Comments of Northeast Energy Efficiency Partnerships (NEEP) to the Maryland Energy Administration (MEA) regarding EmPOWER Maryland Planning for 2020
July 27, 2012

INTRODUCTION

As the regional organization working to promote energy efficiency in buildings throughout the Northeast and Mid-Atlantic, Northeast Energy Efficiency Partnerships (NEEP) thanks the Maryland Energy Administration (MEA) for the opportunity to provide input as part of its EmPOWER Maryland Planning for 2020.[1] We believe that these programs provide significant economic and environmental benefits to Maryland customers and we look forward to engaging with MEA and others in order to help shape these important programs in their next phase. As part of its deliberations, we ask MEA to consider the following recommendations for inclusion in its EmPOWER 2020 report:

- Extend the EmPOWER Maryland Electric Programs through 2020
- Recommend that the General Assembly Create Natural Gas Efficiency Programs
- Modify the EmPOWER Energy Savings Target Design
- Review Cost-Effectiveness Screening Procedures
- Enable Shareholder Performance Incentives (SPIs)
- Coordinate Programs with Building Energy Codes and Appliance Standards
- Continue Support for Common Evaluation, Measurement and Verification Protocols

1. Extend the EmPOWER Maryland Electric Program through 2020

We strongly support the extension of the EmPOWER Maryland programs for a second phase to 2020. Our experience has been that states with coordinated, multi-year energy efficiency programs overseen by a state regulatory commission achieve substantial energy savings and economic benefits for their ratepayers. Though the utilities are currently behind on their 15 X 15 energy savings targets, customers have benefited enormously from the energy and peak demand savings, bill reductions, and environmental benefits that have flowed from the programs (see a quick snapshot of benefits below). Policy has and will continue to provide an essential foundation for strong energy savings programs.

[1] These comments are offered by NEEP staff and do not necessarily represent the view of NEEP's Board of Directors, sponsors or underwriters.

EmPOWER Maryland Program Savings and Benefits, 2009-2011

Year	Annual Energy Savings (MWh) [2]	Annual Energy Savings (mill. USD)[3]	Savings as Percent of Retail Sales
2009	146,898	$19.52	0.23%
2010	387,232	$51.46	0.59%
2011	421,344	$55.99	0.64%

Extending the EmPOWER Programs for an additional five years will allow the electric utilities to build upon their increasing experience in administering energy efficiency programs, create certainty in the marketplace, and acquire cost-effective, near-term savings opportunities and help transform the market towards more energy efficient buildings and products.

2. Recommend that the General Assembly Create Natural Gas Efficiency Programs

We also support the creation of natural gas efficiency programs. As gas provides 42.5 and 46.8 percent of Maryland's household space and water heating needs, respectively, a robust natural gas energy efficiency program has the potential to provide significant savings for ratepayers.[4] Natural gas conservation will become even more important in this era of low natural gas prices, as it will be used increasingly to meet electric supply and transportation needs.

As the "Natural Gas Energy Efficiency Potential in Maryland" study by GDS Associates shows, significant cost-effective opportunities exist to meet Maryland's space and water heating needs through energy efficiency. The report finds that the state could meet at least 2 percent of its annual natural gas needs by 2020 through natural gas energy efficiency programs, given the proper policy environment. This level of savings is consistent with natural gas efficiency programs in states throughout the New England and Mid-Atlantic region, including Connecticut, Massachusetts, New York, and Rhode Island. Despite falling natural gas prices, efficiency remains less costly than comparable supply options, with a total net benefit from programs reaching expected to reach $1.82 billion by 2020.[5] Finally, gas efficiency programs will open up new opportunities for the utilities and energy service providers to offer more

[2] 2011 savings figures available from Public Service Commission of Maryland, "The EmPower Maryland Energy Efficiency Act Standard Report of 2012," March 2012, p.4. Available at http://webapp.psc.state.md.us/Intranet/Reports/2012%20EmPower%20Maryland%20Report.pdf

[3] Estimates based upon a level of savings of 13.29 cents/kwh, adjusted for Maryland from Synapse Economics, "Avoided Energy Supply Costs in New England: 2011 Report," July 21, 2011, p. 1-6. Available at http://www.ma-eeac.org/docs/PAcites/AESC%202011%20Final%20-amended%208-11-11%20-Synapse.pdf.

[4] Richard Spellman, GDS Associates, Inc., "Natural Gas Energy Efficiency Potential in Maryland," p. 16. Available at http://energy.maryland.gov/empower2020/documents/NaturalGasEnergyEfficiencyPotentialinMaryland.pdf.

[5] Spellman, "Natural Gas Energy Efficiency Potential in Maryland," p. 5.

comprehensive, whole-building approaches that are not possible now under EmPOWER. We welcome the opportunity to discuss our experience with natural gas policies and programs from other states in the region and the interaction with electricity programs.

3. Modify the EmPOWER Energy Savings Target Design

The EmPOWER Maryland Act of 2008 formed the basis for the state's electricity energy efficiency programs, providing for program cost-recovery, enabling the Public Service Commission (PSC) to put in place rate mechanisms that favored investments in energy efficiency, and established energy savings targets of 15 percent reduction in per-capita electricity consumption by 2015. Under EmPOWER, the utilities were required to achieve roughly 1.5 percent energy savings annually in order to meet their targets, a number that has grown to over 2 percent each year given progress to date.[6]

We are pleased that MEA has identified modifying the savings targets as an issue to address in its EmPOWER 2020 report. Policy innovation in the Northeast region has allowed us to see a variety of approaches to customer efficiency programs. This experience demonstrates that an optimal policy has two key elements: a mandate for program administrators to achieve "all cost-effective energy efficiency" and a process for stakeholders, informed by expert technical consultants, to put in place aggressive but attainable multi-year savings targets tied to retail electric sales and customer economic benefits.

As illustrative examples, we point to policies in Massachusetts and Rhode Island.[7] Each has put in place policies requiring its states utilities to treat energy efficiency as their "first fuel," investing in all cost-effective opportunities before turning to traditional supply resources. The process then goes before a stakeholder advisory council, which determines through rigorous analysis and dialogue how much savings can be achieved and the level of funding necessary to meet the targets.[8] It is important that this council not only have strong representation from state government and business, energy, consumer and environmental organizations, but also have the resources to employ technical experts who have experience in setting goals for state energy programs and can help board members to evaluate program progress.

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[6] Maryland Statutes, Public Utilities Article, Section 7-211. Available at http://mlis.state.md.us/asp/statutes_Respond2_2013.asp?article=gpu&section=7-211.

[7] For the text of these energy efficiency laws, see Massachusetts General Laws, Title 2, Chapter 25, Section 21 at http://www.malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter25/Section21 and Rhode Island Statutes, Section 39-1-27.7 at http://www.rilin.state.ri.us/statutes/title39/39-1/39-1-27.7.HTM. For more on the energy savings goal-setting process, see the Massachusetts Energy Efficiency Advisory Council (EEAC) at http://www.ma-eeac.org/ and the Rhode Island Energy Efficiency and Resource Management Council (EERMC) at http://www.rieermc.ri.gov/. Connecticut and Vermont also have mandates to achieve all cost-effective energy efficiency, though the process is slightly different.

[8] NEEP, and other groups, have promoted this approach in previous comments. We note that creating a board would not be a significant departure from the current process that has informed EmPOWER Maryland program planning but would build upon that work.

This process has a number of advantages. We note at the outset that this process has produced the nation's most aggressive and highest achieving energy efficiency programs.[9] First, the energy savings targets are not only technically rigorous, but the stakeholder advisory process promotes cooperation and consensus about the goals submitted to the Public Service Commission (PSC). It also offers program administrators flexibility in designing and implementing programs, while allowing utility regulators to focus on evaluating savings targets and performance, rather than overseeing programs. Even if legislative changes are not available at this time, we encourage MEA to recommend that the PSC create such a council to inform the next three-year EmPOWER plans.

We join others in submitting that the metric for the current targets, currently benchmarked to per-capita electric consumption, should be revised. Per-capita consumption targets are subject to significant influence by factors beyond the control of policy, particularly weather and economic conditions, particularly over long periods of time. This makes it uncertain how successful program administrators are in achieving savings for customers. For the second phase of EmPOWER, we recommend that energy savings goals be tied to annual retail sales, as this is the more common metric for programs across the country and allows for easier evaluation of program performance.[10]

In addition, MEA may wish to ensure a minimum standard of electric and natural gas savings as part of revisions to the EmPOWER statute. Such a standard should require utilities to attain at least a minimum level of annual energy savings, but encourage the PSC to approve higher levels of savings if it were the least cost energy resource. While the precise figures for electric and gas should be determined after additional analysis, a level of about 1.5 percent of annual electric sales and 0.75 percent of annual natural gas sales is a good place to begin.

4. Review Cost-Effectiveness Screening Procedures

We applaud MEA for its attentiveness to the impact of cost-effectiveness screening methods on the EmPOWER programs in the past and encourage it to include recommendations for revising the current use of the total resource cost (TRC) test in its report.[11] Policymakers and practitioners across the region are recognizing that the TRC test as currently applied may hinder robust energy efficiency programs, particularly for existing residential buildings and for low-income customers, as well as marketing and community outreach initiatives. A recent report by Synapse Energy Economics states that "Many states are not properly applying the cost-effectiveness tests, and thus are understating the value of energy efficiency

[9] Massachusetts, Rhode Island, and Vermont all achieved levels of savings well above 1 percent of retail sales last year. For the next 3 years, annual electricity savings targets are at or above 2 percent of retail sales, representing the highest targets in the nation. For comparison, see our regional Energy Efficiency Snapshot at http://neep.org/uploads/policy/EE%20Policy%20Snapshot%20Updated-5.2.12.pdf

[10] ACEEE's Annual Scorecard, for example, compares energy savings performance based upon retail sales. See the full scorecard online at http://www.aceee.org/sector/state-policy/scorecard, p. 15-18.

[11] Maryland Energy Administration (MEA), "Recommendations for Enhancing Utility Energy Efficiency Program Performance: EmPower Maryland Plans for 2012 to 2014," September 1, 2011, p. 9-12.

resources."[12] As MEA has commented on this issue extensively in the past, we will not make specific recommendations on cost-effectiveness screening here, but offer the following for your consideration:

- The TRC test, if it is used, should account for other energy benefits, such as fuel and water savings, reduced environmental and renewable portfolio standard (RPS) compliance costs, the benefits of deferred transmission and capacity investments and demand reduction-induced price effects (DRIPE), and reduced risk for customers.
- The TRC test should be applied at the program and sector levels and not at the measure level. Applying the TRC at this level can have a significant negative impact on comprehensive savings programs.
- The Utility Cost Test (UCT) can be useful as a supplement to either the Societal Cost Test (SCT) or the TRC test at the portfolio level, as it can show if customer costs will be lowered as a result of efficiency programs.

It may be appropriate for MEA to request a technical conference with PSC and its staff to discuss this matter in depth. Such a technical conference would allow all parties to air their views on cost-effectiveness screening methods that can enable strong energy savings programs that achieve the greatest value for all customers. This discussion would be timely, as the current EmPOWER plans are in place through 2014.

5. Enable Shareholder Performance Incentives (SPIs)

In order to promote more robust savings efforts, we support MEA's recent comments in favor of allowing the program administrators to earn performance incentive for achieving excellent program performance.[13] Shareholder performance incentives (SPIs) help to level the playing field between energy efficiency and traditional supply-side resources by offering a risk-adjusted return on investment (ROI) for utilities that meet and exceed savings targets, comparable to the returns utilities are allowed for traditional transmission and distribution projects. Recent analysis by the American Council for an Energy Efficient Economy (ACEEE) shows a correlation between states with strong energy efficiency programs and the existence of performance incentives.[14]

We are agnostic on the precise design of an incentive mechanism, as states have had success and challenges with different models. We again offer a few elements we believe can contribute to MEA's proposal:

- An SPI should ensure that the majority of the benefits flow to customers, either through fixed performance goals or a shared benefits approach. The design may be tied to a mixture of performance metrics, including energy savings, economic value,

[12] Tim Woolf, et al., "Best Practices in Energy Efficiency Program Screening: How to Ensure that the Value of Energy Efficiency is Properly Accounted For," Prepared for the National Home Performance Council, July 23, 2012, p. 1. Available at http://www.synapse-energy.com/Downloads/SynapseReport.2012-07.NHPC.EE-Program-Screening.12-040.pdf.
[13] MEA, "Recommendations for Enhancing Utility Energy Efficiency Program Performance," p. 7-9.
[14] Sara Hayes, et al., ACEEE, "Carrots for Utilities: Providing Financial Returns for Utility Investments in Energy Efficiency," January 2011, p. 16. Available at http://www.aceee.org/sites/default/files/publications/researchreports/U111.pdf.

and other specific metrics. Program expenditures alone are not appropriate for purposes of incentives.[15]

- An SPI should have a "tiered" incentive structure, providing for small rewards starting at between 80 and 90 percent of goal and larger rewards for performance above that level, capped at 120 percent of goal.
- Any evaluation processes for establishing rewards must provide clarity about what evaluation protocols will be used and certainty about the timeframe for a final determination.

MEA has recommended that penalties be included as well. While we do not oppose penalties, they are likely to work optimally only if performance incentives are also adopted. Penalties alone are likely to work against robust programs in favor of more conservative programs with lower gains for customers. Penalty mechanisms must also be designed to ensure that they fall on shareholders and are not passed onto utility customers.

6. Ensure that Budgets and Program Spending Match Savings Goals

As MEA noted in its comments last fall, Maryland's per-capita expenditures and program production costs remain low compared with other states with aggressive energy savings targets (see chart below).[16] We do not believe that this is primarily a function of the design of the EmPOWER cost-recovery mechanism, but rather flows primarily for the issues with the savings targets, cost-effectiveness screening, and financial incentives discussed above. The bottom line is that expenditure levels will likely need to rise in order to achieve higher levels of savings. There are a number of approaches that may address the issue of low expenditures, and we look forward to assisting MEA further as it seeks to develop a recommendation in this report.

State Electric Energy Efficiency Spending and Savings, 2011

State	Per Capita Expenditure	Annual Cost/kwh ($)	Savings Achieved (% of Retail Sales)
Massachusetts	$41.70	$0.33	1.44%
Maryland	$16.82	$0.23	0.64%
Pennsylvania	$17.86	$0.13	1.20%
Rhode Island	$33.10	$0.36	1.22%
Vermont	$55.90	$0.38	1.93%

[15] Vermont, for example, considers a mixture of factors in its performance incentive. See its "2012-2014 Electric EEU Funds Performance Indicators and Awards" at http://psb.vermont.gov/sites/psb/files/orders/2011/2011-2/EEU-2010-06%20Order%20re%20Electric%20QPIs%20Appendix%20A.pdf.

[16] MEA, "Recommendations for Enhancing Utility Energy Efficiency Program Performance," p. 2-6.

7. **Coordinate Programs with Building Energy Codes and Appliance Standards**

In order to achieve Maryland's aggressive energy savings and emissions reductions targets a comprehensive approach needs to be employed that coordinates the energy efficiency programs with other energy efficiency policy efforts, namely: building energy codes and appliance efficiency standards. As an organization working to promote more energy efficient codes and standards throughout the region, we have seen firsthand that the effort to advance codes and standards is greatly enhanced through partnerships with the utilities. However, as such activities have not been allowed to claim savings under current state regulatory frameworks, we also advocate for the development of opportunities and methodologies to allow the utilities to be able to do just that.

We commend MEA for its work to incorporate activities to advance and implement building energy code and appliance efficiency standards into the EmPOWER Plans through its Codes Working Group.[17] NEEP looks forward to engaging with MEA, the utilities, the Department of Housing and Community Development (DHCD) and others as they work more on this important initiative. We also encourage stakeholders to continue to both inform and be informed by the ongoing research and evaluation work being done on this topic through NEEP's Regional Evaluation, Measurement and Verification Forum, which is scheduled for completion later this year or early in 2013.

8. **Continue to Support Common Evaluation, Measurement and Verification Protocols**

NEEP thanks MEA and the PSC for their leadership and involvement in the Regional EM&V Forum since the Forum's inception in 2008 and encourage Maryland's continued participation. Forum participants from Maryland have been instrumental in the success of the Forum thus far, and have benefitted from the Forum's range of completed products.

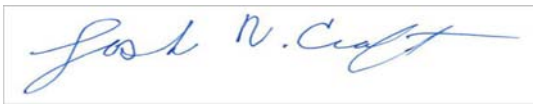
The Forum has made important progress to date to develop and support the use of consistent protocols and data assumptions to evaluate, measure, verify, and report the savings, costs, and emission impacts of energy efficiency, and it has leveraged funds to conduct valuable regional research. We hope to continue to coordinate EM&V Forum efforts with Maryland evaluation stakeholders to avoid duplicating studies and to leverage EM&V funds across Forum states for projects that are useful, cost effective and help to meet Maryland's needs.

The Forum is supported by a Mid-Atlantic Conference of Regulatory Utilities Commissioners (MACRUC) resolution, as well as a complementary New England Conference of Public Utilities Commissioners (NECPUC) resolution that was reaffirmed earlier this year. The Forum Steering Committee recently adopted a Forum 2012-14 Plan, which includes a preliminary list of potential projects. NEEP looks forward to working with Maryland stakeholders this summer/fall to help inform the project agendas for next year, whereby the projects can help support Maryland evaluation activities.

[17] MEA, "Status and Recommendations on the Utilities' EmPOWER Programs," p. 10-17.

Thank you for the opportunity to comment in this important matter regarding the future of the EmPOWER programs and energy efficiency in Maryland. We look forward to engaging with MEA further as its works on its EmPOWER 2020 report.

Sincerely,



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