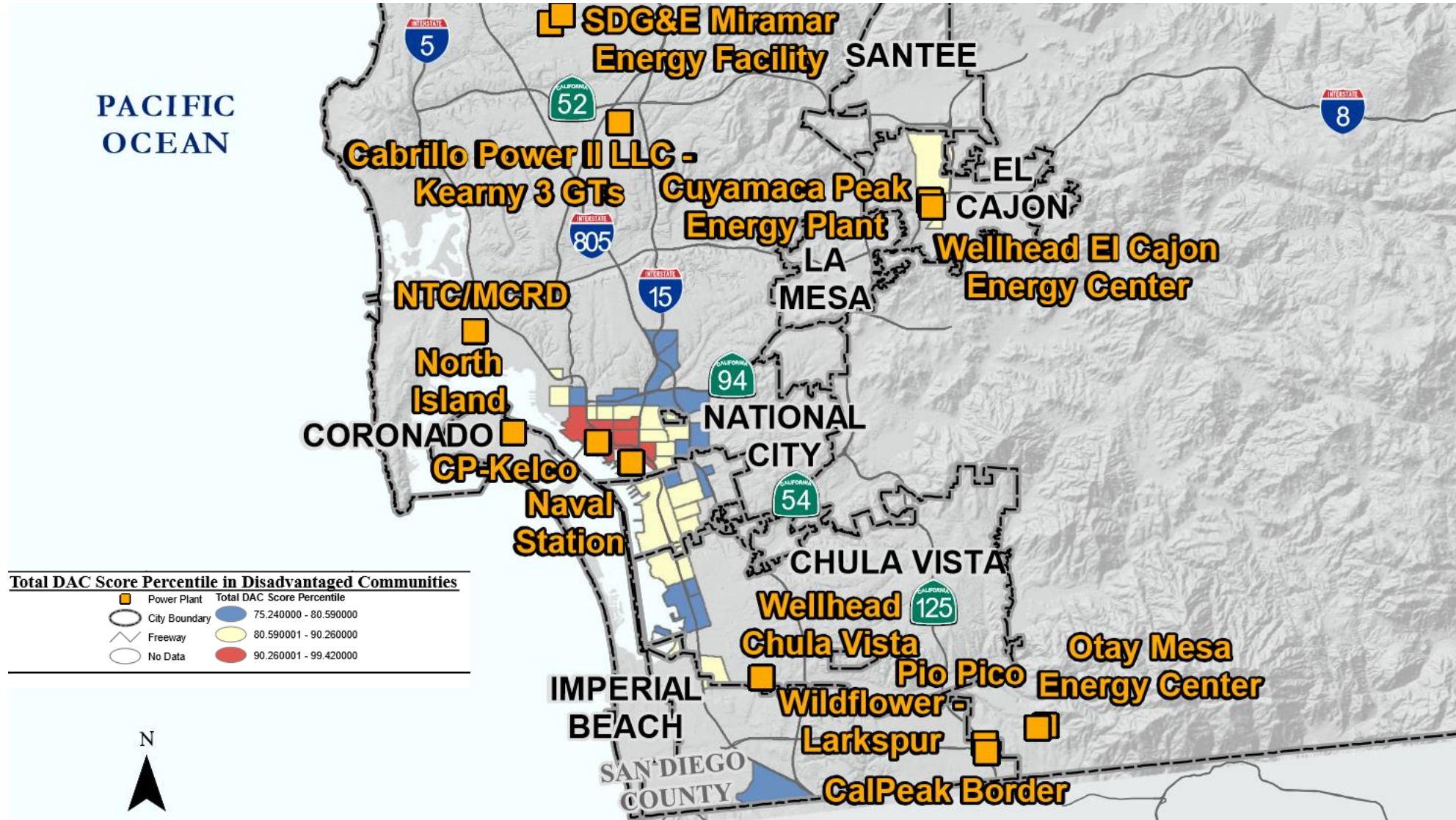


SDG&E's Demand Response Pilot Plan for Disadvantaged Communities

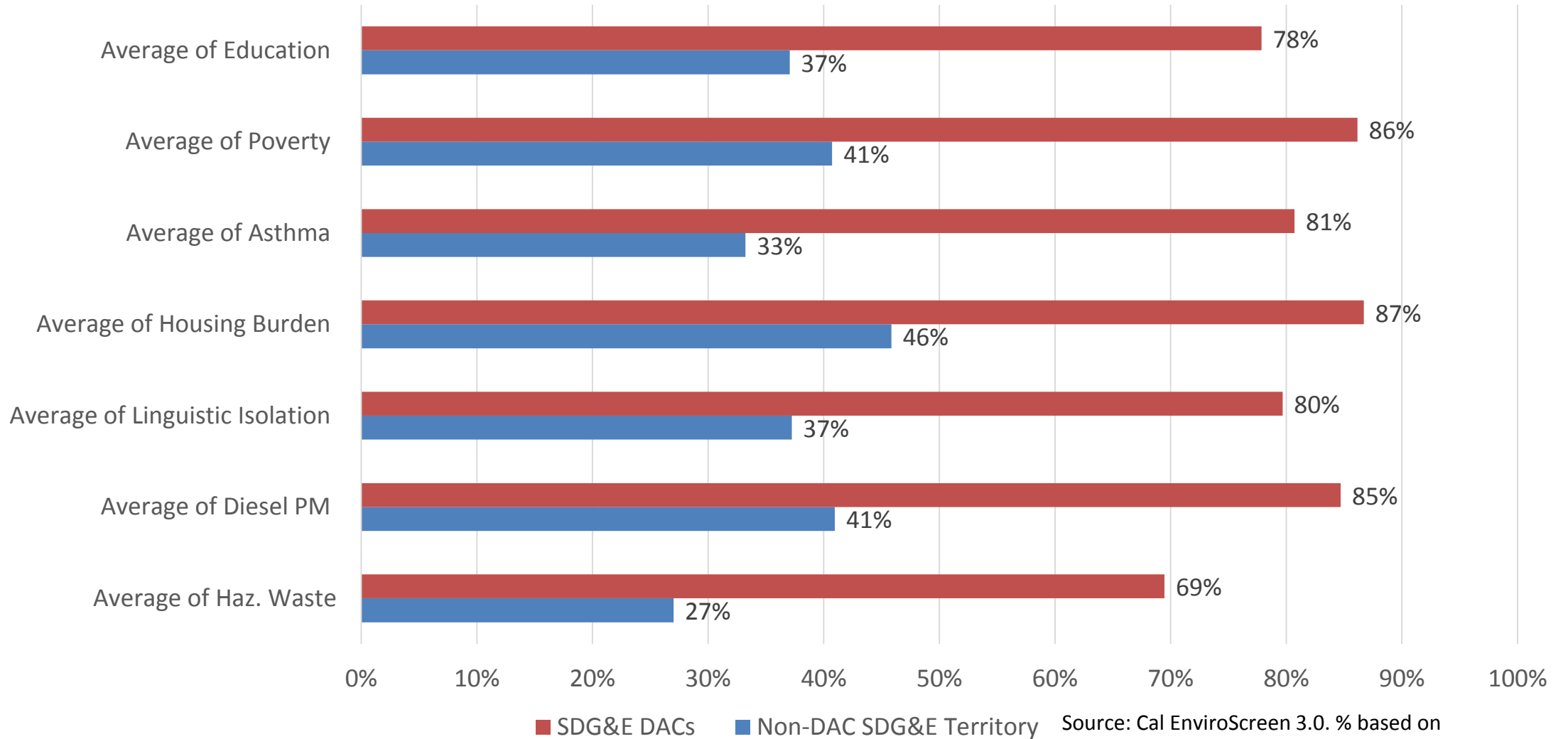
February 22nd, 2019

SDG&E DAC Territories (Statewide Definition)





The “top” DAC Indicators in SDG&E’s Territory using the State-wide Definition



Comparing DACs Customers to our Territory-wide Customers

Table 1: Customer Breakdown %	DACs	Non-DAC SDG&E Territory
% of Total Customers	4.5%	95.5%
CARE participation rate	40.9%	17.7%

Table 2: Customer Breakdown Total	DACs	Non-DAC SDG&E Territory
Total Customers	64,060	1,366,878
Total CARE Customers	26,174	241,822

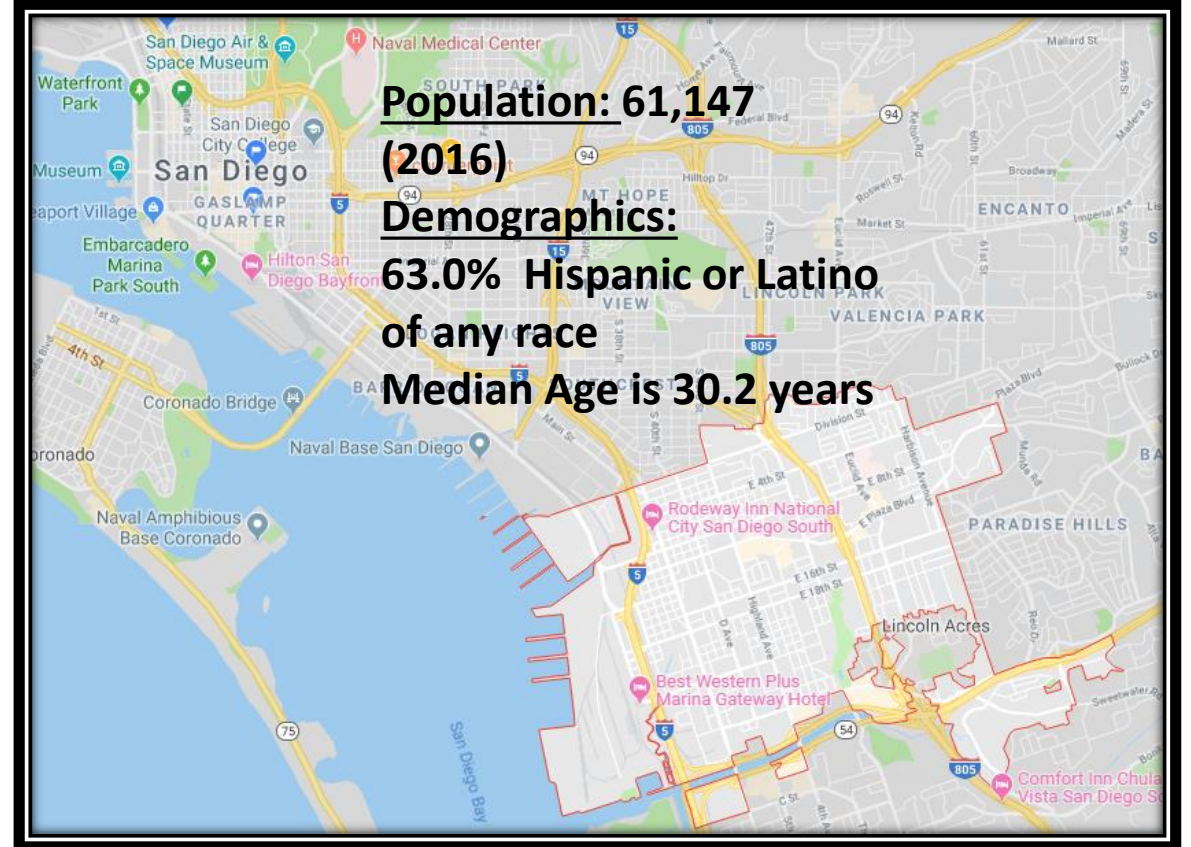
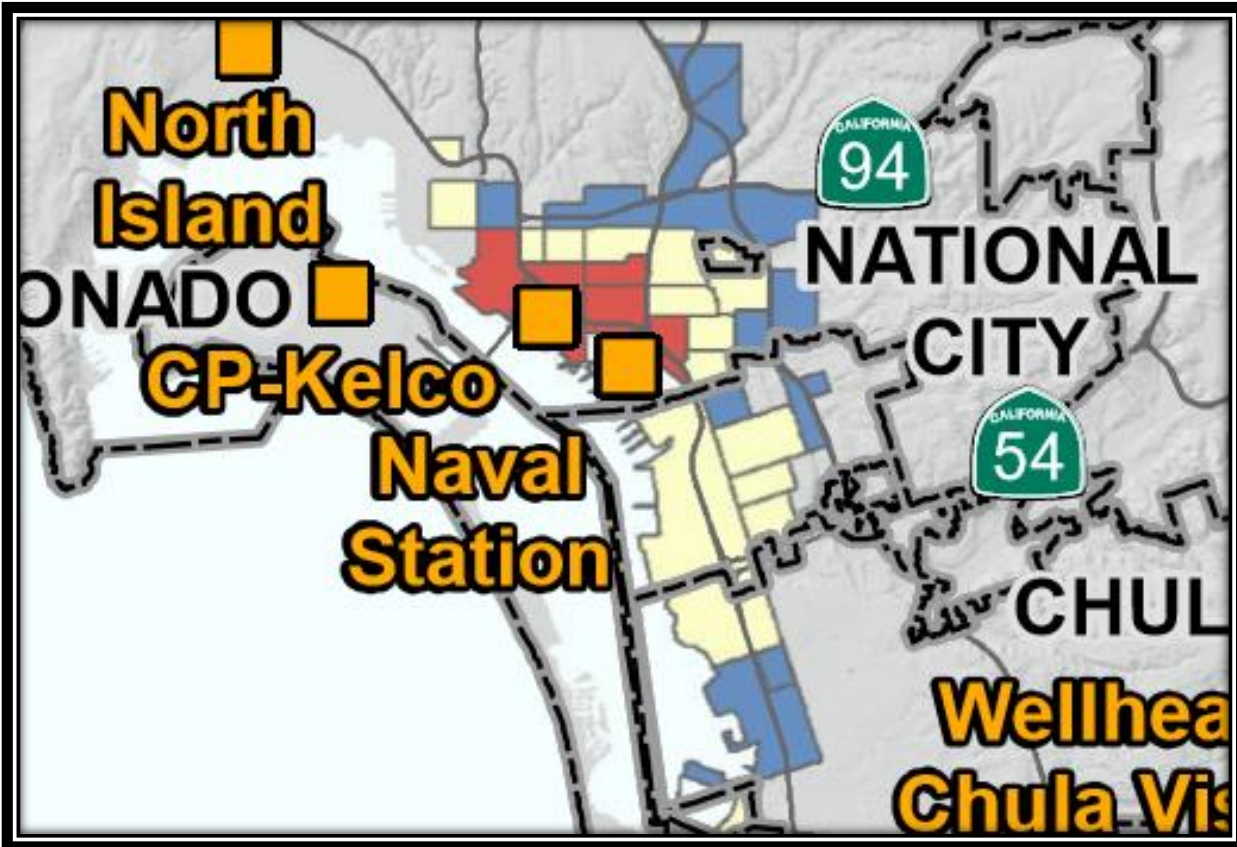
Key Takeaways for SDG&E DACs

SDG&E serves approximately 64,000 customers in DACs, which accounts for 5% of SDG&E's total customers.

Residential DR potential in SDG&E DAC territory is limited because DACs are almost exclusively coastal and many residential dwellings in those communities lack robust HVAC systems.

Since SDG&E DACs are burdened to a larger degree than the rest of its service territory with vehicle traffic and diesel pollution, electrifying the transportation sector will also likely play a critical role in addressing air pollution concerns in these communities.

Pilot Location: National City, CA



Pilot Breakdown: Part A and Part B

Part A will be directed at one or two individual small commercial facilities that serve the community.

- Participants will be vetted to confirm they meet the ideal load profile to be active in annual energy cost savings as well as DR grid benefits.
- Selected participant(s) will receive a strategically sized battery behind the customer meter.
- The battery will be used to mitigate annual energy costs as well as maximize DR participation that in-turn becomes another financial asset (similar to Capacity Bidding Program (“CBP”) capacity/energy payment).

Part B will focus on small and medium commercial (SMB) customer outreach

- The final impact analysis hopes to also include information on bill savings and peak demand reduction on participants who sign up for an existing DR program through various messaging and delivery techniques.
- A survey design will be used to measure how different messages and message delivery techniques impact participation rates in DACs.

Pilot Research Question(s)

“Part A”

- Can a battery-based DR solution be used to allow a small or medium business in a DAC to shave their peak demand and incur additional environmental and economic benefits?

“Part B”

- Are small commercial customers in DACs more likely to participate in a CBP when they receive a message about economic benefits or when they receive a message about its environmental benefits? And does delivering this message in person or via mailer impact the effectiveness of increasing DR participation?

Pilot Theory

Part A

- Meets the goal and purpose of the Decision by designing a platform that would show small and medium businesses in a DAC how to reduce their annual dollars spent on energy consumption as well as provide a facility asset that also generates future cash flows in the form of an energy payment based on the level of event participation.
- Load shaving from this platform may also provide environmental benefits to DACs by deferring generation from natural gas peaker plants. However, these benefits are unidentifiable in a small-scale DR program and therefore cannot be quantified.

Part B

- Uses a survey design where program participation rate is the dependent measure and is determined by those who sign up for the program and actually follow through with curtailment during a DR event or sign up for technology assistance.
- The primary independent measures are message type (economic benefit message vs environmental benefit message of DR) and message delivery type (in person or via mailer).

Pilot Implementation

- The two-phase pilot proposed by SDG&E will require specific expertise in energy storage and controls management, survey design and deployment, measurement and verification, and community outreach in National City, CA
- For **Part A**, SDG&E will seek experts in the operation and control of batteries specifically for the annualized economic benefits as well as a focus in maximizing demand response
- For **Part B**, SDG&E will seek experts in local market research and the assessment of demand response programs. These experts will be able to provide on-site data collection and survey design in order to measure customer responses to various demand response program messaging and gauge participation rates

Pilot Tentative Timeline

Summer 2019: Finalize site selection(s) (Part A), and select 3rd party vendors for controls (Part A) and market research (Part B)

Fall 2019: Complete all site audits (Part A) and finalize study design for outreach and messaging experiment (Part B)

Early 2020: Launch both Parts A & B of the pilot with kick off event(s) at selected site(s) in National City, CA