

PROGRAM PLANNING COMMITTEE
OF THE
NEW YORK STATE
ENERGY RESEARCH AND DEVELOPMENT AUTHORITY

Minutes of the 63rd Meeting
Held on June 11, 2007

Pursuant to a Notice and Agenda dated June 1, 2007, a copy of which is annexed hereto, the 63rd meeting of the Program Planning Committee of the NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY was convened at 10:30 a.m. on Monday, June 11, 2007, at the Authority's Board Room at 17 Columbia Circle, Albany, New York, and by video conference in the Authority's New York City office at 485 7th Avenue, 10th Floor, New York, New York.

The following members of the Committee were present:

Vincent A. DeIorio, Esq., ex officio
Parker D. Mathusa, Committee Chair
Robert B. Catell
Elizabeth W. Thorndike, Ph. D.

Also in attendance were Peter R. Smith, President and Chief Executive Officer; Robert G. Callender, Vice President for Programs; Jeffrey J. Pitkin, Treasurer; Hal Brodie, Acting General Counsel and Acting Secretary to the Board; Paul DeCotis, Director; Brian M. Henderson, Director; Janet Joseph, Acting Director; Karen Villeneuve, Acting Director; Gunnar E. Walmet, Director; Mitchell Khosrova, Associate Counsel and Secretary to the Program Planning Committee; and various members of the Authority staff.

Committee Chair Mathusa called the meeting to order, noted the presence of a quorum, and stated that a Notice of the meeting was mailed to the Members and the press on June 1, 2007. He also noted that program exhibits and banners were placed in the lobby and in the Board Room. Mr. Mathusa thanked staff for its hard work in preparing these and urged the Members to take the time to look at each one.

The first agenda item concerned the approval of the minutes of 62nd meeting of the Committee held on January 17, 2007. Whereafter, upon motion duly made and seconded, and by unanimous voice vote, the minutes of 62nd meeting of the Committee were approved.

Mr. Mathusa indicated that the Committee's central order of business was the review and consideration of the proposed multi-year Program Plan entitled *Leading the Way in Energy Innovation- A Three-Year Strategic Outlook 2007-2010*.

Peter Smith introduced the Program Plan, emphasizing the Authority's statewide strategic goals of improving the reliability and security of the State's energy infrastructure; reducing energy

costs; mitigating the environmental and health impacts of energy use; and creating economic opportunities. This year's Program Plan details these goals and presents the Authority's strategies to further improve the State's energy situation. Mr. Smith then stressed that it is the Authority's practice to use objective data and input from various stakeholders to help resolve difficult energy issues.

The next agenda items were Program Director presentations supplemented with presentations by one of the Program Managers from each Program.

Energy Analysis Director Paul DeCotis reported on the development of the proposed three-year Strategic Program Plan. He stated that, in developing the Plan, three broad themes emerged that cut across all NYSERDA program areas. The themes are climate change, economic development, and energy infrastructure reliability. The Plan addresses integrated programs as a means to realize greater synergy and efficiency and illustrates NYSERDA's collaborative internal structure. He further explained that the Plan treats the programs as "strategies" or a means to achieve the Authority's goals.

The NYSERDA-wide goals are improving reliability and security of the State's energy systems; reducing the energy cost burden on New Yorkers; mitigating environmental and health impacts of energy use; creating economic opportunities and promoting economic well being; assisting the administration in developing strategies for the Governor's "15 by 15" initiative; conducting research for the greenhouse gas initiative; and participating with New York State Department of State (DOS) regarding the Broadwater Long Island Sound Liquefied Natural Gas project.

After discussion among Committee members, it was agreed that the Plan should more specifically define the Governor's "15 by 15" initiative and explain how NYSERDA's programs will help achieve the goal of reducing electricity use 15% below projected levels by 2015. Additionally, NYSERDA's stated goal of reducing the energy cost burden on New Yorkers should be revised to focus on long-term costs, and a goal focusing on demand reduction should be added. It was also suggested and agreed that the Plan will distinguish between long-term benefits and near-term costs in investing in energy efficiency and infrastructure improvements.

Mr. DeCotis then introduced Program Manager Larry Pakenas who discussed NYSERDA's Program evaluation process and the key evaluation elements. He explained that the evaluation process is led by NYSERDA staff but includes input from independent, competitively-selected evaluation contractors. Specific activities being evaluated contain an analysis of the impacts as well as process and market characterization analyses. Mr. Pakenas stated that the evaluation process for the **New York Energy SmartSM** programs is now the template for the Con Edison System-Wide program (SWP) and the Renewable Portfolio Program evaluations.

He concluded by explaining that key evaluation elements include measurement and verification; cost effectiveness; attribution of causality; non-energy impacts; technology saturation; market theory and logic; customer satisfaction; and program operations.

Next, Director Brian Henderson reported on the Energy Efficiency Services program. He reported that the programs providing technical and financial assistance for the broad commercial/industrial/institutional sector and transportation fleets experienced considerable growth during the year. He then highlighted programs aimed at improving energy efficiency in various sectors of the economy using schools as one example. Staff worked with 650 schools in 140 districts across upstate New York which represent 25% of New York State schools. There has been a 13% improvement in school energy efficiency, representing approximately \$75 million cost avoidance, despite growth in plug load from computers and air conditioning. Schools have been an area of increasing program focus.

By the end of this year, staff projects that NYSERDA will have leveraged over \$1 billion in energy projects at existing commercial/industrial buildings. He further stated that staff is working hard on developing strategic partnerships with the utilities.

Mr. Henderson also discussed the energy efficiency, load management, demand response and distributed generation programs that help to ease strain on the electricity system with a major focus on MW reductions in New York City (NYC) and Westchester. In regard to SWP, NYSERDA's achievement of saving 128 MW is well on the way to the program's total goal of 150 MW.

The program's strategies and new initiatives include developing and strengthening NYSERDA's working relationship with Con Edison and other utilities; leveraging emerging trends such as green buildings and sustainability; recognizing and quantifying non-energy benefits for natural gas efficiency in the Con Edison rate case; water savings from Municipal water/wastewater activities; and reducing the carbon footprints of facilities such as college campuses.

Staff will also partner with state agencies and authorities, including working with the New York State Department of Environmental Conservation (DEC) on green buildings, and the next stages of the urban heat island and Greening the Bronx projects, and with DOS on strengthening the State's energy code and equipment standards. It is anticipated that staff will collaborate with stakeholders on the Governor's "15 by 15" initiative including all of the utilities, New York State Department of Public Service (DPS) staff, other state authorities, trade associations, environmental groups, and New York City.

He concluded by noting the intensified focus on Con Edison electricity and natural gas, and noted that approximately 2/3 of EES funding is currently being directed at NYC.

Mr. Catell stressed the need to work closely with the utilities and noted on-going discussions concerning decoupling to eliminate utility disincentives with respect to improved energy efficiency. Staff will report to the Committee at its September meeting on the status of decoupling efforts.

Mr. Henderson then introduced Program Manager Mark Eggers who gave a detailed report on the

High Performance Buildings program. Mr. Eggers stated that since 1999, NYSERDA has offered assistance to building owners and designers. The program has evolved from cost-based incentives to performance-based incentives with over \$90 million of SBC funds allocated to the program. Staff has worked with over 1,500 customers across the State. Leadership in Energy and Environmental Design (LEED) and green building designations have become very important to applicants with over 50% of new applications representing 316 projects requesting this assistance from NYSERDA.

Of 25 LEED- certified projects in the State which have been completed and approved by the United States Green Building Council (USGBC), NYSERDA has worked with all but one of the eligible customers (three being New York Power Authority (NYPA) customers). Staff is also active in the schools marketplace with New York State Education Department's The Collaborative for High Performance Schools (NY-CHPS) guidelines. NY-CHPS places high value on energy and sustainability in school design. Meeting NY-CHPS generally equates to a Silver LEED rating.

Next, Acting Director Karen Villeneuve reported on the Residential Efficiency and Affordability program. She opined that 2006 was a turning point year for the residential programs at NYSERDA. In 2006, there were more than 2,000 new ENERGY STAR[®] homes constructed in New York. More importantly, the market share of new homes receiving the ENERGY STAR label is increasing, despite a drop in housing starts. Thirteen percent of new homes received the ENERGY STAR label in 2006. Additionally, more than 4,200 existing homes have participated in the Home Performance with ENERGY STAR program and \$100 million in homeowner investments for energy efficiency improvements have been made through the Home Performance with ENERGY STAR program. Currently, there are more than 300 homes going through Home Performance with ENERGY STAR each month.

Additionally, she reported that there has been tremendous progress in lighting and that a majority of the 40 new retail and 10 new manufacturing partners are lighting partners. Specifically, NYSERDA brought on significant new partners (Wegmans, Price Chopper, and CVS) These are primary locations where the public buys their bulbs. NYSERDA is also adding partners in the consumer electronics industry, which is the fastest growing area of residential electric consumption.

Through its Energy Smart Students program, the Authority trained more than 700 teachers, reaching more than 65,000 students. In addition, the Authority implemented a "train the trainer" system to expand the scope of the program. Ms. Villeneuve then explained that staff changed the structure of **New York Energy SmartSM** Communities program, which is a growing program serving an outreach and education function for all of NYSERDA and has retained a statewide services and support contractor to allow for consistent training, technical support, and coordinator reporting. NYSERDA has three new regional coordinators in this program.

She then reported on the Low Income programs. The Assisted Home Performance with

ENERGY STAR (Assisted HPwES) program awards grants of up to 50% of the project cost, up to \$5,000. This program consistently represents 36% (totaling 1,525 projects) of total HPwES projects. Ms. Villeneuve stated that efficiency work on more than 13,750 low income units has been completed since the start of the Assisted Multifamily Buildings (AMP) program. Staff has focused on collaborating with utilities and local governments in gas programs, local marketing and outreach support, and has taken the lead in initiating changes to the ENERGY STAR and federal energy efficiency programs.

NYSERDA recently expanded the EmPower New YorkSM Program. This program was initiated with just National Grid and New York State Electric & Gas Company (NYSEG) but is now providing electric reduction measures and consumer education throughout **New York Energy SmartSM** territory. The EmPower program has already had more than 10,200 households participate with 469 energy and financial management workshops attended by more than 4,500 individuals. Another program assisting the low income sector is the federal Home Energy Assistance Program (HEAP) oil-buying component which provides improved pricing and lower overall expenses for the HEAP recipients. The NYSERDA component was expanded to 39 counties and more than 300 vendors. Staff anticipates expanding this statewide next year.

Programs are making increasing use of the environmental message in marketing materials because it has a significant meaning to consumers. Staff is also increasing NYSERDA collaboration with the utilities to support marketing and outreach to their customers and workforce development as part of the energy industry. There has been collaboration with local governments to reduce their own footprint and with federal government programs to increase standards and tax incentives.

Ms. Villeneuve concluded by highlighting some of the program's new initiatives including expanding workforce development to new technologies; new procedures and processes to support more energy efficiency work for low income households by piloting new financing mechanisms and making low interest energy efficiency mortgages available; and a consumer electronics "pirates" campaign to address problems of phantom load.

Program Manager Jim Reis then discussed the newly revised and consolidated Multifamily Buildings Program, which combines all prior programs dealing with multifamily buildings into one. The intent is to provide better customer service and enhance economic development by inviting full participation by the energy services market. The program is completely market based, is open enrollment, and provides a single entry into NYSERDA's multi-family program. One entry point will reduce confusion in the market and assist new building developers and existing building owners of both low income and market rate buildings to improve the energy efficiency of their buildings for their tenants. The minimum threshold of energy efficiency improvements is 20% over current American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) standards. The program provides performance-based incentives whereby owners and developers are eligible for higher incentives if they implement additional energy efficiency measures.

In developing the new program, REAP staff worked with Energy Analysis staff and their evaluation contractors to conduct a process evaluation of the Assisted Multifamily Program. They provided lessons learned and constructive comments on ways to improve the new program and commented on the new incentive structures and implementation method. Staff worked with Oak Ridge National Laboratories to benchmark the energy use of over 500 multifamily buildings and develop the new incentive structure for existing buildings. They evaluated the new construction pilot results conducted in 2004-2007 to develop the incentives for newly constructed buildings. Additional incentives are also provided for advanced metering, combined heat and power systems, photovoltaics, gas efficiency measures in the Con Edison gas service territory, and "green" affordable housing using Ohio Edison settlement funds from the Office of Attorney General. The new program was launched on May 8th in New York City and May 23rd in Syracuse. In the first two months of the program, NYSERDA has recruited over 30 market participants to conduct energy services for the almost 119,000 units currently in the multifamily program. Additional partners are being recruited monthly and all partners need to be trained and certified to work in the program. Through SBC I and II, almost 128,000 units have had energy efficiency services completed in the various multifamily programs.

The Committee next received a report from Director Gunnar Walmet on the Building and Industry Research and Development program. He described the strong sales of energy efficient products developed in the program. During 2006, sales of these products reached \$98.5 million, creating 510 new jobs with \$1.1 million in recoupment payments to NYSERDA. When combining these sales numbers with those of the other R&D programs, total sales of products developed under NYSERDA's programs during 2006 are almost \$200 million with almost 1,000 new jobs created.

Mr. Walmet reported that the Albany Superconducting Cable project has been working well since July 2006. A second generation cable of 100 feet will be sectioned in this summer and energized later in 2007. Additionally, cable in Long Island Power Authority's territory will be energized in 2007 and Con Edison and Homeland Security announced a \$40 million secure superconducting cable and fault current limiter project in New York City with technology from American Conductor. Superconducting cable may have application in New York City where construction costs are high or in places where rights of way for increased capacity are unavailable.

In the transmission and distribution area, Mr. Walmet reported that a solicitation was issued with \$5 million of funding available seeking demonstrations, product development, and engineering studies. The combined heat and power (CHP) program has signed 96 projects totaling 130 MW. Of those, 46 projects totaling 25 MW are operational. NYSERDA has put an emphasis on projects that provide emergency backup. He further explained that there is a new Renewable Portfolio Standard (RPS) solicitation being issued that will focus on fuel cells and that NYSERDA expects to fund \$136 million capable to generate 315 MW by 2009.

Mr. Walmet finished by stating that staff has decided to focus on two areas: clean businesses and the lighting industry. The clean businesses solicitation was have \$10 million in funding available

and the lighting program will have \$2 million of funding over 3-5 years emphasizing intellectual property issues and developing a virtual incubator. The Authority will also issue a united industrial solicitation which combines statutory and SBC funds for industrial and environmental projects that will include EES staff. This effort will include innovative, under utilized, and industrial waste technologies with funding of \$5.75 million.

Program Manager Peter Douglas was then introduced and reported on demand response programs and rate research. The program seeks to make it possible for larger numbers of small electricity customers to contribute to demand reduction by introducing innovative technology and protocols that work under current rate structures, as well as illuminating the growth potential of these types of resources for consideration by policy makers, producers, and consumers under alternate rate scenarios.

A decade ago, balancing generation with load requirements for the State's utility system was simply accomplished through interruptible service relationships with a few large industrial customers. When a demand problem occurred, these customers could be called upon to quickly shed hundreds of MWs of load to quickly restore system stability.

Today, these "swing" load resources have declined with the migration of industry out of the State. At the same time, overall utility load growth has increased the size of "swing" loads necessary for periodic balancing needs. These needs are most acute in the downstate region during the late summer, when cooling requirements for buildings tend to push the system to its limits. The peak load problem is the "hot" topic in many arenas and has been featured significantly in energy planning documents recently issued by New York City government.

The impact of summer peak loading is a decrease in reliability and an increase in rate payers' costs. To mitigate these problems, the wholesale market offers demand response programs that pay people to reduce their electric load during critical periods. Con Edison and other utilities also offer voluntary time sensitive rates designed to encourage customers to move or reduce their electric load during critical periods.

While there has been significant participation in demand response programs and time sensitive rates, most has been with larger, more sophisticated customers capable of easily and cheaply controlling large loads. Further increases in load reduction will require participation by smaller customers but it will be hard to realize for this group because their facilities are not set up for short-duration flexible load operation nor are the value propositions for doing so obvious.

In addition, end-use appliance manufacturers are slow to bring products to market that feature flexible load capability. Under the Demand Response and Rate Research program, NYSERDA supports a variety of projects designed to address these challenges and barriers:

- (1) Provide better estimates of benefits and costs associated with customer investments in demand management and energy efficiency. Staff has determined that a 1KW reduction

in demand to be worth about \$100-150/year and requires a capital investment of \$250-500/KW for a 2.5-5.0 year payback. Reductions will typically come from more efficient and better management of lighting and air conditioning. Additional revenue or cost avoidance from DR make it easier to finance efficiency which helps reduce the problem.

- (2) Encourage development and demonstrate new high efficiency equipment with flexible load capability. Staff worked with Osram Sylvania to develop and demonstrate a load shed ballast; worked with Intech21, Enernet and numerous air conditioning system vendors to develop and demonstrate fleet managed units; and supported demonstrations that bring together building site, technology vendor and energy service companies to discover the appropriate business models for broader applications.
- (3) Demonstrate how customers might navigate time sensitive prices to minimize costs and loss of comfort. Staff is working with PSC, New York City and Con Edison to conduct a large scale pilot program featuring time sensitive energy and delivery rates and use of flexible load technologies in multi-family housing. The object is to acquire meaningful data on effectiveness of reducing peak load in this particular sector for the system planning purposes as well as decision-making by consumers and product manufacturers.

Acting Director Janet Joseph followed with a report on the Research and Development program for energy resources, transportation and power systems, environmental research, and the Renewable Portfolio Standard (RPS).

She first reported on the program's accomplishments. This year was a strong year for product sales. Previous NYSERDA investments in technology and product development resulted in over \$90 million in sales of environmental and clean energy products by NYS companies in 2006.

Combined with the product sales from Industry and Building R&D investment, NYSERDA total R&D product sales is close to \$200 million in 2006 alone. This is quite a significant return on our investment and it highlights NYSERDA's role in catalyzing an innovation economy in the State. In this past year, NYSERDA rolled out a few new commercial products, which are expected to contribute to product sales 2-3 years from now. There were also a few "first-of-a-kind" projects this year including demonstrations of the nation's first grid-connected kinetic hydro-turbine, in the East River, an emerging technology that has the technical potential of close to 1,000 MW in NYS and the nation's first marine application of diesel oxidation catalysts, a device to reduce particulate matter pollution, which is a considerable problem in New York City. The Authority held the nation's first renewable energy workforce development conference, at HVCC, which was attended by 200 people, 25 states, and 3 countries.

Ms. Joseph discussed some of the RPS program's milestones, stating that staff completed the second procurement of Renewable Energy Certificates. Combined with the first procurement, this will incentivize 844 MW of renewable energy development. The total renewable energy development associated with these selected projects is expected to exceed 1000 MW. Ms.

Joseph further explained that not only is this program creating clean and renewable energy, but it is also an economic engine in the State. The total economic benefits in New York from these RPS projects is expected to be over \$700 million – which far exceeds the program costs.

Ms. Joseph then gave an overview of the work being done in the cellulosic ethanol industry in the State and the research regarding climate change. Staff are managing projects involving two large-scale cellulose to ethanol facilities. This is an attempt to help develop a renewable fuel for the transportation sector focusing on an indigenous resource in New York State.

Staff are also launching a climate change research initiative. NYSERDA co-sponsored a workshop and brought in 40 policy/science experts to identify the research needs related to climate change in the State. NYSERDA will support research to assess potential climate impacts in New York – focusing on our natural resources, our coastal environments, agricultural base, and economy. Additionally, the Authority will support research that helps identify adaptation strategies that should be pursued in New York to better manage risks, and will identify climate mitigation strategies to reduce greenhouse gases and provide other benefits in the State.

Program Manager Richard Drake was introduced and reported on the new Plug-In Hybrid Electric Vehicle (PHEV) initiative. PHEVs- are conventional hybrid electric vehicles, such as the Toyota Prius or Ford Hybrid Escape, to which additional batteries have been added. These batteries can only be charged from the electrical grid, not the vehicles' generator or regenerative braking system. The grid-charged batteries are discharged over 20 to 30 miles of driving, thus providing the vehicle the capability to improve gasoline fuel economy and reduce emissions during this period. As supplied from the factory, conventional HEVs only have enough battery power to provide 1 mile of electric-only power.

The 2006 legislative budget included a \$10 million appropriation to convert hybrid –electric vehicles in the NYS fleet to PHEVs. NYSERDA's program is focusing on completing PHEV development work, qualifying products and accelerating the introduction of PHEV technology while encouraging New York State value- added contribution. There are about 600 HEVs currently in the State fleet.

Six “first article” PHEVs have already been competitively procured which include 2 Priuses, 3 Escapes and 1 Civic, representative of the State's fleet inventory. Following testing and evaluation, qualified vendors will be allowed to participate in a second phase larger scale demonstration and State fleet procurement.

NYSERDA has also secured the Department of Energy's (DOE) cost share for track and dynamometer testing. Testing protocols are being developed because miles per hour and emissions vary as the battery is depleted and this is a large challenge in that no existing protocols are appropriate. Two PHEVs have been delivered to the Authority and staff's on-road evaluations have begun. California has commenced a similar program with funding of \$5 million for 20 vehicles. Mr. Drake concluded by reporting that General Motors and Toyota have

announced plans to introduce a mild (generally no battery pack support, i.e. idle-off technology) PHEV by 2011.

The Committee next heard from Vice President for Programs Bob Callender who discussed the Saratoga Technology + Energy Park (STEP).

NYSERDA competitively selected the United Group to develop, construct, finance, and manage the first new building at STEP. United secured the financing for the project and began construction of Site One, which will be a 105,000 sq. ft. LEED-rated manufacturing, lab, and office multi-tenant building. United financed this \$15 million building without any financial guarantees or collateral from NYSERDA. This first building will house Starfire Systems and a number of other clean energy technology companies. United expects to complete the building by August 2007.

United has already paid NYSERDA a utility hook-up fee of approximately \$632,000 and an initial ground lease payment of \$30,000. Additionally, NYSERDA has received roughly \$200,000 from tree harvesting at the STEP site. These funds, a Small Cities grant of \$750,000, future hook-up fees, and future ground lease payments will be used to support the continued, market-driven, phased build-out of NYSERDA's infrastructure at STEP.

The Authority has also made good progress with its partners at the New York State Department of Environmental Conservation (DEC) on the design and development of DEC's Alternative Fuel Vehicle Research Lab. The final design and construction documents for the Lab should be completed by early August. This state-of-the-art Lab will be used to test vehicle emissions, help increase efficiency in the transportation sector, conduct R&D on new transportation fuels and technologies, and promote public-private partnerships and educational programs at STEP.

Hudson Valley Community College (HVCC) will also be partnering with the DEC at the Lab and will specifically use the Lab as a training center for students that are enrolled in HVCC's Automotive Program. It is believed that the Lab will be a perfect fit for STEP's knowledge community and that the Lab will be a big factor in helping attract new transportation companies to STEP.

Mr. Callender then reported that staff has worked with the United Group, the Town of Malta, National Grid, Luther Forest technology Campus (LFTC), NYSERDA's engineering team, and the STEP Design Review Committee to finalize its infrastructure and utility plans for the gas, sewer, water, electricity, high-speed telecommunications, cell tower service, exterior lighting, signage, bike paths, nature trails, and the roads that will be needed to support the build-out of Phase One at STEP. The STEP Master Plan and Land Plan was revised to reflect our final infrastructure and Master Utility Plans.

The STEP team worked hard on attracting new tenants to STEP. Lockheed Martin and the C-9 Corporation will be locating at STEP in the new building. Lockheed Martin will be providing

energy-related consulting, analysis, and program implementation and management services to its clients that include utilities, end-users and NYSERDA. Lockheed Martin expects to significantly grow this sector of its business at STEP. C-9 is a small company that provides material to the semiconductor industry. The company wants to be at STEP to be close to chip fab manufacturer Advanced Micro Devices (AMD) and Albany NanoTech.

In respect to the current STEP tenants, Mr. Callender reported that Starfire continues to do well and recently signed a contract with a major new car manufacturer to develop and manufacture ceramic brakes and rotors. More importantly, Starfire just inked a deal with the Palladium Group for \$10 million in funding. Starfire will use this money to establish its full scale manufacturing facility at STEP and one of the reasons that Palladium invested in Starfire was because of NYSERDA's support of Starfire's technology.

DayStar Technologies, a photovoltaic (PV) manufacturer that was slated to move to STEP has decided to move its manufacturing to California. As discussed in the past, DayStar was planning on building its main headquarters and manufacturing facility at STEP. Unfortunately, DayStar encountered technical challenges with the manufacturing and packaging of its flexible thin film PV cells and also had funding issues. In an effort to generate revenue, DayStar shifted its PV technology and manufacturing process from thin film to glass, and in its efforts to raise funding to support manufacturing of its PV on glass molecules decided to relocate the manufacturing to California. DayStar will continue to maintain its R&D Applications Center in New York and NYSERDA will continue to work with DayStar to help DayStar with its technical issues, but at this time DayStar will not be building a manufacturing facility at STEP.

NYSERDA has also competitively selected a contractor to build a cell tower at STEP. Cell service is very inconsistent at STEP and the cell tower will remedy this problem. There will be no cost to NYSERDA, and the cell service provider will pay NYSERDA a monthly ground lease payment. The cell tower will provide service to STEP, LFTC, and the Town of Malta and construction is expected this year.

Mr. Callender than highlighted some of the strategies for STEP. First, to continue to work with HVCC to fully establish a clean energy workforce training and educational program at STEP. As mentioned earlier, the Authority has made good progress with HVCC on developing and administering training and certification courses, and over the next year, NYSERDA will be working with HVCC to have HVCC teach these courses at STEP and expand its list of clean energy training and educational courses that it offers at STEP.

HVCC is also currently working with Advanced Micro Devices (AMD) to design and deliver expert customized training in semiconductor manufacturing technology and also deliver skilled technicians for the semiconductor industry to meet AMD's future employment needs. These courses will also be taught at STEP.

The NYSERDA/HVCC partnership is a critical strategy for the knowledge community at STEP, but more importantly, it is critical to developing and growing the energy infrastructure and workforce that will be needed to support the development and deployment of the clean energy technologies we are growing in New York, and it's a key component to knowledge based economic development.

As STEP continues to grow, NYSERDA will need to expand its range of partnerships and marketing activities to promote STEP and STEP tenants. To that end, NYSERDA staff will work with AMD to market STEP to energy companies and suppliers that support AMD's business needs and want to be located near AMD at STEP.

The STEP Team will also continue to work with the Saratoga Economic Development Corporation (SEDC), Empire State Development, National Grid, and the United Group, on promoting and marketing STEP to potential tenants on a State and national level.

Mr. Callender concluded by stating that there is a need to enhance the network of partners to help promote STEP, and staff will be looking to work with other universities, incubators, manufacturing associations, site selectors, venture groups, real estate firms, and the Center for Economic Growth (CEG).

The next item on the agenda was to consider and act upon a resolution recommending approval of the multi-year proposed Strategic Program Plan entitled *Leading the Way in Energy Innovation- A Three-Year Strategic Outlook 2007-2010*. Based on all the reports and discussions regarding the Plan as presented, upon motion duly made and seconded, and by unanimous voice vote, the Committee recommended that the full Board adopt the Resolution approving the Plan and the associated fiscal expenditures. A copy of said resolution is attached hereto as Exhibit A.

Mr. Mathusa asked if there was any other business before the Committee. There being none, upon motion duly made and seconded, and by unanimous voice vote of the Members, the 63rd meeting of the Program Planning Committee was adjourned.

Respectfully submitted,



Mitchell Khosrova
Secretary to the Program Planning Committee

NOTICE OF MEETING AND AGENDA

June 1, 2007

TO THE MEMBERS OF THE PROGRAM PLANNING COMMITTEE:

PLEASE TAKE NOTICE that a meeting of the Program Planning Committee (the 63rd meeting) of the New York State Energy Research and Development Authority will be held in the Authority's Albany Office at 17 Columbia Circle, Albany New York, and by video conference in the Authority's New York City Office, located at 485 Seventh Avenue, 10th floor, New York, New York, on Monday June 11, 2007, commencing at 10:30 a.m., for the following purposes:

1. To consider and act upon the minutes of the 62nd meeting of the Program Planning Committee held on January 17, 2007.
2. To receive an overview from the President on the content of NYSERDA's multi-year program plan entitled *Leading the Way in Energy Innovation- A Three-Year Strategic Outlook 2007-2010*.
3. To receive reports on NYSERDA's efforts in the areas of Energy Analysis, Energy Efficiency Services, Residential Efficiency and Affordability, Research and Development, and Saratoga Energy + Technology Park (STEP).
4. To consider and act upon a resolution recommending approval of the multi-year program plan entitled *Leading the Way in Energy Innovation- A Three-Year Strategic Outlook 2007-2010*.
5. To transact such other business as may properly come before the Committee.

Members of the public may attend the meeting at either of the above locations.



Mitchell Khosrova

Secretary to the Program Planning Committee

Main Office

Albany
17 Columbia Circle
Albany, NY 12203-6399
Toll Free: 1 (866) NYSERDA
Phone: (518) 862-1090
Fax: (518) 862-1091

West Valley Site

Management Program
10282 Rock Springs Road
West Valley, NY 14171-9799
Phone: (716) 942-4387
Fax: (716) 942-2148

New York City

485 Seventh Ave., Suite 1006
New York, NY 10018
Phone: (212) 971-5342
Fax: (212) 971-5349

Buffalo

617 Main Street, Suite 105
Buffalo, NY 14203
Phone: (716) 842-1522
Fax: (716) 842-0156

Exhibit A

Resolution No. _____

RESOLVED, that the multi-year program plan for New York's energy, economic, and environmental future (2007-10) submitted to the Members for consideration at this meeting with such non-substantive, editorial changes and supplementary schedules as the President, in his or her discretion, may deem necessary or appropriate, is adopted and approved as the Authority's updated three year program plan, and

BE IT FURTHER RESOLVED, that, to effectuate the purposes, aims, and goals described in that plan, the Members approve the expenditure in fiscal year 2007-08 of \$181,423,000 for the **New York Energy SmartSM** program; \$49,410,000 for the renewable portfolio standard program; \$20,180,000 for the energy research, development, and demonstration program; \$29,136,000 for energy efficiency deployment programs; \$53,213,000 for the Con Edison System Wide Demand Reduction programs; \$18,900,000 for the investment in conservation and efficiency pilot program; \$29,400,000 for the fuel diversification and energy efficiency program; \$8,679,000 for the Saratoga Technology + Energy Park; and \$2,907,000 for energy analysis policy and planning; from various funds anticipated to be available and such additional amounts, as may be determined appropriate by the President, as may become available and not required for other purposes; and

BE IT FURTHER RESOLVED, that the information contained therein is adopted and approved for submission, in whole or in part, pursuant to Section 2800 of the Public Authorities Law.