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November 18, 2019

VIA ELECTRONIC CASE FILING

Ms. Barbara Kunkel
Acting Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Highway
Lansing, Michigan 48917

Re: ***MPSC Case No. U-20147: In the matter, on the Commission's own motion, to open a docket for certain regulated electric utilities to file their five-year distribution investment and maintenance plans and for other related, uncontested matters.***

Dear Ms. Kale:

Enclosed for filing is the ***Association of Businesses Advocating Tariff Equity's Comments re: Stakeholder Meeting #4*** and ***Proof of Service*** in the above-referenced case.

Respectfully,

CLARK HILL PLC

Stephen A. Campbell
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SAC/lkd

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

*** * * * ***

In the matter, on the Commission's own motion, to open a docket for certain regulated electric utilities to file their five-year distribution investment and maintenance plans and for other related, uncontested matters.	))))))	Case No. U-20147

COMMENTS REGARDING STAKEHOLDER MEETING FOUR BY THE ASSOCIATION OF BUSINESSES ADVOCATING TARIFF EQUITY

Prepared by:

Paul Alvarez and Dennis Stephens EE
Wired Group

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I. INTRODUCTION

A. Summary of MPSC Proceeding U-20147 to Date.

On April 12, 2018 the Michigan Public Service Commission ("MPSC" or "Commission"), recognizing a variety of issues raised in Michigan investor-owned utilities' ("IOUs") initial Five-Year Distribution Plans, opened this docket (U-20147) to, among other things, "invite comments and convene a discussion among stakeholders on expectations for the next set of distribution plans".[1] On September 4, 2018, the Commission Staff ("Staff") issued a draft proposed Michigan Distribution Planning Framework ("Framework") regarding the scope of the initial five-year distribution investment and maintenance plans to be filed by DTE Electric Company ("DTE") and Consumers Energy Company ("Consumers"). The Framework was based on the initial five-year distribution plans submitted by DTE and Consumers as well as stakeholder comments, including comments submitted by the Association of Businesses Advocating Tariff Equity ("ABATE"), and incorporating the input of a stakeholder workshop.

Staff has overseen continued stakeholder activity in docket U-20147 throughout 2019 in preparation for the utilities' next round of Five-Year Distribution Plans (to include Indiana-Michigan Power, or "I&M", which was ordered to submit a Five-Year Distribution Plan in MPSC U-18370). One informational workshop was held on June 27th, consisting of presentations by national experts on traditional distribution planning processes, and on the modern components which are becoming standard practice, such as the consideration of non-wires alternatives and the development of distribution generation hosting capacity analyses. A second informational workshop was held on August 14th, consisting of presentations by national experts, including Paul Alvarez and Dennis Stephens, who helped ABATE prepare these

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[1] MPSC U-20147. Order dated April 12, 2018. Page 3.

comments, regarding emerging best practices in the evaluation of utility grid investment proposals. ABATE submitted comments in this docket describing a transparent, stakeholder-engaged distribution planning and capital budgeting process on September 11, which is summarized below. A third informational workshop, largely oriented around reliability and resilience, was held on September 18th. The workshop on October 16 featured recommendations by Consumers, DTE, and I&M on how best to conduct benefit-cost analyses as part of Five-Year Distribution Plans, as well as presentations by Paul De Martini on the US Department of Energy's ("DOE") Distribution System Platform Initiative ("DSPx"). These ABATE Comments focus on these components of the October 16th stakeholder workshop.

B. Review of ABATE's Recommendation for a Transparent, Stakeholder-Engaged Distribution Planning Process Filed September 11, 2019.

Before proceeding, a summary of ABATE's Comments recommending the introduction of a transparent, stakeholder-engaged distribution planning process is in order. In Comments filed September 11, 2019, ABATE began with a justification for a new approach to distribution planning and capital budgeting. Using financial and operating data submitted by IOUs nationwide on FERC Form 1 and EIA Form 861, ABATE identified a lack of reliability and operating cost-reduction benefits despite dramatic growth in distribution grid investment in recent years.[2] Introductory comments in the ABATE filing also justified the need for a new approach to distribution planning by noting what it called "the regulator's conundrum". ABATE described the regulator's conundrum as: 1) Approve the requests in the absence of need, and rates may increase unnecessarily; 2) Reject the requests, and reliability may suffer (if the problems the IOUs claim will arise turn out to be true); and 3) Reject cost recovery post-

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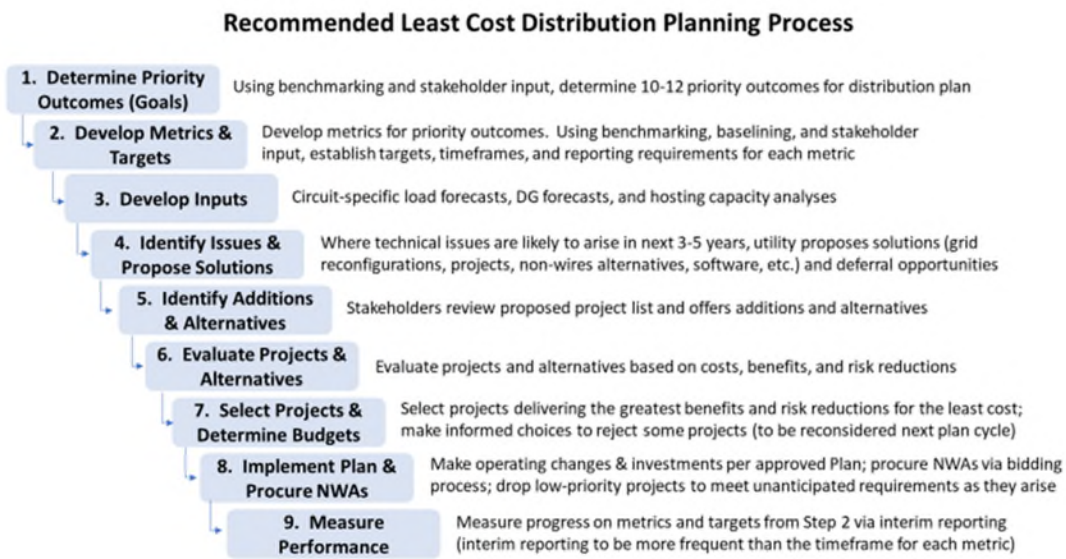
[2] MPSC 20147. ABATE Comments filed September 11, 2019. Pages 4-6.

investment, and rates will increase unnecessarily anyway (due to the large size of the disallowances and associated impacts on IOU cost of capital).[3]

To address lack of value creation demonstrated by US IOUs to date, and to address the regulator's conundrum, ABATE recommended a new distribution planning and capital budgeting process which featured dramatic increases in transparency and stakeholder engagement before Michigan IOUs spend capital to implement distribution investment plans. ABATE's recommended distribution planning and capital budgeting process is summarized and described briefly below.[4]



1. Stakeholders identify and prioritize distribution plan goals (outcomes).

2. Stakeholders define performance metrics, targets, timeframes, and reporting requirements for priority outcomes.

3. Utilities collect and publish distribution planning inputs.

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[3] Ibid, page 6.

[4] Ibid, page 8.

4. Utilities propose a list of recommended distribution projects.

5. Stakeholders identify potential alternative and/or additional projects.

6. All potential projects are evaluated using one of three methods based on the nature of each project (non-discretionary; discretionary with readily quantified benefits; and discretionary with difficult-to-quantify benefits).

7. Stakeholders select projects and determine capital budgets.

8. Utility implements selected projects and procures selected non-wires alternatives through competitive solicitation.

9. Performance is measured using metrics and targets established in Step 2.

C. A Preview of ABATE Comments on the October 16th Stakeholder Workshop.

In these Comments ABATE will present its recommendations regarding the appropriate development and use of benefit-cost analyses in a transparent, stakeholder-engaged distribution planning and capital budgeting process. It will also comment on the benefit-cost analysis presentations made by the Michigan IOUs in the workshop. Finally, ABATE will comment on DOE's DSPx, presented by Mr. Paul De Martini in the workshop, including areas of congruence with ABATE's distribution planning and capital budgeting process recommendation, as well as ABATE's significant concerns about Commission over-reliance on the DSPx as a source of information in making decisions regarding distribution planning and capital budgeting in Michigan.

II. GENERAL OBSERVATIONS ON DISTRIBUTION BENEFIT-COST ANALYSES

At the October 16th workshop the Michigan IOUs presented their thoughts on how benefit-cost analyses should be developed and used. ABATE believes benefit-cost analyses are an extremely critical component of the transparent, stakeholder-engaged distribution planning and capital budgeting process ABATE recommends. In addition, ABATE has observed that variation in approaches to, and development of, benefit-cost analyses lead to inaccurate results and poor investment decisions in other states. As a result, ABATE asks the Commission to carefully consider, and issue rulings on, the development and use of benefit-cost analyses in Michigan distribution planning and capital budgeting processes. ABATE's general observations on distribution benefit-cost analyses include: 1) The Commission should require benefit-cost analyses for all discretionary investments in Michigan IOUs' Five-year Distribution Plans; 2) The Commission should define how costs should be estimated in such benefit-cost analyses; and 3) The Commission should define how benefits should be estimated in such benefit-cost analyses.

A. Benefit-Cost Analysis Should Be Used for Every Distribution Investment Deemed Not To Be In the Normal, Routine Course of Business.

Each of the IOUs devote time in their benefit-cost analysis presentations to describing alternatives to benefit-cost analysis, or to identifying situations in which benefit-cost analyses are difficult to apply. ABATE does not agree that qualitative approaches should serve as substitutes for a benefit-cost analysis, or that the difficulty of estimating some types of benefits should preclude the use of benefit-cost analysis.[5] ABATE has observed that exceptions to the use of benefit-cost analyses are often exploited by IOUs to justify large capital investments, and believes that difficulties in applying benefit-cost analyses can be resolved in large and critical part by precisely the type of transparent, stakeholder-engaged distribution planning and capital budgeting process ABATE is recommending in this proceeding.

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[5] ABATE considers the risk-informed decision support approach it recommends as a type of benefit-cost analysis, and incorporates it into its use of the phrase "benefit-cost analysis". ABATE further notes that risk-informed decision support is ideally suited for situations in which benefits are difficult to estimate.

1. “Least Cost, Best Fit” is a loophole which should be closed through a transparent, stakeholder-engaged distribution planning process.

ABATE is familiar with the ‘Least Cost, Best Fit” approach described by the DOE in DSPx publications. Obviously, implementing solutions deemed necessary at the least cost is a good idea; ABATE’s concern is over the liberties it has observed IOUs taking regarding what investments are “necessary”. The DOE’s DSPx documents specifically describe “necessary” investments as “[g]rid expenditures to replace aging infrastructure, new customer service connections, relocation of infrastructures for roadwork or the like, and storm damage repairs.”[6] This is essentially the same definition ABATE uses to describe “non-discretionary” projects in its recommendations for a new distribution planning and capital budgeting process. It is also the same definition utilities and regulators use when describing what is included in “business as usual” spending, or spending which is “in the normal, routine course of business”.

Yet ABATE has observed that IOUs in other states define as “necessary” many investments which were not truly necessary, and which would have benefitted from a benefit-cost analysis. ABATE is aware of multiple instances in which proposals IOUs have deemed “necessary”, and therefore not appropriate for benefit-cost analysis, were not necessary at all. ABATE has observed many inappropriate justifications of proposed investments as necessary, including regulatory compliance, distributed energy resource accommodation, and reliability, to name just a few. Many such examples are described below, and illustrate why Commissions and stakeholders should question any and all instances in which an IOU deems any investment outside the normal, routine course of distribution business is “needed”. ABATE has observed the

[6] US Department of Energy. Modern Distribution Grid, Decision Guide Volume III. Page 39.

lack of challenge to IOU assumed needs to be the cause of much over-investment in the name of grid modernization.

For example, ABATE has observed many IOUs inappropriately using Critical Infrastructure Protection ("CIP") Standards issued by the National Electric Reliability Council as justification that an investment is "needed", and therefore not subject to benefit-cost analysis. In North and South Carolina, Duke Energy recently proposed spending $110 million to ring its substations with high-security fencing.[7] It cited compliance with CIP Standard 014 as justification for this proposal. However, a review of the Standard indicates that utilities which own substations are required to conduct physical security risk assessments of substations on a routine basis, and to develop and implement associated risk mitigation plans.[8] CIP Standard 014 does not mandate high-security fencing; Duke Energy determined that such fencing was "needed", thereby precluding a benefit-cost analysis based on its own determination. But in fact, NERC or other regulating bodies rarely if ever prescribe capital investments as requirements. Rather, requirements are generally stated as "the utility must demonstrate that it ____________________" (fill in the blank). Usually, CIP and other standard bodies' requirements can be satisfied through changes in business operations or maintenance processes. Yet IOUs are happy to prescribe capital-intensive solutions in situations where less costly solutions are available. In a transparent, stakeholder-engaged distribution planning and capital budgeting process of the sort ABATE recommends, inappropriate justification of proposals as "needed" can be more easily identified.

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[7] NCUC E-7 Sub 1214. Direct Testimony of Jay Oliver. Exhibit 10, Page 90.

[8] National Electric Reliability Council, Critical Infrastructure Protection Standard 014.

ABATE has also observed other proposed investments a utility deems "needed", thereby avoiding a benefit-cost analysis, with no justification whatsoever, particularly in relation to distributed energy resource accommodation. In its 2016 general rate case, Southern California Edison ("SCE") proposed $129 million in investments to upgrade all of its relays.[9] SCE stated this investment was "needed" to accommodate growing distributed solar generation, which would confuse its circuit breakers into remaining closed when they should open, exposing equipment to damage and creating reliability and safety risks. While synchronous generators (spinning turbines) do indeed cause such confusion, non-synchronous generation (solar panels and batteries) do not. A transparent, stakeholder-engaged distribution planning and capital budgeting process may have provided the opportunity for laypersons to have identified the fact that the proposed investment wasn't "needed" at all.

Another example of the inappropriate classifications of IOU investment proposals as "necessary" is in instances in which third party services provide an alternative to costly IOU investments. Consider rapidly-growing IOU capital spending on proprietary communication networks. While no one disputes that the grid of the future will require extensive data communications, there is no "need" for IOUs to build their own communications networks with their own capital. Advanced communications networks from Verizon, AT&T, and T-Mobile include all the security and dedicated bandwidth utilities require, without the large investment. Yet all IOUs are spending tens or hundreds of millions of dollars on proprietary communications networks. Benefit-cost analysis could help stakeholders evaluate the cost of "build" against the cost of "buy" (services). Communications networks are far from the only example. Hawaiian

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[9] California PUC A.16-09-001. Testimony of M. Flores. Substation Construction & Maintenance volume, page 36.

Electric Company proposed to spend $9 million building a smart phone app for customers,[10] justifying the spend as "least cost, best fit". However, smart phone apps which deliver the same types of services to customers can be downloaded at no charge from independent application developers as long as an IOU complies with Green Button's Connect My Data standard.[11] By requiring IOUs to evaluate various ways to deliver a specific capability to customers through cost-benefit analysis, as opposed to simply assuming a "need" and the associated blind application of the least cost best fit approach, more cost-effective options can be identified for customers.

2. "Point Scoring" and other prioritization approaches are loopholes which should be closed through transparent, stakeholder-engaged distribution planning.

In the October 16 workshop benefit-cost analysis presentations, all three Michigan IOUs describe the use of scoring matrices and qualitative factors to prioritize some investments over others. While the approaches the IOUs describe appear to resemble ABATE's recommended risk-informed decision support approach to quantifying the benefits of various hard-to-evaluate investment proposals, the approaches the IOUs describe never translate outputs into economic risk reduction value. All the IOUs approaches are therefore purely subjective. They provide no basis for comparing various available risk mitigation alternatives to each other, nor for evaluating spending on risk reduction to investments with more readily-quantifiable benefits, such as investments to reduce operating expenses. As such these scoring and prioritization methodologies lack key advantages associated with benefit-cost analysis and its cousin, risk-informed decision support.

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[10] Hawaii PUC 2016-0087. Direct testimony of Joseph P. Viola dated March 31, 2016. Page 7.

[11] See www.chaienergy.com and www.ohmconnect.com.

Furthermore, such scoring and prioritization metrics do not simplify transparent, stakeholder-engaged distribution planning processes. Stakeholders will still want to know about scoring and prioritization methodologies, and argue about assumptions and weightings. Yet, using the utilities' prioritization frameworks, the outputs of these efforts will remain no more than qualitative assessments. In the risk-informed decision support framework recommended by ABATE, the outcomes of such efforts are discrete values which are directly comparable. An example of how this would work in practice illustrates the value. In its 2017 general rate case, Pacific Gas and Electric ("PG&E") proposed to invest millions of dollars to install relays in all substations equipped only with single-phase fuses on the high-voltage side of transformers,[12] claiming the reliability risks of failing to do so were significant, and assigning a high priority to the investment without quantification. In discovery, PG&E described the lengthy chain of events required to create the service outages it said it would eliminate through the investment. Upon further discovery, PG&E quantified the likelihood of occurrence for each step in the chain of events required to create the outage. By multiplying the actual likelihoods of the events in the chain together, it became clear that the high priority problem PG&E's investment was intended to eliminate, and thus justified as a high-priority effort, had just a three in one million chance of occurring annually.[13]

To summarize, the consumer value of benefit-cost analysis, and its cousin risk-informed decision support, are great. Not only do benefit-cost analyses help stakeholders prioritize and select distribution investments, and compare build vs. buy options, they provide a framework for

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[12] California PUC A-15-09-001. PG&E Exhibit 4 (Electric Distribution), Chapter 13. Direct testimony of Satvir Nagra. Chapter Page 13-35, Table 13-4, line 9.

[13] California PUC A.15-09-001. Joint testimony of Paul Alvarez and Dennis Stephens on behalf of The Utility Reform Network. April 29, 2016. Page 29.

performance evaluation, holding utilities accountable for the benefits they claimed the investments would deliver. ABATE recommends the Commission resist any attempt by the IOUs to limit the situations in which benefit-cost analyses are applied, and recommends that stakeholders rigorously challenge any investment outside the routine course of distribution business which an IOU claims to be necessary, and therefore exempt from benefit-cost analysis. ABATE also recommends that the Commission require that benefit-cost analyses be developed according to strict specifications, as described next.

B. The Commission Should Clearly Define How "Costs" Are Calculated in Benefit-Cost Analyses.

To the layperson, the definition of "costs" seems simple. In its October benefit-cost presentation, Consumers Energy indicated that the cost to be included in a benefit-cost analysis should be incremental capital and operating expenses.[14] But the recovery of capital and operating expenses are only part of what customers must pay when an IOU invests capital. Customers must also pay authorized profits on equity capital, interest expense on borrowed capital, federal income taxes (21% of authorized profits), state sales taxes (4% on top of kWh and kW charges), and local government property taxes. Over time these charges, called carrying charges, are enormous. On an asset depreciated over 20 years, ABATE expects the carrying charges to be about 90% as large as the original capital cost for the average Michigan IOU; for an asset depreciated over 40 years, ABATE expects the carrying charges to be 180% as large as the original capital cost. These are big incremental amounts over and above capital, and ABATE therefore recommends that the Commission require carrying charges be included in cost estimates. This is also important when comparing the cost of utility investments to the cost of

[14] Lynd, Don. "Benefit Cost Analyses". Presentation on behalf of Consumers Energy, Slide 4. MPSC Staff Stakeholder Workshop 4 in U-20147. October 16, 2019.

third-party services, as demonstrated in the communications network example provided earlier, as well as in all instances of non-wires alternative cost comparisons.

Carrying charges are not the only costs IOUs typically ignore, but which customers must pay. Another example is the cost of equipment removed from service prematurely to make way for modern grid versions. Though generally a bigger issue for smart meter deployments, ABATE believes IOUs bias their investment decisions when they fail to consider the book value of equipment removed prematurely. When equipment is removed from service prematurely, it is no longer used and useful. Any undepreciated book value for such equipment should be removed from rate base and charged against income. This accounting procedure protects customers from paying for two pieces of equipment which serve the same purpose (a violation of the used and useful principle), and reduces IOU incentive to churn through assets. Unless forced to consider these costs in benefit-cost analyses, and unless the appropriate accounting procedure is specified by regulatory order, IOUs ignore the impacts. ABATE recommends the Commission require the proper accounting for equipment with book value removed from service, and that the Commission require IOUs to consider the cost of assets removed from service prematurely in benefit-cost analyses.

C. The Commission Should Clearly Define How "Benefits" Are Calculated in Benefit-Cost Analyses.

Benefit estimates can be manipulated to an even greater degree than costs estimates. In ABATE's experience, utilities generally overstate the benefits customers will receive from grid investments. However, ABATE has also observed utilities which fail to include benefits which harm financial results, such as sales volume reductions between rate cases. ABATE recommends the Commission address all of the deficiencies commonly observed in the benefit estimates developed by US IOUs for discretionary grid projects. The most common of these deficiencies are described below.

3. Operational savings should be calculated on variable costs avoided, not fully-loaded costs.

When estimating operational savings from a grid investment, IOUs typically employ "rules of thumb" to estimate savings. For example, an IOU might claim reductions in troubleman or lineman labor expenses when a grid investment reduces the time required to locate the source of a service outage. If the time required to locate the source of a service outage is reduced by 15 minutes, and the fully-loaded labor rate for a two-man bucket truck is $600 per hour, and there are 20,000 repairs completed in a year, an IOU would estimate the savings to be $3 million annually (.25 hours x $600 x 20,000 outages annually), or $60 million over 20 years.

However, ABATE notes that fully-loaded labor rates are not a good estimate of savings, as they include employee salaries and vehicle costs which would be paid anyway; benefits which would be accrued anyway; supervisory, service center, and corporate overhead cost allocations which will be incurred anyway; etc. When estimating operating savings, IOUs should include only variable costs avoided. In the example provided, this is essentially limited to overtime reductions, contract labor reductions, and any planned headcount reductions (which should be verified post-deployment).

In a recent case in New Jersey, Rockland Electric estimated linemen and troublemen savings from a smart meter deployment at over $500,000 annually, or $13 million over 20 years,[15] due to shortened restoration time using the fully-loaded "rule of thumb" rates indicated

[15] New Jersey BPU ER19050552. Rockland Electric response to data request RCR-AMI-16, tab "NPV RCR-AMI-2g", cells e18 to f19. July 8, 2019.

above. When asked in discovery about how many headcount reductions among linemen and troublemen the IOU would implement to secure over $500,000 in annual savings, Rockland Electric responded "The Company will not reduce the headcount of line crews as a result of the AMI deployment."[16] ABATE is certain this IOU will not be able to deliver $500,000 in operating savings annually, or $13 million in savings over 20 years, with no headcount reductions. It is this type of bias ABATE recommends the Commission pre-empt through benefit estimation guidance.

4. Rate case timing can prevent operating benefits from reaching customers.

While on the subject of operating benefit estimates, the Commission should be aware of the associated rate case timing issue. Many operating benefits, from expense reductions to enhanced revenue recognition, are only translated into rate reductions in a rate case. Due to increasing use of multi-year rate plans and riders, IOUs can extend the period between rate cases. In most states, IOUs control the timing of rate cases. Unless and until a rate case is held using a test year which reflects the expense reductions and revenue enhancements, such benefits accrue to shareholders, not ratepayers. Yet in their benefit estimates, IOUs indicate that such benefits are delivered to customers immediately upon project completion, and every year thereafter. In reality, if the benefits require a few years to be fully realized, and the first rate case after full benefit realization is five years later, it can take six or seven years for any rate reductions associated with a grid project to be reflected in customer rates. In a benefit-cost analysis covering

[16] New Jersey BPU ER19050552. Rockland Electric response to data request RCR-AMI-40(a). August 12, 2019.

a 20-year period, customers can miss out on up to a third of benefits due solely to this rate case timing issue.

Commissions can address this issue in one of two ways. They can demand that benefit estimates reflect the correct timing of recognition in rates, or they can order revenue requirement reductions in the years following the deployment of an investment by the amount of IOUs' operating benefit estimates, at least until such benefits are fully reflected in a rate case test year. The latter approach has the added benefit of holding IOUs accountable for delivering operating benefits of the size and timing anticipated in benefit-cost analyses. When IOUs know of such revenue requirement reductions in advance, ABATE has observed that IOUs' benefit estimates are much more conservative.

5. The period over which benefits are estimated should equal asset life.

Manipulation of the benefit period is another way IOUs over-estimate the benefits of an investment. ABATE has frequently observed IOUs estimating benefits over a 20-year period when the estimated useful lives of the assets delivering the benefits is only 15 years. This obviously inflates benefit estimates in an inappropriate manner.

6. Reliability benefits should be expressed in terms of system-wide SAIDI and SAIFI improvements.

ABATE has observed many grid improvement plans in which an IOU provides no estimate of the SAIDI and SAIFI improvements customers could expect from investments. Incredibly, IOUs often use the DOE's online Interruption Cost Estimator, which requires SAIDI and SAIFI improvement inputs, to calculate the economic value of reliability improvements to customers. Yet these same IOUs refuse to disclose, let alone commit to, the reliability improvements required to deliver the associated economic value presented in benefit-cost analyses used to justify grid investments related to reliability. ABATE recommends the

Commission require the SAIDI and SAIFI improvements associated with all reliability benefits to be clearly identified in benefit-cost analyses.

7. Societal benefits should not be included in benefit-cost analyses.

Many IOUs count societal benefits from grid investments in their benefit-cost analyses. ABATE believes this practice to be flawed in many ways. First, customers should not be required to pay for benefits they will not directly experience; as a result, such benefits should not be included in a benefit-cost analysis designed to represent customer interests. Second, IOUs always overstate such benefits. Most IOUs employ IMPLAN, an online application designed to estimate the multiplicative impact of big construction projects on local economies. But IMPLAN, and IOU societal benefit calculations in general, suffers from two significant deficiencies.

First, these calculations do not incorporate the significant detrimental impact of higher electric rates from big grid investments on local economies. As large users of electricity, ABATE members have first-hand knowledge of how rate increases impact their bottom lines, and therefore their business decisions regarding plant locations and production expansions. Any societal benefit estimate which does not take the detrimental impact of higher electric rates into account is clearly overstated; ABATE believes the detrimental impact of rate increases exceed the economic development benefits of grid investment by a wide margin. Second, IMPLAN does not take into account the fact that many equipment manufacturers, suppliers, and consultants required to execute big distribution projects are not located in the IOU’s service territory or state, leading to additional social benefit exaggerations. Many leading industry suppliers are even located outside of the US. ABATE recommends the Commission prohibit societal benefit calculations from being included in benefit-cost analyses for all of these reasons.

8. Some investment and benefit types are ignored in benefit-cost analyses.

While IOUs generally overstate benefits in an attempt to make their case for grid investments stronger, ABATE has also observed IOUs avoiding certain types of investments and presenting certain types of benefits which negatively impact financial results. Readers are likely aware of the throughput incentive: Because IOU distribution costs are largely fixed, any reductions in electric sales volume reduce income, and any increases in electric sales volume increase income. As a result of the throughput incentive, IOUs are always interested in increasing electric sales volume. When an IOU overstates benefits in benefit-cost analyses, the pressure to quantify additional benefits falls; if an IOU overstates benefits enough, the IOU can deliver a benefit-cost analysis which appears favorable to customers, but which ignores certain types of investments or benefits. In ABATE's experience, the types of investments or benefits which are routinely ignored in grid planning or benefit estimation are those which would serve to reduce electric sales volume. These include the conservation benefits of smart meters and time-varying rates, as well as the conservation benefits of automated, integrated volt-VAr control systems employed 24 x 7 x 365.

As is clear from these comments, ABATE recommends the Commission issue instructions for how benefit-cost analyses should be used (in as many situations as possible), how cost estimates should be calculated, and how benefit estimates should be calculated. Such instructions will lead to better grid investment decisions, and greater benefits for customers, as part of the transparent, stakeholder-engaged distribution planning and capital budgeting process ABATE recommends.

III. COMMENTS ON UTILITIES' BENEFIT-COST ANALYSIS PRESENTATIONS

A. Consumers Energy.

The presentation by Consumers Energy on benefit-cost analysis violates several of the benefit-cost analysis recommendations ABATE makes above. Consumers' recommendations for cost estimates do not include carrying charges or the cost of assets removed from service with book value. Consumers' recommendations for benefit estimates include giving IOUs the option of which type of evaluation approach to use (including qualitative approaches); the prioritization of projects through the use of qualitative point values; and the use of "least cost, best fit" approaches for "needed" capabilities. As described earlier, ABATE recommends the Commission reject all of these commonly-encountered benefit-cost analysis deficiencies.

B. DTE.

The presentation by DTE on benefit-cost analysis focuses almost entirely on investment prioritization using a qualitative point-scoring system, avoiding any discussion of benefit and cost estimation details ABATE described earlier in these comments. DTE's presentation is notable for its use of the benefit vs. cost prioritization chart by project (slide 12) employed by ABATE consultants in the August 14th workshop. By including this chart, DTE seems to be implying that there is some connection between DTE's qualitative approach to project prioritization and ABATE's recommended, quantitative approach to projecting "difficult to estimate" benefits, which is risk-informed decision support. For the record, ABATE declares that there is no connection between the qualitative prioritization approach DTE recommends and the quantitative prioritization approach ABATE recommends (risk-informed decision support). ABATE continues to recommend the use of quantitative, not qualitative, approaches to project benefit estimation (and as a result, objective project prioritization) in every possible instance as described earlier in these comments.

C. Indiana Michigan Power.

Like DTE, the I&M benefit-cost analysis presentation is focused on a qualitative project prioritization approach, and avoids any discussion of the details of benefit-cost analysis development. ABATE strongly encourages the Commission to address all the detailed benefit-cost analysis deficiencies described in these comments, and recommends the Commission discourage and/or reject any and all attempts to use qualitative approaches to project evaluation and prioritization.

IV. PLANNING AND THE DOE'S DSPx

Mr. Paul De Martini presented several aspects of the DOE's DSPx related to distribution planning at the October 16 workshop. While several aspects of the DOE's DSPx are supportive of ABATE's recommendation that a transparent, stakeholder-engaged process for distribution planning and capital budgeting be developed for use in Michigan, ABATE is concerned about several other aspects of the DSPx initiative. ABATE describes both consistencies and concerns in this section of its comments.

A. Multiple DSPx Elements Support ABATE's Recommendation to Implement Transparent, Stakeholder-Engaged Distribution Planning and Capital Budgeting.

Multiple aspects of the DOE's DSPx support ABATE's proposal to develop a transparent, stakeholder-engaged approach to distribution planning and capital budgeting process for use in Michigan. De Martini presentation slide 3 indicates that grid planning should follow from defined grid objectives (steps 1 and 2 in ABATE's recommended process), using granular locational forecasts from utilities (step 3 in ABATE's recommended process). Slide 4 is an evolution of the DSPx's well-recognized "Walk, Jog, Run" approach to grid modernization,[17] which ABATE suggests is the likely and logical outcome of ABATE process steps 5 through 7. De Martini slide 6 illustrates the importance of performance measurement, which is consistent with ABATE distribution planning process step 9. ABATE also appreciates De Martini slide 9, which encourages grid planners to resist the temptation to start with technology solutions to problems which do not yet exist, as well as slide 14, which describes the appropriate use of gap analyses to identify functional needs (ABATE process step 4).

In the Guide the DOE published on the DSPx, other consistencies with ABATE perspectives and distribution planning proposal surface. For example, the DOE Guide suggests that grid project deployments be aligned to customer value, and timed such that the grid enables customer choice at the pace of DER (distributed energy resource) adoption.[18] ABATE agrees with these suggestions, as long as grid enablement (of DER) is not too far in advance of need. Furthermore, ABATE agrees with the DSPx suggestion that it's very easy to implement technology solutions at too early a stage of maturity, increasing risk.[19] (ABATE believes Advanced Distribution Management Systems are a good example of this.) ABATE also strongly agrees with this statement, regarding proportional deployments, as a way to moderate capital spending:

> [D]eployments generally involve relatively large expenditures on a system-wide level that may be able to be deployed on a localized basis to address specific needs and, over time, expand based on needs to encompass the whole system. This type of surgical approach may allow for changes in prioritization of deployment as customer needs and system issues may evolve over time. An

[17] US Dept. of Energy. Modern Distribution Grid, Decision Guide Volume III. Figure 12, p. 33. June 28, 2017.

[18] Ibid, page 27.

[19] Ibid, page 31.

> annual reassessment of the prioritization of grid modernization investments, not unlike those for the physical grid, could be done.[20]

A similar concept applies to complex, data-dependent automation of grid operations; like proportional physical deployments and the aforementioned walk-jog-run approach, a graduated approach makes sense, and moderates risk. Finally, the DSPx Guide confirms the need for a defined cost-effectiveness framework,[21] which ABATE is recommending the Commission issue in these comments.

B. ABATE's Concerns Regarding the DOE's DSPx.

Despite some consistencies between DSPx and ABATE's recommended process for distribution planning and capital budgeting, ABATE is very concerned that regulators, in Michigan and across the US, are overly-reliant on DOE and DSPx perspectives, which could be biased. ABATE notes that of the seven members of the DSPx core team, not a single one has worked in distribution planning, operations, or asset management functions for a large, investor-owned electric utility.[22] (The core team is a mix of researchers, attorneys, economists, and environmental advocates.) Perhaps worse, ABATE notes that there is no residential or business customer advocate on the DSPx core team. The DSPx core team consulted twenty one organizations for input into DSPx; all but two (the DOE's own Grid Modernization Laboratory Consortium, with participants similar to the DSPx core team, and California's Independent System Operator) are investor-owned utilities, or suppliers of services, software, or equipment to investor-owned utilities,[23] all of which stand to benefit from growth in grid investments. ABATE

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[20] Ibid, page 34.

[21] Ibid, page 39.

[22] Ibid. Acknowledgements, page 1.

[23] Ibid.

is very concerned that these DOE constituencies are biased towards greater grid investment above objective determinations of need and grid investment moderation.

This bias can be observed in several components of the DSPx Guide. For example, the Guide reports "[t]he pace and scope of change reflected in distribution investment plans may not be sufficient to meet customer needs and policy objectives."[24] The alternative viewpoint – that utilities' existing distribution planning functions have been accommodating load growth and technological changes for about 100 years now, and are specifically designed to address problems and opportunities as they become apparent – is nowhere to be found. The DSPx Guide states, regarding distributed energy resources, that "future adoption rates (potentially accelerated), will always occur on a timeframe that is faster than new grid infrastructure implementation"[25] and "rates of adoption have outpaced the deployment of grid systems that can enable their effective integration."[26] The DSPx Guide provides no support for these statements, which sound like statements that IOUs interested in growing rate bases would make. ABATE notes that even in Hawaii, where DER adoption is perhaps the highest in the world, Hawaiian Electric Company is doing an admirable job accommodating more DER as issues arise on a circuit-specific basis using its traditional distribution planning process. Hawaiian Electric Company's $150 million Grid Modernization Plan has yet to be approved by the Hawaii PUC,

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[24] Ibid, page 29.

[25] Ibid, page 28.

[26] Ibid, page 29.

let alone implemented. Yet Hawaiian reliability is good, and DER growth is being accommodated.[27]

ABATE is also concerned about some DSPx Guide pronouncements on benefit-cost analysis which are likely to be inappropriately exploited by IOUs in search of rate base growth. In addition to the "least cost, best fit" exploitation opportunity described earlier in these comments, the DSPx Guide refers to "Real Options Analysis".[28] Real Options Analysis relates to the concept that by establishing a platform of capabilities today, unforeseen technologies are likely to be developed in the future to capitalize on the platform, creating new benefits. In theory, the fact that a platform may offer such benefits in the future constitutes a "real option", which has value in a Real Options Analysis. ABATE's position on this is that if the technologies are as yet unforeseen, the likelihood of development and commercialization in the near future is low. As a result, ABATE suggest the best course of action is to wait until these new, unforeseen technologies reach at least a modicum of maturity, and then to recalculate a benefit-cost analysis of the platform with realistic, and ideally proven, benefit assumptions associated with the new technologies. "Betting on the come" is not a game of chance ABATE believes IOUs should be engaged in, particularly when business and residential customers are covering the wagers.

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[27] According to EIA Form 861 data, the average SAIDI (without major event days) for Hawaiian Electric Company's (HEC) three IOUs 2013-2017 was 124, about the same for the average US IOU over the period (123). By year-end 2018, customer-sited generation capacity as a percent of peak demands were 24% on Oahu, 42% on Maui, and 44% on the Big Island. HEC SAIFI (without major event days) is in the bottom quartile of US IOUs, but only just barely, and not extremely poor (1.4 vs. US IOU average of 1.1). HEC accommodates growing distributed generation capacity through local tap, feeder, circuit, and substation upgrades as needed. These upgrades are identified in advance through routine grid planning processes. Significant interconnection delays are not common, and limited to certain taps, feeders, and circuits until upgrades are completed.

[28] Ibid, page 42.

To summarize, ABATE appreciates many components of the DOE's DSPx initiative, but cautions the Commission not to accept all DSPx pronouncements and recommendations at face value.

V. REVIEW, CONCLUSIONS, AND RECOMMENDATIONS

Throughout these comments, ABATE points out both the benefits and potential drawbacks of quantifiable approaches to distribution planning project evaluation in the context of ABATE's recommendation that a transparent, stakeholder-engaged distribution planning and capital budgeting process be developed for use in Michigan. The benefit of quantifiable approaches, such as benefit-cost analysis and risk-informed decision support, is that objective and comparable data is generated to both improve decision making and establish a framework for post-investment performance evaluation. These can only be good for Michigan electric customers. The potential drawback of such approaches is that they can be manipulated by IOUs to secure certain outcomes as illustrated by the many examples ABATE presented in these comments. Without specific guidance from the Commission on quantitative approaches, their application, and the detailed solutions to quantitative approach deficiencies commonly encountered in other states, ABATE concludes that any distribution planning process developed for Michigan will be biased toward IOUs' desired outcomes, not customers' desired outcomes.

As a result, ABATE recommends the Commission develop detailed guidance on quantitative evaluation approaches to distribution grid projects as part of any distribution planning and capital budgeting process decisions it reaches in this proceeding, or alternatively, prescribe that such guidance be part of any future proceedings the Commission establishes on distribution planning and capital budgeting processes. Failure to do so may result in grid modernization investments which are not cost-effective, harming the economic productivity of Michigan businesses and ABATE members, and disadvantaging Michigan businesses and

ABATE members in the global marketplace. ABATE thanks the Staff and Commission for this opportunity to express its viewpoints, and looks forward to continuing discussions on the development of a transparent, stakeholder engaged approach to distribution planning and capital budgeting in Michigan.