



# NYBSC

## NY Building Systems Consultant Inc

Engineering for Sustainable Systems



- **MEP Design**
- **Energy Audits**

- **Local Law 97, 87**
- **Commissioning**

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## About Us

**NY Building Systems Consultant Inc. (NYBSC)** is a comprehensive engineering and energy consulting firm offering full services for buildings and its systems. This includes Mechanical, Electrical, Plumbing and Fire Protection (MEP-FP) design; energy efficiency; project management and commissioning.

**NYBSC** came into business in 2015. We see a clean future of reduced energy usage, minimal CO<sub>2</sub> production, effective auditing reports and a progressive path for NYC in its contribution to Clean Energy. There is a plethora of benefits for New Yorkers in this exciting transitional period into green and clean energy. We are excited to be a part of the movement of real change. We perform the **Energy Audits** to understand where building owners can reduce their energy consumption and **reduce CO<sub>2</sub> emissions**, we follow this through with **Building System Designs** that are sure to reduce energy consumption and CO<sub>2</sub> emissions, we implement these designs, and perform **Commissioning Services** to ensure that everything has been properly implemented.

Working collaboratively with our clients, we have successfully developed and delivered a variety of innovative building engineering services, providing solutions to reduce energy consumption and carbon footprint, as well as financing solutions. Our one-on-one approach with our clients throughout the project allows for transparency and adherence to our quality standards. Client satisfaction is our priority. We are confident that any project when undertaken by **NYBSC** will be carried out with the utmost attention to detail, providing you with a service that is second to none.

**NYBSC** Energy and Engineering team is comprised of individuals with complete industry certifications including Professional Engineers (PE), Building Commissioning Professional (BCxP), Existing Building Commissioning Professional (EBCP), Certified Energy Manager (CEM), and Certified Energy Auditor (CEA). **NYBSC** is a NYS, NYC and **NY NJ Port Authority MBE** and **DBE** certified firm. **NYBSC** is a **New York State Energy Research and Development Authority (NYSERDA) FlexTech Consultant**; Multifamily Building Solutions Network Partner; **ConEd** approved consultant for commercial C&I program, multifamily program, and Small & Medium Business (SMB) program. **NYBSC** is an affiliate service provider for **NYC Accelerator**.

• MEP Design

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## Our Clients



- MEP Design
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## Our Services

**NY Building Systems Consultant Inc.** Engineers are multi-disciplined experts, that offer extensive insight for engineering, energy, and environmental services.

### MEP Engineering Design Services

HVAC Design  
Plumbing Design  
Electrical Design  
Cogeneration (CHP) design  
Sprinkler Design

### NYC Energy Law Compliance

NYC Local Law 97  
Greenhouse Gas Emission Reduction  
NYC Local Law 87  
NYC Local Law 88  
NYC Local Law 84

### Energy and Environmental Services

Energy Audits (Level I, II, III)  
Commissioning  
Lighting  
LEED Certification Energy  
Credits

### Other Services

NYC Special Inspection  
Expediting  
Project Management Services  
Rebate / Incentives Processing

• MEP Design

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## Our Expertise

NY Building Systems Consultant Engineers' expertise reaches all key markets. We have a sound understanding of the opportunities and constraints of the current marketplace. This enables our team of inventive engineers to focus on innovative designs, utilizing their extensive knowledge within your sector to devise the best possible solutions for your project in a cost-effective way. We specialize in the following sectors:

- Commercial
- Retail
- Health Care
- Educational
- Residential, Multifamily and Private Development
- Religious Facility



**NYBSC** has worked on buildings totaling over **20 million gross square feet** with green and energy design studies. In 2022, we identified over **\$6,492,127** in annual savings and **49,850 metric Tons CO2 reductions** which is equivalent to **10,837 passenger vehicles.**

## NYC Local Energy Laws

Local Law	Task	Summary
LL133/ LL84	Benchmarking	All buildings 25,000 SF and over need to be energy benchmarked, reporting the utility & water bills to NYC DOB annually by May 1 <sup>st</sup> .
LL97	Greenhouse Gas Emission (GHGe) Reduction	Building Greenhouse Gas emissions cuts starting in <b>2024-2029</b> , major reduction in <b>2025-2030</b> and again in <b>2030-2050</b>
LL87	Energy Audit and Commissioning	All buildings over 50,000 SF Need to be Energy Audited and Commissioned every 10 years by professionals.
LL88/LL132/LL134	Lighting Upgrades and Submetering	All lighting must be upgraded to the current energy code level; 5,000 SF and greater spaces need to be sub-metered (Deadline: January 1, 2025)
LL33/LL95	Energy Efficiency Grade	All buildings 25,000 SF and over must display energy efficiency Grade

**NYBSC** is a **NYSERDA FlexTech Consultant**, meaning that we are under contract with New York State to offer clean energy services such as energy auditing & modeling, feasibility studies, carbon mitigation strategies, retro-commissioning and continuous commissioning services, NYC Local Laws 97 & 87, and NYC special inspections.

Contact us to learn more about NYSERDA funding.



• MEP Design

• Energy Audits

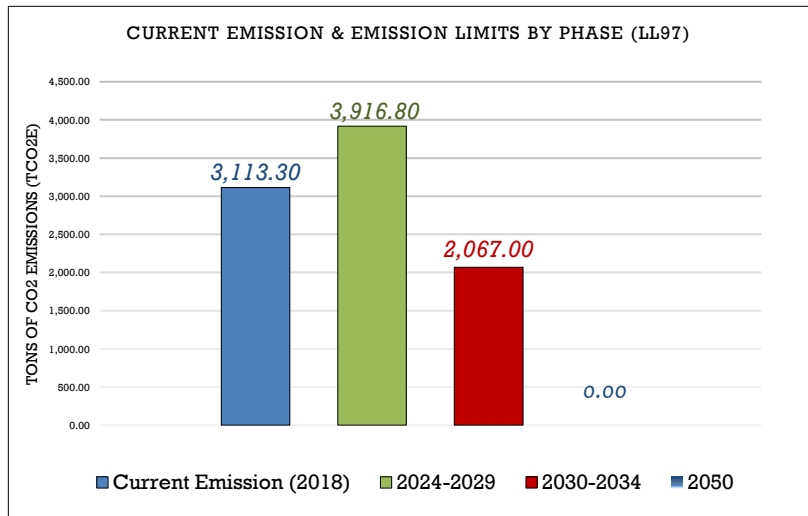
• Commissioning

• Local Law 97, 87

# NYC Local Energy Laws

## Local Law 97 (GHGe) Summary

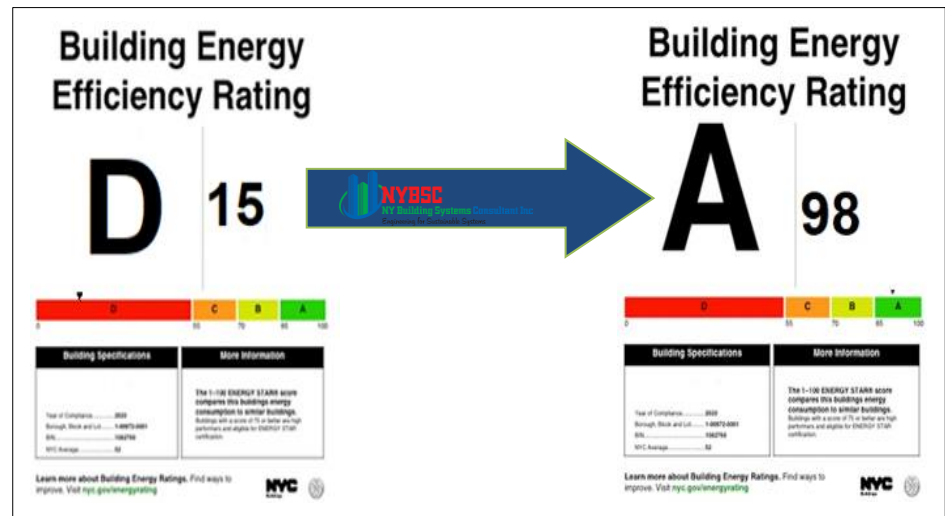
LL97 Evaluation: Carbon Emission Law				
Building Address: _____				
Greenhouse Gas Emissions in 2018		3,113.3 tCO <sub>2</sub>		
Total Potential Penalties by 2035		\$1,599,494		
Emission Reduction Phase	Emission Limit (tCO <sub>2</sub> e)	Result	Emission Reduction Required (tCO <sub>2</sub> e)	% of Emission Reduction Required
2024-2029	3,916.8	Pass	-	-
2030-2034	2,067.0	Fail	1,046.2	33.6%
2050	0.0	Fail	3,113.3	100%



## Energy and Auditing

	kWh	Therms	\$	\$	Years
<b>Energy Conservation Measures</b>	<b>Annual Electricity Savings</b>	<b>Annual Fuel Savings</b>	<b>Total Annual Cost Savings</b>	<b>Implement-ation Costs</b>	<b>Payback Period</b>
Replace the Old AC Unit and Radiator with the Package Terminal Heat Pump (PTHP)	8,054	31,659	\$145,347	\$723,200	4.98
Building Management Systems (BMS) Installation with AI System	94,076	-	\$21,697	\$223,650	10.31
Installation of Low Flow Shower Head	0	1,028	\$6,530	\$43,400	6.65
Low Flow Faucet Aerator Installation	0	1,461	\$8,364	\$70,560	8.44
Lighting Upgrades	5,787	0	\$1,709	\$2,652	1.55
<b>Totals</b>	<b>107,917</b>	<b>34,148</b>	<b>\$183,647</b>	<b>\$1,063,462</b>	<b>31.93</b>

## Building Energy Grade Upgrades Local Law 33/95



• MEP Design

• Energy Audits

• Commissioning

• Local Law 97, 87

## Local Law 97 - Greenhouse Gas Emissions (GHGe) Projects



**508-516 & 518-534 West 26<sup>th</sup> Street, New York, NY**  
 NYSERDA Funding for LL97 Study  
 Annual Savings: \$428,944  
 GHG Reductions: 770.8 Tons of Co2  
 Project Area: 146,416 Square Feet



**10 West 46<sup>th</sup> Street, New York, NY**  
 100% NYSERDA Funding for LL97 & LL87 Study  
 Annual Savings: \$94,222  
 GHG Reduction: 143.70 Ton CO<sub>2</sub>  
 Project Area: 76,008 Square Feet



**45 Park Avenue, New York, NY**  
 100% NYSERDA Funding for LL97 & LL87 Study  
 Annual Savings: \$126,568  
 GHG Reduction: 143.30 Ton CO<sub>2</sub>  
 Project Area: 118,614 Square Feet



**460 West 20<sup>th</sup> Street, New York, NY**  
 100% NYSERDA Funding for LL97 Study  
 Annual Savings: \$89,105  
 GHG Reduction: 134.38 Ton CO<sub>2</sub>  
 Project Area: 68,260 Square Feet



**Plaza West Associates, LLC., New York, NY**  
 NYSERDA Funding for LL97 & LL87 Study  
 Annual Savings: \$280,550  
 GHG Reduction: 458.2 Tons of CO<sub>2</sub>



**52 E 4<sup>th</sup> Street, New York, NY**  
 NYSERDA Funding for LL97 Study  
 Annual Savings: \$50,742  
 GHG Reduction: 62.02 Ton CO<sub>2</sub>  
 Project Area: 26,790 Square Feet



**The Carlton Regency, New York, NY**  
 100% NYSERDA Funding for LL87, LL97, MEP Design  
 Annual Savings: \$199,564  
 GHG Reduction: 500 Ton CO<sub>2</sub>  
 Project Area: 242,383 Square Feet



**The Silk Building Condo, New York, NY**  
 100% NYSERDA Funding for LL97 & LL87 Study  
 Annual Savings: \$40,404  
 Project Area: 156,849 Square Feet

• MEP Design

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• Local Law 97, 87



## Local Law 87 - Energy Audit & Retro-Commissioning Projects



**Oceana Condo, Brooklyn, NY**  
 (15 Bldgs)  
 LL87, Energy Audit & RCx  
 Annual Savings: \$434,291  
 Project Area: 1,178,291 Square Feet



**The Dominick Hotel, New York, NY**  
 LL87, Energy Audit & RCx  
 Annual Savings: \$451,185  
 Project Area: 386,078 Square Feet



**Pfizer Building, Brooklyn, NY**  
 LL87, Energy Audit & RCx  
 Annual Savings: \$1,149,714  
 Project Area: 574,055 Square Feet



**The Beaumont, New York, NY**  
 LL87, Energy Audit, RCx  
 Annual Savings: \$114,485  
 Project Area: 199,635 Square Feet



**100 United Nations Plaza, New York, NY**  
 Energy Audit & LL87  
 Annual Savings: \$316,165  
 Project Area: 357,793 Square Feet



**Castle Village, New York, NY**  
 Energy Audit & LL87 (5 Bldgs)  
 Total Annual Savings: \$342,289  
 Project Area: 890,134 Square Feet



**15 Broad Street, New York, NY**  
 Annual Savings: \$519,058  
 Project Area: 810,798 Square Feet



**185 Prospect Park, Brooklyn, NY**  
 Energy Audit & LL87 Compliance  
 Annual Savings: \$24,901  
 Project Area: 77,238 Square Feet

• MEP Design

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## HVAC, Electrical, Plumbing, Sprinkler and Cogeneration Design Projects



**305 East 24<sup>th</sup> Street, New York, NY**

Scope:  
 Engineering Design for Tri-Generation and Electric Chillers



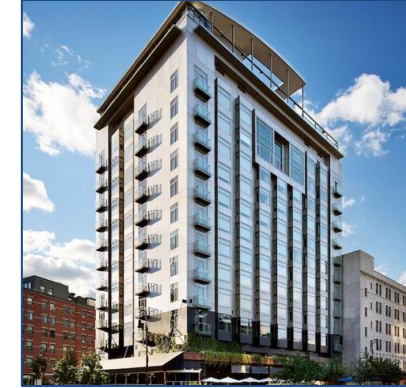
**Archbishop Molloy High School, Queens, NY**

Scope:  
 VRFs Design, Boilers Design, 10 Year Energy Master Plan, LL87 & LL97 Study



**Pfizer Building, Brooklyn, NY**

Scope:  
 HVAC Chiller, Sprinkler Design with Hydraulic Calculation, AHU Design, VRFs, Violation Removal



**Gansevoort Meatpacking, New York, NY**

Scope:  
 Chiller Design, Expediting, Inspection, Commissioning



**The Carlton Regency, New York, NY**

Scope:  
 Ventilation System Design



**7 West 96<sup>th</sup> Street, New York, NY**

Scope:  
 Design and installation of High Efficiency Boilers



**420 East 72<sup>nd</sup> Street, New York, NY**

Scope:  
 BMS & VFD Control Design and Electrical Panel Survey



**172-10 Jamaica Avenue, Queens, NY**

Scope:  
 Mechanical, Electrical & Plumbing (MEP) and Sprinkler Design

• MEP Design

• Energy Audits

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## New Commissioning, Special Inspection, Expediting and Incentives



**Manhattan VA Medical Center,  
 New York, NY**

Scope:  
 Commissioning, AHU, CAV, EFs



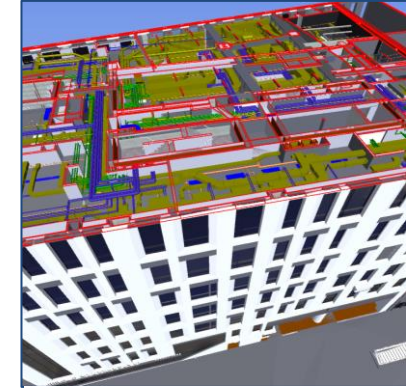
**James J. Peters VA Medical  
 Center, Bronx, NY**

Scope:  
 AHUs Commissioning



**630 Flushing Ave, Brooklyn, NY**

Scope:  
 Expediting ACCUs Design for  
 Violations removal



**PS 464M Trinity Place School  
 New York, NY**

Scope:  
 3D MEP services using REVIT,  
 AutoCAD 3D, Navisworks



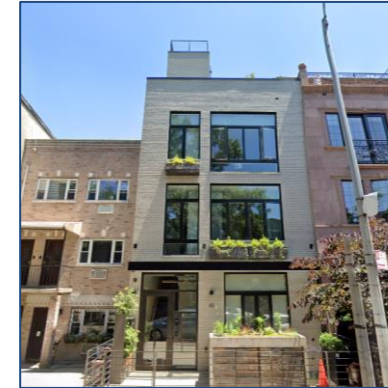
**Archbishop Molloy High School,  
 Queens, NY**

Scope:  
 Special Inspection and Expediting



**2442 Ocean Ave, Brooklyn, NY**

Scope:  
 Mechanical Systems (VRF, EUH, &  
 ERV) Commissioning



**45 Irving Place, Brooklyn, NY**

Scope:  
 NYC Energy Code Commissioning



**170 West End Ave, New York, NY**

Scope:  
 Huge Elevators Savings  
 Annual Savings: \$173,000  
 Annual Energy Savings: 482,267 kWh  
 Rebate: \$173,595.00

• **MEP Design**

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**Accreditations:**

“I have found that NYBSC team to be knowledgeable in the energy and engineering field as well as very customer service focused and they have been willing to go the extra mile for us. I would recommend them for any energy analysis and MEP design.”

**Jeff Rosenblum, Partner,**  
*Acumen Capital Partner LLC*

“NYBSC designed our new efficient boilers and domestic hot water heaters which will save energy during the part load hours. We found them to be very knowledgeable in practical solutions and economic feasibility. We also hired them for project management.”

**Richard Johnson, Treasurer,**  
*7 West 96<sup>th</sup> Street Condominium*

“I highly recommend the NYBSC team for engineering & energy for your buildings. NYBSC has provided our building with in-depth engineering knowledge and workable solutions for reviving our HVAC system and building's energy systems.”

**Sharon Langlais, Account Executive,**  
*Douglas Elliman Property Management*



We see a clean future of reduced energy usage, minimal CO<sub>2</sub> production, effective auditing reports and a progressive path for NYC in its contribution to Clean Energy. There is a plethora of benefits for New Yorkers in this exciting transitional period into green and clean energy. If you are ready to join the revolution, call us and we will get your building up to code as we propel into the new wave of sustainable energy.

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