BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Safe and Reliable Gas Systems in California and Perform Long-Term Gas System Planning. (U 39 G)	Rulemaking No. 24-09-012 (Issued October 4, 2024)

COMPLIANCE FILING OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 G) PURSUANT TO ASSIGNED COMMISSIONER'S APRIL 18, 2025, RULING ISSUING SENATE BILL 1221 MAPPING DIRECTIONS TO UTILITIES

TARA S. KAUSHIK
JONATHAN D. PENDLETON
CHRISTOPHER J. WARNER

Pacific Gas and Electric Company
Law Department, 19th Floor
300 Lakeside Drive, Suite 210
Oakland, CA 94612
Telephone: (415) 971-8064
E-mail: Jonathan.Pendleton@pge.com

Attorneys for
PACIFIC GAS AND ELECTRIC COMPANY

Dated: July 1, 2025

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Pacific Gas and Electric Company (PG&E) respectfully provides its SB 1221 Compliance Filing as required by Ordering Paragraph 2 of the Assigned Commissioner's April 18, 2025, Ruling Issuing Senate Bill 1221 Mapping Directions to Utilities.

Ordering Paragraph 2 provides as follows:

> 2. *By July 1, 2025, PG&E, SoCalGas, SDG&E, and Southwest Gas shall comply with the direction provided in Appendix A "Directions to Utilities for Compliance by July 1, 2025."*

Pursuant to Ordering Paragraph 2 and Appendix A, PG&E provides the following information regarding its SB 1221 mapping compliance:

1. PG&E has published and is hosting a dedicated initial SB 1221 public map at the following link: https://experience.arcgis.com/experience/1c7ad18d1c7744d2897e2997a7aa096a. This directly displays the ArcGIS map that has the information, formatting and functionality required by Appendix A. PG&E has worked extensively with Southern California Gas Company, San Diego Gas and Electric Company, Southwest Gas Corporation and Southern California Edison to format required information consistently including map colors, scales, basemap and labeling arrangements.

2. The user guide required by Appendix A is attached to this filing. Updates to the user guide will be posted on the SB 1221 public map website. For the most current version of the user guide, please download directly from the map webpage via the "help" menu.
3. To answer any questions not covered in the user guide, the data facilitator for the initial SB 1221 map can be reached via email at SB1221Requests@pge.com. A convenient copy of the complete geospatial database file is available to download directly from the map via the "help" menu.
4. The data provided on the initial SB 1221 map webpage and the complete geospatial database file are aggregated sufficiently under applicable customer privacy, cybersecurity and physical security protocols to permit the data to be provided to the public and other users on a non-confidential basis. By separate joint motion filed and served in this proceeding on July 1, 2025 by PG&E and other gas utilities pursuant to General Order 66-D, confidential SB 1221 mapping data required to be submitted to the Commission and available to interested parties executing an appropriate non-disclosure agreement is being submitted in accordance with the requirements in the April 18, 2025, Assigned Commissioner's Ruling and will be available upon Commission review and determination of the separate joint motion.

Respectfully Submitted,

By: */s/ Jonathan D. Pendleton*
JONATHAN D. PENDLETON

Pacific Gas and Electric Company
Law Department, 19th Floor
300 Lakeside Drive, Suite 210
Oakland, CA 94612
Telephone: (415) 971-8064
E-mail: Jonathan.Pendleton@pge.com

Attorney for
PACIFIC GAS AND ELECTRIC COMPANY

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SB 1221

USER GUIDE

Contents

1 Overview

1.1 Disclaimer

The California Public Utilities Commission (CPUC) requires that PG&E provide maps in this Application containing information depicting foreseeable natural gas distribution pipeline replacement projects over the next 10 years. The CPUC has stated that, "These forecasts are not binding but rather are expected to represent the utilities' best estimate of future gas distribution replacement projects."

Pacific Gas and Electric Company (PG&E) has a strong interest in enabling technologies, models, policies, and ways of thinking that advance public safety, system reliability, energy affordability, and clean energy adoption within its service territory. As such, PG&E is sharing information in this application to facilitate identifying potential decarbonization opportunities.

The maps in this application contain information describing where certain gas distribution assets exist that have been identified for potential repair, replacement, or decommissioning. A complete analysis of all factors that inform asset management plans to determine detailed projects, including preventative maintenance and other ongoing investments, is not available at the time of mapping. Asset investments are optimized to maximize reliability and minimize cost through project prioritization and other considerations, such as ongoing operational and emerging priority evaluation. Program and project budgets which ultimately support this asset work are also contingent on regulatory approval. Significant variation between the information on these maps and actual projects is likely.

For these reasons, while the SB1221 application includes the best information currently available, PG&E makes no representation as to the accuracy or quality of the data provided, its fitness for the purpose intended, or its usability by the recipient. PG&E is not liable for inaccuracies, or for the impact of decisions or actions taken based on this information.

PG&E will make every reasonable effort to maintain this application. PG&E may modify the data or functionality without notice.

1.2 Use

This user guide explains how to access and use the SB 1221 application, including its interactive map and downloadable datasets. It also defines the data fields and provides guidance for analyzing and interpreting the data.

1.3 Purpose of the Application

The SB 1221 Application enables users to:

- View and analyze foreseeable gas asset projects.
- Explore jurisdictional boundaries, including tribal lands and disadvantaged communities.
- Access publicly available electricity hosting capacity data.
- Download data for further analysis and reporting.

1.4 Regulatory Background

As outlined in the R.24-09-012 "Assigned Commissioner's Ruling Issuing Senate Bill 1221 Mapping Directions to Utilities" and attached "Appendix A: Directions to Utilities for Compliance by July 1, 2025," large gas investor-owned utilities in CA are required to:

- Submit public maps by July 1, 2025, showing foreseeable pipeline replacement projects, jurisdictional boundaries, and disadvantaged communities.
- Provide a user guide that explains how to access and interpret the data.
- Include summary statistics and metadata for each dataset.
- Update electricity hosting capacity layers at least quarterly.

1.5 Access Methods

Users can interact with the data through:

- An ArcGIS Experience Builder Web Application interface with built-in analysis tools.
- Downloadable datasets in formats such as CSV, Excel, and geodatabase.

The tool and this user guide are intended for a broad audience, including local government staff, researchers, policymakers, and other stakeholders and possible collaborators interested in California's gas infrastructure and decarbonization planning.

2 Access Methods

The SB 1221 Zonal Decarbonization Map Application provides access to information through (1) a map interface, (2) downloadable, tabular data, and (3) an API.

The application is public, requires no login, and provides several data export types. Application support, including troubleshooting and data facilitation, is available via the email listed in the "Additional Resources" section, Section 5.

2.1 Map interface

The SB 1221 Application provides an interactive map built on Esri ArcGIS Online Experience builder, which supports major browsers including Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari. Access from a desktop or laptop computer is recommended – tablet or mobile functionality is not supported.

2.1.1 Accessing the Map

Users can explore layers such as gas utility service areas, census tract summaries of foreseeable gas projects, disadvantaged communities, and electricity capacity. Users can generate summary statistics across selected geographic areas. More details about functionality are available in the Functionality/Features section.

Name	Link
SB 1221 Zonal Decarbonization Map Application - Pacific Gas and Electric Company	https://experience.arcgis.com/experience/1c7ad18d1c7744d2897e2997a7aa096a

2.1.2 Data

The SB 1221 Application includes multiple spatial data layers that support analysis of gas infrastructure, community characteristics, and electricity capacity. These layers are accessible through the interactive map and are also included in the downloadable file geodatabase (GDB), which is updated annually.

Electricity Layers

ICA, Load Capacity (kW) - Represents the estimated available integration capacity for new electrical load at each location, based on utility-provided Integration Capacity Analysis (ICA) maps. This layer reflects the maximum load that might be added without triggering further detailed engineering analysis to explore potential thermal or voltage violations.

Load Hosting Capacity statistics:

- Units: kW, kilowatt
- Number of values: 1,278,989
- Sum of values: 1,051,101,940
- Minimum: 0
- Maximum: 20,000
- Average: 821.823
- Standard deviation: 1,347.984

Source: PG&E ICA Maps. For more detailed information, including documentation of this data layer and its use and limitation, visit grip.pge.com and download the user guide.

Community and Jurisdictional Boundaries

Federally recognized tribal land (FedTribe)

Boundaries of tribal lands managed by federally recognized tribes. These areas are also designated as disadvantaged communities.

Federal Tribe statistics:

- Number of polygons: 152

Source: California Office of Environmental Health Hazard Assessment (OEHHA), *SB 535 Disadvantaged Communities.* For more information, visit https://oehha.ca.gov/calenviroscreen/sb535

Federally recognized tribal land (FedTribe2024)

Additional Tribal lands added in 2023 and 2024.

Federal Tribe statistics:

- Number of polygons: 5

Source: SB 535 Disadvantaged Communities (Additional Tribal Areas 2023 & 2024) | California State Geoapplication

Census tract ID # (TractID)

Each feature represents a 10-digit census tract, defined according to the **2020 U.S. Census boundaries**. These tracts are linked with the total mileage of foreseeable gas distribution projects located within their respective boundaries. Additional details about this dataset are provided below.

TractID statistics:

- Number of polygons: 9,129

Source: 2020 TIGER/Line® Shapefiles

Potential and Foreseeable Gas Distribution Pipeline Replacement within TractID

The attribute table for the **TractID** layer includes data on foreseeable and potential gas distribution pipeline replacement projects, collectively referred to as **ForeseeableGasProject**. This data represents a census tract aggregation of gas distribution assets that have been identified, at the time of analysis, for potential repair, replacement, or decommissioning. Note that the assets identified, the year of replacement, and the overall portfolio of projects are an estimate only. A complete analysis of all factors that inform asset management plans to determine detailed projects, including preventative maintenance and other ongoing investments, is not available at the time of mapping. Asset investments are optimized to maximize reliability and minimize cost through project prioritization and other considerations, such as ongoing operational and emerging priority evaluation. Program and project budgets which ultimately support this asset work are also contingent on regulatory approval. Significant variation between the information on these maps and actual projects is likely.

For each 2020 census tract, the layer reports the total mileage (in miles) of forecasted pipeline replacements within that tract.

Users can explore:

- Total mileage by project type and year
- Annual totals across all project types
- Cumulative totals for the full 10-year period (2026–2035)

The projects are categorized by replacement type, as follows:

- **14A** – Pre-1941 steel replacement
- **14D** – Pre-1985 plastic replacement
- **50A** – Post-1940 steel and post-1984 plastic replacement
- **50I** – Deactivation only
- **47B** – Replacement for hydraulic capacity or reliability

ForeseeableGasProjectsMilesTotal statistics:

- Units: Miles
- Number of values: 1,994
- Number of empty values: 7,135
- Sum of values: 1,997.3
- Minimum: 0
- Maximum: 11.1
- Average: 1.002
- Standard deviation: 1.135

Blank or null entries represent no Foreseeable Gas Projects. “0.0” values in the table: Planned Gas Projects exist but sum to <0.1 miles total

Note: Due to rounding, the sum of individual values in tables, charts, and export files may not match the total shown.

Source: PG&E – internal data.

Census tract ID # (TractID2010)

Represents the 10-digit census tract number and boundary as defined by the 2010 U.S. Census. These tracts are used in CalEnviroScreen analyses. Disadvantaged community (DAC) data has been joined to the attribute table of the 2010 census tracts, as described in the section below.

TractID2010 statistics:

- Number of polygons: 8,057

Source: 2010 TIGER/Line® Shapefiles

Disadvantaged Communities

This layer represents census tracts designated as disadvantaged under categories 1–3 of the California Environmental Protection Agency (CalEPA) criteria. Category 4, which includes tribal lands, is represented in a separate layer.

CalEPA has formally designated the following four categories of geographic areas as disadvantaged:

1. **Top 25% CalEnviroScreen 4.0 Scores**: Census tracts ranked in the highest 25 percent based on overall scores in CalEnviroScreen 4.0 (1,984 tracts).

2. **High Pollution Burden with Data Gaps**: Census tracts that lack overall CalEnviroScreen 4.0 scores due to data limitations but fall within the top 5 percent for cumulative pollution burden (19 tracts).

3. **2017 DAC Designation**: Census tracts identified as disadvantaged in CalEPA's 2017 designation, regardless of their CalEnviroScreen 4.0 scores (307 tracts).

4. **Federally Recognized Tribal Lands**: Lands under the control of federally recognized tribes. These are not included in this layer but are mapped separately. Tribes may request recognition of additional lands as DACs by consulting with CalEPA's Deputy Secretary for Environmental Justice, Tribal Affairs, and Border Relations at TribalAffairs@calepa.ca.gov.

DAC Statistics:

- Number of values 2,310
- Number of empty values 5,747

Source: SB 535 Disadvantaged Communities – OEHHA. Layer: SB 535 Disadvantaged Communities 2022 (Census Tracts and Tribal Areas) (ID:0)

Gas utility service area (GasServiceArea)

This layer displays the name and boundary of each gas utility's service area, including areas where other gas utilities operate.

- Source: Boundaries were shared among all utilities on June 20, 2025, and include PG&E, SoCalGas, San Diego Gas & Electric, and Southwest Gas.

County (County)

Displays the name and geographic boundary of each county in California.

- Source: ArcGIS Online – Living Atlas: USA_Counties_Generalized_Boundaries (FeatureServer)

City (City)

Displays the name and geographic boundary of each incorporated city in California.

- Source: ArcGIS Online – Living Atlas: TIGERweb_Incorporated_Places_v1 (FeatureServer)

2.1.3 Functionality/Features

Basic map functions are supported, including zoom, pan, select, search, etc. Additionally, numerous widgets support a variety of filtering and querying functions. The widgets will always remain a fixed size and stay docked to one side of the screen. For the best experience, only one widget should be opened at a time.

To allow for a larger viewing area, the table has a 'pull out' bar that hides/reveals the table widget on the bottom side of the map.

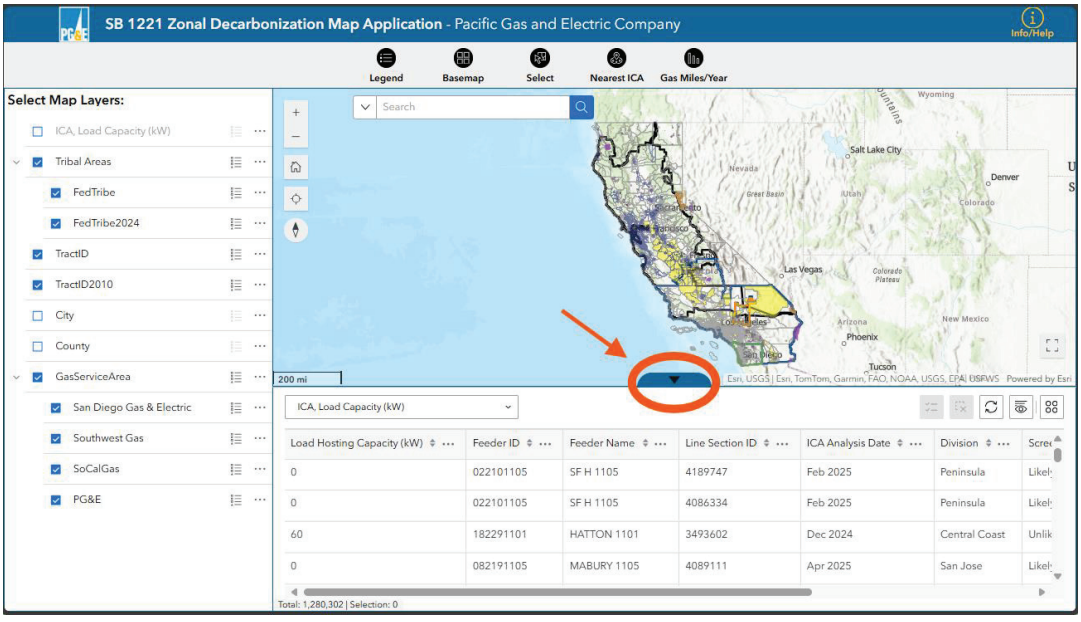

Figure 1 - Interface of SB1221 application.

The SB 1221 application uses only standard functions and widgets to improve usability. Information about the various functions is available at Widgets—ArcGIS Experience Builder | Documentation, or at

the links provided for each widget. Widgets are found at the top of the screen between the map area and the application title.

- Basemap Gallery widget—A panel for changing a map's basemap. The user can select from a variety of basemaps. Note that for best viewing accessibility, it is recommended to remain using the default “topographic” basemap.
- Legend widget—Display labels and symbols for layers in a map.
- Near Me widget—Find and summarize data about features within a certain distance of a defined location. (“Nearest…” widgets.)
- Map Layers widget—Display a list of map layers and their symbols.
- Chart widget—(Gas/Year) Visualize quantitative attributes from an operational layer to reveal potential patterns or trends.
- Search widget—The Search widget allows users to find features, records, or locations based on specific layers and locators. To search, users type a word or phrase in the search box and press Enter, click the search button, or choose from a list of suggestions that appear based on matching records.
- Select widget—Select features using attribute selection, interactive map selection, and spatial selection.
- Table widget—Display interactive attribute tables for feature

2.2 Downloading Data

The SB 1221 Application offers several types of downloadable content, including data layers, reports, and user documentation.

To download the complete geospatial file, users can click the Info/Help button located in the top-right corner of the map interface. From there, you can download the full File Geodatabase (FGDB), which is updated once per year (last updated on 06/30/2025). For the most up-to-date data, users should use the Export tool available in the Actions menu of the Table. This method allows you to export the latest data directly from the map interface. For a complete dataset, users would select each layer in the table, then export that layer in the file format of their choice.

Users can also use the Select tool to export a smaller, filtered subset of data based on your area of interest (see FAQ 3.1 for more details on how to export your data).

Users can also filter data prior to export using the “filter” feature, found by clicking the “…” menu next to each layer in the layer list to the left of the map area.

Recommended export formats are CSV, GeoJSON, JSON. Note: as of June 26, 2025 Esri released an update to ArcGIS Experience Builder, which now supports exporting Shapefile, File Geodatabase (FGDB),

and KML. These formats are available when exporting data from the attribute table and provide flexibility for use in various GIS and mapping tools.

2.3 Application Programming Interface (API)

The data is available for integration through an ESRI ArcGIS Feature Service (REST endpoint). Further documentation is available at Build powerful apps with ArcGIS services | Esri Developer REST APIs documentation. The API does not require authentication.

Layer Name	API Description	URL
ICA Load Capacity	REST Endpoint	https://services2.arcgis.com/mJaJSax0KPHoCNB6/arcgis/rest/services/LGP_API/FeatureServer/0
	Feature Service as an ArcGIS Online Application item	https://pgegisapplication.maps.arcgis.com/home/item.html?id=d2dfbe55d7c549949fa319231be34680
tl_2020 (TractID with Foreseeable gas)	REST Endpoint	https://services2.arcgis.com/mJaJSax0KPHoCNB6/arcgis/rest/services/tl_2020%20with%20Foreseeable%20gas/FeatureServer/0
	Feature Service as an ArcGIS Online Application item	https://pgegisapplication.maps.arcgis.com/home/item.html?id=0b2343b4bef2444a91959c7b5acc3f24
Census Tract 2010 (TractID2010 with SB 535)	REST Endpoint	https://services2.arcgis.com/mJaJSax0KPHoCNB6/arcgis/rest/services/Census%20Tract%202010%20with%20SB%20535/FeatureServer/0
	Feature Service as an ArcGIS Online Application item	https://pgegisapplication.maps.arcgis.com/home/item.html?id=3b39a6eb7d134d68a5c3b7933e702f90
GasServiceArea	REST Endpoint	https://services2.arcgis.com/mJaJSax0KPHoCNB6/arcgis/rest/services/GasServiceArea_SB1221/FeatureServer/0
	Feature Service as an ArcGIS Online Application item	https://pgegisapplication.maps.arcgis.com/home/item.html?id=2edde94cde7347cd99a90db1292c44cf

3 FAQs

3.1 How to select data to export?

To export data from the SB 1221 Application, follow these steps:

1. Use the Select Tool: Click on the Select tool in the analysis toolbar. Choose your preferred selection method—rectangle, lasso, circle, line, or point—to highlight features on the map.

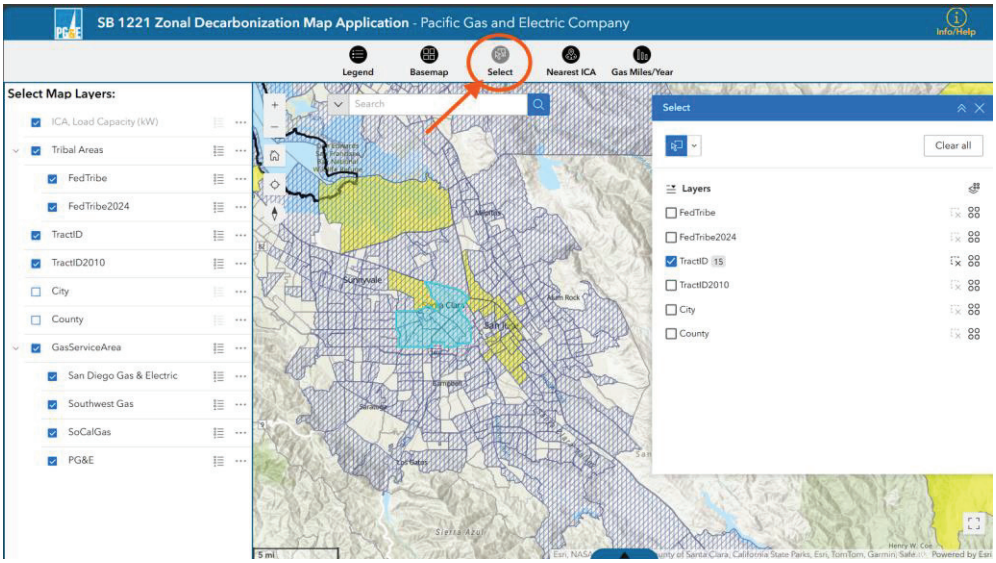

Figure 2 - Select tool

2. Ensure the Correct Layer is Active: Make sure the dataset you want to export is visible and selected in the Layer List. Only active layers can be selected and exported.

3. View the Selection in the Attribute Table: Once features are selected on the map, they will automatically appear in the Attribute Table at the bottom of the screen.

4. Export the Data: In the Attribute Table, click the Actions menu in the top-right corner. Select Export, then choose your desired file format (e.g., CSV, GeoJSON, Shapefile). The file will begin downloading through your browser.

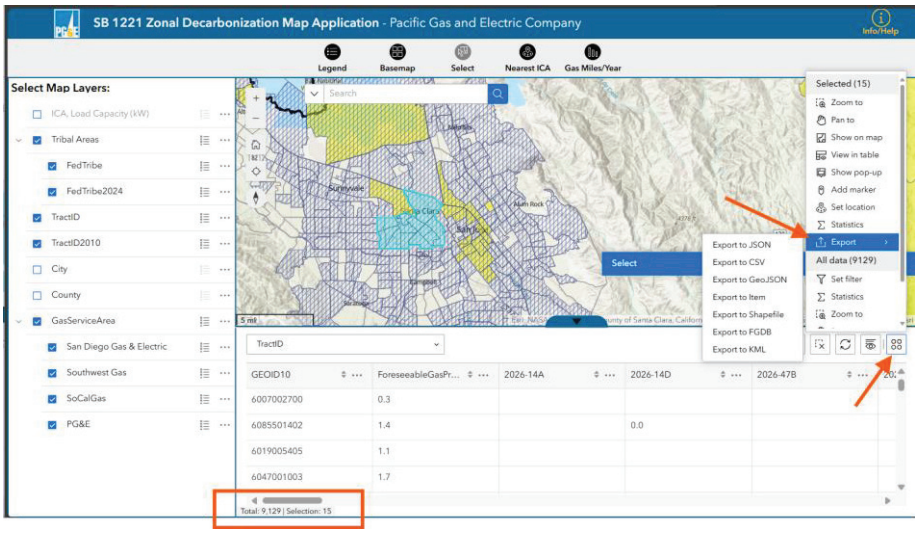

Figure 3 - Exporting select data

3.2 How to summarize information across geographic boundaries of their choice?

To summarize data within a specific geographic area (such as a city, census tract, or custom shape), follow these steps:

1. Use the Select Tool: Choose the Select tool from the toolbar and draw your area of interest using one of the available methods (rectangle, lasso, circle, line, or point).
2. View the Attribute Table: Once your selection is made, the corresponding data will appear in the Attribute Table at the bottom of the scree
3. Analyze the Data: Use the table to view totals, counts, and other attribute values for the selected features. You can also export the data for further analysis in Excel or other tools.

3.3 How Do I Visualize the Total Foreseeable Gas Chart?

To view a chart showing the total miles of foreseeable gas pipeline projects per year:

1. Select TractID: Use the Select tool to highlight the TractIDs (census tracts 2020) you want to include in the chart.
2. Open the Chart: Click the "Gas Miles/Year" chart icon. This will display a bar chart summarizing the total pipeline mileage by year for the selected tracts.

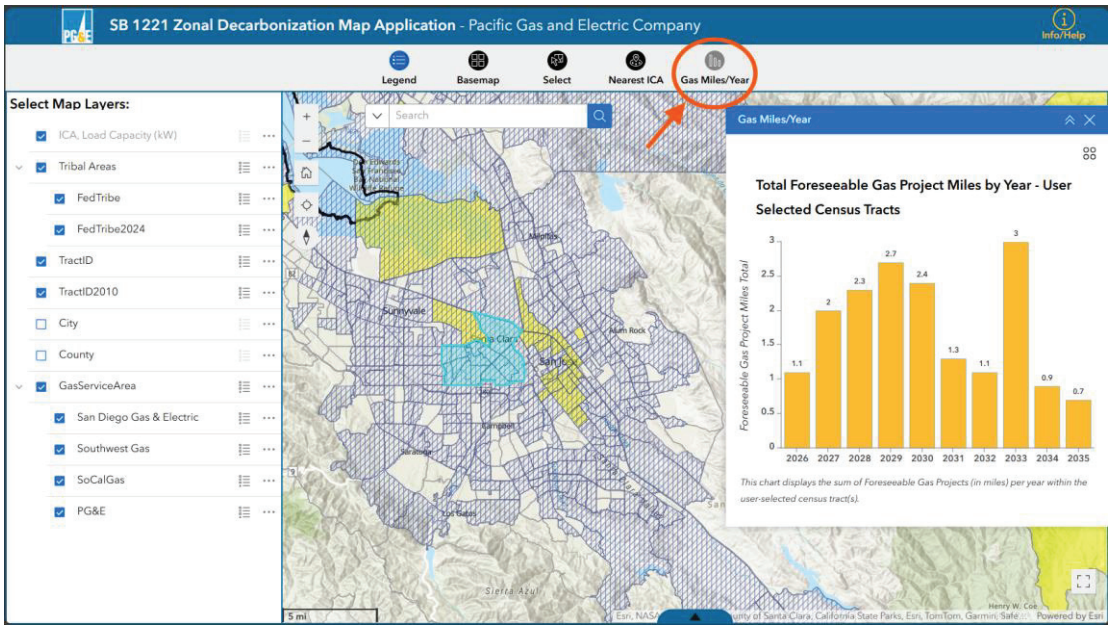

Figure 4 - Total Foreseeable gas of selected Census TractID.

3.4 How Do I Find the Nearest ICA (Integration Capacity Analysis)?

To locate the nearest ICA value:

1. Open the Tool: Click on the Near ICA tool in the map interface.
2. Create a Location: Define your area of interest by placing a point or drawing a line on the map.
3. Set the Buffer Distance: The tool will search within a default buffer of 1,000 feet around your selected location. You can adjust this distance if needed.

The tool will return the closest ICA values within the specified area, helping you assess available load hosting capacity nearby.

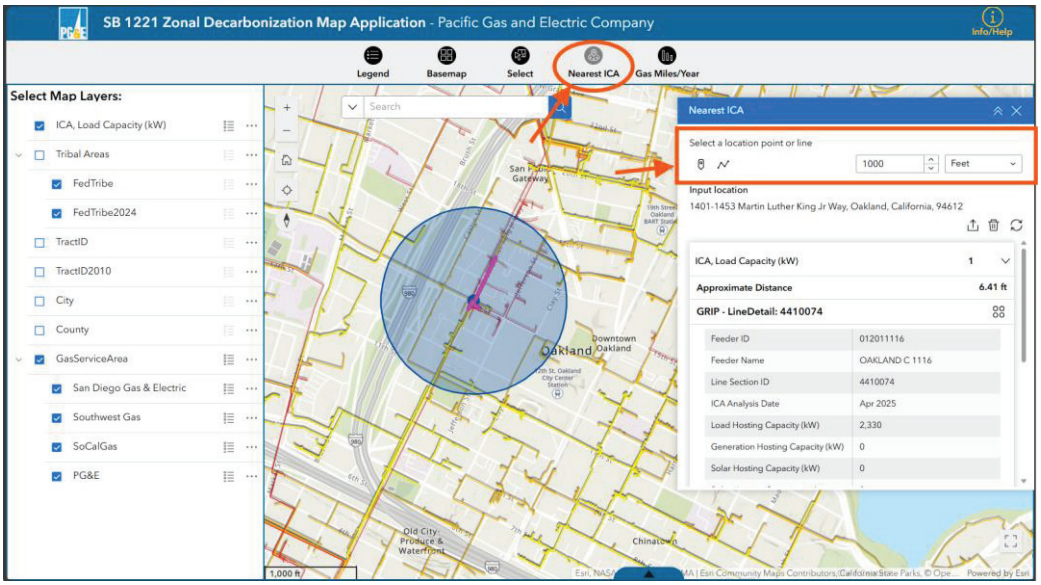

Figure 5 - Nearest ICA analysis using point location and 1000ft buffer distance

3.5 How Do I Download the Most Up-to-Date File Geodatabase?

To download the most current version of the file geodatabase (FGDB), refer to Section "2.2: Data Download" in this user guide. This section explains how to access the full FGDB, which is updated annually.

For step-by-step instructions on how to export the most up-to-date data directly from the map interface—including how to use the Select and Export tools—**see FAQ 3.1: How Do I Select Data to Export?**

3.6 What Should I Do If the Application Freezes or Doesn't Respond?

If the application becomes unresponsive or fails to process your request:

1. Refresh the Page: Reload the browser tab and try your analysis again.
2. Limit the Scope of Your Analysis: For tools like Near ICA, large selection areas can slow down or overwhelm the system. Try to keep your analysis focused on smaller, more manageable areas for better performance.

Tip: If issues persist, clear your browser cache or try a different browser.

4 Glossary

API – Application Programming Interface

DEP – The gas project has begun any phase of execution (scoping, engineering, permitting, gas work)

CPUC – California Public Utility Commission

Global ID – a unique identifier for line sections that can be used as a primary key within PG&E systems

kW – kilowatt, a standard unit of measure for power

SB – Senate Bill

14A – Pre-1941 steel replacement

14D – Pre-1985 plastic replacement

50A – Post-1940 steel and post-1984 plastic replacement

50I – Deactivation only

47B – Replacement for hydraulic capacity or reliability

5 Additional Resources

There are numerous types of support available. First, the SB 1221 Application User Documentation includes a User Guide with FAQs and a Glossary.

As the SB1221 Application uses standardized functionality, users can also refer to support documentation published by ESRI at ArcGIS Experience Builder Resources | Tutorials, Documentation, Videos & More and Widgets—ArcGIS Experience Builder | Documentation.

If the available documentation is not sufficient, users can send questions via email to SB1221Requests@pge.com.

6 Document Change Log

Date	Version	Description
07/01/25	1.0	Document created