

June 20, 2012

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Three Empire State Plaza
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Honorable Jaclyn A. Brilling Secretary New York State Public Service Commission Three Empire State Plaza Albany, New York 12223-1350

Re:

Case 07-M-0548 – Proceeding on the Motion of the Commission Regarding an Energy Efficiency Portfolio Standard; and Case 10-M-0457 – In the Matter of System Benefits Charge IV.

Dear Mr. Cohen and Secretary Brilling:

In your letter¹ dated June 5, 2012, you requested responses to five questions. The questions were posed in response to my September 29, 2011 letter² to Secretary Brilling and the October 24, 2011 Commission Order³ (T&MD Order) approving the operating plan for the Technology & Market Development (T&MD) portfolio. A clarification of the background description, along with your five questions and NYSERDA's responses, are provided below.

Background Clarification

The explanation below is intended to provide clarification and remove potential misunderstanding or miscommunication regarding the intent of the following two sentences in the September 29, 2011 letter:

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¹ Letter, Jeffrey C. Cohen to Janet Joseph, Re: EEPS Optimization and CHP, dated June 5, 2012.

² Letter, Janet Joseph to Jaclyn A. Brilling, Re: Case 10-M-0457 – In the Matter of the System Benefits Charge IV, dated September 29, 2011.

³ Case 10-M-0457, Order Continuing the System Benefits Charge and Approving an Operating Plan for a Technology and Market Development Portfolio of System Benefits Charge Funded Programs, issued October 24, 2011.

- Statement 1 Page 2 of September 29, 2011 Letter, Description of Contingency Scenario C
 "NYSERDA proposes that the \$10 million net increase to support CHP under the SBC would
 come from a reduction in NYSERDA EEPS funding, along with the ongoing optimization of
 NYSERDA's EEPS portfolio."
- Statement 2 Attachment to September 29, 2011, Table C: Contingency Scenario C, Footnote
 "Net increase of \$10 million for CHP would come from a reduction in funding for NYSERDA
 EEPS programs, or stated otherwise, a reduction in NYSERDA SBC funding that would have
 otherwise been moved to EEPS starting in 2012."

These two statements were simply intended to propose the transfer of \$10 million of funds from EEPS to the T&MD program to support CHP. NYSERDA included the phrase "... along with the ongoing optimization of NYSERDA's EEPS portfolio" to indicate that we would continue to strive to identify ways to make the best use of the remaining EEPS funds to make the EEPS portfolio as effective as possible. As demonstrated by Commission decisions throughout the EEPS proceeding, portfolio effectiveness is determined not just by targeted energy savings, but also by the portfolio's ability to align with market factors and other policy objectives. Importantly, the letter did not define portfolio "optimization" solely on the basis of dollars spent per unit of savings achieved and it did not state that NYSERDA would achieve its EEPS I targets with \$10 million of excess funds, especially considering that the monthly scorecard reports and draft evaluation reports shared with DPS Staff during this time period would not have supported any such statement. Nor did NYSERDA make any commitments regarding EEPS II targets, as the EEPS II targets were not yet available. The EEPS II targets were only authorized in the October 25, 2011 Order (EEPS II Order), almost one month subsequent to the September 29, 2011 letter.

On October 24, 2011, the Commission issued the T&MD Order containing the following two key statements (i.e., statements 3 and 4) pertaining to "optimization."

Statement 3 - Page 12 and 13 of October 24, 2011 T&MD Order
 "The additional \$10 million required would come from a reduction in NYSERDA's EEPS funding in
 conjunction with ongoing efforts to optimize NYSERDA's EEPS portfolio. NYSERDA contends that
 this funding shift can be accomplished without compromising the achievement of EEPS targets,

and would allow for full funding of CHP without the need for an increase in SBC collections."

• Statement 4 - Page 14 of October 24, 2011 T&MD Order "We will, therefore, require that NYSERDA submit a plan for funding the balance of the CHP initiative... That plan, which will be subject to our approval, should fully describe and explain how the \$10 million in program costs required for the CHP initiative can be realized without increasing collections from ratepayers. It should specifically identify the source(s) of the funds to be used for the CHP initiative, identify the programs affected by the reallocation of funding, and

⁴ Case 07-M-0548 and Case 07-G-0141, Order Authorizing Efficiency Programs, Revising Incentive Mechanism, and Establishing a Surcharge Schedule, issued October 25, 2011.

explain the expected impact of the shift, if any, on the achievement of statewide energy efficiency goals. Whether or not NYSERDA proposes to use the full \$10 million in savings expected to be achieved through optimization of the EEPS portfolio to fund the CHP initiative, the plan should explain how NYSERDA expects those savings to be realized."

At the time, NYSERDA believed that portions of these statements did not accurately reflect our proposal; however for the reasons stated below, NYSERDA believed it could generally comply with the intent of the Commission's directives so a correction was not sought.

Contrary to statement 3, NYSERDA's September 29, 2011 letter did not contend that the funding shift of \$10 million from EEPS to T&MD could "...be accomplished without compromising the achievement of EEPS targets," (emphasis added). Alternatively, NYSERDA believed that the shift would not result in overall lower savings towards "15 by 15," as savings for CHP would be shifted to the T&MD program, even if such savings would not be realized through the EEPS program. NYSERDA believed there would be no overall reduction associated with the shift of funds to support the CHP initiative because of the long-standing history (i.e., since 2001) of reporting MWh generation from SBC-funded CHP installations as equivalent to energy efficiency savings in all previously reported SBC program results. NYSERDA believed that the MWh generation from the CHP initiative would contribute to the overall goals and would be able to offset the MWh reduction in the program contributing the funds. This long-time practice may no longer be acceptable to DPS Staff. While NYSERDA agrees that there may be some differences in energy resources between CHP generation and end-use efficiency savings, CHP can result in overall demand reduction and improved system efficiency, providing system benefits that result in similar effects as end-use efficiency. NYSERDA will continue to work with DPS Staff regarding such issues, but NYSERDA emphasizes that there was no way of knowing this shift in energy savings calculation would become an issue at this particular time.

Similarly, NYSERDA recognized that the statement 4 reference to "\$10 million in savings expected to be achieved through optimization of the EEPS portfolio to fund the CHP initiative" did not accurately reflect the September 29, 2011 letter, but NYSERDA believed it could generally comply with the demonstrations required by statement 4. Based on the EEPS II Order and subsequent conversations with Staff, NYSERDA understood that the March 30 petitions were required to include an option that fully funded CHP from the October 25, 2011 EEPS II authorized funds, regardless of other proposed funding sources. To comply, NYSERDA prepared a recommended proposal and an alternative option for inclusion in the March 30, 2012 petitions. We recognized that any proposed "optimization" would have to describe proposed inter-program fund and energy savings transfers, however NYSERDA had no preconception regarding the magnitude of "savings" that may be associated with an "optimized" portfolio. Rather, NYSERDA believed that the CHP generation would roughly offset the loss of efficiency savings, on a \$/MWh basis as defined historically. Overall, the changes in the portfolio were proposed in consideration of several funding and policy factors, as discussed below.

In short, the record regarding "optimization" of the EEPS portfolio appears to contain a misunderstanding of NYSERDA's initial proposal. Hopefully, the review of the background information

provided above and the responses to your questions below help to clarify NYSERDA's original proposal and subsequent submittals.

Questions and Responses

 Was any analysis performed of the potential for optimizing EEPS generally, independent of the need to find funding for CHP? If so, describe the analysis fully and provide all supporting documentation.

Yes, an analysis of the potential for optimizing EEPS was performed, independent of the need to find funding for CHP. As described on pages 15 and 16 of the EEPS II Petition⁵ and footnote 7 of the CHP Petition⁶, three factors were considered and the "optimization" process involved the application of these factors in a sequenced manner. As such, Steps 1 and 2 of the process included a bottoms-up program by program review to find opportunities to improve the effectiveness of each program. Effective programs must keep pace with the changing environment in which they operate and as described in detail in NYSERDA's EEPS II Petition⁷, significant material changes have occurred in New York's economy, energy efficiency markets and EEPS requirements since the programs were first proposed in the 2007-2008 time frame. During the bottoms-up program review, NYSERDA Program Staff had to consider the implications of these changes and responsive program changes. Step 1 identified the programs that would be the targets for funding reductions and Step 2 identified programs that would most effectively use additional funds.

The process also involved a "top-down" assessment of issues that could affect the entire portfolio. Step 3 was used to identify potential cost-effective movement of funds between programs, *i.e.*, from higher \$/MWh programs to lower or comparable \$/MWh programs. Step 4 eliminated programs that could not reasonably absorb a significant funding reduction for policy or critical mass reasons. Step 5 balanced the information produced through steps 1 through 4 and produced recommended inter-program fund and savings transfers.

A more detailed description of the steps is provided below, under the heading "Portfolio Optimization Process." While the steps are described in a linear fashion, the portfolio optimization process involved many instances of circling back to an earlier step to respond to internal questions and to balance various factors. Following the portfolio optimization description, several specific examples of proposed program improvements resulting from the process are provided under the heading, "Program Optimization."

⁵ Case 07-M-0548, Petition for Modification of Energy Efficiency Portfolio Standard Budgets and Targets, submitted March 30, 2012.

⁶ Case 07-M-0548 and Case 10-M-0457, Petition for Approval of Combined Heat and Power Performance Program Funding Plan, submitted March 30, 2012.

⁷ Page 6, EEPS II Petition

Portfolio Optimization Process

• Step 1 – Market Demand (Identification of Programs with Excess Funding)

Each program was assessed in the context of improvements that could be made considering the current economic and regulatory environment in which the program operated. One basic question that each program needed to address was whether the program could effectively use all the funds allocated to it through the EEPS II Order. The following table identifies the programs that were determined to have excess funds along with a brief explanation.

Table 1. Programs with Excess EEPS II Funding

Program Name	Reason for Excess Funding
Electric Reduction in Master Metered Buildings Program (ERMM)	Inadequate number of approved meters; reduced target audience due to restrictions on serving affordable housing; historically poor program performance
Benchmarking and Operations Efficiency Program (BOE)	Subsumed into FlexTech which already had adequate funds
Single Family Home Performance (SFHP) - Electric	Whole building program with an imbalance in electric and gas funding
Low-Income Single Family Home Performance (LI-SFHP) - Electric	Whole building program with an imbalance in electric and gas funding
Multifamily Performance Program (MPP) - Gas	Whole building program with an imbalance in electric and gas funding
New York ENERGY STAR Homes Program (NYESH) - Gas	Whole building program with an imbalance in electric and gas funding

Step 2 – Market Demand (Identification of Programs with a Funding Shortage)

In conjunction with step 1, each program assessed whether it could effectively use additional funds beyond the funds allocated to it through the EEPS II Order. The following table identifies the programs that had market demand exceeding the authorized funding level.

Table 2. Programs with an EEPS II Funding Shortage

Program Name	Reason for Funding Shortage
Combined Heat and Power Initiative	Program was not funded
Point-of-Sale Lighting Program	Upstream program that should be able to cost- effectively support residential sector
Existing Facilities Program (EFP) - Gas	Whole building program with an imbalance in electric and gas funding
New Construction Program (NCP) - Gas	Whole building program with an imbalance in electric and gas funding
Home Performance with ENERGY STAR - Gas	Whole building program with an imbalance in electric and gas funding

Step 3 – Cost Effectiveness of Programs

As each program determined the cost at which it could deliver each unit of energy savings (\$ per MWh or \$ per Dth) in the 2011 economic and regulatory climate, a program by program \$/unit energy savings cost list was compiled to identify possible cost-effective inter-program funding transfers (from higher \$/unit energy savings to lower \$/unit energy savings) that aligned with the identified funding overages and shortages.

Table 3. Program Cost Effectiveness (Proposed \$ per energy unit saved)

Program Name	\$/MWh	\$/Dth
EmPower	\$1,189.99	\$131.00
Agriculture Energy Efficiency Program	\$902.26	\$91.83
Low-Income Single Family Home Performance	\$821.18	
Assisted Home Performance with ENERGY STAR Program	N/A	\$128.66
Assisted New York ENERGY STAR Homes Program	N/A	\$101.39
Single Family Home Performance	\$532.59	N/A
Home Performance with ENERGY STAR Program	N/A	\$58.44
New York ENERGY STAR Homes Program	N/A	\$84.10
Electric Reduction in Master Metered Buildings Program	\$502.80	N/A
High Performance New Construction Program	\$409.35	\$23.44
Low-Income Multifamily Performance Program	\$276.24	\$88.92
Combined Heat and Power Initiative	\$224.24	N/A
Benchmarking and Operations Efficiency Program (Ordered)	\$198.41	N/A
Market-Rate Multifamily Performance Program	\$181.56	\$56.06
Existing Facilities Program	\$181.53	\$25.91
Industrial and Process Efficiency Program	\$177.37	\$12.89
FlexTech Program	\$116.83	\$8.59
Residential Point-of- Sale Lighting Program	\$112.00	N/A

Step 4 – High Cost Programs Kept Intact for Policy or Critical Mass Reasons

Three relatively high cost (\$/unit) programs were identified as programs that NYSERDA deemed inappropriate for fund reallocation consideration, based on recent Commission Orders. Table 4 lists the three programs and the reasons for keeping the program funding intact.

Table 4. Programs Kept Intact for Policy or Critical Mass Reasons

Program Name	Reason for Protecting Funding		
EmPower	Low-income program; Commission Order providing increased funding		
Low-Income Single Family Home Performance Assisted Home Performance with ENERGY STAR Program Assisted New York ENERGY STAR Homes Program	Low-income programs		
Agriculture Energy Efficiency Program	Specific Commission Order providing funding for this sector		
 Single Family Home Performance Home Performance with ENERGY STAR Program New York ENERGY STAR Homes Program 	Residential sector equity and critical mass would not be retained with a significant funding reduction		

Step 5 – Recommended Inter-Program Transfers to Optimize the EEPS Portfolio

Considering the information gathered in steps 1 through 4, the inter-program transfer of funds described in table 5 was proposed to optimize the EEPS portfolio.

Table 5: Recommended Inter-Program Funding Transfers

Electric Program	Ordered Budget	Proposed Budget	Description of Proposed Budget Adjustment	MWh Change due to Proposed Budget Change ¹
Benchmarking and Operations Efficiency (BOE)	\$21,158,664	\$0	\$21,158,664 to T&MD Combined Heat & Power Program	(106,640)
Electric Reduction in Master-Metered Multifamily Buildings (ERMM)	\$21,081,304	\$6,324,392	\$14,756,913 to T&MD Combined Heat & Power Program	(29,350)
T&MD Combined Heat & Power Program (CHP) ^{2, 3}	\$0	\$35,915,578	 \$21,158,664 from Benchmarking and Operations Efficiency \$14,756,913 from Electric Reduction in Master- Metered Multifamily Buildings 	147,053
Residential Point-of-Sale Lighting Program (POS)	\$21,287,880	\$25,127,466	\$1,025,279 from Single Family Home Performance Program	34,282

Single Family Home Performance (SFHP)	\$28,133,948	\$27,108,669	\$2,814,307 from Low- Income Single Family Home Performance Program \$1,025,279 to Residential Point-of-Sale Lighting Program	(1,925)
Low-Income Single Family Home Performance (LI- SFHP)	\$14,066,974	\$11,252,667	\$2,814,307 to Residential Point-of-Sale Lighting Program	(3,427)
TOTAL Change in MWh Savings resulting from Proposed Electric Budget Transfers				39,993
Gas Program	Ordered Budget	Proposed Budget	Description of Proposed Budget Adjustment	Dth Change due to Proposed Budget Change ¹
Existing Facilities Program (EFP)	\$8,079,934	[^] \$12,502,728	\$4,422,794 from Multifamily Performance Program	170,702
High Performance New Construction Program (NCP)	\$4,921,968	\$5,413,290	\$491,422 from Multifamily Performance Program	20,965
Multifamily Performance Program (MF)	\$32,322,684	\$27,408,468	 \$4,422,794 to Existing Facilities Program \$491,422 to High Performance New Construction Program 	(87,659)
Home Performance with ENERGY STAR Program (HPwES)	\$56,463,992	\$61,272,558	\$4,808,566 from New York ENERGY STAR Homes	82,277
New York ENERGY STAR Homes (NYESH)	\$41,605,048	\$36,796,482	\$4,808,566 to Home Performance with ENERGY STAR Program	(57,177)
TOTAL Change in Dth Savings resulting from Proposed Gas Budget Transfers			129,108	

¹ MWh and Dth Changes are estimated at new \$/MWh and new \$/Dth values proposed in the March 30, 2012 EEPS 2 Petition.

Program Optimization

In addition to optimizing the portfolio, the process described above also identified areas where each program could be improved. Several specific examples of proposed program improvements are described below.

² The CHP Performance Program supports efficient distributed generation and based on a long-standing history (i.e., since 2001) of reporting MWh generation from SBC-funded CHP installations as an equivalent to energy efficiency savings in all previously reported New York Energy \$mart results, NYSERDA believed that the MWh generation from the CHP initiative would contribute to the EEPS goals.

³Although there is an increase in on-site natural gas use by CHP systems, the increased use is less than the natural gas required to generate the same electricity at the central plant, resulting in a net system-wide savings of natural gas.

- Residential Point-of-Sale Lighting Program (POS) The need to "retool" this program to make it more effective in a market where "... New Yorkers now purchase CFLs regardless of program activity"8 was recognized by the Commission in the EEPS II Order. During the process of optimizing" this program, NYSERDA staff met with DPS staff to review estimates and assumptions. used in developing the proposed program design and targets⁹. Two factors that were analyzed at length and presented in various scenarios were: 1) the proportion of specialty CFLs to LEDs projected for each year of the program and 2) the incentives offered for specialty CFLs and LEDs projected for each year of the program. As specialty CFLs provide greater energy savings at a lower per bulb incentive, NYSERDA ultimately decided to incent a greater percentage of specialty CFLs than originally planned to optimize the energy savings potential of the program. Additionally, in the final projections, NYSERDA assumed a more rapid decrease in the incentive per LED bulb than had originally been planned to allow for a greater number of bulbs to be incented, thereby increasing the projected energy savings. Ultimately, as part of the EEPS portfolio optimization, NYSERDA proposed an increase in the POS budget of \$3.8 million. The proposed shift of funds to the POS program was due to an imbalance of electric/gas funds in other residential programs, but the shift yielded a lower portfolio \$/MWh value and a more effective use of the electric funds.
- Existing Facilities Program (EFP) Historically, the majority of the electric savings for the Existing Facilities Program (approximately 60%) accrued from lighting. The utility PAs have demonstrated strength in lighting equipment rebates that will decrease lighting penetration in EFP. Therefore, EFP is currently pursuing increased penetration of other, more sophisticated system improvements such as controls and chillers through a combination of outreach and the Super Efficient Chiller Bonus. In addition, EFP as a market-based, integrated program, is optimizing the ability to deliver an integrated gas and electric program in the context of an authorized gas to electric funding ratio of \$1:\$18 when a funding mix of \$1:\$4 would be a better match to the relative gas and electric energy spending of the buildings served by the program. To partially address this gas funding shortfall and in the spirit of optimizing NYSERDA's EEPS portfolio, NYSERDA petitioned the Commission to transfer \$4.4 million from the Multifamily Performance Program's gas budget to EFP. In addition, NYSERDA's commercial and industrial programs, including EFP, are currently undergoing a significant upgrade in business processes and underlying systems that will be rolled-out over the next year which should improve the effectiveness and efficiency in working with program participants and contractors.
- Multifamily Performance Program (MPP) MPP is proposing several modifications to improve program effectiveness including: modifying the program incentive structure, incorporating new introductory elements into the program, and simplifying paperwork and technical processes. MPP is proposing to reduce new construction incentives due to the broad inclusion of energy efficiency requirements in various regulated affordable housing programs; increase the incentive to existing affordable housing with the goal of better encouraging in-unit savings measures; increase the

⁸ Page 20 and 21, EEPS II Order.

⁹ The Commission directed retooling of POS and the resulting POS target, accounts for 58% of NYSERDA's proposed portfolio target reduction.

incentive to existing firm gas buildings to better attract these types of buildings; and reintroduce the Performance Payment to encourage energy savings above and beyond the 15% minimum requirements, which is essential to realizing the energy savings/unit necessary to achieve the program goals. MPP is planning to institute new benchmarking and basic measures participation options into the program to attract new program participants, exposing them to the initial value of energy efficiency with the intention of targeting them for participation in the full program at a later date. In addition, for buildings smaller than 50 units and all new construction projects, MPP is adopting a simplified spreadsheet tool based on Tech Market Manual calculations in lieu of more detailed modeling which streamlines the technical analysis and reduces MPP Partner fees.

- Home Performance with ENERGY STAR (HPwES) / Assisted Home Performance with ENERGY STAR (AHPwES) NYSERDA has taken steps to optimize the HPwES Program through an expanded focus on duplexes, row houses, and other larger scale housing complexes that, while performing as one-to four-family residential buildings, were until recently underserved. Historically, NYSERDA's experience in this market sector indicates the energy efficiency upgrades in these units yield higher average electric and gas savings at lower cost. Properties with lower income tenants have been served through AHPwES with an incentive of up to 50% of eligible measure cost. Based on input from our contractors and an analysis of this market sector, NYSERDA believes this sector can be served through the HPwES program, with a 30% incentive and the landlord covering the balance of the cost. In addition, HPwES is exploring savings-based incentives to contractors, as opposed to cost-based incentives and anticipates piloting this alternative approach in 2012.
- 2. Describe the methodology by which NYSERDA arrived at the expectation of \$10 million in EEPS optimization savings and provide any underlying analyses and calculations.

As previously described, NYSERDA had no specific expectation of \$10 million in EEPS optimization savings. Our September 29, 2011 letter stated that the \$10 million "...would come from a reduction in NYSERDA EEPS funding, along with the ongoing optimization of NYSERDA's EEPS portfolio." This statement was never meant to imply that there would be \$10 million of optimization savings. To clarify, NYSERDA was proposing to re-allocate \$10 million in EEPS funds to T&MD for the CHP initiative while at the same time identifying opportunities to get as many savings as possible from the remaining EEPS funds by optimizing the EEPS portfolio, as described in response to question 1.

3. Is EEPS optimization still ongoing? If so, describe the process and any specific steps NYSERDA is planning to take in implementing it.

Yes. NYSERDA produces monthly performance reports to track each program's commitment of funds and savings against a calculated goal-to-date and conducts periodic program reviews. Programs that are not meeting targets will continue to be scrutinized to determine what additional changes can be made within existing regulatory boundaries to improve program performance. If it becomes clear that more significant interventions (e.g., rule changes, inter-program funding transfers, major program redesigns, etc.) are needed to achieve portfolio targets NYSERDA will consult with DPS Staff regarding changes that may or may not be possible to keep the overall portfolio performance on track. In addition, NYSERDA

will continue tracking the implementation and close-out of all evaluation findings and associated program improvement recommendations.

In addition, each program conducts many ongoing continuous improvement activities, such as internal business process and data management improvements, stakeholder, customer and contractor meetings to receive feedback and suggestions for improvement, ongoing refinement of marketing and outreach efforts, and the continued use of QA and QC processes to ensure programs are delivered as intended and that accurate information is being reported.

1. In footnote 7 to the petition for approval of CHP funding, NYSERDA describes three factors it applied in determining how to optimize the EEPS-2 portfolio. Were those factors applied to all EEPS programs? Provide any ranking of programs that was produced.

Yes, NYSERDA applied the factors described in footnote 7 and on pages 15 and 16 of the EEPS II Petition to all EEPS Programs. The process did not involve a ranking of programs but an application of these factors in a sequenced manner. See NYSERDA's response to question 1 for a description of the process.

2. Was the level of efficiency savings NYSERDA expected to realize from the CHP initiative a determinative factor in the decision to recommend transferring funds from the BOE and ERMM programs? If so, would NYSERDA make the same recommendation if projected gains or losses in efficiency savings resulting from the funds transfer were not considered?

As described above, the BOE and ERMM program funds were identified to be in excess of market needs while the CHP program needed funding. This was the primary reason for allocating these funds to the CHP program. The fact that the MWhs expected to result from the CHP initiative were estimated to be slightly higher than the efficiency savings that would have been achieved through the BOE and ERMM programs was a positive factor, but was secondary. NYSERDA believed that funding the CHP initiative was a more effective use of the available funding as compared to allowing the funds to be retained by the programs to which they were originally allocated. Based on the Commission's October 24, 2011 Order, and the stakeholder input received prior to this Order, NYSERDA believed that funding CHP (without an increase in rates) was a Commission policy objective and, as such, included this funding reallocation as a component of the proposed EEPS optimization.

Sincerely.

Janet Joseph

Vice President for Technology and

Tanet Joseph

Strategic Planning