



NYC Carbon Challenge for Hotels Program Design

Background

In September 2014, recognizing the existential threat that climate change poses to New York City and the world, Mayor Bill de Blasio set the ambitious goal to reduce citywide greenhouse gas (GHG) emissions 80% below 2005 levels by 2050 (80 x 50). Because the energy used in New York City's one million buildings represents 73% of citywide GHG emissions, and more than 90% of the buildings that exist today will still be here in 2050, improving the energy efficiency of the city's existing building stock represents the greatest opportunity to reduce citywide GHG emissions.

New York City cannot achieve this ambitious goal without the help of the private sector. Since 2007, the City of New York has launched and expanded the NYC Carbon Challenge program, a ground-breaking public-private partnership to accelerate reductions in GHG emissions. To date, New York City's 17 leading universities, the 11 largest hospital organizations, 12 global companies, 19 residential management firms, and 19 hotels have pledged to voluntarily reduce their building-based emissions by 30% or more over the course of ten years. The program builds on a strong partnership between the City and the private and institutional sectors to pave a pathway towards New York City's 80 x 50 goal.

The NYC Carbon Challenge has been a success. Six universities and hospitals have already achieved the 30% goal, and half of the university and hospital participants have achieved reductions of at least 15% with several years left in the program. These leaders have demonstrated that deep reductions in GHG emissions are achievable, while also realizing other benefits in the form of energy cost savings, energy reliability, and organizational resiliency.

The hotel sector is poised to help New York City lead the way with greenhouse gas emissions reductions. New York City is the nation's number one big city destination, the number one port-of-entry for foreign visitors, and the number one city for tourism spending. New York City offers visitors hundreds of unique neighborhoods and communities to explore—and last year a record 58.3 million visitors chose to experience all that our city has to offer.

The NYC Mayor's Office of Sustainability invites the city's leading hotels to demonstrate their commitment to reducing GHG emissions by joining the NYC Carbon Challenge. Participants will join a well-established program that includes 19 hotels that have already begun to implement innovative energy reduction measures.

This document details the program design for the NYC Carbon Challenge for Hotels. For more information about the program, please visit: www.nyc.gov/carbonchallenges and <http://www.nyc.gov/html/gbee/html/challenge/hotels.shtml>.



The Challenge

The NYC Mayor’s Office of Sustainability (“Mayor’s Office”) invites New York City’s leading hotels to commit to voluntarily reducing the GHG emissions intensity of their buildings, measured as carbon dioxide equivalent per gross square foot or per occupied room, by 30 - 50% over the course of ten years.

Benefits of the Challenge

The NYC Carbon Challenge (“Challenge”) offers hotels the opportunity to demonstrate leadership in energy efficiency and sustainability and be recognized by the Mayor’s Office for these efforts. The Challenge will continue to inspire environmental action throughout the hotel industry by highlighting the energy efficiency work within some of New York City’s most visible and frequented buildings. By participating in the Challenge, New York City hotels can demonstrate a localized commitment to sustainability and GHG reductions. Additionally, participating hotels have access to a diverse forum of peers, industry experts, and organizations that will provide contacts, best practices, technical assistance, and simple tools to help them realize continued reductions in energy use, costs, and GHG emissions.

Summary of the Program

Participation in the NYC Carbon Challenge for Hotels consists of the following (described in detail later in the document):

- 1. Choose Participation Strategy:** Dependent upon the organizational structure of each hotel, the three entities that can commit to the Challenge are the hotel corporation, owner, or management company. These entities will become the “Challenge participants.” The Mayor’s Office will work individually with each participant to determine the appropriate parties that need to commit to the Challenge. Challenge participants can commit individual hotels or a group of hotels as part of a Challenge portfolio. Challenge participants are permitted to have overlapping hotels within their Challenge portfolios.
- 2. Choose a Challenge Goal:** Each Challenge participant will be responsible for selecting a carbon reduction goal (the “Challenge goal”) for individual hotels or their Challenge portfolio. Participants have the option to select a base year of 2012 or later for the 30% Challenge goal, 2009 or later for the 40% Challenge goal, or 2005 or later for the 50% Challenge goal.
- 3. Accept the Challenge:** To accept the Challenge for a hotel, each Challenge participant must submit a commitment letter to the Mayor’s Office signed by an employee with authority to commit to the Challenge. Each Challenge participant must also submit separate hotel participation letters for the individual hotels or portfolios of hotels that will join the Challenge, which may be required to be co-signed by hotel corporations,



owners, or management companies. The Mayor's Office will work individually with each participant to determine the appropriate entities to submit hotel participation letters.

- 4. Track GHG Emissions.** For each participating hotel, the hotel corporation, owner, or management company will submit annual NYC Local Law 84 (LL84) energy use benchmarking data. In cases where there is more than one Challenge participant for a single hotel, the Mayor's Office will work individually with each participant to determine the appropriate entity to submit LL84 data. To accurately measure energy consumption, Challenge participants must collect whole-building data for electricity, steam, and natural gas use as well as heating fuel oil purchases for each hotel in the Challenge.
- 5. Create a GHG Reduction Strategy:** For each participating hotel, the Challenge participant will report a GHG reduction strategy to achieve the Challenge goal bi-annually using a standard template provided by the Mayor's Office.
- 6. Regular Partner Meetings.** The Mayor's Office will organize regular meetings with participating hotels to provide updates, feature guest speakers of interest, and encourage the exchange of ideas and best practices. At least one representative for each Challenge participant will be required to attend each meeting.
- 7. Working Groups.** The Mayor's Office will convene voluntary working groups as needed to help develop new initiatives and/or to resolve issues as they arise.
- 8. Annual One-on-One Meetings.** The Mayor's Office staff and the Challenge participants will meet one a year to review the participant's progress, consider any obstacles to achieving reductions, and discuss a strategy to reach the carbon reduction goal.
- 9. Access to Resources and Technical Expertise.** The Mayor's Office will provide direct access to staff and information to connect participants with financial incentive programs, industry experts, other peers and City agencies.
- 10. Promotion and Recognition.** The Mayor's Office will provide promotion and recognition of participating hotels, including press conferences, news releases, social media outreach, and information posted on the NYC Mayor's Office of Sustainability website.

Completing the Challenge

To complete the NYC Carbon Challenge for Hotels, each Challenge participant must document achievement of their selected Challenge goal from each individual hotel or across their Challenge portfolio, subject to verification by the Mayor's Office. There are no punitive repercussions for not meeting the Challenge goal.

Details of the Program

1. Choose Participation Strategy

Dependent upon the organizational structure of each hotel, the three entities that can commit to the Challenge are the hotel corporation, owner, or management company. These entities will become the “Challenge participants.” The Mayor’s Office will work individually with each participant to determine the appropriate entities that need to commit to the Challenge, which will be based on decision-making authority related to capital investments and operational control of hotel assets. Challenge participants can commit individual hotels or a group of hotels as part of a Challenge portfolio. Challenge participants are permitted to have overlapping hotels within their Challenge portfolios. Examples of Challenge participants include:

- **Hotel Corporation.** Enterprise that operates a portfolio of hotel brands by owning, managing, and/or franchising hotels.
- **Hotel Owner.** Independent owner, partnership, or Real Estate Investment Trust (REIT) that owns hotel’s physical assets.
- **Hotel Management Company.** Third-party firm that manages the operations of franchised hotels that are separately owned.

2. Choose a Challenge Goal

Challenge participants will be responsible for selecting a carbon reduction goal (the “Challenge goal”) of 30%, 40%, or 50% from their selected base year. Participants may select either individual hotels to participate in the Challenge (the “Individual Approach”) or a group of hotels to participate as part of a Challenge portfolio (the “Portfolio Approach”).

- **The 30% Challenge.** To meet the 30% Challenge goal, a participant must reduce their GHG emissions, measured in terms of emissions of carbon dioxide equivalent per gross square foot (CO₂e/sq. ft.) *or* carbon dioxide equivalent per occupied room (CO₂e/OR), by 30% from a base year of 2012 or later within ten years of their start year in the Challenge.
- **The 40% Challenge.** If a participant has achieved significant reductions in GHG emissions since 2009 and would like these reductions to count toward the Challenge, the participant can choose to reduce CO₂e/sq. ft. *or* CO₂e/OR by 40% from a base year of 2009 or later within ten years of their start year in the Challenge.
- **The 50% Challenge.** If a participant has achieved significant reductions in GHG emissions since 2005 and would like these reductions to count toward the



Challenge, the participant can choose to reduce CO₂e/sq. ft. or CO₂e/OR by 50% from a base year of 2005 or later within ten years of their start year in the Challenge.

- **Individual Hotel Approach.** Challenge participants who select individual hotels to participate in the Challenge must reduce CO₂e/sq. ft. or CO₂e/OR by 30%, 40%, or 50% from each individual hotel.
- **Portfolio Approach.** Challenge participants that choose to select a group of hotels to participate as part of a Challenge portfolio may reduce CO₂e/sq. ft. or CO₂e/OR by 30%, 40%, or 50% from across a selected portfolio of hotels. This option provides greater flexibility in achieving the Challenge goal from multiple hotels.

3. Accept the NYC Carbon Challenge

To accept the Challenge, each Challenge participant must submit both a commitment letter and separate hotel participation letters to the NYC Mayor's Office.

- **Commitment Letter.** The commitment letter confirms a Challenge participant's commitment to the Challenge, their selected approach (Individual Hotel Approach vs. Portfolio Approach), selected Challenge goal (30%, 40%, or 50%), and an optional list of potential participating hotels. The commitment letter must be signed by an employee who has the authority to commit to the Challenge.
- **Hotel Participation Letter.** After the commitment letter is submitted, Challenge participants must coordinate with all relevant entities to select hotels to participate in the Challenge and submit separate hotel participation letters for these individual hotels or groups of hotels. These letters may be required to be co-signed by the hotel corporations, owners, or management companies who own or play a decision-making role in the operations of the hotel.

If the Challenge participant both owns and manages a participating hotel, the participant can submit the hotel participation letter. Hotel participation letters will typically be required to be co-signed when a third party owns or manages a hotel. Examples of scenarios that will require co-signed hotel participation letters may include, but are not limited to:

- **Hotel Corporations with Franchised Hotels.** Hotel corporations that franchise the ownership of their hotels and employ third-party management must secure co-signed hotel participation letters from both the relevant hotel owners and the management companies.
- **Hotel Owners that Employ Third-Party Management.** Hotel owners that employ third-party management for their hotels must secure co-signed hotel participation letters from the relevant management companies.

- **Hotel Management Companies with Third-Party Ownership.** Hotel management companies that do not own some or all of the hotels they manage must secure co-signed hotel participation letters from the hotel owners.

4. Tracking GHG Emissions

Challenge participants agree to track and report all energy use and associated GHG emissions annually for each participating hotel. For hotels over 50,000 square feet, Challenge participants may track emissions by complying with Local Law 84 of 2009 (LL84), which requires entering annual energy and water use information into the US Environmental Protection Agency (US EPA) Portfolio Manager tool. The Mayor's Office will work individually with each hotel to determine the appropriate entity to report emissions for the Challenge, although it is anticipated that the management company will typically be the responsible entity.

- **GHG Emissions Inventory.** Challenge participants will submit an annual GHG emissions inventory via a web-based NYC Carbon Challenge Reporting Tool platform. To do so, participants may share their LL84 benchmarking data or enter relevant data through the US EPA Portfolio Manager tool. Challenge participants will also be required to review data quality annually using a simple data quality guide provided by the Mayor's Office.
- **Accounting for Overlapping Hotels:** If participants have overlapping hotels within their Challenge portfolios, they are each permitted to take credit for the GHG reductions from the overlapping hotels, if both parties agree. Below are two common examples:
 - **Franchised hotels.** A hotel corporation may have franchised hotels participating in the Challenge that overlap with hotels in an owner or management companies' Challenge portfolio. All entities may count the GHG reductions from these hotels toward their individual Challenge goals.
 - **Owned hotels.** A management company may include hotels they manage in their Challenge portfolio that overlap with hotels included in a hotel owner's Challenge portfolio. Both participants may count the GHG reductions from these hotels toward their individual Challenge goals.
- **Adding Hotels to the Challenge.** Challenge participants may add a hotel to the Challenge provided that all relevant entities sign a participation letter and receive approval from the Mayor's Office. If a participant wishes to add the hotel to a Challenge portfolio, the hotel's energy use and square footage or number of occupied rooms will be added to the GHG emissions inventory in the participant's

selected base year or year that the participant began to own and/or manage the hotel, whichever is later.

- **Removing Hotels from the Challenge.** Challenge participants are permitted to remove hotels from their portfolio over a ten-year timeframe if the participant no longer owns or manages the hotel.
 - **Keeping Buildings that Change Owner/Management Company.** If a hotel changes ownership and/or management and the Challenge participant(s) responsible for this hotel would like to count reductions already achieved toward the Challenge goal, the most recent CO₂e/sq. ft. or CO₂e/OR for the hotel will be held constant within the GHG emissions inventory for the remaining years of the Challenge.
 - **Removing Buildings that Change Owner/Management Company.** If a hotel changes ownership and/or management and the Challenge participant(s) responsible for this hotel would like to remove this property from its Challenge portfolio, the CO₂e/sq. ft. or CO₂e/OR for this hotel will be removed from the GHG emissions inventory from the hotel's selected base year.
- **Data and Disclosure.** All building-based energy use and associated emissions data will be received and kept confidentially by the Mayor's Office. Any disclosed information will be anonymized and/or aggregated, unless a participant gives explicit approval to the Mayor's Office to release their data. When a Challenge participant reaches the Challenge goal, the Mayor's Office will assist with promotion of this progress.

Methodology for the GHG Emissions Inventory

Challenge participants will aggregate the whole building energy use annually by fuel type and amount for all hotels participating in the Challenge. Participants will share building-based energy use data for each participating hotel with the City through the US Environmental Protection Agency (US EPA) Portfolio Manager account. The NYC Carbon Challenge Reporting Tool will automatically apply carbon coefficients, held constant at 2005 levels, to each fuel type and divide this value by the chosen normalization factor to find GHG emissions per gross square foot (CO₂e/sq. ft.) or per occupied room CO₂e/OR).

- **Base Year.** Each participant can choose a base year after 2012 for the 30% reduction goal, after 2009 for the 40% reduction goal, and after 2005 for the 50% reduction goal.



- **Start Year.** The start year of the Challenge is the first calendar year that the Challenge participant accepts the Challenge.
- **End Year.** The end year is ten years from the start year of the Challenge. To meet the Challenge goal, participating entity must achieve their Challenge goal by December 31 of that year.
- **Calendar Year.** Energy use information for all GHG emissions inventories must be aggregated on a calendar year basis (January 1 – December 31).
- **Fuel Types.** All Challenge participants measure whole-building energy use by fuel type and amount. Energy use is reported using the following metrics:
 1. Electricity: Kilowatt-Hours (kWh)
 2. Natural gas: Thermal Units (Therms)
 3. Heating oil distillates No. 2, No. 4, and No. 6: US Gallons (US Gal)
 4. Heating oil distillates No. 2, No. 4, and No. 6 with biodiesel blend: US Gallons (US Gal)
 5. District Steam: Thousand Pounds (Mlbs)
 6. Diesel or other fuels used for backup generation: US Gallons (US Gal)
 7. On-site/locally-based off-site renewable electricity: Kilowatt-Hours (kWh)
- **GHG Emissions.** The Challenge uses carbon dioxide equivalent per gross square foot (CO₂e/sq. ft.) or per occupied room (CO₂e/OR) as metrics to track emissions. Measuring emissions per square foot or per occupied room standardizes emissions level for hotels of different sizes and uses.
 - **Carbon Dioxide Equivalent (CO₂e).** The level of carbon dioxide (CO₂) that would have the same climate impact as a given concentration and type of greenhouse gas.
 - **Commercial Leased Space.** If the hotel has separately-metered commercially leased spaces, they may be excluded from reported energy use since the Challenge participant does not have direct control over energy consumption in these spaces. Commercial leased spaces can include shops, restaurants, or other retail businesses.
 - **Private Space.** If a hotel has separately-metered private space, it may be excluded from reported energy use. A private space can be defined as areas which are not accessible to hotel guests or conference attendees, including private residential apartments and on-site staff accommodation. However, “back of house” areas such as kitchens and public spaces such as courtyards

are not considered private space. For more information, see the International Tourism Partnership's Hotel Carbon Measurement Initiative's definition of private space.

- **Gross Square Feet (sq. ft.).** The total number of square feet measured between the exterior surfaces of the enclosing fixed walls of all of the Challenge participant's buildings. This includes spaces such as vent shafts, stairs, basements, etc. This does not include commercial leased spaces and private space that the hotel owner does not have direct control over its energy consumption.
- **Occupied Room (OR).** The total number of rooms that were occupied by guests over the reporting year. No-shows are not included in the occupied room count, but complimentary rooms that were occupied but not paid for are included. For more information, see the International Tourism Partnership's Hotel Carbon Measurement Initiative's definition of an occupied room.
- **Carbon Coefficients.** A carbon coefficient determines the level of carbon dioxide equivalent (CO₂e) associated with a given amount of fuel or energy use. All carbon coefficients for the NYC Carbon Challenge were developed by the Mayor's Office and are compliant with the Compact of Mayors and the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) BASIC level.
 - **Electricity and Steam.** The NYC Carbon Challenge uses New York City-specific carbon coefficients for electricity and steam, held constant at 2005 levels. Because the coefficients for electricity and steam can vary significantly across years, holding the coefficients constant at 2005 levels ensures that Challenge participants receive credit for their efforts, and not for exogenous changes to the supply.
 - **Natural Gas, Propane, and No. 2, No. 4, and No. 6 Heating Oils.** The NYC Carbon Challenge uses the nation-wide carbon coefficient for natural gas, propane, and No. 2, No. 4, and No. 6 heating oils, which were developed by the US EPA.
 - **Onsite and Locally-Based Offsite Renewable Electricity.** The electricity generated by onsite and locally-based offsite renewable sources (wind, solar, or geothermal) will have a carbon coefficient of 0.00.

- **Waste.** The NYC Carbon Challenge uses waste coefficients that are calculated by the EPA Waste Reduction Model (WARM) Version 12 for mixed solid waste, recycled, and composted waste.
- **Locally-Based Offsite Renewable Energy.** Offsite renewable energy purchased by a Challenge participant, such as through a power-purchase agreement, can count towards reductions in emissions intensity if 100% of the electricity generated feeds directly into New York City's electric grid (New York Independent System Operator Zone J). The offsite renewable energy project must be a newly constructed source. Challenge participants must have direct ownership of the offsite renewable energy or must directly purchase the offsite renewable energy from the energy provider, as per a contract or other form of agreement such as a power-purchase agreement, and may not sell any RECs or environmental attributes generated by the renewable energy on the open market.

5. Create a GHG Reduction Strategy

Each Challenge participant is required to develop a GHG reduction strategy in the form of a Climate Action Plan and update it bi-annually. The Mayor's Office will work collaboratively with the participants to develop a Climate Action Plan template. All Climate Action Plans will be received and kept confidentially by the Mayor's Office.

- **The Climate Action Plan should include:**
 - Background information about the Challenge participant's hotels
 - An overview of results from the Challenge participant's GHG emissions inventory
 - A plan that includes a description of progress made toward the Challenge goal and the strategy for achieving remaining reductions

6. Regular Partner Meetings

The Mayor's Office will organize regular partner meetings, typically held on a quarterly basis. At least one representative from each participating hotel should plan to attend each meeting. Meetings will include, but are not limited to:

- An update from the Mayor's Office staff
- Presentations by Challenge participants
- Presentations by technical experts and guest speakers of interest
- Open discussion

7. Working Groups

The Mayor's Office will organize volunteer working groups of Challenge participants to discuss and develop solutions to any additional issues as they arise. These working groups will be convened on an as-needed basis.

8. Annual One-on-One Meetings

Annual one-on-one meetings will be held by the Mayor's Office of Sustainability between each Challenge partner and Mayor's Office staff. Meetings will cover:

- Background information about the Challenge partner and major changes to their hotel portfolio.
- Current progress toward the Challenge goal.
- Status of deliverables to Mayor's Office, including the Climate Action Plan and annual updates to the GHG Emissions Inventory.
- Strategy moving forward, any issues or complications to achieving the goal, and potential solutions to help achieve success.

9. Access to Resources and Technical Expertise

The Mayor's Office will provide direct access to staff and information to connect participants with financial incentive programs, industry experts, other peers and city agencies.

10. Promotion and Recognition

The Mayor's Office will recognize the efforts and achievements of participating entities and their buildings. Promotion and recognition will include, but is not limited to:

- Press announcements from the Mayor's Office
- Placement of news articles and other media highlighting the success of Challenge participants
- Promotion of participant involvement at Mayor's Office and industry events
- Individually tailored Mayor's Office of Sustainability promotional materials
- Inclusion of firm name, logo, and profiles on official NYC documents, website, and social media outlets
- The ability to self-promote participation in the Challenge, including the use of the NYC Carbon Challenge logo on vetted documents, web pages, social media, or other media