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FOR THE RECORD

Testimony before the Committee on Housing and Buildings
of the New York City Council
By Ryan J. S. Baxter, Senior Policy Analyst
Real Estate Board of New York
November 19, 2014

Good afternoon Chairperson Williams and members of the Committee on Housing and Buildings. The Real Estate Board of New York, representing over 16,000 owners, developers, managers, and brokers of real property in New York City, thanks you for the opportunity to testify regarding the update to the New York City Energy Conservation Code. We appreciate our continuing dialogue with the Housing and Buildings Committees, and thank Chairman Williams for his leadership and his continuous communication with the real estate industry.

We have been actively engaged in discussions with our membership to help ensure the proposal achieves the increased energy efficiencies of the New York State Energy Code, without introducing avoidable costs or burdens on building operators. We have outlined below several changes that we believe will improve the bill in this regard.

104.2.1 New, altered, extended, renovated or repaired systems.

- We believe that all of the testing requirements for new, altered, extended, renovated, and repaired systems should be included in this or future legislation and not determined by rulemaking by the Department of Buildings. As seen with the Greener, Greater Building Plan, rulemaking has the ability to create a significant amount of new requirements for the construction industry that we believe should be discussed at the City Council.

C408.2 Mechanical, renewable energy, and service water heating systems commissioning and completion requirements.

- Both the NYC Energy Conservation Code and the resulting DOB documents should more clearly state that the preliminary commissioning reports required prior to passing final mechanical inspections need only cover systems based on the drafting registered design professional's discretion. It is important to note that certain systems covered by this section can only be commissioned depending on the season. Absent this distinction, we are concerned about the permitting delays that may be created if the law is interpreted as requiring full commissioning reports prior to the inspections.

C408.2.2 Systems adjusting and balancing.

- We believe the proposed standard for use in balancing HVAC systems may create unnecessary confusion. ASHRAE111 is not commonly used, and most TAB contractors rely on NEBB, AABC, or SMACNA/TABB. We recommend that the NYC Energy Conservation Code retain existing International Energy Conservation Code language, or include all four commonly used standards.

With modification to address the aforementioned concerns, REBNY supports Int. No. 550-2014 and the City's efforts to update energy use standards. Thank you again for the opportunity to comment. We look forward to continuing our conversations with the Council to continue improving energy efficiency throughout the City for all New Yorkers.

INTERNATIONAL CODE COUNCIL®

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November 19, 2014

Good afternoon Chairman Williams, Members and Staff of the City Council Committee on Housing and Buildings. My name is Dottie Harris. I am the Vice President of State & Local Government Relations and your liaison to the International Code Council. The International Code Council, a membership association dedicated to building safety and fire prevention, develops the codes used to construct residential and commercial buildings, including homes and schools. The mission of the International Code Council (ICC) is to provide the highest quality codes, standards, products, and services for all concerned with the safety and performance of the built environment.

I would like to commend the City Council for its outstanding work to ensure the safety, health and well being of its citizens. I am here today speaking in support of Intro. 550, which will update the New York City Energy Conservation Code to the New York state energy code with amendments unique to construction in the city. This update will have a positive effect on sustainability in the built environment and includes provisions outlined in Mayor de Blasio's "One City: Built to Last" report.

Just yesterday (November 18, 2014), the State Fire Prevention and Building Code Council voted to move forward with the implementation of the commercial provisions of 2012 International Energy Conservation Code and ASHRAE 90.1, 2010 so that the State would be in compliance with the requirements of the US Department of Energy. The 2012 ECCCNYS - the Energy Conservation and Construction Code of New York State will become effective on January 1, 2015 and therefore the City of New York must update its Energy Code so that it continues to stay in compliance with Article 11 of the New York State Energy Law.

The International Energy Conservation Code, (IECC) is adopted at the state or local level in 46 states, including Washington DC, Puerto Rico and the U.S. Virgin Islands (adoption chart can be found at: http://www.iccsafe.org/gr/Pages/adoptions.aspx). Presently, Colorado, Delaware, Washington DC, Illinois, Iowa, Maryland, Massachusetts, Missouri, Nevada, North Dakota, Oregon, Rhode Island, Utah, Virginia, Washington and Wyoming have adopted the 2012 IECC statewide.

The International Codes, including the IECC are regularly revised and updated by a national consensus process that strikes a balance between the latest technology and new building products, economics and cost while providing for an acceptable level of public and first responder safety. It is an open, inclusive process that encourages input from all individuals and groups and allows those governmental members that are public safety officials to determine the final code provisions. I am pleased that several staff from the New York City Department of Buildings and other New York based organizations participated in the 2012 ICC Code Development Hearings, and as a result, several provisions have been incorporated into the 2012 IECC. This involvement is critical to the success of the next version of the I-Codes. The expertise of the DOB, FDNY, design professionals, builders, contractors, labor representatives and all organizations interested in building safety and resiliency are vital to your adoption efforts as well as ours.

Thank you for the opportunity to submit this testimony regarding the City's adoption of the commercial provisions of the IECC. The International Code Council is honored to partner with the City of New York and we look forward to continuing to serve your needs. Thank you for the opportunity to present testimony to you today in support of Intro. 550. I am pleased to answer any questions or provide additional documentation.

FOR THE RECORD

HEARING TESTIMONY FROM
THE BUILDING OWNERS AND MANAGERS ASSOCIATION OF GREATER NEW YORK
BEFORE THE NEW YORK CITY COUNCIL COMMITTEE ON HOUSING AND BUILDINGS

INT. NO. 550, A LOCAL LAW TO AMEND THE ADMINISTRATIVE CODE OF NEW YORK, IN RELATION TO CONFORMING THE NEW YORK CITY ENERGY CONSERVATION CODE TO THE NEW YORK STATE ENERGY CODE WITH AMENDMENTS UNIQUE TO CONSTRUCTION IN THE CITY AND RE;EALING SECTION 28-10001.2 IN RELATION THERETO.

November 19, 2014

The Building Owners and Managers Association of Greater New York (BOMA/NY) represents more than 750 owners, property managers, and building professionals who either own or manage 400 million square feet of commercial space. We are responsible for the safety of over 3 million tenants, generate more than $1.5 billion in tax revenue, and oversee annual budgets of more than $4 billion. BOMA/NY is the largest Association in the BOMA International Federation, the world's largest trade organization. BOMA/NY appreciates this opportunity to comment on this legislation and looks forward to continuing to work with the Committee on Housing and Buildings and the City Council on these and other Codes moving forward.

In Section 104.2.1, potentially leaving testing requirements for new, altered, extended or repaired systems to Department of Buildings rulemaking seems unnecessarily vague and creates regulatory uncertainty. Testing requirements should be made explicit up front in the Energy Conservation Code.

Section 408.2 is vague and confusing. If a preliminary commissioning report is required prior to passing mechanical inspections, it should be made clear that the content of such preliminary report will be left to the discretion of the registered building professional, as commissioning of many systems at this point would not be feasible. In addition, it is not clear what would constitute "good cause" in Section C408.2.5.4, and this should be spelled out. Furthermore, the 500,000 square foot cutoff for appealing for additional time to do commissioning seems arbitrary and may need to be extended to smaller buildings.

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Finally, in C.408.2.2, for balancing HVAC systems, ASHRAE111 is not typically used, as most TAB contractors use NEBB, AABC, or SMACNA/TABB. Please use all four standards or the International Energy Conservation Code language.

Once again, we appreciate the opportunity to comment on these Codes. With the above changes, BOMA/NY supports this legislation and these efforts to improve energy efficiency in NYC buildings.

GINA BOCRA
CHIEF SUSTAINABILITY OFFICER
NEW YORK CITY DEPARTMENT OF BUILDINGS

HEARING BEFORE THE NEW YORK CITY COUNCIL
COMMITTEE ON HOUSING & BUILDINGS
NOVEMBER 19, 2014

Good afternoon Chair Williams and members of the City Council. My name is Gina Bocra and I am the Chief Sustainability Officer of the Department of Buildings. I am joined today by Mr. Patrick Wehle, our Assistant Commissioner of External Affairs, and Ms. Emily Hoffman, our Director of Energy Code Compliance. We are pleased to be here this afternoon to offer testimony in support of Introductory Number 550, sponsored at the request of the Administration, which makes important updates to the New York City Energy Conservation Code.

On September 21st Mayor de Blasio unveiled, "One City, Built to Last: Transforming New York City's Buildings for a Low-Carbon Future." This plan commits to holding buildings to the highest standards for construction and energy performance. The legislation before you today embodies this commitment.

As this Council is aware, as part of the Greener, Greater Buildings Plan, Local Law 85 of 2009 established the first New York City Energy Conservation Code ("City Energy Code"), which was amended in 2010. The City Energy Code is part of our New York City Construction Codes and provides performance standards for building energy usage. The current City Energy Code is based on the New York State Energy Code ("State Energy Code"), and includes the requirements

for automatic lighting controls in most commercial buildings that were added by Local Law 48 of 2010, as well as an administrative chapter that is tailored to our procedures at the Department of Buildings.

Yesterday, the New York State Fire Prevention and Building Code Council voted to update the State Energy Code, with technical changes to the commercial provisions that align it with the 2012 edition of the International Energy Conservation Code ("IECC"). This update will be more stringent than the current 2010 State Energy Code, as well as our current City Energy Code. This change is being adopted in response to a federal mandate, and it has an effective date of January 1, 2015. The primary benefit of this code update by the State is that it has been determined by the United States Department of Energy to result in an average annual energy savings of 18.2%. In accordance with the State Energy Law, §11-109, an energy code adopted by a local jurisdiction must be more stringent than the State Energy Code. Our changes at the local level proposed in Intro. 550 will add to these energy savings. Energy savings also translates directly to financial savings, and increasing energy efficiency in buildings is a key strategy to mitigating climate change throughout the City. In sum, these changes will bring the best in energy efficiency to our building equipment and facades and ensure that the City's buildings consume energy more efficiently towards meeting our goal of reducing greenhouse gas emissions 80% by 2050.

Specifically, Intro. 550 is being advanced to serve the following four goals:

1. To preserve the existing improvements in the current City Energy Code;
2. To adopt the State Energy Code as the basis of our technical provisions;

3. To make several enhancements that will make our City Energy Code more stringent than the State Energy Code; and
4. To incorporate technical enhancements contributed by the Green Codes Task Force and others.

The local changes that are being proposed were developed by the Department of Buildings with the consultation of an Energy Code Advisory Committee. This Committee included our partners from the design industry, real estate, representatives from the construction industry and trades, other City agencies, representatives from affordable housing, and advocates from environmental interest groups. The more substantive local amendments can be found Chapter C4 of the proposals included in this bill. They are as follows:

- It introduces technical changes relative to slightly more stringent equipment efficiencies for large boilers, which was a Green Codes Task Force proposal, and to commissioning requirements. Commissioning is the practice of verifying and documenting that all of the energy-using systems are planned, designed, installed and tested to meet the owner's requirements. The Department will be publishing a rule to define the reporting requirements, procedures, and fees for commissioning.
- It retains the automatic lighting requirements of Local Law 48 of 2010.
- It introduces a requirement in new buildings over 50,000 square feet for sub-metering of commercial spaces over 10,000 square feet, which will support the requirements of Local Law 88 of 2009.
- It eliminates a provision that previously exempted lighting in dwelling units of multi-family buildings from the efficiency provisions when following ASHRAE 90.1,

requirements that all other dwelling units are subject to when following the City Energy Code for either one- and two-family residences or for multi-family buildings. ASHRAE 90.1 serves as an alternate compliance path under the State and City Code. Eliminating this provision subjects dwelling units to the same provisions regardless of the compliance path.

With the State Energy Code becoming effective on January 1, 2015 it is vitally important that the City Energy Code be effective by then or we will lose the improvements our Code provides and be subject to the State's Energy Code. Therefore we respectfully request swift and careful consideration and approval of this legislation which will enable our Department and stakeholders to smoothly transition to the requirements of the new City Energy Code.

Thank you for your attention and the opportunity to testify before you today. My colleagues and I welcome any questions you may have.

Horizon Engineering
Associates LLP
Demand a Higher Standard℠

November 19, 2014

Written Testimony

To:
New York City Council
Committee on Housing and Buildings

Submitted by:
Michael C. English, PE, CCP, LEED AP – Founder and Senior Partner of Horizon Engineering Associates, LLP

Re:
Conforming the New York City energy conservation code to the New York State energy code with amendments unique to construction in the city and repealing section 28-1001.2 in relation thereto.

Submitted Testimony:
Mr. Michael C. English, PE, CCP, LEED AP, Founder and Senior Partner of Horizon Engineering Associates, LLP submits the following testimony regarding the conforming of the NYC energy conservation code to the NYS energy code:

Background and Credentials
I am submitting my written testimony as an experienced, licensed Professional Engineer and building commissioning provider of nearly 20 years. I am familiar with the serious nature of energy use in the built environment and have experience as both a technical resource and advisor on policy issues. I hold a professional engineer license in NY (since 1998) and also in PA, MD, NC, VA, SC, IN, NJ, FL, MA, UT, KY, GA, MS, OH, CT, RI and DE. I am also a Certified Commissioning Professional (Building Commissioning Association) and a LEED Accredited Professional (US Green Building Council).

Founded in NYC (in 1995), my firm (Horizon Engineering Associates, LLP (HEA)) has provided building commissioning and energy consulting services in New York City for over 1,500 projects. My leadership in the building commissioning industry is demonstrated through my involvement in the Building Commissioning Association (BCA). I have served a two year term from 2005 through 2006 as President of the BCA after serving as a Vice President for three years. I have also spearheaded the organization's Certified Commissioning Professional (CCP) program as well as commissioning guidelines for LEED-NC Version 2.2, and served on the New York City Chapter Board of Directors of the U.S. Green Building Council. Most recently, I have worked closely with New York City's Mayor's Office to develop retro-commissioning guidelines for PlaNYC Local Law 87 and have been selected by Urban Green Council to lead educational sessions regarding the Greener, Greater Buildings Plan. I am most honored to be the recipient of the 2008 Benner Award, which represents outstanding achievement in making building commissioning "business as usual". I have been a

featured speaker, nationwide, at numerous industry conferences such as: National Conference on Building Commissioning, World Energy Engineering Congress and NFMT Facilities Expo, to name a few.

HEA has 11 offices across the country and is one of the largest firms dedicated to building commissioning services in the USA.

HEA participated in a research study on building commissioning for Navigant Research and was named a Key Industry Player in their 2012 findings.

Why is Commissioning Essential to Reach Energy Goals?Building commissioning is a systematic process that provides documentation that systems are designed, installed and operate in accordance with the owners project requirements. The commissioning process is accomplished with a thorough review of the design documents. HEA proves sequence of operations by inspecting equipment during installation and, when ready, test systems performance. Commissioning integrates design, construction and operations to facilitate "big picture" project success, controlling conditions often underserved in the typical design and construction process. HEA commissions for system performance, and our philosophy dictates that we treat each facility as if we would operate it for the next twenty years. This enhances the quality of the project, which is reflected by improved energy efficiency, sufficient access to equipment, better operational characteristics and improved training of personnel.

Commissioning for new construction and existing buildings are no longer a new and untried concept. The commissioning process has been around long enough to have proven, real-world results. A recent Pike Research study found that retro-commissioning services can result in savings of 10 to 20 percent and average payback periods of less than a year (Energy Efficiency Retrofits for Commercial and Public Buildings, 2011, Pike Research, www.pikeresearch.com). The benefits of commissioning are well documented as far as energy savings. Organizations such as the NYS Energy Research & Development Authority (NYSERDA), US Green Building Council and Portland Energy & Conservation, Inc. (PECI) have calculated anywhere between 15%-30% energy reduction for buildings that are commissioned to buildings that are not. The owner operator community also realizes the operation and maintenance benefits, where the maintenance cost are reduced by 15%-35% as well.

A study by Evan Mills (Building Commissioning: A Golden Opportunity for Reducing Energy Costs and Greenhouse Gas Emissions, 2009, Evan Mills), which was published in the ASHRAE Journal, reported that commissioning is the single most cost-effective strategy for reducing energy, costs and greenhouse gas emissions in buildings today. It also reports that if we were to commission the stock of U.S. non-residential buildings, the energy-savings potential would be $30 billion by the year 2030 and annual greenhouse gas emissions reductions of about 340 megatons of CO2 each year. An industry equipped to deliver these benefits would have a sales volume of $4 billion per year and support approximately 24,000 jobs. The report combined the world's largest database of commissioning case studies and includes data from 643 buildings, comprising 99 million square feet of floor space. Throughout our 20 years of providing commissioning services, we can confirm the research results and have seen the direct impact that commissioning can provide to the construction process. The following case studies illustrate this point:

- New York Times Headquarters, New York, NY
  - Background: One of the largest commissioning efforts in the nation, this stunning 1.6 million sf, 52 floor high-rise tower is the new headquarters for The New York Times Company (NYT). At the time of construction, it was the third tallest building in the city and the seventh in the country. The new facility unites most of the media giant's 2,500 employees. This building exemplifies reduced energy costs, improved air quality and personal comfort. The tower's sustainable design features a fully-transparent glass wall screened by a framework of ceramic tubing, daylighting and automated shading which optimizes energy savings for the building as well as enhance the workplace environment.
  - Role: HEA served as commissioning authority for the core and shell, critical interior and specialty interior systems of the building. HEA's scope of work included mechanical, electrical, plumbing BMS, fire safety, lighting and under floor air distribution systems along with a 12,500 sf data center and multiple chillers, including: five 1,200-ton centrifugal chillers, one 275-ton absorber, one 250-ton air-cooled chiller, 1.4 MW cogeneration plant and an emergency generator. A unique challenge HEA faced was quantifying room air stratification. The NYT in association with the University of California-Berkeley, developed a commissioning cart that measured the stratification of the air, as well as under floor plenum pressure. HEA utilized this cart to obtain temperature samples and data logs on each floor under different load conditions. HEA also utilized 40 remote temperature sensors to log and quantify comfort performance floor by floor.
  - Results: HEA identified and monitored the correction of numerous deficiencies including: systemic controls issues with under floor fan powered boxes and booster fans; poor access to under floor equipment; interior stairwell fire doors were not shutting appropriately; backwards piping on a number of air handling units; free cooling damper configuration was incorrect; damper positions in the field were not matching the damper positions from the BMS; and various alarms were not being transmitted to the cogeneration plant.
- New York State Supreme & Kings County Family Court, Brooklyn, NY
  - Background: The 1.1 million sf NY State Supreme Court & Kings County Family Court was developed as a prominent member of the Metrotech Center campus, serving as a mixed-use judicial, government, and commercial building. It includes 84 courtrooms, 10 hearing rooms, 750-person jury assembly room, 300-person detention facility, and 250-prisoner internal cell block. Space is also devoted to commercial use and more than a dozen city agencies.
  - Role: Commissioning included all MEP, fire protection, fire alarm, building management, vertical transport, telecommunications, audiovisual, and security including 500 cameras. Courtrooms are equipped for electronic presentation of evidence, and some have video-appearance capabilities and wireless internet.
  - Results: Due to full-scale commissioning, HEA was able to coordinate the integration of all building systems which helped turn the facility over ahead of schedule.
- Ariel East, New York, NY
  - 200,000 sf / 37 floors / Residential Building
  - Services include providing documentation that building systems were functioning as designed and assisted the construction manager and subcontractors in coordinating the start-up and turnover process for the building that received a minimum number of call

backs. The commissioning process helped to allow tenants to occupy the building faster and ensured systems were installed and operated as per the owner's project requirements.

- Sample deficiencies: The high-zone domestic hot water heater interlocks to the combustion air dampers were not wired during HEA's field inspection. The mid-zone domestic hot water heater combustion air intake did not function during functional testing due to broken actuator linkages. A failed compressor was found in a heating, ventilation and air conditioning unit that serves common areas. An inoperable freeze protection pump was found while functionally testing the same heating, ventilation and air conditioning units. An inoperable low-suction pressure cut-off was found during functional testing of the buildings house tank fill pumps.
- Savings from discovering deficiencies during construction was approximately $57,000.

Importance of Using a Third-Party Commissioning Provider

The construction team for any project has many people involved and they all have their own core responsibilities. Keeping them focused on their strengths will produce a better product. The designers are good at designing, contractors are good at installation and construction managers are good at managing the process and the schedule. Why would any of these people commission a facility if that is not their specialty or focus?

The most qualified is an independent (third-party) commissioning provider who has no conflicts of interest on the project. A third-party certified commissioning authority under direct contract to the owner represents the preferred delivery model for commissioning services advocated by AABC Commissioning Group (ACG). A third-party professional brings objectivity and practical experience to the project to provide a consistent level of assurance that the owner's best interests will be served. The argument can be made that the design engineer and/or the contractor can make sufficient claims that they are better suited to execute the commissioning process. However, in spite of the fact that many contractors possess the knowledge and capability to test the equipment they install, they may not be skilled at testing, documenting or diagnosing problems. It is difficult for contractors to objectively test and assess their own work, especially since repairing deficiencies found through commissioning may directly increase their costs. The bottom line is that someone will be commissioning their own work and that is a direct conflict of interest. The commissioning provider has no secret agenda, no 'axe to grind'. Therefore, third-party commissioning providers should be a requirement.

Cost

The cost of commissioning is minimal in the life of the project. Typical commissioning cost ranges from .25% - .5% of construction cost depending on the complexity of the building. The cost avoidance of change orders, energy consumption, operations and maintenance savings outweighs these costs significantly. Return on investment case studies have commissioning at a less than one year pay back.

Key Qualifications for Commissioning Providers

Another vital point for successful building commissioning is to have/hire appropriately qualified engineers to perform the services. At a minimum, commissioning providers should have:

- Professional Engineer license
- Commissioning Industry Certifications, such as:

- Certified Commissioning Professional (Building Commissioning Association)
- Certified Commissioning Authority (AABC Commissioning Group)
- Other ANSI-Accredited Program

Based on personal experience with Local Law 87: Energy Audits & Retro-commissioning, problems have arisen with providers, whom are not qualified to conduct commissioning services, delivering below-average findings, below-average results and below-average energy savings. It is also important for the provider to have real-world experience, not just clinical knowledge. Real-world experience and hands-on knowledge are key to the effectiveness of the role of a commissioning provider. The nature of the commissioning provider is an entity who needs to be the mediator/communicator for numerous parties of varying backgrounds (owner, operator, contracts, general contractor, etc.). The provider must wear many hats and be knowledgeable from a whole-building perspective. For example, an established/certified commissioning provider would know that in addition to commissioning energy consuming systems, building enclosure needs to be included. Enclosures are important in regards to the amount of air infiltration and will result in accurately size the equipment.

Conclusion

Commissioning is needed as a quality-assurance measure for today's complex building designs and equipment, and fast-paced construction timelines. The economic ramifications for delayed occupancy and the early detection of design and installation faults alone can provide economic justification for many (if not most) commissioning projects. Energy savings can also reduce the payback period of commissioning investments, but should not be looked upon as the sole reason to commission or retro-commission a building. Advancing building operations and maintenance through improved documentation of systems and procedures; training building operators and managers will further improve return on investment for commissioning and the economic performance of a building.

Green building is simply the right thing to do. Our role is important, we are making a difference in the way a building operates – which has social and ethical ramifications. Much like the healthcare industry, the commissioning industry values the importance of ensuring building systems are working correctly (in addition to being energy efficient) which can affect the well-being of the occupants, the community and the world.

Thank you for inviting me to testify today. By making the commissioning process mandatory and insisting on independent, talented and qualified engineers – we are on the right track to pursuing the goal of energy efficiency and a greener future.

I look forward to answering any questions you may have about our efforts and HEA looks forward to working with members of the committee and others to ensure energy and operational efficiency for buildings in New York City.

Testimony of Cecil Scheib, PE, CEM, LEED AP
Chief Program Officer, Urban Green Council
Before the New York City Council Committee on Housing & Buildings
November 19, 2014

Good morning Chair Williams and members of the Committee. My name is Cecil Scheib and I am the Chief Program Officer of Urban Green Council, the New York chapter of the U.S. Green Building Council. I will testify in favor of Intro 0550-2014, "A Local Law to amend the administrative code of the city of New York, in relation to conforming the New York city energy conservation code to the New York state energy code with amendments unique to construction in the city and repealing section 28-1001.2 in relation thereto." Urban Green Council applauds the Mayor, City Council, and the Department of Buildings in particular for its painstaking and timely work on this bill.

Federal law requires New York state to update its commercial energy code approximately once every three years. The US Department of Energy estimates that "energy cost savings for New York resulting from the state updating its commercial and residential building energy codes in accordance with federal law are significant, estimated to be on the order of nearly $250 million annually by 2030."[1] As the city code must be as stringent as the state version, the city energy code will also receive cyclical updates over time and those savings will accrue to our city.

That energy code updates are federally mandated does not diminish the importance of this bill. A New York City energy code that has been adapted for local use is an essential component of increasing energy affordability and reducing greenhouse gas emissions. The energy code is the DNA of the building industry, strongly influencing the design and construction of every new building and touching many more during renovations of existing buildings. Thus, an energy code that addresses specific NYC needs and that is clear and enforceable is vital to improvement of city building stock over time.

Intro 550 in its present form represents laudable work by the Department of Buildings incorporating comments from stakeholders on an advisory panel, of which Urban Green was a participant. Examples of ways that Intro 550 will improve energy efficiency include:

- Boilers that waste less fuel in winter
- Commercial tenants that are more informed by receiving monthly energy use data
- New buildings that are inspected to ensure room air conditioners aren't constantly leaking air outside

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- A streamlined energy modeling process that makes industry compliance and DOB enforcement simpler and more cost-effective
- Low-energy light fixtures in residential units

We have submitted friendly amendments to Intro 550 in our written testimony that we believe represent technical errors in this draft. We hope they will be addressed in an amended version before this bill is passed by Council. They include:

1. **Table C403.2.3(5)** – Per the outcome of the Advisory Committee discussions, the efficiency of gas-fired hot water boilers >2.5MMBTU should be 85Ec; however, it is shown as 84Ec in Int. 550. We recommend this be reinstated to 85Ec.
2. **Section C408.2.3.1** – Per the outcome of the Advisory Committee discussions, the following modification to the Exception should be included: "Unitary or packaged HVAC equipment listed in Tables C403.2.3(1) through C403.2.3(3) that do not require supply air economizers shall only be required to demonstrate functioning under full-load and part-load conditions." This was previously present in Int 262-2014, but it is omitted in Int. 550. We recommend it be reinstated.

We applaud the City for acting in concert with mandated state energy code updates to ensure an easier transition for the building industry. When it goes into effect in 2015, New York City will have the energy code that was considered industry consensus in 2008 and 2009 when ASHRAE 90.1-2010 was being written. That means that we're about six years behind what the industry thinks is possible. The next versions in the regular update cycle, ASHRAE 90.1-2013 and the 2015 IECC, are already available. While federal law describes the slowest the commercial energy code can legally be improved, there are no such rules preventing the City from moving faster. A strong and enforceable code is an effective way to use an industry consensus process to support New York City's bold affordability and climate change initiatives. We encourage the Council to not wait three years before the next update.

Thank you and I welcome your questions.

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[1] http://www.energycodes.gov/adoption/states/new-york

ACEC New York

American Council of Engineering Companies of New York

The New York City Council
Committee on Housing and Buildings
Wednesday, November 19, 2014, 1:00pm

Hearing on Int. No. 550-2014 – A Local Law to amend the administrative code of the city of New York, in relation to conforming the New York city energy conservation code to the New York state energy code with amendments unique to construction in the city and repealing section 28-1001.2

Testimony by Scott E. Frank, PE, LEED® AP, Chair, Energy Codes Committee, American Council of Engineering Companies of New York (ACEC New York)

On behalf of the American Council of Engineering Companies of New York / Metropolitan Region ("ACEC New York"), I'd like to thank the Mayor's Office, City Council and the NYC Department of Buildings for their efforts to update the City's energy code. I am a partner at Jaros, Baum & Bolles Consulting Engineers, located in New York City and as Chair of the ACEC New York Energy Codes Committee, I am here today to testify in favor of the proposed update to the New York City Energy Conservation Code

Founded in New York City in 1921, ACEC New York is one of the oldest continuing organizations of professional consulting engineers in the U.S. ACEC New York represents 280 engineering and affiliate firms throughout New York State that collectively employ more than 20,000 people statewide, with a concentrated presence of firms located within the five boroughs of New York City. ACEC New York is dedicated to promoting growth of the industry through the education of our members, promotion of cooperative relationships, and by addressing specific areas of concern on behalf of our membership. Our members volunteer hundreds of hours every year helping NYCDOB with Construction Code updates.

First, I would like to call attention to the precedent setting step in this proposed Energy Code update, in modifying section C407 (Total Building Performance) of the Code by replacing the requirements of the International Energy Conservation Code with the analogous requirements of ASHRAE Standard 90.1-2010. This step will greatly simplify the complexity of the Energy Code by removing a redundant energy modeling-based compliance path that is not well articulated nor clearly defined in the International Code, and instead utilizing the National Standard compliance path of ASHRAE Standard 90.1. This step will reduce the total number of compliance paths available in the Code for Commercial buildings in New York City from six to five. This is a critically important step, and hopefully just a first step, toward rationalizing this important Code toward a balance point similar to that currently found in all of the New York City Construction Codes.

I wish to call attention to a critical omission in the proposed Energy Code update, namely the issue of Code Interpretations and Code Variances. Unlike any of the other New York City Construction Codes, New York City currently provides no opportunity for applicants to receive interpretations from an authorized city agency, or to engage in dialogue about possible variances to

the Energy Code due to hardships or unique circumstances. This is in stark contrast to the implementation procedures and practices for all of the other New York City Construction Codes. The only recourse an applicant has when applying the Energy code, is to approach the New York State Department of State in Albany, which is at best, reluctant to provide interpretations and variances to the State Energy Code and at worst, not staffed properly to address the unique issues arising from existing and new buildings in a dense urban environment like New York City. This lack of administrative process is becoming a significant problem in the City of New York, especially as the performance requirements of the City Energy Code continues to increase. We strongly recommend that, in some form or another, this critical issue be specifically addressed in this proposed Energy Code update, such that implementation of the City Energy Code can continue to be successful.

On a related issue around enforcement of the Energy Code, it is worth repeating that this Code is very complex and difficult to fully comprehend for both practitioners and public officials alike, especially so for the energy modeling compliance path. Thus, in order to effectively administer and enforce the Energy Code, it is critical that Department staff, who will be reviewing these submissions for compliance, be adequately trained in this technical area. We recommend that specific resources be applied to this critical staff training task, or alternatively to the hiring of additional experienced and competent staff members to perform this compliance function.

Thank you for your consideration of these comments. I would be pleased to answer any questions you may have.

THE COUNCIL
THE CITY OF NEW YORK

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Name: MICHAEL ENGLUT

Address: ~~2 Hanover~~ 30 BROAD ST

I represent: HORIZON ENGINEERING

Address: 30 BROAD ST

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I represent: URBAN GREEN COUNCIL

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Name: Gina Boera

Address: Department of Buildings

I represent: _____

Address: _____

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I represent: ACEC New York

Address: 8 W 38 St Ste 11C

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Name: Dottie Harris

Address: _____

I represent: ICC

Address: _____

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