

New York State Energy Research and Development Authority

Responses to Comments

Draft Operating Plan for Investments in New York under the CO₂ Budget Trading Program
and the CO₂ Allowance Auction Program

April 10, 2009

General Comments

1. Comment: The municipal role in reducing greenhouse gas emissions is recognized as a crucial component in successfully achieving the objectives of this program. However, there is no specific section, or even sub-section within the current operating plan that offers specific assistance to enhance municipal capacity to further reduce GHG emissions. Most of the references to municipal assistance is grouped into commercial/industrial and institutional sectors. (42)¹

Response: The Municipal and Institutional Climate Change Program offers specific assistance to this sector through a wide range of services, including: dedicated outreach and technical support, streamlined processes for project implementation, energy efficient infrastructure at water/wastewater facilities and recognition initiatives for significant carbon reduction achievements.

2. Comment: The program should strive to promote the most cost-effective carbon reduction. (13)

Response: As stated in the Operating Plan, the majority of funds will be directed at cost-effectively reducing CO₂ in the near term and at least 25 percent will address areas that may require longer investment horizons. The portfolio of programs can thus deliver near-term benefits to New York consumers while also positioning New York to develop additional GHG reduction capacity for the mid-term and long-term. Such an approach is necessary to achieve substantial reductions over time and to move towards a clean energy economy.

3. Comment: NYSERDA should define more clearly the ultimate goal of the program and whether it is intended to reduce energy use, reduce the total level of carbon dioxide (CO₂) emissions, or reduce the amount of CO₂ emissions per unit of energy used. (17b)

Response: The goals of the investments made with auction proceeds are to reduce GHG emissions (tons emitted) in New York and to reduce the cost of complying with the CO₂ Budget Trading Program. Investments will be focused on GHG reduction opportunities related to energy production and use for all fuels and in all energy using sectors.

¹ The number in parenthesis represents the author of the comment. The list of authors appears at the end of this document.

Investments will seek to advance the State's broad energy goal of moving toward a clean energy economy by providing reductions in GHGs in the near term and positioning New York to make additional reductions in GHGs over the longer term.

4. Comment: NYSERDA should provide details of how the Op Plan will be amended, revised and evaluated. (28)

Response: The Operating Plan will be updated annually with input from the Advisory Group and stakeholders. Program evaluation will be conducted on an ongoing basis. Progress reports will be provided on a quarterly basis, and program evaluation information will be used to inform the annual Operating Plan revision process.

5. Comment: A process [should] be put in place to enable funds to be disbursed quickly, including to utilities, so that programs can be funded and implementation started with the benefit of these funds. (30)

Response: The intention is to begin implementing programs as soon as possible. However, funds cannot be distributed to utilities to implement programs since Part 507.4(d) of NYSERDA's regulation states that "the proceeds of the CO₂ Allowance Auctions will be used by the Authority to promote and implement programs for energy efficiency, renewable or non-carbon emitting technologies, and innovative carbon emissions abatement technologies with significant carbon reduction potential, and for reasonable administrative costs incurred by the Authority in undertaking the activities described in Part 507 and for administrative costs, auction design and support costs, and program design and support costs associated with the CO₂ Budget Trading Program, whenever incurred. Each of the utilities will begin implementing their own energy efficiency programs in the near future as directed by the Public Service Commission's Energy Efficiency Portfolio Standard Proceeding (Case 07-M-0548).

6. Comment: Given the urgent need for substantial reductions of greenhouse gas emissions and the need to reduce consumer expenditures on wasteful energy consumption it is important to roll out the planned RGGI programs and initiatives as soon as possible. We urge NYSERDA to adopt the final Operating Plan at its next Board meeting and begin implementation as soon as possible. (10).

Response: The intention is to obtain Board approval and to begin implementing programs as soon as possible.

7. Comment: The Op Plan is broadly focused on programs that promote NYSERDA's mission rather than achieving GHG reductions, and needs further revision. (36)

Response: The goals of the investments made with auction proceeds are to reduce GHG emissions in New York and to reduce the cost of complying with the CO₂ Budget Trading Program. Investments will be focused on GHG reduction opportunities related to energy production and use for all fuels and in all energy using sectors. Investments will seek to advance *the State's broad energy goal* of moving toward a clean energy

economy by providing reductions in GHGs in the near term and positioning New York to make additional reductions in GHGs over the longer term. The goals in the Operating Plan are driven by the State's objectives, and NYSERDA's mission is consistent with the fulfillment of these goals and objectives.

8. Comment: The program should be responsive to market forces, successful research, leverage private or federal funding (6) and be coordinated with existing efforts by local governments (27).

Response: The Operating Plan was developed with these matters in mind. The Operating Plan will be adjusted on an annual basis in order to be responsive to a variety of factors, including those listed.

Overarching Comments about funding allocation

9. Comment: It looks like there are two programs which local governments can benefit from – Residential, Commercial and Industrial (under the Municipal and Institutional Climate Change sector) and Multi-Sector Programs. That's \$88M that municipalities can take advantage of, some of which is competitive bidding and only open to large local governments. Compared to the rest of the funding available this is low, especially when a component of Criteria 4 is to enhance municipal capacity to further reduce GHG emissions. (42)

Response: The primary entry point for this sector is expected to be the Municipal and Institutional Climate Change Program (see response to Comment 1). Other than the water/wastewater initiatives, the majority of direct incentives and direct carbon reductions are expected to be delivered through the renamed Commercial, Industrial, Municipal and Institutional Efficiency Program (to better reflect program activities and eligibility). This sector is also eligible to participate in the Competitive Greenhouse Gas Reduction Program and a variety of transportation program activities and renewable initiatives.

10. Comment: Ninety percent of funding should be allocated to near term programs compared with long term initiatives. (36)

Response: See response to Comment 2.

11. Comment: RGGI auction revenues should be spent on programs that maximize meaningful reductions in CO₂ emissions. (41)

Response: See response to Comment 2.

12. Comment: RGGI auction revenues should be allocated in a manner that fills gaps in existing New York State programs. The draft Operating Plan generally does a good job in identifying gaps in existing funding that can be addressed through use of RGGI auction proceeds. (41)

Response: This is one of the stated objectives of the Operating Plan.

13. Comment: RGGI auction revenues should be allocated among programs in a manner that maximizes CO₂ reductions. We understand from the State energy planning process and State policymakers that New York has adopted an objective of achieving an eighty percent (80%) reduction in greenhouse gas (GHG) emissions by 2050. This “80 by 50” goal should drive the priorities in the development of the Operating Plan. Also, the Concept Paper issued in November 2008 included CO₂ cost abatement curves developed by McKinsey & Company, and we understand that similar cost curves will be established to evaluate the effectiveness and relative cost of achieving substantial reductions of GHG emissions in New York. These curves will provide very valuable information, and should be used, to guide the allocation of RGGI auction proceeds. (41)

Response: Cost effectiveness is one of several criteria in program selection (See response to Comment 2). The New York cost abatement curves are not scheduled to be completed until the summer of 2009. The cost curve information will be used during the next planning cycle. In the meantime, the best available information has been used to assess the cost-effectiveness of various measures in the Operating Plan.

14. Comment: The proportional split between short-term and long-term investments should, at a minimum, be brought closer to equilibrium to reflect a more appropriate allocation and investment in capital infrastructure. Both near-term and long-term programs are important in reducing CO₂ emissions in the power generation sector. (18)

Response: See response to Comment 2. The proportional split between short- and long-term investments may change in succeeding Operating Plans, but a heavier weighting on short-term greenhouse gas reductions is the current priority.

15. Comment: The Draft Operating Plan should be modified to include a funding cap of \$5 per ton with the remainder returned to consumers. (24)

Response: Under the Operating Plan, rather than creating a funding cap at \$5/ton, if New York allowances are sold in the regional auction at values above \$5 per ton, the incremental revenue would be used to support the achievement of a 30 percent renewable energy goal, as proposed in the Governor’s “45x15” announcement, and as recommended by the Governor’s Renewable Energy Task Force.

16. Comments: Additional auction revenues should be directed to energy efficiency (33, 34, 36) and to programs administered by utilities (30, 33). Suggested levels of funding for residential energy efficiency programs and renewable range from 70 percent (33, 36) to all (34) of the available auction revenues. Some comments specified funding levels, for example, at least \$25 million per year for at least five years dedicated to a residential efficiency financing program (for loan guarantees), matched with same amount from the New York State electric and natural gas Systems Benefit Charge. (38)

Response: The Operating Plan has been crafted to address a spectrum of opportunities, and to not supplant program activities funded by other funding sources. Funding levels for efficiency and renewable energy activities also take into account market information and the capacity of the market to deliver products and services. Future Operating Plan

proposals may consider shifts in program allocations pending the development of State policy and programs, and growth in market capabilities.

17. Comment: Additional auction revenues should be directed to RCI. (36)

Response: Approximately 44% of the funds are already directed to the Residential, Commercial and Industrial sector. Moving additional funds into this sector would hamper the ability to “address carbon mitigation for all energy fuels and by all sectors of the economy,” which is an important objective in the Operating Plan. In addition, substantial funds will be made available in the near term for energy efficiency (and to a lesser degree renewable energy projects) in the RCI sectors as a result of federal stimulus funding.

18. Comments: Additional auction revenue should be directed to solar thermal programs (13, 36, and 38). Increase funding for solar thermal technologies to at least \$5 million per year which will help build a more robust consumer market for these highly cost effective technologies, but signals to manufacturers that the leading NYS clean energy technology deployment entity—NYSERDA—is willing to commit a long-term investment to this market-proven and cost-effective renewable energy technology. (38)

Response: The funding for solar thermal outlined in the budget is a significant increase over incentives available to New York State installations. As with other programs, the level of funding will be re-evaluated on a regular basis as the market evolves.

19. Comment: The Draft Plan calls for \$32 million to be spent on PV, with less than one-quarter (\$7.5 million) allocated to solar thermal. The funding should be at least 50-50 in order to maximize the amount of renewable energy – and CO₂ displacement – that can be generated for any given funding level. (13)

Response: Given the relative economics, solar thermal systems generally require less incentive support than PV systems. The funding for solar thermal outlined in the budget is a significant increase over incentives available to New York State installations. In addition, the Final Plan is expanding the Solar Schools program to include both PV and solar thermal options. As with other programs, the level of funding for solar thermal will be re-evaluated on a regular basis as the market evolves.

20. Comment: Given NYSERDA’s experience with both of these solar applications (PV and solar thermal) and its oversight over the related programs and inter-relationship of funding sources, NYSERDA is uniquely qualified to allocate the RGGI auction proceeds in a manner that is in the long-term best interests of New York citizens. (41)

Response: Comment acknowledged. See also the responses to Comments 18 and 19.

21. Comment: Additional auction revenue should be directed to Electric Power Supply and Delivery. (29, 33)

Response: Approximately 21% of the funds are already directed to the Electric Power Supply and Delivery sector. Moving additional funds into this sector would hamper the ability to “address carbon mitigation for all energy fuels and by all sectors of the

economy,” which is an important objective in the Operating Plan. In addition, by investing in technology outside of the capped electric sector, we are furthering additional reductions of CO₂.

22. Comment: NYSERDA should focus on harvesting the abundance of low risk, near term carbon abatement and energy efficiency potential that exists in the residential, commercial, industrial energy efficiency sector and the energy supply and delivery sector. The allocation percentage to these two categories should be raised from the proposed 61.6% to 85% with the transportation allocation reduced proportionally. (29)

Response: The Operating Plan allocates a large portion of the funds (approximately 75%) to short-term cost-effective activities while seeking to simultaneously pursue carbon mitigation measures across all energy fuels and all sectors of the economy. The proposed shift in funding would not support the fulfillment of these joint objectives.

23. Comment: Additional auction revenue should be directed to mass transportation (1) and improving fuel economy with new products and technologies. (3)

Response: A significant percentage of RGGI funds are being directed to mass transportation (\$44 million in near term efficiency projects and over \$5 million in longer term research, this represents 9.3 % of anticipated \$525 million 3-year budget). It is recognized that there is additional potential for significant cost effective GHG reductions and public transit transportation projects are eligible to compete under the Competitive Bidding Program.

With regard to fuel economy, the long-term Advanced Transportation Development Program will be designed to include testing and performance validation of emerging products that have the potential to provide verified GHG benefits. The results can be expected to influence future RGGI programs as well as other public policies and programs, if significant benefits are verified.

24. Comment: It would be more effective to address CO₂ emissions from the Transportation sector through other mechanisms like a low-carbon fuel standard, thereby providing a price signal to drivers that their carbon emissions too have a cost. (30)

Response: New York is participating in efforts to develop a low-carbon fuel standard. Progress will be closely monitored, and future versions of the Operating Plan will be adjusted, as necessary, to ensure that the two programs complement each other. Moreover, a low-carbon fuel standard, depending upon its scope, may not facilitate the improvements that are targeted in the Electrified Rail Efficiency program.

25. Comment: While neither sector pays for RGGI allowances, the Auction Program Investments Draft proposes that the Transportation Sector receive almost 18% of RGGI funding. These sectors have the ability to institute their own funding mechanism for reducing CO₂ emissions, perhaps in a format similar to the mechanism established by RGGI for electric power generators, but specific to the source of transportation and agriculture emissions. (18)

Response: The goals of the investments made with auction proceeds are to reduce GHG emissions in New York and to reduce the cost of complying with the CO₂ Budget Trading Program. Investments will be focused on GHG reduction opportunities related to energy production and use for all fuels and in all energy using sectors. Investments will seek to advance the State's broad energy goal of moving toward a clean energy economy by providing reductions in GHGs in the near term and positioning New York to make additional reductions in GHGs over the longer term. Also, all electricity customers will benefit from GHG reductions regardless of the sector from which they are derived.

26. Comment: Allocation of RGGI auction benefits to the Transportation Sector would be a violation of generally accepted cost/benefit allocation principles. Corporate Average Fuel Economy ("CAFÉ") standards for transportation vehicles, in addition to appliance and residential and commercial building energy efficiency standards, need to be improved before any application of RGGI funds to sectors other than that of electric power generators. (18)

Response: The Transportation Efficiency and Electrified Rail Efficiency programs target cost-effective greenhouse gas reductions. We do not agree with the assertion that CAFÉ and building standards have to be improved before funds can be used to achieve improvements in the transportation and building sectors.

27. Comment: There is no mention in the Plan of the contribution of nuclear power (14) or hydro (14) as a solution to the GHG problem.

Response: Nuclear program activities would be very expensive. Given the relatively limited amount funding available, other more cost effective CO₂ programs have been selected. Advanced "hydro" projects are included in the scope of the Advanced Renewable Energy program.

28. Comment: [We] provide the following program description to be included in the revised version of the plan:

The Draft Plan should allocate \$29 million over three years for a Non-Carbon Emitting Technologies Program (which is the same funding level provided for the Advanced Renewable Energy Program) to be disbursed via the issuance of Requests for Proposals (RFP) by NYSERDA for both short-term and long-term projects that increase the generation of zero / low carbon dioxide emitting electricity, and NYSERDA should rank project bids submitted in response to the RFP based upon the dollar per ton reduction in greenhouse gas emissions of each proposed project as calculated for a given quantity of electricity generation." (17a)

Response: The Electric Power Supply and Delivery Program will focus on long-term activities that enable renewable power technologies. Projects will be identified/selected in an open and transparent manner, but not necessarily through an RFP process. CO₂ mitigation cost-effectiveness will be considered when selecting projects to fund.

29. Comment: RGGI funds should be used to fund the deployment of energy efficiency, renewable energy and carbon abatement technologies at New York Colleges and Universities. Colleges and Universities are educating the leaders of tomorrow. There will be a much greater reduction in GHG emissions if those leaders are educated about the use, optimization, and significance of the technologies the Operating Plan seeks to deploy, including technologies focused on energy efficiency, energy conservation, renewable energy and carbon abatement. Accordingly, funds should be directed to Colleges and Universities for demonstration projects that improve the efficiency of buildings and energy systems, deploy renewable energy systems, and measure and reduce their carbon footprint. (19)

Response: Colleges and universities are eligible to participate in most of the programs in the Operating Plan; however, the programs do not earmark funds for particular customer groups.

30. Comment: There needs to be a clearer breakdown of the total amount of money available to local governments, by section, and the process in which to take advantage of those funds (grants, bidding, loans, etc.). Local governments will need clearer direction on the type and amount of resources that are available to them to make use of these resources more efficiently and effectively. (42)

Response: Shortly after the Operating Plan is approved, NYSERDA will create marketing and outreach materials for the programs in the Plan. Some of these materials will be targeted to customer groups like local governments and will identify the different programs that are available for each group.

Geographic equity (combined with Eligibility of non-SBC customers for electric energy efficiency measures)

31. Comment: It is critical that NYSERDA identify the RGGI-funded programs for which non-SBC customers will be eligible, and create mechanisms to ensure that such customers can participate on equal footing with SBC customers. (27)

Response: RGGI programs will not discriminate between SBC and non-SBC customers. All energy customers in New York that contribute to RGGI are eligible to participate in the fossil fuel reduction programs in the Operating Plan. Certain sectors are eligible for electric efficiency reduction initiatives through the Wastewater program, the MTA program, and the PV program. All energy customers are eligible to submit projects under the Competitive Greenhouse Gas Reduction program for fossil fuel or electric reduction measures.

32. Comment: During the meeting of the RGGI Advisory Group we were informed that residential customers in non-SBC funded areas will not be eligible for NYSERDA programs that are funded from both SBC and RGGI proceeds but that commercial customers will be eligible (and that a firewall will be established between SBC and RGGI funds). This should be clarified and written into the final Operating Plan. (10)

Response: See Response to Comment 31. This issue will be addressed in the final Operating Plan.

33. Comment: Regional equity, including LIPA and NYPA, should be one of the program selection and evaluation criteria in the Operating Plan. (10, 27) We recommend however that the final version of the Operating Plan spell out more specifically what process NYSERDA will use to ensure that proportionate RGGI funds will be spent in the LIPA and other non-SBC service territories. (10)

Response: Geographic equity of expenditures and benefits will be pursued across the portfolio of programs but not on a program by program basis. Certain programs may have a geographic focus, but programs generally will be statewide in scope. Outreach activities may be tailored to different regions. Program monitoring and evaluation may lead to adjustments in program offerings, such as changes in incentive levels. Additional language about this topic has been added to the Operating Plan.

34. Comment: Geographic equity should be evaluated (31) to ensure that ratepayers in disparate parts of the State receive reasonable return in proportion to their contribution to overall RGGI costs embedded in their cost of service. (29)

Response: See response to Comment 33.

35. Comment: Long Island rate payers will likely be contributing over \$25 million annually of the RGGI funding. We believe that disbursement of RGGI funds for projects on Long Island should be commensurate with their level of contribution. (29)

Response: See response to Comment 33.

36. Comment: While no region should be inadvertently excluded from receiving funding from the RGGI auction proceeds, it is likewise true that no region should be specifically allocated funding prior to program implementation. Specific mentions of funding for an area or utility in the Draft Plan is not appropriate and should be deleted. (30)

Response: The overall portfolio of programs in the Operating Plan is designed to provide opportunities for all regions of the State. Certain programs may find concentration in a particular region of the State, but it is NYSERDA's expectation that all regions of the State will share the benefits of RGGI activities equitably on a portfolio level. The comment regarding specific utility reference is noted, and will be removed from the Operating Plan.

37. Comment: The best way to provide for regional equity is to allocate money directly to utilities. (30)

Response: This comment will be taken under advisement. See also response to Comment 5.

38. Comment: The Plan seems to contemplate excluding New York Power Authority customers from fully partaking of all aspects of RGGI funded programs. The Plan appears to perpetuate a misunderstanding on the part of NYSERDA that NYPA provides its customers, such as NYCHA, with electricity-efficiency incentives and/or subsidizes

demand-side programs, and that the RGGI funds should only be directed at NYPA customers' fossil fuel related carbon reduction measures. NYPA does provide below-market electricity production to its customers. It also operates an effective Energy Services Program which provides turnkey demand-side energy-efficiency projects to its customers and offers low-cost lending for these projects. NYPA does not in any way, however, subsidize these programs. It always prices its activities to recover the full cost of any service it provides to its customers. (35)

Response: The Operating Plan will provide NYPA customers with equal access to the same programs as all energy customers throughout the State. See also response to Comment 31.

39. Comment: NYPA customers are contributing to the financing of the programs funded from the proceeds of the RGGI auctions, they should likewise be allowed to benefit from those programs. NYPA customers should be eligible to directly participate in one or more of the Programs outlined in the Draft Operating Plan. We have received inconsistent answers from NYSERDA about this matter and the Plan needs to clarify this issue. (40)

Response: See responses to Comments 31 and 38.

40. Comment: The most effective, streamlined process would be to award a portion of auction proceeds directly to NYPA's Energy Services Program. Barring direct award of RGGI proceeds to NYPA's Energy Services Program, the Operating Plan should at least state that NYPA customers will be eligible for RGGI funding for electric and non-electric projects. (20)

Response: See responses to Comments 5, 31 and 38.

41. Comment: The MTA concurs with NYPA's proposal to dedicate RGGI funds to NYPA through their existing Energy Services Program. NYPA personnel are already experienced with the complex operations and processes of the MTA. (25)

Response: The activities stated in the Electrified Rail Efficiency program are for products and services that are newly-developed and are not currently funded by other State energy efficiency activities. The purpose of the program is to initiate a broader deployment of such technologies so that they may be more quickly adopted into the capital budget of the MTA. See also response to Comment 5.

42. Comment: The Port Authority supports modifying the NYSERDA Operating Plan to directly channel an allocation of RGGI funds to NYPA for the benefit of qualifying projects and programs targeting the Southeast New York governmental customer group. (11)

Response: These customers are eligible to pursue the programs in the Operating Plan through NYSERDA, and we welcome opportunities to work with the Port Authority and NYPA to reach these customers. See also response to Comment 5.

43. Comment: The Operating Plan should explicitly authorize the Port Authority and its power suppliers to have direct access to the NYSERDA programs funded with RGGI auction proceeds. (11)

Response: See response to Comment 42.

44. Comment: Examine making RGGI-funded programs available to the non-SBC government customers directly through NYPA. (27)

Response: These customers are eligible to pursue the programs in the Operating Plan through NYSERDA, and we welcome opportunities to work with NYPA to reach these customers. See also response to Comment 5.

45. Comment: Another method of achieving regional equity of RGGI funding is by adopting technology specific targets for each region of the State, using specific technologies that are most appropriate for each of the respective regions. (30)

Response: See response to Comment 33.

46. Comment: RGGI auction proceeds should supplement and not supplant other monies that are available, or can be made available, for energy efficiency and renewable energy programs, especially given the vast resources and competitive advantages of both the New York Power Authority (NYPA) and LIPA. Programs being implemented by NYPA and LIPA should continue to be funded with the resources of those entities and should not be eligible for funding with RGGI allowance auction proceeds. Furthermore, energy efficiency programs funded by RGGI auction proceeds should be conducted as loans and not grants. The loans should be repaid into the Energy Efficiency and Clean Energy Technology Account, using the savings in energy costs that result from program implementation. (17a)

Response: The Operating Plan proposes programs have been designed in light of existing energy efficiency efforts throughout the State, and are structured to not supplant those activities. Customers of NYPA and LIPA will have equal access to the same programs as all energy customers throughout the State.

With respect to the comment on the distribution of proceeds through loans, previous NYSERDA programs, and those in this Operating Plan, offer a variety of technical and financial assistance to participants. A revolving loan fund is one of the financial assistance mechanisms included in the portfolio of programs in this Operating Plan.

Cross subsidization (i.e., using funds raised from the electricity sector for non-electric programs)

47. Comment: The electric sector is bearing the costs associated with RGGI and programs should focus on decreasing these costs for consumers (17a, 39) and regulated entities. (17a, 39)

Response: The goals of the investments made with Auction proceeds are to reduce GHG emissions in New York and to reduce the cost of complying with the CO₂ Budget Trading Program. Investments will be focused on GHG reduction opportunities related to energy production and use for all fuels and in all energy using sectors. Investments will seek to advance the State's broad energy goal of moving toward a clean energy economy by providing reductions in GHGs in the near term and positioning New York to make additional reductions in GHGs over the longer term. Approximately 32% of the 3-year budget is focused on electricity related initiatives (See Section 2 Budget Overview) whereas approximately 21% of New York's Annual CO₂e emissions are from the Electric Power Supply and Delivery Sector. Electricity sector projects can also be submitted under the Competitive Greenhouse Gas Reduction program. In addition, all electricity customers will benefit from GHG reductions regardless of the sector from which they are derived. Also, under a cap-and-trade system, the total number of CO₂ allowances is determined by regulation. Regulated entities can purchase allowances and collectively emit up to the cap that is currently in place. Therefore, electric efficiency projects may not decrease the overall amount of CO₂ being emitted into the atmosphere by New York entities.

48. Comment: Funding efficiency programs for fuels that do not bear the cost of carbon would amount to a cross-sector subsidy, which may encourage consumers to rely more heavily on other fuels. This cross-subsidization causes a "negative feedback loop," by funding projects that have the unintended consequence of encouraging customers to abandon the electric system - where CO₂ emissions have a cost - and convert to other sources of energy where CO₂ emissions are free. NYSERDA should consider providing additional funds to existing electricity energy efficiency programs and developing new programs that target unfunded areas where additional electricity savings can be achieved. (30; 33)

Response: See response to Comment 47.

49. Comment: The funds generated from the RGGI auctions should be allocated exclusively for purposes within the electricity sector and not allocated, as the Draft Operating Plan proposes, to nonelectricity sectors. (24)

Response: See response to Comment 47.

50. Comment: The Draft Plan contains numerous instances of cross-subsidization of funding, not only across economic sectors but also across fuel types. RGGI funds are produced by a charge paid by electricity consumers, and RGGI funds so generated must

not be made available for natural gas programs or for programs involving any other fuels, such as oil and propane.

Response: See response to Comment 47.

51. Comment: The blurred lines of demarcation from the cross-subsidization contained in the Draft Plan will make it virtually impossible to track where and how the benefits of RGGI funding are realized and the ultimate impact on the goal to reduce CO₂ emissions. (17a)

Response: Although some RGGI funding will be used to supplement existing programs, all of the anticipated benefits outlined in the Operating Plan are attributable to the additional RGGI funding. NYSERDA will ensure that the RGGI program budget and spending is separately tracked and the evaluation efforts will ensure that only benefits associated with those funds are reported for RGGI.

52. Comment: Many of the project categories (Clean Energy Innovation Initiative; University-Industry Collaboration in New York; Business Innovation, Development, and Manufacturing; Research Studies Related to Mitigating and Adapting to Impacts of Climate Change; Climate Change Policy Research and Analysis; Outreach and Education Initiatives, Strategic Partnerships, and Greenhouse Gas Lifecycle Management) are similar to those already being funded by NYSERDA's existing programs or undertaken by the DEC's Office of Climate Change Office, as well as by other state agencies such as the Empire State Development Corporation and the New York State Department of Labor. To the extent that additional resources are needed for these purposes, funding should be allocated to state entities through the New York State Budget process. (17b)

Response: As stated in the "Program Goals" section of the Operating Plan: "investments will seek to advance the State's broad energy goal of moving toward a clean energy economy by providing reductions in GHGs in the near term and positioning New York to make additional reductions in GHGs over the longer term." Legislative funds are inadequate to address the needs and opportunities presented here. That being said, initiatives proposed under RGGI will be fully coordinated with – and not duplicative of – any existing initiatives, to the extent they are available.

53. Comment: An electric project cost abatement curve should be developed and utilized to guide prioritization of funds with benefits to electric customers. (30)

Response: A New York specific cost curve is being developed and the estimated completion date is the summer of 2009. See also responses to Comments 13 and 47.

The Advisory Group and Stakeholder Involvement

54. Comment: NYSERDA should provide, whenever a critical information gap exists, a clearly stated process through which future information and amendments, revisions or

additions to the Plan will be provided to the Advisory Group and the public for comment and deliberation. (28)

Response: Progress reports on the implementation of the Operating Plan will be made available on a quarterly basis. See response to Comment 4.

55. Comment: Throughout the RGGI promulgation and implementation process, NYSERDA has failed to prioritize this component and has put minimal effort into providing clear, easily accessible information on the RGGI cap & trade program. (28)

Response: There have been numerous public meetings during the development of the RGGI program. Also, the regulations were subject to two different comment periods including 6 public hearings on both the CO₂ Budget Trading Program and CO₂ Allowance Auction Program regulations. In addition, there have been two opportunities for public comment on the development of the RGGI Operating Plan.

56. Comment: To ensure that RGGI remains a truly public program, the agency should make continual efforts to engage a variety of stakeholders in the oversight and decision-making process. The Advisory Group is a starting point but does not go far enough. NYSERDA should clearly state a plan for stakeholder outreach and engagement, including what stakeholders it envisions including within the process. The plan should also include a governance structure for the Advisory Group. (28)

Response: The Advisory Group was established to provide an open flow of advice and recommendations to NYSERDA. Annual updates and revisions to the Operating Plan will also seek broad public comment and input. Quarterly progress reports will also be provided the Advisory Group and to the public. See also the responses to Comments 4 and 60.

57. Comment: The Operating Plan should provide clearer information on the taskforces that will be created to assist NYSERDA in fully formulating and implementing each program area. Also, many program areas would benefit from focused taskforces, but don't seem to call for the use of them. The taskforces should be composed of community, industry, agency and interest group (i.e. environmental, public health, etc) stakeholders who will be able to provide expertise and local contacts for the particular areas. (28)

Response: Additional information has been added about the scope and purpose of the specific taskforces mentioned in the Operating Plan.

58. Comment: NYSERDA should dedicate a single staff member to serve as the primary contact person for the Advisory Group. There should be supplemental experts on staff that the Advisory Group has access to as well, but funneling the Group through one staffer would improve the function and effectiveness of the program and the Advisory Group's engagement in the process. (28)

Response: We will take this suggestion under advisement.

59. Comment: Updates should be provided to the Advisory Group through a bi-monthly e-newsletter distributed by the dedicated staff members. The e-newsletters are generally no more than a couple of pages long but provide critical information for Advisory Board members who are interested in monitoring the progress of the Plan’s initiatives. (28)

Response: On a quarterly basis, NYSERDA will prepare a RGGI program status report updating progress made in each major program area. Quarterly reports will include: a summary description of program activities and implementation, an estimate of projected program benefits, and an accounting of program costs and expenditures. Quarterly reports will be made available to the Advisory Group members and the general public via NYSERDA’s Web site.

Program Communications, Marketing and Outreach

60. Comment: Given the multitude of programs and funding streams that NYSERDA will be managing, we encourage NYSERDA to design an electronic interface that makes it easy for customers to access and learn about program funding sources. (27)

Response: A variety of marketing and outreach mechanisms will be used for the portfolio of programs that NYSERDA will be managing. As part of this process, NYSERDA will be providing for a web-based reporting tool to summarize projects we fund.

61. Comment: NYSERDA must make a concentrated effort to increase its public outreach and education on RGGI and RGGI-funded programs. Outreach and education requirements are not satisfied by creating a bare-bones website that is public, but not publicized, and useful only to those who have the time, interest and expertise to spend hours navigating the site. (28)

Response: See response to Comment 60.

62. Comment: The Draft Operating Plan should speak specifically about how the agency will educate and engage the public on the range of activities that are being considered for and supported by RGGI revenues. (28)

Response: A variety of mechanisms will be developed to educate and engage the public on the portfolio of programs in the plan. By necessity, these approaches will need to be dynamic and evolve to meet a variety of changing needs of a variety of customers and markets. However, some additional language has been added under a number of programs in the Operating Plan.

63. Comment: We believe that there are [4] steps that the RGGI Operating Plan can take to move New York from its current ~500 [solar thermal] installations per year to tens of thousands – thereby replicating some of the experiences in EU countries: 1) provide \$9 million (\$3 million a year for 3 years) to a statewide Solar Thermal [marketing and awareness] Campaign modeled on the successful German “Solar - na klar!” (Solar is the

Clear Choice) and the French "Plan Soleil," 2) increase solar thermal funding, 3) Supplement PUBLIC TRAINING PROGRAMS with PRIVATE CERTIFICATIONS by Solar Thermal Manufacturers, and 4) accept the European Solar Keymark standard to expedite the entry of proven European systems into the New York market. (9)

Response: Thank you for the very specific references. We will explore the campaigns and standards you cite. During this first year of the RGGI program, we will continue to establish training and certifications, promote the training to the public to encourage participation, and publicize the available incentives. In addition, we have expanded the proposed Solar Schools initiative and the Municipal Recognition program to include not just PV technology but also solar thermal technology, to provide another vehicle for outreach and education. We will also continue to collect data on New York installations to characterize cost-effectiveness across different types of applications. As the market develops, we will review the budget and outreach/marketing strategies and make adjustments as appropriate.

64. Comment: The Plan should provide \$3 million a year for a 3 year statewide "Wake up to Solar" Campaign, in addition to providing the necessary capital incentives for solar thermal. (13, 22)

Response: Please see the response to question #63. Our marketing strategy across all programs includes not only consumer education and direct marketing by NYSERDA, but also marketing tools for contractor partners to use in their own marketing and outreach efforts. The program budget does not show the significant marketing and customer education contribution of those partners. However, we will monitor response to the program and make adjustments in the marketing budget as needed on an annual basis.

65. Comment: Without disseminating the best information and without technological innovation we will be unable to break down the barriers that exist between the ways we generate, supply, and use energy today and the new energy economy we need. (37)

Response: The Operating Plan contains numerous activities to educate New Yorkers about the programs in the plan and about climate change in general. There are also a number of research programs in the Plan to promote technical innovation. The Plan also describes a number of ways in which information from these projects will be disseminated.

66. Comment: Outreach and education efforts should be tied directly to specific programs being funded by NYSERDA's RGGI programs. While general education and outreach on greenhouse gas reduction efforts and global climate change are necessary and valuable, a correlation between actual programs and education efforts will enable NYSERDA to be sure its funds successfully support real investment in efficiency and renewable resources and that programs can be adequately evaluated. (34)

Response: Each program write-up includes a section entitled “Program Outreach, Education and Technology Transfer” that describes the types of activities that will be pursued for that specific program.

Uncertainty about the amount of funds available

67. Comment: The agency must revise the Plan to state clearly what process will be provided for revenue revisions and how such revisions will be disbursed amongst the RGGI-funded programs during the period between Plans. (28)

Response: NYSERDA may make modest adjustments in the amounts allocated among the program areas but substantial changes will be presented as part of the annual process of updating the Plan. Language in the Budget Overview of the Operating Plan has been revised to clarify this process.

68. Comment: NYSERDA should explain how excess revenue would be distributed in coordination with other state programs, such as the Renewable Portfolio Standard and System Benefits Charge. (33)

Response: If New York allowances are sold in the regional auction at values above \$5 per ton, the incremental revenue (above \$5/ton) would be used to support the achievement of a 30 percent renewable energy goal, as proposed in the Governor’s “45x15” announcement, and as recommended by the Governor’s Renewable Energy Task Force.

69. Comment: NYSERDA should allocate monies only to the extent that they are actually available and should be cautious about establishing program budgets based upon an estimate of overall RGGI allowance auction proceeds that might be available. (17b)

Response: The budgets in the Operating Plan are based upon conservative assumptions, but amendments can be made if proceeds are lower than the values used in the Plan.

70. Comment: NYSERDA should steel itself strongly against any temptation to set the RGGI allowance auction reserve price at a level to cover the projected cost of these program areas. An artificially inflated reserve price would exacerbate further the existing costliness of the RGGI program. (17b)

Response: The reserve price is not a mechanism for creating minimum revenue streams. Rather, its primary purpose is to assist in protecting against potential collusion in the marketplace.

Coordination with other funding sources (economic stimulus, SBC, EEPS, etc.)

71. Comment: Other sources of funds also will need to be leveraged, and the recently passed Economic Stimulus package has proposed monies to advance the development of low-carbon coal technologies including carbon capture transportation and storage technology.

NYSERDA must position the state to take advantage of all of these funding opportunities and to ensure that CO₂ emission control technology is developed successfully. (39)

Response: NYSERDA is working to coordinate a variety of programs and to take maximum advantage of federal economic stimulus funds.

72. Comment: The Draft Operating Plan should be revised to ensure that the auction proceeds are used to offset some of the funding requirements established for the Energy Efficiency Portfolio Standard (“EEPS”). The need for this offset is compelling given the extremely high cost of electricity in New York, as well as the current economic condition of the State. (24)

Response: The Operating Plan has been designed to not interfere with the development of the EEPS program, and to supplement rather than supplant EEPS program funds and objectives. The efficiency activities identified in the Operating Plan would be offered alongside the electric energy efficiency opportunities provided by EEPS, to provide a broader spectrum of energy efficiency incentives for consumers, help to lower the entire consumer energy bill, as well as result in augmented carbon emissions reductions.

73. Comment: The State should fully fund the 30% RPS irrespective of RGGI allowance prices. Support using RGGI funds should be in addition to the money allocated (from rate payer surcharges) for fulfillment of RPS and EEPS goals. (34)

Response: Governor Paterson has expressed his strong interest in moving New York toward a 30% RPS. The Public Service Commission is expected to address the future of the RPS in New York State over the next few months. We concur that the variable nature of the RGGI revenues does not make such revenues appropriate as the primary means of meeting the State’s renewable energy targets. We expect that the Public Service Commission will consider this in its deliberations.

74. Comment: Using some of the RGGI auction proceeds to achieve the RPS goal of having 30% of all electricity consumed in New York State derived from renewable sources is appropriate. The RPS program directly reduces the CO₂ emissions of the electric generation sector by providing incentives for renewable resources. (30)

Response: Comment acknowledged.

75. Comment: Rather than funding parallel, potentially duplicative programs with attendant increased administrative costs, NYSERDA should integrate all of its programs that are funded by electric customers to focus on the overarching goal of achieving a sustainable energy system in New York State and rely on New York State's electric utilities to quickly and effectively implement these programs. By integrating all of NYSERDA's disparate electric system activities, duplication will be eliminated, administrative costs will be reduced, and, with increased focus, the likelihood of achieving the ultimate goal will be increased. Importantly, the funding mechanisms should be reviewed to ensure that customers pay no more than is absolutely necessary to achieve a sustainable energy

system, and steps should be taken to ensure that the funds should be spent as soon as practicable after they become available to speed up the achievement of benefits. (30)

Response: The Operating Plan proposes programs that provide cost-effective energy efficiency services to customers and that, when integrated with existing programs, are intended to capture all energy efficiency needs for a customer seeking energy efficiency services. In addition, the Operating Plan proposes programs that are designed to meet longer-term objectives in advancing New York towards a sustainable energy system.

76. Comment: NYSERDA, the Public Service Commission ("PSC"), the New York State Department of Environmental Conservation, other stakeholders and government agencies, with the help of the State's electric utilities, should develop a single coordinated program, and then determine the appropriate level of funding to achieve the goals of that program. In addition, the State's electric utilities are in various stages of implementing demand response and electric energy efficiency programs, and the money collected by the utilities from all customers to fund these programs must also be considered when NYSERDA and its stakeholders consider the appropriate level of funding to achieve a sustainable energy system. Once appropriate funding for the integrated NYSERDA program is determined, then adjustments can be made to the RPS and SBC charges in combination with the resulting RGGI auction proceeds to make sure that the integrated NYSERDA program is appropriately and consistently funded. Since not all areas of the State currently fund the RPS or SBC mechanisms, care should be taken to ensure that, absent additional contributions by those areas, the integrated programs to be developed by NYSERDA recognize that difference in customer payments and adjust program activities in those areas accordingly. (30)

Response: The proposed programs in the Operating Plan have been developed in consideration of the many existing programs offered by several state and private entities, and have been designed to supplement those program activities. Customers of NYPA and LIPA will have equal access to the same programs as all energy customers throughout the State.

77. Comment: The PSC has begun to approve utility-managed energy efficiency programs, and a number of New York utilities have existing or proposed programs to install solar resources in their service territories that have the potential to mitigate carbon emissions. It makes sense for NYSERDA to channel some of the RGGI auction proceeds into these existing and proposed utility programs as they are approved. (30)

Response: The Operating Plan proposes programs which have been designed in light of existing efforts throughout the State, and are structured to not supplant those activities. See also Comment 5.

78. Comment: The RGGI funds are a unique funding stream that should remain focused on GHG reductions. The marquee benefit of GSHP systems is the significant mitigation of GHG emissions. (23)

Response: Ground source heat pump systems are under consideration as an eligible measure under the Commercial, Industrial, Municipal and Institutional Efficiency Program.

Program selection criteria

79. Comment: Criteria for selecting programs not very heavily weighted on boosting municipal capacity. (42)

Response: The criteria in the Operating Plan are intended to serve as guidance for the development of the overall portfolio of programs. They are not weighted; rather the intention is to achieve a strong balance of programs that cover these criteria. There are numerous programs in the Plan that assist in boosting municipal capacity. Some of the program names and descriptions are being updated to make this more clear. In addition, there will be marketing and outreach activities that will be developed after the Operating Plan is approved that will assist different groups (*i.e.*, municipalities, environmental justice communities) in understanding how to take advantage of the programs.

80. Comment: The extent to which each of the various initiatives will serve Program criteria is unclear. Therefore, it is impossible to comment on the appropriate mix of initiatives and distribution of funds among initiatives. The Plan needs greater clarity on the process that led to the selection of the programs, as well as the selection processes that will determine which initiatives qualify for RGGI funding under each program. (28)

Response: The “Metrics and Benefits” section of the program write-ups describe which of the portfolio development criteria have been met by that program. The criteria in the Operating Plan are intended to serve as guidance for the development of the overall portfolio of programs. They are not weighted; rather the intention is to achieve a strong balance of programs that cover these criteria.

81. Comment: The Executive Summary and Introduction should be revised to reflect the fact that the [program selection] criteria are not weighted. (28)

Response: The Executive Summary and Introduction have been revised to reflect the fact that the [portfolio development] criteria are not weighted. See also response to Comment 79.

82. Comment: We recommend that NYSERDA explicitly weigh initiatives by the extent to which they serve the 6 over-arching criteria, and as part of the evaluation of the overall program, develop specific measures for assessing the extent to which individual criteria are served. (28)

Response: See response to Comment 79.

83. Comment: The environmental justice community urges NYSERDA to rewrite the fifth criteria to clearly state that the agency will consider the positive impacts that an initiative

could have on environmental justice communities when considering its inclusion within the Plan and its access to RGGI revenue. (28)

Response: NYSERDA values the positive impacts that an initiative could have on environmental justice communities. The Operating Plan is intended to provide benefits to both low-income families and to environmental justice communities. It is understood that these terms are not synonymous although they may sometimes overlap. Language in the Operating Plan has been revised to provide more clarity. Once the Plan is approved, a variety of outreach and marketing mechanisms will be developed to assist low-income families and environmental justice communities in understanding and participating in the programs in the Operating Plan.

84. Comment: NYSERDA should not approve a plan until the state-based cost curve study is finished and provided to the Advisory Group for review. (36)

Response: See response to Comment 13.

Environmental justice and Low-income

85. Comment: Use of RGGI auction proceeds provides a valuable opportunity to address environmental justice issues. Environmental justice efforts should focus on under-served communities, and should take into account adverse environmental effects that may bear disproportionately on minority and low-income populations. (41)

Response: We agree, and a variety of programs in the Operating Plan will help to address environmental justice issues. See also responses to Comments 83 and 92.

86. Comment: From our review of the draft Operating Plan, it appears that several program initiatives can provide substantial relief in low-income communities and other areas disproportionately affected by environmental impacts. The draft Operating Plan may have been deficient in that the environmental justice attributes of many programs were not featured. And some programs could benefit from a greater allocation of funds that would provide more resources to address environmental justice concerns. A few examples about how to achieve this objective are provided by this commenter. (41)

Response: Additional language will be added in the Operating Plan with regard to the programs that provide opportunities for low-income families and environmental justice communities. The overall portfolio is designed to balance multiple objectives and criteria. Further expansion of low-income and environmental justice programs will be considered in conjunction with the expansions of other statewide policies and initiatives.

87. Comment: We do agree that addressing the impact of rising energy costs on low-income communities is important, and recommend that programs that are selected for RGGI funding to reduce the cost burden borne by low-income communities should be evaluated based on the economic profile of those served. However, we assert that it is important to understand that programs that provide reduced economic and environmental burdens for

low-income communities do not per se benefit environmental justice communities. Environmental justice communities are those communities that suffer from a disproportionate amount of environmental burdens as a result of systematic societal racism and classism. In short, they are communities suffering from the cumulative burden of multiple environmental harms. (28)

Response: We agree with your assertion that the terms “low-income communities” and “environmental justice communities are not synonymous and the Operating Plan is intended to have programs that help to provide benefits to both low-income families and to environmental justice communities. The Plan envisions specific outreach activities to environmental justice communities specifically to foster expanded participation in those programs. Language in the Operating Plan has been revised to provide more clarity.

88. Comment: [The organization] is concerned that the current version of the plan does not adequately address the needs of low income households. Specifically, of the \$525 million three-year program budget, only \$46 million (8.8 percent) is designated for programs that will benefit low-income households. Moreover, the plan proposes to serve a total of only 28,691 low-income households over a three year period while every low-income household in New York State could experience cost increases as a result of the cap and trade program. In contrast, Maryland enacted legislation requiring 17 percent of their auction proceeds to go to their universal service fund (which helps low-income households pay their utility bills) and New Hampshire enacted legislation to require 10 percent of the auction proceeds to be used for low-income weatherization. (5)

Response: The residential programs expand the low-income program offerings by approximately \$45 million dollars. Please note that the Weatherization Assistance Program is being dramatically expanded through economic stimulus funds, and the EmPower New YorkSM program is being expanded through EEPS funds (for electric efficiency.) A number of other programs in the Operating Plan may have direct and indirect benefits for low-income communities. The “metrics and benefits” section of each program write-up in the Operating Plan elaborate on these matters further. With regard to using the funds to help households pay their bills, the regulations require that the proceeds of the CO₂ Allowance Auctions will be used by the Authority to promote and implement programs for energy efficiency, renewable or non-carbon emitting technologies, and innovative carbon emissions abatement technologies with significant carbon reduction potential.

89. Comment: The proposed research agenda includes an assessment of the economic impacts of climate change in New York. We recommend that this assessment be included as part of the evaluation component as well, with a focus on the specific economic impacts of climate change on low-income families. (5)

Response: The economic impacts of climate change on low-income communities will be included in a study that is currently underway through NYSERDA’s Environmental Monitoring, Evaluation, and Protection (EMEP) program.

90. Comment: The operating plan concept paper proposed to use a portion of the proceeds for transportation system improvements to provide low-cost travel options that would benefit low-income New York residents. However, the February 25 draft of the operating plan does not include any investments to expand mass transit or other public transportation systems that would enhance access for low-income individuals to employment opportunities. (5)

Response: A widespread mass transit rebate program is not feasible given the limited funding available. The regulations also require that the proceeds of the CO₂ Allowance Auctions will be used by the Authority to promote and implement programs for energy efficiency, renewable or non-carbon emitting technologies, and innovative carbon emissions abatement technologies with significant carbon reduction potential.

91. Comment: Supports adding a representative from the environmental justice community on the Advisory Group. (36)

Response: The Advisory Group currently has three environmental justice representatives.

92. Comment: Direct RGGI funds towards projects located in overburdened environmental justice communities because they bear the brunt of carbon production activities and thus deserve the co-benefits generated by these programs such as reduced electricity costs and improved health. (28)

Response: We agree, and a variety of programs in the Operating Plan will help to address environmental justice issues. Once the Operating Plan is approved, NYSERDA will work to develop a number of marketing and outreach materials to clarify how environmental justice communities can participate in and benefit from these programs. In the meantime, some language is being updated in various program write-ups (in the “metrics and benefits” section of each program) to clarify these opportunities.

93. Comment: For urban environmental justice communities, the individual positive benefits will be greater for each action as the number of people impacted and the scope of the positive impacts will be greater than initiatives located in non-environmental justice communities. (28)

Response: Projects in urban environmental justice communities will result in a broad range of benefits. See also the response to Comment 92.

94. Comment: Clarify the percentage of plan funding for low-income vs. multifamily housing. Different percentages are used in three parts of the plan. Multifamily housing does not by definition equal low-income housing and does not necessarily mean housing located in environmental justice communities. (28)

Response: Eighty percent (80%) of the proposed Multifamily Performance Program budget, \$19.2 million of the \$24 million budget, is targeted at low-income multi-family housing. The total proposed Residential Budget of \$84 million includes \$47.6 million

targeted at low-income households, both single-family and multifamily dwelling, equaling 56.7% of the Residential Budget.

95. Comment: GSHP systems can reduce the disproportionate cost burden and environmental impacts on low-income families and environmental justice communities. Since first costs are generally higher for GSHP systems they are often not thought to be viable alternatives for low-income families. This is an area where RGGI programs could be used to establish a fund for the financing of GSHP installations similar to those used by one segment of the utility industry, rural electric cooperatives (RECs). (23)

Response: We agree that ground source heat pumps are underutilized. It is important to note that in a majority of low-income housing, there is substantial energy efficiency work that needs to be performed in a home or building before a GSHP system should be considered for installation. This technology is, however, an eligible measure in our existing residential programs and therefore not specifically addressed in this plan. For example, in the Home Performance with ENERGY STAR Program, GSHP are eligible for low-interest rate financing of up to \$20,000 and lower income households may be eligible for a 50% incentive, up to \$5,000 for a single family home and up to \$10,000 for a 2-4 family home. To increase utilization, we are currently working on increasing the availability of technical training to support this technology, which should result in far more installations. In addition, we provide a link on our web site to information on tax incentives, and will expand our direct education of residents and contractors on the tax incentives.

96. Comment: Prior to the development of demand-side management (DSM) programs that promote energy efficiency in a constrained area, the following actions should be taken and funded, in order to understand and promote the maximum overall public benefits of such a program:

- A study should be conducted to assess what levels of DSM penetration can be accommodated, while respecting the level of peaking facility support that still will be required in order to ensure system reliability is maintained.
- The results of this study then can be used to quantify the emissions reductions and relative value of the environmental benefits that might be achievable through such a program.
- Finally, assuming both energy efficiency and environmental benefits are the desired outcomes, a program should be designed to encourage increased DSM and the repowering of peaking facilities, in order to achieve the maximum combined benefits of peak load reduction, energy savings, and emission reductions (17b)

Response: The energy efficiency measures in the Operating Plan are intended to supplement the electricity energy efficiency programs currently in operation. We expect that the electricity measures in the Operating Plan will largely impact baseload use, and we anticipate that the State Energy Plan modeling activities will assess the potential impacts of augmented electricity energy efficiency programs.

Program administration

97. Comment: A prorated share of the 60 additional personnel associated with RGGI program administration should be based in New York City. (27)

Response: This suggestion will be taken under advisement as NYSERDA begins to implement the programs across the state.

98. Comment: In the next 60 days, issue documentation explaining how the application process will work for accessing application-based programs with limited funds (e.g., electric trailer, heavy duty hybrid trucks, and the water/wastewater treatment plant programs). (27)

Response: NYSERDA will work to get program implementation information out to customers as soon as possible once the Operating Plan has been approved.

99. Comment: Additional clarity is needed on how NYSERDA will work with the New York State Dept. of Environmental Conservation (DEC) Office of Climate Change in coordinating these program activities moving forward. This will not only help prevent possible duplication of efforts on the development, implementation, administration, and evaluation of programs, but ensure that ongoing efforts addressing greenhouse gas mitigation and climate change research are done in accordance with the aims of achieving the maximum environmental, economic, and public health benefits for the citizens of NYS. (38)

Response: The Operating Plan will be amended to reflect the joint implementation of DEC and NYSERDA in efforts to conduct climate change research. DEC and NYSERDA, through the implementation of the compatible regulations established for the CO₂ Budget Trading Program and the CO₂ Allowance Auction Program, will continue to collaborate for the successful implementation of the regulations and to achieve the purposes of the programs.

100. Comment: NYSERDA should modify the Draft Operating Plan to include a firm cap on the amount of funds allocated to the EE&CET Account that may be used for reasonable and verifiable administrative and evaluation expenses related to RGGI. (24)

Response: NYSERDA currently implements programs with equivalent caps on administrative and evaluation costs, up to 7% and 5% levels respectively, for the SBC and EEPs programs. As the range of activities that are proposed in the Operating Plan are similar to the energy efficiency and clean energy technology programs that NYSERDA administers in those programs, NYSERDA believes that the proposed capped administrative and evaluation costs will accurately reflect the needed funds to support the proposed activities. Given the uncertainty of the revenues for this program, a dollar cap on such costs may be untenable. NYSERDA will attempt to realize available economies of scale where achievable to maintain reasonable administrative and evaluation costs.

101. Comment: NYSERDA would greatly benefit in working with environmental justice organizations to determine the fate of proposed program activities. EJ organizations have a great deal of expertise in disproportionate cost burdens and harmful environmental impacts caused by power generation. We also have on the ground experience in job creation through providing communities with health and environmental benefits. (21)

Response: Once the Operating Plan is approved, a variety of outreach and marketing mechanisms will be developed to assist environmental justice communities in understanding and participating in the programs in the Operating Plan. The input of environmental justice organizations will be pursued in working with EJ communities.

Program evaluation and reporting

102. Comment: NYSERDA should provide periodic and publicly available reports that provide updated information on: 1) program availability, 2) program performance, 3) geographic equity of funding allocations from RGGI funds. (27)

Response: See the response to Comment 59 regarding quarterly program status reports. NYSERDA plans to provide information on the geographic distribution of program funding and benefits across the State in its annual evaluation and status reports.

103. Comment: We support the expenditure by NYSERDA of 5% of total program funds on monitoring and verification. This level of expenditure comports with recognized best practices across the country and is generally consistent with Public Service Commission direction to date in the Energy Efficiency Portfolio Standard proceeding and in the existing SBC program. (27)

Response: NYSERDA proposed the 5% funding level for evaluation based on best practice in New York and across the country.

104. Program results must be verified and evaluated to ensure accountability and transparency. We understand that up to five percent (5%) of program funding will be devoted to evaluation and reporting. We support this level of funding for program evaluation. (41)

Response: NYSERDA agrees that program results must be verified and evaluated to ensure accountability and transparency. The 5% evaluation budget is expected to provide adequate support for this effort.

105. Comment: The plan fails to provide information on the processes for programmatic evaluation and revision. Provide further details on evaluation mechanisms. (28)

Response: The Operating Plan has been revised to include information on how evaluation results will be used to help identify possible issues with program performance, and to provide recommendations to NYSERDA as to how those issues might be rectified. The evaluation and program implementation activities will be integrated such that “real time” feedback from the evaluation can be used to help inform and improve programs.

Reports by NYSERDA's independent evaluation contractors will be made publicly available so interested parties can review any programmatic recommendations that are made. NYSERDA will utilize evaluation data and information to make programmatic changes in the annual Operating Plan updates, or more frequently, as needed.

106. Comment: NYSERDA must include benefits to environmental justice communities within its evaluation plan. NYSERDA should assess the geographic distribution of benefits from the various programs that are selected for inclusion and revamp them as necessary should the goal of reducing impacts in environmental justice communities not be adequately addressed. (28)

Response: NYSERDA plans to assess the geographic distribution of benefits, especially for programs proposed in the Operating Plan based on their ability to help reduce the disproportionate cost burden and harmful environmental impacts on low-income and environmental justice communities (Criterion 5). NYSERDA will take this information into account when considering future program modifications.

107. Comment: NYSERDA would benefit from utilizing tools that have been developed by the New York City Mayor's Office of Long-Term Planning and Sustainability (OLTPS) in implementing the PlaNYC program. OLTPS uses a business model to closely track the progress of each of its 126 initiatives and provides annual progress reports to the public on the successes and challenges of implementing the program. (28)

Response: NYSERDA evaluation staff is seeking information on this tool and will take this suggestion under advisement.

108. Comment: Stating that some programs – primarily those of which provide benefits for environmental justice communities – will serve as “case studies” of RGGI funded programs is a wholly inadequate method of providing public information on these programs. NYSERDA should not pick and choose what programs, activities, projects or evaluations it shares publicly as “case studies.” There should be no barriers to the public's access to detailed information on how this money is being spent and the outcomes of the investment. (28)

Response: The case studies proposed in the Operating Plan are intended to serve program outreach, education and technology transfer purposes, and are not part of the formal program evaluation effort. The program evaluation effort will address the RGGI programs more broadly and will employ appropriate sampling strategies to ensure representativeness of the final results. Evaluation results will be publicly available.

109. Comment: The proposed funding for the Program Evaluation and Administration would consume almost 13% of total funding. While the [Commenter] supports strong measurement and verification and acknowledges the need for effective program administration, NYSERDA should consider benchmarking with other states to see if this funding level is appropriate. (30)

Response: The 5% evaluation budget is not only equal to that which has been approved by the New York Public Service Commission for the State's major energy efficiency programs, but is also similar to energy program evaluation budgets in other states. See response to Comment 100.

Program Specific Comments

Residential, Commercial and Industrial

110. Comment: Ground source heat pump (GSHP) systems will dramatically reduce or eliminate GHG emissions and should be a cornerstone of the Residential, Commercial and Industrial Sectors proposed in the Operating Plan. Federal tax credits for GSHP installations, extending to 2016, will offset first costs and leverage any RGGI-funded activity in both residential and commercial sectors for many years to come. (23)

Response: See response to Comment 95.

111. Comment: GSHP systems should become the default standard for any new building being planned or when considering the replacement of existing systems, particularly those buildings heated using oil or propane. Even with all the successful installations and infrastructure in New York, first cost and long payback periods have limited GSHP system acceptance in many markets. In New York's commercial markets, GSHPs are often limited to institutional customers (federal, state and local governments, K-12 schools, etc.) that take the lifecycle view. With sufficient RGGI funding GSHP's will be the preferred heating and cooling method installed in new construction of residential, commercial and industrial buildings in New York. (23)

Response: We will continue to expand training opportunities for this technology, and reach out to builders, and builder associations, to encourage education on this technology. Also see responses to Comment 78, 95 and 110.

112. Comment: We ask you to consider including GSHP systems in the specific program areas and as qualifying technologies in the Operating Plan. If no specific programs are developed for GSHP systems, then please ensure it is not excluded by omission. Where possible, programs should be retroactive to January 1, 2009 to reward early adopters of initiatives that qualify for RGGI-funded programs. (23)

Response: See the response to Comment 110.

113. Comment: Entities seeking to use RGGI auction revenues to implement energy efficiency programs should meet the requirements for general additionality similar to those noted in NYCRR Part 242-10.3 and project standards along the lines of requirements for the "reduction or avoidance of CO₂ emissions from natural gas, oil, or propane end-use combustion due to end-use energy efficiency" as provided for in NYCRR 242-10.5. (17b)

Response: Consistent with Part 242-10.3(d)(3), projects that receive funds under a program covered in the Operating Plan are not eligible to pursue CO₂ Emissions Offset credits under the CO₂ Budget Trading Program. Agricultural methane projects that receive CO₂ Emissions Offset credits under the CO₂ Budget Trading Program may also receive public benefits funds under a program covered in the Operating Plan. NYSERDA will consider using measurement and verification standards along the lines of those shown in NYCRR 242-10.5 to evaluate program performance, as appropriate.

114. Comment: We support exploring the consideration of clean DG and high-efficiency CHP as elements of the Residential, Commercial and Industrial programs. (41)

Response: Clean DG and CHP are addressed under Advanced Building systems and Industrial Process Improvements.

Commercial and Industrial Efficiency

115. Comment: Are there opportunities for local governments in the Commercial/Industrial section? It seems like they might be eligible, but it's not exactly spelled out. (42)

Response: Yes. See responses to Comments 1 and 9.

116. Comment: The total budget for the Residential Space and Water Heating Efficiency Program varies in some significant ways between Table 7 and Table 8. Please correct and further explain the differences. (28)

Response: Table 7 shows marketing, outreach and education ("outreach") as a separate program, which reflects the manner in which the programs will be implemented. Table 8 allocates the outreach budget across the various programs for the purpose of evaluating overall cost-effectiveness of each program.

117. Comment: The Commercial and Industrial Program budget table (Table 5) fails to account for the exact division of revenues between the different initiatives. For both the technical assistance initiatives and the implementation support initiatives, the budget table provides only the yearly allocation numbers and fails to break down how that yearly allocation will be disbursed amongst the nine different initiative programs. If the failure to include a full budget breakdown for these programs is purposeful, the Operating Plan must clearly state why this exclusion is necessary and justified. (28)

Response: The rolled up budgets reflect input from numerous stakeholders that we not offer too many splintered programs and the fact that programs are expected to be offered on an open solicitation, standard offer basis. With this type of open, first-come, first served first-served programs, there is an equitable participation opportunity but actual participation and expenditures are difficult to predict.

118. Comment: The Commercial Diagnostics Program would help identify opportunities for businesses to reduce emissions, but the program should also require businesses to commit to making such facility improvements. (36)

Response: Experience has shown that unbiased technical support and information frequently results in sound decision-making and implementation. Mandating improvements is more appropriate for codes and standards and when applied to incentive programs can lead to reduced participation in diagnostics and technical support initiatives.

119. Comment: The Draft Operating Plan proposes to add incentives for non-electric projects to SBC- and EEPS-funded programs that currently focus on electric measures. This is an area where NYSERDA should partner with NYPA and/or identify that NYPA customers are eligible for funding for electric and non-electric projects. (20)

Response: Coordination with NYPA has been included for a number of programs, Municipal/Institutional in particular. The revised Operating Plan reflects this. See also response to Comment 31.

Residential Space and Water Heating Efficiency

120. Comment: We urge that the plan be revised to significantly increase the percentage of funding for programs designed to benefit low-income households. This could be achieved by earmarking a portion of the auction proceeds for the Low Income Home Energy Assistance Program (LIHEAP) to provide a stable and dedicated funding source that would enable OTDA to expand the provision of vital energy assistance funding to low-income families. Earmarking a portion of the auction proceeds for the LIHEAP funded weatherization and heating equipment repair and replacement programs to make feasible the installation of more energy efficient heating equipment and renewable resource technologies in the homes of low-income residents would achieve the dual goals of implementing innovative energy efficiency measures and offsetting the disproportionate cost burden on low-income families. (5)

Response: NYSERDA appreciates the interest expressed by the Office of Temporary and Disability Assistance (OTDA) to expand the resources available for low income energy assistance and weatherization through RGGI. Year after year these programs have been severely underfunded compared to the need for these services. However, it is important to note that this year is different. The current levels of financial support from the federal government for both energy assistance and weatherization are at all time highs. Federal economic stimulus funding will provide \$394 million to the Division of Housing and Community Renewal (DHCR) to expand the Weatherization Assistance Program over the next two years. This is over 4 times the current annual funding of \$67.8 million. The funding for 2009-2010 was already scheduled to increase to \$104.7 million. It will be a great challenge to expand capacity to effectively utilize these resources, now estimated at \$300 million for each of the next two years. The availability of an additional \$47.6 million from RGGI for low-income energy efficiency programs over the next three years (56.7% of the overall RGGI residential budget and over 9% of the total RGGI budget) is a significant increment above current low income energy efficiency efforts.

NYSERDA also appreciates the vagaries of reliance on annual federal appropriations. For example, the HEAP allocation to New York totaled \$261 million for FY 2007, \$359 million for FY 2008, and \$537 million in 2009. Unfortunately, attempting to level out the troughs in federal dollars would overwhelm the RGGI funding.

NYSERDA agrees that it is important to ensure that OTDA's heating equipment repair and replacement program promote the installation of highly efficient equipment whenever feasible. NYSERDA offers to work with OTDA and DHCR to develop a workable solution that balances the need to cost-effectively address the immediate problem with long-term affordability.

121. Comment: Passive Solar Heating [is] a way for New York to easily and cost-effectively save annually 10s of millions of tons of CO2 and billions of dollars. Tools to do this include: building codes, require energy audits for all real estate transactions and a carbon tax. (8)

Response: We agree that this is an underutilized technology. We will continue to work with builders and builder associations to promote training. As the building codes become more stringent, and incentive programs continue for even higher levels of efficiency, this is one technology that will help builders and homeowners meet the more aggressive energy goals. The specific suggestions provided here are outside NYSERDA's authority and so are not addressed through the Operating Plan.

122. Comment: I suggest you include the opportunity for land-based, small scale wind energy in the Residential, Commercial and Industrial sector or under the Electric Power Supply and Delivery sector. (26)

Response: Demand for PV installations is outpacing available funding support under the RPS while demand for the small wind program has remained at a level that can be met with RPS funding. Consideration will be given to adding an incentive program for small wind to the program during the next annual review stage.

123. Comment: Include a program to support the installation of renewable energy technology at the community level. The funding should support feasibility studies, start up costs and initial infrastructure purchases and should target commercial, residential and industrial facilities (26)

Response: The Statewide Photovoltaic Program will provide funding to support the installation of PV. There is also the Advanced Power Program that could provide funding to support pre-development activities for siting renewable energy technologies. Towns, counties, schools and institutions are all eligible for these programs as well as those outlined in the RCI Section of the Plan. The emphasis of the Programs in the RCI section is expected to be energy efficiency opportunities that deliver cost-effective CO₂e reductions. The municipal institutional sector will also include a recognition program for

exemplary CO₂e savings performance that provides for installation, outreach and monitoring of showcase solar systems.

124. Comment: We recommend that NYSERDA evaluate whether 40% is a sufficient targeting of funds to low-income communities in light of overall population demographics and in light of the extent to which higher income households are able to implement efficiency measures with lesser funding support. (28)

Response: The Proposed Residential Budget of \$84 million includes \$47.6 million targeted at low-income households (56.7%). NYSERDA's low income programs target very specific populations. The EmPower program targets the same population as the Weatherization Assistance Program (WAP) administered by NYS Division of Housing and Community Renewal. With the very large increase in funding for WAP, through the stimulus package, ongoing collaboration with gas utilities, as well as the recent increase in the EmPower program through the Energy Efficiency Portfolio Standard, funding through RGGI is primarily targeted at oil and propane fired heating systems in households that are not planned to be served through WAP. In addition, the Multifamily Performance Program (MPP) also targets, in part, buildings that are eligible for WAP assistance.

Both the MPP and the Home Performance with ENERGY STAR (HPwES) programs target affordable housing and households with incomes between 60% and 80% of the state or area median income. The estimated budget mix between low-income and non-low-income households for these two programs is based on our experience to date, and reflects a heavy preference for low-income households (80% and 75% respectively.) The overall residential budget balance between low-income and non-low-income budgets also reflects that there has not yet been a specific target established for low-income participation in the Green Homes Incentive Program and the Solar Thermal Incentive Program, as the incentive structures for these two new initiatives are still under development. NYSERDA will work closely with housing authorities, affordable housing developers and others to target lower-income households for participation in these two initiatives and will track and report participation levels. This will enable us to better identify appropriate low-income targets for the Green Homes and Solar Thermal Incentive Programs, which may be included in future updates to the Operating Plan.

125. Comment: Specific goals should be developed for the amount of funds targeted to environmental justice communities and NYSERDA should measure the extent to which these goals are being met. (28)

Response: NYSERDA will work with NYS DEC to identify environmental justice communities, enabling us to track and report participation levels. Establishing specific goals at the community level would depend on our ability to determine on a broad scale, up-front, what fuel types are used in the households within those communities, and matching the needed services with the appropriate funding sources administered through our programs. For example, households using gas for heating will be served with gas

funds as opposed to RGGI funds. Households heating with electricity can be best served with SBC or EEPS funds.

126. Comment: The Operating Plan must be clarified to state how the Energy Smart Communities Program and the Energy Smart Target Zones are relevant to environmental justice communities. (28)

Response: This will be clarified in the Operating Plan.

127. Comment: ACE NY strongly supports the use of RGGI auction funds to support solar thermal technologies (for air and water heating), and believes a significant amount of money should be spent in this area since they are proven technologies and are not currently supported via the State's RPS. (34)

Response: We agree that this is an underutilized technology. However, the funding targeted for this initiative is based on a need to ramp up – training technicians, contractors and builders, and developing marketing and educational campaigns. The program budget will be reviewed annually and potentially adjusted based on demand and performance in New York. See also responses to Comments 18 and 19.

128. Comment: Accept European Solar Keymark standards. New York State has the ability to establish standards in addition to the Solar Rating Certification Center (SRCC) ratings. By accepting the stricter European “Solar Keymark” as an approved NYS standard, proven European products - which now have to wait 2 years or more to gain SRCC ratings - will be able to quickly enter the NY market. This expansion will increase the potential to also attract new manufacturing facilities to the state. (22)

Response: Thank you for this reference. We will explore this option.

129. Comment: Increase Solar Thermal funding. The draft Operations Plan recognizes that Solar Thermal provides the same carbon reduction as PV – at one-third the cost (\$81 per ton). Solar heated air is even more cost effective. Yet, the Operations Plan calls for only 7.5 million for solar thermal (1/4 of the \$32 million proposed to be spent on PV). The effective promotion and adoption of solar thermal will lead to a broader public acceptance of all solar technologies, including PV. (15)

Response: See response to Comment 127.

130. Comment: This program should also identify NYPA as a partner for implementation support as NYPA is currently developing a PV and solar thermal program targeted to the residential sector of its municipal and cooperative customers. In addition, NYPA is developing a \$25 million project with the New York City Housing Authority to replace hot water storage tanks with instantaneous water heaters, resulting in annual savings of 111,213 dekatherms of steam and \$2.35 million in annual savings. (20)

Response: We will coordinate with NYPA, and the Operating Plan will be updated to reflect this.

Municipal and Institutional Climate Change Program

131. Comment: The Plan says that the Municipal and Institutional Climate Change Programs are not anticipated to directly contribute to carbon reductions, but on Page 23, under Municipal and Institutional Programs, it says the program will be evaluated based on the number of entities reached and the achieved carbon reductions. (42)

Response: The revised Operating Plan states that these programs have not been “designed” to contribute to measureable carbon savings, but rather to a set of overall criteria of which the first is cost effectiveness. Another important criterion is the potential to reduce CO2 emissions through reduced electrical consumption.

132. Comment: There is a reference to a municipal program for climate protection, but it does not specifically highlight that it is the Climate Smart Communities Program. Can that be called out now that it has been officially launched? (42)

Response: The description in the revised Operating Plan is a broad approach to climate change, which encompasses a number of elements and potential programs, including but not limited to the Climate Smart Communities Program.

133. Comment: The Municipal and Institutional program is an excellent example of a program that fills a need not otherwise met by existing funding sources. It also involves agencies other than NYSERDA in pursuing GHG reduction objectives, which is valuable in that it takes advantage of capabilities of other agencies and their relationships with potential allies in New York’s communities. (41)

Response: We agree with this comment, and will work closely with a wide network of available resources.

134. Comment: To address environmental justice issues, the Municipal and Institutional program could be targeted toward lower income municipalities which lack the resources to initiate such programs, and could provide greater financial and technical assistance to pursue such initiatives in these communities. For example, some portion of the funding could be earmarked for communities having a disproportionate number of low-income families or a high number of industrial sites.

Response: We expect to provide services across the state and to assure a mix of municipalities both by geography and economic strata.

135. Comment: We support exploring the use of a portion of the RGGI auction revenues to establish a revolving fund. We are interested in helping with the research and design this program, and could offer the expertise we gained on these issues from the PSC’s EEPS proceeding. (41)

Response: NYSERDA will solicit stakeholder input in the development of a revolving loan fund. See response to Comment 46.

136. Comment: The competitive bid process included in the Grade School Education initiative should be removed to ensure that the process does not disadvantage urban schools and teachers that are under-resourced and overwhelmed. The intention of the program is laudable but using a competitive bid process to enable teachers to gain access to climate change-related materials, courses and resources creates the strong possibility that the most well-funded, resourced and equipped schools will be best able to participate in the bidding process and construct successful applications. Instead of using a competitive bid process for the program, NYSERDA should commit to disbursing programmatic resources equally throughout the state, perhaps implementing pilot programs in each region. (28)

Response: The revised Operating Plan no longer calls for these funds to be distributed solely based upon a competitive process.

137. Comment: The College and University Competition Initiative competitions should be limited to CUNY and SUNY schools. This would dedicate funds toward the schools that will benefit the most from the funds – those schools with the smallest financial platform from which to run these competitions themselves. (28)

Response: The competition will be open to all schools and universities as proposed in the Operating Plan, to be fair and to reach the widest pool of students.

138. Comment: Opposes the inclusion of initiatives described in the Draft Plan that may have substantial “societal benefits” but that do not result in greenhouse gas reductions. RGGI resources should not be used for local government climate awareness programs and outreach to schools and colleges. Capitalizing a revolving loan fund — of which there are many models — or making direct grants/performance incentives to municipalities for energy savings resulting from facility improvements would be a better use of such funds. Incentives for public building diagnostics would also help local governments in more tangible ways than vaguely defined “planning assistance.” Similar to the commercial program, diagnostic tools should be provided to municipal facilities and be accompanied by a commitment to making facility improvements. (36)

Response: The revised Operating Plan lists a number of criteria to be used in the design and evaluation of program services. Societal benefits can be defined in many ways, and are a component of many of program criteria. The Operating Plan provides flexibility to fine tune services, which may include diagnostics in some cases.

139. Comment: This program should specifically identify NYPA as a partner because we have existing and planned projects incorporating energy efficiency into wastewater infrastructure. For example, NYPA has several projects at New York City Department of Environmental Protection facilities including a \$35.7 million improvement to the anaerobic digester gas system at its Red Hook facility that will feed fuel cells, thereby reducing and offsetting 15,268 tons of CO₂ emissions annually. (20)

Response: The revised Operating Plan recognizes the potential to coordinate with NYPA.

140. Comment: It seems like larger communities and more urban areas are going to be prioritized based on the types of projects they are targeting (except the sustainable Ag program). Is there going to be assistance available for small, rural communities as well? (42)

Response: Criterion 5 in the Operating Plan includes the opportunity to reduce the disproportionate cost burden and environmental impacts on low –income and environmental justice communities, which could include small, rural areas.

141. Comment: Will the Revolving Loan Fund encourage existing local programs or just remove barriers to begin climate protection programs? (42)

Response: We would expect it to build on existing programs and encourage new actions in communities as well.

Advanced Building Systems and Industrial Process Improvements

142. Comment: Colleges and university buildings have varied designs and uses, long operating hours and are excellent targets for energy audit and efficiency improvements under the Advanced Building Program. (37)

Response: The Operating Plan does not preclude college and university building types as targets for advanced technology. Institutional buildings have been added to the narrative in the Operating Plan.

143. Comment: Research should be focused on methods to reduce first cost and improve performance of GSHP systems in the Advanced Building Systems and Industrial Process Improvements Program (23)

Response: Ground source heat pumps have been added as an explicit technology topic in the Operating Plan. Innovations in heating, cooling, ground source heat pumps, ventilation and distribution equipment will be pursued to reduce first costs, increase operating performance and reduce emissions; this language has been incorporated into the Operating Plan.

144. Comment: NYPA projects (innovative uses of waste heat recovery for heating, process, or electrical generation, installation of low pressure hydro projects, and demonstration projects of fuel cell, solar, and wind technologies) reduce fossil fuel use and are not supported by SBC funding should qualify for participation in the Advanced Building Systems and Industrial Process Improvements Program. (20)

Response: NYPA customers are eligible to pursue projects that reduce fossil fuel use that are included in this Operating Plan through NYSERDA. We welcome opportunities to work with NYPA to reach these customers. See also response to Comment 31.

145. Comment: We support the use of RGGI auction proceeds to explore micro-grid CHP. (41)

Response: Specific activities identified in the Operating Plan include cost-effective, efficient micro-combined-heat-and-power (Micro-CHP) systems for residential applications.

Transportation

146. Comment: Transportation initiatives should include developing infrastructure to integrate plug-in hybrid and electric vehicles (33), research of fuel cells (34), and development of advanced on-board chargers for PHEV (29). Public transportation use and services programs should focus on areas that are currently underserved as well as linking these underserved areas with job clusters outside of Central Business Districts (28). Funds should also be available for school bus retrofits to clean fuels, particularly important in environmental justice areas in NYC and throughout the state. (28)

Response: As described in the Advanced Transportation Development Program section of the Operating Plan, the long-term advanced transportation development program includes development of PHEV and electric vehicle products and infrastructure.

The Operating Plan recognizes that improving the performance of public transportation systems is a critical component of attracting ridership, changing behavior patterns, serving the public and reducing VMT. As noted in the VMT reduction discussion, projects that address these issues are eligible.

The RGGI program prioritizes GHG reductions. DOC and particulate filter retrofits do not provide any CO₂ reduction and therefore were not considered as part of the RGGI program. The RGGI regulations do not allow for fuel switching if there is no improvement in engine efficiency. Replacing diesel engines with alternate fuel engines on school buses does not improve efficiency or reduce CO₂. AFV conversions are best accomplished through air quality programs such as CMAQ.

147. Comment: Opposition to the use of RGGI auction proceeds for transportation projects is noted, unless projects are limited to those directly related to efficient electric use (17b). An alternative to proposed transportation initiatives in the Draft Operating Plan is to create a new transportation offsets category for the RGGI (17b).

Response: Agreed, the transportation sector is the major contributor of GHG emissions and the establishment of a transportation offsets category for RGGI is a worthwhile funding mechanism to consider. However such an action would need to be considered by all of the RGGI states and is beyond the scope of the New York RGGI Operating Plan. See also response to Comment 47.

148. Comment: How do those three programs under Transportation encourage behavioral changes and smart growth policies? How are transportation projects going to be prioritized? Efficiency in more dense areas? Regional transit systems? Analysis of VMTs in an area and which transportation projects will reduce the most VMTs? It seems like if this sector is second to buildings in GHG generation that it would receive more than the amount allocated (\$93M compared to the \$524M for all programs, \$38M of which really focuses on VMTs). (42)

Response: Program elements that address behavioral change and smart growth policy are included in the Long-term Advanced Transportation Development Program as they require a long timeframe to have significant impact. The transportation demand management aspect of the short-term program will also encourage behavioral changes by providing funding for VMT reduction strategies to make them competitive with driving. The electric rails efficiency program, insofar as it makes public transportation cost-effective, could increase the funds available for expanding transit service. Short-term efficiency programs were prioritized and selected on the basis of verified near-term cost effective GHG reductions, long-term program were selected on the basis of their potential for an even greater magnitude of cost-effective reductions.

Transportation Efficiency Program

149. Comment: The Operating Plan is vague on how to expand public transportation use and services and how it will address smart growth; we encourage comprehensive planning that links housing, economic development, land use and transportation policies. Consideration should be given to incorporating successful international best practices and policies that link land use and transportation. The Operating Plan is also vague regarding how and when the education and outreach plan will be developed, and the role of the Advisory Group. Planning should include community based organizations in addition to collaboration with other agencies and authorities. (28)

Response: RGGI VMT reduction / smart growth programs will fund municipal planning, agency coordination, analysis, external consulting services and demonstration projects that demonstrate best practices in land use and transportation system performance and efficiency. The program will also fund education and transfer of program results to policymakers and communities not directly impacted by the program.

150. Comment: Pre-specified criteria should be stated in the Operating Plan, for diesel projects that involve only vehicle purchases and retrofits using existing technologies as described in Section 4.A.1(a) (28).

Response: The criteria for eligibility is expected to be: medium and heavy duty electric and hybrid vehicles, commercially available, having verified performance benefits, with prioritization based on operating profiles and GHG reduction potential.

151. Comment: Clarify whether funding for Heavy Duty Hybrid-Electric and Battery Electric Vehicles would be in addition to available or supplement CMAQ funding. (29)

Response: RGGI funding will not be used to supplant CMAQ funding.

Electrified Rail Efficiency

152. Comment: Expanding electrified rail and increasing its efficiency is a transportation-related funding avenue with significant potential to reduce electricity consumption and GHG emissions. (33)

Response: We agree.

153. Comment: Only Electrified Rail Efficiency identifies a close working relationship with NYPA, Con Ed, and MTA and its operating subsidiaries. There is additional potential for identifying NYPA as a partner in implementing cost-effective carbon mitigation projects. The Advanced Transportation Development Program should specifically leverage NYPA's existing programs and partnerships with major auto manufacturers to develop and demonstrate plug-in hybrid technology. (20)

Response: The Advanced Transportation Development Program anticipates leveraging NYPA resources in the development and demonstration of PHEVs, EVs and other grid connected transportation technologies.

Advanced Transportation Development Program

154. Comment: Multi-state collaborative programs should be implemented to avoid duplicating efforts and wasting funding. (28)

Response: We agree that multi-state programs should be encouraged and, if they provide benefits to NYS, NYS should participate.

155. Comment: Advanced Transportation Development should involve vehicle OEMs and standards group, with the OEM supporting the development of advanced on-board chargers for plug-in hybrid electric vehicles and the cooperation of partners including vehicle OEMs, standards groups, and utilities. (29)

Response: We agree. We are currently collaborating with SAE, IEEE, DOE, EPRI and OEMs and this will continue.

156. Comment: Tailpipe emissions programs should focus on emissions reduction in gallons of fuel consumed and reduction in trip time (miles traveled x time commuting). (29)

Response: We agree. The RGGI transportation program prioritizes GHG reductions achieved through efficiency measures (reduced fuel consumption in the miles traveled) and reductions in vehicle miles traveled.

157. Comment: Funding for long-term R&D for plug-in hybrid vehicles has a tenuous connection to the goals of RGGI and those funds should be reprogrammed to other initiatives (36).

Response: We strongly disagree. Virtually all studies including those done by DOE, EPRI, NRDC, NYISO and NYSERDA have shown that PHEVs have huge potential for GHG reductions. Reductions in excess of 40% can be achieved with no increased transmission or generating capacity while using our current generation mix.

Electric Power Supply and Delivery

158. A number of commenters requested participation on the EPSD Task Force (4, 17a, 27, 28, 29) and noted that the work should be public, well documented and clear. (28)

Response: The work of the Task Force will be well documented and clear. The Task Force will be comprised of technical experts in the area of power generation, delivery, and carbon capture/recycle, storage, and sequestration.

159. We support the efforts for advanced renewable energy technologies (17a, 21, 33), energy storage technologies (17a, 33), distributed generation (21), existing power plant efficiency improvements (17a), conversion to biofuels (17a), off-shore and other wind projects (17a) and energy delivery technologies such as smart grid (29, 33). Renewable energy at existing plant sites, where ample acreage and infrastructure exists are supported, with the ultimate goal to create hybrid energy centers that incorporate baseload facilities, renewable energy, and combined heat and power applications. (17a, 39)

Response: Comment acknowledged.

160. There should be incentives for wind and low-impact hydro plants, peak demand management technologies and the reduction of local air quality impacts associated with oil and diesel-fired peaking plants (through options such as repowering) in environmental justice communities ... and non-carbon emitting technologies, ... to include nuclear energy, and, in particular, nuclear up-rates. (17a)

Response: Funds will not be used to support nuclear projects at this time. The limited funds that are available will focus on renewable energy projects.

161. There should not be subsidization of the development of risky sites for wind power, development by utilities and public authorities, and development by private companies who simply may lack the resources to fund development on their own. (17a). The 100 to 300 MW range limit proposed for the funding of demonstration of storage technologies associated with wind projects should be changed to accommodate smaller projects. (17a)

Response: Funds for site development will be used to support practical projects that demonstrate long-term potential for commercial success. A full range of energy storage

projects will be eligible, including distribution and transmission applications. Smaller projects are expected to be in the 1 MW power output range.

162. The EPSD initiative is heavily focused on long-term programs and may be neglecting some potential for short-term GHG reduction efforts. (33)

Response: Short term projects in the electric power sector are eligible under the Competitive Greenhouse Gas Reduction Program in Section 7 of the Operating Plan. The EPSD Initiative will focus exclusively on long-term activities.

163. Funding should be increased for this sector (33) from 20 to 50 percent of all funds. (30) Increased funding will reduce cross-sector and cross-energy-source subsidization effects. (30)

Response: The RGGI program has been designed to achieve GHG reductions across multi-sectors of the economy. Apportioning funds too narrowly among sectors will negatively impact overall effectiveness. See also response to Comment 47.

164. The EPSD program should also evaluate enhancements to the T&D system to integrate renewable energy into the grid. (29)

Response: The EPSD initiative is designed to support this.

Statewide Photovoltaic Program

165. Comment: The Statewide Photovoltaic Initiative includes residences, businesses, institutions and schools, but not local governments. Can this be expanded to include them or, if it already does, indicate such? (42)

Response: As stated in the Operating Plan in the section describing the Statewide Photovoltaic Program: “The initiative will focus on communities with high peak electric demands, customers of non-regulated utilities, and off-grid applications.” Local governments could be a part of this effort.

166. Comment: We support the proposed expansion of the photovoltaic (PV) incentive program statewide to include eligibility of any residence, business or institution in New York. Particular emphasis should be placed on communities with high peak electric demands, as these areas should produce the greatest benefits in terms of displacing the dirtier resources that are operated to generate electricity during peak periods. Moreover, strategic deployment of PV in capacity constrained areas should produce benefits through deferred or reduced investment in T&D facilities. (41)

Response: As stated in the Operating Plan in the section describing the Statewide Photovoltaic Program, the initiative will focus on communities with high peak electric demands.

167. Comment: Increase the funding to at least \$5 million per year... to install solar PV in areas that have acute electric grid-resource sensitivity when summer peak demand events occur. (38)

Response: The PV Incentive Program has a budget of \$24 million over 3 years.

168. Comment: Clarify whether New York City government is eligible for participation in the Statewide Photovoltaic Initiative (27). NYPA and/or its customers should also specifically be identified in the Operating Plan to ensure that they benefit from the initiative. (20)

Response: As stated in the amended Operating Plan in the section describing the Statewide Photovoltaic Program: "... expand the program statewide to include customers who do not pay into the RPS program ..." NYPA customers, which could include NYC government, would be included in the program.

169. Comment: Clarify whether the goal of 50 MW of PV on Long Island is in reference to the 50 MW RFP that LIPA issued or is it in addition to it. (29)

Response: The 50 MW goal of PV on Long Island is in reference to the 50 MW RFP that LIPA issued. NYSERDA funds will supplement available LIPA funding and will enable NYS to achieve this goal. Without this NYSERDA funding it is unlikely that NYS would be able to support the full 50 MW target for Long Island.

170. Comment: To ensure geographic equity in the School Power Naturally Program, preference should be given to urban schools and those located in environmental justice communities. (28)

Response: The target for the program is to install 100 solar systems in a diverse set of schools.

171. Comment: We oppose the funding cap to limit coverage to 2 kW demonstration systems. (29)

Response: This program is primarily an educational effort that builds on an existing program. The 2kW systems will be tied together through a common data acquisition system and the internet. Schools could use other funding to install larger PV systems on their buildings.

172. Comment: We oppose the provision that the Statewide Photovoltaic Initiative will install 100 photovoltaic systems at public and private schools in three years. Section 1005 of the Public Authorities Law already requires NYPA to make energy efficiency services and clean energy technologies available to public and nonpublic elementary and secondary schools (17a)

Response: The School Power Naturally Program is an educational program. The solar systems will be tied together using a common data acquisition system via the internet and teachers will be able to use curriculum materials that have been prepared to meet NYS Math-Science-Technology standards.

173. Comment: We support using the funds to reach out to those deemed ineligible for the RPS program, such as off-grid applications. However, NYSERDA should seek to use a significant amount of RGGI money to support aggressive photovoltaic installations even in those areas eligible for RPS funds since the RPS goal for solar, and the money available, is smaller than the demand and the benefits that easily could be realized. (34)

Response: Budget allocations for the RGGI program will be reconsidered on an annual basis.

Advanced Power Technology Program

174. Comments were received that support carbon capture and sequestration (“CCS”) (4,17a, 31, 39) urge caution (21) and less funding (27) and those that do not support funding the technology at all (28, 34, 36). Environmental justice (28), health (21), safety (28), speculative research (34), environmental quality (21, 28) and cost effectiveness (34, 36) were cited as reasons not to support CCS.

Response: CCS technologies represent a significant opportunity to reduce GHG emissions from the combustion of fossil-fuels and are an integral part of any practical carbon mitigation solution.

175. Among the supporters of CCS, NYSERDA is encouraged to increase funding to at least a total of \$45 million (17a), or to 50% of all available RGGI auction revenues over the three years of the plan for Generation Carbon Control Technology applications (39).

Response: The current allocation of program funds for CCS seems sufficient to leverage federal money and conduct meaningful projects. Opportunities for increasing CCS funding may be considered in the future.

176. Comment: The definition of CCS should be broadened and read “[t]he innovative concepts for beneficial CO₂ use/reuse include, but are not limited to, CO₂ mineralization to carbonates directly through conversion of CO₂ in flue gas or indirectly through capture of CO₂ from air, use of CO₂/algae for biomass production, conversion of CO₂ to fuels and chemicals, and desalination of water produced from CO₂ storage in saline formations.” (4)

Response: All of these methods are potentially eligible for funding under the CCS category. Every effort will be made to provide maximum flexibility in the Operating Plan to support projects that not only capture and sequester carbon, but also recycle and reuse carbon to produce other co-products and chemicals.

177. Comment: There should be a demonstration project for CCS at a coal facility, as well as at a natural gas facility. (17a)

Response: CCS related technologies are equally applicable to all fossil-fueled facilities (oil, natural gas, and coal). Demonstration projects are not exclusively focused on coal power plants.

178. Comment: CCS is recognized as the critical enabling technology necessary to achieve significant (50-80%) GHG reductions . . . but the Draft Plan fails to calculate the cost-per-ton of CO₂ reduced for CCS and provide a comparison to the other measures. Technical information needed for a more complete analysis includes: (1) assumptions about the level of NYSERDA funding required to incentivize measures; (2) comparative CO₂ reductions attributed to the RGGI programs versus other funding programs, including the SBC, RPS and Federal Stimulus funding; and (3) assumptions about the life of control measures generically, and photovoltaics specifically. (31)

Response: Insufficient data exists to accurately define the CO₂ reduction cost targets for CCS. Comparative values for both cost and technology performance will be made available as the program progresses.

179. Comment: Use of RGGI auction proceeds in the manner proposed in the draft Operating Plan for carbon capture and sequestration should be contingent on the precondition explicitly stated in the draft Operating Plan itself: “large-scale demonstration of these technologies will require significant leveraging of funds from the Federal government and the power sector.” No portion of RGGI auction proceeds should be devoted to coal sequestration in the absence of a clear indication that any such financial commitment will lead to the leveraging of substantial funds from the Federal government and the power sector. (41)

Response: Large-scale demonstration projects will only be funded if significant external cost share is available. Some preliminary site/well characterization work may be undertaken, but it is recognized that large-scale demonstration projects must include significant levels of outside financial resources.

180. Comment: The promotion of biomass is cautioned and research is needed regarding the capacity of the forest to supply woody biomass as a sustainable, renewable fuel (2).

Response: We agree that additional research is needed. Funds may be used to develop/define this information.

181. Comment: There are near-term opportunities to meet the goals of carbon emissions abatement and agricultural economic growth by incentivizing the NYS biodiesel supply chain to make it competitive with diesel. (12)

Response: Biodiesel may very well prove to be a cost-effective fuel for reducing the carbon footprint of both the transportation and electric power sectors.

182. Comment: Wood chips harvested in a responsible manner for New York’s forests will provide a starting point for the biopower industry in our state, with new feedstocks like cropped shrub willow and perennial grasses, of both established and novel varieties, becoming available as they find their place in the state’s agricultural economy. Therefore, we suggest that the reference (under section 5.B.1) be simply to “biomass”, rather than “advanced biomass.” (15)

Response: Sustainably managed/certified woodchips are considered “advanced biomass.”

183. Comment: The financial viability of superconducting cables is uncertain. NYSERDA should carefully evaluate existing research in this area before specifically targeting such projects rather than other technologies with possibly greater cost effectiveness. The objective within advanced power delivery should simply focus on cost effective advancement in technology to promote the grid of the future. (29)

Response: We agree, and continuously monitor superconducting research efforts.

184. Comment: Funding eligibility within Advanced Power Delivery should include not only “smart grid” development but smart Transmission development. Accordingly, under the bullets on page 39 for specific projects, we suggest adding an additional bullet indicating a proposed project:

Smart Transmission Grid. Capability of the transmission system to interconnect with renewable energy sources while maintaining system stability. Apply advanced technologies to enable the grid to monitor and make the necessary adjustments to power flows due to new and disparate sources of energy on the grid, both inside and outside of NY. Technologies may include digital relaying and associated equipment, secure deterministic communications and algorithms to respond to dynamic system changes. (29)

Response: The program will support both distribution and transmission level projects. The term “smart grid” applies to both T&D activities.

Sustainable Agriculture and Bioenergy

185. Comment: We support the scope, approach and budget for this program. (41)

Response: Comment acknowledged.

186. Comment: Some of the \$15 million included in the budget for sequestration work should be dedicated to projects related to land use activities. Further assessment is needed to quantify the greenhouse gas impacts associated with terrestrial sequestration in New York. We support the intent to only allow for sustainably harvested woody and herbaceous fuel sources to be used for biomass energy production. (2)

Response: Research activities involving terrestrial sequestration are contained in the Sustainable Agriculture and Bioenergy section.

187. Comment: Protecting the remaining forest lands in New York is extremely important component in providing a carbon sink and thus mitigating climate change, and the Draft Plan should dedicated revenue for this purpose. (2) We wholeheartedly support the investigation and quantification of the carbon sequestration potential of New York’s terrestrial ecosystem. Preserving, enhancing and maintaining our urban green and natural resources is a sustainable way to create jobs, enhance biodiversity and improve our air quality. (21)

Response: At the present time, forest protection has not been included in the plan due to the fact that the available data show no net change in forest area. Furthermore, there is no expectation that this trend will change in the near-future. Typically any recent losses in forest area to development have been made up by gains from agricultural land to forest reversion.

188. Comment: Information on the Biofuels Roadmap was requested including the schedule, availability, who is conducting the research, and the availability of the final product (28) Failing to fully flesh out the Agriculture & Bioenergy Program because the [Roadmap] is not yet available underscores the impression created throughout the Plan (as well as much of the RGGI program broadly) that the entire implementation and creation process has occurred too quickly without the opportunity to adequately plan the many fundamental elements of the program. (28).

Response: As shown in the budget breakdown for this sector, funding in the first year of the program is relatively modest. The Roadmap was designed to provide policy makers with a better understanding of the possible impacts that increased use of renewable fuels might have on economic development, energy supplies and diversity, the environment and public health. When used wisely, agriculture and forest resources offer the potential for significant renewable energy resources. The contractor for the Roadmap was selected through RFP 1249, “Development of a Renewable Fuels Roadmap and Sustainable Biomass Feedstock Study for New York”. The contract was awarded to the Pace University School of Law, Energy and Climate Center. A “Visioning Meeting” was held with invited advisors on January 29, followed by a series of statewide public stakeholder meetings in February and March:

<http://www.nesungrant.cornell.edu/cals/sungrant/education/index.cfm>

A draft of the Roadmap will be complete at the end of 2009.

189. Comment: Three-quarters of a million dollars is set aside for the analysis and demonstration of [climate friendly farm] practices, without ever stating what such practices would be. (28)

Response: The initial program will involve the practical demonstration and evaluation of agricultural practices and technologies to characterize and quantify emission reduction and mitigation opportunities using an integrated system-based approach on several types of predominant agricultural operations found in NYS including but not limited to dairy, crop, orchard and controlled environment agriculture operations. Practices and technologies will be characterized and evaluated for emission reduction, carbon storage, economic, and cross-media environmental benefits. Practices and technologies may include but are not limited to; tillage, manure management, precision feeding, precision fertilizer application, integrated pest management, irrigation water management, cover crops, rotational grazing, cover crops.

190. Comment: NYSEDA should consider broadening the scope of the Agriculture sector funding to include support for urban farming initiatives, which reduce carbon emissions by reducing the need to transport agriculture products over long distances and provide secondary benefits to the local environment like improved nutrition and increased job opportunities in urban areas. (30)

Response: As stated in the comment, urban farming could provide multiple benefits and will be considered as part of the first year effort.

191. Comment: Resources should be dedicated to promoting the development of biomass as a solid fuel for residential and commercial building heating. This is a highly energy efficient, near term solution that, in addition to reducing fossil fuel carbon emissions ... would generate lots of local semi-skilled jobs and would also promote the development of the biomass production and pre-processing infrastructure that is going to be needed for cellulosic ethanol production once large-scale processing is perfected. (32)

Response: The Sustainable Agriculture and Bioenergy Program [refer to page 44 of the Plan] outlines activities to develop sustainable non-food feedstocks that can be used in the production of bioenergy. In the context of the Plan, bioenergy is energy in the form of heat, electricity, fuel and other products derived from biomass.

192. Comment: NYSEDA should increase funding for energy crop research, development, and commercialization to ten per cent of all auction revenues over the next three year period. (32)

Response: Budget allocations will be reconsidered on an annual basis.

193. Comment: In Section 6, covering Sustainable Agriculture and Bioenergy, the first paragraph ends with a sentence stating that this program will focus on biofuels and bioheat. We would suggest changing that line to state, "...biofuels, bioproducts, bioheat, and CHP." A number of mid-sized and larger industrial energy users in New York are already investing in, or at least investigating, replacing fossil fuels with biomass to produce process heat and electricity, this appears to be a particularly fertile area for both technology and feedstock supply system development. It would be unfortunate to exclude projects that were focused on the use of biomass in such CHP applications. (15)

Response: The Sustainable Agriculture and Bioenergy Program will focus primarily on the development of substitutes for fossil-based fuels or power generation. Expanding the development of bioproducts may, however, offer a way to sequester carbon. The Advanced Power Technology program may have initiatives that can support CHP technology.

194. Comment: Consider supporting efforts to refuel existing dispatchable facilities to run on bio-fuels. Existing fossil-fired facilities may have the ability to convert to bio-fuels, but they may lack the fuel supply to do so . . . should recognize the tremendous potential that biomass expansion in the electric generation sector can play in creating the necessary infrastructure for the development and progression of second and third generation bio-fuel businesses in the future. (17b)

Response: This activity could be supported under the Advanced Power Technology program discussed in the Operating Plan. In addition, under the Sustainable Agriculture and Bioenergy section, activities are anticipated to support strategies to overcome the financial barriers associated with long-term supply contracts for biomass.

195. Comment: The development of performance standards does not appear on activities as listed in the chart on page 45 that summarizes the anticipated multi-year program schedule (15).

Response: The budget item for this activity is included in the Analysis and Demonstration category.

196. Comment: Create a new Agriculture, Forestry, and Sustainable Bio-Energy Offset Projects Category under the RGGI, and the project categories envisioned by the Draft Concept Paper should be added as programs under that offset project category. (17b)

Response: The Sustainable Agriculture and Bioenergy section will include both forest and agricultural feedstocks. An early effort in the program will be to develop and test methodologies to identify and measure opportunities for greenhouse gas reduction and mitigation using lands in New York. Creation of a new Offset Category under RGGI would need to be considered by all of the RGGI states and is beyond the scope of the New York RGGI Operating Plan.

Multi-Sector Programs

197. Comment: Multi Sector Project funding should be prioritized based on greatest GHG reduction potential per dollar invested. National Grid is encouraged by NYSERDA's proposed multi-sector allocation wherein approximately \$40 million will be available to projects within any sector on a lowest dollar per CO2 ton reduction competitive basis. We would suggest however that projects with the greatest abatement cost effectiveness for utility ratepayers receive higher priority for funding. (29)

Response: The Competitive Greenhouse Gas Reduction Program plans to select projects based on a transparent evaluation criteria that includes technical merit and program and total costs on a \$/ton carbon equivalent basis, as well as other considerations. This comment will be considered as final evaluation criteria and weighting are developed.

198. Comment: Is there going to be a clearer breakdown of the percentage of funds that will be available through the Multi-sector section for local governments? How is this providing local governments with funding/resources to support their efforts to reduce their carbon footprint? Where can they obtain funding to conduct inventories to measure their footprint so they know where to reduce it? (42)

Response: Rolled up budgets reflect prior stakeholder feedback that we should not offer too many splintered programs, and the fact that programs are expected to include significant outreach, and be offered on an open solicitation, standard offer basis.

Municipalities and institutions are eligible for a range of initiatives, including coordinated support and assistance in conducting inventories and carbon action plans. Facility and site specific analysis and implementation is expected to be provided on a cost-shared basis.

Workforce Development

199. Comment: NYSERDA should work with DEC in addition to DOL in identifying workers to train, particularly since DEC's environmental justice map and database will provide information on where to find underemployed communities. (28)

Response: NYSERDA has been closely involved in the Governor's Task Force on Renewable Energy and the Environmental Justice Task Force. We also have been collaborating with all state agencies to prioritize training for environmental justice and low-income communities. In order to increase overall awareness of environmental justice issues and facilitate the incorporation of initiatives that address environmental justice concerns, NYSERDA is exploring options for one or more staff to serve as NYSERDA's environmental justice coordinator(s).

200. Comment: It is unclear as to whether or not NYSERDA will develop specific training programs to target under/unemployed workers. We would encourage NYSERDA to do so, and to prioritize locating training programs in low-income and environmental justice communities. Where possible, NYSERDA should also consider partnering with organizations that provide job-entry training to create a multi-step training program that leads to skilled green careers. This is a critical point for environmental justice communities, as it is all too often that workers in our communities are frequently placed in dead-end jobs with little opportunity for advancement. (28)

Response: NYSERDA is working closely with the NYS DOL, DHCR, Hudson Valley Community College (HVCC) (who recently received a US DOL grant to address disadvantaged and underemployed workers) and community action agencies to work with

underemployed, displaced, and disadvantaged workers. NYSERDA has submitted a proposal to NYS DPS for approximately \$22 million over three years for workforce development, of which, \$6 million has been earmarked for disadvantaged, displaced, and underemployed workers. If funded, this will help NYSERDA work closely to address environmental justice issues and work with the low-income sector, helping to develop sustainable jobs. This \$6 million will also include working with NYS DOL through their One Stop system, community based organizations and others to develop the basic skills necessary to participate in energy efficiency and renewable energy training. Currently, as part of its contract with NYSERDA, HVCC is completing development of an entry level training focusing on insulation, air sealing, and building science fundamentals. This curriculum will be used to train underemployed, displaced, and disadvantaged workers allowing them to begin a career in energy conservation. Currently, Onondaga-Cortland-Madison BOCES is working with the Syracuse Metropolitan Development Association to train unemployed/underemployed youth on the city's north side. The training consists of fundamental construction skills and will also incorporate the Insulation/Air Sealing Technician course. Students will then complete an apprenticeship program putting the training to use to improve houses on Syracuse's north side. A similar effort is just being organized in Buffalo as an initiative of State Senator Antoine Thompson in homes on the perimeter of Martin Luther King Park.

201. Comment: NYSERDA needs to make public information about what community organizations it is working with to develop its workforce training candidate pool. This will provide interested parties/organizations with the opportunity to become involved if they are not currently on the list. (28)

Response: NYSERDA is developing new web pages for all of its workforce development activities, which will include a list of all training partners and summary of training activities with each partner, a calendar of training activities across the state, and a list of all funding opportunities to develop and offer training initiatives.

202. Comment: Employers who hire NYSERDA-trained green workers will receive “stipends as incentives to provide new staff with important on-the-job skills.” NYSERDA should maintain strict oversight of this program to ensure that employers comply with the requirement of providing on-the-job skills to newly hired green workers, and NYSERDA must ensure that employers are restricting from firing employees once they have received the stipend provided to them by the state. (28)

Response: NYSERDA will work closely with agencies such as DOL to evaluate similar on-the-job training assistance programs and compliance procedures and issues. Appropriate employee/employer milestones will need to be established, monitored, and tied to stipend payments.

203. Comment: New York has the infrastructure in place to design and install GSHP systems today and the ability to increase this capacity quickly, creating jobs in a number of trades through Workforce Development programs. (23)

Response: This is correct. One of our training partners, Hudson Valley Community College, Troy, NY, has begun geothermal training at its facility. Other training partners that will initiate geothermal training this year include SUNY Delhi, SUNY Canton, Erie CC, North Country CC, Fulton-Montgomery CC, SUNY Institute of Technology, Clinton CC, SUNY Alfred, Broome CC, Mohawk Valley CC, Tompkins Cortland CC, Westchester CC, Empire State Chapter of the Association of Builders and Contractors, SUNY Sullivan County CC Dutchess County CC, SUNY Ulster CC, SUNY Orange County CC, SUNY Rockland County CC, and SUNY Sullivan County CC. NYSERDA has also begun discussions with the New York State Pipe Trades Association to train the Association's instructors on renewable energy technologies including GSHP systems. Also see response to Comment 95.

204. Comment: Supplement the public training programs (NYSERDA, vocational and community college training) with private certifications by solar thermal manufacturers. There are already 25 solar thermal manufacturers active in New York. While the public training proposals are excellent, the private sector has the ability to more quickly train and mobilize their existing distribution and installation channels. Manufacturers should be allowed to participate in the statewide incentive and marketing campaign. They can be held accountable by requiring a 5 year manufacturer system warranty, and establishing a customer rating system on the central internet database. (22)

Response: NYSERDA's workforce development and training strategy will include working with manufacturers wherever possible.

205. Comment: NYSERDA should work with community based organizations that are operating job training programs and work with them to establish the curriculum which will enable their trainees to qualify for entry level positions with energy efficiency program contractors. The greatest and most sustainable way to ensure energy efficiency programs persist post the cessation of public subsidy is training individuals that live in target communities. (21)

Response: To some extent, NYSERDA already works with community-based organizations to develop the basic skills and other training needed to prepare trainees for entry level positions. NYSERDA plans on expanding these relationships significantly to develop pathways out of poverty that result in good jobs with opportunities for advancement. For example, in the New York City area, NYSERDA staff working with the Energy Smart Communities Coordinators have been actively involved in the development of programs including work with Sustainable South Bronx, the Consortium for Workers Education and other groups that already run such programs or are interested in creating them. NYSERDA participates on a taskforce working with the Office of Long Term Planning and Sustainability and the NYC EDC that is focusing on issues related to green workforce development in the city. One focus of this work is to identify ways to provide opportunities to under/unemployed workers into that field. NYSERDA is also participating actively in the Urban Agenda's Green Jobs Roundtable. NYSERDA has submitted a proposal for funding to the NYS DPS through the EEPS that would enable us to create new programs and partner with DOL to channel people from their

entry-level training programs into NYSERDA's technical training programs. Once that funding is approved, NYSERDA plans on developing and implementing opportunities for collaboration that could bridge the gap between technical training programs and basic skills training.

Competitive Greenhouse Gas Reduction Bidding Program

206. Comment: As expressed during the March 6 RGGI Advisory Group meeting, we had some concern that this program could stimulate proposals that would also be eligible for offsets under the RGGI program. NYSERDA staff clarified at the meeting, however, that proposals eligible as offsets under the RGGI regime would not be eligible for consideration under this competitive bidding program. With that clarification, Pace supports the proposed allocation of \$40+ million of RGGI auction proceeds to the competitive bidding program. (41)

Response: The following has been added to the program description for clarification: "Consistent with Part 242-10.3(d)(3), projects that receive funds under this program are not eligible to pursue CO₂ Emissions Offset credits under the CO₂ Budget Trading Program. All entities, including Compliance entities, may pursue projects under this program."

207. Comment: This section also seems somewhat lopsided - for example, the Competitive Bidding Program targets large municipalities. Is there funding available for smaller, rural communities? (42)

Response: In general, all technically viable energy and non-energy greenhouse gas reduction projects will be eligible. The program description lists examples of potential respondents. The following statement has been added for clarification: "All entities, including compliance entities, may pursue projects under this program."

208. Comment: The GHG Bidding process solicitation should be shared with the Advisory Group in addition to other stakeholder groups. (28)

Response: The program description states: "Final program design and release of the first solicitation are planned for the fourth quarter of 2009 after further design, research, and input from stakeholders, including RGGI Advisory Group organizations and other stakeholders." It is our intent that, at a minimum, a draft RFP would be shared with interested members of the Advisory Group. NYSERDA places a premium on objective analysis, as well as collaboration, reaching out to solicit multiple perspectives and share information. Stakeholder input will be key to a successful program.

209. Comment: In general, more specificity related to eligibility and the types of activities funded with these resources is needed. Environmental Advocates would not support the transfer of funds back to power generators as a way to offset the cost of purchasing allowances. We are particularly troubled by greenhouse gas reduction strategies related to fuel switching that may have occurred anyway due to changing economic conditions. A

much smaller budget allocation would seem to be warranted for an idea in the early stages of development. (36)

Response: The following statement was added to the program description to clarify eligibility: “All entities, including compliance entities, may pursue projects under this program.” NYSERDA will apply its experience managing, minimizing and measuring free-ridership to develop appropriate guidelines in this program.

With the exception of the existing programs presented in the operating plan, approval of the plan will be followed by program design and development phase for all proposed programs. The \$40.9 million budget allocated to the Competitive Greenhouse Gas Reduction Program will provide the best chance of success in meeting the stated goals.

210. Comment: Further clarification is needed on the overall goals and implementation procedures of the Competitive Greenhouse Gas Reduction Bidding Program as drafted, many questions remain on the overall purpose and aims of such a program. While certainly a laudable goal to attempt to abate a larger number of greenhouse gas emissions from other sectors, the NY auction proceeds should be used to reduce the costs of the program to consumers. NRDC believes that the budget assigned to the Competitive Greenhouse Gas Reduction Bidding Program could yield more benefits for the state if it were assigned to a clean energy finance facility such as a residential loan guarantee program described in number. (38)

Response: The Operating Plan overall and the Competitive Greenhouse Gas Reduction Program in particular have been edited to better explain overall goals, purpose and procedures. Electric energy efficiency projects are eligible under the program. The concern with reducing the cost of the program to consumers will be considered as evaluation criteria are developed for the program. The Operating Plan already includes a financing sub program in the Commercial, Industrial, Municipal and Institutional Program and development of a Revolving Loan Fund as a component of the Municipal and Institutional Climate Change Program.

211. Comment: As currently drafted, the CGGRBP will likely cause unnecessary confusion in the marketplace. The RGGI rule has already delineated a number of project protocols under which proponents could reduce greenhouse gas emissions from other sectors and receive offset allowances, which can be sold into the RGGI market. Those offset allowances provide a valuable flexibility mechanism for regulated entities while ensuring that GHG reductions actually occur. Also, the offset allowances already provide a significant incentive for GHG reductions in other sectors. (38)

Response: See response to Comment 207.

212. Comment: The CGGRBP proposal would likely present significant additionality problems in that it would be very difficult to prove that emission reductions offered by potential bidders would not have occurred but for the program. Furthermore, significant issues with verification of emission reductions, enforceability of measures and the permanence of those actions suggest that there are better uses for this money.

NYSERDA should not use the auction revenue to muddy the water in the offset markets. Instead the funds should be used to ensure that the program costs are minimal to ratepayers. (38)

Response: See responses to Comments 207 and 210. As stated in the program description: “Measurement and verification will be an important program component and project selection criterion.”

213. Comment: Without appropriate program design, the competitive bidding program could result in funding projects only in the upstate region, because the costs of virtually any activity is less expensive outside of the downstate region. The Companies suggest that a bi-regional (upstate and downstate) auction design be implemented to ensure some regional equity in this program. (30)

Response: We expect that cost differences between proposals will be influenced far more by proposed carbon strategy than by geography.

214. Comment: Page 49. Competitive Greenhouse Gas Reduction Bidding Program. We suggest changing the terminology here as bidding typically means buying and selling in the market. Perhaps “competitive project evaluation” might be more appropriate terminology. (29)

Response: The program name has been changed to the “Competitive Greenhouse Gas Reduction Program”.

215. Comment: The operation of this program needs to be much better defined, and the purposes associated with the \$40.9 million in funding need to be clearer... NYSERDA explained that the Competitive Greenhouse Gas Reduction Bidding Program will involve disbursing \$40.9 million over three years via the issuance of RFPs for an open-ended range of greenhouse gas reduction projects and that NYSERDA will rank project bids submitted in response to the RFP based upon the dollar per ton reduction of each proposed project. The wording of the Draft Plan needs to be more focused and specific in this regard, and funding should be directed for projects associated with the electricity sector. IPPNY appreciates that NYSERDA intends to consult with IPPNY further about how this program would be implemented. (17a)

Response: See response to Comment 209. NYSERDA looks forward to discussing how this program would be implemented with IPPNY and other Advisory Group members.

Clean Technology Industrial Development

216. Comment: Funding is not nearly enough to fund the critical multidisciplinary objectives for Advanced Industrial Research and Development in Clean Technology to attract high-tech manufacturing companies or to leverage the large amounts of federal funding that will be made available in these areas. (6)

Response: At the funding level requested, NYSERDA anticipates supporting just one CLEAR Center. If the level of funding available to this initiative does not increase, the focus will be on providing sufficient funds for one Center to succeed.

217. Comment: We support the Clean Energy Advanced Research Centers (6, 19) and propose increased funding and the number of Centers. The proposed CLEAR Centers should be based at universities and foster growth through state-of-the-art R&D, manufacturing, and prototyping facilities, human talent development, workforce training, and partnerships between industry, government, and R&D facilities. Accordingly, we suggest that NYSERDA consider fully funding at least four CLEAR centers at New York based Colleges and Universities, with commitments to fund cost shares for federal or privately sponsored research. (19).

Response: Expanding the funding for the CLEAR Centers will be part of the annual evaluation of the program. Centers will be selected through a competitive process. It is expected that the investment of RGGI funds into the Center will increase the ability of the Center to compete for federal or private research funding.

218. Comment: The proposed CLEAR Centers should establish a governing board (appointed by the governor, NYSERDA, DEC etc.), an advisory board (members from industry and experts from organizations outside of the state), and a leadership team (representatives from each center) in order to build a sustainable and solid management plan. (6)

Response: Given current budget limitations, it is likely that only one CLEAR Center will be established through this Operating Plan. Should the program expand, there would be value in the development of a multi-agency/stakeholder advisory board.

219. Comment: GSHP systems should be the focus area of a CLEAR Center described in the Operating Plan. (23)

Response: It is expected that the CLEAR Center(s) will focus on specific technology areas. As with other NYSERDA programs, the Center(s) will be selected through a competitive solicitation following guidelines to work in areas of relevance to the reduction or mitigation of CO₂ emissions. Ground Source Heat Pump technology would need to be the focus of one of the proposing organizations.

220. Comment: One commenter opposes funding for all the long-term initiatives proposed in this section.

Response: The majority of funding from RGGI will be targeted to relatively short-term activities. By providing nominal funding to long-term initiatives, RGGI funds are investing in the ability to develop innovative solutions to the carbon problem. See also the responses to Comments 2 and 14.

221. Comment: New energy research institutes at universities are not a wise investment given the short-term.

Response: Funding for the CLEAR Centers is seen as a long term commitment to building a core capacity to address energy and environmental problems in the future.

222. Comment: New energy research institutes at universities are not a wise investment given the short-term challenges from a changing climate. In addition, NYSERDA's research and development programs are already funded through section 18-a of the Public Service Law. If those funds are inadequate, statutory authorizations should be revisited. (36)

Response: NYSERDA will coordinate all sources of funding to maximize the return to New York State ratepayers for their investment in research, development and deployment activities.

Climate Research and Analysis

223. Comment: Work is needed immediately throughout New York State to promote the need to plan for and develop and implement strategies that enable humans, plants, fish, animals and their habitats adapt to climate change. We do not believe the level of funding included in the Draft Plan is sufficient to implement adaptation strategies, or even effective pilot or demonstration projects for such strategies. (2)

Response: NYSERDA has already begun a study (*Integrated Assessment for Effective Climate Change Adaptation Strategies in New York State*) with our research partners at Columbia University, Cornell University and Hunter College to identify critical vulnerabilities (including those to infrastructure), climate risks, and adaptation strategies for a range of key sectors including: Agriculture, Ecosystems, Ocean Coastal Zones, Energy (including electric generation, transmission, and distribution), Transportation and Communications Infrastructure, Public Health, and Water Resources. Future research in the area of climate change adaptation will be directed by the results of this study. NYSERDA will leverage funding to the extent possible to support this research. Recommendations from this project will be widely distributed to State and local governments, resource managers, industries, institutions and other stakeholders to assist with adaptation plans and implementation. NYSERDA will also use the results of this project to help guide deployment programs that can better address climate-related impacts.

224. Comment: [We] urge you to dedicate a relatively small portion of these auction proceeds to create a source of leveraging funds for NYS institutions to capture a larger portion of an increasing federal investment in energy and climate change R&D. (37)

Response: All NYSERDA research solicitations encourage leveraging funding with other partners and the federal government to maximize the effectiveness of our research dollars. NYSERDA will continue to work cooperatively with NYS institutions seeking federal funding for projects that are consistent with state and federal goals.

225. Comment: Only limited funds should be used for Climate Research and Analysis program. Efforts to understand climate change and to develop adaptation to its effects are certainly important and we value NYSERDA's current efforts in this area. However, much of that research may be best addressed at the national level while we use our state funds to reduce our carbon footprint while simultaneously producing economic development and public health benefits. (34)

Response: The two major ongoing climate change research studies at NYSERDA (see response to comment 224 for the adaptations project; the other project is entitled *Development of New York State Greenhouse Gas Abatement Cost Curves*) focus specifically on New York State resources and will serve as the basis for directing any future research. We recognize the importance of research that may be more appropriate at the national scale, and do not intend to duplicate those efforts. Only a small percentage of RGGI funds are dedicated to climate change science research. A portion of these funds are dedicated to effectively managing the risks associated with the inevitable impacts from a changing climate. The majority of funds targeted in the RGGI Operating Plan are dedicated to direct reductions in GHG.

226. Comment: NYSERDA should explain how this research will not be duplicative of already funded climate change research; the \$9 million funding for this should be reduced, absent a demonstration that this program is providing benefits that are not available from other nationally or internationally funded climate change research initiatives. (30)

Response: The ongoing (see response to comments 224 and 226) and future research as prescribed in the RGGI Operating Plan is or will be focused on the resources of New York State, and will not be addressing national or international issues. It is not our intention to duplicate the efforts of other research programs, but to maximize the use of the limited funding we have available for this work.

227. Comment: Efforts should include a determination regarding what has to be done to ensure that the following policies can be implemented without affecting overall electric system reliability: the reinstatement of a State Energy Planning Process that incorporates greenhouse gas mitigation, the implementation of a Renewable Portfolio Standard (RPS), and the "15 by 15" Program (17a)

Response: The actions taken as a result of the RGGI Operating Plan will contribute to achieving the goals of New York's 15 X 15 program. Impacts of the 15 X 15 program and the RPS will be analyzed as part of the electricity system modeling being done for the State Energy Plan process. The State Energy Plan will address potential impacts to system reliability (as measured by loss of load probabilities); reliability analyses will be conducted in cooperation with the NYISO. The proposed RGGI Operating Plan programs will not be evaluated separately or in aggregate for impacts to electric system reliability, but rather to determine the GHG impacts of those programs.

228. Comment: [We] are concerned that the Climate Research and Analysis Initiative is similar to the work already being conducted by the Office of Climate Change Office at the NYS Department of Environmental Conservation (DEC). RGGI monies should not be used for additional research studies and instead need to go to actual applications that reduce CO₂ emissions. Instead, funding for the purposes of the Climate Research and Analysis Initiative should be allocated to the DEC through the New York State Budget process. (17a)

Response: The two ongoing NYSERDA projects (see responses to comments 224 and 226) are being conducted in cooperation with the DEC Office of Climate Change; there is no duplication of effort. The current legislative appropriations in the state budget do not provide DEC with funding for this research effort.

229. Comment: Create a comprehensive climate action plan for the state of New York (\$500,000 should be sufficient funding) (7).

Response: A comprehensive climate action plan will be prepared jointly with the DEC, following a similar process as that used in the development of the RGGI Operating Plan.

230. Comment: Provide assistance to student competitions that have proven to be highly successful in steering graduates into this field and in educating the general public to adopt and adapt new technologies. (37)

Response: Response: NYSERDA research solicitations for climate change will provide opportunities for student fellowships at universities located in New York State. We have also expanded our outreach activities and have added a climate change section to our webpage http://www.nyserda.org/programs/Environment/EMEP/climate_change.asp

231. Comment: I suggest that NYSERDA add to its research agenda a very promising oil heating technology for residential and small business applications. Twenty-six years ago, I did a research project for Volkswagenwerk AG, the parent company of car manufacturer Volkswagen. The project was to develop a marketing plan for an oil-fired heat pump designed for hydronic heating systems. VW had produced a hundred or so prototype units and installed them in Germany and Austria, where they reduced oil consumption about 70%, without waste heat recovery. When we looked at the US market, we determined that the unit first cost (about \$8,000) was too high and that the oil heat industry was not equipped to install and service the units, which were essentially Rabbit diesel engines driving compressors. So VW abandoned the project to import the units into the US. It may be worth trying to find out what happened to this technology at a time when New York and other Northeastern states are beginning large-scale programs to make oil heated homes and businesses more energy efficient. The objections from twenty-six years ago may be less relevant in an era when residential and small business customers are making significant investments in energy technologies, such as renewables and CHP, that require sophisticated installation and maintenance capabilities. If the VW technology can be made workable in the US, it would be a huge step forward in oil heating efficiency. (43)

Response: Innovations in heating, cooling, ground source heat pumps, ventilation and distribution equipment will be pursued to reduce first costs, increase operating performance and reduce emissions.

Authors of comments submitted to NYSERDA on the draft Operating Plan are indicated in this document by the number that appears below.

1. New York State Metropolitan Transportation Authority
2. The Nature Conservancy
3. Taconic Energy
4. Calera Corporation
5. New York State Office of Temporary and Disability Assistance
6. University at Albany, College of Nanoscale Science and Engineering
7. Rockefeller Brothers Fund
8. David N. Borton, Ph.D.
9. European Solar Thermal Industry Federation
10. Renewable Energy Long Island
11. Port Authority of New York and New Jersey
12. Brookfield Renewable Power
13. Conserval Systems, Inc.
14. John A. Basile
15. New York Biomass Energy Alliance
16. The Solar Energy Consortium
17. Independent Power Producers of New York, Inc.
18. International Brotherhood of Electrical Workers, Local Unions 83 and 97
19. Rensselaer Polytechnic Institute
20. New York Power Authority
21. Sustainable South Bronx
22. EarthKind Energy, Inc.
23. Aztech Geothermal, LLC
24. Multiple Intervenors
25. Metropolitan Transportation Authority
26. Law Offices of Howard Goldman, LLC
27. New York Economic Development Corporation
28. Morningside Heights/West Harlem Sanitation Coalition, New York City Environmental Justice Alliance and multiple others
29. National Grid
30. ConEdison
31. Jamestown Board of Public Utilities
32. Cornell Cooperative Extension
33. Northeast Regional Greenhouse Gas Coalition
34. Alliance for Clean Energy New York, Inc.
35. NYC Housing Authority
36. Environmental Advocates of New York
37. Commission on Independent Colleges and Universities
38. Natural Resources Defense Council
39. AES Eastern Energy LP
40. Westchester County

41. Pace Energy and Climate Center
42. ICLEI – Local Governments for Sustainability USA, Inc.
43. National Association of Energy Service Companies (NAESCO)