



October 14, 2005

Jaclyn A. Brillling  
Secretary  
New York State Public Service Commission  
3 Empire State Plaza  
Albany, New York 12223-1350

**Response of CEC Stuyvesant Cove, Inc., also known as Solar One, To The Public Service Commission Staff Proposal for the Extension of the Systems Benefits Charge and the SBC Funded Public Benefits Programs (SBC III) (the "Staff Proposal")**

**I. Introduction**

On August 30, 2005, the Staff of the New York State Department of Public Service submitted a Staff Proposal for the Extension of the System Benefits Charge (SBC) and the SBC-Funded Public Benefit Programs ("Staff Proposal"). Staff proposed, among other things, continuation of SBC funding for another five years at the current level of \$150M annually; revisions to the goals for SBC III to more accurately reflect today's energy realities; and some modification of program priorities, including consolidation and simplification of the New York State Research and Development Authority's (NYSERDA) program portfolio and use of limited SBC funds for transmission and distribution research and development; continued funding of efforts to enhance New York's renewable resources infrastructure; and additional efforts to encourage participation in demand response programs.

Solar One commends the Staff for its recommendations, particularly as they pertain to the continued funding of the SBC and the extension of funding for another five (5) years. We would like to suggest, however, that the Commission consider making two specific additions to the SBC III program goals not explicitly identified in the Staff Proposal:

First, SBC III presents an opportunity for developing unique and innovative energy efficiency and awareness education programs that achieve specific measurable outcomes and drive change into long established patterns of energy consumption. Given its unique demographic, economic and geographic character within the region, New York City, in particular, will require new and innovative methods to move its residents to a new level of energy awareness and efficiency and we encourage the Commission to support those efforts as a policy goal. We urge the Public Service Commission (PSC) to elevate energy conservation and awareness education as a program goal of SBC III and to continue funding for the program started by NYSERDA with Solar One during SBC II.

Second, we believe the Commission should support as a policy goal the development of sustainable public buildings, particularly net-zero buildings, like Solar 2 described in Section III below, where the use of renewables and energy efficiency can be demonstrated first hand, where energy performance can be assessed and optimized in real time, and where future energy needs can be met through the development of new and innovative technologies.

We make these recommendations based on our experience of working with NYSERDA for the past four (4) years to create Solar 1,<sup>1</sup> NYC's only stand alone solar powered building, through which we have developed an innovative energy education program targeting NYC residents using Solar 1 as a model of clean, renewable and distributed energy technology.

We believe that the PSC should elevate public education as a goal and make a special allocation of SBC III funds to continue the education programs initiated by NYSERDA with Solar One and for the construction of Solar 2, New York State's first Environmental Museum and Learning Center in New York City, as well as for similar initiatives in other metropolitan areas throughout the State.

## **II. SBC III Should Include An Energy Efficiency and Awareness Education Program Goal and Funding To Achieve That Goal**

New York has always had a knack for overthrowing accepted notions of what is considered technically and socially possible in the human habitat. Not content to merely argue and theorize, residents of our state and its most famous city have long excelled at building the unprecedented into the very landscape that sustains and enriches us. From the Erie Canal to the Brooklyn Bridge to tomorrow's Freedom Tower, New Yorkers are, in the most literal of ways, right at home with innovation and change.

At the beginning of the 21<sup>st</sup> Century, however, New Yorkers face a sobering array of complex environmental and resource challenges, many of which are not fully understood and are global in nature. Climate change, vital resource depletion and degradation, rising energy demand, and escalating dependence on nonrenewable, foreign fuels rank high among these grave concerns, and threaten the basic foundations of our way of life. As the urgency of these problems grows more evident with time, it is clear that New York has a responsibility to bring its unique dynamism, diversity and creative assets to bear upon the challenges at hand.

The PSC and NYSERDA have played a pivotal role in orienting New Yorkers towards a prosperous and sustainable vision for our State with SBC I and II. In the areas of resource conservation, pollution remediation, renewable energy and efficiency standards,

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<sup>1</sup> Solar One refers to the organization; Solar 1 refers to the facility itself.

few States have demonstrated such commendable resolve and foresight. However, any hope of effectively confronting our most pressing environmental problems will depend on more than proactive policy making. **Equally important will be the achievement of a broad public understanding of the gravity of the challenge, the great opportunities that potentially lie in their solution, and the rewards to be reaped from forward-thinking efforts that will set new standards for a clean, energy-independent future.**

**a. Solar One: Advancing Educational Solutions In A Time of Complex Energy Problems**

New York City is on the brink of an energy crisis.<sup>2</sup> New York State has recognized that our current energy crisis requires us to reduce our dependence on foreign fossil fuels or engage in a smarter use of them. NYS is well positioned to become the center for green business and the increased emphasis on research and development into renewable energy technologies lays a solid groundwork for that to happen. However, technology alone will not solve the problem. Education is required both to reduce demand and to create the public awareness and market for the adoption of those smarter, innovative technologies and green products in development.

That said, New York City is a tough nut to crack. As the largest regional consumer of energy in NYS, we are faced with the daunting task of affecting dramatic behavioral change in the ways in which we use energy. Solar One, along with its parent organization, the Community Environmental Center (CEC), is the only not-for-profit organization in NYC dedicated exclusively to energy conservation and efficiency education in the urban environment. In NYC, our experience shows that people want to engage in adopting energy efficient measures, but the avenues to do so are limited.

For the past four (4) years, Solar One and CEC, have received funding from NYSERDA (using SBC II funds) to support the development of Solar One and its energy education

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<sup>2</sup> The warmer-than-normal temperatures over one of the hottest summers on record (2005) pushed electricity use in New York City and Westchester to new heights. During June, July and August, 18,744,332 megawatt hours of electricity were consumed - enough power to supply the states of Vermont, Rhode Island and Alaska combined for an entire year. This summer's record electricity use surpassed the 17,491,313 megawatt hours used over the same three-month period in 2002. In addition, a number of other power-use records were established, including:

- the most electricity used in a single month – 6,649,832 megawatt hours for August;
- the highest all-time peak demand – 13,059 megawatts on July 27;
- the greatest summertime one-hour gas usage - 55,690 dekatherms on July 27;
- consecutive weekday electricity consumption records on July 26 and 27;
- most electricity used over a weekend on August 13 and 14;
- the highest ever peak demand for a Saturday and for a Sunday;
- seven of the top 10 days of most electricity used;
- the five highest days of peak demand, and eight of the top 10 peak day

<http://www.coned.com/PublicIssues/>

programs in New York City. With NYSERDA's assistance, we have developed a comprehensive energy program targeting NYC residents. Our Solar 1 facility itself demonstrates the promise of renewable technologies and an overall design approach that incorporates efficiency and re-use, while achieving superior indoor air quality. The Solar 1 facility operates in conjunction with a grid connection and the photovoltaic (PV) array on the roof, and thus not only demonstrates the efficacy of a particular energy technology, but perhaps more significantly, provides an important point of reference for understanding an emerging paradigm organized around distributed energy services. Bookended between the looming smokestacks of ConEd's 14<sup>th</sup> Street generating plant and Manhattan's busiest gas station, Solar One's green facility throws into stark relief the promise of green technology and high performance building practices in the New York City context, thus making it an ideal setting for in-school and adult learning programs.

There is a clamoring for information and education in NYC – we see it everyday. While on any given week a diversity of arts and education activities take place at Solar One, all aim to lift the fog of abstraction that commonly surrounds matters of energy and conservation in the public imagination. When New Yorkers understand the importance of energy conservation and efficiency through their own experience of it, they are more likely to change their behavior. Our programs attempt to make that connection. Our solar powered dance, film and music festivals this past summer drew thousands of New Yorkers, each of whom left with a new found understanding of how to become more energy efficient consumers. (It is difficult to maintain the impression that renewable energy is a resource only to be pursued seriously at some undetermined future point, when the musicians you are enjoying from the Solar One stage, in the present moment, are amplified by solar power.)

Our first green products marketplace and all day solar powered music festival, CitySol, was held this past October 1<sup>st</sup> and drew hundreds of people excited about the ideas of energy efficiency and renewable technologies. ConEd Solutions conducted its first ever green power drive at CitySol and more than 30 people signed up for a year of renewable electricity; NYSERDA sold more than 160 CFL bulbs; and more than 20 vendors participated. The event was listed in popular lifestyle magazines, and accordingly, drew a young, dynamic crowd of what market research refers to as “early adopters.” CitySol represents an innovative form of public engagement that is uniquely suited to the cosmopolitan context of NYC. In forwarding a smart energy message through vibrant, social, alluring cultural events that are deemed relevant and “cool” we see the beginnings of broad grassroots adoption.

[Attached as Exhibit A Solar One's Program Report]

At its core, Solar One is concerned with the movement of a responsible energy vision into the public sphere via paths that are most relevant and near to New Yorkers' everyday lives. That means spreading the promise of a clean and abundant energy future not only

through the classroom, but from the stage, marketplace, dance floor and other contexts that are most immediate and inspiring.

Policies that create extensive incentives and capital support within the business and research communities are essential to meaningful energy progress, to be sure; but absent a concerted and creative campaign to inspire and educate the broader public, the ultimate viability of such progress is greatly compromised. As an organization, we deeply believe that the people of New York – diverse, industrious, and adaptive – will be its greatest asset in building a new energy paradigm. Our programming seeks to draw people closer to an inspiring vision through the gateways of education and culture. And every indication suggests that it is working.

More than 1100 people have signed postcards and petitions asking the PSC and Governor Pataki to support Solar One's education programs and the design and construction of Solar 2.<sup>3</sup> These postcards represent the collective judgment of more than 1100 New Yorkers who will be paying for SBC III through their utility bills, each of whom have asked the PSC to support and allocate funds for Solar One's educational programs and for the design and construction of Solar 2. More than 16 environmental organizations, schools and businesses have also provided testimonial letters supporting our efforts.<sup>4</sup> Interest in our mission has been overwhelming. This is signaled most clearly by the thousands of postcards we have collected from enthusiastic New Yorkers who understand that education must be established as a leading priority if we are to affect meaningful change in New York City. We urge the Commission to elevate education as a goal and to continue funding the programs NYSERDA has initiated with Solar One with SBC III funds.

### **III. SBC III Funding Should Include the Construction of Solar 2**

#### **a. Solar 2: New York State's First Environmental Museum and Learning Center**

Providing for the development of high performance buildings in NYC where people can learn about and experience first hand what it means to generate electricity to sell to the local electric grid, reinforces the importance of a distributed energy model and should be a goal of SBC III. Supporting net-zero green building technologies advances several of the Staff's goals, but in particular, improves New York's energy system reliability and security, mitigates the environmental health impacts of energy use and promotes economic opportunity by supporting the development of emerging technologies.

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<sup>3</sup> By prior arrangement with the PSC Secretary, Jaclyn A. Brillig, to avoid making multiple copies of the postcards for this submission and to conserve paper, we are not submitting all 1100 postcards with this testimony. Rather, we are submitting a sample copy of the postcard together with a list of all of those who have signed them as Exhibit B.

<sup>4</sup> Copies of these letters are attached as Exhibit C.

Working with NYSERDA, Solar One was created as a prototype for a larger net-zero building that will be NYS's first Environmental Museum and Learning Center. Currently, known as Solar 2, the Museum's very existence would showcase renewable technologies and encourage the development of a renewable energy infrastructure, optimize energy performance of buildings and products through its net-zero design, and create a place where technological advances to meet future energy needs can be understood and addressed. Such a Center is consistent with the program goals set forth in the Proposal, but we believe that the funding required for the construction of such a Center should be spelled out more explicitly.<sup>5</sup>

Several factors exist to make Solar 2 more pertinent and sensible now, more than ever:

- A net-zero facility of this size will be the only such building in NYS and will itself serve as a real life demonstration of energy savings' best practices. Dependence on \$60 barrel foreign oil requires new and innovative technologies, which will be amply demonstrated by the "net zero" structure that will be the Museum.
- Solar 2 will be a destination where environmental conservation education will be presented as a hands-on experience, rather than something to be studied and observed from afar. It will serve as a clearinghouse for new ideas.
- The greatest need for energy conservation education is in NYC. Last summer's successive days of record breaking energy use consumed in a single day represents only the most recent episode in a series of unsettling signals indicating the need for bold action.
- Lessons learned about waste reduction techniques, new green building technologies, and sustainable building practices will be featured prominently in the design and construction of Solar 2 and the programs it operates.
- The Museum is in keeping with the recent citywide interest in the redevelopment of the East River shoreline. Located on the East River in a sustainable park in Stuyvesant Cove, the Museum will be able to take advantage of its unique location to make the connections between the natural and built environments.

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<sup>5</sup> The goal to "[M]itigate the environmental and health impacts of energy use by increasing energy efficiency, encouraging the development of renewable energy resources infrastructure, and optimizing the energy performance of buildings and products" (program goal #3) underscores the importance of creating a fully sustainable public building where renewable technologies are demonstrated through the net-zero building itself and where on-going technological advances in renewable technologies "to meet future needs through efficiency and innovation" (program goal #4) are exhibited and available to builders, architects, developers, students, elected officials, and the general public.

- The Museum will be built on a brownfield site providing a leading precedent for brownfield development nationwide, which in and of itself is an extraordinary public educational benefit.

The construction of Solar 2 will be a significant national achievement in sustainable design featuring: ground source heat pumps, CO<sub>2</sub> sensors and zoning of HVAC systems, optimized natural ventilation, rainwater collection and re-use, a Hydroponic Living Machine® wastewater treatment system, an 85kW array of photovoltaics, daylighting strategies, high recycled content steel, and an exterior green screen that will provide passive shading and cooling of the building.

[Attached as Exhibit D is a copy of the preliminary schematic design plans for Solar 2 and a description of the programming that is envisioned.]

Creation of a learning facility dedicated to advancing public knowledge of the most pressing resource challenges of our time in the world's most dynamic, influential city would create a powerful focal point to generate public understanding of the obstacles and victories that will inevitably define this century. Many of the challenges on the horizon are staggeringly complex in nature, and therefore the hands-on, interactive learning model that prevails in contemporary museum education would provide the maximum opportunity for public support and participation.

Museums are public spaces that inherently exhibit the complex and abstract and provide content and narrative for the abstract. The spectator ideally leaves a museum with a greater understanding than he or she possessed going in. It is a place where an idea can be understood tangibly. What better place for people to learn about complex ideas about the environment than a museum that physically embodies sustainability through its net zero design? What better place than a building, which at its core demonstrates renewable technologies in every aspect of its construction? What better place than New York City, a perennial work in progress, a laboratory that has again and again broadened the parameters of the possible?<sup>6</sup>

Having worked extensively with NYSERDA to develop an urban energy conservation program, we are on the verge of creating a new and significant institution in NYS that would address the serious challenges confronting us today and help shape the vision of the future. We have gathered the support for Solar 2 from thousands of New Yorkers as well as the environmental community at large. We are asking for your support through

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<sup>6</sup> New York City is also the proper venue for receiving SBC III funds for Solar 2 since, as the Staff Proposal correctly noted, 49% of SBC III funds will come from New York City residents. We believe this is appropriate for the PSC to consider in its deliberations.

SBC III funding to use this as an opportunity to demonstrate that NYS can lead the nation one more time towards building a sustainable society.

**We urge the Commission to make a special allocation of \$25 million over five (5) years to continue to fund the education program started by NYSERDA with Solar One and for the construction of Solar 2 and to provide program and capital funding for similar projects and initiatives in other metropolitan areas around New York State.** We believe Solar 2 provides NYS with an excellent model that could be replicated in other metropolitan areas in the State, and based on the knowledge we have gained in developing it, we would be glad to provide assistance in developing other similar centers.

Sincerely,



Christopher J. Collins  
Executive Director



**SOLAR**one

GREEN ENERGY, ARTS  
& EDUCATION CENTER



EXHIBITS TO RESPONSE OF CEC STUYVESANT COVE, INC., ALSO KNOWN AS  
SOLAR ONE, TO THE PUBLIC SERVICE COMMISSION STAFF PROPOSAL FOR THE  
EXTENSION OF THE SYSTEMS BENEFIT CHARGE AND SBC FUNDED PUBLIC  
BENEFITS PROGRAM

SUBMITTED OCTOBER 14, 2005



**SOLAR**one

GREEN ENERGY, ARTS  
& EDUCATION CENTER

# **EXHIBIT A**

## **SOLAR ONE PROGRAM REPORT**

**SOLAR**one

GREEN ENERGY, ARTS  
& EDUCATION CENTER



## PROGRAM REPORT

## ***Solar One's Education Program***

CEC Stuyvesant Cove, Inc. a/k/a Solar One<sup>1</sup> has dedicated itself to inspiring New Yorkers to become environmentally responsible urban residents. It embraces this mission through environmental science education, access to sustainable arts performances, energy conservation using its own solar powered building as a prototype (Solar 1), and through other means to help New Yorkers develop a sense of stewardship for New York City, for themselves and for their own individual neighborhoods. What makes Solar One unique is that it

- educates by providing hands on energy conservation and sustainability instruction through its own use of solar power and other resource saving techniques,
- facilitates a better understanding of water ecology through its immediate access to and use of the East River estuary,
- reinforces the importance of our natural environments through its preservation and maintenance of Stuyvesant Cove Park, a two acre park jewel located on the banks of the East River between 18<sup>th</sup> and 23<sup>rd</sup> Streets, and
- gives the arts a place in promoting change and exemplifying a new direction in the positive use of energy and art.

Our unique mission enables us to build programming around three key elements of the site - the East River, the Park and Solar 1 – and emphasizes energy consumption and conservation, the interaction of the natural and built environments, river ecology, local flora and fauna, and “green” design.

### *Solar One's Energy Education Programs:*

**K through 12 Education Program:** Students in our elementary through high school program experience a model of urban sustainability in a stand alone solar powered building. They undertake experiments like building wind turbines, solar powered cars and biospheres all geared towards providing them with a better *understanding* of the importance of energy conservation. It is an experience that is not replicated anywhere else in NYC. In the past one and one half years since we opened, more than 2500 students have participated in our education program.

**Energy and the Environment** – *Energy and the Environment* is not a typical environmental science course. *Energy & The Environment* aims to 1) acquaint students with the important concepts and frameworks that inform contemporary environmental science, i.e. *ecology, systems thinking, sustainability, etc.*; 2) to promote a more sophisticated scientific, historical and social understanding of contemporary energy use, production and waste; 3) to draw out the many complex linkages that exist between human energy systems and the Environment; and 4) to

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<sup>1</sup> Solar One refers to the organization; Solar 1 refers to the building.

demonstrate how attempts to address “environmental problems” are the basis of diverse professional fields, disciplines and careers. In addition to weekly coursework that builds participant knowledge and interest in a range of environmental and resource-related subjects, the program aims to create opportunities and provide ongoing career and educational guidance for students who are seeking opportunities in the environmental field.

Our pilot program targeted students in NYC’s Offsite Educational Services program, primarily made up of students who are trying to transition back into high school or obtain their graduate equivalency diploma. Solar One uses its resources and position within New York City’s growing network of environmental organizations to seek out and place participating students in part-time internships that involve services relevant to the educational focus of the course. Solar One provides career guidance, networking opportunities, and letters of reference for interested and qualified participants following completion of the program. The objective is to cultivate knowledge, interest and opportunity in the emerging green sector. The course has been designed and sequenced to make sustainability relevant as a social priority, and at the same time, more transparent as a career and education path.

**Professional Education Program:** Our professional education program targets those who are in the best position to affect change in NYC – developers, builders, architects, designers, lawyers, etc. They are the green champions of the future. They experience and learn about green building techniques and performance standards by taking classes at Solar 1. Our curriculum focuses on Solar 1 as an example of green design and solid green building performance standards. This Winter we are hosting 2 continuing education courses “Affordably Green in NYC” and “Renewable – Sustainable – Solar.”

**Arts and the Environment Program:** Our newest and, quite possibly, most important initiative is our arts and environment program. We have developed a program at Stuyvesant Cove that is unique and the first of its kind in New York, if not the nation: “Green Arts” – The Bridge Between the Arts and Environmental Communities.”

A consistent premise here at Solar One, is that the arts performances (i.e., dance, music and film) are powered, either entirely or in part by renewable (solar) electricity. Furthermore, we encourage artists who are performing here to present projects with an environmental focus or theme. For people who attend Solar One’s “Green Arts” programs, environmentalism is an experience, not a stuffy lecture. Audiences are exposed to the arts and the environment in a new and engaging way that translates into educational efficacy for the public at large.

What we have found is that people go away from these performances with a profound realization that environmentalism can coincide with artistic expression and actually improve quality of life, as opposed to degrading it. Too often environmentalists are thought of as those “other” people who don’t mind cold showers or live off a diet of granola and lentils. People often have trouble recognizing that one’s quality of life does not have to change to be an environmentally sustainable and responsible urban resident.

“Green Arts” is a form of artistic expression that has the potential for transformative change in the way NYC residents understand and implement energy conservation measures. Artistic expression often drives change. Harnessing that change and marketing it is a logical

outgrowth of our “Green Arts” program. Using “Green Arts” we’ve harnessed the opportunity to teach people about energy conservation and urban sustainability, without an invasive lecture. In 2005 we introduced the first Solar Powered Arts Festival™. The festival ran from June through October and featured a Solar Powered Dance, Film and Music Series™. Our film series began with an informational short about energy conservation. Several thousand New Yorkers attended our first Solar Powered Arts Festival™ and left with a newfound appreciation of what it means to reduce our reliance on fossil fuels for our energy needs.

**Community Housing Program:** Working with partners well acquainted with community housing issues we bring together community housing groups to Solar 1 for lessons about green building, energy efficient design, renewable energy in their project and financing. Again, the experience of Solar 1 makes the workshops real and powerful.

**CitySol and Other Events:** This September, Solar One in conjunction with o2, ConEd Solutions, Compact/Impact, the Brooklyn Brewery and CEC, held the first green Vendor Fair, which showcased the latest in local sustainable products and services within an energized, festive atmosphere of electronic music, dancing and socializing. This free, all-day event aimed both to embody and celebrate the unique innovativeness, commercial savvy and creative genius that have increasingly come to define New York City’s changing green culture.

In addition, we host our “Thursdays at the Cove” **Author’s Series** and the **Green Renters Series**, both of which are geared towards the lay population not familiar with but interested in green energy techniques in a city like New York as well as numerous other events throughout the year.

Dated: October 17, 2005

# **IN-SCHOOL EDUCATION PROGRAM**

### in-school education program

Americans account for 5% of the world's population, yet we consume 25% of the world's energy. Education is the first step towards smart usage and the economic and health benefits that come with it. To advance these ideas, Solar One has developed collaborative arrangements with numerous NYC schools that bring middle and high school students with their teachers to Solar 1 at no charge to receive hands-on environmental science and energy lessons. Since March 2004, more than 2500 grade, middle and high school students have participated in programs at Solar 1.

Our most recent partnership is with the New York City Department of Education's Offsite Educational Services (OES) program which provides students who have dropped out with the opportunity to transition back into traditional high schools or obtain a Graduate Equivalency Diploma. With OES, we are developing a pilot program in energy and environmental science for transitional high school students to engage students in energy and environmental issues and give them access to skills training to expand their opportunities for higher education and careers in the field.

Solar One uses a curriculum created in partnership with National Energy Education Development (NEED) based around a series of lectures and workshops that focus on the issues of resource conservation, water ecology and renewable sources of energy. Our programs provide students with critical thinking skills and give them the opportunity to apply the lessons to their daily lives. Through Solar One's environmental lessons, students develop a greater understanding of the urban environment, sustainability, and how they can make decisions about using resources wisely.

Providing free programming permits us to maximize the effectiveness of our outreach. The lack of a fee allows us to individualize the programs that we provide for each school because we are not required to provide a specific number of lessons to cover our costs. This way of structuring the lessons leads to a more flexible program that can produce benefits for each class no matter how many sessions they attend.



*A classroom session in Solar 1*



*Workshop on the East River*



*Learning about solar power*



*Classes take advantage of the outdoor space as well*



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[www.solar1.org](http://www.solar1.org)

### stats

**number of schools:** 15

**number of students:** 2500+

**partner organizations:** National Energy Education Development; Lower East Side Ecology Center; New York City Department of Education Offsite Educational Services; New York City Soil and Water Conservation District

# SOLARone

FREE ENERGY EDUCATION  
WORKSHOPS IN YOUR CLASSROOM.



## Energy & The Environment

SINGLE AND MULTI-SESSION WORKSHOPS ENGAGE  
STUDENT INTEREST IN:

**The Science of Energy** • Electricity Generation • Energy and Ecology • Fossil Fuel Origins • **CO<sup>2</sup> and Climate Change** • **RENEWABLE ENERGY SOURCES** • **The History of Energy Use** • Global Politics and Energy • **Everyday Efficiency and Conservation.**

Modern systems of energy production, driven by the combustion of fossil fuels, are simultaneously at the basis of unprecedented human achievement, political complexity and ecological stress.

Solar One's *Energy & The Environment* outreach program aims to promote critical understandings of the scientific, social, and ecological significance of everyday energy consumption.

*Energy & The Environment's* interdisciplinary environmental science focus allow for integration with both natural science and social studies coursework.

## Designing a Solar One learning program . . .

Solar One opts for a collaborative approach to education, working with schools and teachers to create individual lessons around subjects in the schools' current curriculum.

For more information or to schedule a visit teachers can contact Solar One Education Coordinator Chris Neidl: 212 505 6050, [neidl@solar1.org](mailto:neidl@solar1.org). [www.solar1.org](http://www.solar1.org)

## Solar One Energy Workshops . . .

- Spark student interest about how we use energy in our city, and deal specifically with the use of energy in New York's urban environment.
- Promote an *energy ethic* based on a realistic understanding of the social, economic and environmental impacts of energy production and use.
- Are based on US Department of Energy National Energy Education Development (NEED), The Union of Concerned Scientists, Power Schools Naturally and other effective, proven curricula.
- Provide practical information on how to be a smart and responsible energy user in NYC.
- Are adapted for the NYC education Standards.
- Are FREE



Solar One is located along the East River at E 23<sup>rd</sup> St. in Stuyvesant Cove Park, Manhattan.

**PROFESSIONAL  
EDUCATION  
PROGRAM**

### professional education

Environmental education applies to more than just students. As such, Solar One has developed a continuing education program geared towards those who have the most influence about how energy conservation in the urban environment will move forward in the future – builders, developers, architects, designers, lawyers, etc. After surveying the landscape of continuing education classes, two specific areas of continuing education that would benefit from our program were identified: (i) the cost effectiveness of building green from a performance standards perspective and (ii) green construction as expressed by the very real example of Solar 1 at Stuyvesant Cove. The value added from these courses can be measured by their influence in the adoption of green building standards by developers and builders in NYC.

While the lament has been heard for decades that “Building Green” in an urban environment is cost prohibitive, it is far from the truth. In the first program, participants will gain a thorough understanding of the LEED System as designed by the U.S. Green Building Council. The LEED System indicates increasingly higher levels of environmental sustainability. This program will demonstrate how affordable housing can be achieved at the Silver level. Attendees will be given a detailed overview of sustainable practices as they relate to building systems, water efficiency, energy use, material and resource use and indoor air quality.

In the second program, participants will have the opportunity to study and fully understand high performance building systems used while discussing current issues regarding the environment, various energy sources, and renewable energy. An examination of the systems and lessons from Stuyvesant Cove Park, Solar 1, and the planned Solar 2 will cover topics including renewable energy, embodied energy levels, sustainable materials, passive heating and cooling

The facilitators are experts in their specific specialty and receive continuous training in the areas of building design and construction.



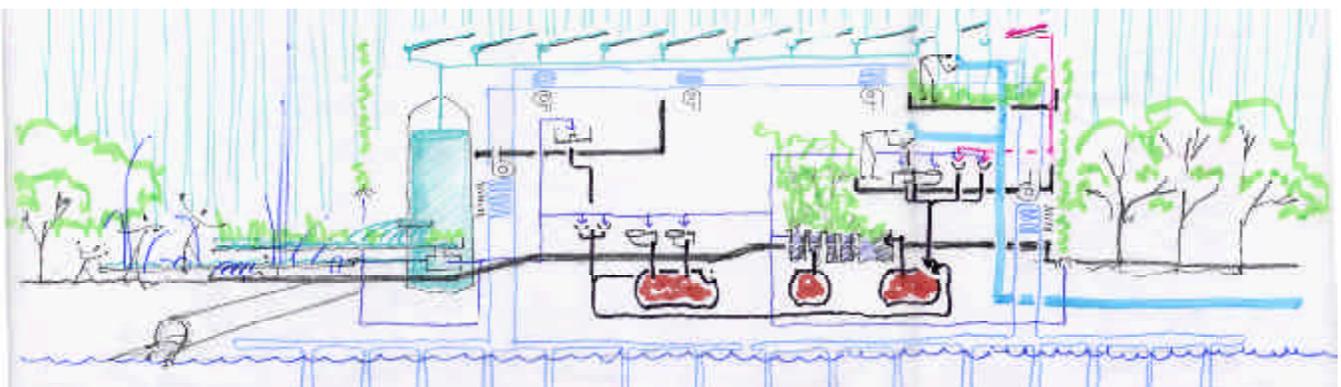
*Inverters and systems in Solar 1*



*Diagram of a heat recovery ventilator*



*A lesson in insulation*



*Diagram of greenbuilding features including solar roof, wastewater treatment and passive cooling*



### stats

24-20 FDR Drive Service Road East  
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T 212.505.6050 F 212.253.2467  
www.solar1.org

**program partner:** Community Environmental Center  
**workshop length:** 3 hours  
**credits:** 3 Learning Units (AIA)  
**health, safety, welfare (HSW) eligible?:** Yes

## Provider Program Summary

**Provider Name:** Community Environmental Center, Inc.

**Program Title:** Affordably Green in New York City

**Length:** 3 Hours      **Credits:** 3 LU      **HSW:** yes (yes/no)

### **Learning Objectives:**

While the lament has been heard for decades that “Building Green” in an urban environment is cost prohibitive, it is far from the truth. For the high performance building developer, initial cost premiums can be as low as 1 – 2%. And, even though smaller projects may have increased premiums in the 5% range, the quality of life issues achieved are often considered an appropriate off set.

At the conclusion of this program the participants will have a thorough understanding of the LEED System as designed by the U.S. Green Building Council. The LEED System indicates increasingly higher levels of environmental sustainability. This program will demonstrate how affordable housing can be achieved at the Silver level. Also presented will be the related construction costs, and some potential savings.

In addition, each participant will be able to:

1. Understand Sustainable Sites and be able to address the importance of the concepts.
  - a. Alternative Transportation
  - b. Reduced Site Disturbance
  - c. Storm Water Management
  - d. Landscape & Exterior Design to reduce Heat Islands
  - e. Light Pollution Reduction
2. Clearly describe the importance of Water Efficiencies and describe specific measures that can be included in design/construction to conserve water.
  - a. Water Efficient Landscaping
  - b. Innovative Wastewater Technologies
  - c. Water Use Reduction
3. List ways in which the standards for Energy and Atmosphere can be applied in the building / renovating trades.
  - a. Heating and Domestic Hot Water
  - b. Heat Recovery
  - c. Building Envelope
  - d. Efficient Cooling Systems
  - e. Ozone Depletion

4. Explain the standards for Materials and Resources, describing ways to manage these in cost effective ways.
  - a. Building Reuse
  - b. Construction Waste Management
  - c. Recycled Content
  - d. Local/Regional Materials
  - e. Rapidly Renewable Materials
5. Identify the indicators of Indoor Environmental Quality and list ways to monitor and improve the Indoor Environmental Quality.
  - a. Carbon Dioxide Monitoring
  - b. Construction Indoor Air Quality Management Plan, during construction
  - c. Construction Indoor Air Quality Management Plan, before occupancy
  - d. Indoor Environmental Quality, low-emitting materials
  - e. Indoor Chemical & Pollutant Source Control
  - f. Controllability of Systems

**Facilitator Qualifications:**

All CES facilitators from the Community Environmental Center, Inc. have been trained on CES guidelines and presentation skills. All also are experts in their specific specialty and receive continuous training in the areas of building design and construction and the whole area of Energy Conservation and Sustainability.

Alexander T. MacFarlane

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Name	Qualifications
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**Method of Delivery:**

This course will be delivered in a very Interactive Participation format. The formal direct instruction will be facilitated through a Power Point presentation. The instructor will encourage much discussion, with extensive question and answer periods to ensure that each participant is well versed in the topic.

**Audio/Visual required:**

Access to an electrical outlet and a screen are all that are required, as the instructor will provide his/her own laptop and projector for the Power Point presentation.

**Cost to Participants:** \_\_\_\_\_

**Point of Contact:**

## Provider Program Summary

**Provider Name:** Community Environmental Center, Inc.

**Program Title:** Renewable – Sustainable - Solar

**Length:** 3 Hours      **Credits:** 3 LU      **HSW:** yes (yes/no)

### **Learning Objectives:**

It has always been a dilemma to include renewable energy sources and energy efficient systems in construction projects while at the same time containing costs. With technology constantly improving and our level of knowledge increasing, this dilemma is quickly disappearing. It is indeed possible, and even desirable, to include renewable energy and energy efficient systems in all projects, whether new construction or renovations.

This course will examine green construction as is expressed in the Stuyvesant Cove Environmental Learning Center on the NYC waterfront. Participants will have the opportunity to study and fully understand the systems used in the Learning Center while discussing current issues regarding the environment, various energy sources, and renewable energy. An examination of the systems and lessons from Stuyvesant Cove Park and Solar 1 (the only stand-alone solar-powered classroom in New York), and the planned Solar 2 will give meaning to the terms renewable, sustainable, and solar.

At the conclusion of the program, participants will be able to:

#### Session 1

1. Describe and explain the systems that make Solar 1 an efficient building
  - a. Passive Solar Energy
  - b. Use of photovoltaic technology
  - c. Energy efficient systems
  - d. Sustainable materials

#### Session 2

2. Explain the systems involved and planning steps used to develop the next generation Environmental Learning Center, Solar 2.
  - a. Solar energy, passive and photovoltaic
  - b. Level of embodied energy in building materials (sustainable materials)
  - c. Energy efficient systems
  - d. Geo-thermal energy

**Facilitator Qualifications:**

All CES facilitators from the Community Environmental Center, Inc. have been trained on CES guidelines and presentation skills. All also are experts in their specific specialty and receive continuous training in the areas of building design and construction and the whole area of Energy Conservation and Sustainability.

Jonathan Cramer

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Name	Qualifications
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**Method of Delivery:**

This course will be delivered in a very Interactive Participation format. The formal direct instruction will be facilitated through a Power Point presentation. The instructor will encourage much discussion, with extensive question and answer periods to ensure that each participant is well versed in the topic.

**Audio/Visual required:**

Access to an electrical outlet and a screen are all that are required, as the instructor will provide his/her own laptop and projector for the Power Point presentation.

**Cost to Participants:** \_\_\_\_\_

**Point of Contact:**

# **GREEN ARTS**

**green arts**

In an effort to broaden the scope of environmentalism, Solar One has developed a unique program at that is the first of its kind in New York, if not the nation: “Green Arts” – The Bridge Between the Arts and Environmental Communities

At Solar One, we feel that environmental information can be presented without making people feel attacked or lectured to. Thus the concept of “Green Arts” emerged. “Green Arts” is a medium for artistic expression that makes sustainability an experience rather than just an abstract concept. It is a bridge toward understanding the importance of energy conservation. When a person is watching a performance or listening to a concert, they are much more receptive to learning about new or unique concepts. Using “Green Arts” we’ve harnessed the opportunity to teach people about energy conservation and urban sustainability without preaching at them. Arts performances at Stuyvesant Cove are powered by renewable energy, including the efforts of the artists themselves. Furthermore, we encourage artists who are performing here to present projects with an environmental focus or theme. For people who attend our “Green Arts” programs, environmentalism is an experience. Audiences are exposed to the arts and the environment in a new and engaging way that translates into educational efficacy for the public at large.

In the summer of 2004 we developed a trial arts program of dance, music and film. Based on our early success, we launched the first Solar-Powered Arts Festival™ from June through September 2005. The Festival featured a Film Series, a Dance Series and a Music Series. Each had a renewable component that enabled the audience to “experience” what it means to produce your own energy. Our Film Series featured independent films and included Q&As with the directors as well as two short student films that dealt with environmental issues. The Dance Series highlighted new and emerging choreographers, and the Music Series consisted of a variety of New York City musicians working in a multitude of genres. By the end of the summer, over 4,000 people had attended the Festival or one of our other performances.



*Handful Percussion*



*Dance Performance on the East River*



*Cultural Dance on the labyrinth*



*Opening Night at the Solar-Powered Film Festival*



24-20 FDR Drive Service Road East  
New York, NY 10010  
T 212.505.6050  
F 212.253.2467  
www.solar1.org

**stats**

**number of artists:** 75+  
**partner organizations:** P.S. 122, Mertz Gllmore Foundation  
**estimated 2005 attendance:** 4,000



SOLARone

Summer 2005

# CALENDAR OF EVENTS

AT STUYVESANT  
COVE PARK



SOLARone

GREEN ENERGY, ARTS  
& EDUCATION CENTER

[www.solar1.org](http://www.solar1.org)

# JUNE

**Saturday 11** Irish Set Dancing with instructor Linda Kiggins\*  
6-7pm, FREE  
Rain Date: Sunday 12

**Tuesday 14** Green Drinks  
7 - 10pm, \$10 donation  
New York's premier networking event for environmentalists and the "green-minded."

**Thursday 16** Revelry By The River  
5:30 - 9pm, \$75/ticket  
*Solar1's 1st Annual Fundraiser.*  
Call for more information.

**Friday 17** Tiny Ninja Theater - Shakespeare's *Romeo & Juliet*  
6:00pm, \$12  
Reservations only: 212-505-6050  
*Acclaimed alt-puppeteer Dov Weinstein renders the world's most famous tale of unrequited love with wit, pathos and . . . Zounds! tiny, plastic toy ninja figurines. This one of a kind, one man show runs approximately 45 minutes, and is appropriate for a general audience.*

**Saturday 18** Elaine Summers' Invitation to Secret Dancers  
12pm - workshop;  
3pm - Children's Performance;

5&7pm - Regular Performances, all FREE  
*Performed in many places and countries by many people, Invitation to Secret Dancers is an improvisational dance choreographed by Elaine Summers that covertly transforms public spaces into artistic venues, and passive passersby into active participants.*  
Rain Date: Sunday 19

**Saturday 18** Tiny Ninja Theater - Shakespeare's *Romeo & Juliet*  
9:30pm, \$12  
Reservations only: 212-505-6050  
(See Friday 17)

**Sunday 19** Tiny Ninja Theater - Shakespeare's *Romeo & Juliet*  
8:30pm, \$12  
Reservations only: 212-505-6050  
(See Friday 17)

**Thursday 23** Solar-Powered Film Series  
8:45pm, \$6 (suggested donation)  
*This Land Is Your Land*, Directors: Lori Cheatle and Daisy Wright (2004, 82 mins)  
For more information, see back page.

**Saturday 25** Elaine Summers' Invitation to Secret Dancers  
Noon - workshop;

3pm - Children's Performance;  
5&7pm - Regular Performances, all FREE  
(See Saturday 18)  
Rain Date: Sunday 26

**Sunday 26** Amateur Radio Field Day  
10am-2pm, FREE  
*Join The Steve Jacobson Memorial Amateur Radio Association as they harness solar power to broadcast live from Solar1 and communicate with other amateur radio aficionados from around the world.*

**Sunday 26** The Birdhouse Project  
Directed by Andrea Olsen  
12-1pm, FREE  
*Middlebury College students, faculty and alumni perform the Birdhouse Project, choreographed by Andrea Olsen. This piece is a ramble through the park with dance solos, duets and group pieces.*

**Monday 27** The Birdhouse Project  
6pm & 7:30pm, FREE  
(See Sunday 26)

**Thursday 30** Solar-Powered Film Series  
8:45pm, \$6 (suggested donation)  
*Screen Door Jesus*, Director: Kirk Davis (2004, 118 mins).  
See back page.

# JULY

**Thursday 7** Solar-Powered Film Series  
8:45pm, \$6 (suggested donation)  
*Grey Gardens*, Directors: Albert Maysles, David Maysles, Ellen Hovde, Muffie Meyer (1976, 94 mins), see back page.

**Saturday 9** Ballroom/Social Dancing with instructor Larissa Malikhina  
Trebunskaya of Ballroom on Fifth Dance Studio\*  
6-8pm, FREE  
Rain Date: Sunday 10

**Sunday 10** Instant Shakespeare - *The Life of Henry the Fifth*  
1-3pm, FREE  
*In Shakespeare's day there was little time for rehearsal, and no directors as we know them today. Instant Shakespeare seeks to revive these traditions with an informal approach to The Bard's classic plays.*

**Thursday 14** Solar-Powered Film Series  
8:45pm, \$6 (suggested donation)

*Road* Director: Leslie McCleave (2005, 92 mins), see back page.

**Saturday 16** Bronx Academy of Arts and Dance  
2:30pm, FREE  
*Dancers will perform a selection of pieces highlighting their repertoire.*  
Rain Date: Sunday 17

**Thursday 21** Solar-Powered Film Series  
8:45pm, \$6 (suggested donation)  
*Gotham Fish Tales*, Director: Robert Maass (2005, 70 mins), see back page.

**Saturday 23** Bronx Academy of Arts and Dance  
12pm, FREE  
(See Saturday 16)

**Saturday 23** Folk Dancing led by Evelyn Diamond\*  
7-8pm, FREE  
Rain Date: Sunday 24

**Sunday 24** Steven H. Rosen Poetry Series\*  
2:30-4pm

**Thursday 28** Solar-Powered Film Series  
8:45pm, \$6 (suggested donation)  
*Mana - Beyond Belief*, Directors: Peter ("Silverlake Life") Friedman & Roger Manley (2004, 92 mins), see back page.

**Saturday 30** Garden Angel Volunteer Orientation for Stuyvesant Cove Park  
10am  
*New and old volunteers welcome!*

**Sunday 31** Elaine Shipman - Ha  
6-7pm, FREE  
*"Ha" is the Mayan word for water, and Ms. Shipman brings a water-themed dance performance featuring live music to the Solar1 stage.*

\*Denotes event sponsored by the Stuyvesant Cove Park Association

# AUGUST

**Saturday 6** Ballroom Social Dancing\*  
6-8pm, FREE  
Instructor: Autumn Bear of Dance  
Manhattan  
Includes free Salsa lesson.  
*Rain Date: Sunday 7*

**Sunday 7** Instant Shakespeare -  
*The Tragedie of Cymbeline*  
1-3pm, FREE  
*In Shakespeare's day there was little time for rehearsal, and no directors as we know them today. Instant Shakespeare seeks to revive these traditions with an informal approach to The Bard's classic plays.*

**Saturday 13** Ballroom/Social Dancing\*  
6-8pm, FREE  
Instructor: Evita Arce of Dance  
Manhattan  
Includes free Swing lesson.  
*Rain Date: Sunday 14*

**Sunday 14** A Mixed Recital by The  
Rutkowski Trio & Friends  
7:30pm, FREE  
*The Rutkowski Trio & Friends have performed from Long Island to West Virginia, and are now bringing a mix of Klezmer and Dixie Land to the Solar1 Stage.*

**Thursday 18** Solar-Powered Dance  
Series - *Program A* (See side panel)  
6:30pm, \$6 (suggested donation)  
*Rain Date: Sunday 21*

**Friday 19** Solar-Powered Dance Series  
- *Program A* (See side panel)  
6:30pm, \$6 (suggested donation)  
*Rain Date: Sunday 21*

**Saturday 20** Solar-Powered Dance  
Series - *Program A* (See side panel)  
6:30pm, \$6 (suggested donation)  
*Rain Date: Sunday 21*

**Thursday 25** Solar-Powered Dance  
Series - *Program B* (See side panel)  
6:30pm, \$6 (suggested donation)  
Program B  
*Rain Date: Sunday 28*

**Friday 26** Solar-Powered Dance Series  
- *Program B* (See side panel)  
6:30pm, \$6 (suggested donation)  
*Rain Date: Sunday 28*

**Saturday 27** Solar-Powered Dance  
Series - *Program B* (See side panel)  
6:30pm, \$6 (suggested donation)  
*Rain Date: Sunday 28*

**The Solar-Powered Dance Series**  
Short programs by choreographers from an eclectic mix of new and emerging dance companies that work in a variety of styles, ranging from classical Indian to post-modern. This juried selection features dance pieces that are theatrical, energetic, and suitable for all ages.

**Program A** runs on August 18th, 19th, & 20th, at 6pm, and features:

MidGet Dance	MayDance
Tara Madsen	Adam Scher
Christopher Williams	INSPIRIT

**Program B** runs on August 25th, 26th, & 27th, at 6pm, and features:

Maxine Steinman	Isabella Bruno
Everything Smaller	Keila Cordova
Saba Dance Theater	Parul Shah

*Be sure to see both programs!*

# SEPTEMBER

**Thursday 8** Circus Amok  
6pm, FREE  
*Free public art addressing contemporary issues of social justice to the people of New York City. Circus Amok brings a seventeen-act-in-59-minutes joyful extravaganza of acrobatic artistry, satiric skill, and good old-fashioned circus fun.*

**Saturday 10** Ballroom/Social Dancing\*  
6-8pm, FREE  
*Rain Date: Sunday 11*

**Sunday 11** Steven H. Rosen Poetry  
Series\*  
2:30-4pm, FREE

**Thursday 15** Solar-Powered Music  
Series (See side panel)  
6pm, \$6 (suggested donation)  
*Rain Date: Sunday 18*

**Friday 16** Solar-Powered Music Series  
(See side panel)  
6pm, \$6 (suggested donation)  
*Rain Date: Sunday 18*

**Saturday 17** Solar-Powered Music  
Series (See side panel)  
6pm, \$6 (suggested donation)  
*Rain Date: Sunday 18*

**Thursday 22** Solar-Powered Music  
Series (See side panel)  
6pm, \$6 (suggested donation)  
*Rain Date: Sunday 25*

**Friday 23** Solar-Powered Music Series  
(See side panel)  
6pm, \$6 (suggested donation)  
*Rain Date: Sunday 25*

**Saturday 24** Solar-Powered Music  
Series (See side panel)  
6pm, \$6 (suggested donation)  
*Rain Date: Sunday 25*

**The Solar-Powered Music Series** will feature artists from a variety of genres, including music appropriate for children. The line-up is being finalized, so keep posted for details.

**For current event information:**

Visit [www.solar1.org](http://www.solar1.org)

Call (212) 505-6050

Check the weekly Round and About listings for specific program information.

*Solar1 is dedicated to inspiring New Yorkers to become environmentally responsible urban residents. It embraces this mission through environmental science education, access to sustainable arts performances, energy conservation using its own solar-powered building as a prototype, and through other means to help New Yorkers develop a sense of stewardship for New York City, for themselves, and for their neighborhoods.*

New York's first and only

# SOLAR-POWERED ARTS FESTIVAL™



**FILM**  
June 23 - July 28



**DANCE**  
August 18 - 27



**MUSIC**  
September 15 - 24

## FILM SERIES

**Thursdays at 8:45 pm June 23 - July 28**

**June 23:**

### THIS LAND IS YOUR LAND

Directors: Lori Cheadle & Daisy Wright (2004, 82 mins)  
Presented by Lori Cheadle & Daisy Wright

A thoroughly entertaining and determinedly funny look at how Americans -- across the country and from all walks of life -- rage against the corporate machine.

**June 30:**

### SCREEN DOOR JESUS

Director: Kirk Davis (2004, 118 mins)  
Presented by Kirk Davis

When an image of Jesus appears on Old Mother Harper's screen door, it's time to take sides, triggering an Altman-esque series of interrelated dramas that try the ideals, principles and stamina of a cast of eclectic characters in Bible Belt Bethlehem, TX (pop. 2,378).

**July 7:**

### GREY GARDENS

Directors: Albert Maysles, David Maysles, Ellen Hovde, Muffie Meyer (1976, 94 mins)  
Presented by Albert Maysles

Meet Big and Little Edie Beale — high society dropouts, mother and daughter, reclusive cousins of Jackie O. — thriving together amid the decay and disorder of their ramshackle East Hampton mansion. Five years after Gimme Shelter, the Maysles unveiled this impossibly intimate portrait of the unexpected, an eerie echo of the Kennedy Camelot.

**July 14:**

### ROAD

Director: Leslie McCleave (2005, 92 mins)  
Presented by Leslie McCleave

Margaret (Catherine Kellner), uses the latest government-supplied technology to survey environmental disaster areas. But the real toxicity in her life is her unresolved feeling for Jay (Ebon Moss-Bachrach), her unemployed ex-boyfriend, who has tagged along for the ride.

**July 21:**

### GOTHAM FISH TALES

Director: Robert Maass (2005, 70 mins)  
Presented By: Robert Maass

A hopeful, inspiring story of the dogged fishermen who ply New York City waters, from Hell's Gate to the shadow of the Statue of Liberty. Flying against the conventional wisdom, Gotham Fish Tales is a portrait of a highly utilized marine ecosystem pressed against the density of America's largest city and a fishery as vibrant and varied as the city itself.

**July 28:**

### MANA — BEYOND BELIEF

Directors: Peter ("Silverlake Life") Friedman & Roger Manley (2004, 92 mins)  
Presented by Peter Friedman

MANA (the Polynesian word for the power that resides in things) is a journey leading from a Navajo medicine man's mud-covered hogan to the eternity of space, from the most ancient of technologies to the most complex, from the concrete world of objects to the projected world of values, and from the individual's attempt to comprehend the secret powers surrounding him to the power our own minds give us to shape our experiences.

**Solar One and Stuyvesant Cove Park are located on the East River, at the intersection of E. 23rd St. & Avenue C.**



**For more information call (212) 505-6050.**

New York's first and only

# SOLAR-POWERED ARTS FESTIVAL™



## DANCE SERIES

All performances Th/Fr/Sa at 6pm

Featuring short programs by choreographers from an eclectic mix of new and emerging dance companies that work in a variety of styles, this juried selection features dance pieces that are theatrical, energetic, and suitable for all ages. All audio portions of the performances will be solar-powered.

**August 18, 19, 20**

Rain Date August 21

Featuring:

MidGetDance

MayDance

Keila Cordova

Adam Scher

Christopher Williams

INSPIRIT

**August 25, 26, 27**

Rain Date August 28

Featuring:

Maxine Steinman

Everything Smaller

Saba Dance Theater

Isabella Bruno

Tara Madsen

Parul Shah

## FILM SERIES

Jun 23, 30

Jul 7, 14, 21, 28

## DANCE SERIES

Aug 18-20, 25-27

## MUSIC SERIES

Sep 15-17, 22-24

\$6 suggested donation

Proceeds support Solar One's education and arts programs.

Funded in part by a grant from the Mertz Gilmore Foundation.

For info, visit [www.Solar1.org](http://www.Solar1.org) or call 212.505.6050



In Stuyvesant Cove Park  
at 23rd St & East River

To reach Solar One, take the 6 train to 23rd St, the L train to 1st Ave, or the M23 cross-town bus to Ave C. Continue east, crossing Ave C at 18th, 20th, or 23rd Sts, and walk under the FDR Dr into Stuyvesant Cove Park.

# New York's first and only SOLAR-POWERED ARTS FESTIVAL™



## MUSIC SERIES

All performances Th/Fr/Sa at 6:30pm

Outdoor musical performances from a variety of New York City musicians working in a multitude of genres and styles and with all necessary electricity powered by the sun.



### Sep 15 SUPHALA

Suphala uses the adaptability of the tabla to lead her band of musicians to integrate varied genres and create a rich, emotive, and spontaneous sound.

### Sep 22 CIRCUS GUY

Having spent the past 3 years bringing the "simple sounds of rock and roll" to the Middle East to help promote solar energy, Circus Guy brings their sounds to Solar One.

### Sep 16 ROMASHKA

Playing Gypsy music from Russia, Romania, and beyond, Romashka channels their musical energy to create an infectious gypsy dance party experience.

### Sep 23 MUSICAL CHAIRS CHAMBER ENSEMBLE

MCCE is a consortium of high-caliber musicians dedicated to the craft of chamber music with wide-ranging presentations of classical and contemporary pieces.

### Sep 17 GLOBAL PERCUSSION

Global Percussion play original percussion-based music influenced by beats from around the globe. The group has performed throughout the U.S.

### Sep 24 INVERT

A unique string quartet drawn from diverse, eclectic musical backgrounds, Invert's members defy tradition by being firmly rooted in rock, jazz and world musics.

## FILM SERIES

Jun 23, 30

Jul 7, 14, 21, 28

## DANCE SERIES

Aug 18-20, 25-27

## MUSIC SERIES

Sep 15-17, 22-24

\$6 suggested donation

Proceeds support Solar One's education and arts programs.

For info, visit [www.Solar1.org](http://www.Solar1.org) or call 212.505.6050



**SOLARone**

GREEN ENERGY, ARTS  
& EDUCATION CENTER

In Stuyvesant Cove Park  
at 23rd St & East River

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# **COMMUNITY HOUSING WORKSHOPS**

community housing seminars

One of the largest inroads that can be made in energy efficiency and green design is in the housing sector, either in the upgrading of existing building or in the construction of new ones. With support from NYSERDA and other foundations in 2004, we conducted a series of four workshops held in May and June 2004 entitled "Energy Efficiency and Renewable Technology for New Construction and Gut Rehab." With the assistance of our partners, the Association for Neighborhood and Housing Development (ANHD) and Pratt Institute Center for Community and Environmental Development (PICCED), we had a turnout of representatives from more than fifteen professional organizations. The topics covered were as follows:

- Part 1: Green Building
- Part 2: Energy Efficient Design and Gut Rehab
- Part 3: Renewable Energy in Your Project
- Part 4: Financing

Each topic was broken down into smaller segments dealing with concepts such as energy efficiency, indoor air quality, heating distribution, building envelopes, windows and lighting, solar energy, fuel cells and tax incentives.

Feedback among the attendees was uniformly positive. During the workshops there were numerous active discussions as people brought up issues relevant to their buildings and compared experiences with implementing energy efficient technologies and other "green" measures. These workshops also contributed networking opportunities participation as the representatives of each organization got to meet others in their field and solicit and offer advice to others who regularly face similar situations.

Among the challenges facing these organizations are the relative newness of Green Design and the surrounding confusion over what qualifies as "green." All agreed that as the concept of building "green" catches on, and more financial incentives become available, there will be greater demand for workshops like these.



*Outdated boilers waste energy*



*Conducting a building audit*



*Inventory of energy-saving products*



*A workshop session in progress*



24-20 FDR Drive Service Road East  
New York, NY 10010  
T 212.505.6050 F 212.253.2467  
www.solar1.org

stats

**number of attending organizations:** 15  
**partner organizations:** Association of Neighborhood Housing Developers;  
Pratt Institute Center for Community and Environmental Development

# Energy Efficiency and Renewable Technology for New Construction and Gut Rehab May 4<sup>th</sup>, May 18<sup>th</sup>, June 1<sup>st</sup>, June 15<sup>th</sup>

Learn how to save money by implementing energy efficient and environmentally green measures into your new buildings and rehabilitation.

This 4-part series workshop will cover Green Building, Energy Efficient Design, Renewable and Alternative Energy Technologies, and Financing.

Who should attend: Community housing developers together with their architects and engineers interested in improving the environmental performance of their new construction or rehab project

## ***Part 1: Green Building – May 4 – 10AM – 12N***

You may have heard some of the buzz going around about “green buildings”. But what is a green building and why build green? This session will answer these questions and introduce participants to fundamental concepts of improving the environmental performance of projects, especially housing, in an urban context.

## ***Part 2: Energy Efficient Design and Gut Rehab – May 18 – 10AM - 12N***

HPD has adopted new energy efficient standards for their gut rehab specifications. CEC, who designed these standards for HPD will cover the different specification sections that were revised and show cost effectiveness of the energy efficient measures. In addition to gut rehab, CEC will discuss how these standards can also be utilized in the capital improvement plans. As a certified Energy Star partner and a member of the Building Performance Contractors Association, CEC will discuss Energy Star criteria for new housing developments.

## ***Part 3: Renewable energy in your project – June 1 – 10AM – 12N***

Energy efficiency is one of the most important aspects of a green building. This session will delve deeper into efficiency and renewable technologies appropriate for buildings in New York City.

## ***Part 4: Financing – June 15 – 10AM – 12N***

There are several State and Federal initiatives in support of environmentally friendly buildings. In this session, participants will learn about money and programs available to assist with a green project.

**Location: Stuyvesant Cove Leaning Center – New York, N.Y  
(23 Street on the East River)**

Sponsored by Community Environmental Center (CEC), Association for Neighborhood and Housing Development (ANHD) and Pratt Institute Center for Community & Environmental Development (PICCED).

Made possible by Independence Community Bank and Astoria Federal Savings.



March 1, 2004

The Community Environmental Center, Inc., Association for Neighborhood and Housing Development and Pratt Institute Center for Community & Environmental Development are sponsoring a 4-part workshop geared at Non-for profit Community Housing Developers. This workshop will address energy efficiency measures, green building design and renewable energy sources for new construction and rehabilitation of existing buildings. The workshop is made possible by Independence Community Bank and Astoria Federal Savings.

Who should attend: Community housing developers with their architects and engineers interested in improving the environmental performance of their new construction or rehab project.

The workshop will be broken down into four sections, each approximately two hours in length. It will thoroughly cover the best practices, materials, technologies, and applications of these measures, as well as the cost-effectiveness and how they will improve the efficiency of the buildings. The series will be held at the Stuyvesant Cove Learning Center, which can accommodate approximately 35 participants in a session. There will be shuttle transportation utilizing hybrid cars provided by CEC from subway station to Stuyvesant Cove Learning Center. Repeat sessions can be offered if there is wide interest in the workshop. The sections will cover Green Building, Energy Efficient design, Renewable and Alternative Energy technology, and Financing.

### **1. *Green Building***

You may have heard some of the buzz going around about “green buildings”. But what is a green building and why build green? This session will answer these questions and introduce participants to fundamental concepts of improving the environmental performance of projects, especially housing, in an urban context.

- Concepts of green design: energy efficiency, indoor air quality, local materials, storm water management, water efficiency and more...
- Introduction to the LEED (Leadership in Energy and Environmental Design) eco-label for buildings.
- Economics of green building – bottom-line pros and cons

### **2. *Energy Efficient Design and Gut Rehab***

This section will cover all standardized energy efficient gut rehab specifications designed by CEC for HPD. CEC will cover the different specification sections that were revised and show cost effectiveness of the energy efficient measures. We will discuss how this design can be utilized by NCG in their capital improvement plans. As a certified Energy Star partner and a member of the Building Performance Contractors Association, CEC will discuss Energy Star criteria for new housing developments. Specifications to be covered include:

- High efficient heating and distribution
- Building envelope improvements (cellulose insulation)
- Water measures (low-flow showerheads and faucet aerators)
- Energy efficient windows
- Lighting
- High efficiency gas heat
- Lighting, elevators and more.

### 3. *Renewable energy in your project*

Green building. This session will delve deeper into efficiency and renewable technologies appropriate for buildings in New York City.

- Solar electric and thermal generation.
- Fuel cells and micro turbines
- Building envelope improvements
- Geothermal heating and cooling

### 4. *Financing*

There are several State and Federal initiatives in support of environmentally friendly buildings. In this session, participants will learn about money and programs available to assist with a green project.

- NYSERDA's New Construction Program
- New York State Green building Tax Credit
- Federal incentives

**Training Schedule – May 4, May 18, June 1, June 15, 2004**

**Location: Stuyvesant Cove Learning Center  
23<sup>rd</sup> Street on the East River**

Directions

STUYVESANT COVE PARK-23<sup>RD</sup> STREET AND THE EAST RIVER  
6 train to 23<sup>rd</sup> Street and the M23 to Avenue C

**To Register, Please call Gregory Gaskin at (718) 784-1444 x 137**



## Green Building Materials and Methods

### Laying the foundation:

Because concrete has a sizeable environmental impact, foundation systems that use less of it, such as **High Volume Fly Ash Concrete** can be used as a replacement. The worldwide manufacture of Portland cement accounts for 6 to 7% of the CO<sub>2</sub> that humans produce, adding the greenhouse gas equivalent of 330 million cars driving 12,500 miles per year.

However, Fly ash, a by-product of coal-fired power plants, can be used in concrete in high volume (displacing more than 25% of the cement) to create a stronger, more durable product and reduce concrete's environmental impact.

<b>High Volume Fly Ash Concrete</b> Less energy intensive manufacture Higher ultimate strength More durable Uses a waste by-product Less global warming gases created	<b>Conventional Concrete</b> Energy intensive manufacture Weaker ultimate strength Less durable Uses virgin materials only More global warming gases created
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Having a well-insulated building envelope is crucial to creating an environmentally sound building. By minimizing heat transfer through the envelope, energy used to maintain the interior climate is similarly minimized, reducing both utility bills and the environmental costs of fossil fuel use.

**Cellulose Insulation** is made from recycled paper that is applied as either loose fill into attics and closed wall cavities or damp-sprayed into open wall cavities. Due to its recycled content and superior energy and acoustic performance, cellulose is a very environmentally-preferable product. Because of its method of installation, Cellulose seals all cavity spaces very effectively, greatly reducing air infiltration and sound transmission.

<b>Cellulose Insulation</b> High Recycled Content Not Harmful to Installer No Formaldehyde Binders Superior Acoustical Properties	<b>Conventional Insulation</b> Low Recycled Content Harmful to Installer Formaldehyde Binders Inferior Acoustical Properties
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Lumber use can be reduced by employing **Optimum Value Engineering (OVE)** framing techniques, these result in lower material and labor costs and improved energy performance for the building. The lumber's wood fiber can also be used more efficiently with **Engineered Lumber**. Specify **FSC-Certified Wood** to ensure that sustainable forestry practices were used to harvest the wood or **Reclaimed Wood** can also be used for many applications.

The Forest Stewardship Council (FSC) defines forest stewardship in a set of global Principles and Criteria. These Principles and Criteria, which apply to all forests worldwide, ensure that FSC-endorsed forests are managed in an ecologically sound, socially responsible and economically viable manner.” Specific standards are set regionally, and they can vary widely depending on the type of forest and the decisions of the regional body.

Despite the variety, all of the FSC standards are significantly less damaging than the vast majority of contemporary logging operations. In order to be certified, landowners must devise explicit management plans for maintaining ecological balance and log only within the limits of the forests' ability to grow back. Certifying agencies conduct annual inspections and audits of timber shipments to ensure that these businesses honor the guidelines.

<p><b>FSC-certified Forestry</b>  <b>Enhances biodiversity &amp; wildlife habitat</b>  <b>Requires monitoring of forest health</b>  <b>Respects Indigenous People’s Rights</b>  <b>Supports Community Relations and Workers’ Rights</b></p>	<p><b>Non-FSC-certified Forestry</b>  <b>Degrades habitat</b>  <b>Leads to monoculture</b>  <b>Permits massive clear-cuts</b>  <b>Allows widespread pesticide use</b></p>
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**Green Roof Systems** for low-slope roofs protect the roof membrane, help control stormwater, and help green our built environment through rooftop plantings. Green roofs, which are more common in Europe, can detain over 50% of rainwater from a typical storm. Stormwater detention reduces the often high loads placed on storm sewers after a rainfall. This is a particularly attractive system in urban areas that have combined sewer overflow (CSO) events during heavy storms. Multilayered green roof systems are thicker than conventional roofs. Space must be allocated for the usual insulation and roofing membranes, and additional structural support is typically required to carry the extra dead load. A green roof includes drainage, geotextile, soil, and vegetation layers. A thick sod of native grasses interspersed with wildflowers can be a wonderful architectural element, also helping to reduce building heat gain and urban heat island effect. Plantings also absorb CO2.

Other durable and energy efficient roof options include **Metal Roofing**—which is recyclable at the end of its life—and **Recycled Rubber Roofing**. Metal roofing, if properly installed, is highly durable and readily recyclable at the end of its useful life. The use of dissimilar metals for roofing, flashing, and fastening is not recommended because, in the presence of water, such metals are susceptible to galvanic corrosion. Metal is also a preferred material for roofs used in rainwater catchment systems. In northern climates, snow readily slides off metal roofs, avoiding the damage caused by ice dams.

**Interior:**

Flooring:

There are a number of commercially available options for flooring; some options are compared below:

<b>Green Products</b>	<b>Conventional Products</b>
<b>Bamboo Flooring</b> Mature fiber 3.5 to 7 years Reduces the need for virgin lumber	<b>Hardwood Flooring</b> Oak takes 120 years to grow to maturity Hardwood floors typically come from old-growth forests
<b>Cork Flooring</b> Made of Natural Ingredients Low Offgassing From Natural Oils Renewable and Biodegradable Long Lifespan	<b>Vinyl Flooring</b> Made of Synthetic Ingredients High Offgassing From Petroleum Distillates Non-Renewable and Non-Biodegradable Short Life Span
<b>Natural Linoleum</b> Made of Natural Ingredients Low Offgassing From Natural Oils Renewable and Biodegradable Long Life Span	<b>Vinyl Flooring</b> Made of Synthetic Ingredients Offgassing From Petroleum Distillates Production and Incineration Creates Dioxin Short Life Span
<b>Recycled-Content Ceramic Tiles</b> Less embodied energy Reuses a waste material	<b>Conventional Ceramic Tiles</b> More embodied energy Uses virgin materials

Paints:

Conventional paints contain a multitude of harmful chemicals and compounds that release into the atmosphere, affecting the health of people and the planet. These paints release Volatile Organic Compounds (VOCs), which are actually a class of carbon-based chemicals that have the capacity to rapidly evaporate. VOCs are responsible for the smells we associate with new paint and cause some people to get headaches. “Greener” paints contain fewer of these dangerous chemicals (such as formaldehyde, benzene, toluene, biocides, lead, and cadmium) while still providing very high performance paint qualities. “Green” paints are low-VOC, zero-VOC, recycled, or natural paints.

**Product Comparisons**

“Greener” Paints	Conventional Paints
Low/No VOC	High VOC
Less formaldehyde, fungicide, biocide	Formaldehyde, fungicide, biocide
Recycled	Virgin manufacture
Natural, plant-based	Petrochemical-based
Fewer odors	Strong odor

Windows:

Energy lost through inefficient windows, accounts for 9% of total residential energy consumption in the U.S. Because energy efficiency is a crucial component of sustainable design, the efficiency of a building's windows is a good indication of how green a building is.

<b>High Performance Windows</b>	<b>Conventional Windows</b>
Higher upfront cost and lower operating costs	Lower upfront cost and higher operating costs
Increased comfort in summer and winter	Less comfort in summer and winter
Potential to downsize or eliminate heating and cooling systems	Greater dependence on costly mechanical systems
Quieter rooms and less fading from UV light	High noise transmission and fabric fading

# **CITYSOL AND OTHER EVENTS**

### citysol and other events

In addition to our function as a green energy, arts and education center, Solar One also serves an important purpose in the community as a meeting place and center for events, lectures, workshops and more. Over the past three years, Solar One and the blacktop area have played host to a wide array of uses including: lectures on topics such as global warming, the New York waterfront and horseshoe crabs; workshops on fishing, composting, plant life and green design; an author's series; poetry readings; dance lessons; musical performances; circuses; a City Council candidates debate; a press conference for the launch of a Green Building Competition with EPA Region 2 and the NYC Department of Environmental Protection; and our two most recent endeavors, CitySol and *The Green Renter*.

CitySol was an all-day event featuring a solar music party, a green power sign-up drive and an ecodesign market held on Saturday, October 1, 2005. Solar One was joined by o2nyc, Bright Power, Compact Impact and ConEd Solutions as cohosts of the event which brought over 500 people to Stuyvesant Cove Park to connect with eco-friendly products and services from 24 different vendors and companies while listening to music powered by our solar power and enjoying sustainably produced food and beverages. 30 people signed up for Green Power from ConEd Solutions, while NYSERDA sold 160 compact fluorescent light bulbs. Part festival, part sustainable product marketplace, CitySol was a big success that will lay the groundwork for future events that will strive to reach a broad array of people from all over the City.

Meanwhile, beginning October 18, Solar One will host a weekly series of informative lectures entitled *The Green Renter*. Living an eco-friendly lifestyle in the urban environment presents challenges, pitfalls and opportunities that are unique to our one of a kind city. Luckily, practical, effective choices abound in the Big Apple. Guest experts will speak about a range of pertinent subjects, like measuring your ecological footprint; electronics recycling; carbon-neutral electricity options; eco-friendly furnishings and products; green voting; the power of local purchasing, and more.



CitySol



City Council candidates debate



EPA Competition announcement



The CitySol green product marketplace



24-20 FDR Drive Service Road East  
New York, NY 10010  
T 212.505.6050 F 212.253.2467  
www.solar1.org

### stats

**total events held:** 100+  
*for CitySol*

**participating vendors:** 24

**green power drive sign-ups:** 30

**partner organizations:** o2nyc, ConEd Solutions, Compact Impact, Bright Power, Brooklyn Brewery



# CitySol

**SOLAR 1, o2NYC & MAG PRESENT**

OCTOBER 1, 1pm-7pm  
at STUYVESANT COVE  
(E. 23rd st. on the East River)

## A FREE MUSIC EVENT

with: Matthias Heilbronn, Corey Baker, Cato, Marc-Alan Gray, Michael Hime, Romano Arcaini, Simon Garette, Zenon Marko, & Red Robot

## GREEN POWER DRIVE

CITYSOL & CONEDISON SOLUTIONS bring you NYC's 1st ever Green Power Sign Up Drive!  
BRING AN ELECTRICITY BILL...  
sign up for green power ... DRINK FREE  
BROOKLYN BREWERY BEER ALL DAY  
+ RECEIVE FREE GREEN GOODS

## & GREEN PRODUCT FAIR

A market and showcase of some of NYC's favorite sustainable products, retailers, & designers

ORGANIZERS



BRIGHT POWER

SPONSORS



GREEN PRINTING



CONTACT: 212 505 6050; neidl@solar1.org

design by Rebecca Silver bi@o2nyc.org



# The Green Renter

Doing right by the Earth in  
the world's greatest city.

A FREE WORKSHOP  
SERIES  
PRESENTED BY

**SOLAR**one

Tuesdays, 7pm

Stuyvesant Cove Park  
E. 23<sup>rd</sup> St and the East River  
(East of the FDR Drive)

L Train to 1<sup>st</sup> Ave  
6 Train to 23<sup>rd</sup> St.

For More Information Contact:  
212 505 6050, [neidl@solar1.org](mailto:neidl@solar1.org)

10/18: MEASURING YOUR  
ECOLOGICAL FOOTPRINT  
Chris Neidl, Solar One

10/25: COMMUNITY SUPPORTED  
AGRICULTURE (CSA) IN NYC.  
Paula Lukatz, Just Food

11/1: GREENING THE GRID:  
BUYING WIND POWER FOR  
YOUR APARTMENT.  
Mike Forese, New Wind Energy

11/15: THE POWER OF LOCAL  
PURCHASING.  
Jen Roth, New York Industrial Retention  
Network



**SOLARone**

GREEN ENERGY, ARTS  
& EDUCATION CENTER

# **EXHIBIT B**

## **SAMPLE POSTCARD AND LIST OF PETITIONERS**

FRONT



# SOLARone

## GREEN ENERGY, ARTS & EDUCATION CENTER

To: Governor George E. Pataki,  
N.Y. State Public Service Commissioners:

I recently attended Solar One's Solar-Powered Arts Festival and received information about **Solar 2**, a fascinating plan to build **New York State's first Environmental Museum and Learning Center**. In a form true to our city and state's unique and dynamic spirit, Solar 2's net-zero energy design would serve as a built testament to the potential of ingenuity and innovation to address the most pressing environmental and resource challenges of our time.

New York should provide global leadership in the technical quest to achieve big city sustainability. I firmly believe that Solar 2 represents a powerful opportunity to initiate such a vision, and therefore urge the Public

Service Commission to support its programming and construction through the Systems Benefit Charge 3.

Sincerely,

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Phone (optional): \_\_\_\_\_

*front: architect's rendering of Solar 2 (Kiss + Cathcart)*

BACK

**Solar One Petitioners List**  
**Submitted to NYS Public Service Commission**  
**October 17, 2005**

Jamie Paquette Brooklyn, NY	Judy Kurzer New York, NY	Ben Brandow
Cynthia Ozersky	Maria Sepcich New York, NY	Steven Weinstein Brooklyn, NY
Marty Klien New York, NY	Sewell Chan New York, NY	Judy Cramer NYC, NY
Danielle Burger Astoria, NY	Mary Anne Eves Media, PA	Lawrence Frommer New York, NY
Robert Buchan	Max Joel Astoria, NY	John Napolitano New York, NY
Lawren McNulty Brooklyn, NY	Rich Lovejoy New York, NY	Leslie Roeder New York, NY
Abby Kelly Brooklyn, NY	Tina Carr New York, NY	Cynthia Fetty New York, NY
George Kokkinidiz Norwalk, CT	David Glickman	Liz Shea Brooklyn, NY
Kelly Steinlage Brooklyn, NY	Marco Carag Brooklyn, NY	Carola Burroughs Brooklyn, NY
Jeremy Davis	Emil Kozerawski	Vibe Clausen
Leon Erlanger New York, NY	Marvin Lipper New York, NY	Theresa Rodrigues Astoria, NY
Patty Arnold New York, NY	Bebeth Villacean	Stuart Chalen Long Island City, NY
Brian Conningham	Nastasha Cline-Thomas Scarsdale, NY	Peter Smith New York, NY
Ren Rukerich New York, NY	Trey Webster New York, NY	Brittany Pixton
Hilary Prager	Chirs Roddy	Nora Mandel
Tracey Minkin	Sue Oppenheimer	Franco Vega New York, NY
Kate Brinkerholff	Carol Kolinger Bayside, NY	Avi Silber
Tom Nonnon New York, NY	Elaine Herscher New York, NY	Bonnie Lane Webber New York, NY
Sheila Reenarn New York, NY	Hillary Exter	Slaney Ross

Sharon Shemesh New York, NY	Laila Thatbet New York, NY	Julie Lawrence
Rene Zaharkiu New York, NY	Harriet Ater New York, NY	Noah Sharipo New York, NY
Sara Toff	Susie Tofte	Dov Nowak
Kevin Byrne	Hans Kulleseid Brooklyn, NY	Michael Ginaulh New York, NY
Johnathan Martin New York, NY	Brian Sabbats New York, NY	WPM Gonzalez Brooklyn, NY
Alex Marks Brooklyn, NY	Dorothy Rubinovitz New York, NY	Becky Potts New York, NY
Blake Hunnewell New York, NY	Laura Morris	Matt Vituwe New York, NY
Bos Vitrwe New York, NY	David Cook New York, NY	Towog Dino
Kevin Bakry New York, NY	Marcella Durand	Elaine Shipman New York, NY
Veronica Cordina New York, NY	Sarina Armin	Beth Gibbons Philadelphia, PA
Benjamin Persky Brooklyn, NY	Tamir Novotny	Joanna Mckenzie
D Knutson	Greg Stepes	Jennifer Mandez
Anne Bussen	Beverly Abebogun New York, NY	Jackie Hinsly South Orange, NJ
Lois Stunm New York, NY	Clint Phippi Brooklyn, NY	Denise Lalandi Brooklyn, NY
Raymond Scharin New York, NY	Hans & Gloria Gesell Englewood Ciffs, NJ	Dave Nimmons Brooklyn, NY
Matt Sharp Brooklyn, NY	Amy Harns New York, NY	Ken Cerniglia New York, NY
Elisa Goldberg New York, NY	Don Dodelsson New York, NY	Herb Silver New York, NY
Beth Lombodih New York, NY	Anthony Obilade Brooklyn, NY	Jazm Pocusrs Brooklyn, NY
Peggy Kelly Brooklyn, NY	JoAnn Fynke New York, NY	Peter Schmitz Brooklyn, NY

Sean Hokins Blairstown, NJ	Ben Brouwer Lopez Island, WA	Kathleen Kelly
Pamela Vail Lancaster, PA	Julia Basso Marlton, NJ	Amy Chavasse Brandson, VT
Lisa Gonzales Lancaster, PA	Jennifer Kayle Lancaster, PA	Ian Umeda
Tina Lois	Wendy Frank	Barbara Ann
David Scouk	Jon Guson New York, NY	Allison Prete Brooklyn, NY
L Reilly Fleischmanns, NY	Hana Daskaaki	Hellen Gallagher New York, NY
Anne Meronans New York, NY	Kevin Cluppondo	Jane Borkon New York, NY
Frances Gallo New York, NY	Joseph Rutkowsli New York, NY	Nicolette Strauss New York, NY
Dennis Gawrys New York, NY	Irene Aizstraits New York, NY	Ruthy Effler New York, NY
Anne Emerman New York, NY	Anne Ferril New York, NY	Philip Mccaffrey New York, NY
Betty Sheardson New York, NY	Patricia Marrin New York, NY	Kevin Chuapodos
Jane Borkow	Ashley Evan	Arthur Epspen New York, NY
Matthew Monzon New York, NY	Allan Yashn New York, NY	Stephen Braswell Brooklyn, NY
Marisa Monzon Arcata, CA	Lisa Jeallimzc New York, NY	Arnold Horton New York, NY
M Orracia Roosevelt Island, NY	Esther Scheciltman New York, NY	Elileen Hughes Pelham, NY
B.E Spandoff New York, NY	Rochelle Blank Fairlawn, NJ	Kimberly Huntington New York, NY
Leda Scheintaub New York, NY	Hsing Wei	Henry Beer New York, NY
Douglas Perre New York, NY	Joan Fitzgerald New York, NY	Abby Linne Brooklyn, NY
Grant Captianian New York, NY	Lori Hatem Kew Gardens, NY	Ruth Powell New York, NY
James New York, NY	Ralph Beate	Jeffrey Nelson New York, NY

Alisan Lew Brooklyn, NY	Wonovan New York, NY	Harriet Alter New York, NY
Rena Cohen NY, NY	Charles Vereen Bronx, NY	Spencer Aste New York, NY
Barbara Gilbert Brooklyn, NY	David Juham	Jimbo Blachly New York, NY
Sam Slous New York, NY	Anand Ramaswomy	Rosela Moseng Brooklyn, NY
Jacquelyn Moorad New York, NY	Carolyn Hsu Brooklyn, NY	Jason Meyer New York, NY
Triay Tere New York, NY	Dave Cohen New York, NY	Rebecca Joy New York, NY
Guorgo Nelson New York, NY	Juliet Dickey New York, NY	Elizabeth Johnson Brooklyn, NY
John Zweibel Miami, FL	Marcy Einhorn New York, NY	Elizabeth Panzer New York, NY
Christine Resta New York, NY	Robert Gordon New York, NY	Betsy Brody New York, NY
Allison Russell New York, NY	Ben Davis New York, NY	David Covell New York, NY
Terry Wittenberg Oak Park, IL	Todd Hartnett Oakland, CA	Bernice Hartnett Marblehead, MA
Sandra Blank New York, NY	Howard Frank Yorktown, NY	Johannes Familton New York, NY
Lynn Vaag New York, NY	Lauren Panzo New York, NY	Susan Brennun New York, NY
Victoria Gershik Brooklyn, NY	Simion Ostrorsky Brooklyn, NY	Juliet Gamarci Brooklyn, NY
Shawne Cooper New York, NY	Diana Bronshteyn Brooklyn, NY	Phillip Wilk New York, NY
Gregor Tsuker	Carol Cherry Larchmont, NY	Eric Hurst New York, NY
Robert Monica Brooklyn, NY	Sara Fink New York, NY	Marie Lunau New Milford, NJ
Warren Chow New York, NY	Bajir Cannon Brooklyn, NY	Myra Batchelder New York, NY
Charlie Kraybill Bronx, NY	JoAnn Polise NY, NY	Michael Dupin New York, NY
Nicola Majocchi New York, NY	Caitlin Harris New York, NY	Isabelle Edwards Los Angeles, CA

Alice Hartley Brooklyn, NY	Aika Nakashima New York, NY	Elizabeth Nelson New York, NY
Jon Bxanew Brooklyn, NY	Brenda Withers Astoria, NY	Marc Balgavy Brooklyn, NY
Ana Radoric	Caleb Cliff Brooklyn, NY	Peter Collins New York, NY
Miriam Applebaum New York, NY	Jolene Poydar Brooklyn, NY	Ethelena Persons Brooklyn, NY
Carlos Garica Coral Gables, FL	Muir Brooklyn, NY	David Geccos New York, NY
Vasu Panicker New York, NY	Jennifer Glenn	Angela Campijott Brooklyn, NY
Bill Roundy Brooklyn, NY	Lula Blackwell Brooklyn, NY	Cassandra Kassell New York, NY
Tom Bently New York, NY	Matthew Dilvancesco Brooklyn, NY	Oliver Kramer New York, NY
Barbara Garcia Coral Gables, FL	K Diggan New York, NY	Joanne Canary East Hampton, NY
Nelly Mercer Jamaica, NY	Gerald Charles New Rochelle, NY	Thania Acaron Brooklyn, NY
Kristin Taylor New York, NY	Roderick George Purchase, NY	Helen Wade New York, NY
W.T. Chan New York, NY	Agatha Scauzzo New York, NY	Ken Graham New York, NY
Ines Graham New York, NY	Akemi Tomizawa New York, NY	Rose Picariello New York, NY
Jeanne Harroo New York, NY	Mary George Brooklyn, NY	Clara Fay New York, NY
Helen Flanagan New York, NY	Aime Vipond New York, NY	Esta Samiljan New York, NY
Maureen Flynn-Hart Kansas City, MO	Cordelia Persen New York, NY	F Kennedy New York, NY
Rachel Fershleiser New York, NY	Marvin Hidalgo Hollis Hills, NY	Geoff Hockert New York, NY
Bryan Dailey Brooklyn, NY	Samina Iqbal New York, NY	Irene Boland New York, NY
Erik Brown New York, NY	Bradley Goodman New York, NY	Ernest Matsukawa New York, NY
Aaron O'Connor Brooklyn, NY	Donald Dodelson Long Island City, NY	Susana Rodriguez New York, NY

Michelle DeBlasi Jersey City, NJ	D Mossa New York, NY	Peter Talavico Irvington, NY
Wendy Talavico Irvington, NY	Melissa Wild Brooklyn, NY	Aurora Ocampo New York, NY
Maxine Siegel New York, NY	Vivian Logan New York, NY	Arthur Silverman New York, NY
Dawn Ford New York, NY	Sandra Seymour New York, NY	Josh Wheaton New York, NY
Dina Fragale New York, NY	Todd Tarhon New York, NY	Susan Robins New York, NY
Ana Huertos New York, NY	David Schmidlopp New York, NY	P Ehlen Brooklyn, NY
Vasso Kampiti New York, NY	Celine Ruben-Salama New York, NY	Sara Rothstein Brooklyn, NY
Amy Ryan New York, NY	Eddie Mullins Brooklyn, NY	Katherine Pangaro Brooklyn, NY
Lodge Kerrigan New York, NY	Carol Isaacman New York, NY	Heidi Reinberg Brooklyn, NY
Jane Kopelman New Windsor, NY	Heath Allen New York, NY	T Maniaci Brooklyn, NY
Rob Kaarto Branchville, NJ	Adam Lippman Westport, CT	A Lelievre New York, NY
Isaac Amham New York, NY	James Conklin Valley Cottage, NY	Dorothy Jeffries New York, NY
Lawrence Schyer New York, NY	Suzanne Carlsen Toronto, ON	Kate Brokaw New York, NY
Yuko Inayaki Brooklyn, NY	Catherine Gund New York, NY	Curt Shepard New York, NY
Tenzin Grand-Morrow New York, NY	B Morrow New York, NY	Melissa Meece Brooklyn, NY
Neil Daly Astoria, NY	Ross Guberman Brooklyn, NY	Ebon Moss-Bachrach Brooklyn, NY
Greg Masters New York, NY	Gary Winter Brooklyn, NY	Hieu Trinh New York, NY
Michelle Blum New York, NY	Kimberly Engber Long Island City, NY	Elisa Zazzera New York, NY
James Bell Brooklyn, NY	Nicole Williams New York, NY	Jeff Schiller New York, NY
Kyle McCabe Brooklyn, NY	Daniela Erle Brooklyn, NY	Betsy Mpartland New York, NY

Margaret Cummins  
New York, NY

Kira Moskalionova  
Brooklyn, NY

Alex Zhormitskiy  
Brooklyn, NY

Aaron Kenedi  
New York, NY

Irene Shea  
New York, NY

Margaret Kubek  
New York, NY

Kurt Christenson  
New York, NY

N Lane  
New York, NY

Lucian Wielopolski  
Ridge, NY

Michele Anoroso  
Flushing, NY

Jennifer Weiss  
New York, NY

Stella Strombolis  
New York, NY

Daniel Hobbs  
New York, NY

James Burtis  
Hastings, NY

Carla Aspenberg  
New York, NY

Alex Johnson  
Brooklyn, NY

Stephanie Herman  
New York, NY

Jeff McHugh  
New York, NY

Angie Gatti  
New York, NY

Todd Zwigard  
New York, NY

Mark Danser  
Kew Gardens, NY

Carla Grillman  
New York, NY

Marco Williamson  
Bronx, NY

Sam Burtis  
Hastings, NY

Belinda Hakansson  
Brooklyn, NY

Jamie Bixby  
New York, NY

Diana Zuluaga  
New York, NY

Kristina Nilsson  
New York, NY

Kaya Wielopolski  
Astoria, NY

Phyllis Eisner  
New York, NY

Netta Cocos  
New York, NY

Dolores Kestler  
New York, NY

Lillian Filmbru  
New York, NY

James  
New York, NY

Barb Vali  
New York, NY

Jeremy Avnet  
New York, NY

Shannon Holman  
Brooklyn, NY

Daniel Bobek  
Long Beach, NY

Dan Raphael  
Brooklyn, NY

Marianna Orensliteyn  
New York, NY

Matthew Fischesser  
New York, NY

Franco Marinaro  
Brooklyn, NY

Beth Kaiser  
New York, NY

Lily Maass

Amylin Loglisci  
Brooklyn, NY

Darcey Levendis  
New York, NY

Andrea Keefe  
Brooklyn, NY

S Parker  
New York, NY

Heather Oakley  
Brooklyn, NY

Amanda Kopf  
New York, NY

Christian Lahoude  
New York, NY

Julie Spooner  
New York, NY

Robert Foster  
Hoboken, NJ

PAula Wright  
Brooklyn, NY

Frederico Meyer  
New York, NY

G Magerl  
New York, NY

Givenno James  
New York, NY

Andrea Hessel  
New York, NY

Ary Bobron  
Brooklyn, NY

Masa Hosojima  
New York, NY

Erik Buichi Sao Paulo,	Glenn Gatti New York, NY	Onur Gucukoglu Brooklyn, NY
Nick Diminno Brooklyn, NY	Elizabeth Uoder New York, NY	M Leytes
Linda Summers New York, NY	Patrick McShane Fresh Meadows, NY	Josh Moise Brooklyn, NY
Parvez Sharma New York, NY	Peter Friedman New York, NY	Long Island City, NY
Elisa Zazzera NYC, NY	Susan Zwirn New York, NY	Lauren Snelling New York, NY
Adam Ristow New York, NY	Jayn Panicker New York, NY	Rema Venu New York, NY
Jawb Robinson Brooklyn, NY	Dave Duran New York, NY	Joshua Moskovitz Brooklyn, NY
Veronica Carnero Brooklyn, NY	Amara Smith Brooklyn, NY	Amy Jordan New York, NY
Alicia Murphy Forest Hills, NY	Jeff Crumrine Brooklyn, NY	Alum Phillips New York, NY
Brooke Phillips New York, NY	Molly Merkler Brooklyn, NY	Jordan Marinov Astoria, NY
Joe Ryan Brooklyn, NY	Sarah Robinson Brooklyn, NY	Nick Scott Brooklyn, NY
Dana Iovacchini Hana, HI	Isabella Bruno New York, NY	Van Scott Brooklyn, NY
Monica Clark Brooklyn, NY	Douglas Dunn New York, NY	Erin Pride Paterson, NJ
Caroline Banks Lyndhurst, NJ	Joan Coddington New York, NY	Andy Mayberry New York, NY
Linda Diamond New York, NY	Jessica Schein New York, NY	Ronah Sadan Jersey City, NJ
Hagar Sadan Jersey City, NJ	Josh Saltzman Jersey City, NJ	Ann Marie Salmon New York, NY
Eliza Axelson-Chidsey Brooklyn, NY	Josh Heitler Hastings, NY	Carl Martinez New York, NY
Lee Muslin New York, NY	Ali Linthicum Brooklyn, NY	L. Ortiz Brooklyn, NY
J. Wright Cooper Station, NY	Flannery Houston New York, NY	Lynne Schlesinger Yonkers, NY
Mana Adler New York, NY	Xl. Moyer East Rockaway, NY	Jon Meyer East Rockaway, NY

Addy	Arthur Nay New York, NY	Corey Gosselin Astoria, NY
Christie Zummo Wheatley Heights, NY	Alex Sikoscow Scarsdale, NY	Michael Meade Brooklyn, NY
Allison Meade Brooklyn, NY	Keri Marcovici New York, NY	Jene Youtt New York, NY
Baraka de Soleil Brooklyn, NY	Delano Jn-Pierre Brooklyn, NY	Kyle Pitts New York, NY
Dennis Gault New York, NY	Yachiyo Gault New York, NY	Lainie Dalby New York, NY
Cecilia Lam New York, NY	Ashley Benninghoff New York, NY	Patty Montesi Jersey City, NJ
Jeanette B. Nyabu New York, NY	Gia Neswald Brooklyn, NY	Brenda Sanders-Garrett Brooklyn, NY
Rebecca Stemton New York, NY	Peter Adrian Brooklyn, NY	S. L. Schwartz New York, NY
Joselyn Matos Sunnyside, NY	Karie Kinchelse New York, NY	D. Ashworth New York, NY
Constance Jackson Brooklyn, NY	Leah Moskowitz Brooklyn, NY	L. Bolitzen New York, NY
Nolini Barretto New York, NY	Tanya Rullan Bronx, NY	Kathy Feuerstein New York, NY
Karen Coughlin New York, NY	Allen Lun Brooklyn, NY	Laurie La Rose Brooklyn, NY
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Bauj Sucow New York, NY	Deana Aeheson Brooklyn, NY	Jennifer Lafferty New York, NY
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May Page New York, NY	Adam Scher New York, NY	Pascal Rekoert New York, NY

Kate Atherton Brooklyn, NY	Lindsay Fisher New York, NY	Doris Stoeffel New York, NY
Christal Brown Bronx, NY	Paloma McGregor Brooklyn, NY	Charlie Garb New York, NY
Jill Slater New York, NY	Rory O'Flaherty New York, NY	Jennifer Daly Brooklyn, NY
Brian Hires Brooklyn, NY	Rosi Rosenblatt New York, NY	Ruth Rosenblatt New York, NY
Bernard Rosenblatt Flushing, NY	Tim Rhone New York, NY	Steve Muzzy Brooklyn, NY
Maya Agarwal New York, NY	Michael Kulp New York, NY	Karen Sivigwp New York, NY
March Chadwick New York, NY	Mary Seele New York, NY	Brendan Mack Brooklyn, NY
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Evan Humphreys Hampton Bays, NY	Kelly Webb Water Mill, NY	Andrew Feinman Brooklyn, NY
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Denis Golden New York, NY	Susan Fischer New York, NY	Irex Tar New York, NY
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Linda McDonald Brooklyn, NY	Emilio Dez Villar Yonkers, NY	Jorge Guengue Jersey City, NJ
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Sam Somwaru Jamaica, NY	June O'Garro Brooklyn, NY	Felicity Arengo Cortlandt Manor, NY
Jeff Mandelbaum Brooklyn, NY	Andy Ball New York, NY	Marini Sur New York, NY

Dorothy Rocco New York, NY	Sean Hoskins Blairstown, NJ	Alicia Sells New York, NY
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Jose Olivo Bronx, NY	Egberto Fernandez New York, NY	Zak Laurel Brooklyn, NY
Chris Evjy Brooklyn, NY	Kendra Henmig New York, NY	Hannelove Breuer New York, NY
Ingred Herrmada Williston Park, NY	Lucy Knopf New York, NY	Sharmili Basu
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Merle Greig Brooklyn, NY	Trevor Tewar Far Rockaway, NY	Wildes Ani
Nyheen Fergso	Eddy Menuau New York, NY	Nancy Ford New York, NY
Engeline Kok New York, NY	Lisa Albers New York, NY	Aileen Gribben New York, NY
M.A. Tockarshewsky Flushing, NY	Kelly Cox New York, NY	Lucas Layacre New York, NY
Gregory Zhock 4th Street Brooklyn Way, NY	Jim Rogers New York, NY	Deb Silver New York, NY
Gay Fast Taft New York, NY	Bob Fidlow New York, NY	Randy Blackner New York, NY
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Rachel Vassar New York, NY	Natalie Washuta New York, NY	Kelly Cielensky New York, NY
Carolina Alexander New York, NY	Carol Barocas New York, NY	Bryan Schneider
Christine Scafa Princeton JCT, NJ	Ashley Phelan New York, NY	Michael Pierce

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New York, NY

Hancock  
New York, NY

Andrew Oawes  
New York, NY

Bernice Haber  
New York, NY

Jean Langhaws  
New York, NY

Dave Nimmons  
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Clara Reiss  
New York, NY

Kelly Steinlage  
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Jessica Siegal  
New York, NY

Stacy Abraham

Carol Wilson  
New York, NY

Alexmora Feris  
New York, NY

Betty Cooney

Jennifer Wilson  
New York, NY

Susan Snyder  
New York, NY

Jason Gross  
New York, NY

Dianna Mars  
Yonkers, NY

Azure Carter  
Brooklyn, NY

Miranda Lyon  
Brooklyn, NY

Yadigar Coskun

Tony Rodriguez  
Bronx, NY

Judith Goldwater  
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Cameron Cole

Carolina Priebe  
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J. Amon  
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Shiao Wang

Paul Hunt  
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Naomi Silberstein  
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New York, NY

Kakee Scott  
Brooklyn, NY

Jayna Gventi  
New York, NY

Helen Frank  
Brooklyn, NY

Wendy Byrne  
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Robert Simpson  
Wayne, NJ

Brent Baker  
New York, NY

Luke Felisbret  
New York, NY

Chris Zelov  
New York, NY

Amanda Daly  
Brooklyn, NY

Jenny Hwa  
New York, NY

Abby Roesch  
New York, NY

Jan Rosenberg  
Brooklyn, NY

Roger Hailes  
New York, NY

Marvin Marcus  
Brooklyn, NY

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Udita Khinvasala

Azure Carter  
Brooklyn, NY

Chevon Stewart  
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Rita Steinhardt  
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Black Robb

Joel Johnson Brooklyn, NY	Marton New York, NY	Jonah Ching New York, NY
Dilele Hancioglu	Jen Hwang Brooklyn, NY	Justin Shockley
Ellen Levin New York, NY	Chris Fowle New York, NY	Shirin Soltani New York, NY
Vasili Gavre Brooklyn, NY	Evan O'Brien New Paltz, NY	Chrn Fom New York, NY
Caroun Crtia New York, NY	Karen Steele Astoria, NY	Socorro Cordova New York, NY
Diane Rosner New York, NY	Nelson Pereyre Brooklyn, NY	Skip Borowiec New York, NY
Ann Eagan Sunnydale, NY	Sally Potenza New York, NY	James Subudhi New York, NY
George Calderaro New York, NY	Mike Mash Greenburg, PA	Sarah Homeijer New York, NY
M. Homeijer New York, NY	Stacey Taylor New York, NY	Jesika Homeyer New York, NY
Penelope Josephids New York, NY	Ehud Tal New York, NY	Dean Zias Bayside, NY
Christina Cobb New York, NY	Michael Rieser Brooklyn, NY	Dan Miner Jackson Hts, NY
Anne Pope Brooklyn, NY	Susan Wolfe New York, NY	Mary Collins New York, NY
Stephen Colter New York, NY	Lauren Snelling New York, NY	Steven Goldstone New York, NY
Shaun Stewart New York, NY	Emily Dunn New York, NY	Jeremy Eagle New York, NY
Anne Yen Astoria, NY	Vanessa Roe Brooklyn, NY	Pamela Timmins New York, NY
Regina DeSimone Bayshore, NY	Vicko D. Brooklyn, NY	Jeffrey Cooper Brooklyn, NY
Reggie Johnson Bronx, NY	Roy Arezzo Brooklyn, NY	Katie DeLaney New York, NY
Dan Kassell	Raymond Hernandez New York, NY	Edith Selio New York, NY
Rupert Dezyz City Island, NY	Lisa Smith New York, NY	Greg Hasselink New York, NY
Sudney Krumholz New York, NY	Max Henny New York, NY	James Rose New York, NY

Julia Prosser  
New York, NY

Amanda Rogers  
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Lisa Kim  
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Ed Scerbo  
Peekskill, NY

Melissa Everette  
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Laura Stockstill  
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New York, NY

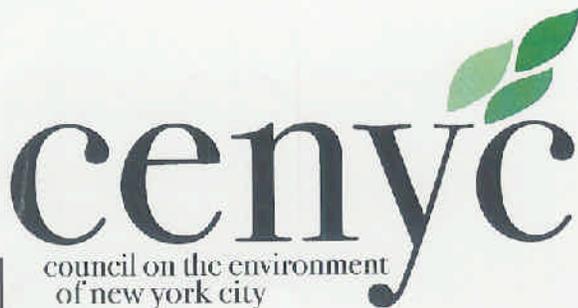


**SOLAR**one

GREEN ENERGY, ARTS  
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# **EXHIBIT C**

## **LETTERS OF SUPPORT**



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council on the environment  
of new york city

September 20, 2005

Hon. William M. Flynn  
Public Service Commission Chairman  
Empire State Plaza  
Agency Building 3  
Albany, NY 12223-1350

Dear Mr. Flynn:

I received information about Solar 2, a fascinating and timely plan to build New York State's first Green Energy and Education Museum. In a form true to our city and state's unique and dynamic spirit, Solar 2's net-zero energy design would serve as a built testament to the potential of ingenuity and innovation to address the most pressing environmental and resource challenges of our time.

CENYC staff has taken classes from the High School for Environmental Studies (HSES) to the Solar 1 classroom by the Green Energy Arts and Education Center. The HSES teens learned a great deal from the experience and applied the concepts, information and materials to their classroom work. If Solar 2 is as good as Solar 1 then it will be a significant addition to environmental education in New York.

New York should provide global leadership in the technical quest to achieve big city sustainability. I firmly believe that Solar 2 represents a powerful opportunity to initiate such a vision, and therefore urge the Public Service Commission to support its programming and construction through the Systems Benefit Charge 3.

Sincerely,

Michael Zamm  
Director of Environmental Education

51 chambers street, room 228, new york, new york 10007  
tel: 212.788.7900 fax: 212.788.7913 www.cenyc.org

\* Honorary



LOWER EASTSIDE ECOLOGY CENTER

oreinc@earthlink.net

OUTSTANDING RENEWAL ENTERPRISES, INC.

P.O. Box 20488 • New York, NY 10009 • tel 212 477-4022 • FAX 212 420-0621

September 15, 2005

Hon. William M. Flynn  
Chair  
Public Service Commission  
Empire State Plaza  
Agency Building 3  
Albany, NY 12223-1350

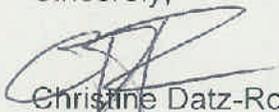
Dear Mr. Flynn:

I would like to urge you to consider providing funding for Solar 2, an innovative plan to build New York State's first Green Energy and Education Museum. I understand that Solar 2 is planned as a net-zero energy design, which would serve as a publicly accessible resource to showcase designs that we clearly need to champion at this point in time.

Located at the East River in Stuyvesant Cove, the Museum will provide a model for sustainable design in an urban setting. As you might be aware, New York City needs to generate 20% of its power use within its city limits, which translates into power plants being sited in minority communities and often times on our waterfront. These power-plants can have many negative impacts on the surrounding neighborhoods and the surface waters. It is fitting that Solar 2 will be located at the banks of the East River to showcase that conservation and smart design can address this unfortunate dynamic in a sustainable way.

The current Solar I is one of our project partners in our ongoing environmental education programs, and we currently collaborate with Solar I to bring environmental education that will foster stewardship for the natural resources of New York City. The creation of Solar 2 would allow us to carry this objective to another level and we strongly urge the Public Service Commission to consider this project as one of your top priorities through the Systems Benefit Charge 3 program.

Sincerely,



Christine Datz-Romero  
Director

Brooklyn Center  
for the  
Urban Environment



Tennis House  
Prospect Park  
Brooklyn, NY  
11215-9992

T 718.788.8500  
F 718.499.3750  
W www.bcue.org

September 16, 2005

Honorable William M. Flynn  
Public Service Commission Chairman  
Empire State Plaza  
Agency Building 3  
Albany, NY 12223-1350

Dear Chairman Flynn,

I received information about Solar 2, a fascinating and timely plan to build New York State's first Green Energy and Education Museum. In a form true to our city and state's unique and dynamic spirit, Solar 2's net-zero energy design would serve as a built testament to the potential of ingenuity and innovation to address the most pressing environmental and resource challenges of our time.

New York should provide global leadership in the technical quest to achieve big city sustainability. I firmly believe that Solar 2 represents a powerful opportunity to initiate such a vision, and therefore urge the Public Service Commission to support its programming and construction through the Systems Benefit Charge 3.

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Executive Director



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(718) 552-1161 (fax: -1191)  
[rkoral@citytech.cuny.edu](mailto:rkoral@citytech.cuny.edu)

## Superintendents Technical Association, Inc.

*Also known as "The Supers Club"*

*A technical society of multifamily building maintenance personnel*

September 8, 2005

Hon. William Flynn, Chairman  
Public Service Commission  
Empire State Plaza, Agency Building 3  
Albany NY 12223-1350

Dear Mr. Flynn:

I received information about Solar 2, a fascinating and timely plan to build New York State's first Green Energy and Education Museum. In a form true to our city and state's unique and dynamic spirit, Solar 2's net-zero energy design would serve as a built testament to the potential of ingenuity and innovation to address the most pressing environmental and resource challenges of our time.

New York should provide global leadership in the technical quest to achieve big city sustainability. I firmly believe that Solar 2 represents a powerful opportunity to initiate such a vision and therefore urge the Public Service Commission to support its programming and construction through the Systems Benefit Charge 3.

Sincerely,

Dick Koral  
Secretary-Treasurer



**Earth Day  
New York**

October 7, 2005

Governor George E. Pataki  
State Capitol  
Albany, NY 12224

cc: Hon. William M. Flynn  
Public Service Commission Chairman  
Empire State Plaza  
Agency Building 3  
Albany, NY 12223-1350)

Dear Governor Pataki,

I would like to express my strong support for Solar 2, New York State's first Green Energy and Education Museum. We have worked for several years with the leadership of the organization and I am confident in their ability to effectively utilize state support to reach many New Yorkers with a clear message about the viability of environmental energy technologies. It is important to demonstrate in "bricks and mortar" that there are new approaches to the seemingly intractable resource challenges of our time. Solar 2's net-zero energy design would serve as a built testament to the potential of "clean and green" ingenuity and innovation.

New York is already providing global leadership in the technical quest to achieve big city sustainability but we could definitely do more. Solar 2 represents a great opportunity to expand New York State's role in demonstrating a new approach for the future. We hope the Public Service Commission will find a way to encourage Solar 2's programming and construction through the Systems Benefit Charge 3.

Sincerely,

Pamela Lippe  
Executive Director

September 22, 2005

Hon. William M. Flynn  
Public Service Commission Chairman  
Empire State Plaza  
Agency Building 3  
Albany, NY 12223

Dear Hon. Flynn:

I received information about Solar 2, a fascinating and timely plan to build New York State's first Green Energy, Arts and Education Museum. In a form true to our city and state's unique and dynamic spirit, Solar 2's net-zero energy design would serve as a built testament to the potential of ingenuity and innovation to address the most pressing environmental and resource challenges of our time.

As a small business owner in NYC's fledgling clean energy industry, I know first-hand how valuable a resource Solar 2 will be for our city, our state and the world.

New York should provide global leadership in the technical quest to achieve big city sustainability. I firmly believe that Solar 2 represents a powerful opportunity to initiate such a vision, and therefore urge the Public Service Commission to support its programming and construction through the Systems Benefit Charge 3.

Sincerely,



Jeff Perlman  
President  
Bright Power, Inc.



**New York State Department of Public Service**  
3 Empire State Plaza  
Albany, New York 12223-1350

**NYSERDA**  
17 Columbia Circle  
Albany, NY 12203-6399

To whom it may concern:

This letter confirms our school's partnership with CEC Stuyvesant Cove, Inc. My students from the United Nations International School have participated in Stuyvesant Cove Park's environmental education lessons and initiatives over the last year. I plan to continue using this program and facility in my future classes.

This program adds significant benefits to students through an expanded understanding of their local environment, the demonstration of alternative energy sources and the chance to participate in hands-on lessons. The classes at Stuyvesant Cove challenge my students to consider the choices that they and their families make in their day-to-day lives and how those choices impact the world around them. These lessons have helped my students become more environmentally aware urban residents; especially in regard to the energy they use everyday.

I am very pleased with this program and feel that my students are lucky to be exposed to a broader spectrum of science and technology than they might otherwise have a chance to learn about and I look forward to our continuing partnership as the project continues to grow and develop.

Sincerely,

A handwritten signature in cursive script that reads "Linda Miglierina".

Linda Miglierina (Classroom Teacher)

A handwritten signature in cursive script that reads "Chris Muller".

Chris Muller (Middle School Principal)



## METROPOLITAN WATERFRONT ALLIANCE

September 14, 2005

Governor George E. Pataki  
State Capitol  
Albany, NY 12224

Dear Commissioner Pataki,

I am writing in strong support of applying funds from the Systems Benefit Charge 3 to the creation of Solar 2 at Stuyvesant Cove, New York State's first Environmental Museum and Learning Center.

Solar 1 exceeds their mission by not only working with their immediate neighborhood, but the whole city. As the city's only free standing solar building, Solar 1 is an essential tool in educating future generations about the possibilities of alternative energy. In addition to youth programming, the staff at Solar 1 has developed both a lecture and art series serving to area residents which reflects their ongoing commitment and education of sustainable issues.

The Metropolitan Waterfront Alliance works through education, grassroots organizing and media advocacy to include the public's voice and values in the decision-making that will determine the future of our region's waterfront and waterways. Solar One currently sits on one of our city's most active and vital waterways, the East River. We believe that building Solar 2, New York's State's first Green Energy and Education Museum on the river where Thomas Edison's had his energy plant and which has been home to energy facilities ever since will reflect New York State's strengthening commitment to alternative energies.

I therefore urge the Public Service Commission to support Solar One's ongoing programming and construction of Solar Two through the Systems Benefit Charge 3.

Please contact me with any additional questions at 800.364.9943.

Sincerely,

Carter Craft  
Director  
Metropolitan Waterfront Alliance

cc: PSC Chairman William Flynn, Christopher Collins

*Serving the New York-New Jersey Metropolitan Area*

457 Madison Avenue New York, NY 10022 Tel: 1-800-364-9943 Fax: 1-888-486-9688 email: info@waterwire.net



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Catherine Morrison  
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Karen A. Phillips  
Peter J. Povors  
Arthur Ross  
Janette Sadik-Khan  
A. J. C. Smith  
Charles E. Williams, III

*Executive Director*  
Christian DiPalermo

October 13, 2005

Hon. William M. Flynn  
Public Service Commission Chairman  
Empire State Plaza  
Agency Building 3  
Albany, NY 12223-1350

Dear Governor Pataki:

On behalf of New Yorkers for Parks, I am writing in support of Solar 2 and to urge the Public Service Commission to support the project through the Systems Benefit Charge 3.

New Yorkers for Parks is the city's only independent, non-profit organization dedicated to promoting and protecting parks and open space throughout the five boroughs. We recently received information about a plan to build Solar 2, New York State's first Green Energy and Education Museum along Manhattan's East River waterfront, in Stuyvesant Cove Park. This proposed facility has long been planned as part of the city's efforts to revitalize this stretch of waterfront property and enjoys significant community support.

Given the current success of Solar 1 as a community asset, educational tool and cultural center, I firmly believe that Solar 2 would be an excellent addition to Stuyvesant Cove Park and therefore urge the Public Service Commission to support its programming and construction through the Systems Benefit Charge 3.

Sincerely,

Christian DiPalermo  
Executive Director



# New York Restoration Project

## NYRP

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**DARREN STAR**

**MICHAEL SYLVESTER**

**CARMEN and JOHN A. THAIN**

September 30, 2005

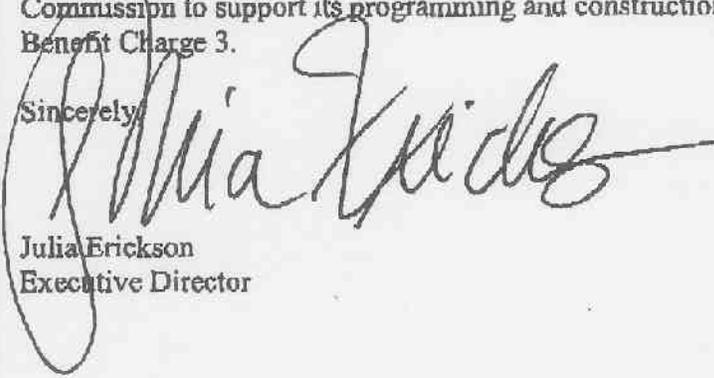
Governor George E. Pataki  
State Capitol  
Albany, NY 12224

Dear Governor Pataki,

I received information about Solar 2, a fascinating and timely plan to build New York State's first Green Energy and Education Museum. In a form true to our city and state's unique and dynamic spirit, Solar 2's net-zero energy design would serve as a built testament to the potential of ingenuity and innovation to address the most pressing environmental and resource challenges of our time.

New York should provide global leadership in the technical quest to achieve bit city sustainability. I firmly believe that Solar 2 represents a powerful opportunity to initiate such a vision, and therefore urge the Public Service Commission to support its programming and construction through the Systems Benefit Charge 3.

Sincerely,

  
Julia Erickson  
Executive Director

THE CHILDREN'S  
WORKSHOP SCHOOL



LA ESCUELA EL  
TALLER DE NIÑOS

DIRECTOR : *Maria Velaz-Clarke*

March 3, 2005

New York State Department of Public Service  
3 Empire State Plaza  
Albany, New York 12223-1350

To whom it may concern:

Our school, The Children's Workshop on East 12<sup>th</sup> Street, has been working happily with CEC Stuyvesant Cove, Inc. Students from our after school Science Club as well as all 5<sup>th</sup> and 6<sup>th</sup> grade classes have participated in Stuyvesant Cove Park's environmental education lessons and initiatives over the last year and we plan to continue using this program and facility next year and beyond.

This program is such a rare and precious thing as students can learn first hand about a real solar environment, about an incidental beach, about biospheres. The program offers significant and unique benefits to students through an expanded understanding of their local environment, the demonstration of alternative energy sources and the chance to participate in hands-on lessons.

The classes at Stuyvesant Cove challenge my students to consider the choices that they and their families make in their day-to-day lives – to consider how they play a part in the quality of the East River, to think hard about the importance of recycling.. These lessons have got me and my students turning the lights out more often when they are not in use.

I am very pleased with this program and feel that my students are tremendously lucky to be exposed to a broad spectrum of science and technology than they might otherwise have. Our school lacks funding for any real science curriculum so Stuyvesant Cove is much more than just an add on for us. I look forward to our continuing partnership as the project continues to grow and develop. If you have any questions, feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca Perl". The signature is fluid and cursive, with the first name being the most prominent.

Rebecca Perl  
After School Science Program  
PTA/CWS  
212 674 7820  
rperl@mindspring.com



**BARUCH COLLEGE CAMPUS HIGH SCHOOL**  
17 LEXINGTON AVENUE, BOX A - 920  
NEW YORK, NEW YORK 10010  
(212) 802-2620 FAX (212) 802-2623  
EMAIL: BCCHS@BARUCH.CUNY.EDU

**ALICIA PÉREZ-KATZ, PRINCIPAL**

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**New York State Department of Public Service**

3 Empire State Plaza  
Albany, New York 12223-1350

**NYSERDA**

17 Columbia Circle  
Albany, NY 12203-6399

To whom it may concern:

This letter confirms our school's partnership with CEC Stuyvesant Cove, Inc. My students from Baruch College Campus High School have participated in Stuyvesant Cove Park's environmental education lessons and initiatives over the last year. I plan to continue using this program and facility in my future classes.

This program adds significant benefits to students through an expanded understanding of their local environment, the demonstration of alternative energy sources and the chance to participate in hands-on lessons. The classes at Stuyvesant Cove challenge my students to consider the choices that they and their families make in their day-to-day lives and how those choices impact the world around them. These lessons have helped my students become more environmentally aware urban residents; especially in regard to the energy they use everyday.

I am very pleased with this program and feel that my students are lucky to be exposed to a broader spectrum of science and technology, and I look forward to our continuing partnership as the project continues to grow and develop.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lauren S. Loizides".

Lauren S. Loizides



Cornelia Connelly Center

**New York State Department of Public Service**

3 Empire State Plaza  
Albany, New York 12223-1350

**NYSERDA**

17 Columbia Circle  
Albany, NY 12203-6399

To Whom It May Concern:

My name is Rochelle Gandour, and I teach science at Connelly Middle School of the Holy Child. I am writing to confirm our school's partnership with CEC Stuyvesant Cove, Inc. My fifth and sixth grade students participated in Stuyvesant Cove Park environmental education lessons this past January. I plan for these classes to continue visiting Solar 1; I would like to make our experiences there a permanent part of our science curriculum.

Our visits to Solar 1 in Stuyvesant Cove Park truly benefited my students' understanding of environmental science. Better than any lecture, my students saw, firsthand, solar panels in use on the roof of our field trip classroom. While we were there, building mini-biospheres allowed my students to realize how our atmosphere works and why pollution can be so detrimental to our world. Finally, my students were thrilled when the wheels on their solar-powered vehicles actually turned.

Moreover, my students were listening. They now understand the impact their electricity use can have on our local environment and on the whole world. Now, Alexis is careful to open her refrigerator only when she needs to. Yulia actually convinced her mother to purchase and use compact fluorescent light bulbs, instead of standard ones. Brittany no longer turns on her television and radio on at the same time. My students remember to turn off our classroom lights before lunch or recess if I forget to do so.

I am extremely pleased with every aspect of this program: the hands-on exercises, the active learning, the real-life applications of knowledge, and the vital importance of this environmental content. I feel lucky that my students have been exposed to technologies that I cannot provide in the classroom, and I feel even luckier that they could have this experience at no cost to us. I look forward to a continuing partnership between my school and Stuyvesant Cove Park, Inc., as the project continues to grow and develop.

Sincerely,

Rochelle Gandour,  
Science and Dance Teacher



420 East 12th Street  
New York, NY 10009  
Tel: (212) 460 8467  
(212) 260 1142  
Fax: (212) 260 9657  
Principal: Mark Federman

March 3, 2005

To whom it may concern:

I am writing this letter on behalf of the Community Environmental Center. My name is Maria Agurcia. I teach 7<sup>th</sup> grade Earth Science at East Side Community High School in the lower east side of Manhattan. The Community Environmental Center was a vital part of my environmental science unit this past fall semester.

As part of a unit on energy and natural resources, my classroom visited SOLAR 1 on three occasions. We built solar powered cars, made posters about how electricity is generated, and we built mini biospheres. Students learned about solar power, non-renewable vs. renewable resources, pollution, and global warming. The best part of the three trips was seeing how the students reacted to and learned from this unique experience. They looked forward to going to Stuyvesant Cove, got comfortable with John as their "other environmental science teacher," and loved the hands on nature of it.

Being near the East River and learning in a solar powered building brought environmental science to life for the students. It is not a common thing for students in New York to have such an opportunity. The students were enthusiastic and engaged not only at SOLAR 1, but also when we returned to the classroom. I continually refer back to John Garvie's lessons and our experience at SOLAR 1. The lessons he developed integrated physical science, environmental science, and biology.

I look forward to taking my students back to SOLAR 1 next year. It was truly an invaluable experience for them! Furthermore, it did not cost the students, school, or myself anything to go. This is exactly the type of program I am proud to have been a part of, and I hope that my students in the future will also benefit from it!

Sincerely,

Maria Jose Agurcia  
7<sup>th</sup> grade Science  
East Side Community High School

September 17, 2004

4878 Bryn Mawr  
Bloomfield Hills, MI 48301

John Garvie  
Community Environmental Center  
43-10 11<sup>th</sup> Street  
Long Island City, NY 11101

Dear John,

I am writing to express my appreciation for the incredible learning opportunities you and your organization provided for my students this past spring and summer. It was my dream to come to New York City and find a way to help students form meaningful connections between themselves and the urban environment. It was through our field trips to Stuyvesant Cove Park that this interaction truly came alive.

As a public educator it is often difficult within the constraints of money, testing, supervision, and all the other demands, to approach teaching and learning in a way that takes kids out of the classroom and into the real world. The two most crucial aspects of our work together, your availability, interest, and enthusiasm and the fact that programming at the park was free, made it all possible. Although there are many nonformal learning opportunities out there for students in the city, many of them have fees and very few of them provide an educator who is willing to partner, plan, and lead the programs. In addition, John, I felt that you worked very positively with students, with a true enjoyment and understanding of their interests and abilities. You can see this for yourself in the digital video I enclosed! (The digital camera I purchased with the money from CEC's "urban environment teaching award." It was an excellent way to assess student learning in a field setting!)

The 7<sup>th</sup> grade science students at East Side Community High and I thank you so much for all you've given to our teaching and learning experience. I only hope that you can maintain and expand this current model of programming, continuing to offer so much to the community. Stuyvesant Cove Park has a special place in my heart. It is a truly unique place for students to learn and connect with New York City's environment. Please keep in touch ([rebeccamgrant@hotmail.com](mailto:rebeccamgrant@hotmail.com)) and good luck with the new school year!

Sincerely,



Rebecca Grant



**SOLARone**

GREEN ENERGY, ARTS  
& EDUCATION CENTER

# **EXHIBIT D**

## **SOLAR 2 PLANS**

Imagine . . .



. . . a city where  
buildings act as their  
own power plants . . .



# Solar 2 - The Environmental Learning Center and Museum



Solar 1 is the solar-powered environmental learning center in Stuyvesant Cove Park at 23<sup>rd</sup> Street and the East River in Manhattan. This “green classroom” is the prototype for the Stuyvesant Cove Environmental Museum and Learning Center, New York City’s first museum for the environment. The Environmental Museum, to be built on the site of Solar1, is being designed as a “net-zero” building; it should be a little power plant, generating more energy than it consumes.

The Environmental Museum will be a green building featuring energy efficient and sustainable technologies including geo-thermal wells, building-integrated photovoltaic panels, solar hot water, daylighting strategies, a living machine, and systems demonstrating these “net-zero” measures.

Visitors will experience first-hand how to conserve energy every day. Current plans call for the building to house an eco-apartment – a typical NYC apartment, outfitted with green friendly products and EnergyStar appliances, which would be available for purchase. Making their way through the building, visitors will experience a series of interactive exhibits that would evolve with changing technologies. A visitor might view a green

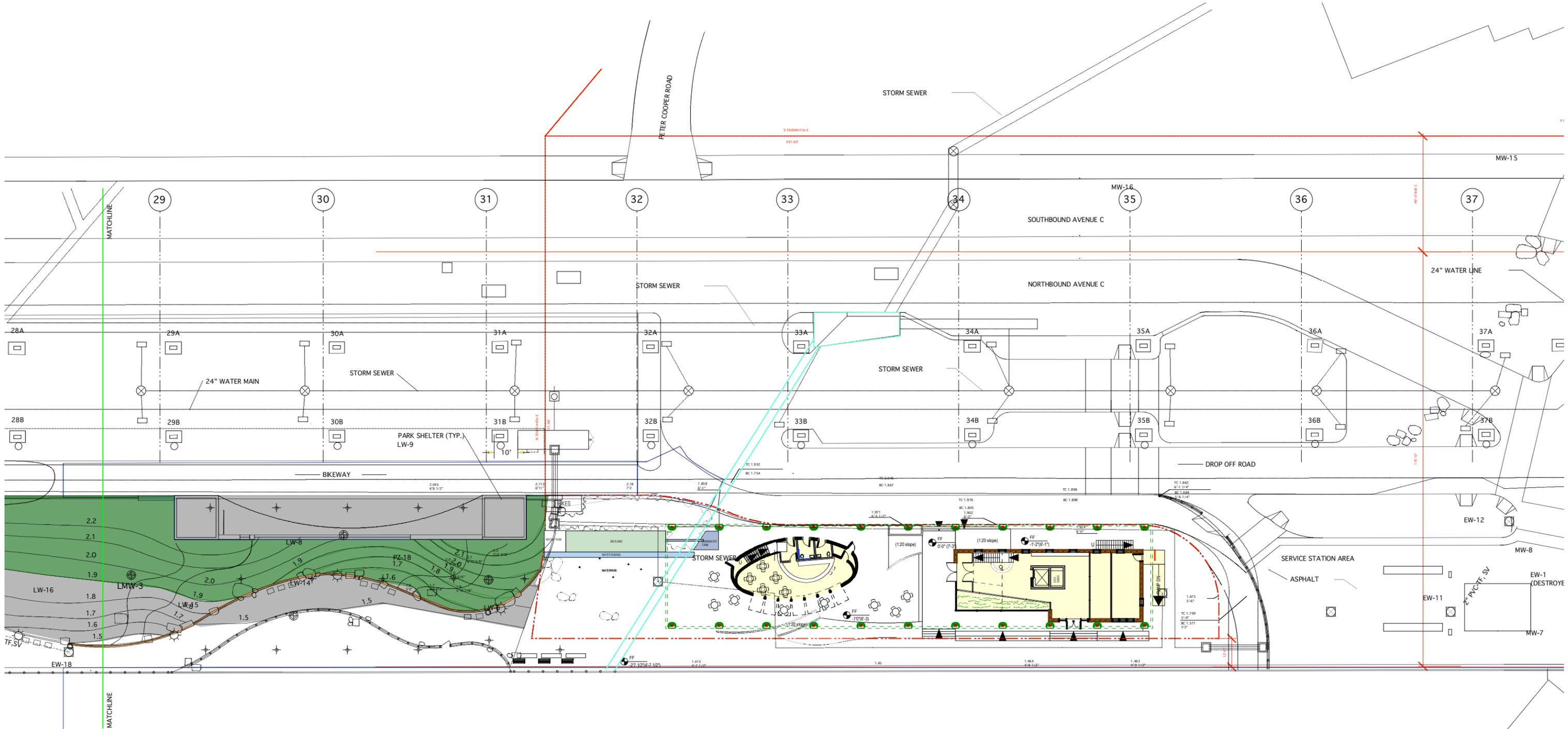
metropolis in the future or purchase products on-line from a hardware store that deals exclusively in green products. A spacious multi-purpose room, accommodating 100 people, will serve as a classroom, meeting or performance space. The building will house a café and bookstore, and capitalize on its unique location on the East River in Stuyvesant Cove Park; our existing education program will be expanded, as will our arts program, which features solar powered film, music and dance outdoors during the summer.

The design of the Environmental Museum is underway. Our design team, featuring Kiss + Cathcart Architects, Ove Arup Associates, engineers, and Judith Heintz Landscape Architecture, is in consultation with members of the local community board as well as NYSERDA (The New York State Energy Research and Development Authority) and other city agencies.

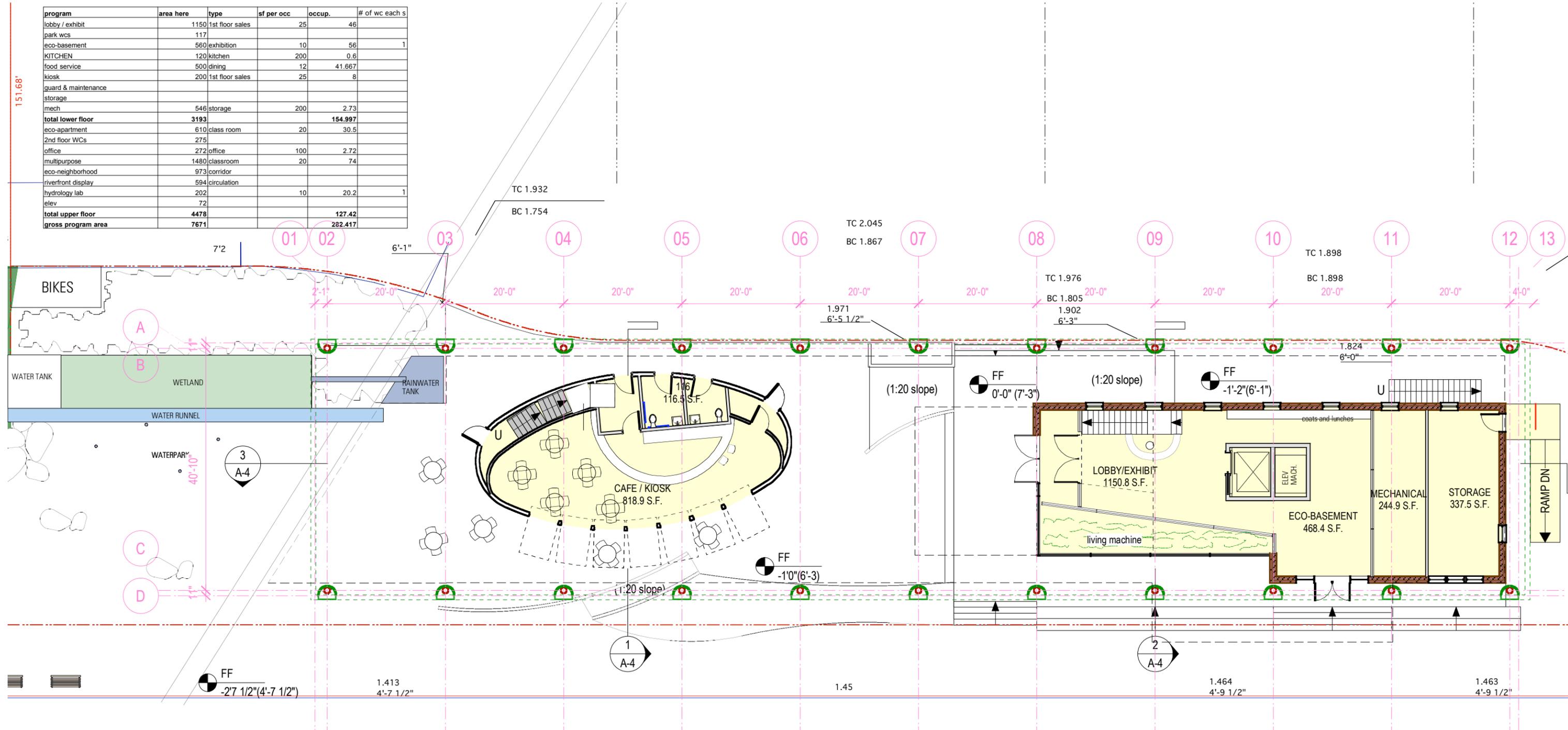
Inquiries or comments may be forwarded to Chris Collins at 212.505.6050 or via e-mail at [chris@solar1.org](mailto:chris@solar1.org).

**SOLAR**one

GREEN ENERGY, ARTS  
& EDUCATION CENTER

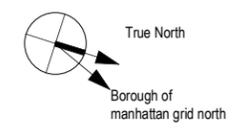
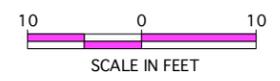


program	area here	type	sf per occ	occup.	# of wc each s
lobby / exhibit	1150	1st floor sales	25	46	
park wcs	117				
eco-basement	560	exhibition	10	56	1
KITCHEN	120	kitchen	200	0.6	
food service	500	dining	12	41.667	
kiosk	200	1st floor sales	25	8	
guard & maintenance storage					
mech	546	storage	200	2.73	
<b>total lower floor</b>	<b>3193</b>			<b>154.997</b>	
eco-apartment	610	class room	20	30.5	
2nd floor WCs	275				
office	272	office	100	2.72	
multipurpose	1480	classroom	20	74	
eco-neighborhood	973	corridor			
riverfront display	594	circulation			1
hydrology lab	202		10	20.2	
elev	72				
<b>total upper floor</b>	<b>4478</b>			<b>127.42</b>	
<b>gross program area</b>	<b>7671</b>			<b>282.417</b>	



**Kiss + Cathcart, Architects**  
 44 COURT ST. TOWER C  
 BROOKLYN NY 11201  
 tel 718 237 2786  
 fax 718 237 2025  
 www.kisscathcart.com

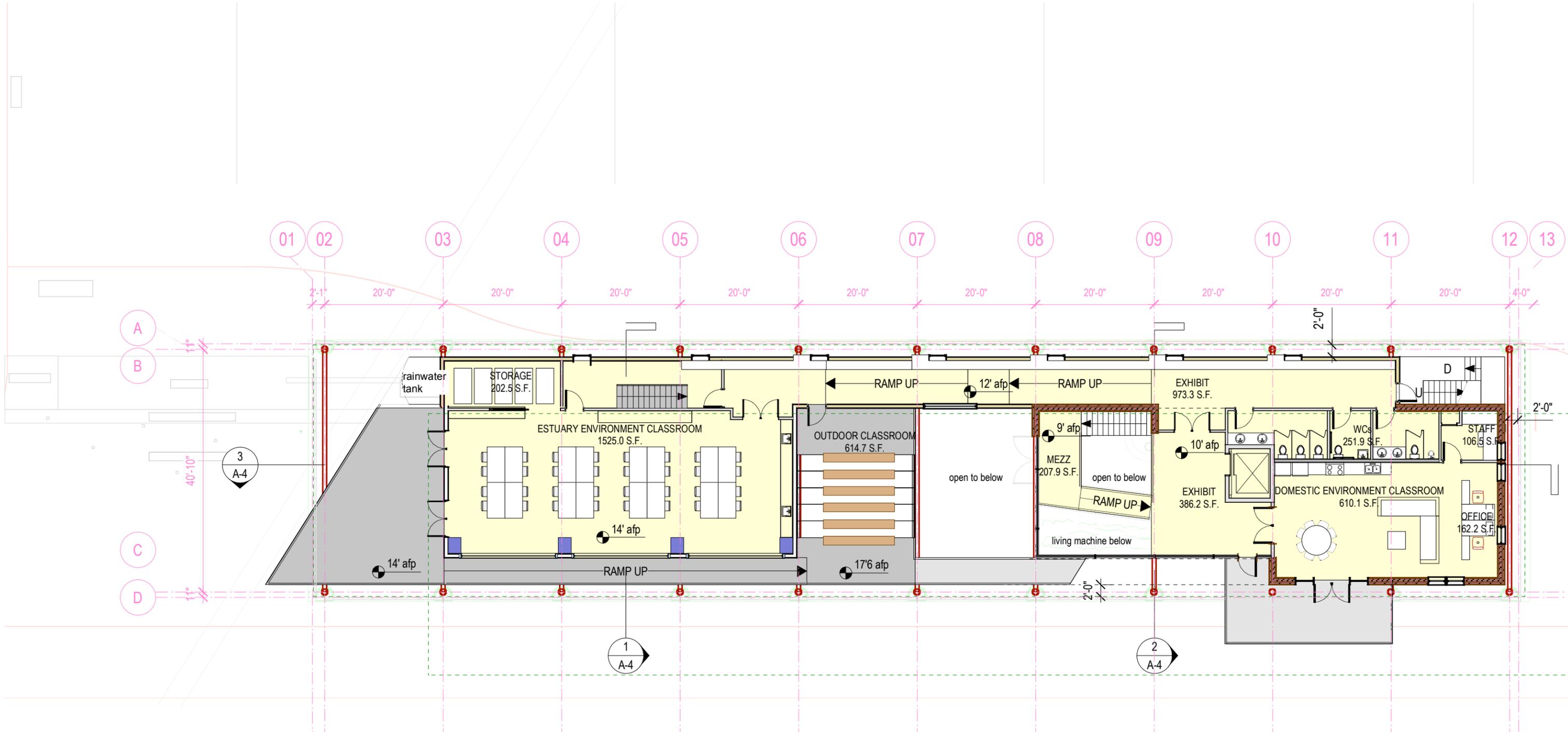
# Stuyvesant Cove Environmental Center

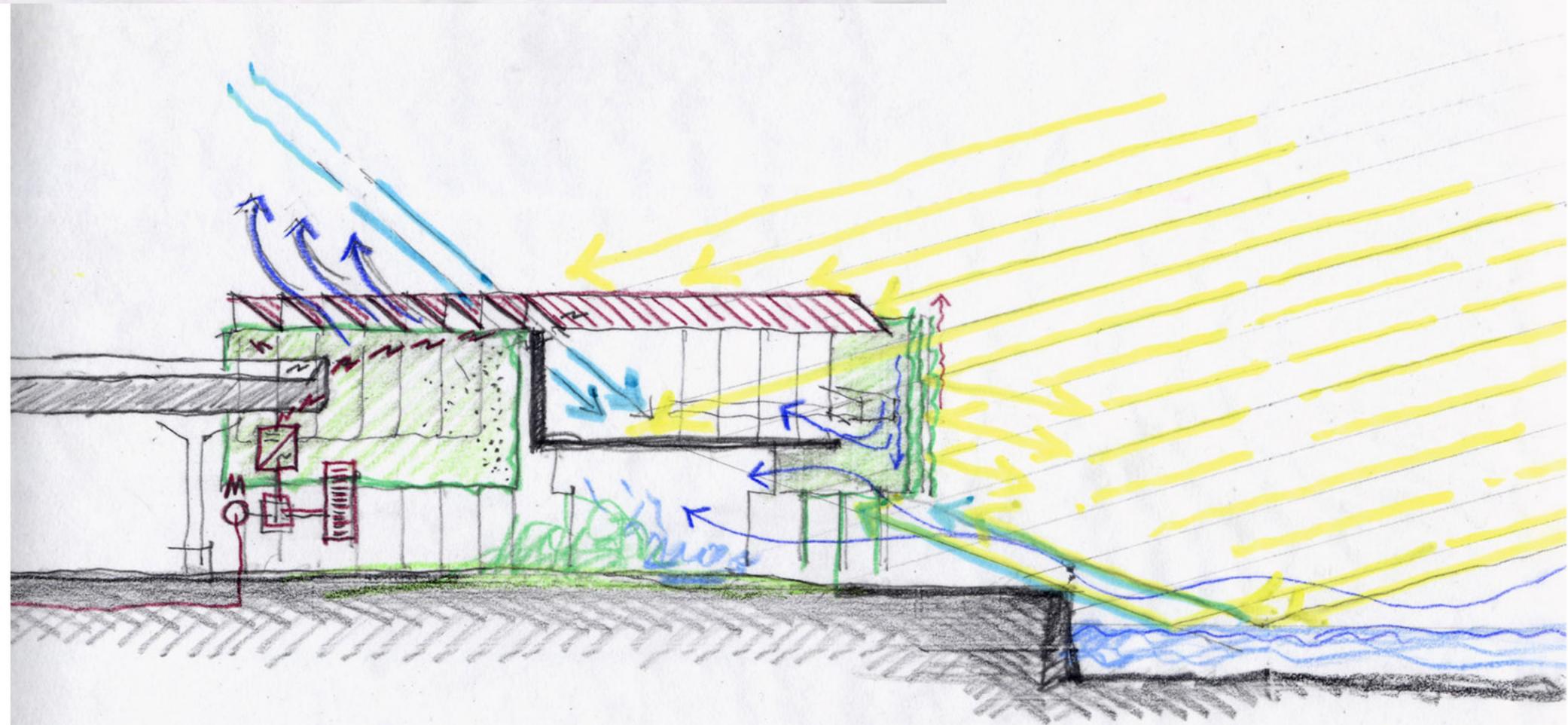
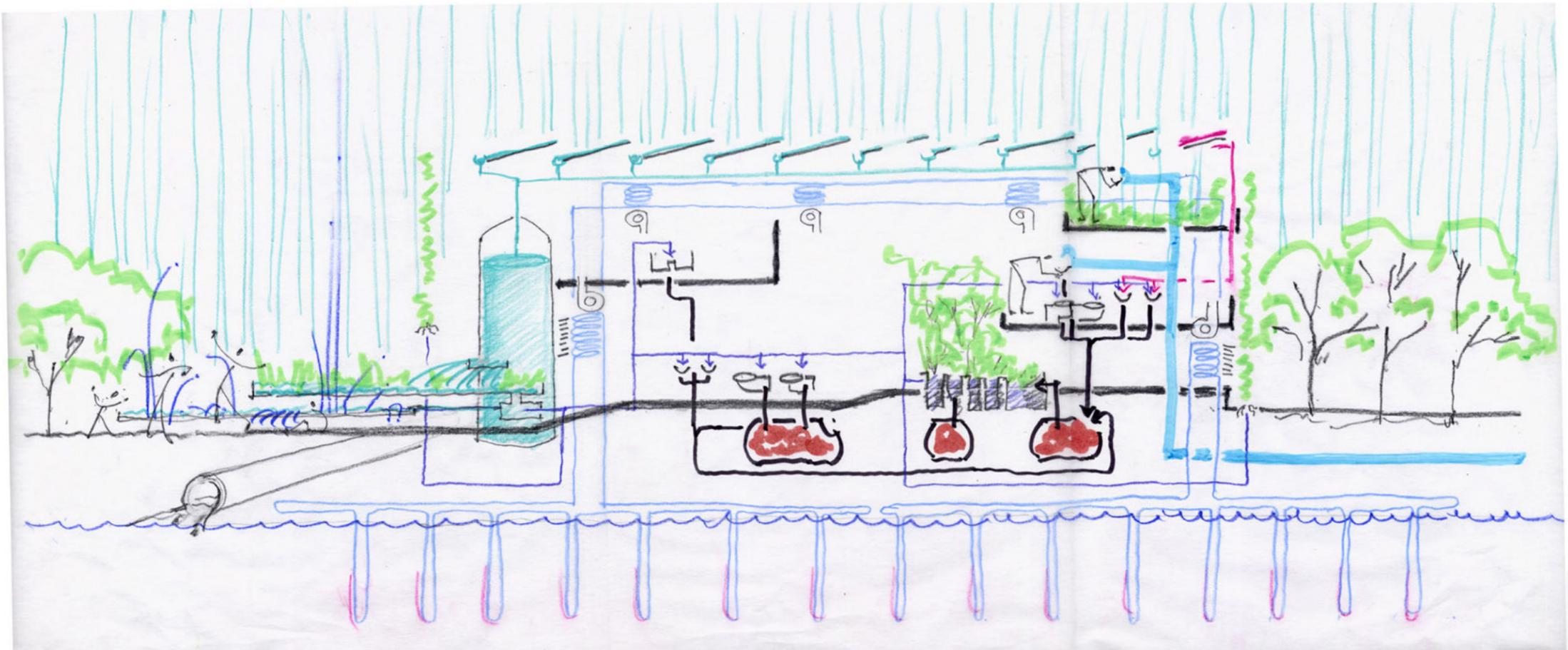


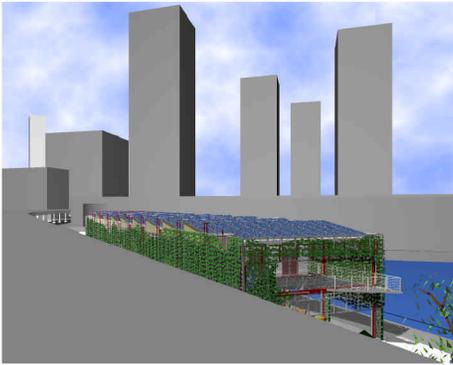
Date: May 21st 2004

## Ground Floor Plan

## A-2







View from highway driving north



Approach from 23rd st looking south east



View from Park looking north



Exploded Isometric

Renderings

**Kiss + Cathcart, Architects**  
44 COURT ST. TOWER C  
BROOKLYN NY 11201  
tel 718 237 2786  
fax 718 237 2025  
www.kisscathcart.com

# Stuyvesant Cove Environmental Center

Date: July 14th 2004



View towards Eco-neighborhood display on second floor



View within estuary environment classroom



View from Lobby on ground floor



View from cafe looking east