting processes. These annual TRC analyses will facilitate appropriate Plan modifications in a timely manner. Met Ed’s Revised Plan at § 6.3, Penelec’s Revised Plan at § 6.3, and Penn Power’s Revised Plan at § 6.3. The OCA did not comment on the overall EM&V budget, nor did the OCA comment on the adequacy of the information provided in the Revised Plans regarding evaluation activities.

OSBA, however, commented that the Revised Plans appear to be inconsistent with the *October 2009 Order’s* conclusion that an EDC cannot shift program funds within a customer class, or between customer classes, without prior Commission approval. OSBA Comments at 8. According to the Revised Plans, if it is found that one or more of the Companies’ Programs are not meeting expectations, each of the Companies, independently, propose to take one or all of the following actions: (1) shift the focus of underperforming programs to measures that have a higher adoption rate; (2) alter the program delivery processes utilized in order to enhance market penetration;
(3) investigate through further surveys, customers’ issues, and modify delivery based upon those survey results; (4) shift program delivery to more aggressively promoted or perhaps rebated programs; (5) abandon non-performing programs and replace them with other programs enjoying greater success (but only in extreme cases); (6) shift resources to higher performing industrial programs (a rebalancing due to higher than expected response from the industrial class); (7) add delivery channels via the on-line audit program; and/or (8) shift resources between sectors as needed to address demand. Met Ed’s Revised Plan at 96-97, Penelec’s Revised Plan at 96-97, and Penn Power’s Revised Plan at 88-89. The Companies further state that they expect to have the ability to shift resources between programs and/or between customer sectors within the portfolio as needed to meet the goals. Met Ed’s Revised Plan at 97, Penelec’s Revised Plan at 97, and Penn Power’s Revised Plan at 89. The OSBA recommends that the Commission order the Companies to change their Plans to be consistent with the *October 2009 Order*. OSBA Comments at 9.

In reply, the Companies agree with the OSBA regarding the need for Commission approval prior to changes in their EE&C Plans and state that they will follow the process set forth by the Commission in the *October 2009 Order* to request prior Commission approval of Plan modifications. First Energy’s Reply Comments at
7-8.

#### c. Disposition

The OCA’s witness testified at the hearing that a total evaluation budget in the range of one to three percent of total program spending can provide high value returns. OCA St. No. 1 at 36. The evaluation budgets for the Companies, as set forth in the Revised Plans, comprise four to five percent of the entire portfolio budget. Although the cost of the evaluation activities has increased, compared to the Plans considered in the *October 2009 Order*, this change is due to updated information. The Companies increased their EM&V budgets after meetings with Commission staff and the Commission’s statewide evaluator when drafting the statewide evaluation audit plan, which is the blueprint that companies must follow to evaluate their energy program measures. We will approve the evaluation provisions in the Revised Plans, except that we agree with OSBA that the Revised Plans must be modified to acknowledge that an EDC cannot shift program funds within a customer class, or between customer classes, without prior Commission approval.

## E. Other Issues

### 1. Projects Installed Between July 1, 2009, and Commission Approval of the Plans

#### a. *October 2009 Order*

The Companies’ Plans did not seek credit for energy efficiency or demand reduction measures implemented by customers before the date of Commission approval of the Plans. In its Answer and Comments, MIEUG *et al.* recommended grandfathering proposed and existing projects for customers that install, or commit to installing, qualifying equipment or services under an EE&C Plan between July 1, 2009 and final Commission approval of the plan. MIEUG *et al.* Answer and Comments at 25-26. MEIUG *et al.* did not pursue its recommendation further during this proceeding.

In its Main Brief, FDSI argued that the Commission should allow the Companies to “grandfather proposed and existing projects for customers that install or commit to install qualifying equipment or services under its EE&C Plans between July 1, 2009, and Commission approval of the Plans.” FDSI MB at 17. FDSI posited that Act 129 permits such treatment because “energy efficiency and conservation measures” are defined in the Act as those installed on or after the Act’s effective date (November 14, 2008). 66 Pa. C.S. § 2806.1(m). FDSI further asserted that the inclusion of such projects would improve the Companies’ ability to meet their energy efficiency and demand reduction targets. Moreover, according to FDSI, grandfathering such projects would allow customers to take advantage of programs and incentives, such as the federal American Recovery and Reinvestment Act, that may be available between the date the Plans were filed and the date of the Commission’s approval. FDSI MB at 17.

 FirstEnergy did not address the grandfathering proposal in its Main or Reply Briefs.

In the *October 2009 Order*, we stated that we saw no need to grant FDSI’s recommendation. We noted that FirstEnergy had not requested credit for projects that customers installed, or committed to install, between July 1, 2009, and the date that the Commission approves the Plans. Even without such credit, FirstEnergy projected that it would meet the required conservation and demand reduction targets. Consequently, we did not require the Companies to modify their Plans in accordance with FDSI’s recommendation. *October 2009 Order* at 125-126.

#### b. Positions of the Parties

The Overview section of the Revised Plans states that each Company “requests retroactivity to July 1, 2009 for certain programs.” Met Ed’s Revised Plan at 2, Penelec’s Revised Plan at 2, and Penn Power’s Revised Plan at 2. It does so by adding a section called “Other information deemed appropriate” to the descriptions of the pertinent programs. That section contains the following language:

This program is retroactively eligible to customers who install or commit to install qualifying equipment on or after July 1, 2009.

In addition, the Companies propose a revision in Section 7.4 of each Revised Plan, which would permit the recovery of costs incurred during the period July 1, 2009 through May 31, 2013, rather than the period November 1, 2009 through May 31, 2013. Met Ed’s Revised Plan at 119, Penelec’s Revised Plan at 120, and Penn Power’s Revised Plan at 111.

 The following eight programs contain “grandfathering” provisions:

* + - Residential Energy Efficient HVAC Equipment Program; Met Ed’s Revised Plan at 47-49, Penelec’s Revised Plan at 48-50, and Penn Power’s Revised Plan at 46-48.
		- Residential Energy Efficiency Products Program; Met Ed’s Revised Plan at 50-52, Penelec’s Revised Plan at 51-53, and Penn Power’s Revised Plan at 49-51.
		- Residential Multifamily Building Program; Met Ed’s Revised Plan at 59-61, Penelec’s Revised Plan at 60-62, and Penn Power’s Revised Plan at 58-60.
		- C/I Equipment Program; Met Ed’s Revised Plan at 67-69, Penelec’s Revised Plan at 68-70, and Penn Power’s Revised Plan at 66-68.
		- Multifamily Building Program; Met Ed’s Revised Plan at 70-72, Penelec’s Revised Plan at 71-73, and Penn Power’s Revised Plan at 69-71.
		- Industrial Motors and Variable Speed Drives; Met Ed’s Revised Plan at 73-75, Penelec’s Revised Plan at 74-76, and Penn Power’s Revised Plan at 72-74.
		- C/I Performance Contracting; Met Ed’s Revised Plan at 87-88, Penelec’s Revised Plan at 87-89, and Penn Power’s Revised Plan at 79-81.
		- Governmental and Institutional Programs; Met Ed’s Revised Plan at 90-92, Penelec’s Revised Plan at 90-92, and Penn Power’s Revised Plan at 82-84.

No Parties commented on this aspect of the Revised Plans.

#### c. Disposition

We will reject the Companies’ grandfathering proposal because the Companies have failed to carry their burden of proving that the proposal is reasonable. Our review of the record reveals no testimony or exhibits discussing the proposal. The grandfathering provision was not included in the version of the Plans that was subjected to hearings. Moreover, the Companies’ Revised Plans include no explanation for this change or any analysis as to how these modifications will affect the Companies’ projected energy savings or costs.

We are troubled by the inclusion of this proposal, for the first time, in the Revised Plans. The Companies’ Plans were filed July 1, 2009. MEIUG *et al.* filed its Answer and Comments, which included a grandfathering proposal, on August 7, 2009. The Companies modified their Plans by written rebuttal testimony introduced at the hearing on August 31, 2009. FDSI filed its Main Brief, proposing grandfathering, on September 11, 2009. The Companies further modified their Plans on September 21, 2009. The September 21, 2009 version of the Plans explicitly incorporated some of the recommendations made by other parties to this proceeding during settlement negotiations or litigation. Met Ed’s September 21, 2009 Plan at 1, Penelec’s September 21, 2009 Plan at 1, Penn Power’s September 21, 2009 Plan at 1. Nevertheless, the Companies never addressed the grandfathering proposal in its testimony, briefs, or any version of the Plans prior to the Revised Plans submitted on December 2, 2009.

The other Parties to this proceeding were permitted to submit comments on the Revised Plans, but they could not submit testimony. Moreover, we are cognizant of the fact that the Parties had a brief period of time over the holidays to review three Revised Plans containing extensive changes. OCA’s Comments at 1. We further note that the other Parties had no opportunity whatsoever to review and comment on the January 19, 2010 version of the Revised Plans.

Consequently, we shall deny the Companies’ request that certain programs be retroactive to July 1, 2009. The revised EE&C plans to be submitted within sixty days of the entry of this Opinion and Order shall remove all language implementing this proposal. Moreover, we expect that the denial of this proposal will impact the data concerning the pertinent programs (e.g., the proposed costs and energy savings of the pertinent programs), which will, in turn, impact other data shown in the January 19, 2010 Revised Plan (e.g., total projected energy savings, total projected plan costs, and certain TRC Test calculations). We direct the Companies to modify their EE&C plans accordingly or explain why the data do not need to be changed due to our denial of the grandfathering proposal.

### 2. Met Ed’s Request for a Modification of its Residential Direct Load Control Program

#### a. *October 2009 Order*

The OCA contended that Met Ed’s Plan, as originally filed, improperly included spending for the Residential Direct Load Control Program (RDLCP) that would not occur during the period covered by that Plan. OCA MB at 18. Met Ed modified its Plan during the litigation to remove from the budget the costs associated with the RDLCP from the years 2014 to 2024. FirstEnergy St. No. 2-R at 4-5. The funds were reallocated to other programs. The *October 2009 Order* accepted the Company’s proposed reallocation of funds with respect to its RDLCP. *October 2009 Order* at 30.

#### b. Positions of the Parties

Met Ed appears to request Commission approval of a modification in its RDLCP. Specifically, Met Ed proposes to utilize a Smart Grid Integrated Distributed Energy Resource program and will increase the RDLCP budget from $13,536,737 to $15,378,504 in order to match a grant from the U.S. Department of Energy (DOE). Met Ed’s Revised Plan at § 3.2 and Appendices E and F.

The OCA supports Met Ed’s proposal to increase the budget for the RDLCP in order to match a $15 million DOE smart grid grant. The OCA is concerned, however, about Met Ed’s reductions in the RDLCP participation numbers. The OCA submits that Met Ed has cut the participation numbers roughly in half and has accomplished this by an increase in per participant savings. The OCA states that, if Met Ed is proposing to increase the unit cost of the program by a factor of four to gain a doubling of per unit savings, then issues regarding the design and cost effectiveness of the program are raised. The OCA submits that these changes and the resulting issues should be more thoroughly addressed by the Companies during the first stakeholder collaborative meeting. OCA Comments at 2.

#### c. Disposition

After reviewing Appendix E and Appendix F of Met Ed’s Revised Plan, we observe an increase in the per unit savings by a factor of four, in contradiction to the OCA’s assertion that there is a doubling of the per unit savings. When the factor of four increase in the savings per unit is integrated with the decrease of participating customers by one-half, the entire program savings is doubled. This is consistent with the doubling of the total program cost. Therefore, we find that the increase and reallocation of funds by Met Ed sufficiently addresses the concerns outlined by the OCA concerning the RDLCP.

We commend Met Ed for its efforts in obtaining a federal grant to pursue energy efficiency and conservation efforts. We shall approve the requested modification of its RDLCP to enable Met Ed to obtain the matching funds required for this grant.

##

# V. Conclusion

For the reasons set forth above, we will approve in part and reject in part the Revised Energy Efficiency and Conservation Plans submitted by Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company, consistent with this Opinion and Order. Pursuant to 66 Pa. C.S. § 2806.1(e)(2)(ii), the Companies shall file with this Commission and serve on all Parties of record in this proceeding further Revised Energy Efficiency and Conservation Plans consistent with the modifications directed in this Opinion and Order, within sixty days of the entry of this Opinion and Order. Interested parties will have ten days to file comments on the revised portions of the Plans, with reply comments due ten days thereafter. The Commission will approve or reject the further Revised Plans at a public meeting within sixty days of the date of filing of the further Revised Plans. See *Implementation Order* at 12-13. The Companies are permitted to implement any portion of their Plans that has been approved without modification by this Commission in the *October 2009 Order* or this Opinion and Order; **THEREFORE;**

**IT IS ORDERED:**

1. That Metropolitan Edison Company’s Revised Energy Efficiency and Conservation Plan, as filed on January 19, 2010, is approved in part and rejected in part, consistent with this Opinion and Order.

2. That Metropolitan Edison Company shall file with this Commission and serve on all Parties of record in this proceeding a further revised Energy Efficiency and Conservation Plan consistent with the modifications directed in this Opinion and Order, within sixty days of the entry of this Opinion and Order. This filing shall clearly show all changes in the Revised Energy Efficiency and Conservation Plan filed on January 19, 2009.

a. For each deficiency listed in this Opinion and Order, Metropolitan Edison Company shall identify the page(s) in the Revised Plan on which the corresponding revision(s) may be found. These deficiencies are summarized below:

1. From Sections IV.A.6.d. and IV.D.1.c.: The company shall provide updated information regarding its reporting and tracking system.
2. From Section IV.B.2.c.: The company shall include specific line items in the TRC Test calculations for Government/Non-profit organizations for: (a) programs aimed at the street lighting customer class, (b) programs aimed at the non-profit customer class, and (c) programs aimed at all remaining government/non-profit customers.
3. From Section IV.B.4.b.(3): The company shall indicate how approved EE&C costs will be recovered for the non-profit and street lighting classes.
4. From Section IV.B.4.f.(3): The company shall strike language pertaining to a contingency reserve, and shall add language regarding the need for Commission approval before increasing the EE&C Plans’ budget.
5. From Section IV.D.2.c.: The company shall modify its evaluation provisions by adding language acknowledging that an EDC cannot shift program funds within a customer class, or between customer classes, without prior Commission approval.
6. From Section IV.E.1.c.: The company shall remove all provisions making programs retroactive to July 1, 2009. The company shall recalculate the data in the EE&C Plan, as necessary, or explain why the data do not need to be changed.

b. For any change made to the Energy Efficiency and Conservation Plan that is in addition to the changes required by this Opinion and Order, Metropolitan Edison Company shall provide a brief description of and justification for the change. Metropolitan Edison Company shall also identify the page(s) on which each change may be found.

3. That interested parties will have ten days to file comments on the revised portions of Metropolitan Edison Company’s Energy Efficiency and Conservation Plan, with reply comments due ten days thereafter. The Commission will approve or reject the revised portions of the Energy Efficiency and Conservation Plan at a public meeting within sixty days of the date of filing the revised plan.

4. That Metropolitan Edison Company shall submit with its revised Energy Efficiency and Conservation Plan a revised cost recovery mechanism and appropriate tariffs, consistent with the modifications directed in this Opinion and Order.

5. That Metropolitan Edison Company’s request to modify its Residential Direct Load Control Program, as approved by *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company for Consolidation of Proceedings and Approval of Energy Efficiency and Conservation Plans*, Docket No. M-2009-2092222 *et al.* (Order entered October 28, 2009), is approved.

6. That Metropolitan Edison Company is permitted to implement any portion of its Energy Efficiency and Conservation Plan that has been approved without modification by this Commission.

7. That Pennsylvania Electric Company’s Revised Energy Efficiency and Conservation Plan, as filed on January 19, 2010, is approved in part and rejected in part, consistent with this Opinion and Order.

8. That Pennsylvania Electric Company shall file with this Commission and serve on all Parties of record in this proceeding a further revised Energy Efficiency and Conservation Plan consistent with the modifications directed in this Opinion and Order, within sixty days of the entry of this Opinion and Order. This filing shall clearly show all changes in the Revised Energy Efficiency and Conservation Plan filed on January 19, 2010.

1. For each deficiency listed in this Opinion and Order, Pennsylvania Electric Company shall identify the page(s) in the Revised Plan on which the corresponding revision(s) may be found. These deficiencies are summarized below:
2. From Sections IV.A.6.d. and IV.D.1.c: The company shall provide updated information regarding its reporting and tracking system.
3. From Section IV.B.2.c.: The company shall include specific line items in the TRC Test calculations for Government/Non-profit organizations for: (a) programs aimed at the street lighting customer class, (b) programs aimed at the non-profit customer class, and (c) programs aimed at all remaining government/non-profit customers.
4. From Section IV.B.4.b.(3): The company shall indicate how approved EE&C costs will be recovered for the non-profit and street lighting classes.
5. From Section IV.B.4.f.(3): The company shall strike language pertaining to a contingency reserve, and shall add language regarding the need for Commission approval before increasing the EE&C Plans’ budget.
6. From Section IV.D.2.c.: The company shall modify its evaluation provisions by adding language acknowledging that an EDC cannot shift program funds within a customer class, or between customer classes, without prior Commission approval.
7. From Section IV.E.1.c.: The company shall remove all provisions making programs retroactive to July 1, 2009. The company shall recalculate the data in the EE&C Plan, as necessary, or explain why the data do not need to be changed.

b. For any change made to the Energy Efficiency and Conservation Plan that is in addition to the changes required by this Opinion and Order, Pennsylvania Electric Company shall provide a brief description of and justification for the change. Pennsylvania Electric Company shall also identify the page(s) on which each change may be found.

9. That interested parties will have ten days to file comments on the revised portions of Pennsylvania Electric Company’s Energy Efficiency and Conservation Plan, with reply comments due ten days thereafter. The Commission will approve or reject the revised portions of the Energy Efficiency and Conservation Plan at a public meeting within sixty days of the date of filing the revised plan.

10. That Pennsylvania Electric Company shall submit with its revised Energy Efficiency and Conservation Plan a revised cost recovery mechanism and appropriate tariffs, consistent with the modifications directed in this Opinion and Order.

11. That Pennsylvania Electric Company is permitted to implement any portion of its Energy Efficiency and Conservation Plan that has been approved without modification by this Commission.

12. That Pennsylvania Power Company’s Revised Energy Efficiency and Conservation Plan, as filed on January 19, 2010, is approved in part and rejected in part, consistent with this Opinion and Order.

13. That Pennsylvania Power Company shall file with this Commission and serve on all Parties of record in this proceeding a further revised Energy Efficiency and Conservation Plan consistent with the modifications directed in this Opinion and Order, within sixty days of the entry of this Opinion and Order. This filing shall clearly show all changes in the Revised Energy Efficiency and Conservation Plan filed on January 19, 2010.

a. For each deficiency listed in this Opinion and Order, Pennsylvania Power Company shall identify the page(s) in the Revised Plan on which the corresponding revision(s) may be found. These deficiencies are summarized below:

1. From Sections IV.A.6.d. and IV.D.1.c.: The company shall provide updated information regarding its reporting and tracking system.
2. From Section IV.B.2.c.: The company shall include specific line items in the TRC Test calculations for Government/Non-profit organizations for: (a) programs aimed at the street lighting customer class, (b) programs aimed at the non-profit customer class, and (c) programs aimed at all remaining government/non-profit customers.
3. From Section IV.B.4.b.(3): The company shall indicate how approved EE&C costs will be recovered for the non-profit and street lighting classes.
4. From Section IV.B.4.d.(3): The company shall state that it will bid its Residential Direct Load Control Programs into the PJM Reliability Pricing Model upon joining the PJM.
5. From Section IV.B.4.f.(3): The company shall strike language pertaining to a contingency reserve, and shall add language regarding the need for Commission approval before increasing the EE&C Plans’ budget.
6. From Section IV.D.2.c.: The company shall modify its evaluation provisions by adding language acknowledging that an EDC cannot shift program funds within a customer class, or between customer classes, without prior Commission approval.
7. From Section IV.E.1.c.: The company shall remove all provisions making programs retroactive to July 1, 2009. The company shall recalculate the data in the EE&C Plan, as necessary, or explain why the data do not need to be changed.

b. For any change made to the Energy Efficiency and Conservation Plan that is in addition to the changes required by this Opinion and Order, Pennsylvania Power Company shall provide a brief

 description of and justification for the change. Pennsylvania Power Company shall also identify the page(s) on which each change may be found.

14. That interested parties will have ten days to file comments on the revised portions of Pennsylvania Power Company’s Energy Efficiency and Conservation Plan, with reply comments due ten days thereafter. The Commission will approve or reject the revised portions of the Energy Efficiency and Conservation Plan at a public meeting within sixty days of the date of filing the revised plan.

15. That Pennsylvania Power Company shall submit with its revised Energy Efficiency and Conservation Plan a revised cost recovery mechanism and appropriate tariffs, consistent with the modifications directed in this Opinion and Order.

16. That Pennsylvania Power Company is permitted to implement any portion of its Energy Efficiency and Conservation Plan that has been approved without modification by this Commission.

17. That any directive, requirement, disposition or the like contained in the body of this Opinion and Order that is not the subject of an individual Ordering Paragraph shall have the full force and effect as if fully contained in this part.

18. That a copy of this Opinion and Order be served on Steven Pincus, Assistant General Counsel for the PJM Interconnection, LLC and on the Senior Manager of Resource Adequacy for the Midwest Independent Transmission System Operator, Inc.

 **BY THE COMMISSION,**

 James J. McNulty

 Secretary

(SEAL)

ORDER ADOPTED: January 28, 2010

**ORDER ENTERED: January 28, 2010**

1. As discussed further herein, the Companies submitted Revised Plans on December 2, 2009, corrected Revised Plans on December 23, 2009 and further corrected Revised Plans on January 19, 2010. Unless otherwise indicated, the term “Revised Plans” as used here refers to the January 19, 2010 version of the Revised Plans. [↑](#footnote-ref-1)
2. MEIUG, PICA and PPUG are *ad hoc* associations of energy-intensive commercial and industrial customers receiving electric service in FirstEnergy’s service territories. MEIUG, *et al.,* Joint Petition to Intervene at ¶ 3. [↑](#footnote-ref-2)
3. FDSI develops “monitoring and diagnostic solutions for the HVAC industry that are generated from proprietary technologies, services and products that deliver front-line decision support for technicians, contractors, end-users and other stakeholders.” FDSI Petition to Intervene at ¶ 4. [↑](#footnote-ref-3)
4. Direct Energy is an electric generation supplier (EGS) licensed to provide retail electricity supply and related services to commercial, industrial and governmental customers in Pennsylvania. Direct Energy Petition to Intervene at ¶ 1. [↑](#footnote-ref-4)
5. ACORN is “an advocacy and membership organization whose mission is to advocate on behalf of low and lower income persons on numerous consumer issues, including access to and affordability of utility service.” ACORN Petition to Intervene at ¶ 7. [↑](#footnote-ref-5)
6. Rep. George is a customer of FirstEnergy. In addition, Rep. George’s district office receives electric service from FirstEnergy. Rep. George Petition to Intervene at ¶ 7. [↑](#footnote-ref-6)
7. The UGI Distribution Companies provide natural gas distribution services in the FirstEnergy territories. UGI Distribution Companies Petition to Intervene at ¶¶ 3-5. [↑](#footnote-ref-7)
8. Dominion Peoples is a regulated utility providing natural gas service in FirstEnergy’s service territories. Dominion Peoples Petition to Intervene at ¶ 3. [↑](#footnote-ref-8)
9. NFG is a natural gas distribution company whose service territory overlaps the service territories of Penelec and Penn Power. In addition, NFG is a customer of Penelec and Penn Power. Order Granting Petitions to Intervene at 3. [↑](#footnote-ref-9)
10. Constellation is a licensed EGS in FirstEnergy’s service territories. Constellation Petition to Intervene at ¶ 5. [↑](#footnote-ref-10)
11. EnerNOC is an energy services provider operating in Pennsylvania. EnerNOC Petition to Intervene at ¶ 1. [↑](#footnote-ref-11)
12. ClearChoice is a registered CSP providing curtailment services in the Met Ed and Penelec service territories. ClearChoice Petition to Intervene at ¶ 3. [↑](#footnote-ref-12)
13. As used here, a “red-lined” document shows all the differences between one version of a document and a previous version of that same document. [↑](#footnote-ref-13)
14. This proposal is discussed in Section IV.E. [↑](#footnote-ref-14)
15. The Companies’ budgets are discussed, *inter alia*, in Sections IV.B.1.b. and IV.D.1. [↑](#footnote-ref-15)
16. This proposal is discussed in Section IV.E.2. [↑](#footnote-ref-16)
17. PJM Interconnection, LLC. [↑](#footnote-ref-17)
18. Penn Power’s transmission facilities are currently under the operational control of the Midwest Independent Transmission system Operator, Inc. (MISO), but Penn Power has announced that it intends to join PJM in 2011. OCA St. 1 at 42. [↑](#footnote-ref-18)
19. The contingency reserve issue is discussed in greater detail in Section IV.B.4.f. [↑](#footnote-ref-19)
20. Met Ed’s Revised Plan at 4, Penelec’s Revised Plan at 4, and Penn Power’s Revised Plans at 4. [↑](#footnote-ref-20)
21. Met Ed’s Revised Plan at Appendix G, Penelec’s Revised Plan at Appendix G, and Penn Power’s Revised Plan at Appendix G. [↑](#footnote-ref-21)
22. These four types of customers were embedded in the Residential Customer Class. See Supplement No. 51 to Electric Pa. P.U.C. No. 35, Fourth Revised Sheet No. 10, effective June 1, 2008 for Penn Power. [↑](#footnote-ref-22)
23. The PJM PLC is determined based on the customer’s electricity demand during the five PJM peaks during the prior year. *October 2009 Order* at 85. [↑](#footnote-ref-23)
24. <http://www.pjm.com/markets-and-operations/demand-response/dr-energy-market.aspx> [↑](#footnote-ref-24)