ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE CONTINUATION, EXPANSION, AND ENHANCEMENT OF PUBLIC UTILITY ENERGY EFFICIENCY PROGRAMS IN ARKANSAS	))))	DOCKET NO. 13-002-U ORDER NO. 30

ORDER

On April 24, 2015, the following parties to this docket (Joint Parties) submitted *Joint Comments in Response to Order No. 7 Concerning Non-Energy Benefits* (Joint Comments) to the Arkansas Public Service Commission (Commission): the General Staff ("Staff") of the Commission, Entergy Arkansas, Inc. (EAI), Southwestern Electric Power Company (SWEPCO), Oklahoma Gas and Electric Company (OG&E), The Empire District Electric Company (Empire), CenterPoint Energy Arkansas Gas (CenterPoint), SourceGas Arkansas, Inc. (SourceGas, formerly Arkansas Western Gas Company), Arkansas Oklahoma Gas Corporation (AOG), Arkansas Advanced Energy Association, (AAEA), Arkansas Community Action Agencies Association, Inc. (ACAAA), Arkansas Electric Energy Consumers/Arkansas Electric Gas Consumers (Consumers), the National Audubon Society (Audubon), and Sierra Club (collectively, the Parties Working Collaboratively, or the PWC).

In addition to the Joint Comments referenced above, on April 24, 2015, Consumers and the AG (Ratepayers) jointly submitted comments; AAEA, ACAAA, National Audubon, and the Sierra Club (Associations) jointly submitted comments; Staff and all utilities in this proceeding except EAI (Staff/Utility Group) jointly submitted comments; and EAI submitted Comments.

Order No. 7, issued on September 9, 2013, requested that the PWC collaboratively develop, and propose for Commission approval, values for non-energy benefits (NEBS) for inclusion in the Total Resource Cost (TRC) test, which is used for cost-benefit analysis of utility-funded energy efficiency (EE) programs. Order No. 1 in this docket, issued on January 4, 2013, noted that many of the electric and gas utilities in the state already incorporate one or more non-energy benefits into their cost-effectiveness analysis and stated that as a general matter, including all utility and customer costs within the TRC test without considering all utility and customer benefits skews the accuracy of the economic evaluation, when the magnitude of non-energy benefits is significant. Order No. 7 directed the PWC to review the literature on the comfort and health benefits of weatherization and to seek consensus on any recommended, reasonably quantifiable, and significant NEBs for inclusion in program screening. The Commission further stated that the TRC test shall include well-defined NEBs which (a) measurably reduce the use of scarce resources, add significant value or reduce costs; (b) have a quantifiable economic value; and (c) are clearly applicable to the specific program or measure at issue; provided that the PWC shall review the literature on the NEBs of weatherization services and seek consensus on any reasonably quantifiable, significant NEBs for inclusion in program screening for the next three year EE program cycle (now scheduled from 2017-2019).

Positions of the Parties

The PWC indicate that it researched and analyzed the quantification of NEBs in cost-effectiveness testing for the next three-year EE planning cycle, with the facilitation and technical assistance of the Independent Evaluation Monitor (IEM). The PWC submit a report developed by the IEM, Dr. Katherine Johnson: *An Examination of Non-Energy Benefits: Definitions, Approaches and Values Used in Other Jurisdictions* (June 17, 2014) at 3 (IEM Report), which includes a review of the literature on NEBs. Joint Comments at 3, Appendix A to Attachment A, Document 204 in Docket No. 13-002-U. The PWC report that, while some jurisdictions rely on adders of 10 to 15 percent to the value of EE programs to account for the additional value of NEBs, rather than trying to quantify specific values for a variety of NEBs, many PWC participants agreed that such an adder does not fit the Commission's definition of well-defined NEBs. *Id.* at 4. Multiple PWC participants submitted NEB proposals, including a prioritized list submitted by Audubon. *Id.* The PWC state that they agreed to focus on a few of the most important and most quantifiable NEBs, including:

- Avoided "other fuels" consumption;
- Avoided water/sewerage consumption;
- Avoided and deferred equipment replacement; and
- Avoided utility cost of service.

Id. at 4-5. The PWC indicate that they decided early on not to further investigate methods of quantifying avoided utility cost of service because it would require significant research and would be difficult to quantify, and because such avoided costs are comprehended in cost of service updates in general rate proceedings. *Id.* at 5. Regarding savings of "other fuels," the PWC indicate that for programs that save both natural gas and electricity, most Arkansas utilities already account for the benefit of saving both of these fuels, but not propane, if the benefit is not accounted for by another utility. *Id.*

The PWC as a whole do not further agree on an approach to NEBs, but subgroups within the PWC coalesce around the following four recommendations:

1. Recommendation 1: Ratepayers

Ratepayers believe that the PWC should not have submitted a filing because the PWC did not reach consensus regarding NEBs after twelve meetings and conference calls. Ratepayer Comments at 1. The Attorney General maintains that only utility-perspective NEBs are appropriate for inclusion in the TRC test, and then only when they are quantifiable. Ratepayer Comments at 4. Ratepayers recommend (Recommendation 1) that, for the next three-year plan, no NEBs be included in the TRC test for program screening or evaluation. Joint Comments at 6. These parties state that no NEB proposed by any PWC member meets the criteria established by Order No. 7 and that only reductions in utility avoided costs, and not benefits realized by the customer installing the specific measure being evaluated, should be included within the TRC test. *Id.* at 6-7; Ratepayer Comments at 2.

Ratepayers emphasize the Commission's recognition in Order No. 7 that rate impacts are more salient as EE portfolios reach scale, and the provision in Order No. 7 requiring that EE program incentives paid to customers, at the level of individual measures, be constrained by utility system avoided costs (*i.e.,* by PACT analysis, which might properly include utility NEBs but not customer NEBs). Ratepayer Comments at 2-3, referencing Order No. 7 at 51 and 53. Ratepayers maintain that Order No. 7 thereby directed the discussion of NEBs to be tailored towards identifying "utility NEBs but not customer NEBs."

Ratepayers state further that inclusion of NEBs does not comply with Arkansas law or the Commission's *Rules for Conservation and Energy Efficiency* (C&EE Rules). Joint Comments at 7; Ratepayer Comments at 4-5. Ratepayers reference Ark Code Ann. § 23-3-405(a) which provides as follows:

> (a)(1) Except as otherwise stated in this section, [the Commission] is authorized to propose, develop, solicit, approve, require, implement, and monitor measures which cause the companies to incur costs of service and investments which conserve, as well as distribute, electrical energy and existing supplies of natural gas, oil, and other fuels.
>
> (2) After proper notice and hearings, the programs and measures may be approved and ordered into effect by the commission if it determines they will be *beneficial to the ratepayers* of such public utilities and to the utilities themselves. [Emphasis added by Ratepayers.]

Ratepayers state that the majority of utility ratepayers do not participate in the EE programs at issue, noting, for instance, that EAI has 702,000 customers and that approximately 135,000 customers (roughly 19%) or accounts participated in EAI's EE programs during 2014, if one excludes the lighting and appliance program (which are tracked in terms of measures sold rather than customers served). Ratepayer Comments at 5 and FN 1, *referencing* EAI 2014 Annual Report. As such, Ratepayers state that non-participants do not benefit from many of the proposed NEBs that the PWC have discussed. *Id.* at 5

Ratepayers also maintain that inclusion of NEBs in cost-effectiveness screening does not comply with the C&EE Rules, emphasizing that the Rules require that all EE programs should include "a showing of high probability of providing aggregate ratepayer benefits to *the majority* of ratepayers." *Id., referencing* C&EE Rules Section 5.A. (emphasis added by Ratepayers). Ratepayers add that the Rules state that "[a] cost-effective program would be one that has a high probability of providing aggregate ratepayer benefits to *the majority* of utility customers." Ratepayers assert that, since the majority of utility ratepayers in Arkansas do not participate in EE programs, inclusion of NEBs in EE program cost-effectiveness screening would violate the requirement that such programs benefit the majority of ratepayers. *Id.* at 5-6. Ratepayers conclude with the observation that the PWC's protracted discussion of NEBs confirms its position that it is extremely difficult to accurately estimate NEBs, and that inclusion of nebulous factors in cost-effectiveness screening could lead to the approval of ineffective programs or to the awarding of utility incentives for such programs. *Id.* at 6.

2. Recommendation 2: EAI

EAI maintains that cost-benefit tests should be based upon the same criteria that are used in any long-term energy resource decision. EAI at 1. EAI references the Commission's *Resource Planning Guidelines* (RPGs), as follows, for the proposition that the RPGs direct electric utilities to address both supply-side and demand-side resources:

> Resource planning is a utility planning process which requires consideration of all reasonable resources for meeting the demand for a utility's product, including those which focus on traditional supply sources and those which focus on conservation and the management of demand. The process results in the selection of that portfolio of resources which best meets the identified objectives while balancing the outcome of expected impacts and risks for society over the long run.

Docket No. 06-028-R, Order No. 6, Attachment 1 at 1.

EAI emphasizes that the utility remains responsible for resource planning actions and that resource planning should "reflect each utility's unique circumstances and the judgment of its management ..." *Id.*

EAI states that its position regarding NEBs has not changed and that NEBs should be considered when they are quantifiable and material. EAI at 2. EAI adds that, because the TRC looks at costs and benefits relative to all customers, rather than specific customers, NEBs should be included where the benefits apply to all customers and not solely the customer who is receiving the EE incentive or measure. *Id.* at 2; Joint Comments at 7. Including NEBs that accrue to specific customers would disconnect utilities' consideration of demand-side and supply-side resources, according to EAI, because customer-specific benefits would be included only in considering demand-side proposals and not supply-side proposals. *Id.* In order to preserve the relationship between demand-side and supply-side resources in resource planning, EAI urges the Commission to adopt the following definition of NEBs:

> A NEB is any consumer, customer, or ratepayer benefit that is not demonstrated to be energy saving or demand reducing, or that otherwise cannot be quantified as a utility savings that benefits all customers.

EAI at 3.

EAI indicates that this definition should exclude consideration of cost savings associated with customer-specific reduced usage of "other fuels" and water/wastewater because they do not reflect the costs that all of the utility's customers are avoiding. *Id.* EAI recognizes that, while individual customers realize these NEBs, the C&EE Rules direct utilities to evaluate benefits to "customers in the aggregate." *Id., referencing* C&EE Rule 5.A. and 5.C. Like Ratepayers, EAI maintains that, by limiting EE program customer incentives to an amount less than or equal to avoided utility costs, the Commission directed the NEBs discussion to be limited to identifying "utility NEBs, but not customer NEBs." *Id.* at 4. EAI states that most of the proposed customer NEBs do nothing to avoid or delay energy production by a utility and therefore do not provide aggregate benefits to all customers as contemplated within the C&EE Rules. *Id.*

EAI states, however, that costs associated with avoided utility cost of service items (such as reduced costs of meter-reading, late payments, or customer write-downs) could be included in a benefit cost analysis, assuming they can be quantified. *Id.* at 4. EAI notes that such reductions in the cost of service are realized by customers in the aggregate and are thus consistent with the Commission's C&EE Rules. *Id.*

EAI maintains that other program benefits proposed by other parties should not be ignored, but can be included in ways other than inclusion as NEBs. *Id.* EAI states, for instance, that avoided and deferred costs for equipment replacement, and the energy savings associated with reduced water and sewerage treatment, if quantifiable, could be included within the energy savings to be calculated in the TRM, rather than as a NEB. *Id.* at 5. EAI concludes by noting that at the inception of the C&EE Rules, EE could be evaluated on a comparable basis under the Resource Planning Guidelines (RPGs), and that the Commission should follow EAI's NEB recommendations to avoid further disconnection between the comparability of demand-side and supply-side resources in planning. *Id.* at 5-6.

3. <u>Recommendation 3: "Staff/Utility Group"</u>

The Staff/Utility Group recommend that NEBs, both utility and participant, be evaluated individually and included in the TRC test only if they are quantifiable and material. Staff/Utility Group at 1. These parties support inclusion of avoided "other fuels" (electricity and natural gas) savings in cost-effectiveness calculations, noting that these are energy savings that have been included in previous filings approved by the

Commission. *Id.* at 1-2. While CenterPoint has not included avoided electricity costs in its TRC calculations, it supports doing so. *Id.* at 2. These parties maintain that inclusion of "other fuels" savings is consistent with both the California Standard Practice Manual, which is adopted by C&EE Rules Section 6. A. and the National Action Plan for Energy Efficiency. *Id.*

The Staff/Utility Group also supports including avoided water/wastewater costs, provided that the IEM can provide guidance through the Technical Reference Manual (TRM) on how to properly quantify and value these avoided costs. *Id.* at 3. These parties maintain that the provision in Order No. 7 limiting measure incentives to utility system avoided costs (including utility NEBs but not customer NEBs) and ensuring that programs and portfolios pass both the TRC and PAC tests, ensures that EE programs show a "high probability of providing aggregate ratepayer benefits to the majority of rate payers," as required by C&EE Rule 5.A. *Id.* at 3-4. These parties also note that the IEM's review of NEBs clearly indicates that participant NEBs may be considered in the TRC test. *Id.* at 4.

The Staff/Utility Group does not support including avoided or deferred equipment costs as NEBs. *Id.* While the IEM's review categorized such savings as "Operations and Maintenance (O&M) cost savings," and while Audubon put forth a detailed approach for their calculation, the Staff/Utility Group is unaware of any jurisdiction that categorizes these savings as NEBs. *Id.* These parties note that SWEPCO already accounts for avoided measure replacement costs for long-lived items (*i.e.,* LEDs), and that the TRM currently includes guidance for determining the Remaining Useful Life (RUL) of many measures, which is a critical input for Audubon's proposed methodology. *Id.* These parties state however, that the determination of RUL is contingent upon accurate knowledge regarding when the existing measure was installed, which is not always available. *Id.* at 4-5. The Staff/Utility Group therefore states that it is always more conservative to assume in the TRC test that the existing measure was replaced on burnout. *Id.* at 5.

4. Recommendation 4: "Associations"

AAEA, ACAAA, Audubon, and the Sierra Club (Associations) recommend that the following three categories of NEBs be consistently and transparently accounted for in all applications of the TRC test, as it is applied to measures, programs, and portfolios:

- benefits of electricity, natural gas, and liquid propane energy savings;
- benefits of public water and wastewater savings;
- benefits of avoided and deferred equipment replacement costs.

Associations at 1. Associations state that these NEBs are responsive to Orders No. 1 and 7 in this docket; are consistent with accepted standards of industry practice; advance the policy objectives set forth in the Commission rules and orders governing EE program planning, implementation, and evaluation; can be implemented within a reasonable time frame and at reasonable ratepayer cost; and have the potential to significantly impact the realization and quantification of EE cost savings. *Id.* at 1-2.

Associations comment that, while the PWC have not agreed on inclusion of the above-listed NEBs, they nevertheless meet the criteria set out in Order No. 7. *Id.* at 2. Associations also comment that the PWC remains a productive forum to discuss these NEBs and to investigate additional NEBs for inclusion in the TRC test. *Id.*

Associations note that Order No. 1 stated that, as a general matter, "including all utility and customer costs within the TRC test, without considering the value of all utility and customer benefits, skews the accuracy of the economic evaluation in cases when the magnitude of the non-energy benefits are significant." *Id.*, *referencing* Order No. 1 at 34. Associations also note that Order No. 1 observed that many electric and natural gas utilities already incorporated one or more NEBs in cost-effectiveness tests. Associations note that Order No. 1 requested that the parties "collaboratively develop and propose for Commission approval NEB values for inclusion in TRC tests," and suggested that customer-perspective NEBs such as "water, wastewater, and some alternative fuels" could be quantified. *Id.* at 2-3. Associations note that, after taking comment on Order No. 1, the Commission in Order No. 7 determined that

> [T]he TRC test shall include well-defined NEBs which (a) measurably reduce scarce resources, add significant value or reduce costs; (b) have a quantifiable economic value; and (c) are clearly applicable to the specific program or measure at issue; provided that the PWC shall review the literature on the non-energy benefits of weatherization service and seek consensus on any reasonably quantifiable, significant NEBs for inclusion in program screening for the 2015-2017 EE program cycle.

Id. at 3, *referencing* Order No. 7 at 88.

Associations relate that the PWC reviewed, in a series of drafts, the IEM Report on NEBs, and that Audubon and AAEA submitted separate NEBs proposals in March, June, July, and September of 2014. *Id.* at 4. Through this process, the PWC agreed to focus on a few of the most important and most quantifiable NEBs, according to Associations. *Id.* at 5.

Regarding "other fuel savings," Associations state that, if electric EE measures result in natural gas or liquid propane savings, or if natural gas EE measures result in electric or liquid propane savings, then the savings should be accounted for in the TRC analysis. *Id.* at 5. Associations indicate that the Arkansas TRM includes methodology to calculate electric and gas energy savings, and that the IEM has developed examples to demonstrate how the TRM methodology can be used to calculate propane savings for duct sealing, ceiling insulation, infiltration, faucet aerators and low-flow showerheads. *Id.* at 6. Associations state that the average or representative price of propane within the utility service territory must be determined to quantify this benefit. *Id.*

Associations also state that the IEM has developed examples to demonstrate how the TRM methodology can be used to calculate annual water savings from faucet aerators and low-flow showerheads. *Id.* Associations indicate that the average or representative prices of public water and sewerage service within the utility service territory must be determined to quantify this benefit. *Id.* at 6-7. Associations note that the IEM has compiled detailed water and wastewater rate information for a number of Arkansas districts and computed the average water and wastewater rates for residential and commercial customers. *Id.* at 7. Associations state that further research regarding the marginal cost of water utility service would help produce a conservative estimate of these avoided costs. *Id.*

Associations assert that EE measures with a longer useful life than less efficient alternatives provide a NEB equal to avoided or deferred cost of alternative equipment replacement, citing long-lived LEDs, or early replacement of a furnace as examples. *Id.* Associations state that the Arkansas TRM distinguishes between normal replacement decisions, designated as Replacement on Burnout (ROB) and early replacement decisions, designated as Early Retirement (ER). *Id.* at 8. According to Associations, while ROB savings are calculated as the difference between the EE measure and standard-efficiency new equipment at the time of replacement, ER savings should include the difference between the EE measure and the measure being replaced, until the time when the existing equipment would have normally been replaced, at which time the ROB calculation is applied. *Id.* at 8-9. Associations specify that the valuation of EE measure costs should account for the present value of deferred equipment replacement and assert that the generally accepted method of doing so is based on the present value of the real levelized carrying charge (RECC) on the installed cost of the baseline equipment. *Id.* at 9-10.

Associations maintain that its proposed NEBs are applicable to a number of residential and commercial/industrial measures documented in the Arkansas TRM, including (in addition to measures mentioned above) clothes washers, direct vent heaters, refrigerators, commercial and industrial boilers, packaged terminal AC/HP (air conditioners/heat pumps), unitary and split system AC/HP, chillers, and premium efficiency motors. *Id.* at 10. Associations note that, while the term "NEB" is used to refer to any valid TRC benefit that is frequently not accounted for in current practice, the term is losing currency in favor of alternative, more inclusive nomenclature such as "Other Program Impacts" in order to avoid the literal interpretation that certain valid benefits, such as other fuel savings, are exempt from consideration because they are "energy" benefits. *Id.* at 10-11. Associations thus state that the question of whether a NEB qualifies for inclusion does not hinge on it being a "non-energy" benefit. *Id.* at 11.

Associations recommend that its proposed NEBs be accounted for in all TRC tests using a consistent, transparent methodology that is included in the next TRM. *Id.*

Associations argue that such methodological consistency and transparency will promote comparability across utilities, comports with Arkansas's "best practice" TRM policies, and advances the Commission's pursuit of EE program comprehensiveness. *Id.* at 11-12 and 17-18. Associations argue that the clear definition and measure-specific applicability of its proposed NEBs will preclude the double-counting of benefits that could occur under a generic "adder" or "multiplier" approach to NEBs. *Id.* at 12-13.

Associations add that their proposed NEBs meet the Commission's directives in Order No. 7 and are consistent with accepted standards of industry practice, as suggested within the IEM's literature review. *Id.* at 13-15. Associations reference the example of a paper cited by the IEM, which lists the following participant benefits that are components of the TRC test:

- Other Energy Savings;
- Other Resource Savings (septic, well pumping, etc.);
- O&M Cost Savings;
- Participant Health Impacts;
- Employee Productivity; and
- Comfort.

Id. at 15-16, *referencing Recognizing the Full Value of Energy Efficiency* (RAP: September, 2013). Associations also note that the California Standard Practice Manual provides that "all equipment costs, installation, operation and maintenance, cost of removal (less salvage value), and administration costs, no matter who pays for them, are included in" the TRC test. Manual at 18. Associations report that the IEM's literature review determined that, among states that include NEBs in cost-effectiveness screening, quantifiable non-energy savings from water, other fuel savings, and reduced O&M costs are the most frequently used NEBs. *Id.* at 16-17.

Associations add that their proposal can be implemented within a reasonable time frame at minimal cost to ratepayers, using procedures already in place in the Arkansas TRM. *Id.* at 18. Associations state that no new data development is necessary, other than the average price of liquid propane and public water and sewerage service within each utility's service territory, and that the necessary additional data tracking should not be burdensome because fuel price and water utility rate data can be obtained from published documents. *Id.* at 19.

Associations assert that the potential impact of including the proposed benefit is significant because all of the measures proposed are either core or direct-install measures in the approved state-wide residential weatherization program. *Id.* at 19. Associations state that for ceiling insulation, infiltration reduction and duct sealing, if natural gas is the heating fuel, inclusion of other fuel savings by an electric utility would increase the measure benefits by a factor ranging from 1.8 to 4.4. *Id.* at 20. Associations note that, in its illustrative example, ceiling insulation has a benefit-cost ratio below 1.0 when electricity or natural gas is considered in isolation, but significantly greater than 1.0 when both fuels are considered. *Id.*

Similarly, Associations state that inclusion of water savings more than doubles the present value of gas savings from the installation of faucet aerators and low-flow showerheads and has a similar, but smaller effect on the value of electric water heating. *Id.* In the example of replacing a CFL light bulb with an LED, Associations calculate that including the value of deferred equipment replacement increases the benefit-cost ratio for the measure by more than 30%. *Id.* at 20-21.

Associations note that the scope of potential application of the proposed benefits extends beyond the measures considered in the illustrative examples and that their proposals represent a modest start toward fulfilling the Commission's expressed desire that the TRC test include well-defined NEBs which conform to the guidelines established in Order No. 7. *Id.* at 21. Associations request that the Commission approve its proposed NEBs following input from the other PWC members and provide further guidance regarding future efforts by the PWC to duly consider the quantification and potential inclusion of additional NEBs that are applicable to Arkansas EE programs. *Id.* at 21-22.

<u>Findings and Rulings</u>

The Commission agrees with Staff, AOG, SGA, CenterPoint, OG&E, SWEPCO, AAEA, ACAAA, Audubon, and Sierra Club that NEBs, both utility and participant, be included in the TRC test if they are quantifiable and material. The Commission also agrees with these parties that such NEBs should continue to be carefully and individually evaluated to determine whether they are quantifiable, material, and relevant to the analysis of a specific utility program or program portfolio. The Commission also approves the framework proposed by Associations, as conditioned below, for inclusion of specific NEBs because it is a logical extension of the general inclusion of quantifiable, material, relevant NEBs, which also generally complies with the directives of Order No. 7. Associations present substantial evidence that its approach comports with EE best practices and the IEM's literature review, and is practicable with little modification of the existing Arkansas TRM.

Such approval does not, as Ratepayers suggest, diverge from the statutory requirement in Ark. Code Ann. § 23-3-405 that utility EE programs benefit utility ratepayers or the C&EE Rules requirement that programs benefit ratepayers in the aggregate. Rather, it more accurately recognizes a portion of the value of EE programs to the subset of ratepayers that participate in EE programs, for the purpose of ensuring that ratepayers in the aggregate neither overpay for, nor are deprived of, cost-effective resources. In this regard, accurate inclusion of NEBs within the TRC promotes, rather than erodes, the benefit of ratepayers in the aggregate.

In asserting that the majority of EAI ratepayers do not participate in EE programs and thus do not benefit, Ratepayers first note that 135,000 (or 19%) of 702,000 EAI customers participated in its EE programs in a single year, excluding upstream lighting and appliance programs. EAI's upstream lighting program, however, provided over 900,000 efficient bulbs to EAI customers in 2014, directly benefiting a significant share of EAI customers. *2014 EAI Annual Report Workbook* at Savings and Participants Tab, Document 443 in Docket No. 07-085-TF. Also, EAI's EE programs operate over a span of years and in practice are approved for at least three years. To the degree that customers served are non-duplicative, even accepting the 19% figure for annual participation, within three years roughly half or more of customers likely would benefit directly.

These examples, however, fail to fully capture what is meant in the C&EE Rules by a "showing of high probability of providing aggregate ratepayer benefits to the majority of ratepayers." *Aggregate* ratepayer benefits include reductions in the cost of service that benefit program participants and non-participants alike, such as the reduced total cost of fuel, reduced fuel prices, deferred capacity acquisition, avoided line losses and the deferred need for transmission and distribution infrastructure.[1] The Commission has required extensive, best-practice evaluation to reasonably verify that such benefits can be expected to accrue.

As noted by Associations and by the Staff/Utility Group, representing the majority of parties in this case, the C&EE Rules and Order No. 7 in this docket further address concerns raised regarding benefits to program participants versus non-participants. The C&EE Rules provide that utilities must submit the results of each of the standard cost-benefit tests. The PAC test (Program Administrator Cost, or formerly, the Utility Cost Test, or UTC) assesses the cost-benefit of a program from the utility perspective. It thus includes the cost of program administration and incentives given to participants, but not participant contributions to measure costs. As noted by the Staff/Utility Group, by limiting participant incentives to the magnitude of avoided costs under the PAC test and by requiring programs and portfolios to pass PAC, Order No. 7 reasonably provided that non-participating ratepayers do not subsidize non-utility service. The phrase "utility NEBs not customer NEBs," thus did not, as suggested by Ratepayers, limit the directive to consider NEBs generally, but instead described those NEBs that are appropriate for consideration under the PAC Test, for the purpose of

[1] The Commission addressed the issue of assessing aggregated benefits for ratepayers as a whole under Ark. Code Ann. 23-3-405(a)(2) in the proceeding that established the current C&EE Rules. The Commission determined therein that, rather than pitting program participants against non-participants as "winners" and "losers," when EE programs are properly designed and screened for cost-effectiveness "all ratepayers will be 'winners' over the long run." Docket No. 06-004-U, Order No. 12 at 32. The Commission also determined that Ark. Code Ann 23-3-405 does not mandate usage of the RIM test to the exclusion of other cost effectiveness tests. *Id.*

limiting the magnitude of incentives for the installation of an individual measure. This interpretation also is in accord with the IEM's literature review, which states that Utility NEBs are properly considered in "all three tests (PAC, TRC, Societal)" while Participant NEBs are properly considered in the "TRC and Societal" tests. IEM Report at 3. The Commission also notes, regarding accounting for "other fuels," that Ark. Code Ann. § 23-3-405 explicitly authorizes approval of programs that cause utilities "to incur costs of service and investments which conserve, as well as distribute, electrical energy and existing supplies of natural gas, oil, *and other fuels*." (Emphasis added).

Nor does orderly inclusion of NEBs upend resource planning. Resource planning regularly involves the assessment of diverse resources with a mix of attributes such as energy, capacity, and effects on reliability. Supply-side resources, however, do not have a direct cost contribution from individual customers, so the NEB issue does not arise. But where, as here, it does, Associations and the Staff/Utility Group, have demonstrated that a body of best practice exists to develop comparable resource values.

The Commission also agrees with EAI that costs associated with avoided utility cost of service items (such as reduced costs of meter-reading, late payments, or write-downs of customer uncollectibles) should be included in a benefit cost analysis, assuming they can be quantified and otherwise meet the NEBs standards established by Order No. 7. While the effects of avoided costs of service should be captured in rate cases, the ability to use an EE program to avoid those costs may be hampered if utility NEBs are not accounted for in EE program screening and design. The Commission notes, however, that no party has placed a specific utility NEB quantification method before the Commission for a ruling.

The Commission acknowledges the concern by the Staff/Utility Group that the inability to know when an existing measure was installed could frustrate calculation of avoided or deferred equipment replacement costs. The fact that some utilities already account for deferred or avoided lighting equipment costs, however, suggests that customer O&M NEBs, including deferred equipment replacement NEBs, need not be ignored in all cases.

The Commission therefore directs that the IEM be requested to recommend an approach for quantification of deferred equipment replacement NEBs in individual instances when they are material and quantifiable. Approval of deferred customer equipment NEBs, however, is conditioned as follows: The Commission directs that each recommended approach for customer deferred equipment replacement NEB quantification shall be included within the annual TRM update filing, and that its reasonableness shall be addressed in testimony by the IEM and/or Staff, and may be addressed by other parties, so that the Commission may approve or disapprove such proposed NEB quantifications.

The Commission therefore orders and directs that the following three categories of NEBs be consistently and transparently accounted for in all applications of the TRC test, as it is applied to measures, programs, and portfolios:

- benefits of electricity, natural gas, and liquid propane energy savings;
- benefits of public water and wastewater savings;
- benefits of avoided and deferred equipment replacement costs as conditioned herein;

provided that inclusion of these NEBs meets the standards previously established in Order No. 7.

BY ORDER OF THE COMMISSION,

This 10th day of December, 2015.

Ted J. Thomas, Chairman

Elana C. Wills, Commissioner

Lamar B. Davis, Commissioner

I hereby certify that this order, issued by the Arkansas Public Service Commission, has been served on all parties of record on this date by the following method:

____U.S. mail with postage prepaid using the mailing address of each party as indicated in the official docket file, or

X Electronic mail using the email address of each party as indicated in the official docket file.

Michael Sappington, Secretary of the Commission