Memorandum

To: Illinois Energy Efficiency Stakeholder Advisory Group
From: Celia Johnson, SAG Facilitation
Date: October 23, 2015 (updated)
RE: Clean Power Plan and Other Initiatives: Impacts on Portfolio Planning (DRAFT)

I. Introduction

The Clean Power Plan final rule was released by the U.S. Environmental Protection Agency ("U.S. EPA") in August 2015. The Clean Power Plan requires states to reduce carbon dioxide ("CO2") emissions nationally by 32% below 2005 levels by 2030, with compliance beginning in 2022. States are required to submit individual or regional plans for compliance, or an initial plan with a request for an extension, by September 2016. A state receiving an extension must submit a final plan by September 2018. A state that does not submit a compliance plan will be directed by the U.S. EPA to utilize a Federal Plan to achieve compliance.

The Illinois Environmental Protection Agency ("IL EPA") is currently reviewing the final rule and meeting individually with stakeholders to discuss feedback and options for compliance. Illinois has not yet announced a stakeholder process or next steps in preparing a compliance plan. There are numerous pathways for Illinois to comply with the Clean Power Plan, under either a mass-based or rate-based approach.[1] The U.S. EPA established two ways to comply: "(1) a "rate-based" state goal measured in carbon dioxide per megawatt hour and (2) a "mass-based" state goal measured in total carbon dioxide emissions. States must choose one of those two measurements to be the basis for its compliance.[2]

The U.S. EPA encourages states to consider demand-side energy efficiency programs, measures, and policies as a compliance approach, stating that energy efficiency "is an important, proven strategy widely used by states that can substantially and cost-effectively lower carbon dioxide emissions from the power sector."[3] Energy efficiency savings are eligible to generate Emission Rate Credits ("ERCs") under a rate-based plan, which can be traded to regulated entities in order to help them achieve compliance.[4] Under a mass-based plan, energy efficiency savings do not generate allowances directly; however, energy efficiency measures will be critical in helping states reduce their demand and in turn, help meet their carbon reduction goals. As such, states may choose to set-aside a portion of their pool of allowances for energy efficiency measures, in order to help incentivize this emissions reduction strategy. The U.S. EPA is seeking public comment on a number of draft sections in the Clean Power Plan final rule. Opportunities for comment are described in Section II below, as applicable.

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[1] Under a rate-based approach, a state utilizes Emissions Rate Credits to effectively lower CO2 emission rates at affected sources (ERCs may be generated by new renewables, new EE, etc). In each compliance period, units in a state selecting a rate-based plan would acquire sufficient ERCs to bring their effective emissions rate within compliance. In a mass-based approach, emissions are reduced by procuring more energy from non-emitting sources.
[2] See E9 Insight Regulatory Brief: The Clean Power Plan. November 2015.
[3] See FACT Sheet: Energy Efficiency in the Clean Power Plan. U.S. Environmental Protection Agency. Available at: http://www2.epa.gov/cleanpowerplan/fact-sheet-energy-efficiency-clean-power-plan.
[4] "One ERC equals an emissions free megawatt-hour of electricity… To be turned into an ERC, MWhs must come from eligible projects (including electricity saving projects like a lighting retrofit in a commercial building) installed in 2013 or later, connected to the grid, and located in a rate-based state." See *Measuring energy efficiency in EPA's Clean Power Plan*. Natural Resources Defense Council Staff Blog – Switchboard. Dylan Sullivan. September 29, 2015. Accessible at: http://switchboard.nrdc.org/blogs/dsullivan/measuring_energy_efficiency_in.html.

The Illinois Energy Efficiency Stakeholder Advisory Group ("SAG") began a new process in September 2015, the SAG Portfolio Planning Process. The objective is to reach as much consensus as possible on issues related to Energy Efficiency Portfolio Plans ("EE Plans"), in advance of Illinois Program Administrators[5] filing EE Plans with the Illinois Commerce Commission for approval in fall 2016.[6] The goal is to reach consensus on issues to reduce litigation in the EE Plan dockets.

There are several possible impacts on the next 3-year EE Plans due to elements in the Clean Power Plan final rule and other initiatives underway in Illinois. Section II of this memo presents a brief summary of five potential impacts identified by SAG participants at the September 2015 meeting: 1) Draft EM&V Guidelines; 2) Clean Energy Incentive Program; 3) Ownership of Allowances and Emissions Rate Credits; 4) Calculating Achieved Savings; 5) Additional Funding for EE – Trading; and 6) Expected EE Savings from Upcoming 3-year EE Plans. Section III describes three other initiatives that may impact the next 3-year EE Plans: 1) Development of the Illinois Energy Roadmap; 2) Pending Illinois Energy Legislation; and 3) Expected Code and Appliance Standard Updates. SAG questions and SAG actions are identified for each potential impact.

II. Potential Clean Power Plan Impacts

1. Draft EM&V Guidelines

The U.S. EPA included draft *Evaluation Measurement and Verification (EM&V) Guidance for Demand Side Energy Efficiency Programs* in the final rule, requesting public input.[7] EM&V requirements differ depending on whether a state selects a rate-based or mass-based approach for compliance. The U.S. EPA is asking for recommendations on how the draft guidelines can be improved, in order to implement the EM&V provisions included in the Clean Power Plan. Draft guidelines will be open for public comment for 90 days following publication of the Clean Power Plan in the Federal Register.[8] The Clean Power Plan was published on October 23, 2015, triggering the comment period.[9]

- **SAG Questions:** How will draft EM&V guidelines impact the next three-year Plan? Are any changes necessary to current Illinois EM&V practices?
- **SAG Action:** Stakeholders have noted that the draft guidelines state a preference for measured over deemed savings.[10] Thus, savings claims may need to become less reliant on Technical Reference Manual deemed savings, and more based on ex post measurements, perhaps using AMI-data. Rob Neumann, Navigant, has reviewed the draft EM&V guidelines. Neumann will present to SAG on this topic at the November monthly meeting, to provide an overview of how draft guidelines differ from current

[5] Illinois Program Administrators include Ameren Illinois, Commonwealth Edison Company, Nicor Gas, Peoples Gas – North Shore Gas, and the Department of Commerce and Economic Opportunity, offering energy efficiency programs pursuant to Section 8-103 and 8-104 of the Public Utilities Act.

[6] See Section 8-103, 8-104 Public Utilities Act.

[7] See *Evaluation Measurement & Verification Guidance for Demand-Side Energy Efficiency (EE).* U.S. Environmental Protection Agency, August 3, 2015. Draft for Public Input. Available at: http://www2.epa.gov/sites/production/files/2015-08/documents/cpp_emv_guidance_for_demand-side_ee_-_080315.pdf.

[8] Comments should be submitted to emvinput@epa.gov.

[9] See Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units. Federal Register. October 23, 2015. Available at: https://www.federalregister.gov/articles/2015/10/23/2015-22837/standards-of-performance-for-greenhouse-gas-emissions-from-new-modified-and-reconstructed-stationary.

[10] See *Evaluation Measurement & Verification Guidance for Demand-Side Energy Efficiency (EE)* at 15-16. U.S. Environmental Protection Agency, August 3, 2015. Draft for Public Input. Available at: http://www2.epa.gov/sites/production/files/2015-08/documents/cpp_emv_guidance_for_demand-side_ee_-_080315.pdf.

Illinois EM&V policy. The SAG Facilitation team will continue tracking the draft EM&V Guidelines, including the release of the final document after the comment period.

2. Clean Energy Incentive Program

The Clean Energy Incentive Program ("CEIP")[11] is an optional "matching fund" program that provides an opportunity for participating states to earn additional credits by taking early action to achieve energy efficiency savings in low income communities.[12] This program is targeted at removing historic barriers to energy efficiency measures available to low income customers. CEIP is available as an option for states that select either a mass-based or rate-based approach. CEIP is also included in the federal plan prepared by U.S. EPA. The U.S. EPA will provide matching credits to states participating in CEIP, with a cap at 300 million tons of CO2. Double credits will be available for savings achieved through low income energy efficiency programs during the years 2020 and 2021.[13] However, credits through the CEIP would be available onlyto projects implemented after September 2018, or after the submission of a final state plan, whichever comes first. The CEIP is currently in draft form and U.S. EPA is interested in public input. However, a specific process for input has not yet been announced. The U.S. EPA has not clarified whether there will be a separate process for CEIP feedback. However, stakeholders anticipate that public input will be similar to draft EM&V guidelines, with comments open for 90 days following publication of the Clean Power Plan in the Federal Register.

- **SAG Questions:** How will the U.S. EPA define "low income" eligibility for energy efficiency programs? Should Illinois Program Administrators consider additional low income program opportunities in the next 3-year plan?
- **SAG Action:** Low income programs will be discussed as part of the SAG Portfolio Planning Process. The SAG Facilitation team will continue tracking the opportunity for public input and will share details with SAG as they are made available. The SAG Facilitation team will also track the release of the final CEIP document after the comment period expires. In addition, through the SAG Portfolio Planning process, additional focus on low income programs and funds allocated to low income programs may be appropriate given the double credit they are likely to get under the Clean Power Plan.

3. Ownership of Allowances and Emissions Rate Credits

States can use energy efficiency to assist in compliance under both a rate-based or mass-based plans. Under rate-based plans, energy efficiency savings are eligible to receive an Emissions Reduction Credit (ERC), which can be traded to regulated entities in order to help them decrease their effective emissions rate. Under a mass-based plan, compliance is measured solely based on emissions from the stack of regulated entities, and these entities must carry "allowances" in equivalent amount to their emissions. Energy efficiency can be a critical strategy in mass-based states by reducing load and thereby reducing emissions from regulated entities. While ERCs will be issued directly to energy efficiency providers in states choosing a rate-based plan, the ownership of allowances in mass-based states is dependent on each state's allocative decisions. There are several options for determining who owns allowances, including: 1) Auctioning allowances to generators; 2) Giving away allowances to

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[11] See Clean Energy Incentive Program. U.S. Environmental Protection Agency. Available at: http://www3.epa.gov/airquality/cpp/fs-cpp-ceip.pdf.

[12] The CEIP also includes early action credits for wind and solar.

[13] "For every one MWh saved in 2020 or 2021, low-income energy efficiency programs that begin any time after the final plan has been submitted can receive two ERCs or allowances equivalent to two MWh saved." See FACT Sheet: Energy Efficiency in the Clean Power Plan. U.S. Environmental Protection Agency. Available at: http://www2.epa.gov/cleanpowerplan/fact-sheet-energy-efficiency-clean-power-plan.

generators; or 3) Allocating credits for allowance set-asides, such as energy efficiency or renewable energy. The EPA has left the decision of how to allocate allowances up to the states.

- **SAG Questions:** Will the decision on who owns allowances or ERCs influence participation by large commercial & industrial customers in energy efficiency programs? How are credits allocated under a mass-based approach?
- **SAG Action:** The answer to this question will depend on which approach Illinois selects for compliance with the Clean Power Plan. The SAG Facilitation team will continue tracking this issue.

4. Calculating Achieved Savings

The U.S. EPA's draft EM&V guidelines document includes reporting on lifetime annual savings, instead of only first year savings as is the current practice of and statutory directive for Illinois Program Administrators. Energy efficiency savings can be claimed from measures installed after 2012, with effective useful lives through 2022. In Section 2.4.2, Applicable Guidance, the U.S. EPA suggests that deemed savings values: "Are quantified as the most likely averages of electricity savings and other factors that determine such values over the lifetime of the EE Measure, such as average occupancy, typical weather, typical operating hours and Effective Useful Life."[14] Energy efficiency savings must be reported in both first year as well as cumulative savings: "Report current year incremental and cumulative savings values on the basis of best available information at the time of reporting."[15]

As described above, the U.S. EPA has specifically asked for recommendations on how the draft guidelines for implementing the EM&V provisions included in the Clean Power Plan can be improved.

- **SAG Questions:** How does the Clean Power Plan reference to lifetime savings impact the next 3-year EE Plans? What is the length of the measure expected useful lives?
- **SAG Action:** Lifetime vs. annual savings is a threshold issue that will be discussed at the October SAG meetings. Section 8-103 of the Public Utilities Act establishes annual savings goals, whereas Clean Power Plan goals will be cumulative lifetime. Program Administrators will likely assert that goals should either be annual or lifetime and both should not be established as goals. Establishing annual goals through the SAG Planning Process is consistent with past practice and also most consistent with the language of the current statute. However, given the budget cap, the annual savings targets are not achievable, and the Commission does have the flexibility to approve lower goals, and arguably also to establish the lower goals as lifetime rather than annual goals. The SAG facilitation team will seek to build early consensus on this important threshold issue.

5. Additional Funding for EE – Trading

One method for states to comply with the Clean Power Plan final rule is to trade compliance instruments with another state following the same type of plan (e.g. a mass-based or rate-based approach). For example, if two states implement a mass-based compliance approach, each state has an option of trading allowances with the other. If two states implement a rate-based approach, the same is true (but ERCs would be traded).

[14] See *Evaluation Measurement & Verification Guidance for Demand-Side Energy Efficiency (EE).* U.S. Environmental Protection Agency at 17, August 3, 2015. Draft for Public Input. Available at: http://www2.epa.gov/sites/production/files/2015-08/documents/cpp_emv_guidance_for_demand-side_ee_-_080315.pdf.

[15] Id. at 15.

The “currency” for trading in mass-based plans is allowances. If a state decides to auction off allowances, that is a potential revenue stream, and funding could be used to increase energy efficiency program budgets. The U.S. EPA describes this in its energy efficiency Fact Sheet: “States can further incentivize energy efficiency under mass-based approaches by allocating emission allowances for energy efficiency activities, including activities that occur prior to 2022. States can also auction allowances and decide to use portions of the revenue to support demand-side energy efficiency programs.”[16] The “currency” in rate-based plans is ERCs. Under rate-based plans, there is a clear source of potential revenue for energy efficiency programs through trading ERCs.

In order to facilitate trading across state lines, the EPA has published draft “Model Trading Rules” which can be adopted by states under a mass-based or rate-based plan. are available for adoption by states, as provided by U.S. EPA in its proposed Federal Plan. State plans that adopt the Model Trading Rule are presumptively approvable, and are said to be “trading-ready”..[17] This means that if a state adopts the Model Trading Rule, that state can trade with any other state utilizing the same approach (e.g. a mass-based or rate-based approach). The U.S. EPA has asked for public comment on the Federal Plan, including the Model Trading Rules. The Federal Plan will be open for public comment for 90 days following publication of the Clean Power Plan in the Federal Register.[18]

- **SAG Questions:** Will trading result in an opportunity for additional EE funding in Illinois?
- **SAG Action:** The answer to this question will depend on which approach Illinois selects for compliance with the Clean Power Plan, and whether Illinois adopts the Model Trading Rules. The SAG Facilitation team will continue tracking this issue. The SAG Facilitation team will also continue tracking the draft Federal Rule and Modeling Trading Rules, including the release of the final document after the comment period expires. In addition, through the planning process, it would be helpful to identify further cost-effective savings opportunities should more funding become available through trading.

6. Expected EE Savings from Upcoming EE Plans

Energy efficiency is an allowable and encouraged compliance option for states to achieve Clean Power Plan goals. However, it is unclear how much projected energy efficiency savings in the next three-year EE Plans will meet the Clean Power Plan targets, and whether increased energy efficiency is a less expensive compliance strategy than other options. Under a rate-based plan, only those savings occurring in 2022 and beyond are eligible to receive ERCs. For example, if a measure is installed in the upcoming 3-year EE Plan, but has an Effective Useful Life through 2022, it can generate ERCS in 2022. Under a mass- based plan, energy efficiency measures do not directly generate credits (unless a state decides to set-aside allowances for energy efficiency). Any savings that are generated before 2022 (ie, during the upcoming EE Plans) will effectively help the state comply by lowering demand, but would not necessarily directly receive any credit – either before or after 2022. As described above in impact 2, there is a possibility for Illinois to receive early credit for low income energy efficiency programs, through participation in the Clean Energy Incentive Program.

[16] See FACT Sheet: Energy Efficiency in the Clean Power Plan. U.S. Environmental Protection Agency. Available at: http://www2.epa.gov/cleanpowerplan/fact-sheet-energy-efficiency-clean-power-plan.
[17] See Environmental Protection Agency 40 CFR Part 62, *Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations*. Available at: http://www3.epa.gov/airquality/cpp/cpp-proposed-federal-plan.pdf.
[18] Comments should be submitted through Federal Rulemaking Portal www.regulations.gov or Email: a-and-r-Docketa@epa.gov, Attention ID No. EPA-HQ-OAR-2015-0199.

- **SAG Question:** Stakeholders have asked how much of the Clean Power Plan targets for Illinois will the expected savings meet, and whether targets should be increased if energy efficiency is a more cost-effective approach than other options.
- **SAG Actions:** The answer to this question will depend on which approach Illinois selects for compliance with the Clean Power Plan. The SAG facilitation team will seek to schedule a future presentation by a stakeholder that has analyzed the extent to which current expected energy efficiency savings could meet Clean Power Plan targets.

III. Other Initiatives

In addition to the Clean Power Plan, there are two other initiatives, and future code and appliance standard changes, that may impact the SAG Portfolio Planning Process. Each initiative is summarized below, including a brief description of process and next steps.

1. Illinois Energy Roadmap

The Illinois Department of Commerce and Economic Opportunity ("the Department") is working with the Galvin Center at the Illinois Institute of Technology, the Energy Resources Center at the University of Illinois at Chicago, and the National Association of State Energy Officials to complete an Illinois Energy Roadmap for the state of Illinois by December 2016. This effort is funded by the U.S. Department of Energy. The goal is "to develop an Illinois Energy Roadmap that identifies the optimized role of energy efficiency and renewable energy to meet current and future policy requirements."[19] Developing the Illinois Energy Roadmap is an initial process to start discussing energy efficiency and renewable policies in Illinois. This effort is meant to help inform Illinois EPA Clean Power Plan efforts.

The process for developing the Illinois Energy Roadmap includes the following steps: 1) Convene an "Advisory Group" of primary utilities, as well as state, energy, and environmental agencies; 2) Use statistical modeling to establish baseline and quantify potential impacts of policy options; 3) Engage stakeholders through a public comment process; 4) Develop a concrete integrated policy strategy that links energy, environmental, and economic goals and a "Roadmap" for how to achieve goals; and 5) Create an Energy Roadmap for Illinois & Annual Planning Report by the end of 2016.

- **SAG Question:** Do SAG participants have feedback to share with the Department on the data sets to use in creating the Illinois Energy Roadmap?
- **SAG Actions:** 1) SAG to schedule a teleconference to discuss modeling feedback. 2) In addition, SAG can provide its analysis of energy efficiency potential in Illinois and expected goals achievement over the next three years (starting June 1, 2016) so that the Illinois Energy Roadmap accurately characterizes and accounts for utility-funded EE activity in the state. The SAG facilitation team will reach out to the Illinois Energy Roadmap leads to find out when and what information they need about energy efficiency in IL, communicate any requests back to the stakeholders, and will continue tracking the Illinois Energy Roadmap effort.

2. Proposed Energy Legislation

[19] See Illinois Energy Efficiency Stakeholder Advisory Group Meeting Materials: September 27-28, 2015. Available at: http://ilsagfiles.org/SAG_files/Meeting_Materials/2015/September_2015_Meetings/Illinois_Energy_Roadmap_Presentation_EE%20SAG_09-28-15.pdf.

Proposed energy legislation is under consideration by the Illinois legislature.[20] Proposed legislation in the spring 2015 legislative session includes House Bill 2607[21] / Senate Bill 1485[22] and House Bill 3328[23] / Senate Bill 1879[24]. Proposed legislation impacts numerous aspects of Illinois energy efficiency programs, as well as the role of the Illinois Power Agency in the energy efficiency program procurement process. Energy legislation may be addressed by the Illinois legislature during either the fall 2015 veto session[25] or the spring 2016 legislative session.

- **SAG Question:** Will the adoption of energy legislation impact the next 3-year EE Plans?
- **SAG Actions:** The SAG Facilitation Team will continue tracking proposed legislative action that may impact Illinois energy efficiency programs. If necessary and appropriate, the SAG Facilitation Team will dedicate time for SAG participants to discuss legislative impacts if energy legislation is signed into law in Illinois, following either the fall 2015 veto session or the spring 2016 legislative session.

3. Expected Code and Appliance Standards Updates [Placeholder]

Code and appliance standards may change over the next 3-4 years and may need to be considered during the SAG Portfolio Planning Process – *additional information to be added.*

- **SAG Question:** Will code and/or appliance standards impact the next 3-year EE Plans? If so, how should those impacts be addressed?
- **SAG Actions:** The SAG facilitation team will follow-up with the TRM Administrator, Illinois Program Administrator portfolio planners, and independent evaluators to identify and capture expected changes to codes and appliance standards.

IV. Conclusion

The SAG Portfolio Planning Process is governed by Illinois statute and regulatory directives, related to the development of energy efficiency programs. However, other state and federal initiatives may also influence, or alternatively may be informed by, the SAG Portfolio Planning Process. The SAG facilitation team will stay abreast of developments in related state and federal initiatives, and inform stakeholders of any developments so that the planning process can be congruent with and leverage other important policy initiatives.

[20] See Illinois House Bill 2607; Senate Bill 1485; House Bill 3328; and Senate Bill 1879.
[21] See House Bill 2607. Retrieved from: http://ilga.gov/legislation/99/HB/PDF/09900HB2607lv.pdf.
[22] See Senate Bill 1485. Retrieved from: http://ilga.gov/legislation/99/SB/PDF/09900SB1485lv.pdf.
[23] See House Bill 3328. Retrieved from: http://www.ilga.gov/legislation/99/HB/PDF/09900HB3328lv.pdf.
[24] See Senate Bill 1879. Retrieved from: http://www.ilga.gov/legislation/99/SB/PDF/09900SB1879lv.pdf.
[25] Currently scheduled for the first week of November, 2015.