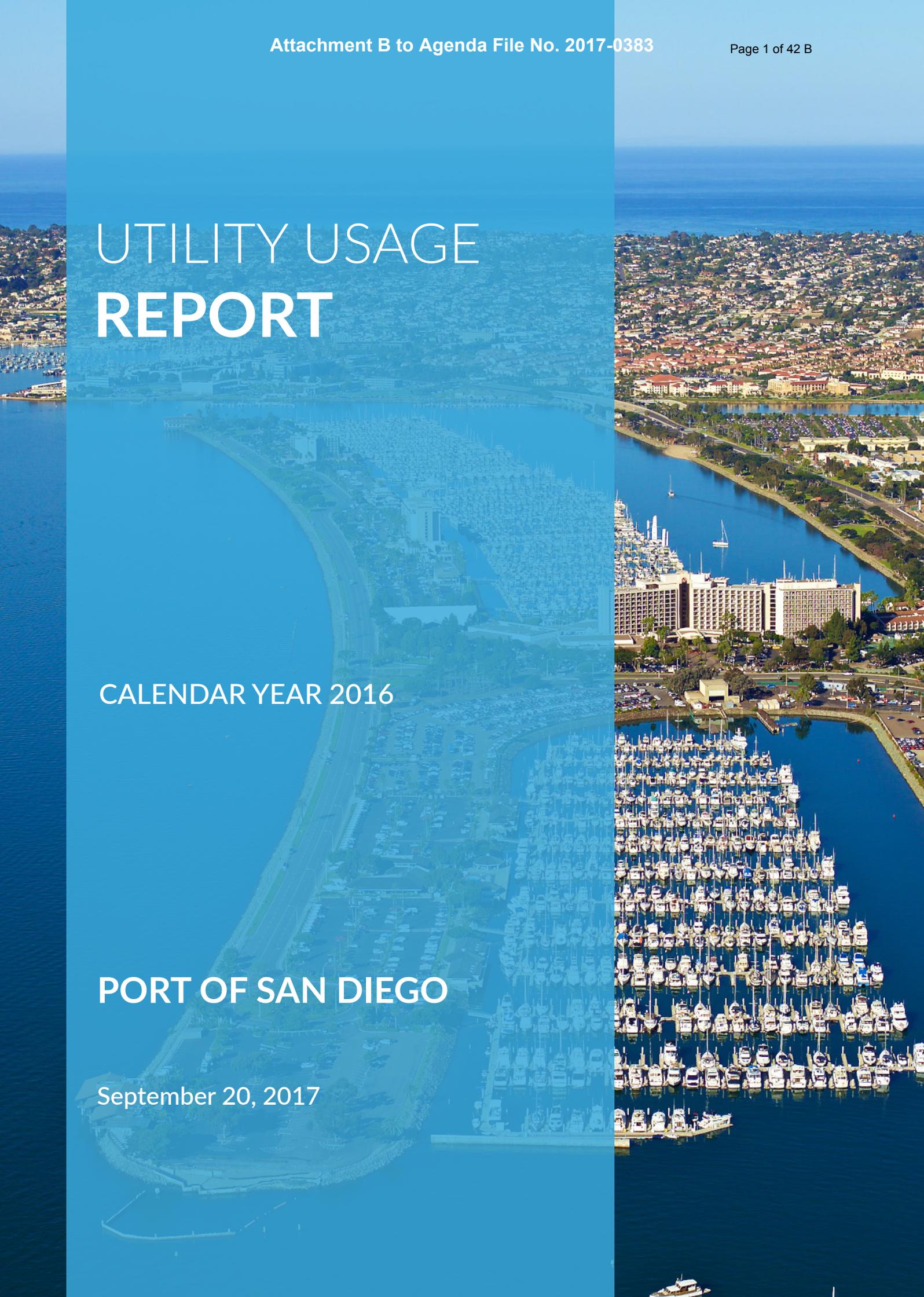


# UTILITY USAGE REPORT

CALENDAR YEAR 2016

PORT OF SAN DIEGO

September 20, 2017



# TABLE OF CONTENTS

<b>Executive Summary</b>	Page 03
<b>1. Introduction</b>	Page 05
<b>2. Understanding the Ordinance</b>	Page 07
<b>3. Participation &amp; Compliance</b>	Page 12
<b>4. Energy</b>	Page 15
<b>5. Water</b>	Page 23
<b>6. Greenhouse Gas Emissions</b>	Page 26
<b>7. Successes, Challenges, and Next Steps</b>	Page 28
<b>8. References, Acronyms, and End Notes</b>	Page 37

# EXECUTIVE SUMMARY

## Utility Usage Reporting Ordinance

The Port of San Diego (Port) Board of Port Commissioners (Board) adopted Ordinance 2844 - Required Reporting of Utility Use on Tidelands - in December 2015. Ordinance 2844 requires that all account holders within the Port tidelands report energy and water usage through a data collection system, and then to provide that information to a third party data aggregator. This report is the second under the Ordinance, and it presents the currently available utility usage data and compares this data to the prior, baseline report<sup>1</sup>. Significant increases in the amount of electricity, natural gas, and water data reported shows progress in implementation of the Ordinance. This data also allows additional analysis to be performed, compared to the baseline report, providing further insights into the energy usage on the Port Tidelands. This utility usage report provides the results for calendar year 2016 utility data (January 1 – December 31, 2016). Key findings contained in the report include:

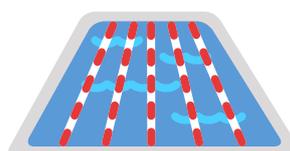
### SUMMARY OF RESULTS

	2015 REPORTING YEAR	2016 REPORTING YEAR
<b>NATURAL GAS USAGE</b> REPORTED ANNUALLY (THERMS/YR)	3,680,456	24,920,335
<b>PERCENTAGE</b> OF DISTRICT-WIDE NATURAL GAS USE ON PORT TIDELANDS	14%	97%
<b>ELECTRICITY USAGE</b> REPORTED ANNUALLY (KWH/YR)	202,195,384	291,147,838
<b>PERCENTAGE</b> OF DISTRICT-WIDE ELECTRICITY USE	50%	86%
<b>TOTAL ENERGY USAGE</b> REPORTED ANNUALLY (MMBTU/YR)	1,057,965	3,485,430
<b>PERCENTAGE</b> OF ESTIMATED TOTAL ENERGY USE ON PORT TIDELANDS	27%	93%
<b>TOTAL GREENHOUSE GAS EMISSIONS</b> REPORTED ANNUALLY (MT CO <sub>2</sub> E)	79,055	206,553
<b>WATER USAGE</b> REPORTED ANNUALLY (GALLONS/YR)	429,305,000	915,922,229
<b>TOTAL NUMBER OF UTILITY ACCOUNT HOLDERS</b>	340	326
<b>TOTAL NUMBER OF UTILITY ACCOUNT HOLDERS</b> REPORTING UTILITY DATA	91	122

Note: An acronym list is provided at the end of this report.



GHG emissions for 2016  
equivalent to  
**43,947 cars**  
driving for one year



Water use for 2016  
equivalent to  
**1,388**  
**Olympic sized pools**

# EXECUTIVE SUMMARY

## *continued*

For implementation of Ordinance 2844, the Port selected the Environmental Protection Agency's ENERGY STAR® Portfolio Manager® (Portfolio Manager) tool as the data collection system and Edison Energy as the utility data aggregator. Note that Edison Energy is not the same company as Southern California Edison, the utility, and Edison Energy is not regulated by the California Public Utilities Commission.<sup>2</sup> Other key participants in implementation include the San Diego Port Tenants Association (SDPTA) and the Center for Sustainable Energy (CSE). And progress relies on the successful participation of tenants in the reporting their utility data.

Successes and challenges of the Ordinance can be measured in many ways. Increases in the number of tenants participating and achieving compliance has been moderate but steady. But by reaching out to some of the largest energy users at the Port, the 2016 data shows significant increases in the reporting of electricity and natural gas use. Approximately 97% of the natural gas usage on Port tidelands is being reported. For electricity, it is approximately 86% of the estimated total. These percentages are based on a comparison to annual district-wide natural gas and electricity usage provided by SDG&E to the Port. This reporting is required by the Energy Data Access Decision (D.14-05-016) by the California Public Utilities Commission (CPUC)<sup>3</sup>. Similar district-wide annual total water usage data has not been available.

Reporting utility data and achieving compliance under the Ordinance involves several steps. Therefore, tracking utility account holder engagement has been done in three ways, representing increasing levels of successful engagement. The first level is "participation" which means that a utility account holder has created a Portfolio Manager account and connected with Edison Energy. The next level is "reporting utility data" which is defined as participation plus the utility account holder has created a property (or properties) profile, shared at least one property with Edison Energy, and correctly entered a full 2016 calendar year of utility data for at least one meter. The third level is "compliance" which indicates that all of the above tasks are completed and all meter data is correctly entered for all utilities for the full 2016 calendar year for all of their properties. 155 utility account holders are participating in the Ordinance. Data from a total of 122 utility account holders is included in the report. 107 utility account holders are fully compliant for calendar year 2016 utility data. All data is as of August 1, 2017, which was the reporting deadline for calendar year 2016 data.

All 2016 data presented in the report is for the 122 utility account holders unless indicated otherwise. Therefore, the data does not represent the entire electricity, natural gas, and water usage on the Port Tidelands, but it provides enough data to make

# EXECUTIVE SUMMARY

*continued*

conclusions regarding general patterns of energy and water usage at the Port. Note that the reported usage is for all natural gas, electricity, and water usage on the utility meters, which in some cases may include “shore power” that is used by ships that dock at the Port.

This is the second year of implementing the Ordinance and remains a relatively new process for tenants and subtenants to adopt. The report outlines opportunities to increase compliance rates and provide additional outreach and training in future years.

Utility benchmarking and reporting yields data that can measure performance and progress towards achieving the Climate Action Plan (CAP) greenhouse gas (GHG) emissions reduction goals over time and can be used by building operators to understand the performance of their building in comparison to similar buildings. The annual energy and water use, annual GHG emissions, and other findings of this utility usage reporting and data aggregation process provide values that the Port can use for tracking and monitoring progress in accordance with the Port's CAP.

The report that follows provides greater details on energy and water use, GHG emissions, participation, key performance indicators that are recommended for future year's, and a summary of lessons learned and challenges to facilitate the Port's next steps with implementing Ordinance 2844.

*Prepared By: Michael Starkey, Jon Aldrich; Sarah Baumgartner; Christopher Berg;  
and Dennis Huynh, EDISON ENERGY*

# 1. INTRODUCTION

*The Port of San Diego is a centerpiece of the economically vibrant and scenic San Diego region and is a leader in sustainability efforts, including stewardship of the San Diego Bay and its resources, fostering economic activity and providing community benefits. These goals are described in its mission statement:*

**“ The San Diego Unified Port District will protect the Tidelands Trust resources by providing economic vitality and community benefit through a balanced approach to maritime industry, tourism, water and land recreation, environmental stewardship and public safety. ”**<sup>4</sup>

The main purpose of the reporting, aggregation, and analysis of energy and water utility data is to facilitate tracking progress toward meeting the GHG emissions reduction goals identified in the CAP. It is also to support the Port's mission and commitment to environmental stewardship through the conservation of resources. Benchmarking can help identify opportunities for investment in energy efficiency which yields environmental benefits and enhances economic activity through construction and engineering jobs, while reducing business operating costs. The baseline report provides insights into energy and water use, GHG emissions, and opportunities for future improvements.

## **Climate Action Plan Context**

The Port was created in 1962 with a mission that includes stewardship of the San Diego Bay. Environmental stewardship was further emphasized in 2008 with the approval of the Green Port Policy, and corresponding development of the Green Port Program. Addressing climate change is an important part of this effort, and in December 2013 the Port of San Diego's Board of Port Commissioners adopted a CAP to reduce GHG emissions that contribute to global climate change. The CAP established the following targets:

- GHG Reduction of at least 10% less than 2006 levels by 2020
- GHG Reduction of at least 25% less than 2006 levels by 2035

The CAP applies to all operations within Port tidelands including

both Port-owned and operated, as well as tenants and subtenants, including on-road transportation, off-road transportation (boats and other vessels), and buildings. Based on the 2013 CAP the relative contributions of these sectors are 39% for on-road transportation, 35% for buildings, 22% for off-road transportation, and 3% for other.

The CAP is informed by California state policies, and the overall management of the Port. One of the relevant state policies is Assembly Bill (AB) 32, which is California's Global Warming Solutions Act of 2006. Another is Executive Order S-3-05, which extends the state's GHG emissions goals. A subsequent policy related to implementation of the CAP is AB802, which was passed in 2015 and mandates statewide energy use benchmarking and disclosure. Also, SB32 passed ten years after AB32 and AB75 for energy efficiency in existing buildings.

Some measures in the CAP that address building energy and water consumption are:

- EB1 & EB2: Establish green building standards and/or policies for existing buildings and new construction<sup>5</sup>
- EB 6: Replace light fixtures with lower energy consuming option such as compact fluorescent lamps (CFLs) and light-emitting diodes (LEDs)
- EB7: Enforce the requirements of California AB1103, requiring non-residential buildings to measure and report energy use data through Portfolio Manager ® (AB 1103 has since been repealed and replaced by AB 802)

- WR1: Establish programs and policies to increase capture and use recycled water
- EB5: Increase awareness and coordinate use of incentives to invest in energy efficiency upgrades

## **Benefits of Benchmarking**

This report is the second annual utility data aggregation and benchmarking report for the Port tidelands. Benchmarking of energy and water use has become an important part of environmental efforts around the world. The old adage “you can't improve what you can't measure” provides some of the motivation behind benchmarking efforts, but the advantages are far-reaching. The benefits of benchmarking energy and water use include, but are not limited to: engagement of building owners and operators in understanding their usage, giving energy managers and sustainability practitioners tools to encourage energy efficiency programs, providing policy makers and regulators with data to evaluate sustainability and climate planning, reducing energy and water consumption (the LBNL evaluation has found that energy benchmarking and transparency programs provide an average annual energy use reduction of 3 to 8% over a 2 to 4 year period of implementation<sup>11</sup>), and verifying the results of energy conservation measures. This report is the second annual utility data report for Ordinance 2844; note that the first annual (baseline) report was also provided earlier this year. The first report was for calendar year 2015 utility data. The current report is for calendar year 2016 data.

## 2. UNDERSTANDING THE ORDINANCE

### overview

**FIGURE 1:**  
ENERGY STAR® Portfolio  
Manager Login Screen



Increased energy efficiency can help achieve Climate Action Plan goals

### ENERGY STAR PORTFOLIO MANAGER

# 450,000

Properties benchmarked  
using Portfolio Manager.<sup>6</sup>

# 40

 BILLION

Square feet of buildings  
represented through  
Portfolio Manager (current  
as of 2012).<sup>6</sup>

### Ordinance 2844

In December 2015 Ordinance 2844 was passed by the Board, requiring utility usage data to be reported via a third-party data aggregator to the Port. The Port selected the use of the Portfolio Manager® as the data collection system to be utilized for the purposes of utility account holder reporting. Portfolio Manager is a tool that is used nationally, and is a best practice for energy and water benchmarking and reporting. A utility account holder (UAH) is any entity or person as defined by California Public Resources Code Section 25116 (or any successor legislation) who has an account with any provider of utilities that is separately metered, per the ordinance. Utility account holders include a range of tenants, subtenants, and Port-operated properties within the Port's jurisdiction. The Ordinance further calls for a third-party data aggregator, separate from the Port, to aggregate and report the data. The Port and the San Diego Port Tenants Association collaborated under a Memorandum of Understanding, to jointly select Edison Energy as the data aggregator. Per the Ordinance the Port does not have access to the energy or water utility data of the individual utility account holders, and the data remains confidential. Edison Energy receives the utility data through Portfolio Manager and then aggregates and reports the data to the Port. The data is reported as an aggregated value.

### ENERGY STAR® Portfolio Manager®

ENERGY STAR® Portfolio Manager® is an online platform managed by the United States Environmental Protection Agency (US EPA). The platform allows individual building owners, managers, or operators to organize and better understand the energy performance of their properties. It is used to benchmark the energy efficiency of buildings relative to a national database, tailored to local weather conditions and building operating hours. Note that benchmarking is not available for all business sectors. For example, some of the unique business sectors of the Port including industrial, marinas, and water based museums cannot be benchmarked in ENERGY STAR® Portfolio Manager®. The system is capable of also tracking water use, waste and materials, and GHG emissions. Figure 1 shows the Portfolio Manager login screen, which can be accessed at:

[portfoliomanager.energystar.gov/pm/login.html](http://portfoliomanager.energystar.gov/pm/login.html)

Portfolio Manager is used in the Port's data aggregation and benchmarking program, as the platform by which utility account holders

# UNDERSTANDING THE ORDINANCE

## *continued*

enter their energy and water data and basic characteristics of their property (gross floor area, property type, etc...). This data is then accessed by Edison Energy to prepare this aggregated utility usage report.

### ***Anonymity***

A requirement of the Ordinance is that all data reported by the data aggregator must be presented anonymously. For this purpose anonymous means that no data is identified by a specific address or tenant name, and that individual tenant data cannot be extrapolated from the report. This anonymity should encourage participation of all tenants and subtenants. Specifically, aggregation must include at least three properties to be included in within a reporting category.

### ***Process of Utility Data Reporting, Aggregation, and Publication***

Implementation of the Ordinance has required developing and fine-tuning the process for reporting and aggregating the data. The flow chart in Figure 2, describes the process established in 2016. The process begins with outreach and education (training) to inform tenants of the requirements and promote understanding of the reporting process. Each utility account holder then creates a Portfolio Manager account and enters their utility data and basic characteristics of their property (gross floor area, property type, etc.) and authorizes SDG&E to automatically populate energy (electricity and natural gas) data and manually inputs utility water usage data, if possible. Based on utility account holder preferences, an option to manually enter energy meter data is available. Tenants may utilize their SDG&E online My Account or physical records to access their billing and usage data. Please note that the Port of San Diego has provided one-on-one assistance for setting up accounts. Finally, the utility account holder then connects their account to the Edison Energy data aggregation account within Portfolio Manager. Edison Energy's data aggregation and benchmarking platform automatically extracts the Portfolio Manager data and loads it into the Edison Energy platform where it can be aggregated, analyzed and benchmarked. The Center for Sustainable Energy works alongside Edison Energy to provide targeted training, outreach, and technical assistance via email, phone, and in-person support to utility account holders.. Edison Energy reports the aggregated data to the Port and Center for Sustainable Energy upon request and by deadline.

### ***Data Sources***

Benchmarking relies on the quality of the data used. Therefore, time spent identifying and developing quality data sources and "cleaning" the data yields more accurate and benchmarking results. Data used in this report comes from several sources, including utility company meter data, a list of properties provided by the Port, and self-reported data from tenants and subtenants. All the utility data is first entered into Portfolio Manager and then shared with the data aggregator, Edison Energy. The Portfolio Manager data and the utility account holder, which Port staff has access to, have been mapped to each other by Edison Energy and given anonymous coding to protect tenant privacy. This anonymously-coded data is then used in the annual report.

# UNDERSTANDING THE ORDINANCE

*continued*

## ***Utility Company Meter Data***

Utility companies that serve properties in the Port include: SDG&E, The City of San Diego (water utility), Sweetwater Authority, and California American Water.

## ***Web Services & Automated Meter Data Entry***

SDG&E offers an Automated Benchmarking Services (ABS), through which SDG&E automatically populates monthly meter data into properties within Portfolio Manager. The ABS uses Portfolio Manager's web services feature, which facilitates automated exchanges between Portfolio Manager and third-party providers. The benefits of ABS relative to manual data entry are that it eliminates potential introduction of errors inherent in manually copying data from a monthly utility bill into Portfolio Manager, and saves time for staff who would otherwise have to enter SDG&E utility data each month. However it is important to note that for 2016 electricity data, many tenants have to manually enter since SDG&E's automatic population is only available for data within the last 12-14 months.

Tenant training and support encourage use of web services for SDG&E electric and natural gas meters for enhanced data quality.

## ***Manual Meter Data Entry***

Monthly water consumption data must be manually entered for each water meter. This is because the water utilities serving the facilities within the Port tidelands do not offer Portfolio Manager web services automated meter data uploads. In addition, utility account holders may choose to manually enter their energy data rather than using the previously described SDG&E web services feature. Note that SDG&E's ABS does not upload any cost data to Portfolio Manager.

## ***Self-Reported Property Data***

Property information such as gross floor area, operating hours, number of computers, and other characteristics are self-reported by utility account holders. Currently utility account holders who have incomplete property data but have entered complete utility data are still considered compliant. The UURO requires the total energy and water usage on Port tidelands and does not require accurate or complete property information. . Additionally, certain property types (e.g. marinas) are difficult to report in the ENERGY STAR® Portfolio Manager® platform and therefore would create issues if required by the UURO.

# UNDERSTANDING THE ORDINANCE

## *continued*

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### ***Data Quality Control and Cleaning***

Part of Edison Energy's role is to review data to ensure the data is as accurate as possible. This involves data "cleaning," meaning that improperly formatted data, duplicate entries, and other inaccuracies are identified and are corrected, or removed. For tenant-entered data, Edison Energy contacts tenants/subtenants when needed to address data issues and works with the tenants to resolve these issues. As for tenants/subtenants and subtenant information, the initial property and contact list was prepared by the Port with the understanding that aligning this list to identify specific utility account holders would be necessary, as the Port does not have a comprehensive database accounting for tenants and subtenants that pay for utilities directly. Over the past year, all parties (Port

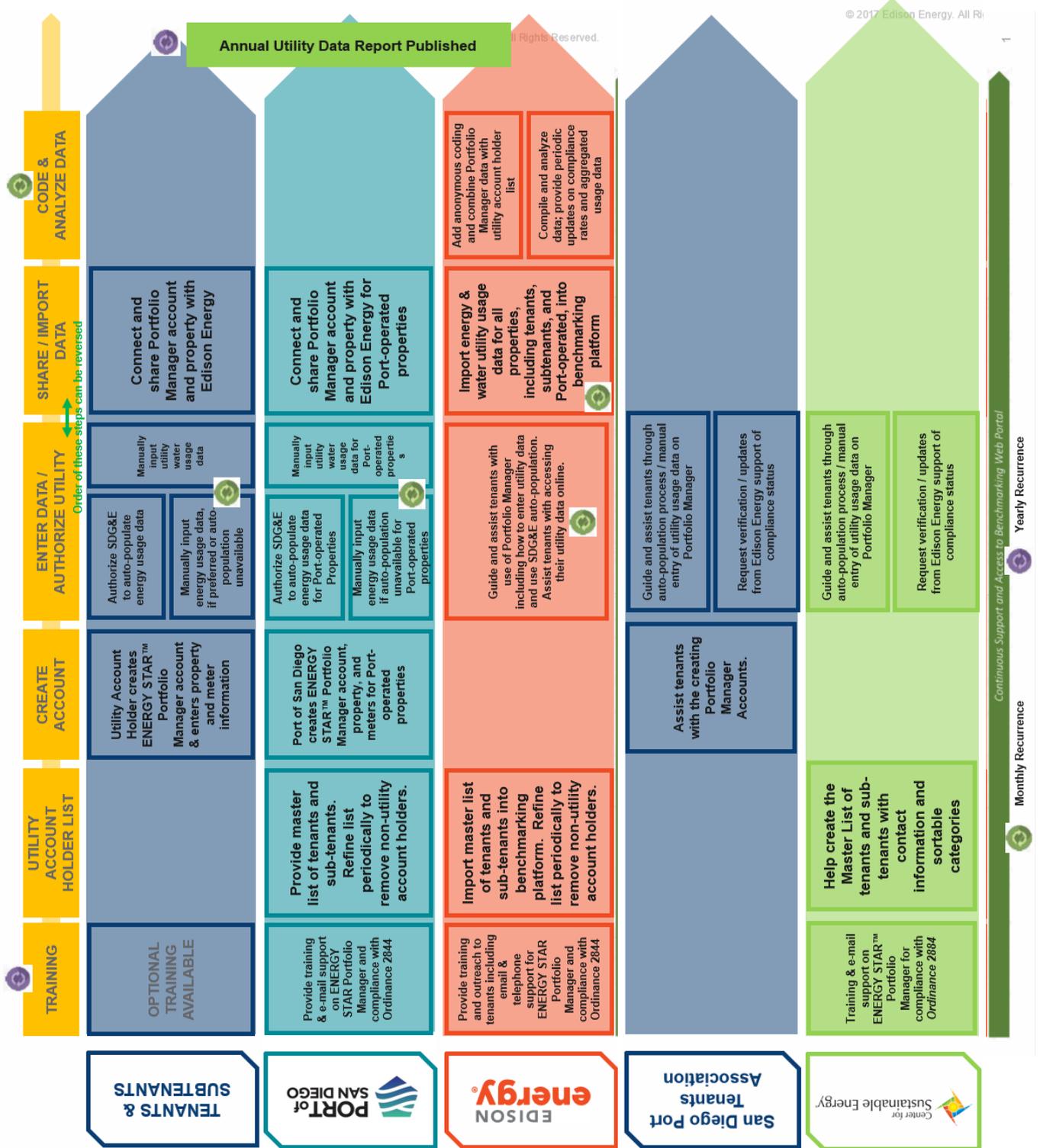
Staff, PTA, Edison Energy, and CSE) have worked to create a database of utility account holders. Edison Energy then reviewed the data to identify and correct issues. A pilot program of the data reporting, aggregation, and analysis was executed in the fall of 2016 and provided insights to help develop the process. According to the Ordinance, the data can also be evaluated by an independent auditor to further insure its accuracy. Since the evaluation of this process, Edison Energy has collaborated alongside the Center for Sustainable Energy (CSE) to engage a larger scope of utility account holders in an effort to increase effective targeted outreach. In addition to assisting with support services by working with tenants to populate property meters, CSE reaches out to Edison Energy with requests to verify utility account holder compliance statuses. As the third party data aggregator, Edison Energy, provide detailed status updates regarding requested utility account holder compliance. These requests occurred on a daily basis, doubling the number of tenants that could be reached. Additionally, Edison Energy and CSE collaborated with an initiative to conduct targeted outreach focused on estimated large-scale utility account holders as determined by the Port, based on key factors such as business sector, estimated energy usage, and property square footage and categorization.

Additionally, CSE has been helping with engagement and training since April 2016. CSE has created training videos, a reference guide, PowerPoint trainings, and other material to assist in the compliance process.

# UNDERSTANDING THE ORDINANCE

continued

FIGURE 2: Flowchart on Data Usage Reporting



# 3. PARTICIPATION & COMPLIANCE

## by the Port, tenants, and subtenants

Participation is critical to the success of the data aggregation and benchmarking effort. The ability to draw meaningful conclusions from the data and make informed policy decisions relies upon achieving high participation levels.

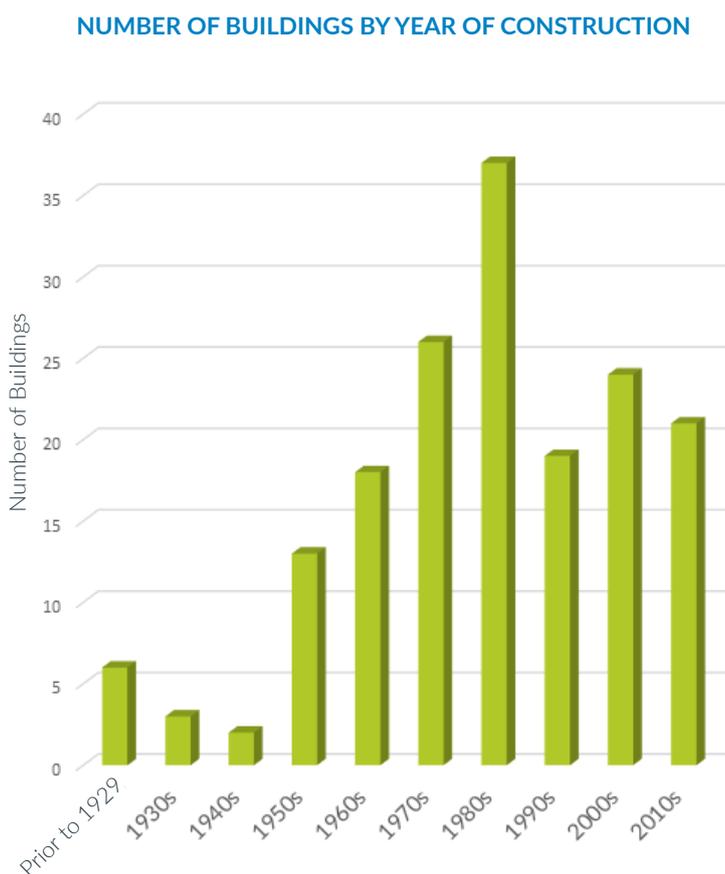
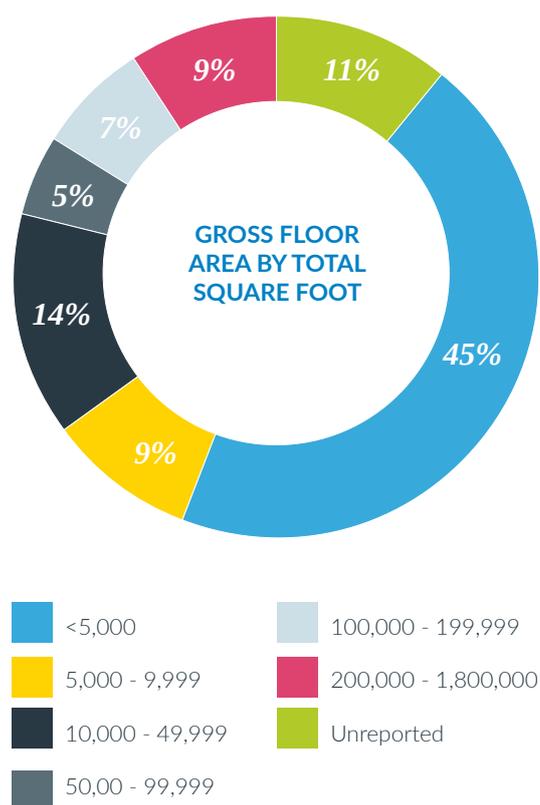
### Participation

A Utility Account Holder is considered a participant when they create a profile in Portfolio Manager® and connect with Edison Energy. They may be a participant without being in compliance, but all compliant entities or person are participants.

### Compliance

To be considered compliant a Utility Account Holder must: create an ENERGY STAR Portfolio Manager account, enter their property information, report utility usage data for the full 2016 calendar year, and connect and share the property and usage with Edison Energy. Compliant data for Utility Account Holders includes reported usage for electricity, natural gas, and water as applicable.

The following charts provide some context for understanding the types of properties found at the Port. Buildings vary in age from being constructed in the late 1800s through buildings built in the 2010s. The distribution of ages by decade indicates the 1980s is the most prominent in terms of number of buildings built. The distribution by gross floor area indicates that 42% of the utility account holders occupy less than 5,000 sq. ft., either as standalone buildings or space in a larger building.



# PARTICIPATION & COMPLIANCE

## *continued*

*Several methods are used to encourage tenant participation and facilitate compliance. Some of these are listed below.*

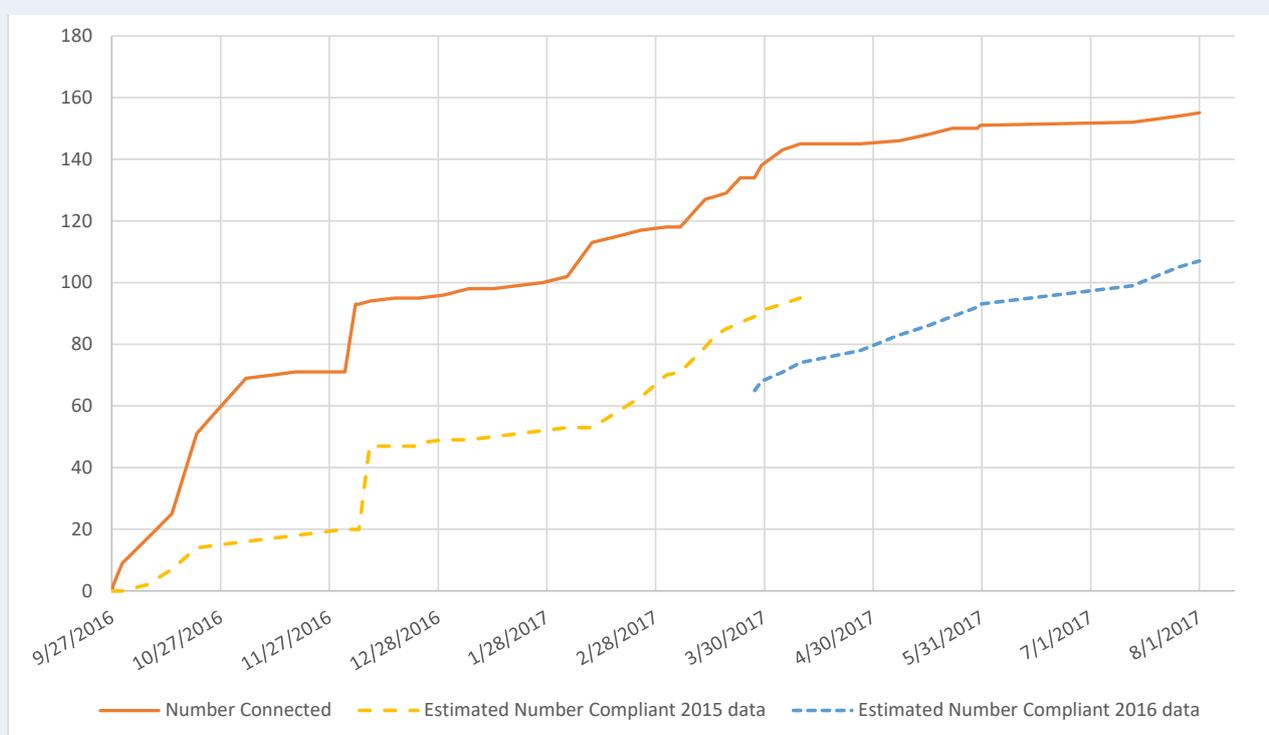
- 1. Training** for tenants and subtenants was provided by the Port, the Center for Sustainable Energy (CSE), and Edison Energy at no cost to attendees. These trainings covered use of ENERGY STAR Portfolio Manager with a specific focus on compliance with the Ordinance in order to encourage increased participation and a better understanding of the tools available within Portfolio Manager. Two websites dedicated to the program have been created with training videos and resources: <https://www.portofsandiego.org/utility-usage-reporting.html> and <http://greenportnetwork.org/utility-usage-reporting>.
- 2. Outreach** to tenants and subtenants has helped increase participation. Outreach has been performed over the phone, in person, and via email.
- 3. Individual Technical Assistance** has been provided via phone, e-mail, and in-person meetings.
- 4. Data privacy** is built into Ordinance 2844 and its implementation. Utility data with tenant specific information is not shared with the Port. This process encourages participation while still ensuring meaningful data is provided. Utility account holders have complete access to individual data through Portfolio Manager and can track their progress overtime while comparing their facility to other similar buildings. The Port will benefit from tracking utility usage overtime, as there is a direct correlation to CAP progress reporting.

# PARTICIPATION & COMPLIANCE

*continued*

A total of 155 tenant, subtenant, and Port-operations created a Portfolio Manager account and connected with Edison Energy as of August 1, 2017, and of this total connected, 122 are providing utility data that is included in this report. This corresponds to 48% of the approximately 326 utility account holders located in the Port are connected (participating) and 37% are reporting utility data.<sup>7</sup> Figure 3 below represents utility account holder participation and compliance over the course of implementing the Ordinance.

**FIGURE 3:** Utility Account Holder Participation



The chart above shows the increase in participation and compliance since implementation of the Ordinance began. The top line shows the number of utility account holders who have connected with Edison Energy through Portfolio Manager. The dashed yellow line shows the approximate number of utility account holders compliant for 2015 data. The percent compliance for 2015 data continues to increase, but for simplicity, that trend line ends around the time that the first annual report was issued. The dashed blue line shows the approximate number who compliant for 2016 data. In March and April, Edison Energy began tracking compliance for 2016 data while continuing to also track 2015 compliance. At that time, the 2016 data compliance lagged behind 2015. This largely reflects the importance of individual outreach to tenants. The 2015 rates were higher because SDPTA, CSE, and Edison Energy had worked with tenants to achieve compliance by the first year deadline. Later, in June and July, the team worked with tenants to achieve compliance prior to the second year deadline of August 1, 2017.

## 4. ENERGY

### *annual use distribution*

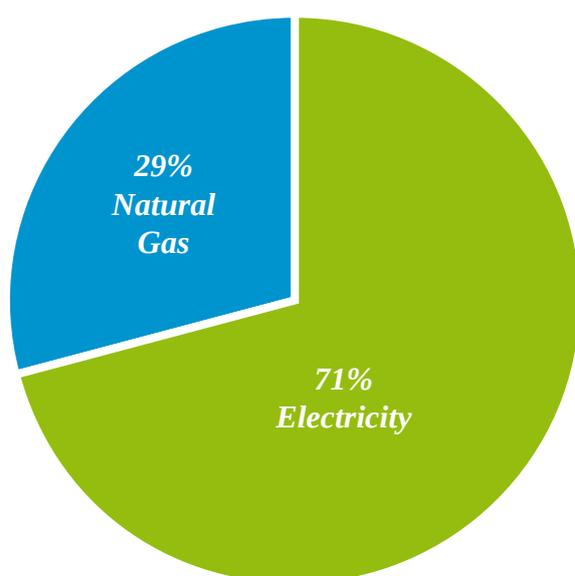
*This section summarizes the total reported energy by participating buildings. The distribution of reported energy use by fuel type and a comparison to estimated total usage are provided. Note that all data presented is based on the utility data submitted as part of the data aggregation program required by the Ordinance.*

#### **Annual Energy Use Distribution**

Total reported energy usage is 3,485,430 million British Thermal Units (MMBtu) per year, which is up from the 1,057,965 MMBtu per year reported in the 2015 data. This Energy usage increase isn't necessarily from actual increased energy usage, but rather an increase in compliance from utility account holders. Table 1 on the following page provides a year-over-year comparison of the annual electric, natural gas, and total energy usage from 2015 to 2016. The data is provided in kilowatt-hours (kWh)

for electricity and therms for natural gas. This data is then converted to MMBtu to show the total energy use on a consistent unit basis. The reported usage is also compared to the estimated total electricity and natural gas usage. The total usage is based on the Port's 2015 Emissions Inventory and adjusted SDG&E Port-wide summary data provided to Edison Energy by the Port. Chart 1 graphically presents the distribution of total annual energy use between electricity and natural gas on an MMBtu/yr. basis for 2016.<sup>8</sup>

**CHART 1:** Total Annual Energy Use Distribution 2016 Calendar Year Data



*The total energy use by fuel type shows only the 2016 reported utility usage.*

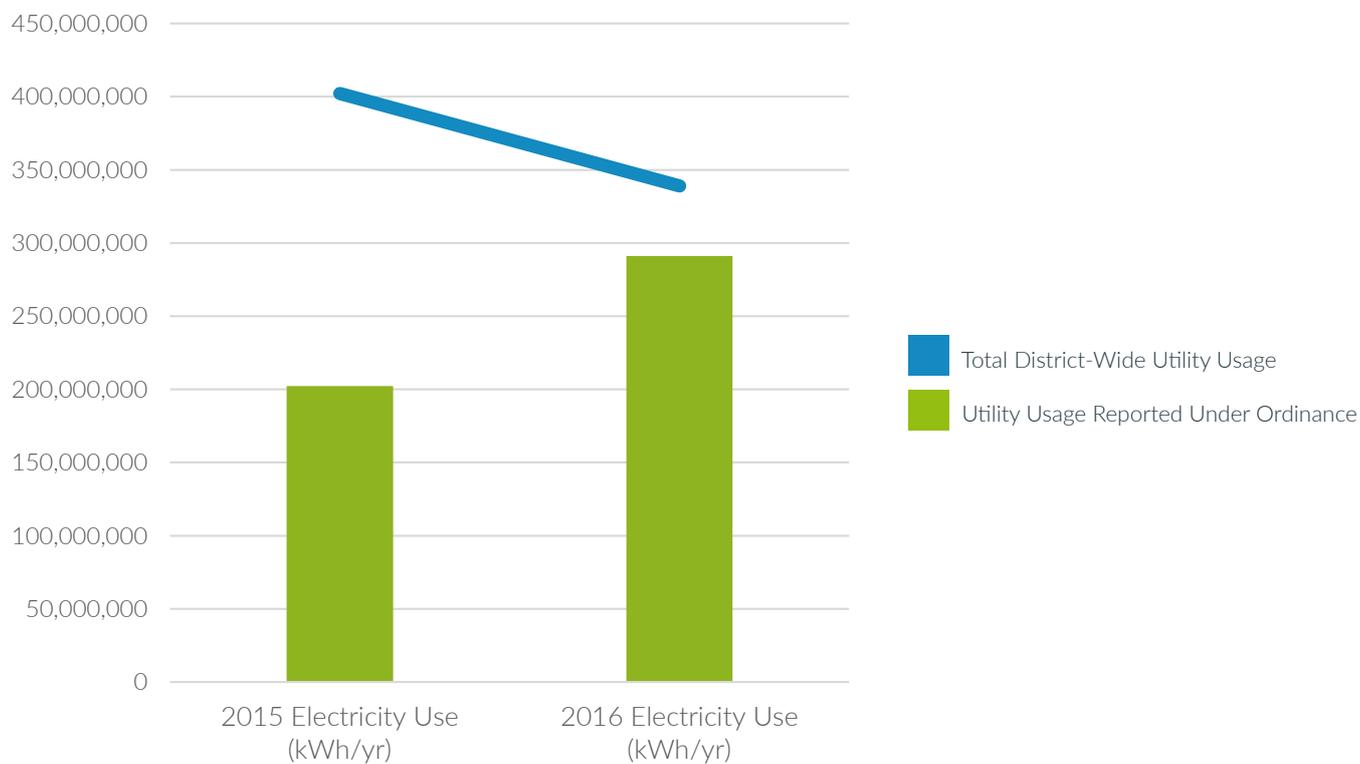
# ENERGY

*continued*

**TABLE 1:** 2015 vs 2016 Total Energy Use

	2015			2016		
	Electricity Use (kWh/yr)	Natural Gas (therms/yr)	Total Energy (MMBtu/yr)	Electricity Use (kWh/yr)	Natural Gas (therms/yr)	Total Energy (MMBtu/yr)
<b>Total Estimated Utility Usage</b>	402,055,889	25,486,155	3,920,487	339,089,994	25,781,464	3,735,121
<b>Utility Usage Reported Under Ordinance</b>	202,195,384	3,680,456	1,057,965	291,147,838	24,920,335	3,485,430
<b>Estimated Percentage Reported Under Ordinance</b>	50.3%	14.4%	27.0%	86%	97%	93%

The following chart shows a comparison of the total amount of electricity use reported under the ordinance for 2015 and 2016 utility data. The trend line on top represents the total district-wide usage provided by SDG&E.



# ENERGY

## continued

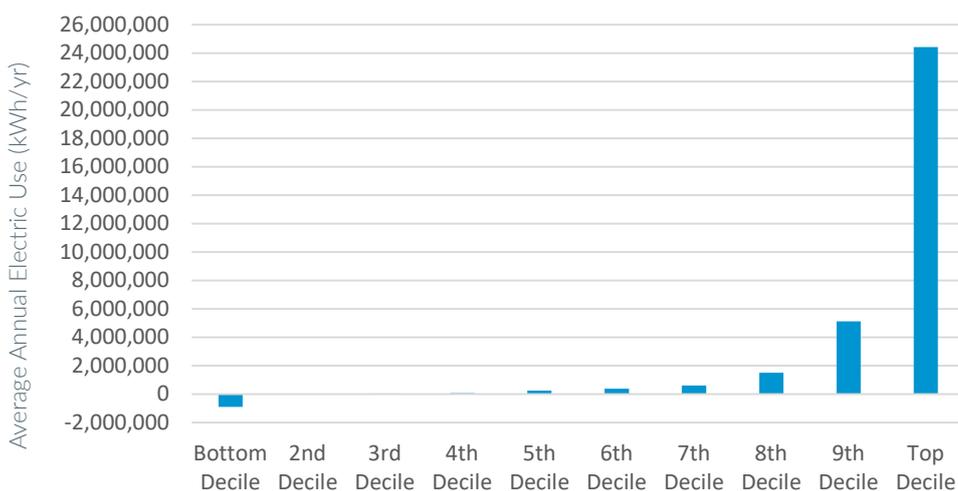
### Decile Analysis

Table 2 and the chart below provides decile analysis of the 2016 energy presented in the previous sections. For each energy category (electricity, natural gas, and total energy use), the utility account holders have been sorted from largest to smallest user. The deciles are then created by grouping the 10% of users with the lowest usage (bottom decile), second 10% of users (2nd decile), and so on. This analysis indicates the relative contributions of large energy users, mid-size energy users, and small energy users. The values shown in the chart are the average electric usages for each decile. The table shows the total usages in each in decile. Based on the results below, the top decile accounts for 75% of all the annual electricity use, 90% of all annual natural gas use, and 88% of the total energy use reported under the Ordinance for calendar year 2016.

**TABLE 2:** Decile Analysis of Reported 2016 Utility Usage Under Ordinance

	Electricity (kWh/yr)	Electricity (%)	Natural Gas (therms/yr)	Natural Gas (%)
1st Decile	219,668,752	75%	22,518,633	90%
2nd Decile	51,224,229	18%	1,465,200	6%
3rd Decile	14,256,609	5%	463,570	2%
4th Decile	6,467,861	2%	239,196	1%
5th Decile	3,476,770	1%	143,268	1%
6th Decile	2,900,184	1%	69,336	0.3%
7th Decile	696,565	0.2%	14,431	0.1%
8th Decile	378,443	0.1%	3,829	0.02%
9th Decile	146,398	0.1%	2,205	0.01%
10th Decile	-8,067,974	-3%	667	0.00%
Total	291,147,838	100%	24,920,335	100%

**CHART 2:** Annual Electric Use by Decile



# ENERGY

## energy analysis by key property characteristics and geography

The Port of San Diego consists of over 2,400 acres of land plus the water area. It contains hundreds of businesses, including the approximately 326 utility account holders, and encompasses parts of five cities. Economic activity of the Port consists of billions of dollars of commercial, industrial, and other endeavors, ranging from manufacturing to marinas and restaurants to refrigeration warehouses. Understanding this diverse economic and political geography can yield insights into the sources and distribution of energy and water use in the Port and the associated GHG emissions. These insights may then be used to focus efforts toward achievement of the CAP goals.

Each utility account holder has been identified by the Port as being in a particular Business Sector and whether it is a member of the Green Business Network (GBN). In addition, each property is identified by the City in which it located. These three characteristics—business sector, GBN membership, and city—have been used to aggregate and analyzes the reported utility data.

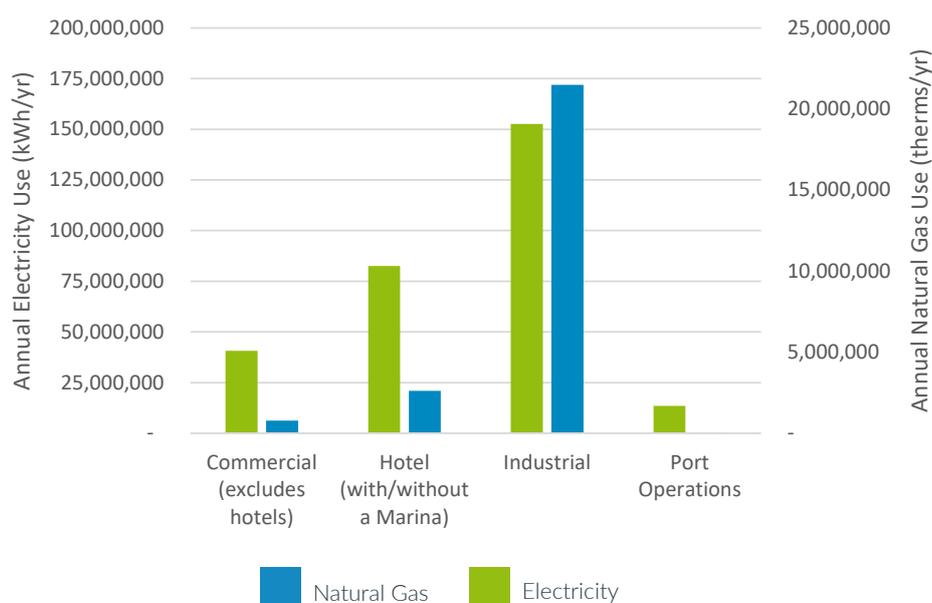
### Business Sectors

The Port is home to a wide variety of businesses. Each utility account holder in the Port is identified as a member of one of the business sectors identified in Table 3. The table presents the number of utility account holders that are reporting utility data in each business sector.

**TABLE 3:** Number of Utility Account Holders By Business Sector for CY 2016 Data

Business Sector	Number of UAHs
Commercial (excludes hotels)	87
Hotel (with/without a Marina)	12
Industrial	22
Port Operations	1
<b>Total</b>	<b>122</b>

**CHART 3:** Electric and Natural Gas Use by Business Sector, CY 2016 Data



Note: Port-operated facilities do have natural gas consumption; however, the usage is small relative to the Port Tidelands overall, and therefore the column isn't visible in Chart 3.

# ENERGY

## *continued*

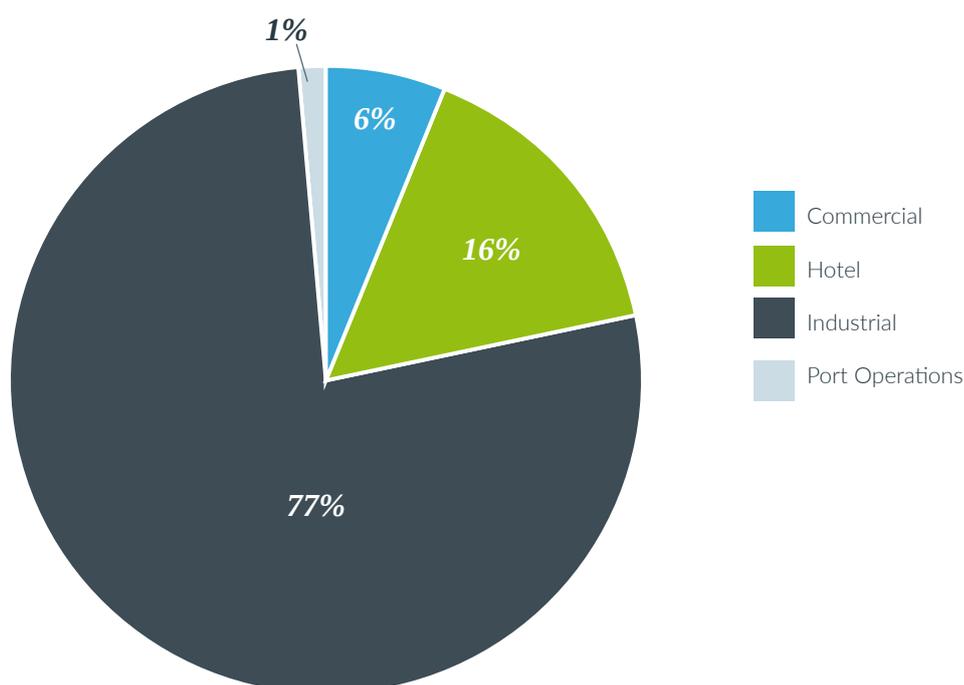
Chart 3, Chart 4 and Table 4 provide a breakdown of the electricity, natural gas and total energy use by business sector. Industrial is the largest electric and natural gas consumer, followed by Hotels (with/without a Marina).

**TABLE 4:** Electric and Natural Gas Use By Business Sector

Business Sector	Electricity (kWh/yr)	Natural Gas (Therms/yr)
Commercial (excludes hotels)	40,711,132	786,472
Hotel (with/without a Marina)	82,566,522	2,611,621
Industrial	152,541,918	21,481,525
Port Operations	13,474,954	31,255

Based on the reported 2016 utility data, the industrial sector consumes 77% of all the reported energy, with the hotel sector reporting 16% of the overall energy consumption. For comparison, hotels account 38% of the total gross floor area of the utility account holders reporting data. The gross floor area distribution across the business sectors in a chart below in this section.

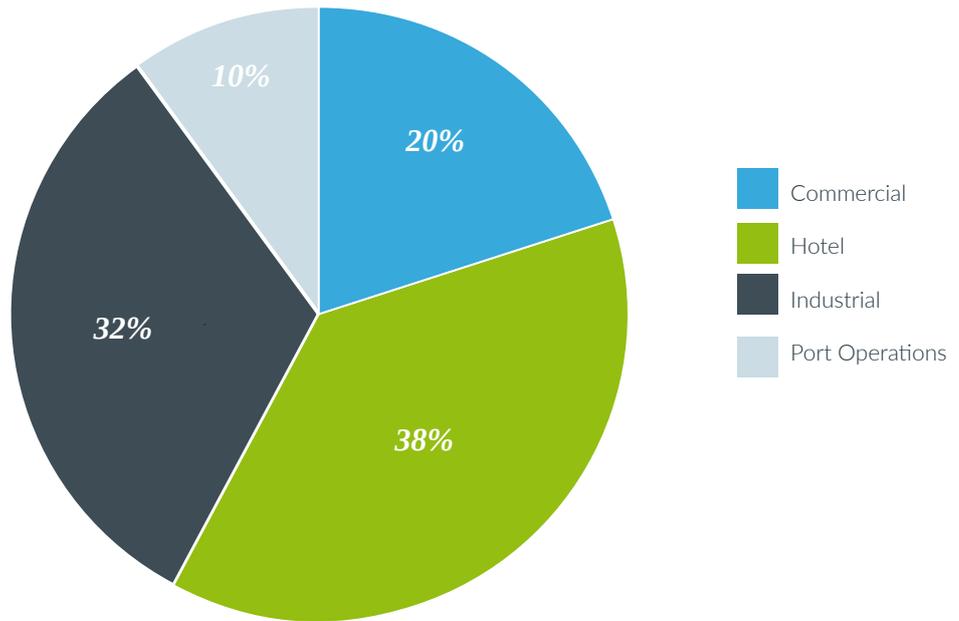
**CHART 4:** Total Energy Use by Business Sector for CY 2016 Data



# ENERGY

*continued*

**CHART 5:** Total Floor Area by Business Sector for CY 2016 Data



## City

Table 5 provides key aggregated energy data by city. The cities of Chula Vista, Imperial Beach, and National City are grouped together and shown as South Bay to meet the aggregation threshold. The vast majority of reported energy use is in the City of San Diego due to the large acreage of tidelands in the city of San Diego.

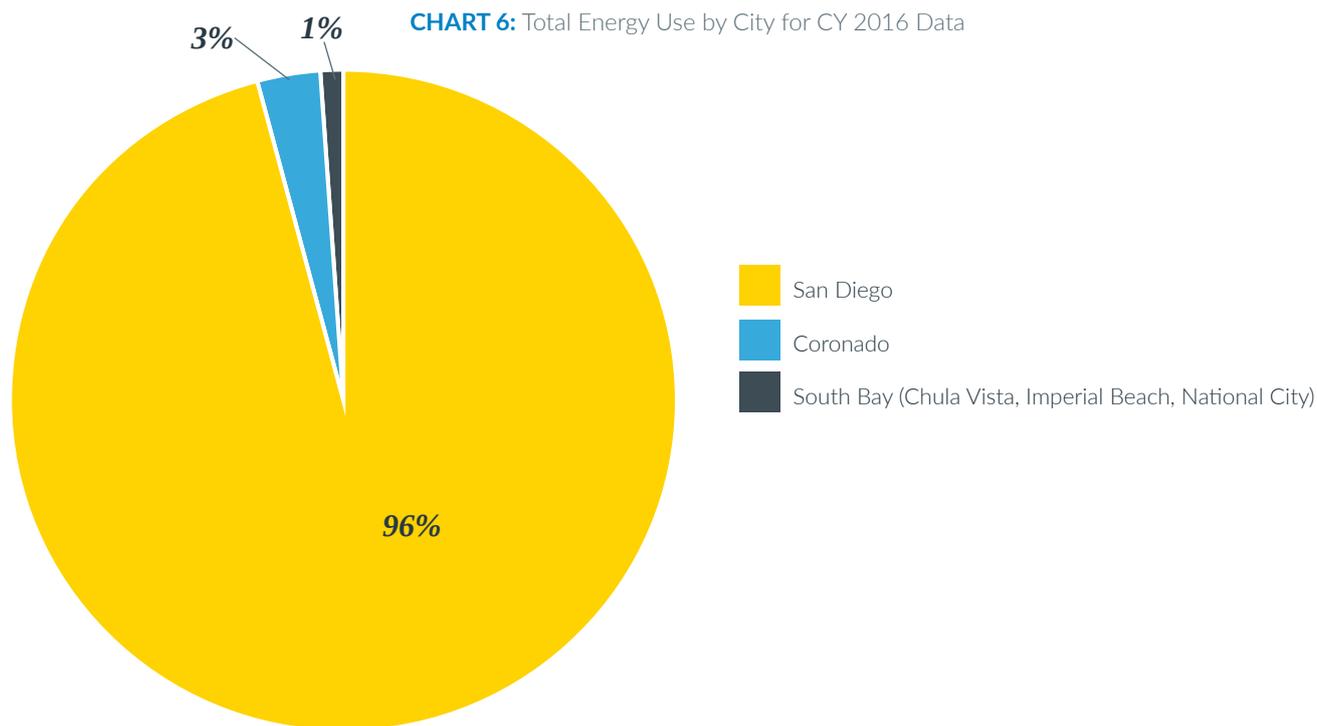
**TABLE 5:** Electric and Natural Gas Use By City

City	Electricity (kWh/yr)	Natural Gas (Therms/yr)
San Diego	257,225,375	24,306,312
Coronado	13,811,890	590,624
South Bay (Chula Vista, Imperial Beach, National City)	11,916,561	23,303

# ENERGY

*continued*

Below is the total energy displayed in a pie chart by city. As seen in the chart, San Diego accounts for 96% of the reported energy use.



For comparison, San Diego accounts for 87% of the gross floor area of the utility account holders reporting data, Coronado 5%, and South Bay 8%.

# ENERGY

## continued

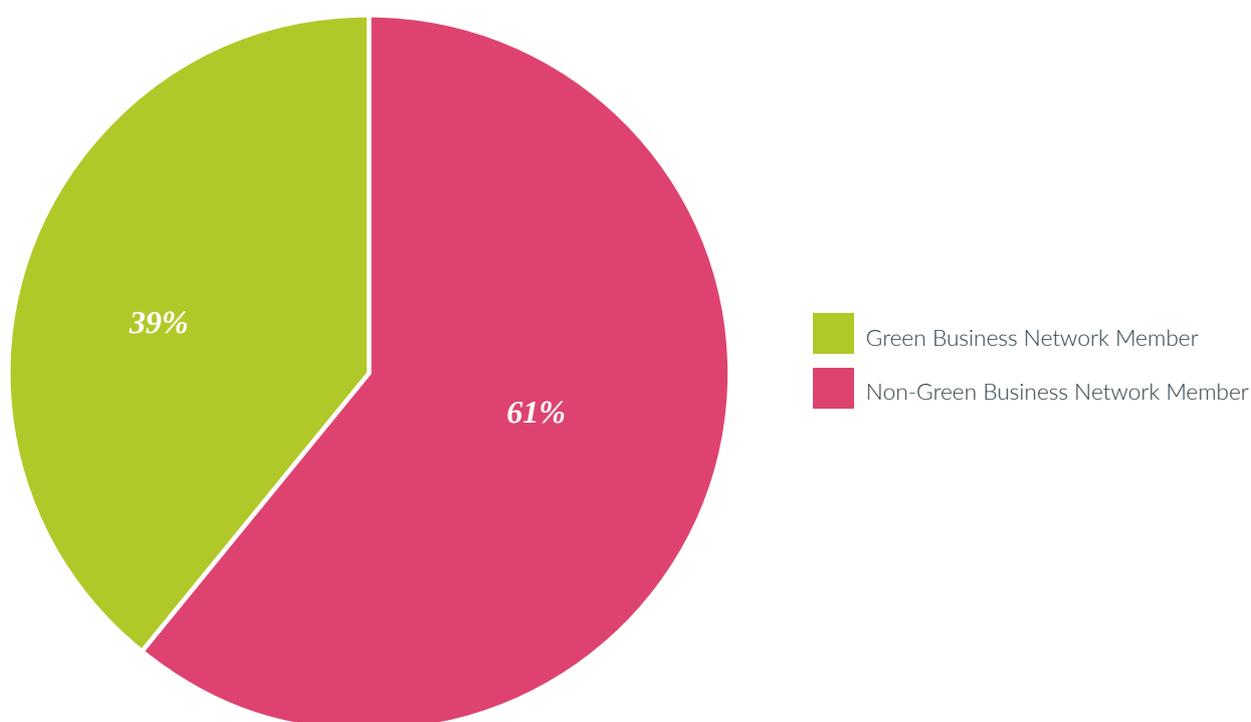
### Green Business Network Membership

Table 6 provides insight to the energy data reported from Green Business Network members. As seen in Chart 7 the Green Business Network members only make up 39% of the total reported energy use. As described from their website, the Green Business Network is an integrated energy-efficiency and sustainability effort spearheaded by the Port of San Diego with support from the San Climate Collaborative and San Diego Gas & Electric. The Green Business Network is currently 89 business and this number continues to grow. For more information, visit [www.greenportnetwork.org](http://www.greenportnetwork.org).

**TABLE 6:** Electric, Natural Gas and Total Energy Use by Green Building Network Membership for CY 2016 Data

Member Type	Electricity (kWh/yr)	Natural Gas (Therms/yr)
Green Business Network Members	251,932,664	4,860,315
Non-Green Business Network Members	31,021,162	20,050,559

**CHART 7:** Total Energy Use by Green Business Network Membership



## 5. WATER

### summary of results

This section summarizes the total reported water by participating utility account holders. The overall year-over-year summary and 2016 data aggregation by key characteristics are provided. Note that all data presented is based on the utility data submitted as part of the data aggregation program required by the Ordinance.

#### Annual Water Use Distribution

Total reported water usage for calendar year 2016 is 915,922,229 gallons, up from 429,305,000 gallons reported in the 2015 data. Table 7 provides a year-over-year comparison of the annual reported water usage from 2015 to 2016. The data is provided in gallons per year. The increase in usage is most likely due to increased participation rather than increased usage.

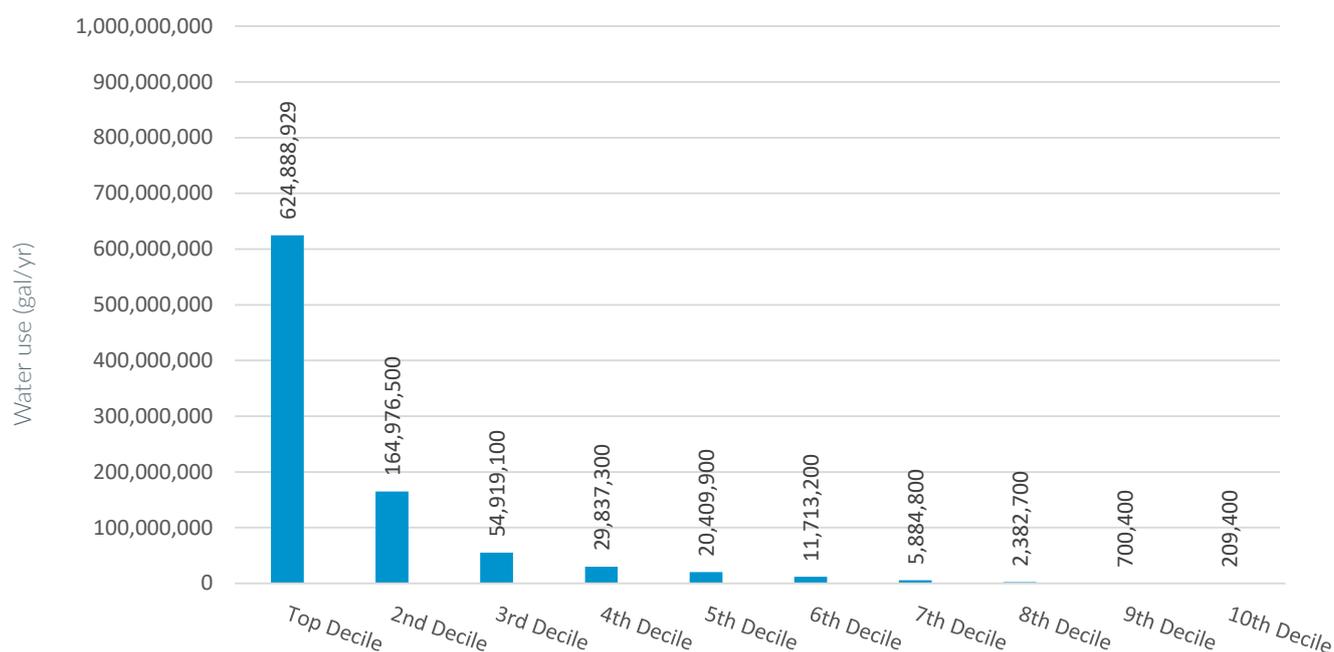
**TABLE 7:** 2015 vs 2016 Total Water Use

	2015 (gallons/year)	2016 (gallons/year)	% Reporting Increase
<b>Total Reported Water Usage</b>	429,305,000	915,922,229	113%

#### Decile Analysis

Chart 8 provides decile analysis of the 2016 water presented in the previous section. Based on the results below, the top decile accounts for 68% of all the water reported under the 2016 Ordinance.

**CHART 8:** Decile Analysis of Reported 2016 Utility Usage Under Ordinance



# WATER

## water analysis by key property characteristics and geography

As provided in the Energy section, water usage of each participating utility account holder have been aggregated into three categories: Business Sector, City and Green Business Network membership.

### Business Sectors

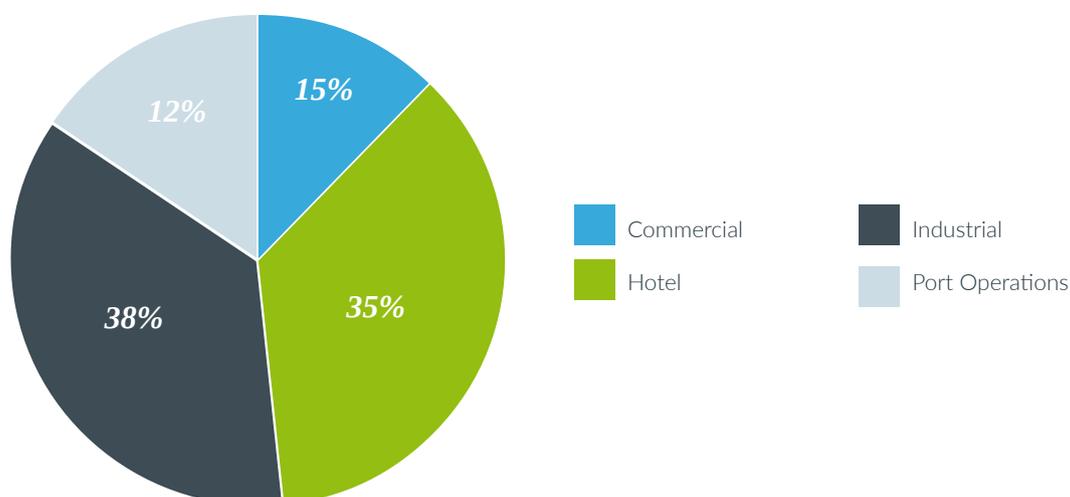
The distribution of utility account holders by business sector has been utilized to understand the distribution of water across the Port. Table 8 and Chart 9 below provides a breakdown of the water by business sector from the participating utility account holders. As shown below, Industrial is the largest water consumer, followed closely by Hotels (with/without a Marina).

**TABLE 8:** Water Use By Business Sector for CY 2016 Data

Business Sector	Water (gal/yr)
Commercial (excludes hotels)	133,483,200
Hotel (with/without a Marina)	319,152,029
Industrial	340,584,400
Port Operations	104,506,000

Based on the reported water data, the Industrial business sector consumes 38% of the water use, with the Hotel sector consuming a similar amount at 35%. The Commercial and Port Operations sectors are close in water use, with 15% and 12% consumed, respectively.

**CHART 9:** Total Water Use by Business Sector for CY 2016 Data



# ENERGY AND WATER

## *summary of results*

### **Summary of Results**

The following table provides a year-over-year comparison of the results for 2015 and 2016, including the GHG emissions that are discussed in the following section of the report.

	2015 REPORTING YEAR	2016 REPORTING YEAR
<b>NATURAL GAS USAGE</b> REPORTED ANNUALLY (THERMS/YR)	3,680,456	24,920,335
<b>PERCENTAGE</b> OF ESTIMATED TOTAL NATURAL GAS USE ON PORT TIDELANDS	14%	97%
<b>ELECTRICITY USAGE</b> REPORTED ANNUALLY (KWH/YR)	202,195,384	291,147,838
<b>PERCENTAGE</b> OF ESTIMATED TOTAL ELECTRICITY USE AT THE PORT	50%	86%
<b>TOTAL ENERGY USAGE</b> REPORTED ANNUALLY (MMBTU/YR)	1,057,965	3,485,430
<b>PERCENTAGE</b> OF ESTIMATED TOTAL ENERGY USE ON PORT TIDELANDS	27%	93%
<b>TOTAL GREENHOUSE GAS EMISSIONS</b> REPORTED ANNUALLY (MT CO <sub>2</sub> E)	79,055	206,553
<b>WATER USAGE</b> REPORTED ANNUALLY (GALLONS/YR)	429,305,000	915,922,229
<b>TOTAL NUMBER OF UTILITY ACCOUNT HOLDERS</b> IDENTIFIED (AS OF 8/2/17)	340	326
<b>NUMBER IN COMPLIANCE</b> OF THE PARTICIPATING UTILITY ACCOUNT HOLDERS	79	107
<b>PERCENTAGE IN COMPLIANCE</b>	23%	33%
<b>NUMBER OF PARTICIPATING</b> UTILITY ACCOUNT HOLDERS	127	155
<b>PERCENTAGE OF PARTICIPATION</b>	37%	48%

Note that the number of utility account holders in compliance and participating are different from the number that are reporting utility data. Briefly, the number “participating” is all utility account holders that have created a Portfolio Manager account and connected with Edison Energy. The number “reporting utility data” is all utility account holders who have created a Portfolio Manager account, connected with Edison Energy, **and** reported some utility data correctly such that it can be included in the aggregated values, which is the 122 UAHs noted previously (37% of the total). The number “in compliance” is all utility account holders who created a Portfolio Manager account, connected with Edison Energy, reported some utility data, and entered all data correctly per the Ordinance and Portfolio Manager requirements, including monthly meter data without duplicate entries. Please refer to the Section 7 of the report for additional reasons for some of these differences.

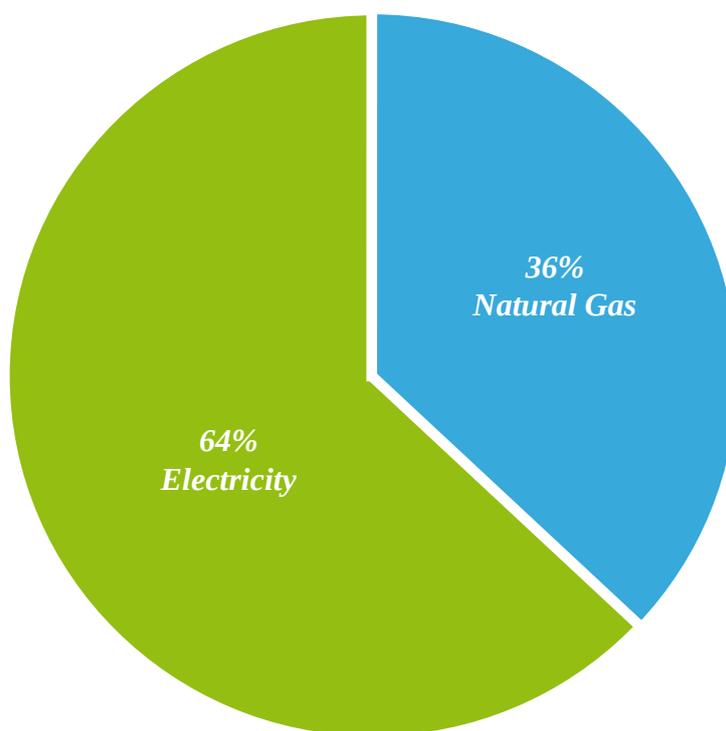
## 6. GREENHOUSE GAS EMISSIONS

### *addressing global climate change and sustainability efforts*

*Addressing global climate change and reducing GHG emissions are key features of the Port's CAP and Green Port Program. Benchmarking GHG emissions will help the Port measure progress toward the Climate Action Plan goals. The total GHG emissions of the reporting properties for Calendar Year 2016 are 206,553 MT CO<sub>2</sub>e/year, which is up from 79,055 MT CO<sub>2</sub>e/year reported in the 2015 data report. The GHG emissions are based on the GHG emissions factors provided by the Port, which are sourced from the 2016 GHG Inventory for Port Operations (electric) and The Climate Registry General Reporting Protocol for 2017 (natural gas)*

The following figure shows the distribution of reported GHG emissions between electricity and natural gas usage at the Port.

**CHART 10:** GHG Emissions Distribution



# GREENHOUSE GAS ANALYSIS

## GHG analysis by key property characteristics and geography

As provided in the Energy and Water sections, the greenhouse gas emissions of each participating utility account holder have been aggregated into three categories: Business Sector, City and Green Business Network membership.

### Business Sectors

The distribution of utility account holders by business sector has been utilized to understand the distribution of GHG emissions across the Port. Table 9 below provides a breakdown of the GHG emissions by business sector from the participating utility account holders. As shown below, Industrial is the largest GHG emissions producer, followed by Hotels (with/without a Marina).

**TABLE 9:** GHG Emissions By Business Sector for CY 2016 Data

Business Sector	Electricity MTCO <sub>2e</sub>	Natural Gas MTCO <sub>2e</sub>	Total MTCO <sub>2e</sub>
Commercial (excludes hotels)	10,340	4,184	14,525
Hotel (with/without a Marina)	20,971	13,896	34,868
Industrial**	38,745	114,303	153,048
Port Operations	3,422	166	3,588
<b>Total</b>	<b>73,481</b>	<b>132,551</b>	<b>206,032</b>

\*\*Note : This category includes utility use of US Navy vessels that is beyond the direct control of the shipyards.

Based on the reported water data, the Industrial business sector consumes 38% of the water use, with the Hotel sector consuming a similar amount at 35%. The Commercial and Port Operations sectors are close in water use, with 15% and 12% consumed, respectively.

### City

Table 10 below provides key aggregated GHG emission data by city. Based on the reported GHG data, San Diego leads GHG emissions at 95% of all GHG produced.

### Green Business Network Membership

Table 11 below provides insight to the GHG data reported from Green Business Network members. As seen in below, the Green Building Network members make up 44% of the reported GHG emissions.

**TABLE 10:** GHG Emissions Use By City for CY 2016 Data

City	Electricity MTCO <sub>2e</sub>	Natural Gas MTCO <sub>2e</sub>	Total MTCO <sub>2e</sub>
San Diego	65,335	129,333	194,669
Coronado	3,508	3,142.71	6,650
South Bay (Chula Vista, Imperial Beach, National City)	3,026	124.00	3,150

**TABLE 11:** GHG Emissions by Green Building Network Membership for CY 2016 Dat

Member Type	Electricity MTCO <sub>2e</sub>	Natural Gas MTCO <sub>2e</sub>	Total MTCO <sub>2e</sub>
Green Building Network Members	63,990	25,861	89,852
Non-Green Building Network Members	7,879	106,689	114,568

## 7. SUCCESSES, CHALLENGES, AND NEXT STEPS

*The second year of implementation has seen several successes and continued challenges for Ordinance 2844. This section of the report describes some of these experiences.*



# SUCCESSSES & CHALLENGES

## *Successes*

The Port's staff presented a summary of the baseline report to the Board of Port Commissioners in the spring of 2017. The Commissioners provided feedback that staff then used to improve implementation of the Ordinance. These process changes have yielded positive results.

### *Large Energy Users*

One important change is that the Port staff decided to focus on obtaining participation and achieving compliance for the largest energy users. This was done by identifying some of the larger properties at the Port and then working with CSE, SDPTA, and Edison Energy to contact those tenants and assist them with reporting their utility data. These outreach efforts and technical assistance are the same as those provided to all tenants.

By focusing on these large users, a significantly greater percentage of the total energy use at the Port is now included in the utility data aggregations. The benchmark against which this progress is measured is the total district-wide electricity and natural gas use data provided by SDG&E. As mentioned earlier in the report, the year-over-year progress is significant. For calendar year 2015 data, approximately 27% of the total energy use in the overall buildings sector (including some shore power) was reported through the Ordinance. In calendar year 2016 data, total energy use in this sector rose to 93%.

### *More Frequent and Detailed Reporting*

Another success has been the Port's request for more frequent and detailed reporting of the aggregated utility data by Edison Energy. Since the beginning of implementation of the Ordinance, the Port has received periodic updates from Edison Energy of the total reported electricity and natural gas consumption, greenhouse gas emissions, and overall participation and compliance rates. Starting in May 2017, quintile and decile analyses have been added to this periodic reporting. This additional detail has brought greater understanding of the data and allowed the Port to develop more effective outreach strategies.

### *Continued Contact with Utility Account Holders*

At the Port's request, Edison Energy provided specific feedback to all participating utility account holders in the form of "thank you" letter e-mails and in some cases, individual interviews and case study development. This enabled the Port to gather more qualitative data on the effectiveness of the Ordinance.

Utility account holders not in compliance received specific information on what was needed to correct their data. This process achieved increased contact with the UAHs and clarification regarding compliance statuses. Follow up with additional instruction was available depending on status or guidance needed on a case-by-case basis.

# SUCCESSSES & CHALLENGES

## *continued*

### **Challenges**

While successes have been achieved, the Ordinance also continues to face some challenges in implementation. These challenges present some barriers that still must be overcome.

#### ***Using Portfolio Manager***

Portfolio Manager is a powerful online application that has received widespread support in the building industry. While Portfolio Manager doesn't require extensive technical energy expertise, it is often most useful to large property owners who have in-house energy management staff or can hire external energy consultants. These people bring technical knowledge and experience that facilitate successful use of Portfolio Manager. Smaller businesses, like many of those at the Port, face some challenges when using the system, sometimes due to competing interests that take time away from energy management.

This experience gap is addressed, in part, by CSE, SDPTA, and Edison Energy. But the individual tenants still need to perform certain tasks themselves. One way that this barrier to success has been overcome is to provide temporary "Full Access" rights to Edison Energy which then allows direct addressing of specific issues, such as proper energy meter setup and input. After the initial setup is complete, the tenant/subtenant can then return the access to "Read Only" if desired.

#### ***Participation and Compliance Levels Remain Relatively Low***

One significant challenge is the relatively low level of utility account holder participation, consisting of 48% participation and 33% in compliance as of August 1, 2017. These values are based on an estimated total population of 326 utility account holders.<sup>9</sup> As a result, it is difficult to make certain conclusions about the distribution of the Port's energy and water usage among different categories

of users. The relatively high proportion of energy usage reported helps overcome this limitation.

The Port has continued to engage stakeholder groups, including the SDPTA, and working closely with consultants such as CSE. SDPTA's and CSE's knowledge of and contacts with various tenants are a great benefit for compliance. CSE has worked closely with SDG&E to troubleshoot and address any data access issues pertaining to ABS. There may be other stakeholder groups that can provide additional assistance.

#### ***Unique Property Types for Benchmarking with Energy Use Intensity and ENERGY STAR Scores***

A common reason for using Portfolio Manager in the building industry is the ability to benchmark properties against similar properties across the nation.

This benchmarking relies on large data sets of comparable buildings, such as commercial office buildings. Over 80 property types are available in Portfolio Manager for comparing EUIs. Over 20 are eligible for an ENERGY STAR score. However, certain Port properties with non-building use on energy meters (such as shore power) may receive skewed metric data. For example, Marinas and Maritime Industrial facilities may receive limited benefits from using Energy Use Intensity (EUI) and ENERGY STAR scores to compare the buildings to other properties

# SUCSESSES & CHALLENGES

## Common Mistakes for Complying with Ordinance 2844

*Participation in the data aggregation and benchmarking process is a complex process. This section summarizes potential pitfalls that tenants may face when participating in the utility account holder reporting process, and methods to troubleshoot these user and system errors:*

### 01 **Not Sharing Property(ies) and Meter(s)**

Sharing properties and meters with the Port Benchmarking Account is a crucial step of the utility reporting process. In addition to connecting with Edison Energy's Portfolio Manager benchmarking account, tenants must also remember to share their properties and associated meters with Edison Energy. Not providing a minimum of viewing permissions for both properties and respective energy and water meters to the Port Benchmarking Account prevents Edison Energy staff from being able to troubleshoot the current compliance status of tenant properties and meter data.

To resolve this issue, tenants can consult the ENERGY STAR Portfolio Manager Reference Guide for instructions on sharing their property. This step requires modifying the sharing / access permissions on ENERGY STAR Portfolio Manager to either "Read Only" or "Full Access." Tenants have the option of customize the exchanging of data for their properties at their discretion via the "Personalized Sharing & Exchange Data ("Custom Orders")" selection. A phone call or email to tenant support is another way to resolve this issue. While the Edison Energy cannot yet view the data, staff may be able to walk a tenant through how to correctly complete the sharing process.

### 02 **Not Providing a Full Calendar Year of Data**

A full calendar year of data is required for benchmarking of meter data. In most circumstances, utility bills are billed mid-month. Tenants input a range of energy and water meter usage data that falls short of all 365 days in a calendar year. For example, a billing period may be November 17 – December 16. In this case, the utility account holder must include the months that "bridge" between two years. For example, a December 17 – January 16 bill would need to be included.

To capture the required range of data for benchmarking, tenants must input usage data one cycle into the prior or subsequent year. A phone call or email to tenant support is one way to resolve this issue. While the Port is not able to see tenant data, Edison staff can view the data. Edison staff can help identify shortfalls of data and assist a tenant in bridging the years.

### 03 **Meter Data Gap, Overlaps, and Duplicates**

Utility data for each meter in the ENERGY STAR Portfolio Manager must be entered in a sequential order that captures the entirety of a calendar year without any gaps or overlapping, even by one business day. When entering usage data manually, tenants must pay extra attention to the start and end dates of monthly entries.

# SUCCESSSES & CHALLENGES

## continued

Utility data for each meter in ENERGY STAR Portfolio Manager must be entered so that the entirety of a calendar year is captured without any gaps or overlapping, even by one business day. When entering usage data manually, tenants must pay extra attention to the start and end dates of monthly entries.

Monthly Entry	Start Date	End Date
Entry 1	12/15/2014	1/15/2015
Entry 2	2/14/2015	2/16/2015

To the left is an example of a gap in entries that would be flagged. Notice the End Date for Entry 1 is a month later, thus creating a one month gap.

Even the smallest of meter data errors are identified and flagged in ENERGY STAR Portfolio Manager. These errors are made visible to users in the form of yellow boxed error messages and red exclamation symbols (!) next to energy and water meters. A data quality checker may be run for a selected time period to check the integrity of inputted data.

Monthly Entry	Start Date	End Date
Entry 1	12/15/2014	1/15/2015
Entry 2	1/14/2015	2/16/2015

## 04

### *Issues with SDG&E Automated Benchmarking Service (ABS)*

SDG&E's Automated Benchmarking Service (ABS) is an opportunity for tenants to backfill 14 months of previous meter data and automate future monthly electricity and natural gas meter data entries into properties within Portfolio Manager. However, all the requirements listed below must be performed inside of Portfolio Manager to activate ABS:

- Tenants are required to connect SDG&E's Benchmarking Account and modify permissions for their property and any associated meters. This can be achieved by selecting "Customized Sharing and Exchange Data" when modifying permissions, and selecting "Full Access" permissions for all items
- The ABS uses Portfolio Manager's web services feature and requires inputs from tenant's most recent utility bill:
  1. the most recent bill amount
  2. the meter's 8-digit SDG&E meter number
  3. the first 10-digits of the SDG&E account number associated with that meter. Tenants must input the correct information in the correct fields when sharing with SDG&E's Benchmarking Account

Once the ABS service has been activated, tenants must perform the following steps to assure accurate that is ABS service is performing properly:

- Tenants must verify the property is actively receiving monthly updates within ENERGY STAR Portfolio Manager.
- Tenants must verify that there are no duplicate entries within the meter data. This occurs when the tenant manually enters meter data, then activates the ABS afterwards.

It is recommended that tenants consult their copy of the ENERGY STAR Portfolio Manager Reference Guide for more detailed instructions on troubleshooting any errors. Tenants may also call or email Edison Energy tenant support staff to receive guidance through these steps.

# SUCSESSES & CHALLENGES

## *Inclusion or Exclusion of Utility Data for Participating but Noncompliant Utility Account Holders*

*Utility account holders must complete several steps to report their utility data and achieve compliance with Ordinance 2844. Each step can introduce compliance issues. This document lists some of the main reasons for lack of compliance for participating tenants and the impact that it has on whether a tenant's utility data is included or excluded from the reported data.*

**01**

### ***Connected with Third-Party Data Aggregator on Portfolio Manager but Not Sharing a Property***

One of the most common reasons that a participating tenant is not compliant is simply that they have not yet shared their property(ies) with Edison Energy through Portfolio Manager. In this case, Edison Energy as the third-party data aggregator can only see the tenant's basic account information, which includes their user name, email address and phone number. It's possible that the tenant has a property profile set up and utility data entered, but this cannot yet be viewed or accessed by Edison Energy.

No utility data is included in the report in this scenario.

**02**

### ***Multiple Properties with at least One Having Insufficient Data***

Some tenants have more than one property at the Port. In this case, the tenant must set up a separate property profile in Portfolio Manager for each property. Annual utility data must be entered correctly for each property for the tenant to achieve compliance as a utility account holder. It's possible, therefore, that one or more properties is effectively compliant while other(s) are not. As a result, the utility account holder overall is noncompliant.

Utility data for the compliant properties is included in the report, in this scenario. Utility data for the noncompliant properties may or may not be included, depending on the specific issues, such as those listed on the following page.

# SUCCESSSES & CHALLENGES

## *continued*

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**03**

### ***Not Providing a Full Calendar Year of Data***

Utility account holders are required to provide at least a full calendar year (365 days) of utility data for each reporting year of the Ordinance. Utility billing, however, is usually not done on the first or last day of a month. For example, a billing period may be January 15 – February 14. In this case, the utility account holder must include the month(s) that “bridge” between two years. For example, a December 15 – January 14 bill would need to be included to cover the first half of January. ENERGY STAR Portfolio Manager automatically divides the data for that month and distributes it to the appropriate year. It’s possible that this issue could arise for one utility but not another (e.g. electricity but not natural gas).

Data for utilities that have a complete calendar year of data will be included. For example, if all electricity meters have a full 365 days of data, then the annual electricity use will be included. No utility data will be included for utilities where one or more meters don’t have a full 365 days of data.

**04**

### ***Meter Data Gaps, Overlap, and Duplicate Entries***

ENERGY STAR Portfolio flags errors in the entry of monthly utility data. These may include gaps in data, overlapping data, or duplicate entries. SDG&E’s Automated Benchmarking Service (ABS) is one reason that duplicate entries are sometimes introduced. If a tenant has manually entered data and then later succeeds in using ABS, the SDG&E system will automatically upload the prior 14 months of data. This may result in duplicate entries that could show approximately twice as much usage for the period than the tenant actually experienced. This issue can be quickly rectified by deleting the manual entries, but until that time, the utility account holder will be noncompliant. Part of the reason that gaps and overlapping data cause noncompliance is that it is unclear exactly how much utility data is being used, which introduces data quality problems both for Portfolio Manager and the third-party data aggregation system. Similar to not providing data for a full calendar year, it’s possible that this issue could arise for one utility but not another (e.g. natural gas but not electricity).

Data reporting in this scenario is similar to not providing data for a full calendar year. Data for utilities that have a complete calendar year of data will be included. For example, if all electricity meters have a full 365 days of data, then the annual electricity use will be included. No utility data will be included for utilities where one or more meters don’t have a full 365 days of data.

# NEXT STEPS

*The Port, tenants, subtenants, SDPTA, CSE, and Edison Energy can take several next steps based on the results of this aggregated utility usage and benchmarking report.*

## **Participation and Compliance**

Increasing participation levels is crucial to the future success of this data aggregation and benchmarking program. Edison Energy recommends the following activities continue to increase participation:

-  Increase outreach to tenants and subtenants. The Port and SDPTA staff have increased outreach efforts through 2017 with positive results. Outreach efforts should continue to include door-to-door visits with tenants/subtenants, phone calls, and e-mails to provide education and support on the reporting requirements and assist with implementation. Edison Energy will continue to provide phone and email support to tenants with any questions or issues concerning compliance with the Ordinance.
-  Provide direct assistance to help utility account holders create Portfolio Manager accounts, enter property and meter data, and connect and share with the data aggregation system. Edison Energy will continue to increase support of tenants as they work with in Portfolio Manager and connect with us to share data for the aggregation.
-  Utilize “full access” in Portfolio Manager. Tenants have been encouraged to provide Edison Energy with read only access to their accounts because the reporting process is designed to have tenants enter data into Portfolio Manager, and then it is extracted by Edison Energy’s platform. It is possible for tenants to provide full access temporarily to Edison Energy. This level of access allows Edison Energy to review and correct aspects of the utility account holder’s property profile in Portfolio Manager, such as energy meter set-up. After the initial set up is complete, the tenant/subtenant can then return the access to read only.
-  Work with more stakeholder groups. The Port, SDPTA, and CSE staff support has been instrumental in educating tenants and subtenants with increasing compliance. SDPTA’s knowledge of and contacts with various tenants are a great benefit for compliance. SDPTA is in the process of outreach to Green Business Network members. There may be other stakeholder groups that can provide additional assistance.
-  Continue to provide education and training to utility account holders. Edison Energy recommends training sessions be offered in 2017 and/or 2018. These sessions may be the same as those already provided or could be tailored to address specific issues that have been identified during the first year of reporting.
-  Continue to work with SDG&E to facilitate Ordinance compliance. SDG&E’s Automated Benchmarking Service (ABS) provides 14 months of meter data, which does not cover the entire prior calendar year for a tenant who connects in March or later. As a result, even tenants who use ABS can be required to manually enter additional data for the beginning months of the prior calendar year to achieve compliance. Edison Energy, CSE, and the Port have communicated with SDG&E regarding this issue. In addition, some tenants have had difficult connecting and syncing with SDG&E. These difficulties are addressed through both tenant outreach and by working with SDG&E.
-  Assist in finding energy and water bills. Some tenants have difficulty finding energy and water bills from up to two years ago, and some have stated that they no longer have copies of those bills. In addition to working with SDG&E, Edison Energy may need to work directly with some of the local water utilities to assist tenants with acquiring the information that they need to achieve compliance.

# NEXT STEPS

## *continued*

### ***Invest in Energy Efficiency & Water Use Reduction***

The primary purpose of the data aggregation and benchmarking effort is to support the Climate Action Plan and help the Port measure and reduce its GHG emissions. Investing in projects aimed at energy efficiency and water use reductions should be informed by results of the data aggregation and reporting. Using this information to target investment may help the Port move towards achieving its CAP goals.

### ***Data Quality***

This report depends on the accuracy of data entered into Portfolio Manager by utility account holders. Outreach and education efforts in the future should include a list of key data quality checks that tenants can do when creating their Portfolio Manager accounts. These include:

- ✔ Accurate gross floor area, property usage details, and operating hours. The EUI values rely on accurate floor areas and property use type to determine a calculation. The ENERGY STAR score for eligible properties relies on the operating hours and approximate building occupancy, in addition to the energy consumption and gross floor area data.
- ✔ Correct SDG&E meter numbers. SDG&E automatically uploads monthly utility data into Portfolio Manager by meter. This ABS provides a great benefit to the utility account holders and the data aggregation effort. Users must provide accurate meter numbers in order to have SDG&E upload the data.
- ✔ Enter water usage data. The majority of the participants did not enter water data. The water data must be entered manually.

### ***Increasing participation levels***

is crucial to the future success of this data aggregation and benchmarking program. Additional outreach, training, and other support can help more tenants participate in the utility reporting and achieve compliance with the Ordinance.

### ***Apply for Recognition***

ENERGY STAR certification is a nationally recognized marker of high performance in building energy efficiency. Utility account holders should monitor their Portfolio Manager accounts to see if they have reached the required score of 75 or higher. Once that score is reached, eligible tenants, subtenants and Port- operated properties should apply for certification. ENERGY STAR certification signage from the EPA can be installed at the building to indicate excellence in energy efficiency performance.

### ***Future Records***

Annual reporting is anticipated to facilitate CAP GHG reduction goal monitoring and tracking. As the program moves forward, additional key performance indicators (KPIs) may be incorporated.

## 8. REFERENCES, ACRONYMS, & ENDNOTES

### *references*

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[www.energystar.gov/benchmark](http://www.energystar.gov/benchmark)
2. Free Energy Star Portfolio Manager Training:  
<http://greenportnetwork.org/utility-usage-reporting>
3. Instructions to Share Data with Edison Energy:  
[http://greenportnetwork.org/sites/default/files/Sharing%20Property%20Instructions%20-%20Data%20Aggregation%20%20Benchmarking\\_100316\\_Final.pdf](http://greenportnetwork.org/sites/default/files/Sharing%20Property%20Instructions%20-%20Data%20Aggregation%20%20Benchmarking_100316_Final.pdf)
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9. City of San Diego Public Utilities Department – Water Survey Programs:  
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10. SoCal Metropolitan Water District - SoCal Water\$mart Rebate Program:  
[www.socalwatersmart.com/commercial](http://www.socalwatersmart.com/commercial)
11. Port of San Diego Climate Action Plan:  
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## REFERENCES, ACRONYMS, & ENDNOTES

### *acronyms and definitions*

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ABS	Automated Benchmarking Service
Btu	British Thermal Unit
CAP	Climate Action Plan of the San Diego Unified Port District
CY	Calendar Year
CFL	Compact Fluorescent Lamp
CSE	Center for Sustainable Energy
EUI	Energy Use Intensity
GFA	Gross Floor Area, per Portfolio Manager definition available at <a href="https://portfoliomanager.energystar.gov/pm/glossary">https://portfoliomanager.energystar.gov/pm/glossary</a>
GHG	Greenhouse Gas
In Compliance	Utility account holders who created a Portfolio Manager account, connected with Edison Energy, and entered all data correctly per the Ordinance and Portfolio Manager requirements, including monthly meter data without duplicate entries.
kBtu	1,000 British Thermal Units
kBtu/sq.ft.-yr.	1,000 British Thermal Units per square foot per year
KPI	Key Performance Indicator
kWh	kilowatt hour
LED	Light Emitting Diode
LBNL	Lawrence Berkeley National Laboratory

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## REFERENCES, ACRONYMS, & ENDNOTES

### *acronyms and definitions*

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MMBtu	1,000,000 British Thermal Units
MT CO <sub>2</sub> E	Metric tons of carbon dioxide equivalent
SDG&E	San Diego Gas & Electric
SDPTA	San Diego Port Tenants Association
UAH	Utility Account Holder: A UAH is any entity or person as defined by California Public Resources Code Section 25116 (or any successor legislation) who has an account with any provider of utilities that is separately metered, per the Ordinance.
US EPA	United States Environmental Protection Agency
UURO	Utility Usage Reporting Ordinance

## REFERENCES, ACRONYMS, & ENDNOTES

### *endnotes & energy team*

1. Baseline report is available for download at <https://www.greenportnetwork.org/sites/default/files/Utility%20Usage%20Baseline%20Report%20Calender%20Year%202015.pdf>
2. Edison Energy is not the same company as Southern California Edison, the utility, and Edison Energy is not regulated by the California Public Utilities Commission. Each company is a subsidiary of Edison International.
3. For both 2015 and 2016, SDG&E was able to provide all natural gas data. For electricity for both years, however SDG&E had to remove customer consumption for those customers that did not meet the aggregation standard and did not provide consent. For 2016, SDG&E used a proxy to fill the gap for the omitted data. The proxy methodology is based on publicly available information on energy intensity by industry type. For 2015, a proxy was also applied to the electricity data. California utilities are obligated to abide by the Energy Data Access Decision (D.14-05-016) by the CPUC here: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M090/K845/90845985.PDF> See pages 33-34.
4. Source: <https://www.portofsandiego.org/about-us.html>, accessed on 9/24/2016
5. EB1 refers to measures identified in the Port's CAP.
6. ENERGY STAR Portfolio Manager Facts and Stats (as of year-end 2015, <https://www.energystar.gov/buildings/about-us/facts-and-stats>)
7. Many of the remaining entities who are not currently participating may not be required to report. That is, they may be incorrectly classified as a utility account holder. With continued individual outreach, it is expected that the number of utility account holders will decrease. Therefore, percentage participation is currently a conservative estimate.
8. Total energy usage (MMBtu/yr.) is based on a conversion factor of 3.412 kBTu/kWh, which is used in Portfolio Manager.
9. Determining exactly how many utility account holders are covered by the Ordinance is an ongoing effort. The Port and SDPTA have worked to reduce the initial list of potential utility account holders by identifying tenants who do not have utility accounts and therefore are not required to report under the Ordinance.
10. 2013 Port of San Diego Climate Action Plan: <https://www.portofsandiego.org/document/environment/climate-mitigation-and-adaptation-plan/documents-1/5515-port-of-san-diego-climate-action-plan.html>
11. Lawrence Berkeley National Laboratory (LBNL) Benchmarking and Transparency Program Evaluation Report: [https://emp.lbl.gov/sites/default/files/lbnl\\_benchmarking\\_final\\_050417\\_0.pdf](https://emp.lbl.gov/sites/default/files/lbnl_benchmarking_final_050417_0.pdf)

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