

Distribution Planning and Interconnection Process

Jose Lopez – Distribution Planning Manager
Ken Parks - Customer Generation Manager

October 10, 2019

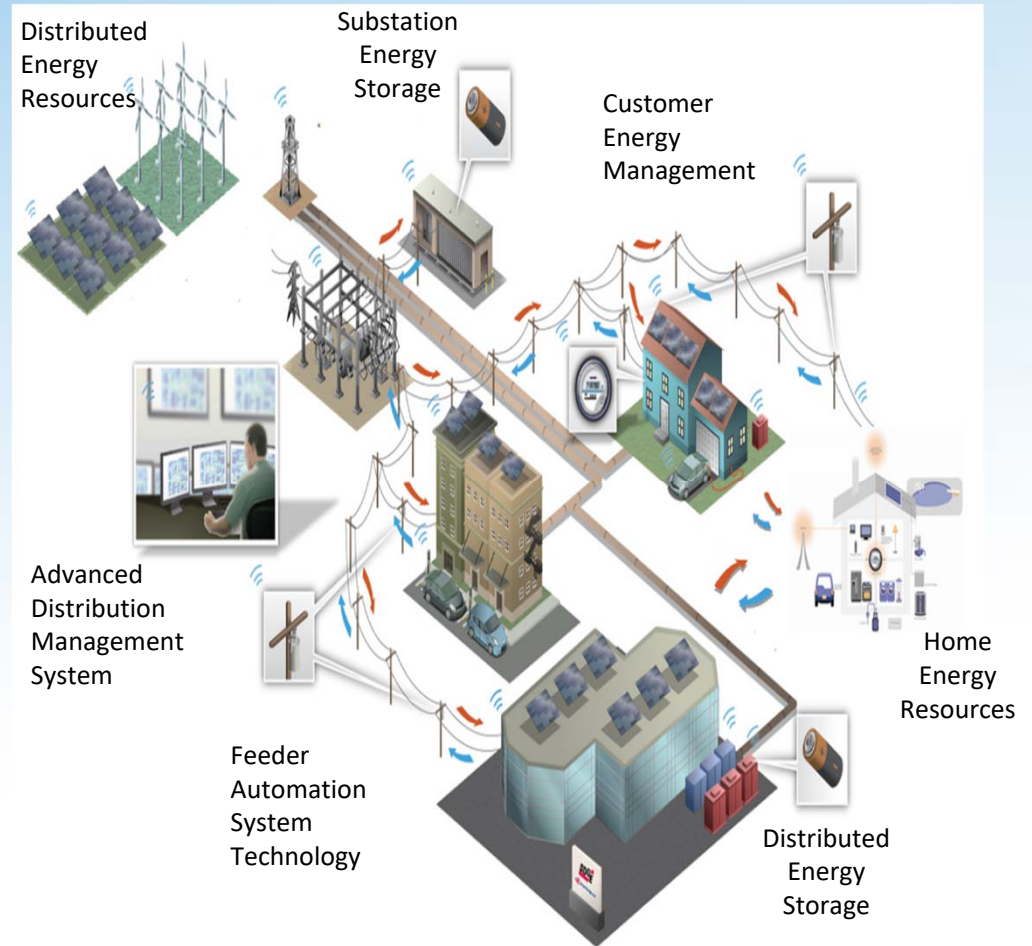


A  Sempra Energy utility®



Evolving Distribution System

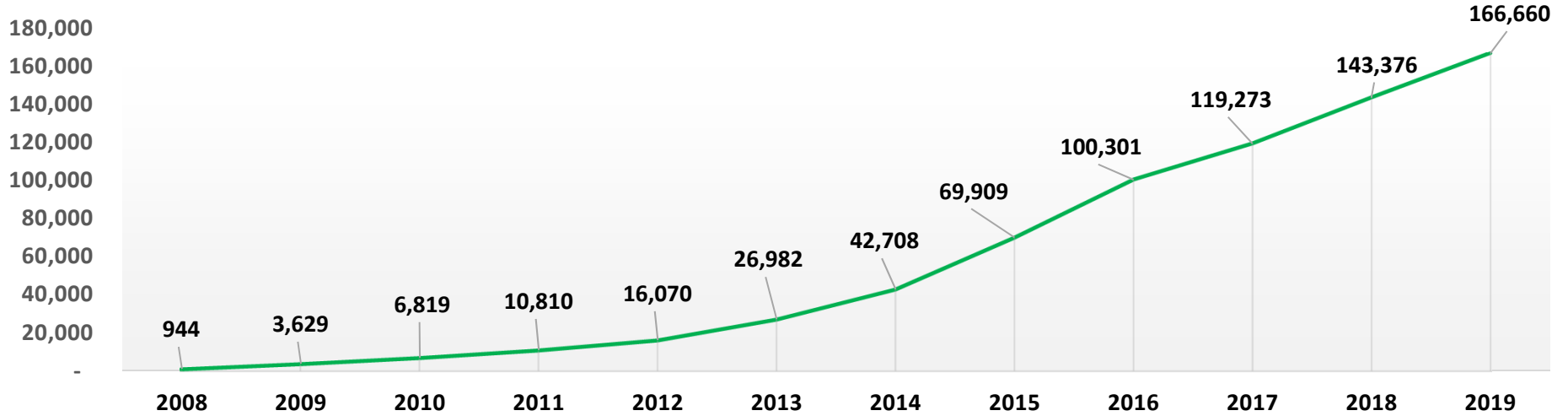
- Leveraging prior innovations: Advanced Metering Infrastructure (AMI), Weather Network, SCADA
- Implementing and advancing tools and systems to plan, monitor, and control the distribution system: advanced distribution management, distributed energy resource (DER) management
- Enhancing consumer engagement in support of a more innovative and efficient energy system



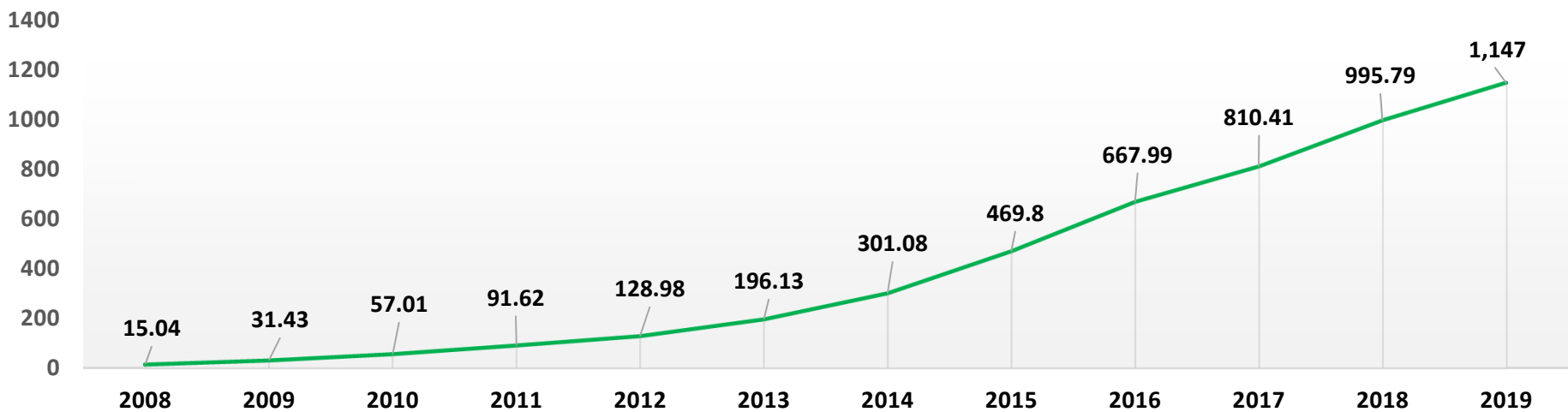
DER Growth



Net Energy Metering Cumulative Authorizations by Year



Net Energy Metering Cumulative Megawatts by Year



Making Things Easy for Our Customers



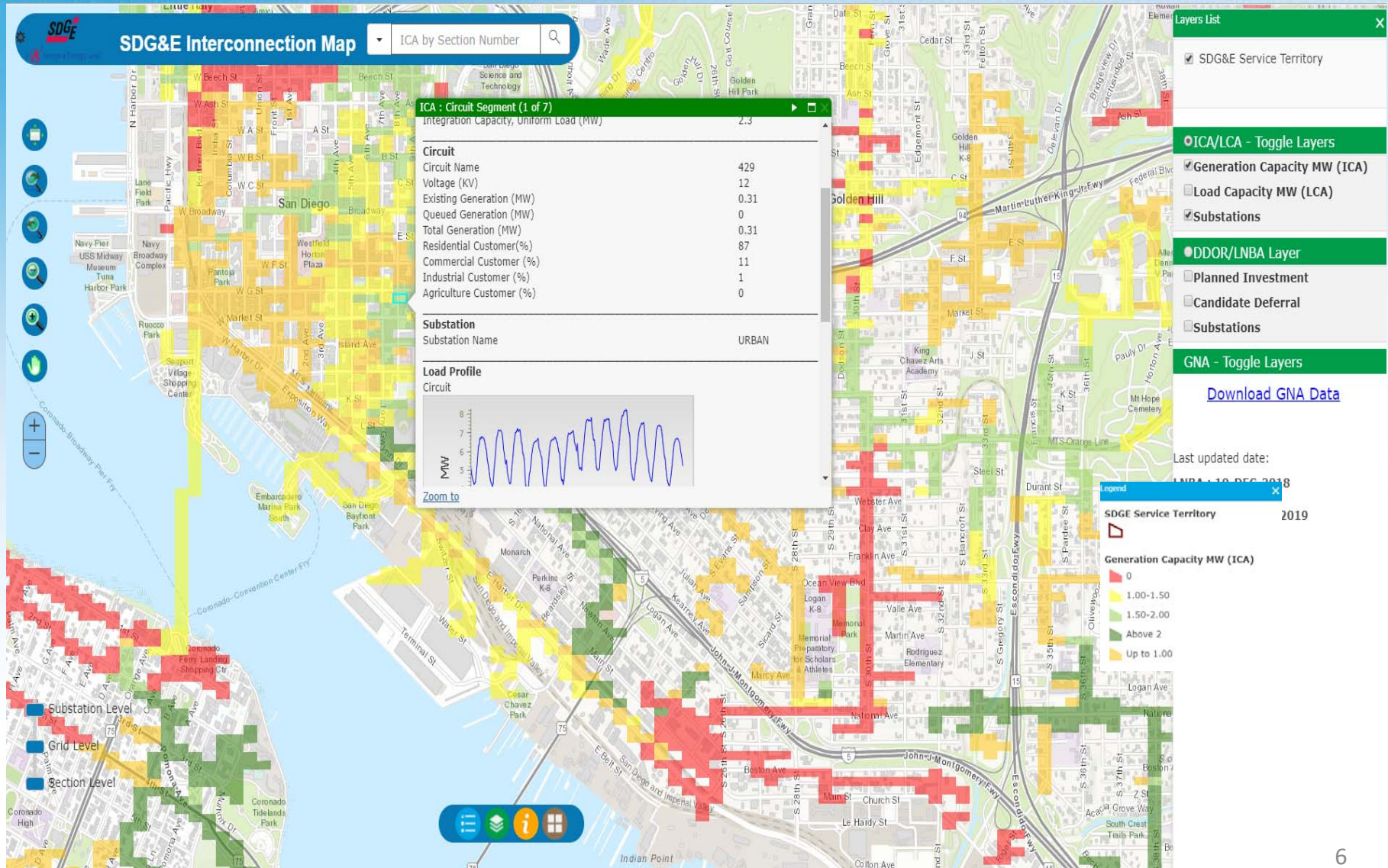
- Distribution interconnection portal
- Distribution Interconnection Information System (DIIS)
 - Transparency and efficiency
- FastTrack interconnection process
 - Environmentally Conscious
 - Quickest in the state
- Automated online payments
 - Flexibility
 - Convenience
- Automated jurisdictional (AHJ) electrical release process

Integration Capacity Analysis (ICA)

- Distribution capacity information to help enable DER interconnection safely and reliably
- Information most relevant to larger DER projects
- ICA analysis produces DER hosting capacity information at millions of locations across the distribution system
- Calculating ICA Values
 - Assesses current system capabilities
 - Uses dynamic methods – hourly load and resource profiles



Interconnection Portal



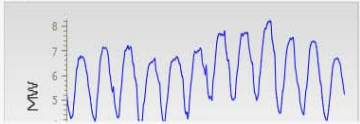
SDGE Interconnection Map ICA by Section Number

ICA : Circuit Segment (1 of 7)
Integration Capacity, Uniform Load (MW) 2.3

Circuit	
Circuit Name	429
Voltage (KV)	12
Existing Generation (MW)	0.31
Queued Generation (MW)	0
Total Generation (MW)	0.31
Residential Customer (%)	87
Commercial Customer (%)	11
Industrial Customer (%)	1
Agriculture Customer (%)	0

Substation
Substation Name: URBAN

Load Profile
Circuit



Zoom to

Layers List

- SDGE Service Territory
- ICA/LCA - Toggle Layers**
 - Generation Capacity MW (ICA)
 - Load Capacity MW (LCA)
 - Substations
- DDOR/LNBA Layer**
 - Planned Investment
 - Candidate Deferral
 - Substations
- GNA - Toggle Layers**
 - [Download GNA Data](#)

Last updated date: MARCH 10, 2018

Legend

- SDGE Service Territory** 2019
- Generation Capacity MW (ICA)**
 - 0
 - 1.00-1.50
 - 1.50-2.00
 - Above 2
 - Up to 1.00

Substation Level
 Substation Level
 Grid Level
 Section Level

Distribution Interconnection System



[Logout](#)

Distribution Interconnection Information System

DIIS > Customer Generation

Customer Generation

+ Start a New Application

Renewable Meter Adapter

+ Questions or Issues

+ Helpful Links

+ Admin Links

+ Manage Lookup Tables

CG Advanced Search Tool

+ Reverse Power Flow



Issued US Patent - April 2017

DIIS Features and Benefits



Features

- DIIS was launched 2013
- Keys: service and transparency
- Empowers customers/contractors to manage their own business through self-service tools and monitor every milestone within the utility's control

Benefits

- Over 140,000 applications processed
- ~87,000 through Fast Track process (60%)
- Average approval time is three days
- 500,000 avoided vehicle miles due to Fast Track

Continuous Improvement

- GoSolar website reader for inverters/modules
- Reverse Power Flow Detection
- Remote Meter Configuration (RMC)
- GIS integration release (mapping)
- Transformer Loading
- NEM paired with storage
- Automated approvals
- Tariff changes
- PayPal/Braintree integration
- AHJ Inspector (City inspection releases)
- Standard Rule 21 application automated
- Backup generator tracking



Automated Application Process

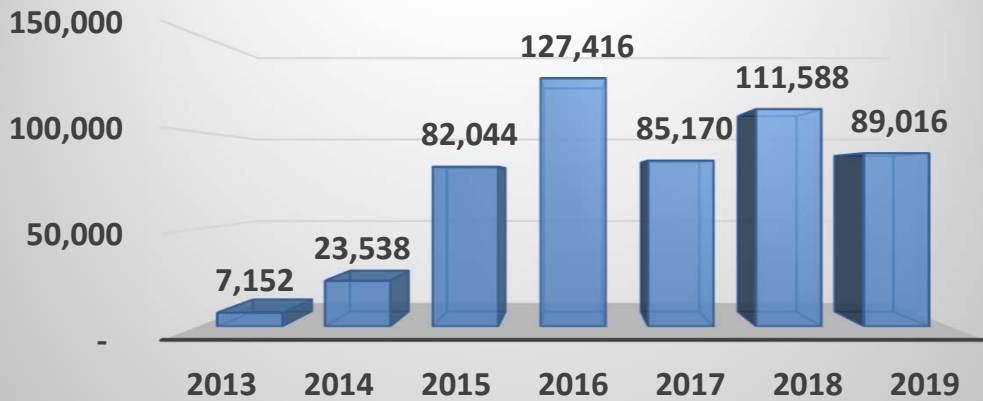
Six Easy Steps



SDG&E's automated process has eliminated many of the administrative type application deficiencies that existed prior to its implementation

Fast Track

525,000 Avoided Driving Miles

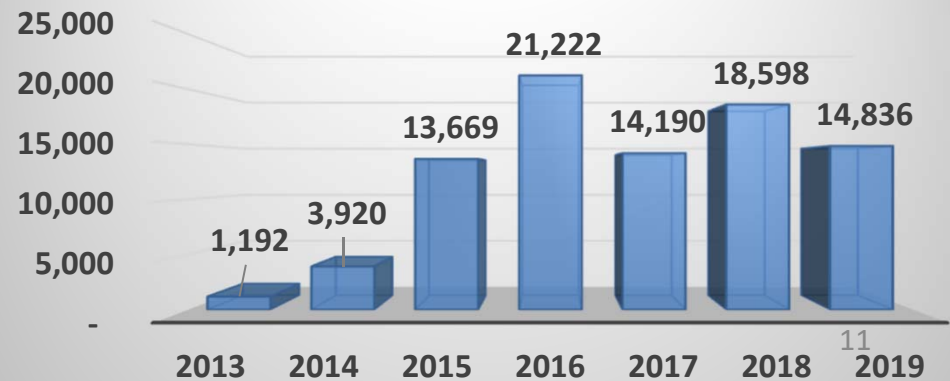


Earth to Moon
233,421 Miles

525,000
Avoided Miles



Fast Track Projects



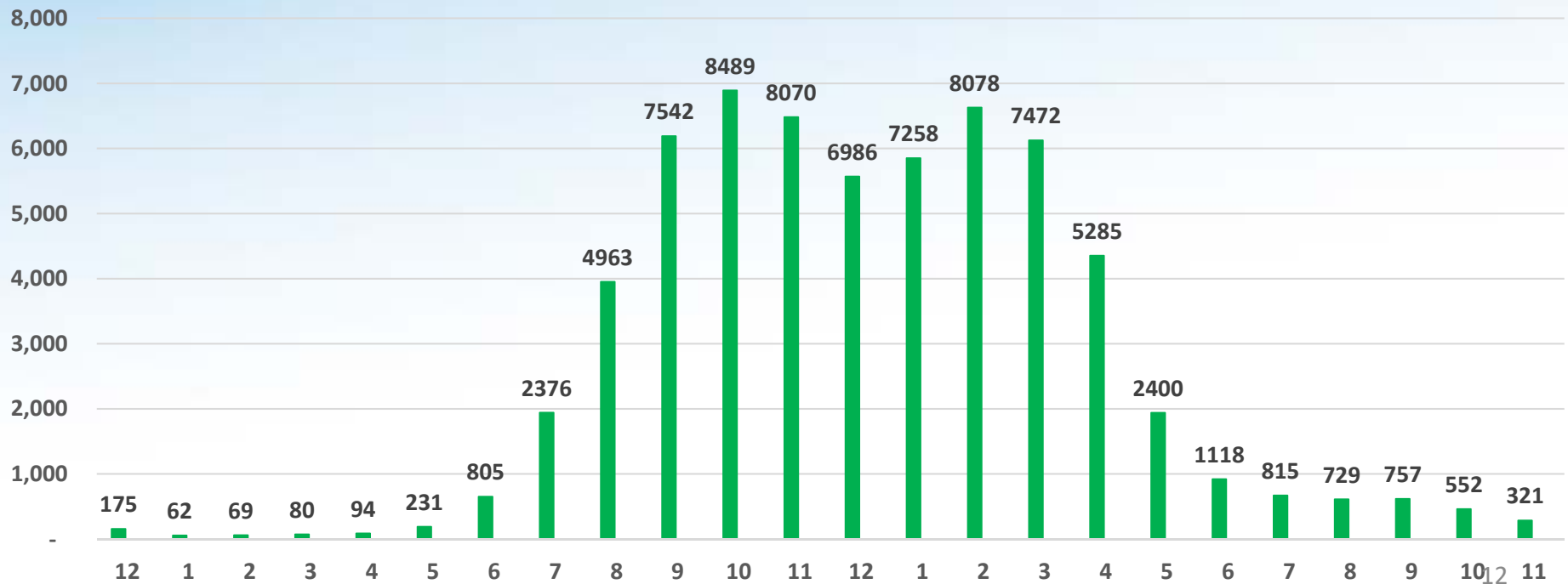
Automated Online Payment



- **Easy – Convenient – Flexible**
 - Available 24/7 everyday
 - Processed 74,729 payments

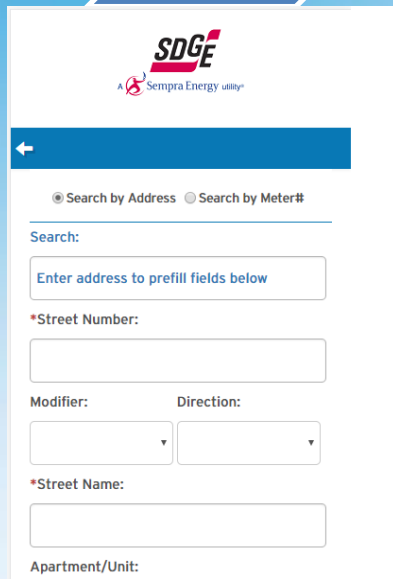


NEM Payments by Hour

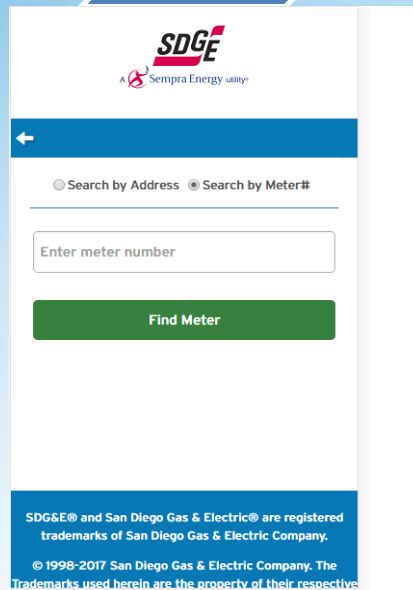


Automated Electrical Release Process

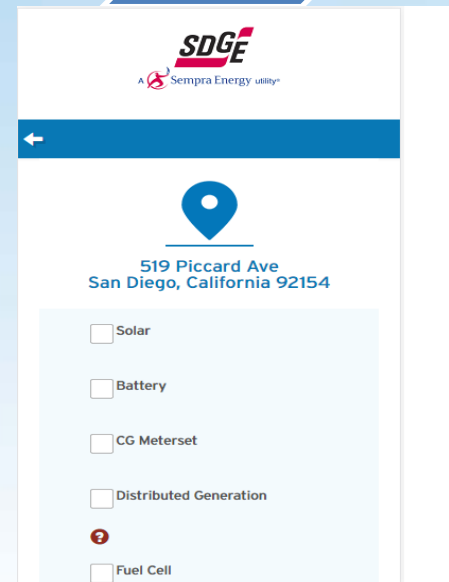
Search for
Address



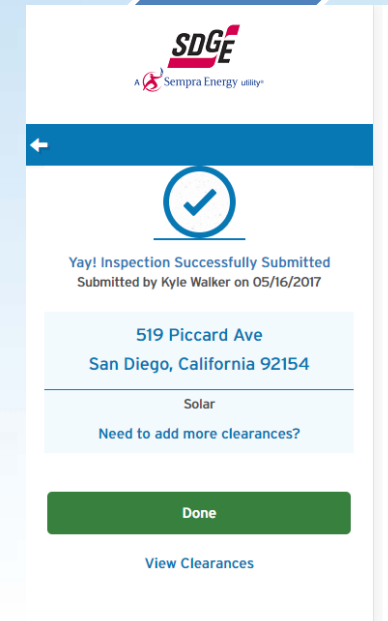
Search for
Meter #



Select
Release
type(s)



Submit
Release



✓ More efficient way of sending electrical releases for generation (no need for double entry)

✓ When user is typing in address or electric meter number, the system auto-completes to assist with data entry

✓ Ability to concurrently submit multiple electrical releases at the same location (solar, battery, meter set, etc.)

Thank You!