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July 23, 2021

**VIA E-MAIL**

New York State Energy Research
and Development Authority
Integrated Energy Data
Resource Team
17 Columbia Circle
Albany, New York 12203

RE: Comments of the City of New York on the Integrated Energy Data Resource

To Whom It May Concern:

The City of New York ("City") submits these comments in response to the Integrated Energy Data Resource ("IEDR") Invitation to Stakeholders to Provide Comments Addressing the Identification and Prioritization of Use Cases issued by the New York State Energy Research and Development Authority ("NYSERDA").

Introduction

The City appreciates the opportunity to provide these comments on the creation and prioritization of the IEDR use cases. The IEDR is an important step toward removing barriers to energy data access, which has been a priority for the City for many years. The ability to access relevant and quality energy data is vital to the achievement of the State and City's concomitant public policy goals, as set forth in the Climate Leadership and Community Protection Act ("CLCPA") and *OneNYC*.[1] Indeed, the City has been at the forefront of leveraging energy data to achieve public policy goals for several years. For example, the City has several local laws that are driven by access to energy data, including:

- Local Law ("LL") 22 of 2008, wherein the City must prepare an annual greenhouse gas emissions inventory to measure changes in citywide and City government emissions;
- LLs 84 and 87 of 2009 and 133 of 2016, which require the City to collect data regarding energy and water usage benchmarking for the largest buildings in the City; and

[1] L. 2019, ch. 106; *OneNYC 2050: A Livable Climate* (issued April 2019), available at http://1w3f31pzvdm485dou3dppkcq.wpengine.netdna-cdn.com/wp-content/uploads/2019/05/OneNYC-2050-A-Livable-Climate.pdf ("OneNYC").

- LL 97 of 2019, which requires robust reductions in carbon emissions by large buildings, as confirmed through submission of energy usage data.

As such, the City strongly supports efforts to remove barriers to accessing energy data. The identification and creation of priority use cases for the IEDR is a critical first step in this endeavor.

The City also offers that, in addition to identifying and creating use cases for the IEDR, NYSERDA must also prioritize data quality. As an example, the processes currently implemented by utilities to provide direct data uploads for New York City's energy benchmarking program suffer from quality control issues. While these current methods are an improvement from the original practice of individual building owners transcribing bill data, they need consistent periodic review to ensure data quality. To be most useful, the data populating the IEDR should be, among other things, accurate, complete (*i.e.* no data points in a set missing), reliable, relevant, and up-to-date. Without requirements to ensure minimum data quality standards are met, the IEDR runs the risk of providing data that does not actually help to achieve its intended purpose(s). As such, the City implores NYSERDA to work with stakeholders to institute data quality standards for the use cases as it advances the IEDR.

Required Information

*Name and contact information for each of the individual(s) or organization(s) on whose behalf the comments are submitted.*

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*What are your most immediate needs that the IEDR should address as soon as possible?*

Access to data for small buildings (*i.e.* buildings under 25,000 square feet) is the highest priority for the City at this time. The benchmarking data that the City collects regarding large buildings has allowed the City to develop effective climate and energy policies that not only provide examples for other cities, but will also advance the City and State's climate goals. However, the City has limited building level insight with respect to its building stock that is under

25,000 square feet. Small buildings represent approximately 40% of the built floor area of New York City building stock (and a significant proportion of the State's overall building stock), and therefore this is a significant data gap. In order to meet climate goals in the most efficient and expeditious manner, data from these buildings are needed. Specifically, the City would be most interested in access to the hourly, daily, and monthly consumption of small buildings with respect to electricity, natural gas, and steam. This would allow the City to perform benchmarking in a similar manner for small buildings as it does with large buildings.

*What criteria should be used to prioritize initial use cases?*

As discussed above, the City and State have enacted a suite of aggressive objectives to mitigate the impacts of climate change. Achieving these objectives should be at the forefront of all policy decisions made by the State going forward, including those policies relating to data access. As such, the City recommends that those use cases that will have the largest impact on the ability of the State and City to achieve their climate goals in the near term should be prioritized. For example, decarbonizing the building sector is of critical importance to achieving the goals of the CLCPA and *OneNYC* as the building sector is one of the highest emitting sectors. Also, building infrastructure is often comprised of long-lived assets, increasing the urgency of addressing emissions from this sector. To achieve carbon neutral buildings, consumption data for buildings of all sizes must be readily available to assist in benchmarking and help target energy efficiency upgrade efforts.

In addition, it is important that NYSERDA prioritize use cases that will best contribute to a just and equitable transition toward carbon neutrality, including a 100% clean grid. Communities of color and low income communities have historically been disproportionately impacted by climate change and the use of fossil fuels. Any use cases that can help to ensure that these communities are not left behind in the transition to a greener energy system should be considered a top priority.

Finally, NYSERDA should prioritize those initial use cases that will provide a foundation for developing effective future use cases. It is likely that as the IEDR develops, use cases will become more complex and nuanced. When creating the initial use cases, NYSERDA should be mindful of potential future uses cases and consider what groundwork needs to be laid to best support these future uses of the IEDR. The initial use cases should be prioritized accordingly.

*Suggested definition of use case to be used for the IEDR*

The City recommends the following definition of use case: "A set of data points that can be used together in conjunction with other quantitative and qualitative data to meet a defined objective or answer a specific question."

Conclusion

The City applauds NYSERDA for its efforts with respect to the IEDR and looks forward to working with NYSERDA and other stakeholders on its further development.

Respectfully,

*Devlyn C. Tedesco*

Devlyn C. Tedesco

# City of New York IEDR Use Cases

July 23, 2021

## Use Case Profile Form # 1 - Small Building Data to Develop Building Typologies, Targeted Retrofit Strategies, and Decarbonization Programs and Policies

### 1) Contributor Name & Contact Information

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### 2) Use Case Category

Local Government Function

### 3) Use Case Sub-Category

Other - regulatory research and policy planning

### 4) What Question(s) Does the Stakeholder Seek to Answer with This Use Case?

a. How do buildings under 25,000 $ft^2$ ("small buildings") of different use types, age, size, location, and other qualities consume energy and contribute greenhouse gas emissions across New York City and New York State?
b. What representative small building typologies can best inform the development of standardized decarbonization retrofit approaches?
c. What are the biggest challenges and opportunities that small buildings may face based upon their existing conditions and what policies and programs will drive small building retrofits most effectively and efficiently?

d. What small buildings will benefit most from engagement with programs like the New York City ("NYC") Accelerator, which provides direct assistance to building owners considering efficiency and electrification retrofits?

**5) What Information Should the Use Case Produce for the Stakeholder?**

a. Describe the type(s) of useful information that the use case should produce.
   i. Whole building energy consumption data (electricity, natural gas, district steam, etc.) on an hourly, daily, and monthly basis for small buildings.
   ii. Current distributed energy resource ("DER") deployment by building.

b. How Will the Stakeholder Use the Information Produced by This Use Case?
   i. The City of New York ("City") will use this data to define representative small building typologies, decarbonization retrofit pathways for each, and consider policies, programs, and advocacy to facilitate these pathways.
   ii. The City will combine energy consumption and DER data provided by the IEDR with building details (age, location, use type, etc.) from NYC's Property Land Use Tax Output (PLUTO) data and other data sets. It will then find commonalities across attributes to define representative building typologies that characterize the roughly 1 million small buildings in the five boroughs. The City will then develop retrofit pathways for these typologies to better understand the options and costs for decarbonization and improving building health. This model of analysis is based on the work that the City has already done for buildings over 50,000 $ft^2$, in which it leveraged the energy benchmarking data available for roughly 30,000 of the largest buildings in NYC. This method is described in the One City Built to Last Technical Working Group Report: Transforming New York City Buildings for a Low-Carbon Future (https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/TWGreport_042120 16.pdf)
   iii. This use case will also inform targeting for the City's Accelerator program, which provides free, personalized guidance to make cost-saving, energy-efficiency upgrades and reduce carbon emissions in buildings in NYC. (https://www1.nyc.gov/site/nycaccelerator/index.page). Energy consumption data will also be considered along with air quality health impact data and other data sets to aid affordable housing buildings.
   iv. This use case could also support New York State's goal of a statewide energy benchmarking program. Access to consumption data is a foundational element for all the 30+ city and state level building benchmarking programs in the United States.

c. What are the Minimum Necessary Attributes for Each Type of Information Produced?
   i. Monthly whole building level energy consumption by energy type (electricity, natural gas, steam, etc.)
   ii. Monthly building level peak demand
   iii. DER type and nameplate capacity

**6) How Should the IEDR User Interface Present the Information Produced by the Use Case?**

a. Tabular data available for download, showing:
   i. Consumption in various time frames (hourly, daily, weekly, monthly, seasonal, annual) by property type and granular spatial level (i.e. census tract, block, lot, etc.).

ii. Peak electricity, gas, and steam demand in various time frames (hourly, daily, weekly, monthly, seasonal, annual) by property type and granular spatial level (i.e. census tract, block, lot, etc.).

**7) What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**

a. Electric Service Point Details
    i. Average load
    ii. Average peak
b. Electric Customer Details
    i. Monthly billed energy
    ii. Monthly billed demand
    iii. Monthly billed service charge
    iv. Account start data
    v. Account end date
c. Electric Meter Details
    i. Date installed
    ii. Date removed
d. Gas Service Point Details
    i. Average demand
    ii. Average demand peak
e. Gas Customer Details
    i. Monthly billed energy
    ii. Monthly billed demand
f. Gas Meter Details
    i. Date installed
    ii. Date removed
g. Steam Service Point Details
    i. Average demand
    ii. Average demand peak
h. Steam Customer Details
    i. Monthly billed demand
    ii. Monthly billed energy
i. Steam Meter Details
    i. Date installed
    ii. Date removed
j. Installed DER Details
    i. DER type
    ii. DER nameplate rating
    iii. Historical power interval data
    iv. Date installed
    v. Date removed
k. Existing Building Details
    i. GIS coordinates
    ii. Building type
    iii. Building size
    iv. Zoning classification

**8) What Data Relationships Does the IEDR Need to Analyze for This Use Case?**

a. Building utility accounts and any installed DERs associated with them must be related to municipal tax lot numbers, for example NYC's Borough, Block, and Lot number (BBL). This includes buildings that have several utility accounts within a given building or tax lot number (for example, apartment buildings that are not submetered).

**9) What Data Analysis Function(s) Does the IEDR Need for This Use Case?**

The IEDR does not need to perform significant analysis in this use case. However, where the data does not meet the privacy thresholds that the Public Service Commission determines are applicable to the particular use case, it may need to aggregate account-level data into whole building aggregated data. Moreover, the use case should allow users to select data on the following attributes.

a. Desired time frame
    i. start date
    ii. end date
    iii. interval size
b. Desired building
    i. Tax lot number (BBL in NYC)
    ii. address
c. Energy type
    i. Electric
    ii. Gas
    iii. Steam
d. Energy consumption or peak demand
e. Installed DERs

**10) How Often Does the Stakeholder Expect to Employ This Use Case?**

a. The use of whole building consumption data defining small building typologies would be executed in the near term and would involve detailed analysis of the data over several months. During this period, the use case data would need to be accessed on a regular basis. Once typologies are developed, they could be recalibrated as needed, for example every three or four years.
b. The use of whole building consumption data to inform targeting for the City's Accelerator program could be performed monthly or quarterly. At a minimum, this program targeting analysis would be performed annually.
c. The use of whole building consumption data to facilitate additional policy and program development that would be ongoing.

**11) How Does This Use Case Benefit the Stakeholder?**

a. The City views this use case as foundational for policy and program development to reduce greenhouse gas ("GHG") emissions and improve environmental justice for the city's roughly 1 million small buildings. This building segment represents over 40% of the built floor area in NYC and 30% of citywide GHG emissions. Due to lack of data, these buildings are currently not well understood, and therefore, more challenging to target efficiently from a policy and program design perspective. As stated above, a similar data collection approach implemented by the City for roughly 30,000 of the largest properties has been a fundamental driver of NYC's landmark green

building and climate policies, including Local Law 97. Given that consumption data is already being collected and stored, this is arguably a relatively easy but critical step to developing a more targeted policy and programmatic approach to decarbonizing small buildings in NYC and across the State.

b. The NYC Accelerator program provides advisory services to buildings larger than 5,000 $ft^2$. This includes over 400,000 properties for which the City has no energy consumption data. This use case would allow the Accelerator program to target its services much more effectively and ensure that the public funding behind this program benefits a wider range of buildings. Critically, it also would help the program to seek to maximize impact in terms of GHG emissions reductions and improvement in environmental justice outcomes, both of which are goals stated by the City and the State's Climate Leadership and Community Protection Act ("CLCPA").

**12) Why Should This Use Case Be Prioritized From the Perspective of i) the Industry and ii) the Citizens of New York State?**

a. Emissions from buildings make up 56% of fuel combustion emissions in New York State.[1] 66% of NYC's citywide GHG emissions come from buildings, with roughly half coming from buildings below 25,000 $ft^2$.[2] It will be very difficult for the City and State to reach their GHG reduction goals without making deep emissions reductions in small buildings. Both the City and the State need to better understand how buildings consume energy in order to develop policies and programs to meet their GHG emissions targets and to ensure that currently allocated program funding is directed effectively. This use case will provide critical data to inform that understanding and will help meet the requirements of the CLCPA and the City's emissions goals.

b. This use case could also benefit energy efficiency providers by enabling them to provide more targeted offerings and services to building owners based on the typologies produced by this use case. As more targeted retrofit strategies emerge, residential and commercial tenants would also benefit from better building performance including improvements in cost, comfort, and air quality.

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1 NYSERDA, *New York State GHG Inventory 1990-2016* (issued July 2019) at S-6, available here: https://www.nyserda.ny.gov/About/Publications/EA-Reports-and-Studies/Greenhouse-Gas-Inventory.

2 New York City, *Inventory of New York City Greenhouse Gas Emissions*, available here: https://nyc-ghg-inventory.cusp.nyu.edu/.

## Use Case Profile Form # 2 - Electricity Emissions Coefficient to Improve GHG Accounting, Building Performance Standards, and Carbon Management Strategies

**1) Contributor Name & Contact Information**

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**2) Use Case Category**

a. Local Government Function

**3) Use Case Sub-Category**

a. Other - regulatory research and policy planning

**4) What Question(s) Does the Stakeholder Seek to Answer with This Use Case?**

a. What is the historic carbon intensity (t $CO_2$e/MWh) of the electric grid serving discrete regions/municipalities across the state at various time intervals on a marginal and average basis? (Described in further detail in response to 5(b), below)
b. What is the projected carbon intensity (t $CO_2$e/MWh) of the electric grid serving discrete regions/municipalities across the state at various time intervals on a marginal and average basis?
c. In what locations and at what times of day do energy reducing strategies have the greatest emission reduction benefits? What policies and programs can best target these strategies?

**5) What Information Should the Use Case Produce for the Stakeholder?**

a. How Will the Stakeholder Use the Information Produced by This Use Case?
    i. The City will use the electric GHG coefficient data to inform compliance with its Building Performance Standard (Local Law 97).
    ii. It will also use this value to quantify GHG emissions more precisely in its citywide and municipal GHG inventory reports. As the inventory is the foundation of the City's climate action planning, greater temporal granularity would also allow the City to design policies,

programs, and investment strategies that consider seasonal or intraday fluctuations in carbon intensity of the grid.

iii. The City would also use marginal emissions factor data to weigh investments in specific energy efficiency, DER, electrification, and renewable energy projects.

b. What are the Minimum Necessary Attributes for Each Type of Information Produced?

i. Real-time and historic average emissions factor - the average carbon intensity of the electric mix serving each zone in the state (include local generation and imported power) defined in terms of t $CO_2$e/MWh. This factor should be made available in real time by hour. A weighted average should be available for each day, month, season, and year for electricity serving each New York State Independent System Operator, Inc. ("NYISO") zone. The IEDR should include a reference map or list indicating which zone each municipality is in.

ii. Projected average emissions factor - the projected average carbon intensity of the electric mix serving each zone in the state (include local generation and imported power) defined in terms of t $CO_2$e/MWh. An annual average and seasonal factor should be projected for each year through 2040 based on the interconnection queue and/or generation and system planning studies performed by NYISO and NYSERDA.

iii. Real-time and historic marginal emissions factor - the marginal carbon intensity of the electric mix serving each zone in the state (include local generation and imported power) defined in terms of t $CO_2$e/MWh. This factor should be made available in real time by hour. An average should be available for each day, month, season, and year for electricity serving each NYISO Zone. The use case should include a reference map or list indicating which zone each municipality is in.

iv. Projected marginal emissions factor - the projected marginal carbon intensity of the electric mix serving each zone in the state (include local generation and imported power) defined in terms of t $CO_2$e/MWh. A marginal factor should be projected hourly on a day-ahead basis. Projections on how the marginal factor will fluctuate across seasons and in peak and off-peak periods should be made available through 2040 based on the interconnection queue and/or generation and system planning studies performed by the NYISO and NYSERDA.

**6) How Should the IEDR User Interface Present the Information Produced by the Use Case?**

a. Historic

i. Tabular data showing average $CO_2$e intensity of the electricity serving each municipality in the state on an hourly, daily, monthly, and annual basis

ii. Tabular data showing marginal $CO_2$e intensity of the electricity serving each municipality in the state on an hourly basis

iii. Bar charts for both average and marginal historic data showing $CO_2$e intensity over time frames that can be defined dynamically

b. Projection

i. Monthly, and annual projections of average $CO_2$e intensity of the electricity serving each municipality in the state through 2040

ii. Day-ahead hourly projections of average $CO_2$e intensity of the electricity serving each municipality in the state on an hourly basis

iii. Charts indicating projected seasonal marginal emissions factors

iv. Charts indicating projected marginal emissions for daily peak and off-peak periods.

v. Bar charts for both average and marginal projections showing $CO_2e$ intensity in time frames that can be defined dynamically at various levels of time granularity.

**7) What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**

a. Average factors
    i. Average real-time
        1. Power plant emissions and generation data
        2. Expected power flows
    ii. Average daily, seasonal, and annual
        1. Averages of computed real-time factors in various time intervals
    iii. Projected Average
        1. Modeled expectations of generation, capacity, and power flows through 2040
b. Marginal factors
    i. Real time
        1. Emissions associated with the last dispatched unit running to meet load in any given zone or region.
    ii. Projected
        1. Based on modeled expectations of the last dispatched unit running to meet load in any given zone or region.

**8) What Data Relationships Does the IEDR Need to Analyze for This Use Case?**

a. Power generation units, their fuel type, and their generation amounts and emissions rates must be related to their location (possibly NYISO Zone).
b. Power flows between regions and zones

**9) What Data Analysis Function(s) Does the IEDR Need for This Use Case?**

a. Municipality/population center served
b. Average or marginal emissions coefficient (t $CO^2e$/MWh)
c. Time frame (hourly, daily, monthly, etc.)
d. Projected or real-time/historic

**10) How Often Does the Stakeholder Expect to Employ This Use Case?**

a. Annual for GHG accounting and the City's building performance standard (LL97)
b. Real-time for compliance with the City's building performance standard (LL97)
c. Multiple times throughout each year: real-time and projections will be used for ad-hoc analysis policy research and assessing specific investments
d. Other stakeholders will benefit from this use case on an ongoing basis for GHG accounting and reporting

**11) How Does This Use Case Benefit the Stakeholder?**

a. Electrification of transportation, heating, and hot water is a critical path for New York State to meet the requirements of the CLCPA and for the City to meet its climate goals. Climate planning, policy, and programs all fundamentally rely on a clear understanding of carbon intensity. This use case would provide that understanding. The City will use the annual coefficient data to inform compliance with its Building Performance Standard (Local Law 97), which is expected to cut citywide emissions

10% by 2030. This use case will also help the City quantify GHG emissions more precisely in its citywide and municipal GHG inventory reports. As the inventory is the foundation of our climate action planning, data with increased temporal granularity would also allow the City to design policies, programs, and investment strategies that consider seasonal and intraday fluctuations in carbon intensity of the grid. Finally, the City would use marginal factor data to evaluate the benefits and costs of investments in specific energy efficiency, DER, electrification, and renewable energy projects.

**12) Why Should This Use Case Be Prioritized From the Perspective of i) the Industry and ii) the Citizens of New York State?**

a. A reliable understanding of the carbon intensity of electricity is key to the success of the City's Building Performance Standard (Local Law 97). This law is expected to drive a large amount of energy efficiency and electrification in the city's largest buildings. This use case should be prioritized to ensure that Local Law 97 has a robust foundation and that it can contribute to the State reaching the goals of the CLCPA. This will give the roughly 30,000 large properties impacted by Local Law 97 improved certainty and help drive targeted investment sooner.
b. The carbon intensity of the local energy supply is a critical tool in the City and State's climate action planning. Providing accurate and up to date emissions coefficients and projections of carbon intensity will enable municipalities throughout the state to perform more effective climate action planning and to assess investments in technologies to decarbonize their buildings and transportation sectors. This will deliver better policy outcomes for citizens across the state.
c. Greater public transparency of current and projected carbon intensity of local energy grids is important to inform residents across New York State about the climate impacts of energy use and the benefits of reducing energy consumption.
d. Increased demand side flexibility will be an integral part of the transition to a clean grid. The information provided in this use case will support industry innovation among demand-side service providers, by making it possible for them to offer dynamic demand management solutions that are responsive to time-based grid emissions signals.

## Use Case Profile Form # 3 - Customer Cost Data to Improve Targeting for NYC Accelerator

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**2) Use Case Category**

a. Local Government Function

**3) Use Case Sub-Category**

a. Environmental Justice Initiatives

**4) What Question(s) Does the Stakeholder Seek to Answer with This Use Case?**

a. Where is energy cost burden highest within NYC and the State?
b. How does energy affordability vary across geographies and building types?

**5) What Information Should the Use Case Produce for the Stakeholder?**

The City's energy cost burden assessment found that there are approximately half a million low income families who are energy burdened (i.e. expend more than 6% of household income on utility costs) in NYC. (https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/EnergyCost.pdf)

This assessment was limited from the perspective of geography and building type because it relied on sampling data. As a result, this assessment cannot be used to develop targeted interventions around building types and geographies.

a. <u>How Will the Stakeholder Use the Information Produced by This Use Case?</u>
    i. The NYC Accelerator is a free energy assistance program run by the City. One of the Accelerator's main goals is to provide small building owners with financial and technical

assistance to drive energy and decarbonization retrofits. Information procured by this use case, in tandem with energy consumption and public health data, will be used to target building owners and residents most in need of assistance reducing energy cost burden through planning and completing energy efficiency projects.

b. What are the Minimum Necessary Attributes for Each Type of Information Produced?
    i. Building and/or utility account level energy consumption and cost data
        1. Total monthly/annual energy bill cost
        2. Monthly consumption meter read
        3. Rate classification for each record

**6) How Should the IEDR User Interface Present the Information Produced by the Use Case?**

a. Tabular data available for download showing building level
    i. Total monthly bill for electricity and natural gas
        1. Total cost of consumption for electricity and natural gas
            a. Monthly, annually
        2. Total cost of electricity and natural gas supply charges
            a. Monthly, annually
        3. Total cost of electricity and natural gas distribution charges
            a. Monthly, annually
        4. Consumption meter read
            a. Monthly, annually
        5. Rate classification for each record
b. Geospatial map
    i. Total monthly bill for electricity and natural gas
        1. Total cost of consumption for electricity and natural gas
            a. Monthly, annually
        2. Total cost of electricity and natural gas supply and distribution charges
            a. Monthly, annually
        3. Consumption meter read
            a. Monthly, annually
        4. Rate classification for each record

**7) What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**

a. Electric Customer Details
    i. Monthly billed energy
    ii. Monthly billed demand
    iii. Monthly billed service charge
b. Gas Customer Details
    i. Monthly billed energy
    ii. Monthly billed demand
    iii. Monthly billed service charge

**8) What Data Relationships Does the IEDR Need to Analyze for This Use Case?**

a. Building utility accounts must be related to municipal tax lot numbers, for example NYC's Borough, Block, and Lot number (BBL). This includes buildings that have several utility accounts within a given building or tax lot number (for example, apartment buildings that are not submetered).

**9) What Data Analysis Function(s) Does the IEDR Need for This Use Case?**

a. Energy type
b. Time frame
c. Building and/or accounts

**10) How Often Does the Stakeholder Expect to Employ This Use Case?**

a. The NYC Accelerator will employ this use case at least semi-annually to target buildings for participation in the Accelerator. The use case will also inform implementation strategies at those buildings.
b. The NYC Accelerator will use data produced by this use case at least annually to improve and evaluate service offerings.
c. The City will use this use case on an annual basis to maintain a clear picture of energy affordability issues in NYC.

**11) How Does This Use Case Benefit the Stakeholder?**

a. The NYC Accelerator is a free energy assistance program run by the City. One of the Accelerator's main goals is to provide small building owners with financial and technical assistance to drive energy and decarbonization retrofits. This program will use energy cost data in tandem with energy consumption data to target building owners most in need and assist them in planning and completing energy efficiency projects. This data will also inform design of our programs to ensure we are assisting building owners and utility customers most in need.
b. The City will also use this information to assess energy affordability broadly and inform policy interventions to alleviate energy burden.

**12) Why Should This Use Case Be Prioritized From the Perspective of i) the Industry and ii) the Citizens of New York State?**

a. Energy costs disproportionately burden low-income households. A more granular understanding of cost data will allow the City to help building owners and utility customers most in need make energy efficiency upgrades that reduce utility costs, identify bill assistance opportunities, and connect those customers with useful policies and programs. Being able to monitor these costs on an ongoing basis will help the City and State achieve our goals of environmental justice and equity.

b. As the State, the City, and other municipalities develop programs to better support energy cost burdened residents, this will help grow the market for energy efficiency solutions. A more detailed understanding of the barriers facing cost burdened customers may also help the energy efficiency and DER providers develop innovative approaches to reaching this underserved population.