Integrated Energy Data Resource (IEDR)
Stakeholder Use Case Survey Template

Comments Due: July 23, 2021 to iedr@nyserda.ny.gov

Cover Sheet

Contact Information

The Joint Utilities of New York ("Joint Utilities"), defined by the companies listed in the table below, collectively submit these comments regarding the high priority IEDR Use Cases from the utility as a user perspective.

Organization Name	Contact	Email Address
Central Hudson Gas & Electric Corporation	Paul Colbert	pcolbert@cenhud.com
Con Edison Orange & Rockland	Damian Sciano	scianod@coned.com
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National Fuel Gas Distribution Corporation	Jeff Same	SameJ@natfuel.com

IEDR Immediate Needs

The IEDR immediate needs should be driven by the needs of developers looking to deploy distributed renewable energy and storage projects, transportation electrification, energy efficiency (EE), and heat electrification. The Joint Utilities understand that developers want to overlap their solutions with existing and planned electric capacity needs.

While the Joint Utilities recommend that the IEDR priority use cases should focus on the needs of developers or other stakeholders, we have identified five IEDR Use Cases that could support utility functions.[2] The utility IEDR Use Cases are listed below based on priority level (from highest priority to lowest priority). The prioritization criteria are described in the following section.

IEDR Utility Use Cases

- Use Case 1: Programs to Support Disadvantaged Communities (DACs)
- Use Case 2: Electric Vehicle Supply Equipment (EVSE) Siting – DACs and Low-to Moderate-Income (LMI) Customers
- Use Case 3: Reliability Benchmarking
- Use Case 4: Electric Vehicle (EV) Fleets

[1] National Grid as used herein is Niagara Mohawk Power Corporation d/b/a National Grid, KeySpan Gas East Corporation d/b/a National Grid, and The Brooklyn Union Gas Company d/b/a National Grid NY.

[2] National Fuel Gas Distribution Corporation supports the identification and prioritization of the use cases herein that apply to natural gas, and it does not oppose the comments herein that are related to use cases that do not apply to natural gas.

- Use Case 5: EVSE Siting – Strategic Location Suitability

Prioritization Criteria

The Joint Utilities propose that use cases that most directly advance the Climate Leadership Community Protection Act (CLCPA) goals should be prioritized. Accordingly, the Joint Utilities developed the following categories of use cases based upon the degree to which the criterion advanced CLCPA goals.

1. Contributions to CLCPA goals – Use Cases that more directly advance CLCPA goals should be prioritized.
2. Benefits to DACs – Use Cases providing direct and immediate beneficial impacts for disadvantaged communities should be prioritized.
3. Improvement/maintenance to grid safety and reliability – Use Cases contributing to improvement or maintenance of grid safety and reliability should be prioritized.
4. Market and customer choice enablement – Use Cases enabling clean energy technology deployment and customer choice should be prioritized.
5. Current availability of data and ease of access for stakeholders – Use Cases that would enable simple, streamlined access to data items that are currently difficult for stakeholders to access should be prioritized.

Use Case Profiles

Use Case 1: Programs to Support Disadvantaged Communities (DACs)

Definition/Description

The Joint Utilities seek data that will support targeted DACs programs that will have a meaningful impact on those communities and advance the goals of the CLCPA. The Joint Utilities are currently using the NYSERDA Disadvantaged Communities interim definition and maps, the New York State Department of Environmental Conservation Geospatial Information System (NYS-DEC GIS), and other tools for program design purposes, but could benefit from integrating the information provided by the DAC Use Case within the IEDR with rolling enhancements.

1. **Contributor Name & Contact Information.**
   Joint Utilities of New York – Patricia D'Costa – patricia.dcosta@icf.com (consultant)

2. **Use Case Category:** Utility Functions

3. **Use Case Sub-Category:** Regulatory/Statutory Compliance

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

   - Where are DACs located within each utility jurisdiction?
   - Are programs that are qualified to provide benefits to DACs and that have a spatial component seeing projects deployed in DACs?
   - What are the boundaries of DACs in a form readily translated to accessible information?

5. **What Information Should the Use Case Produce for the Stakeholder?**
   The use case should provide a visualization of the DAC zones being contemplated under the various utility related program implementation orders such as EVSE and EE. The information should also provide the underlying data used to define these zones.

   a. **How Will the Stakeholder Use the Information Produced by This Use Case?**
   The information will support implementation of programs as they relate to Energy Justice/LMI targets/budgets. DAC information will also allow utilities to better market and target program offerings within these communities, measure DAC participation in programs, and use the underlying information to perform additional analyses.

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

5. Information Type Produced	5a. How will the stakeholder use the information produced by this use case?	5b. What are the minimum necessary attributes for each type of information produced?
Area median income	Information on average household income and number of households below the federal poverty level can give utilities insights into the makeup of DAC areas.	Census tract, zip code level, refreshed annually[3]
Minority population	Information on percentage of households that identify as members of minority groups can give utilities an illustrative look at racial participation in program offerings.	Census tract, zip code level, refreshed annually
Community health	Information on asthma rates and other air quality influenced health conditions that could indicate a need for programs to help reduce air pollution.	Census tract, zip code level, refreshed every 5 years
Environmental conditions	Information on air quality and contributing factors to air quality to help utilities determine where programs could create a meaningful and positive impact for a community's environment.	Census tract, zip code level, refreshed every 5 years

6. **How Should the IEDR User Interface Present the Information Produced by the Use Case?**
   The information should be presented in an interactive map format so that the utilities can identify visually where DACs are located. The information should also be downloadable in Excel or CSV format so that the utilities can easily download and conduct analysis on the data.[4]

7. **What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**
   The data types listed below are not exhaustive of all necessary data elements and will need to be refined as CLCPA DAC criteria are established. The IEDR should include all CLCPA data bases used for determining DACs and make the indicators used for such determination available.

   a. **What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?**

[3] Census tract and zip code level data must meet the data aggregation standards

[4] IEDR should integrate census-based shapefiles: Note there are various forms of census data. There's the decennial census data which can be useful, but other federal census data is also available. The American Community Survey data and American Household data are updated on an ongoing basis and are more useful for program targeting. The ACS data is especially useful.

Information Type Produced	7. What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?	7a. What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?
Area median income	Average household income	Zip code level granularity, refreshed annually, most recent census tract data.
	Number of households below the federal poverty level	Zip code level granularity, refreshed annually, most recent census tract data.
Minority Population	Number of customers that identify as members of minority groups	Zip code level granularity, refreshed annually, most recent census tract data.
Community health	Asthma rates	Zip code level, refreshed every 5 years, most recent census tract data.
	Average hospitalizations due to lung-related conditions	Zip code level, refreshed every 5 years, most recent census tract data.
Environmental conditions	Air quality metrics	Zip code level, refreshed annually
	Data on contributing factors to air quality	Zip code level, refreshed annually
	Data on heating fuel type	Building level, refreshed annually

8. **What Data Relationships Does the IEDR Need to Analyze for This Use Case?**
   The DAC Use Case information will need to have the following data relationships:

   - All outlined data types within the DAC Use Case will need to be associated via Census Block Group level
   - Information on available utility programs
   - Information on heating fuel source

   All data elements will need to be related by location so that DAC Use Case data, customer account data, and available utility programs can be merged to identify customers in DACs and the programs they are eligible for.

9. **What Data Analysis Function(s) Does the IEDR Need for This Use Case?**
   Program design and mapping visualization tools.

   a. **What are the Minimum Necessary User Input Variables Needed to Enable a Useful Analysis?**
      Spatial data for defined DACs.

10. **How Often Does the Stakeholder Expect to Employ This Use Case?**
    Data will be pulled by utilities as needed and will be referenced on an ongoing basis as programs are implemented or designed.

11. **How Does This Use Case Benefit the Stakeholder?**
    With access to both the determined locations of DACs and the underlying indicators used to determine those locations, the utilities will be able to tailor programs to the characteristics of individual DACs. This information will help the Joint Utilities accomplish two goals:
    1) Enhance the design and implementation of programs in DACs;
    2) Gain insight into specific environmental and health needs of individual DACs that could be positively impacted or met by new utility programs.

12. **Why Should This Use Case Be Prioritized From the Perspective of i) the Industry and ii) the Citizens of New York State?**
    The industry can use the data gathered from program administrators to evaluate where DAC-benefit qualifying programs should be deployed, increasing the benefits that accrue to those communities.

    The DAC Use Case should be prioritized from the perspective of New York State citizens because this information will support the development of effective utility-sponsored programs and projects that better serve DACs.

Use Case 2: EVSE Siting – Low-to Moderate-Income (LMI) and DAC Customers

Definition/Description

The IEDR can provide value to a utility if the data on disadvantaged communities is coupled with existing data produced through the "EVSE Siting – Strategic Location Suitability" Use Case, as well as existing EVSE load serving capacity maps (released December 2020), to identify ideal locations to deploy both public and private EVSE. Although existing resources help identify DACs and LMI customers, the Joint Utilities recommend that the information should be sourced through the IEDR and updated continuously.

1. **Contributor Name & Contact Information.**
   Joint Utilities of New York – Patricia D'Costa – patricia.dcosta@icf.com (consultant)

2. **Use Case Category:** Utility Functions

3. **Use Case Sub-Category:** Market Enablement

4. **What Question(s) Does the Stakeholder Seek to Answer with This Use Case?**
   - Where would it be most useful to place EVSE equipment to meet DAC and LMI program goals?
     - Where are DACs located and which programs are appropiate for those areas?

- Where are LMI households located and which programs should targeted to those communities?

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

   a. **How Will the Stakeholder Use the Information Produced by This Use Case?**
   This information will be used to target and site needed EVSE in the LMI and DAC areas.

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

5. Information Type Produced	5a. How will the stakeholder use the information produced by this use case?	5b. What are the minimum necessary attributes for each type of information produced?
DAC Areas	Information on designated DACs can give utilities an illustrative look at which areas are likely to qualify for DAC programs and program carve-outs.	Zip code level, refreshed annually, mappable data/shape files preferred
EV Presence	Information on EV ownership, types, and location	Zip code level, refreshed every 5 years
EVSE Information	Information on existing and planned EVSE location, capacity, and utilization	Zip code level, refreshed every 5 years

6. **How Should the IEDR User Interface Present the Information Produced by the Use Case?**
   The information should be presented in a tabular and spatial format. This format will enable utilities to identify preferred or suitable locations within DACs or LMI areas. The information should also be downloadable in Excel or CSV format to further facilitate data analysis.

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

   a. **What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?**

Information Type Produced	7. What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?	7a. What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?
DAC Areas	See Use Case 1: Programs to Support DACs.	
ICE Registration	VIN	Vehicle level granularity, refreshed annually
	Registration start date	Vehicle level granularity, refreshed annually

	State registration street address	Vehicle level granularity, refreshed annually
	Vehicle information: Type, Manufacturer, Model, Model year	Vehicle level granularity, refreshed annually
	Vehicle fuel information: Fuel type (leaded, unleaded, diesel, etc.)	Vehicle level granularity, refreshed annually
	Milage information: Miles per gallon and estimated range.	Vehicle level granularity, refreshed annually
EV Registration	VIN	Vehicle level granularity, refreshed annually
	Registration start date	Vehicle level granularity, refreshed annually
	State registration street address	Vehicle level granularity, refreshed annually
	Vehicle information: EV type, EV manufacturer, EV model, EV model year	Vehicle level granularity, refreshed annually
	Vehicle charging information: Compatible charger type(s), maximum EV charging power (W), EV battery capacity (kWh)	Vehicle level granularity, refreshed annually
	Milage information: Efficiency (miles per kWh), estimated annual miles	Vehicle level granularity, refreshed annually
Installed EVSE Equipment	Identification information: Charger ID, service point ID, utility ID, owner ID, operator ID	Charger level granularity, refreshed monthly
	Location information: Location category, street address, GIS coordinates	Site level granularity, refreshed monthly
	Installation timeframe: Date installed, date removed (if applicable)	Charger level granularity, refreshed monthly
	Number of charger ports	Site level granularity, refreshed monthly
	Charger access category	Site level granularity, refreshed monthly
	Charger technology information: Charger class level	Charger level granularity, refreshed monthly

8. **What Data Relationships Does the IEDR Need to Analyze for This Use Case?**
   The "EVSE Siting – LMI Customers" Use Case information will need to have the following data relationships:

   - All outlined data types within the "EVSE Siting – LMI Customers" Use Case will need to be associated via zip code.
   - EVSE load serving capacity data
   - "EVSE Siting – Strategic Locations Suitability" Use Case information
   - Customer account information
   - EV Make-Ready Program (MRP) Approved Contractor information

All data elements should be associated with location by full address and geographic coordinates. If full address information is not possible, data should include zip code so that each data element can be compared to identify priority locations for EVSE siting.

Addresses should be in the same format as utility customer account data so that ideal locations can be associated with customer account information. This will allow utilities to easily identify contact information for customers with potential host sites. Utilities can also use address and service territory information from the list of EV MRP Approved Contractors to perform outreach to contractors performing work in DACs.

9. **What Data Analysis Function(s) Does the IEDR Need for This Use Case?**
   To be identified as the data sets are developed.

   a. **What are the Minimum Necessary User Input Variables Needed to Enable a Useful Analysis?**
      N/A

10. **How Often Does the Stakeholder Expect to Employ This Use Case?**
    The utilities will employ this Use Case both operationally as needed and annually for planning purposes.

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

    a. Driving towards CLCPA goals: The "EVSE Siting – LMI and DAC Customers" Use Case empowers the utilities with information to advance the deployment of EVSE equipment which will help encourage Zero-Emissions Vehicles adoption in DACs across New York State. This will help advance CLCPA emissions and DAC goals.

    b. Meeting EV MRP Order requirements: The Use Case will also help the utilities meet requirements outlined in NYPSC's Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs, where the Joint Utilities were directed to identify strategic locations for EVSE deployment so they can perform targeted education and outreach to potential site hosts and developers in those areas. The MRP also provides higher incentive levels for EVSE equipment within or near DACs. The "EV Siting – LMI and DAC Customers" Use Case will provide utilities with information that will help them identify communities eligible for higher incentive levels through the program.

12. **Why Should This Use Case Be Prioritized From the Perspective of i) the Industry and ii) the Citizens of New York State?**
    The information provided by the "EVSE Siting – LMI and DAC Customers" Use Case will provide information on areas eligible for higher incentive levels through the EV MRP, allowing EVSE developers to expand their business accordingly. This targeted deployment of EVSE equipment will help NYS LMI and DAC customers by increasing accessibility of EVSE equipment and improving air quality through reduced emissions compared to gasoline-powered vehicles.

Use Case 3: Reliability Benchmarking

Definition/Description

The Joint Utilities could benefit from easier access to reliability data from utilities across New York State for benchmarking analysis in a streamlined way. The IEDR can facilitate the sharing of reliability data and metrics across utilities, allowing for easy access to the information at all times.

1. **Contributor Name & Contact Information.**
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2. **Use Case Category:** Utility Functions

3. **Use Case Sub-Category:** System Operations/System Planning

4. **What Question(s) Does the Stakeholder Seek to Answer with This Use Case?**
   - How does the reliability performance (similarities and differences) of circuits in like-for-like geographical regions compare between the utilities?
   - What reliability measures are the utilities providing (System Average Interruption Frequency Index (SAIFI), Customer Average Interruption Duration Index (CAIDI), Customer Average Interruption Frequency Index (CAIFI), etc.)?
   - What kind of granularity is available for reliability data (*e.g.,* by load area, zip code, etc.)?
   - What system design configurations help improve reliability performance? (conventional design and non-conventional design)
   - What proactive measures help improve reliability performance in rural areas and in urban areas?

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

   a. **How Will the Stakeholder Use the Information Produced by This Use Case?**
   The information used will help the utility assess existing system design and construction standards and other actionable items (*e.g.,* weather forecasting ahead of storms) to improve reliability performance. The information will help the utility present their performance with context to other NYS utilities.

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

5. Information Type Produced	5a. How will the stakeholder use the information produced by this use case?	5b. What are the minimum necessary attributes for each type of information produced?
Reliability metrics including SAIDI, SAIFI, CAIDI	Utility will benchmark its performance against those of the other utilities in New York State using different reliability metrics and corresponding thresholds for each utility	System level, zonal level, zip code or town level, substation level, feeder level, and segment or protection zone with annual updates
Metric thresholds (with explanation side notes to understand reasons for differences across utilities)	Utility will benchmark its performance against those of the other utilities in New York State using different reliability metrics and corresponding thresholds for each utility	System to feeder level with annual updates
Outage Cause	Utility will use this information to learn and adopt reliability measures, where applicable, from other utilities with the lowest outages associated with a particular cause	Number and duration of outages associated with each cause (*e.g.,* vegetation, weather, equipment failure). System to feeder level with annual updates
Major Storm Exclusion events	Utility will use this information to normalize reliability statistics and compare impacts of extreme weather events on its systems with other utilities within New York state	System to feeder level with annual updates
Weather information for New York utility jurisdictions	Weather data would help utilities normalize reliability statistics from other utilities for accurate data benchmarking. Improve forecasting for event impact	System level, zip code level, substation, street segment

6. **How Should the IEDR User Interface Present the Information Produced by the Use Case?**
   The IEDR user interface should present the information in an interactive online dashboard with a mix of graphs, tables, and bar charts with a geographical overlay and then an extractable spreadsheet version based on filtered criteria.

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

   a. **What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?**

Information Type Produced	7. What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?	7a. What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?
Reliability metrics including SAIDI, SAIFI, CAIDI	Number of interruptions, number of customers interrupted, total duration of customer interruptions, total number of customers served	System level, zonal level, zip code or town level, substation level, feeder level, and segment or protection zone with annual updates
Metric thresholds (with explanatory notes to understand reasons for differences across utilities)	Thresholds for each reliability metric. Short explanations on how the thresholds are established for each utility	System to feeder level with annual updates
Outage Cause	Different categories of outage cause across all utilities in New York state. Number and duration of outages attributed to each cause for each utility.	System to feeder level with annual updates
Major Storm Exclusion Events	Number, durations, and dates of major storm exclusion events	System to feeder level with annual updates
Weather information for New York utility jurisdictions	Historical weather data - Precipitation, wind gust, wind speed, snow, rain, direction	System level, zip code level, substation, street segment level with annual updates

8. **What Data Relationships Does the IEDR Need to Analyze for This Use Case?**
   Data relationships to be analyzed
   - Outages with weather conditions
   - System with outage causes
   - Weather with outage causes
   - System design configuration (conventional and non-conventional) with outage performance
   - Reliability impact by cause per circuit with a geographical relationship per circuit (town) to associate topographical challenges and weather impact

9. **What Data Analysis Function(s) Does the IEDR Need for This Use Case?**
   Determining averages, minimums, maximums, percentile (50, 90, 95, 98, etc), whisker charts, greater than and/or equal to, less than and/or equal to, and equal to.

   b. **What are the Minimum Necessary User Input Variables Needed to Enable a Useful Analysis?**

Number of interruptions, number of customers served, number of customer hours impacted, number of customers impacted, level of tree density, likelihood of outage, and level of non-conventional resources available.

10. **How Often Does the Stakeholder Expect to Employ This Use Case?**
    This data will be used annually for planning purposes, as well as on an ongoing basis.

11. **How Does This Use Case Benefit the Stakeholder?**
    The "Reliability Benchmarking" Use Case will allow the utilities to streamline their processes as they analyze their individual utility operational performance. Housing the data used for each utility reliability analysis on the IEDR will create efficiencies in the way the utilities currently share such information.

12. **Why Should This Use Case Be Prioritized From the Perspective of i) the Industry and ii) the Citizens of New York State?**
    Streamlining the sharing of reliability data for purposes of benchmarking will help the utilities identify and address areas for reliability performance improvement more quickly, which will benefit all citizens of New York State who rely on power within their homes and businesses.

Use Case 4: *EV Fleets*

Definition/Description

The EV Fleets Use Case will help utilities identify existing business fleets and their characteristics within New York State to identify or predict future fleet electrification plans, the timing, and the resulting impact of a potential fleet electrification for the grid. This modeling can be incorporated in utility forecasting and planning exercises to prepare the grid for potential fleet electrification.

This Use Case would also be helpful in identifying EV Fleets in DACs, which would advance CLCPA goals.

1. **Contributor Name & Contact Information.**
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2. **Use Case Category:** Utility Functions

3. **Use Case Sub-Category:** System Planning

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

   - Where are large vehicle fleets located within utility jurisdictions?
   - Which fleets have already electrified? Which (if any) are planning to electrify or have emissions related goals?
   - How large are existing fleets?
   - What types of vehicles are within existing fleets?

- What are the travel characteristics of the vehicles including average daily mileage and utilization schedules?

5. **What Information Should the Use Case Produce for the Stakeholder?**
   a. **How Will the Stakeholder Use the Information Produced by This Use Case?**

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

5. Information Type Produced	**5a. How will the stakeholder use the information produced by this use case?**	**5b. What are the minimum necessary attributes for each type of information produced?**
Existing Fleet Information	Information on existing fleets in NYS including the associated business, location, size, charging profile (i.e. 2x5 Direct Charge/Fast Charge (DCFC), 1x10, etc.), and vehicle types will allow the utilities to identify locations where large vehicle electrification projects could occur and determine the scope of potential grid impacts if electrification efforts were to be pursued.	Site level granularity, refreshed annually
Business Sustainability and Electrification Goals	Information on business sustainability and electrification goals will help utilities perform propensity analysis to determine if/when and where they can expect large fleet electrification projects to occur.	Site level granularity, refreshed annually

6. **How Should the IEDR User Interface Present the Information Produced by the Use Case?**
   The IEDR user interface should present the information in a downloadable spreadsheet format so that the utilities can download and analyze the data internally.

7. **What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**
   a. **What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?**

Information Type Produced	**7. What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**	**7a. What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?**
Existing Fleet Information	Business name	Site level granularity, refreshed annually
	Business address	Site level granularity, refreshed annually

	Fleet address	Site level granularity, refreshed annually
	Fleet size	Site level granularity, refreshed annually
	Vehicle composition of fleet: Vehicle type(s), vehicle manufacturer(s), vehicle model(s), vehicle model year(s)	Site level granularity, refreshed annually
	Vehicle utilization data: Daily miles, utilization schedules	Site level granularity, refreshed annually
Business Sustainability and Electrification Goals	Data on businesses that have existing sustainability goals	Site level granularity, refreshed annually
	Data on businesses that have existing electrification goals	Site level granularity, refreshed annually

8. **What Data Relationships Does the IEDR Need to Analyze for This Use Case?**
   The "EVSE Fleets" Use Case information will need to have the following data relationships:

   - If existing fleet information and business sustainability and electrification goals come from different sources, relationships will need to be made between the datasets so that fleet information and sustainability/electrification goals can be attributed to the proper businesses. Associations can be made via business name or address.
   - Customer Account Information

   All data elements will need to be associated by business name and/or address.

9. **What Data Analysis Function(s) Does the IEDR Need for This Use Case?**
   To be identified as the data sets are developed.

   a. **What are the Minimum Necessary User Input Variables Needed to Enable a Useful Analysis?**
      N/A

10. **How Often Does the Stakeholder Expect to Employ This Use Case?**
    The utilities will employ this Use Case annually.

11. **How Does This Use Case Benefit the Stakeholder?**
    The "EV Fleets" Use Case will provide the utilities with relevant information to identify where and when vehicle fleets in their service territories may electrify. This will allow the utilities to anticipate potential grid impacts and maintain the safety and reliability of the grid.

12. **Why Should This Use Case Be Prioritized from the Perspective of i) the Industry and ii) the Citizens of New York State?**
    Utilities will use the EV Fleets Use Case to help EV and EVSE equipment manufacturers, developers, and installers identify customers looking to purchase electric fleet vehicles and EVSE.

    New York would benefit from air quality improvement due to reduced emissions of electric vehicles compared to gasoline powered vehicles. Additional benefits include safety and reliability of the utility grid as utilities work to forecast and plan for potential grid impacts from fleet electrification.

Use Case 5: EVSE Siting – Strategic Locations Suitability

Definition/Description

To identify ideal locations for EVSE siting, the Joint Utilities propose housing customer and geographic information, including data such as EV registration, transportation patterns, and parking locations, on the IEDR. The information would help the utilities identify charging locations that would be most useful for individual drivers (as opposed to EV fleets) in their jurisdictions, based on where electric vehicles are already traveling and parking. When layered with DAC customer data (see Use Case 2), as well as existing EVSE load serving capacity maps (released December 2020), the information produced by the "EVSE Siting – Strategic Locations Suitability" Use Case can be used to identify priority locations to deploy EVSE.

1. **Contributor Name & Contact Information.**
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2. **Use Case Category:** Utility Functions

3. **Use Case Sub-Category:** Market Enablement

4. **What Question(s) Does the Stakeholder Seek to Answer with This Use Case?**
   - Where would it be most useful to place EVSE for individual EV owners?
     - Where is the "home site" for existing EVs?
     - Where are existing vehicles traveling most often?
     - What types of EVs are currently on the road?
     - Where are existing vehicles parking for longer periods? Short periods?
     - Where are existing parking spots that could house EVSE?
     - How does this compare with electric system load serving capability?
     - How does this compare with planned or forecasted EVSE?

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

   a. **How Will the Stakeholder Use the Information Produced by This Use Case?**

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

5. Information Type Produced	5a. How will the stakeholder use the information produced by this use case?	5b. What are the minimum necessary attributes for each type of information produced?
Traffic Patterns	Information on traffic patterns in NYS, including number of yearly travelers by road and gasoline sales by zip code, will help utilities determine where customers are likely to be traveling, indicating where they may need to stop and charge their vehicle.	Refreshed annually
Parking Lots	Information on where large parking lots are located in NYS, separated by lot type (commuter lot, office lot, shopping complex, etc.) indicating where there could be spots readily available for EVSE installations, as well as how long patrons would typically be parked at the locations (based on parking lot type).	Refreshed annually
ICE Registration	Data on where and what type of ICE vehicles are registered throughout the state so that utilities are aware of where differences in EV adoption and where homeowners' incentives for charging equipment may make sense. Information could also be used to inform EV adoption propensity models.	Refreshed annually
EV Registration	Data on where and what type of EVs are registered throughout the state so that utilities are aware of where different types of EVs are located throughout the state, and where homeowners could be installing charging equipment. Information could also be used to inform EV adoption propensity models.	Refreshed annually
Installed EVSE Equipment	Information on currently installed EVSE so that utilities can identify and rule out locations that already have EV charging capabilities.	Refreshed monthly
Site Zoning and Ownership	Information on site zoning and ownership so that utilities can easily contact, or put developers/customers in touch with, site owners.	Refreshed annually
New construction	Information on new developments pre-construction can help utilities proactively contact new businesses about fleet electrification.	Refreshed continuously
Electric System Capability	Information in distribution circuits (3 phase vs 1 phase) and available load serving capacity at the location	Refreshed bi-annually

6. **How Should the IEDR User Interface Present the Information Produced by the Use Case?**
   The information should be presented in tabular data with spatial relation so that the utilities can identify where suitable EVSE sitting opportunities areas are located. The information should also be downloadable in Excel or CSV format so that the utilities can easily download and conduct analysis on the data.

7. **What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**
   a. **What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?**

Information Type Produced	**7. What Type(s) of Data Does the IEDR Need to Analyze for This Use Case?**	**7a. What are the Minimum Necessary Data Attributes for Each Type of Data Collected and Analyzed?**
Traffic Patterns	Locations of all roads	Road level granularity, refreshed annually
	Number of yearly travelers	Road level granularity, refreshed annually
	Gasoline sales	Zip code granularity, refreshed annually
Parking Lots	Locations of parking lots	Site level granularity, refreshed annually
	Number of spots available	Site level granularity, refreshed annually
	Type of parking lot (commuter lot, office, shopping, residential, etc.),	Site level granularity, refreshed annually
	Public or private lot	Site level granularity, refreshed annually
EV Registration	VIN	Vehicle level granularity, refreshed annually
	Registration start date	Vehicle level granularity, refreshed annually
	State registration street address	Vehicle level granularity, refreshed annually
	Vehicle information: EV type, EV manufacturer, EV model, EV model year	Vehicle level granularity, refreshed annually
	Vehicle charging information: Compatible charger type(s), maximum EV charging power (W), EV battery capacity (kWh)	Vehicle level granularity, refreshed annually
	Milage information: Efficiency (miles per kWh), estimated annual miles	Vehicle level granularity, refreshed annually
Installed EVSE Equipment	Identification information: Charger ID, service point ID, utility ID, owner ID, operator ID	Charger level granularity, refreshed monthly
	Location information: Location category, street address, GIS coordinates	Site level granularity, refreshed monthly

	Installation timeframe: Date installed, date removed (if applicable)	Charger level granularity, refreshed monthly
	Number of charger ports	Site level granularity, refreshed monthly
	Charger access category	Site level granularity, refreshed monthly
	Charger technology information: Charger class level	Charger level granularity, refreshed monthly
Site Zoning and Ownership	Information on who owns land parcels, associated contact information	Site level granularity, refreshed annually
	Zoning information on sites	Site level granularity, refreshed annually
New construction	Business name, industry, existing fleets and/or plans to introduce fleets	Site level granularity, refreshed continuously

8. **What Data Relationships Does the IEDR Need to Analyze for This Use Case?**
   The "EVSE Siting – Strategic Locations Suitability" Use Case information will need to have data relationships:

   - All outlined data types within the "EVSE Siting – Strategic Locations Suitability" Use Case will need to be associated via location information (address or geographic coordinates);
   - EVSE load serving capacity information;
   - "EVSE Siting – LMI Customer" Use Case information;
   - Customer account information; and
   - EV MRP Approved Contractor information.

   All data elements should be associated with location by full address and geographic coordinates. If full address is not possible, data should include zip code so that each data element can be compared to identify ideal locations for EVSE siting.

   Addresses should be in the same format as utility customer account data so that ideal locations can be associated with customer account information. This will allow utilities to easily identify contact information for customers with potential host sites. Utilities can also use address and service territory information from the list of EV MRP Approved Contractors to perform outreach to contractors performing work in ideal locations.

9. **What Data Analysis Function(s) Does the IEDR Need for This Use Case?**
   To be identified as the data sets are developed.

   a. **What are the Minimum Necessary User Input Variables Needed to Enable a Useful Analysis?**
      N/A

10. **How Often Does the Stakeholder Expect to Employ This Use Case?**
    The utilities will employ this Use Case annually.

11. **How Does This Use Case Benefit the Stakeholder?**
    1. **Driving towards CLCPA goals:** The "EVSE Siting – Strategic Locations Suitability" Use Case empowers the utilities with information to advance the deployment of Zero-Emissions Vehicles in New York State, which will help advance CLCPA emissions goals.
    2. **Meeting EV MRP Order requirements:** The Use Case will also help the utilities meet requirements outlined in NYPSC's Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs,[5] where the Joint Utilities were directed to identify strategic locations for EVSE deployment so they can perform targeted education and outreach to potential site hosts and developers in those areas.

12. **Why Should This Use Case Be Prioritized From the Perspective of i) the Industry and ii) the Citizens of New York State?**
    Utilities will use information provided by the "EVSE Siting – Strategic Locations Suitability" Use Case to provide industry with information that will allow them to target customers with optimal sites for EVSE. This will help developers and other EVSE installation service providers expand their business throughout New York State. This in turn will help the citizens of NYS by increasing accessibility of EVSE equipment and improving air quality through reduced emissions compared to gasoline-powered vehicles.

    This Use Case will also provide information that will inform EVSE adoption scenarios for overall system impact and load forecasting.

[5] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure* (EVSE Proceeding), Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 16, 2020) and EVSE Proceeding, Errata Notice (issued November 3, 2020).