

# Committee on Environmental Protection

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**Testimony of Rohit T. Aggarwala, Director of the Mayor's Office of Long-Term  
Planning and Sustainability, to the New York City Council  
Committee on Environmental Protection on  
Proposed Introductory Number 476-A: Benchmarking  
Preconsidered Introductory: Water & Energy Disclosure  
Council Chambers – City Hall  
June 27, 2008**

Good morning Chairman Gennaro and Committee Members. My name is Rohit T. Aggarwala, and I am the Director of the Mayor's Office of Long-Term Planning and Sustainability. Our office managed the creation of PlaNYC, the City's long-term sustainability plan, and continues to oversee its implementation. Thank you for inviting me here today to testify on the importance of the proposed benchmarking and disclosure amendments. The goals of these two bills are consistent with PlaNYC's own initiatives and we look forward to continuing our close collaboration with the City Council to refine them further towards ultimate passage.

Mayor Bloomberg unveiled PlaNYC 2030 in April 2007. This comprehensive plan, which includes 127 initiatives, was conceived with the necessary objective of helping the City of New York address the challenges of growth, aging infrastructure, and the many risks to our environment, from pollution to climate change. PlaNYC will help us achieve a greener, greater New York City. Together, PlaNYC's initiatives provide a roadmap for accomplishing the City's ten specific sustainability goals, which include upgrading our energy infrastructure to ensure cleaner, more reliable power for every New Yorker, achieving the best air quality of any large city, and reducing global warming emissions by 30%.

Collectively the energy used in New York City's buildings contributes 79% of the City's greenhouse gas emissions; of that total, 74% are attributable to creating hot water, heating, and lighting our buildings. Considering that a projected 85% of the buildings that will exist in 2030 have already been built, we must address environmental issues within our current building stock if we are to achieve our goal of reducing global warming emissions by 30% by 2030.

Economically, there is no better time to make emission reduction within our buildings a priority. New Yorkers currently spend over \$13 billion each year on energy, and during the past decade, the demand for energy has increased by 23%. With the cost of electricity rising and expected to increase indefinitely, we will see an estimated 125% -175% increase in electricity bills for our citizens over the next 20 years. Additionally, emission reductions will now be even more economical thanks to the New York State Public Service Commission's decision last week to double the funding available for energy efficiency projects as part of a new incentive structure it laid out for the next few years.

In PlaNYC, the City outlined a five-point energy strategy to reduce building energy consumption, starting with the City government leading by example. Over the last nine months, City staff have been working on a plan describing exactly how the City will reduce municipal government emissions by 30% by 2017; we expect that plan to be released in the near future, and it will focus significantly on the opportunities in existing buildings. Following the City's lead, a group of ten local universities have pledged to match the City government's emission reductions target by the same year. Presently, we

are working with each of these universities to complete greenhouse gas inventories and to develop their action plans for reduction. In the coming months, we plan to challenge other local institutions, such as hospitals and cultural organizations, to meet this same goal.

While this is progress, we still have a long way to go to achieve our 30% by 2030 citywide emissions goal. City government and institutions account for only 17% of our total building emissions. The remaining 83% comes from energy use in the private sector. Therefore, PlaNYC's energy strategy includes cost-effective initiatives that will lead to significant greenhouse gas reductions in the private sector. Specifically, PlaNYC identifies the transparency associated with benchmarking and disclosure of energy costs; continuous improvement from building audits and retrofits and lighting replacement; and the greening of our codes to promote green design in both existing and new buildings. These measures will make a tremendous difference in the energy consumption of our buildings. The two bills that are the subject of today's hearing, Proposed Intro 476-A on benchmarking and the Preconsidered Intro on energy disclosure, are great starting points to move forward our energy efficiency efforts for existing buildings.

Benchmarking energy and water consumption is a process that allows building owners and operators to see how well their buildings function; it can also enable prospective buyers and renters to understand the relative efficiency of various buildings. We believe this type of analysis and transparency can help transform the market, and ensure that building owners who design and maintain efficient buildings, and work with their tenants

to manage energy consumption, are rewarded. In the same way, we believe that it is important for home buyers to know – even if they are not thinking about it at the outset – the energy consumption of the homes and apartments they are considering buying, because this must be part of a calculation of total cost of ownership. It also would help encourage homeowners to make energy-efficient investments, because they would be more likely to recoup some of those investments at the time of sale. Today, most homeowners know that if they remodel their kitchen, they will get back at least some of the investment when they sell the home, because all buyers will see the kitchen; but investments in insulation, EnergyStar appliances, and the like may go unvalued by some buyers.

The importance of benchmarking is clear in the fact that some of the city's best building managers are already doing it on a widespread basis, using the EPA Portfolio Manager tool. This is true in the private sector, and, for this reason, the Department of Education has already begun benchmarking their 1300 school buildings. Making it a requirement will be necessary to penetrate the full spectrum of New York City buildings, and also to create as deep a set of information as will be necessary to make smart policy in the future and to refine the EPA tool itself.

We support the goals of these two bills, but we do see the opportunity to further improve these bills to achieve maximum effectiveness. We must ensure that the requirements are created in a way that is as easy to comply with, and to enforce, as possible. Second, there are some concerns that have been raised about the use of the data that we should take into

**Testimony of Alexandra Sullivan, Program Engineer  
ENERGY STAR Commercial and Industrial Branch  
United States Environmental Protection Agency  
Before the New York City Council, Committee on Environmental Protection  
Proposed Int. No. 476-A and Preconsidered Int. No. \_\_\_ Concerning Energy and  
Water Efficiency in Individual Residential Units  
June 27, 2008**

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Chairman Gennaro and Members of the Committee –

Good morning. Thank you for the opportunity to join you today to discuss the important energy and environmental issues before the committee, particularly Proposed Introduction 476-A and the Preconsidered Introduction on energy and water efficiency in individual residential units. EPA would like to congratulate the Council for being the first in the country to propose energy benchmarking for both residential and commercial buildings. We believe that benchmarking the energy use of commercial and residential buildings will position New York City as a leader in superior energy management and will help deliver important environmental benefits for residents of the City and the global community. I know you are all well aware of the many challenges related to increased energy use facing our nation, and New York City, and you are to be commended for identifying existing buildings as a major opportunity to reduce energy consumption in the city.

Energy efficiency offers one of the lowest cost solutions for improving energy reliability and security, reducing our energy bills, and addressing the important issue of global climate change—all while helping to grow the economy. Since its inception in 1992, the ENERGY STAR program has helped individuals and organizations nationwide find cost-effective, energy-efficient solutions. Through 2007, ENERGY STAR has helped prevent greenhouse gas emissions equivalent to those from 27 million vehicles while saving Americans more than \$16 billion on energy bills across the nation's homes, schools, office buildings, industries, and other facilities.

For more than a decade, EPA, through ENERGY STAR, has worked with tens of thousands of building owners and managers to reduce energy use in buildings. Using the lessons learned from working with these individuals who are on the front lines addressing our nation's energy challenges, EPA tailors easy-to-use tools and cost-effective solutions through ENERGY STAR to help businesses and other organizations reduce energy waste in buildings. We provide solutions for buildings of all types, sizes, and functions, and our tools are used by offices, hospitals, schools, retailers, hotels, congregations, and many others. The cornerstone of the ENERGY STAR program for buildings is energy benchmarking. Simply put, you can't manage what you don't measure, and measuring energy use in buildings leads to greater activity aimed at reducing this energy use.

To this end, a key tool leading to successful energy reductions in existing buildings is EPA's Portfolio Manager. Portfolio Manager is an interactive energy management tool that is referenced in the proposed bill 476-A as the mechanism by which building owners in New York City will benchmark their energy performance. You can rest assured that Portfolio Manager is well-suited for this type of use. It is a free tool that allows users to assess and track energy and water consumption for a single building or across an entire portfolio of buildings in a secure on-line environment. A little time spent entering basic facility and utility bill data into Portfolio Manager allows owners of all types of buildings to:

- benchmark energy and water use and set a baseline against which improvement can be measured
- identify under-performing and top-performing buildings to prioritize energy efficiency projects
- verify efficiency improvements
- understand the carbon emissions of a building
- obtain data to support mortgage, sale, and/or lease transactions
- document performance in energy service contracts
- communicate energy performance with tenants/customers/general public.

There is growing national interest in benchmarking energy use as a way to spur and measure improvement in buildings. National associations such as the Building Owners and Managers Association, the American Society of Healthcare Engineers, and others are encouraging, actually challenging, their members to assess the energy use in their buildings as a first important step toward improvement. Organizations of all types have used Portfolio Manager to benchmark the energy performance of over 60,000 buildings and 8 billion of square feet of commercial space across the country. This is over 10% of all commercial building space in the US, but we estimate that over 25% of the nation's office space has been assessed through Portfolio Manager. It has been our experience that understanding and communicating the energy performance of buildings is critical to finding energy waste and improving efficiency. Portfolio Manager provides an objective and standardized way to do this.

In New York City, several hundred commercial buildings representing over 120 million square feet of space have already benchmarked energy use with Portfolio Manager. These include both large and small buildings, but the average size is over 600,000 square feet. Usage of Portfolio Manager for energy benchmarking is also high in other major U.S. cities, with both Chicago and Washington, DC at over 100 million square feet each, and Los Angeles at more than 65 million square feet. Perhaps more important, benchmarking with Portfolio Manager has become a key part of standard business practices for a number of the largest building owners and management companies in the U.S. Companies such as CB Richard Ellis, Marriott, JCPenney, and many others now require benchmarking of all buildings as a key step in their efforts to reduce energy use and their carbon footprint.

The popularity and success of benchmarking with ENERGY STAR continues to grow dramatically. In fact, from December 2006 to December 2007, the total number of buildings benchmarking energy use in Portfolio Manager nearly tripled and the square footage of space more than doubled. We believe this growth is due to several factors, including: growing public and private concerns with climate risk; increasing energy prices; increased consumer awareness of the ENERGY STAR program; recognition of



EPA as a trusted and unbiased authority on energy efficiency; and EPA's commitment to continually upgrading the tool and adding new user-friendly features. For example, a new partnership with energy information service vendors and utilities allows for the automatic, electronic transfer of utility data, eliminating the need for manual entry by the building representative. There is also flexibility for building owners to share information with others through an online feature, which may be helpful in thinking about the implementation of the reporting provisions of proposed Bill 476-A.

While most of what I have described so far applies to commercial buildings, there is growing interest in the real estate community for tools to allow similar benchmarking for multi-family high-rise residential buildings. Many companies who are benchmarking office or other properties using Portfolio Manager also own residential properties and are interested in including these properties in their benchmarking activities. And now New York City, as well as several other cities across the country, have expressed a similar interest in being able to include residential buildings in Portfolio Manager as part of the energy efficiency solution. To respond to this growing interest, I am pleased to report that we are initiating efforts to allow for the benchmarking of multi-family high-rise residential buildings in Portfolio Manager, and the functionality will be present in the tool in Fall 2008. We are working with New York City staff as we develop this functionality.

New York City can lead the way to a new standard for tracking and disclosing building energy use. The City has the opportunity to be among the first to require benchmarking of existing private commercial buildings, to extend the requirement to large residential buildings, and to require reporting and public disclosure of energy use. But while New York City may be a leader in this area, the City will be continuing a rapidly growing trend of local and state governments passing legislation that leverages Portfolio Manager and ENERGY STAR offerings to reduce energy use in buildings in their jurisdictions. A range of Portfolio Manager benchmarking requirements have already been passed in Denver, Colorado and West Chester, Pennsylvania; the Minnesota Next Generation Energy Act sets a state goal of 1,000 ENERGY STAR labels for commercial buildings; the states of Ohio and Michigan established Portfolio Manager as

the benchmarking tool for state-owned facilities; and California's AB 1103 requires all utilities to maintain commercial building data in a format compatible for uploading to Portfolio Manager and requires disclosure of energy benchmarking data from Portfolio Manager during sale, lease, or financing of a building. We believe the disclosure of energy benchmarking data at the time of sale or lease, as required in California and included in Proposed Introduction 476-A and the Preconsidered Introduction pertaining to individual residential units for New York City, is an important tool that will allow investors and renters to make better informed decisions. These disclosure requirements will ultimately drive owners and operators to improve the energy efficiency of their buildings. For commercial buildings, the Statement of Energy Performance, or SEP, that can be generated within Portfolio Manager is a perfect tool for conveying such information to prospective buyers or tenants.

With the benchmarking and disclosure concepts included in Proposed Introduction 476-A, as well as those of the Preconsidered Introduction pertaining to individual residential units, you clearly are in good company. You join leading state and local governments in accomplishing your goals by leveraging the most successful national energy-efficiency program ever in the history of this country. With the concepts being considered in this hearing today, you can raise the bar and set a first-class example for others to follow. Benchmarking the energy use of commercial and residential buildings and the energy efficiency improvements that follow can benefit all New Yorkers by helping to ensure greater energy reliability as well as a higher level of environmental protection.

Thank you again for the opportunity to appear before you today. I'm happy to take any questions.



**Testimony of  
Russell Unger, Executive Director  
U.S. Green Building Council, New York Chapter**

**Before the New York City Council Committee on Environmental Protection**

**June 27, 2008**

Good morning Chairperson Gennaro and members of the Committee, my name is Russell Unger and I am the Executive Director of the New York Chapter of the U.S. Green Building Council or USGBC New York. I am pleased to express the Chapter's strong support for Proposed Int. 476-A and the energy disclosure bill for 1-4 family homes, coops and condos.

The mission of USGBC New York is to advance buildings that are environmentally responsible, profitable, and healthy places to live and work. USGBC developed and manages the LEED green building rating system, which has been the driving force behind the green building boom. Our membership includes many of the city's top developers and builders, building product manufacturers and the country's foremost architects and engineers.

If you live in New York and care about the environment, you should care about buildings. This is because buildings account for 79% of this city's greenhouse gas emissions, 95% of its electricity use and 85% of its water use. Whether you are concerned with climate change, loss of biodiversity, air pollution or protecting our watershed, in New York it comes down to buildings.



The two bills before the Council today share the same fundamental premise - namely, that increasing knowledge and transparency about the environmental impacts of buildings will help reduce those impacts. Benchmarking - the subject of Int. 476-A - is a term that essentially means knowing how much energy and water your building uses and how that compares to similar buildings. Without that information, an owner can't really know how their building is doing compared to last year, or how it is doing compared to their peers. And when it comes to residential buildings, how can an average New Yorker looking for an apartment and concerned about energy use make an informed decision unless they have the information to do so?

It is also important to note that there is an established history demonstrating that benchmarking is feasible for large buildings. The best-known benchmarking tool is Portfolio Manager, which is managed by the Environmental Protection Agency. Buildings that score in the top 25% of Portfolio Manager's database receive an Energy Star designation - in New York City, there are presently 28 Energy Star buildings, and many hundreds registered in the system.

One firm alone - the Durst Organization - has 7 of those 28 Energy Star buildings and other national companies like Hines have over 12 million square feet of Energy Star-certified space. You may hear from some building owners who are concerned that Portfolio Manager includes tenant energy use in determining its ratings, and who stress the limits of an owner's ability to influence tenant behavior. What Hines and Durst demonstrate, however, is that an owner who is committed to reducing energy use can work with tenants to achieve great win-win results.



USGBCNY

Well before the environment was nearly as popular an issue as it is today, this Council took the lead in passing countless groundbreaking environmental laws, including the city's landmark green building law. I'm thrilled to see the Council ready to build upon these past environmental successes, and look forward to future installments in the Council's green building agenda.

I am happy to answer any questions that you may have.

Testimony Provided to the Committee on Environmental Protection of the New York  
City Council by the New York State Energy Research and Development Authority

Friday, June 27, 2008

Regarding: Proposed Int. No 476-A

Thank you for the opportunity to present testimony today on behalf of the New York State Energy Research and Development Authority (NYSERDA), regarding a proposal to amend the administrative code of the city of New York, in relation to benchmarking the energy and water efficiency of buildings. I am Michael Colgrove, Senior Project Manager, and I am located in NYSERDA's New York City office.

NYSERDA is a public benefit corporation of the state of New York, established by law in 1975. NYSERDA's mission is to help grow the State's economy and improve its environment by partnering with businesses, industries, and residents to invest in innovative, environmentally friendly, energy-efficient technologies. To support this mission, NYSERDA offers a variety of programs and services designed to lead the State toward increasing energy independence, economic security, and environmental health.

NYSERDA currently administers System Benefits Charge (SBC) funds and programs under an agreement with the Public Service Commission to help the State address its energy, economic, and environmental challenges. On December 21, 2005, the PSC ordered New York's public benefits program funding extended for five years, from July 1, 2006 through June 31, 2011 and increased funding from approximately \$150

million to \$175 million annually (\$896 million over the five-year period). The continuation and expansion of the Program is intended to help maintain momentum for the State's efforts to develop competitive markets for energy efficiency; demand management (including peak load reduction); outreach and education services; research, development, and demonstration; low-income services; and to provide direct economic and environmental benefits to New Yorkers. The extended program will continue to address market barriers to the competitive procurement of these services. By mid-2011, SBC funds and interest earnings will have provided more than \$1.87 billion to support a full range of programs to help the State meet its energy challenges.

NYSERDA is a member of Governor Paterson's Renewable Energy Task Force which issued its first Report on February 28, 2008. This Report lays out a policy roadmap to address the challenges that New York faces in reducing our dependence on fossil fuels, stimulating investment in clean energy alternatives, and moving us towards a Clean Energy Economy. Strategies to improve energy efficiency are paramount to any overarching clean energy policy. In fact, the Task Force concluded that energy efficiency should be viewed as the "first" energy source. All cost-effective energy efficiency should be harvested and doing so will improve grid reliability, make New York more competitive by reducing energy costs, create new jobs by keeping energy dollars in state and reduce emissions which adversely impact public health and cause global warming.

Specifically, the Task Force recommended that New York reclaim a leadership role through building and product energy performance. For building efficiency, this

included recommendations that would require benchmarking and/or energy audits of all residential and commercial buildings at the time of occupancy or upon a change in ownership or tenancy, as well as requiring periodic retro-commissioning of large commercial buildings. The agencies and organizations with responsibility for carrying out the recommendations of the Task Force, including NYSERDA, are considering various policy approaches, which may include state legislation. The forward thinking policies being considered in New York City through efforts such as the legislation being considered here today will ease the transition to a statewide requirement in the future, and put New York City buildings “ahead of the curve.”

NYSERDA has incorporated energy benchmarking into our Programs and promotes the use of the US EPA Portfolio Manager tool as an important element of our energy efficiency programs. NYSERDA’s commercial business/institutional programs include benchmarking as the first step in an effective strategy to assess energy performance and develop an energy efficiency improvement plan. Additionally, NYSERDA’s multifamily program relies specifically on benchmarking to help determine to what extent a building reduces their energy usage. A portion of the building’s incentive is also based on their benchmarking score. Moreover, energy benchmarking can be further leveraged, not only as an immediate rating tool, but as a continuous improvement tool, allowing owners and property managers to track energy performance over time and establish successful energy efficiency improvement plans to address both short and long term energy and environmental goals.



Over the last six months, NYSERDA has been working with the NYC Economic Development Corporations (NYC EDC), the New York Mayor's Office of Long Term Planning and Sustainability, the US Environmental Protection Agency (EPA), and other partners such as the Real Estate Board of New York (REBNY), to institutionalize benchmarking in New York City and statewide. NYSERDA has developed a streamlined process for data entry and custom reporting of regional-specific metrics such as source energy consumption and carbon emissions for each fuel consumed by the building. These tools and resources are currently available on NYSERDA's website: [CRE.nyserdera.org](http://CRE.nyserdera.org). NYSERDA's FOCUS on Commercial Real Estate (FOCUS CRE) initiative is sponsoring energy benchmarking training for technical providers, property managers, and building owners/landlords to help the private sector comply with the proposed benchmarking protocol. Its Multifamily Performance Program will be providing similar assistance to those entities as they deal with multifamily buildings.

NYSERDA is coordinating with various entities at the national level to leverage successful benchmarking strategies similar to the scale of this bill, such as the effort currently underway in California per order of the California Assembly Bill 1103. This recently passed bill (now CA Public Resources Code Section 25402.10) requires electric or gas utilities to maintain energy consumption data for non-residential buildings for at least the most recent 12 months in a format that is compatible for uploading to the United States Environmental Protection Agency's (EPA's) Energy Star Portfolio Manager program. Effective January 1, 2009, the utilities, upon written or electronic authorization from the owner/operator, must upload all of the data for a building to the Energy Star

Portfolio Manager in a manner that preserves the confidentiality of the customer.

Effective January 1, 2010 non-residential building owners must disclose to prospective buyers and lenders the EPA's Energy Star Portfolio Manager data and scores for a building that is being sold, leased, financed or refinanced. Best practices identified within the California model show that large scale benchmarking requires a streamlined process and full cooperation of the utilities.

NYSERDA programs have already advanced benchmarking in several market sectors including public K-12 schools, commercial offices, hospitality/hotels, healthcare, and multi-family residential facilities. Specifically, NYSERDA has supported the benchmarking of approximately 770 public K-12 schools representing 167 school districts with performance improvements from 2002/2003 to the 2006/2007 school year of 22% reduction in energy use per square foot and an 18% reduction in CO<sub>2</sub> emissions. To date, over 200 buildings, representing approximately 120 million square feet of NYC commercial office space, have been benchmarked using the EPA Portfolio Manager. In the multifamily sector, according to the current pipeline in the Multifamily Performance Program, just fewer than 2,000 buildings with over 85,000 units statewide will receive benchmarking. The ability for building owners to benchmark their buildings will be greatly expanded as the result of an effort between NYSERDA, the EPA, NYC and other large cities to expand the capabilities of the Portfolio Manager to accept consumption data and building characteristics on multifamily buildings.

New York and the nation face a future of continued tightening of energy supplies, rising prices, and increasing environmental repercussions from energy use. The city, states and federal government must work collectively toward developing technologies and resources that will sustain our economies and citizens well into the future.

Benchmarking strategies for assessing how and when we use energy, while ensuring that our energy use is efficient and effective, will play an important role in the State's economic well-being.

account, although I continue to believe that the Portfolio Manager tool itself is the best tool to use.

Most importantly, I think we need to treat the process of greening existing buildings as an overall effort, and that will require the simultaneous development of additional bills to address the even more important aspect of continuous improvement – primarily around required periodic audits and retrofits envisioned in PlaNYC – as well as measures that will improve efficiency in tenant spaces as well as the central systems that building managers control.

We look forward to our continued collaboration with the City Council on developing sound green building policies, including the refinement of the two bills discussed today. Thank you for the opportunity to testify. I am available to answer any of your questions.