



# Interactive Map and GNA/DDOR User Guide

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# Support Data

## Purpose

California Public Utilities Commission (CPUC) on Rulemaking 14-0808-13 issued on February 2015, required San Diego Gas & Electric (SDG&E) and other utilities to publish Distribution Resource Plan (DRP) by July 2015. The GNA and DDOR data was mandated in the DRP Track 3, sub-track 3 Decision issued in February 2018 by the CPUC to be mapped. The intended purpose of the map is to help developers and contractors find LNBA results, GNA and DDOR report of projects.

## Access

URL: <https://interconnectionmapsdge.extweb.sempra.com/>

## Technical Support

If you need assistance in viewing/registering or technical issues for the interactive map, contact us via [sdgeinterconnectionmap@sdge.com](mailto:sdgeinterconnectionmap@sdge.com).

Disclaimer

These maps are provided by SDG&E in accordance with requirements set forth by the California Public Utilities Commission. This map is not survey grade. SDG&E is not responsible for any party’s use of or reliance upon these maps. SDG&E makes no warranties, express or implied, regarding the accuracy or quality of these maps. Replication of these maps is prohibited. The publication or distribution of data downloaded from the maps without SDG&E’s express written consent is prohibited. SDG&E does not support the inappropriate use of this data that: (1) Puts the physical or cyber-security of the electric grid or gas pipelines at risk; (2) Violates customer privacy; (3) Compromises sensitive market data; or (4) Voids company intellectual property, patents, or trade secrets. SDG&E's provision of these maps is contingent on the above areas being unaffected. Certain technology used under license from AT&T Intellectual Property I, L.P. Copyright ©1998 – 2018 AT&T Intellectual Property 1, L.P. All rights reserved.

Data Redaction

SDG&E complies with the 15/15 rule, that states: If a customer takes 15% or more of the total load of the circuit OR if a circuit holds 15 customers or less, then the data will qualify for data redaction.

On the interactive map the following will be considered:

- If a circuit fails the 15/15 rule, consumption, demand, and information derived from such data will be redacted from the map. Data will still be available as requested.
- If the portion of a circuit downstream from the SCADA sectionalizing device that was used for operational flexibility fails the 15/15 rule, only one (the minimum) value of the 576 points in the operational flexibility screen profile is provided for those downstream sections.

Circuit Level 15/15	SCADA Device Level 15/15	Aggregate Load Profile	Redacted ICA Operation Flexibility Data
Pass	Pass	No	No
Pass	Fail	No	Yes
Fail	Not applicable	No data provided on map	No data provided on map

Definitions

Grid Needs Assessment (GNA)	Preliminary set of grid needs identified from the distribution forecast.
Distribution Deferral Opportunity Report (DDOR)	Analyzed grid needs that would result in a capital investment.
Planned Investment	The list of capital projects in the DDOR.
Candidate Deferral	A subset of the DDOR planned investments that are eligible to become procured via competitive solicitation based on Distribution Planning Advisory Group (DPAG) and Advice letter decisions.
Locational Net Benefits Analysis (LNBA)	The quantitative benefit generated by deferring a capital investment for 5 years. Represented as a \$ range of installing each KW of DER for each year of the project deferral.

Interactive Map

Map Navigation

1 Search Bar

Type an address, city, place, substation or circuit to zoom into that location.

2 Zoom tools

- 2.1 Zoom extent – zooms out to default elevation, service territory
- 2.2 Next zoom- takes you one forward zoom level
- 2.3 Previous zoom – takes you one back zoom level
- 2.4 Zoom out- draw a rectangle on an area on the map to zoom out
- 2.5 Zoom in- draw a rectangle on an area on the map to zoom in
- 2.6 Panning – Click and drag on the map to move the map location.
- 2.7 Zoom in and zoom out buttons

(or use the mouse wheel to zoom in and out)

3 Specific Zoom level layer

- 3.1 Substation Level – zooms to an elevation to display layer
- 3.2 Grid Level – zooms to an elevation to display layer
- 3.3 Section Level – zooms to an elevation to display layer

4 Legend – click to displays the values of the selected layer

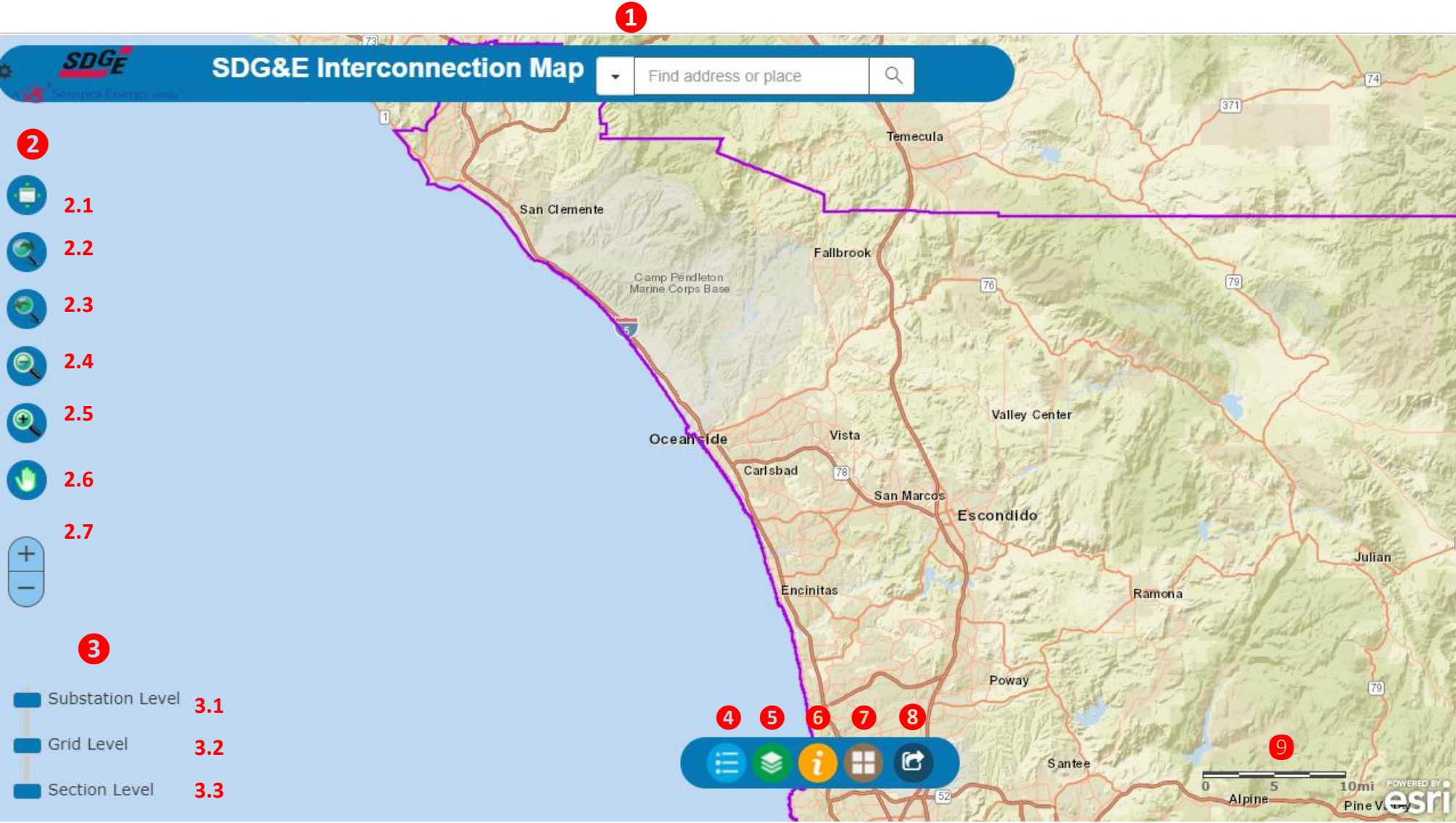
5 Layer List – click to select the desire layer to view

6 Information & User Guide

7 Base Map Gallery

8 API

9 Elevation map display



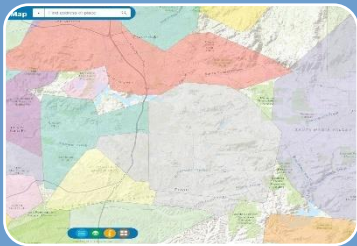


Elevation Map Display

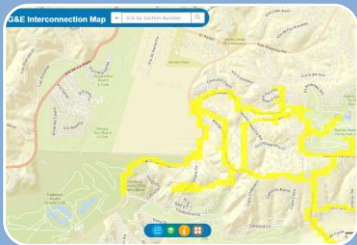
The following attributes will be display at different elevations on the map



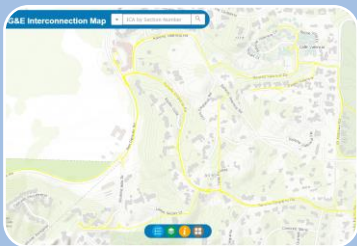
Service Territory  
10 miles



Substations  
2 miles



GNA/DDOR - Grid Level  
0.3 miles

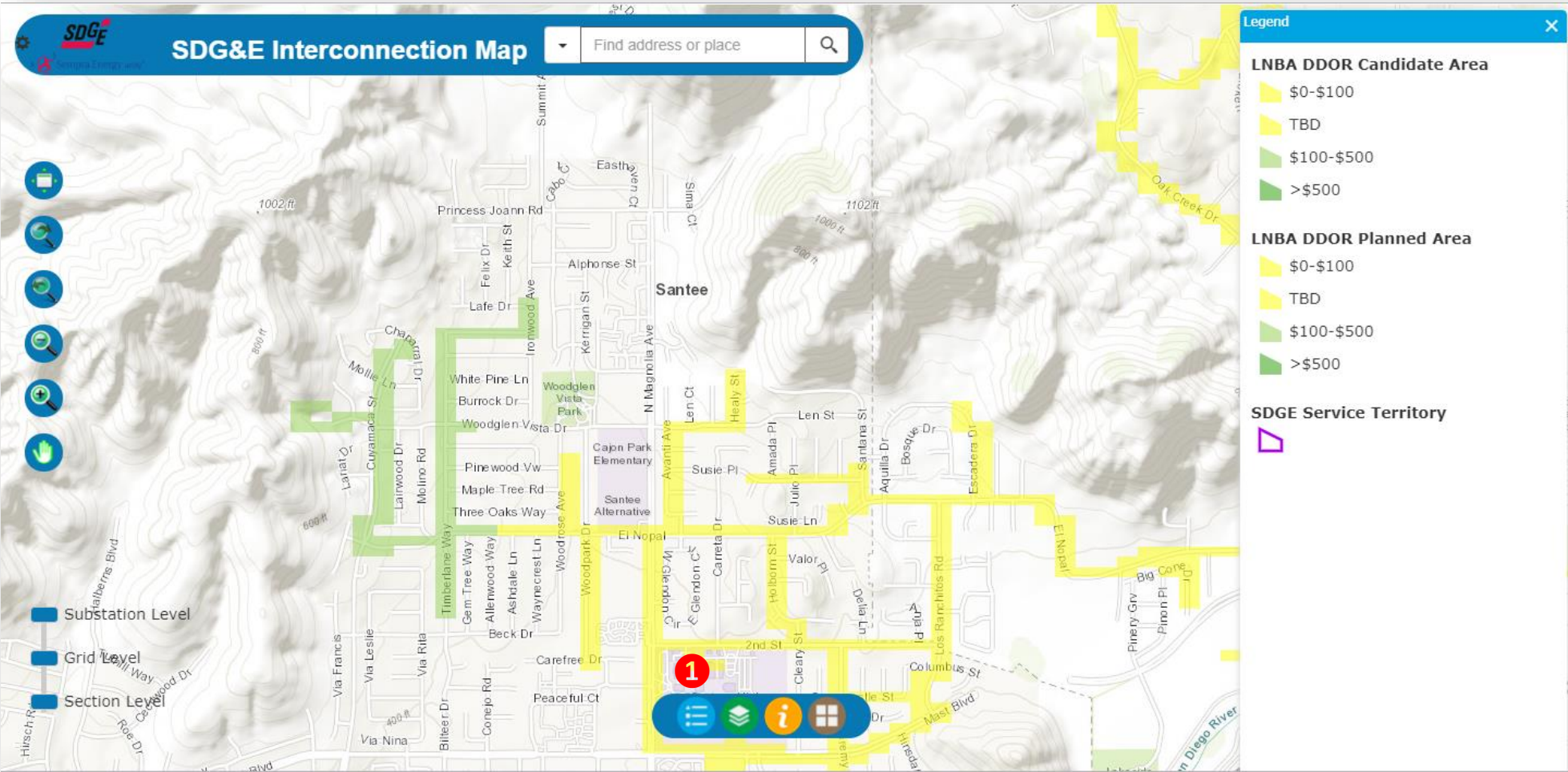


GNA/DDOR - Section Level  
600 feet

## Legend

Displays what the different color is representing \$ range of installing each KW of DER for each year of the project deferral

- 1
- Click to show the legend
- 2
- A window will appear on the right showing the selected layer values by the range of dollars per KW year capacity.





Layers List

- 1 Click to select the layer of interest
- 2 A window will appear on the right showing different layers that can be selected. The default layer is Generation Capacity. Please select the DDOR/LNBA Layer to display the area of need of a planned infrastructure project. The default is that both the Planned Investment and Candidate Deferral layers are selected.

**Planned Investment** – The list of capital projects in the DDOR.

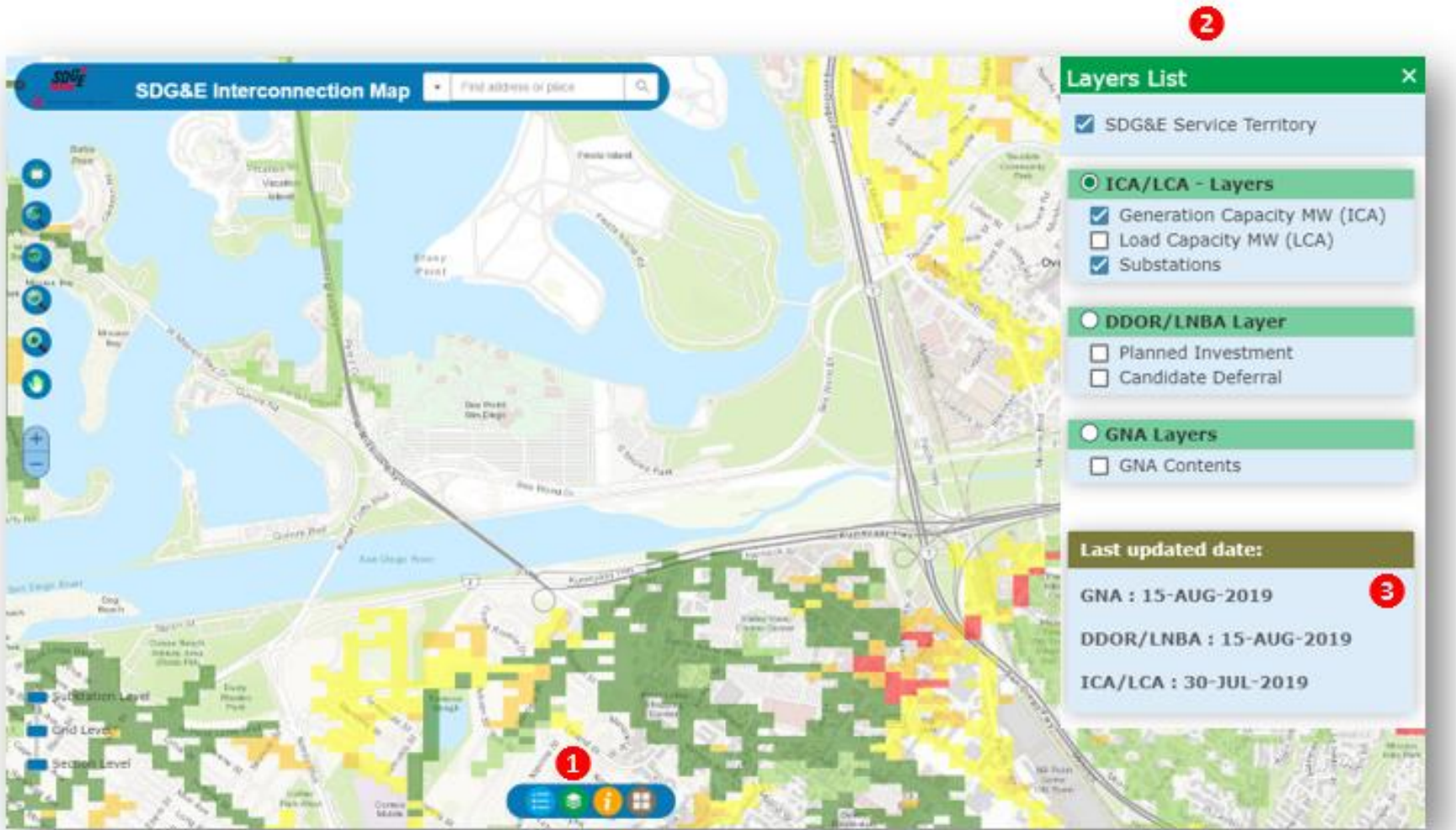
**Candidate Deferral** – A subset of the DDOR planned investments that are eligible to become procured via competitive solicitation based on Distribution Planning Advisory Group (DPAG) and Advice letter decisions.

**GNA** – Grid Needs Assessment: Preliminary set of grid needs identified from the distribution forecast

- 3 Timestamp the last time the layers were updated.

Note:

See [Navigation Tools ICA User guide](#) for ICA layer information



Layer Display Information

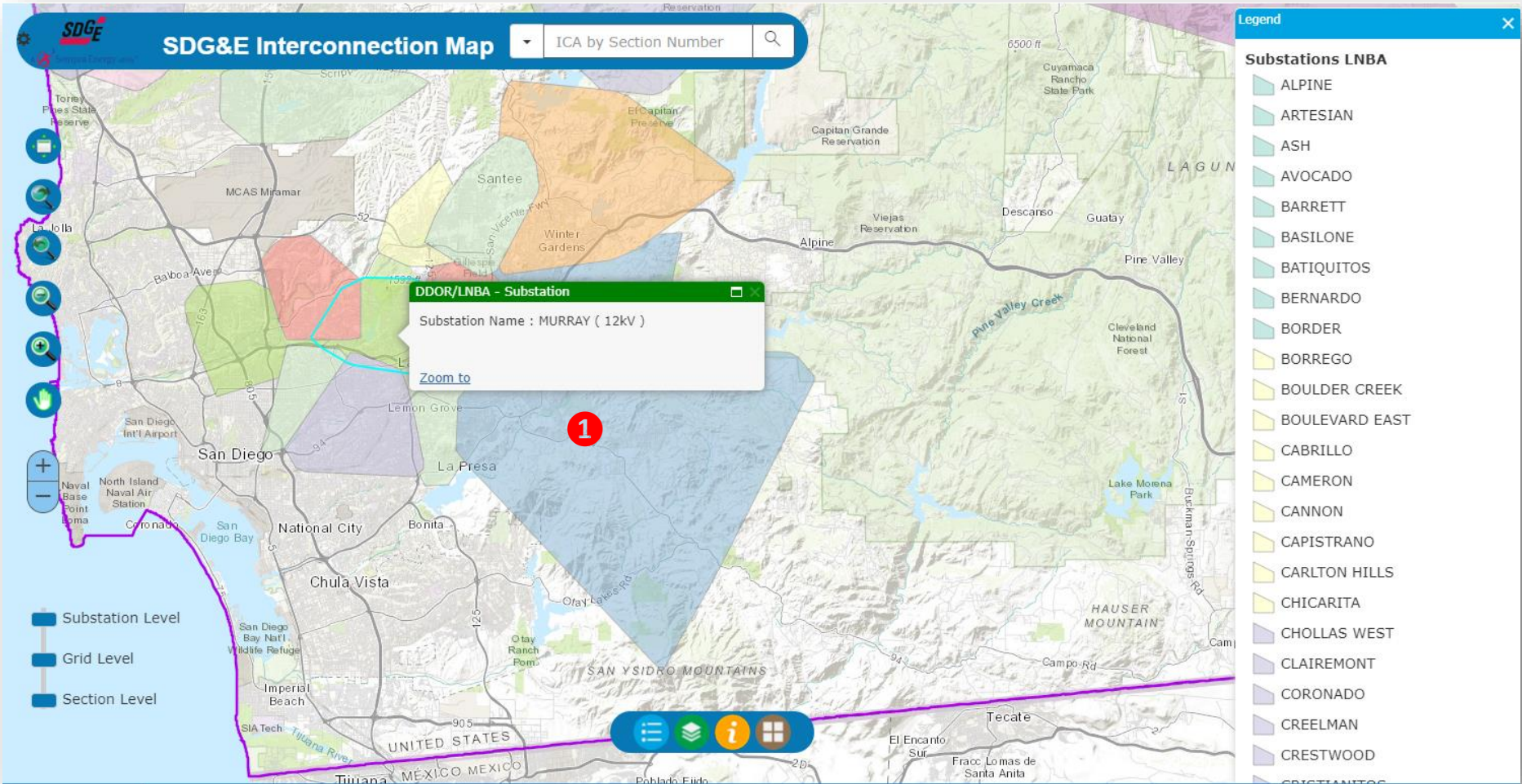
Substation layer

This layer loads at 2 miles zoom level

1 Click on any substation colored polygon area and a window will pop-up displaying the following information on the substation selected:

- Substation Name

**Note:** Only substation that contain a project(s) will be display.





# SDG&E Interactive Map and GNA/DDOR User Guide

## Planning Investment & Candidate Deferral Layer -Grid and Section zoom level

This layer loads at zoom level 0.3 mile.

- 1 Click on any Grid or Line Section (this depends on the zoom level) to open a window to display information
- 2 The pop-up will display:

For DDOR/LNBA Planned Investment

- DDOR Project
- Substation
- Bank/Circuit
- Project Description
- Equipment involved
- Additional Project Description
- In-Service Date
- Deficiency Need (Year)
- Deficiency % (Year)
- Equipment Units
- Distribution Service Identified
- DER Service Eligible
- LNBA Range (\$/KW-year)

For DDOR/LNBA Candidate Deferral

- DDOR Project
- GNA ID
- Substation
- Bank/Circuit
- In-Service Date
- Distribution Service Required
- Months of Need
- Duration of Need
- Number of Need Events per Year
- Service Provision MW
- Estimated LNBA Range (\$/KW-year)
- Utility Cost of Traditional Mitigation

- 3 Click to download the data

The screenshot displays the SDG&E Interconnection Map interface. A search bar at the top allows users to find addresses or places. The map shows various grid and line sections. Two pop-up windows are shown, each with a red circle 1 indicating the click location and a red circle 2 indicating the pop-up window. The first pop-up, titled 'DDOR/LNBA Planned Investment (1 of 2)', displays the following data:

DDOR Project	Planned Investment
Substation	Del Mar
Bank / Circuit	C68
Project Description	Transfer with new equipment
Equipment Involved	Sectionalizing, cable
Additional Project Description	
In-Service Date	6/1/2022
Deficiency Need (2018)	2
Deficiency % (2018)	0.33%
Equipment Units	Amps
Distribution Service Identified	Thermal, Backtie
DER Service Eligible	
LNBA Range (\$/KW-year)	\$0-\$100

Below the table are links for 'Download Data' (marked with a red circle 3) and 'Zoom to'.

The second pop-up, titled 'DDOR/LNBA Candidate Deferral (1 of 2)', displays the following data:

DDOR Project	Candidate Deferral
GNA ID	2018_0038
Substation	Del Mar
Bank / Circuit	C68
In-Service Date	6/1/2022
Distribution Service Required	Thermal
Months of Need	June to October
Duration of Need	1PM to 10PM
Number of Need Events per Year	61
Service Provision MW	0.037
Estimated LNBA Range (\$/KW-year)	\$0-\$100
Utility Unit Cost of Traditional Mitigation	\$412,000

Below the table are links for 'Download Data' (marked with a red circle 3) and 'Zoom to'.

The 'Layers List' panel on the right shows the following layers:

- ☒ SDG&E Service Territory
- ICA/LCA - Layers**
  - ☐ Generation Capacity MW (ICA)
  - ☐ Load Capacity MW (LCA)
  - ☐ Substations
- DDOR/LNBA Layer**
  - ☒ Planned Investment
  - ☐ Candidate Deferral
- GNA Layers**
  - ☐ GNA Contents

The 'Last updated date:' section shows the following dates:

- GNA : 15-AUG-2019
- DDOR/LNBA : 15-AUG-2019
- ICA/LCA : 30-JUL-2019

# SDG&E Interactive Map and GNA/DDOR User Guide

## GNA layer -Grid and Section zoom level

- 1 Click on any Grid or Line Section (this depends on the zoom level) to open a window to display information
- 2 The pop-up will display:

For GNA
  - Substation
  - Facility ID
  - Primary Driver
  - Distribution Service Identified
  - Anticipated Upgrade Date
  - Equipment Rating
  - Equipment Units
  - 5 year % Deficiency
- 3 Click to download the data

SDGE

SDG&E Interconnection Map

Find address or place

1

2

3

Substation Level

Grid Level

Section Level

GNA Contents (1 of 2)

Facility ID	68
Facility Type	Distribution line
Primary Driver	Demand Growth
Distribution Service Identified	Thermal
Anticipated Upgrade Date	6/1/2020
Equipment Rating	500
Equipment Units	Amps
% Deficiency 2019	0.80%
% Deficiency 2020	4.70%
% Deficiency 2021	5.90%
% Deficiency 2022	
% Deficiency 2023	

[Download Data](#)

[Zoom to](#)

Layers List

☒ SDG&E Service Territory

ICA/LCA - Layers

☐ Generation Capacity MW (ICA)

☐ Load Capacity MW (LCA)

☐ Substations

DDOR/LNBA Layer

☐ Planned Investment

☐ Candidate Deferral

GNA Layers

☒ GNA Contents

Last updated date:

GNA : 15-AUG-2019

DDOR/LNBA : 15-AUG-2019

ICA/LCA : 30-JUL-2019



Downloads

Planning Investment, Candidate Deferral Layer & GNA

1 Click on the “Download Dataset” to download the following files:

- LNBA\_DDOR\_Full

Two taps will be on the report:

1. DDOR Planned Investment
2. DDOR Candidate Deferral

- GNA\_Contents\_Full

A tap will be on the report:

1. Preliminary set of grid needs identified from the distribution forecast

DDOR/LNBA Candidate Deferral (1 of 6)	
DDOR Project	Candidate Deferral
GNA ID	2018_0038
Substation	Del Mar
Bank / Circuit	C68
In-Service Date	6/1/2022
Distribution Service Required	Thermal
Months of Need	June to October
Duration of Need	1PM to 10PM
Number of Need Events per Year	61
Service Provision MW	0.037
Estimated LNBA Range (\$/KW-year)	\$0-\$100
Utility Unit Cost of Traditional Mitigation	\$412,000
<a href="#">Download Data</a> 1	
<a href="#">Zoom to</a>	

GNA Contents (1 of 2)	
Facility ID	68
Facility Type	Distribution line
Primary Driver	Demand Growth
Distribution Service Identified	Thermal
Anticipated Upgrade Date	6/1/2020
Equipment Rating	500
Equipment Units	Amps
% Deficiency 2019	0.80%
% Deficiency 2020	4.70%
% Deficiency 2021	5.90%
% Deficiency 2022	
% Deficiency 2023	
<a href="#">Download Data</a> 1	
<a href="#">Zoom to</a>	

LNBA\_DDOR\_Full.xlsx

GNA\_Contents\_Full.xlsx

DDOR Planned Investment						
Area Identification:	Substation	Bank / Circuit	Description	Equipment Involve	Additional Information	In-
1 GNA ID						Da
2 2018_0001	Batiquitos	C751	Transfer	N/A		6/1
3 2018_0002	Batiquitos	C757	Transfer with new equipment	Cable		6/1
4 2018_0003	Batiquitos	B4243	Transfer	N/A		6/1
5 2018_0004	Cannon	C783	Transfer	Trenching/conduit, cable, sectionalizing		6/1
GNA Contents						
Substation ID	Facility ID	Facility Type	Primary Driver	Distribution Service Identified		
2 Old Town	105	Distribution line	Demand Growth	Thermal, Backtie		
3 Coronado	376	Distribution line	Demand Growth	Thermal, Backtie		



## API (Application Programming Interface) To downloads system wide data.

1 Click on the 'ESRI API' button to go to the API explorer page

- ESRI API:** Will launch the home page of the data.
- Get Token:** Will provide you with the token to use during the API URL download
- Help Page:** Will provide you with instructions on how to use the API

