



THE NUTTER PLAN
FOR A SUSTAINABLE
PHILADELPHIA ENVIRONMENT
NOW AND TOMORROW

INTRODUCTION

My Vision for Philadelphia is a place where our “greene countrie towne” reclaims its position as America’s most sustainable community.

--Michael Nutter

Philadelphians are the heirs of William Penn and Eli Price’s vision for our City. Penn’s legacy of peace, tolerance, and stewardship has never been more relevant to the challenges we face as a City and region. It is easy to think of the debates in this election as policy issues defined only by technical realities, budget constraints, and media sound bites. But Philadelphia remains a “Holy Experiment” for many of us; a place where we are committed to continuing William Penn’s experiment in living well together. Eli Price’s legacy of building modern institutions to govern our changing City—he expanded Philadelphia from 2 square miles to 130 and then established the Fairmount Park Commission to preserve forever over one-tenth of that land as public parklands—is another inspiring Philadelphia ancestor who created change that guided Philadelphia’s future for generations.

A sustainable community is one that uses thinking about tomorrow to create a healthier, more attractive, more productive City. Changing the light bulb today lowers next month’s electric bill and next year’s need for more power generation. Green buildings improve lighting and ventilation in buildings today and improve the performance of school children and office workers tomorrow. Using porous surfaces on playgrounds reduces stormwater runoff today and increases the shade in the Schuylkill next year. Building green roofs on City rec centers lowers City energy costs, reduces ambient heat in surrounding streets, decreases future maintenance costs, and saves lives during summer heat emergencies. And all of this activity produces a range of new job opportunities for Philadelphians, from manufacturing and installation to research and design.

My Sustainable Philadelphia Environment Plan consists of five components achievable by the end of my first year as Mayor. Each component is discussed in detail in the pages that follow, but the overall goal is to raise the visibility of energy, natural resources, environmental health, waste management, and green building and to place these issues at the center of our plans for the future. My Sustainable Philadelphia Environment Plan understands our City as part of an ecosystem that has enormous potential value as both a resource base and quality-of-life amenities. By appropriately managing this system, we can simultaneously create a sustainable and prosperous future.

As Mayor, I will:

- **Create** a Sustainability Cabinet of department heads and senior officials responsible for protecting the air, water, and land resources of the City and for promoting the sustainable use of those resources to enhance our quality of life and economic development.
- **Reform** the governance and increase the funding to Fairmount Park, building on this valuable but neglected asset as the foundation for a commitment to environmental goals throughout City government.
- **Coordinate** agencies and departments whose work impacts the environment with the goal of reducing the City’s energy consumption by at least ten percent per year by the end of my first term.
- **Deploy** this increased governmental capacity to achieve solutions to a variety of fixable problems that endanger our future and limit our ability to prosper, including the ten items identified by the Next Great City Coalition.
- **Brand** Philadelphia as a City of the Future and pursue future environmental innovation relentlessly with the goals of creating opportunities for Philadelphians.

I applaud the thoughtful discussions on these issues in this mayoral campaign. Let me single out the Next Great City Coalition and acknowledge its agenda of ten proposals for a cleaner, safer, healthier Philadelphia. As a member of City Council for fifteen years, these issues—from storm water runoff to the care of street trees—have commanded my attention for a long time. I have enthusiastically endorsed all ten proposals and in a collegial spirit, I have incorporated the language of several into this policy paper.

In addition to specific proposals, what I offer here is **a plan for a City government that is committed to and capable of embracing and implementing these and dozens of other smart proposals on environmental issues that will emerge in the coming years.**

CREATE A SUSTAINABILITY CABINET

As Mayor, I will organize a Sustainability Cabinet of all departments and agencies whose work has an impact on the natural environment of the City's air, land, and water systems.

The Sustainability Cabinet will meet monthly and include the Managing Director's Office, the Departments of Commerce, Health, Water, Streets, Public Property, and Licenses and Inspections, the Housing Authority and housing and community development agencies, the Municipal Energy Office, the Capital Program Office, the City Planning Commission, the Redevelopment Authority, and PIDC. I will strongly request the participation and support of the School District, the Parking Authority, SEPTA, DVRPC, and others.

I will regularly attend the meetings of the Sustainability Cabinet to ensure that the Cabinet's work has all the political and managerial support it requires. The Cabinet will coordinate the efforts of the various line offices, agencies, and departments within city government to improve environmental quality, lower energy costs, promote long-term sustainability, and foster economic development.

As Mayor, I will organize a Sustainability Cabinet to lead the Sustainability Cabinet and assume responsibility for the City's environmental initiatives.

The Sustainability Cabinet will be led by a senior member of my administration who will act as Sustainability Coordinator and will report directly to me. The Coordinator will be responsible for developing and implementing all components of the sustainability policy outlined here. He or she will have the means and authority to design mechanisms and incentives to achieve the City's sustainability goals. Reaching those goals will become part of the performance evaluation of every manager in every department. In his or her first year, the Coordinator will:

- Increase the number of LEED (Leadership in Energy and Environmental Design) accredited professionals in the City workforce by 25 employees (Chicago exceeded this goal in 2005.)¹
- Add LEED specifications to all City construction and maintenance RFPs and RFQs, including preferences for LEED certified projects and workforce training among bidders,
- Develop specific environmental plans for all municipal buildings based on "LEED for Existing Buildings" standards to be phased in over three-to-seven years depending on the complexity of the building.
- Pursue the possibilities of Philadelphia's membership in the Clinton Climate Initiative, especially the pooling of purchasing power among cities around the world for green technologies and materials that will reduce the costs of these efforts.

The Coordinator will publish an annual Environmental Agenda and a State of the Sustainable City report, to provide public access to its work and goals.

As Mayor, I will convene a Sustainability Advisory Group to inform the work of the Sustainability Cabinet in this rapidly changing field.

With the advice of expert groups such as the Design Advocacy Group and the Delaware Valley Green Building Council, I will assemble a Sustainability Advisory Group, comprised of experts from business and academia, professionals working in the field, and concerned citizens, to review the progress of the Sustainability Cabinet and offer suggestions. These experts will be drawn from Philadelphia and around the world to advise my Administration on best practices and new possibilities. This field is growing rapidly and Philadelphia is emerging as one of the leading areas for research and practice, and I will build on that strength. The Sustainability Advisory Group will help foster a culture of continuous improvement, keep ideas at the cutting edge of practice and technology, and challenge the City to reach for total quality performance.

REFORM THE GOVERNANCE AND INCREASE THE FUNDING OF FAIRMOUNT PARK

Almost 60 percent of Fairmount Park lies within the 4th Councilmanic District that I represented for 15 years. I know and love the Park.

--Michael Nutter

As Mayor, I will work with City Council to preserve an independent Fairmount Park Commission using a new and more accountable system than puts qualified people in charge of the Park.

Fairmount Park faces enormous challenges, including the need to reform the way we govern it. As Mayor, I will support and maintain an independent Fairmount Park Commission that is established through a transparent and fair process designed to place the very best qualified people in charge of our treasured park system.

As Mayor, I will support proposals that draw Commissioners from three distinct constituencies: City government; the non-profit trusts and organizations that support the Park and protect the environment; and representatives of user groups such as runners, bikers, hikers, softballers, birders, etc., including representatives from the four suburban PA counties. A Nominating Committee named by the Mayor would submit a slate of qualified Commissioners. The Mayor would select from the nominated slate and City Council would utilize a confirmation process to appoint Commissioners.

As Mayor, I will work with City Council to expand and diversify the funding sources for Fairmount Park.

The broad and diverse governance structure outlined above would be better positioned to pursue various strategies for increasing the funding of the Park system. That funding is significantly inadequate and has been frozen at about \$13 million for most of the past decade. This level of funding is a small fraction of the per capita and per acre funding levels of our peer cities and experts estimate that an appropriate Park budget would be at least \$30 million per year.²

Three critical sources of new funding for the Park are: (1) working with City Council to allow the Park to retain some of the revenues that are now and could be in the future generated inside the Park system, including user fees and new market-based concession and other activities; (2) the capture of environmental costs through new grants and fees that recognize the importance of the Park to the region's watershed, including possible surcharges on water and sewer fees, and contributions to the Park from the City's water fund; and (3) the creation of a new "Fairmount Park Fund" as a transparent vehicle for current budgeting within the City budget process and to channel new fundraising efforts, especially in coordination with private donors and possible sources in the suburban counties. The existence of such a lockbox fund facilitates fundraising efforts by making needs clear, maintenance of existing efforts certain, and ensuring the dedication of new resources to Park activities exclusively.

As Mayor, I will make a successful Fairmount Park the foundation for a City government-wide commitment to environmental goals.

Fairmount Park was created to protect our water supply and to promote the sustainable management of our watershed in the midst of Nineteenth Century urbanization. The recent restoration of our magnificent 1819 Fairmount Water Works is a powerful reminder of the role that a protected environment plays in the prosperity and vitality of a great city. Appropriately governed and funded, Fairmount Park will become a full partner in the Sustainability Cabinet's efforts to protect and restore our natural resources (parks, rivers fronts and streams, natural areas) as part of a larger ecosystem. The Cabinet will coordinate and align the activities of the Park Commission, the nationally prominent Department of Watersheds in the Philadelphia Water Department, and the Planning Commission to achieve these goals.

COORDINATE AND ALIGN ENVIRONMENTAL ACTIVITIES

As Mayor, I will charge the Sustainability Cabinet with identifying common ground in the existing activities of City departments and agencies and with aligning those activities to increase available resources.

The Sustainability Cabinet will identify and align activities and actually save money while improving performance. These resources can then be re-invested in Sustainability activities.

An upfront investment of 2 percent in green building design, on average, results in life cycle savings of 20 percent of total construction costs.³ Occupants can save about 50 cents per square foot each year through strategies that cut energy use by 30 percent. This can represent a savings of \$50,000 or more over five years in 20,000 square feet of office space (about a floor of the Municipal Services Building.)⁴ A study by Carnegie Mellon demonstrated an average increase in productivity of 7.1 percent in buildings with lighting controls. And students with the most daylighting in their classrooms progressed 20 percent faster on math tests and 26 percent faster on reading tests in one year than students with the least daylighting.⁵

But all these initiatives require agreement, coordination, incentives, and monitoring in order to capture these benefits across City government and related entities such as the School District. These potential savings must be shared with the participating departments and agencies in order to maximize participation by creating incentives. The Sustainability Coordinator will be responsible for designing and implementing this effort across City government and other public entities.

As Mayor, I will charge the Sustainability Cabinet with aligning and improving the City's efforts to monitor and remediate environmental conditions and to weatherize and conserve energy in Philadelphia homes.

Several agencies now promote public health in homes and neighborhoods by monitoring and remediating environmental conditions – mercury in soils, lead in paints and soils, heavy metals and volatile chemicals in parks, rivers, & streams, PCBs in the Delaware and Schuylkill, and so on. The Department of Watersheds in the Philadelphia Water Department (PWD) monitors water quality and response to contamination. Efforts to clean contaminated land – “brownfields” – and return it to active use are managed by the Commerce Department, working closely with the State Dept. of Environmental Protection. Toxins in homes such as lead paint and mercury are managed in the Department of Health.

Several agencies promote weatherization and energy conservation in homes across Philadelphia. Working with nonprofit organizations such as The Energy Cooperative, the Energy Coordinating Agency, and the Delaware Valley Green Building Council, the Sustainability Coordinator will develop of public/private partnership to create a database of completed projects, document baseline information for energy use before and after improvements, and determine the cost-savings under these various programs to predict results of proposed improvements.

As Mayor, I will direct the Sustainability Cabinet to implement a comprehensive building performance and energy management policy.

Buildings consume about 30% of a municipal government's total energy load – in Budget Year 2004, the total energy cost for the City was over \$66 million.⁶ Since 2004, energy prices have risen over 30% and it is likely that the City spends almost \$100 million per year in total energy costs. Potential savings from a coordinated energy management policy are enormous, and many have minimal up-front cost. Lighting load typically takes 24% of a building's energy load.⁷ Daylighting controls could easily cut that in half by turning out lights when there is sufficient sunlight available. Timers and motion sensors can also significantly reduce energy demand, especially during peak demand hours during the working day.

- The Sustainability Coordinator will lead the City's effort to save \$10 million per year in total energy expenditures by the end of my first term as Mayor.

- Half of these savings will be shared with the departments and agencies that generate the savings and half will be invested by the Sustainability Cabinet in the environmental and energy initiatives envisioned in this policy paper and in future innovations as they arise.

To be effective, these efforts will be coordinated and enforced across all City agencies. The Capital Program Office, the Municipal Energy Office, the School District, and smaller efforts within City departments and agencies will be integrated into a comprehensive citywide policy. Several strategies exist and have been successfully applied at other municipalities or large institutions, and are presented in the Sustainable Energy Management plan produced by Philadelphia’s Municipal Energy Office in 2004, but which were never implemented. Re-lamping buildings with high-efficiency bulbs, upgrading heating and cooling equipment, separating trash and recycling, and purchasing higher-mileage, lower-maintenance vehicles are investments that have quick payback. Mechanisms and incentives to pursue these and other innovations will be developed, including:

- a zero-interest, revolving loan fund, available to City departments for self-financing energy or environmental initiatives. Many city managers already know how to save energy, reduce waste, or conserve resources, but there’s no money in their annual budgets to implement change, fund training, or to manage an innovative program. Each manager will be able to apply for funding to implement an energy- and cost-saving initiative, then repay the fund through annual savings:
- energy use will be tracked by department and good performance rewarded with recognition, an award, and bonuses based on annual energy saved.

As Mayor, I will direct the Sustainability Coordinator to design “green building” practices in both public buildings and the zoning and regulation of private buildings in Philadelphia.

The Capital Program Office is responsible for the design and construction of new municipal buildings. Although there has been one pilot “green” project (the Police Forensics Lab in University City), green building specifications have not been integrated into all municipal capital projects. The Sustainability Cabinet will support the integration of these specifications across City and School District buildings.

In Chicago, under the leadership of Mayor Richard Daley, city officials have refitted 15 million square feet of public buildings—equal to twelve Comcast Towers—with more efficient heating, cooling, lighting, and ventilation.⁸ By installing a green roof of lawn and shrubbery on top of Chicago City Hall, officials lowered the maximum summer temperature of the roof from 160 to 90 degrees and cut air-conditioning by 10 percent. After that cost-saving success, Chicago now has three million square feet of public rooftops planted with shady and cooling gardens.

Philadelphia will also support the efforts of private building owners and developers to adopt green practices and technologies. The Sustainability Coordinator will assist Licenses and Inspections, the Zoning Board of Adjustment, and the Planning Commission to revise our city’s building codes, neighborhood zoning code, and urban planning practices with a particular emphasis on sustainable design. By the end of my first term, Philadelphia codes will reflect the best thinking about green cities and embody the most innovative commitment to green building in the country.⁹

As Mayor, I will direct the Sustainability Coordinator to identify resources for improved transportation programming and to raise the impact of City policy goals and interests on regional transportation decision-making.

Transportation is a key part of urban sustainability and a good transportation system is essential to Philadelphia’s future prosperity. Whereas the City’s tax structure and workforce preparation remain major challenges for our competitiveness, Philadelphia’s unparalleled transportation infrastructure represents an untapped resource. My comprehensive transportation policy is the subject of a future policy paper.

All aspects of City transportation policy will be coordinated within the Sustainability Cabinet. This will include the city fleet (Managing Director’s Office), city and regional transit (SEPTA and the Delaware River Port Authority), parking policy (the Parking Authority and the Center City District), pedestrian safety (Streets Department and the CCD), congestion management and traffic signage (Streets and DVRPC), and transportation alternatives such as bicycling.

DEPLOY THIS NEW CAPACITY TO ACHIEVE RESULTS

As Mayor, I will use this powerful City government structure to solve specific problems and take on new challenges in the future.

As a first step, all ten of the proposals made by the Next Great City Coalition will be pursued by the Sustainability Coordinator and supported by the Sustainability Cabinet. This agenda will allow the Coordinator and Cabinet to begin its work immediately while developing a longer term agenda of its own. Several of these proposals have been discussed (green building policy, Fairmount Park reform, and improved transportation policy) and others will be the subject of later policy papers in their own right (zoning modernization and planning improvements including the waterfront.) I reiterate the others here to make as clear as possible my support for these proposals:¹⁰

- **Fix sewers** that cause property damage and endanger health by assessing fair and accurate stormwater fees based on the amount of impervious surface. Our current system of charging a fee for stormwater services based on water use alone is unfair and inaccurate. Philadelphia will join 400 other cities and towns that charge a user fee for stormwater management based on the amount of impervious area of a property that generates the impact on the sewer system.
- **Plant trees** to replace 23,000 trees the City cut down in the past five years by fulfilling the promise made in NTI to replace lost trees. We have half the number of street trees as Baltimore and one-third as many as Chicago. Trees raise the value of nearby houses, limit stormwater flooding, and reduce heat related deaths.
 - This priority builds on legislation that I championed a decade ago that instituted an “HMO for Street Trees” in the city in which investment in tree maintenance significantly extends the life of our street trees.
- **Install devices** to limit pollution on older City diesel trucks to reduce asthma caused by soot. This pollution represents large measurable risk to City residents and funds are available to install these live-saving devices.
- **Continue to clean and green** vacant lots into community assets by maintaining the \$3 million annual budget from the City for Philadelphia Green. Even after NTI, the City has only cleaned 10 percent of its vacant lots and I will support proven efforts like Philadelphia Green to manage these assets as community gardens and pocket parks.
- **Expand weekly single-sort recycling** service to all City residents and save up to \$17 million a year, more than enough to implement all of the proposals above.

In addition to implementing this immediate agenda, the Sustainability Cabinet will consider other proposals and develop more every year, including:

- Expand the use of **PhillyCarShare** by the City fleet. By outsourcing maintenance, insurance, and management, this great idea reduces the City government role in the auto maintenance business, and allows clear tracking of usage and mileage, helping to make auto use much more efficient.
- Consider the redesign of our **parking strategies**. By encouraging day-long parking for commuters in public lots (early bird specials, and so forth), the Parking Authority works against both public transit and against shoppers and visitors who want to spend anything less than a full day downtown. Street parking is a scarce resource that will be priced accordingly to increase its availability.
- Increase the City’s purchase of **local, clean energy** to lower our exposure to the non-renewable energy market and create local jobs. The Commonwealth has increased its clean energy purchases from 5 to 20 percent during the first term of the Rendell Administration.¹¹

- Develop **power reserves for critical services**. Both Chicago and New York use solar power to ensure that 911 and police operations remain functioning in the case of power outages. Philadelphia will develop the same level of emergency preparedness.
- Reduce the urban heat island effect, indoor air temperatures, air conditioning load, and the attendant health risks associated with heat waves, by requiring **all new roofs to be reflective or vegetative** and providing incentives to re-finishing black tar roofs.
- Underwrite an **energy efficient mortgage program** that would provide home mortgages at a lower interest rate if the home meets specific energy efficiency standards. This will provide an incentive to both sellers and buyers to improve the energy efficiency of existing homes.
- Consider the creation of a summer activity for youth, and for recent college grads, focused on improving the environment in Philadelphia: Such a **Philadelphia Conservation Corps** will provide a youth development and engagement opportunity for the City. This idea is modeled in the new Chicago Conservation Corps.
- Champion and support Philadelphia's large and growing **sustainable food movement**: including the Farm-to-City program involving community supported agriculture and the farmers markets to bring local produce into all neighborhoods, <http://www.farmtocity.org>; the Food Trust (<http://www.thefoodtrust.org/>) working on education and changing eating habits throughout Philadelphia; and Philabundance is a national model for sustainability with its focus on not wasting food, <http://www.philabundance.org/aboutus> . The White Dog Cafe Foundation (www.whitedogcafefoundation.org) is a fine example of both local entrepreneurship and Philadelphia's national leadership on sustainability issues related to food.

BRAND PHILADELPHIA AS A CITY OF THE FUTURE

As Mayor, I will raise the profile of Philadelphia as a leading city on Sustainability.

Philadelphia is well-positioned to become a national and international center of research, technology, and practice on environmental sustainability. Under Governor Rendell, the Commonwealth is becoming a prominent leader in environmental issues and policy. Pittsburgh has recently joined Cities for Climate Protection, an international coalition, and has recently completed a Green House Gas Inventory to inform that city's policy to reduce emissions.¹²

As noted by the Next Great City Coalition, one of the world's leading wind turbine manufacturers chose to locate its headquarters in the city and 14 companies that install solar photovoltaic panels work in the region. Our architectural and engineering firms and schools of architecture, engineering, and design are among the world leaders in the innovation of the emerging environmental technology and practice. The Comcast Tower's LEED certification will create a powerful symbol of Philadelphia's prominence on these issues.

The products and services in the sustainable environment market and green building industry exceeds \$7 billion and increased by 37 percent over the preceding year. There are over 5000 LEED registered projects and nearly 800 LEED certified projects in the U.S., including projects located in all 50 states. This year two new programs, LEED for Homes and LEED for Neighborhoods, will be developed. This growth represents a major opportunity for Philadelphia residents. As discussed in my future Economic Development policy paper, construction is the new "manufacturing": jobs that can provide very good wages for workers with solid basic education skills.

As Mayor, I will personally champion the branding of Philadelphia as a City of the Future, one in which sustainability is an over-arching theme to all that the City does. By the end of my first term, no city in the United States will be more closely associated with the challenges and solutions of urban sustainability than Philadelphia. We will honor and reclaim our status as America's "greene countrie town."

ENDNOTES

¹ City of Chicago, *Environmental Action Agenda 2006: Building the Sustainable City* (available <http://egov.cityofchicago.org>)

² Park Reform Task Force, *A Revival Plan for Fairmount Park* (November 2006) available at <http://www.philaparks.org>

³ *The Costs and Financial Benefits of Green Buildings: Report to California's Sustainable Building Task Force* (October 2003).

⁴ U.S. Green Building Council, *Buildings and Climate Change* (Washington DC.)

⁵ Heschong Mahone Group, *Daylighting in Schools* (California Board for Energy Efficiency.)

⁶ City of Philadelphia *Proposed Sustainable Energy Management Action Plan, 2004 (Draft)*, prepared by the Gas Technology Institute and the Sustainable Energy Planning Office.

⁷ US Department of Energy, Office of Energy Efficiency and Renewable Energy, 2004, *Buildings Energy Databook* (August 2004), 1-9

⁸ Jim Carlton, "The green house effect", *Wall Street Journal*, (January 26, 2007), pW1.

⁹ Katie Zezima, "Boston plans to go "green" on large building projects", *New York Times*, (December 20, 2006).

¹⁰ Last year, Mayor Thomas Menino of Boston proposed changes to that city's building code requiring all large private building to meet at least 26 of the 69 criteria established by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) standards, which include construction with recycled materials, water-efficient technology, and proximity to public transportation. (The Comcast Tower will be the tallest building in the U.S. to receive LEED certification.) Washington DC, Pasadena CA, and the State of New Mexico are developing similar requirements. "Our commitment is to grow this city in a sustainable way that enhances the quality of life and helps save on the bottom line, according to Mayor Menino. For a complete analysis of these problems and solutions, see the brilliant report issued by the Coalition last month: Karen L. Black, *The Next Great City Report*, (Next Great City Coalition, Philadelphia PA) January 2007.

¹¹ "Clean Energy: Today's Reality, Tomorrow's Opportunity" (The Reinvestment Fund: Philadelphia PA, 2006).

¹² Heinz School, "Pittsburgh Climate Protection Initiative: Green House Gas Inventory" (Pittsburgh PA, December 2006.)