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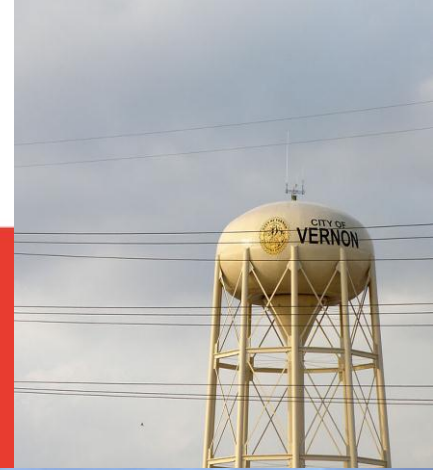
Docket Number:	16-OIR-04
Project Title:	Integrated Resource Plans (Publicly Owned Utilities)
TN #:	212103
Document Title:	City of Vernon's presentation of its Integrated Resource Planning at Lead Cmr Workshop on April 18, 2016.
Description:	City of Vernon: SB 350-Required Integrated Resource Plans workshop of April 18, 2016.
Filer:	Patty Paul
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Docket Number:	16-OIR-01
Project Title:	General Rulemaking Proceeding for Developing Regulations, Guidelines and Policies for Implementing SB 350 and AB 802
TN #:	211142
Document Title:	City of Vernon's presentation of its Integrated Resource Planning at Lead Cmr Workshop on April 18, 2016.
Description:	City of Vernon: SB 350-Required Integrated Resource Plans workshop of April 18, 2016.
Filer:	Marc Pryor
Organization:	City of Vernon
Submitter Role:	Public
Submission Date:	4/19/2016 12:11:30 PM
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City of Vernon Gas & Electric

Integrated Resource Plan



CEC Workshop on POU IRPs

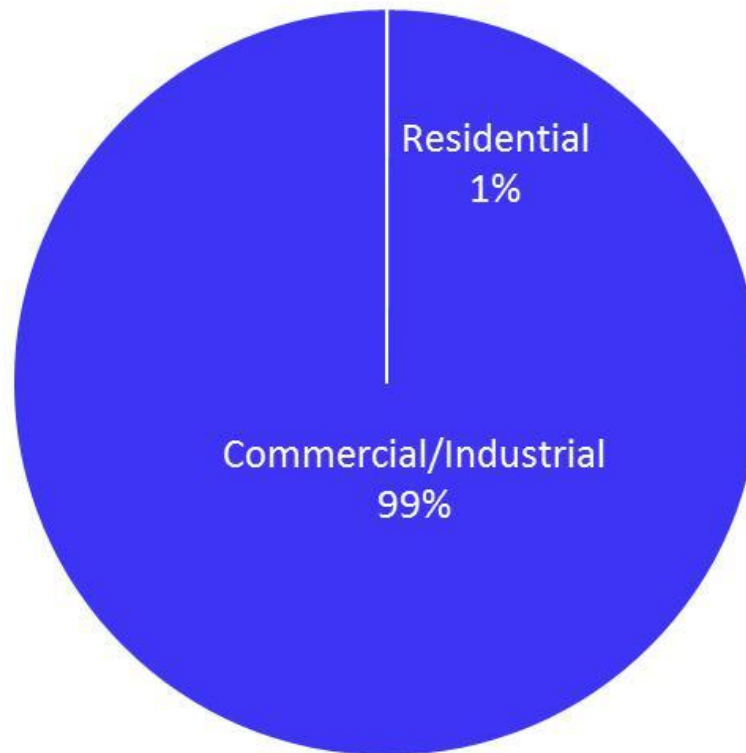
Introduction to Vernon and its Electric System

- City of Vernon is an Industrial City Located 4 miles Southeast of downtown Los Angeles
- Very Unique. Founded in 1905 with the motto “Exclusively Industrial”



Introduction to Vernon and its Electric System

- Serves Mainly Commercial/Industrial Customers

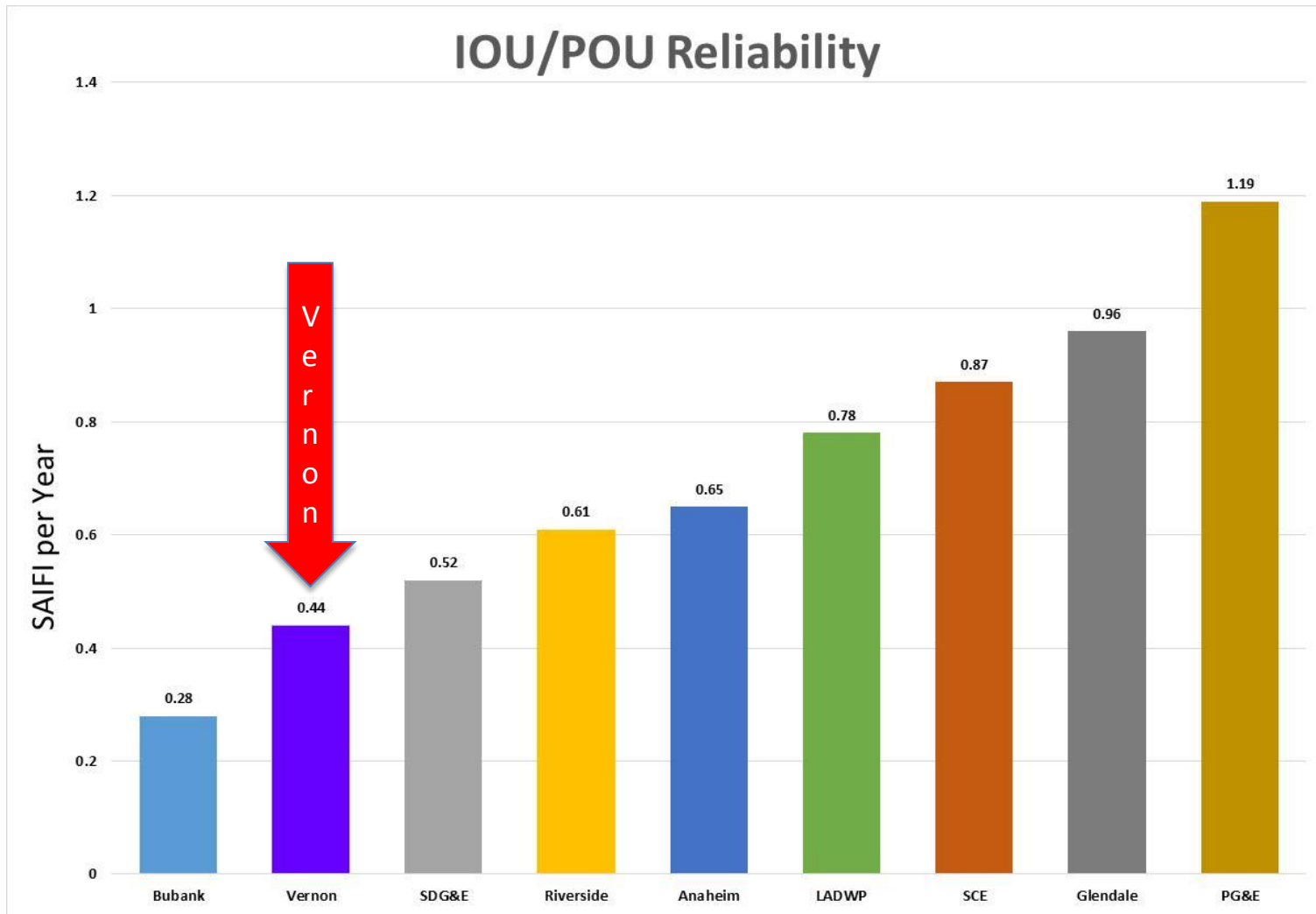


Introduction to Vernon and its Electric System

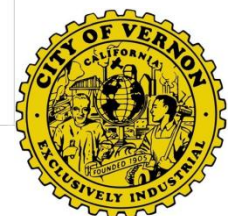
- Service Area: Approximately 5 Square Miles
- Vernon's System Peak Loads are almost Non-Seasonal
 - Very High Load Factor: 75%
- Extremely Reliable Electric Distribution System



Introduction to Vernon and its Electric System



Source: Vernon Staff Report



VG&E Load Forecasting:2016-2030

■ **Methodology & Assumptions:**

- Delphi Method
- Based on Historical Load Growth & Local Economy Forecast
- Customer Load Growth in Vernon Service Territory is Impacted by Boom/Bust Economy
- Include End-Use Energy Efficiency Gains
- Include Solar Capacity Forecast
- Include Potential/or Loss of Customer



VG&E C&I DSM Programs

■ Existing Demand Side Programs

- **Customer Incentive Program:** Fund the Exploration and Implementation of EE Technologies and Equipment: Lighting, Variable Speed Drives, Air Compressors, Motors
- **Customer-Direct Program:** Fund Customized Projects Demonstrating Energy/Cost Saving and/or Commercial Market Potential in the area of EE
- **Energy Education & Demonstration Workshops:** Provide Customers with an Array of Information Resources to Encourage EE Measures through EE Workshops and Other Forms of Customer Outreach
- **Energy Audit Program:** Provide on-site audits for commercial/industrial businesses. The Audit includes an Analysis of Energy Usage & Costs, Identification of Energy Conservation Measures, and Recommended Actions

VG&E C&I DSM Programs

■ Existing Demand Side Programs

- **Interruptible Load Program:** Contracts with larger commercial and industrial customers that are willing to reduce electrical consumption at peak times
- **Time of Use Rate Programs:** All Customer loads exceeding 100 kW demand are eligible to receive Time-Of-Use rate
- **Net Metering:** Since January 2010, Vernon has instituted a Net Metering Program for **Solar PV Systems**

VG&E Generation Resources

Natural Gas

Malburg Generation Station (MGS)

- Combined Cycle
- 134 MW

H. Gonzales

- Combustion Turbine
- Two 5.75 MW Units

▪ Nuclear

Palo Verde Nuclear Station

- Capacity and Energy
- 11 MW; 93,000 MWh annual



VG&E Generation Resources

Large Hydro

Hoover Dam

- Capacity and Energy
- 22 MW; 25,000 MWh annual

Intermittent Renewables

Solar PV & Landfill Gas Projects

- Capacity and Energy
- 65 MW



VG&E Transmission & Distribution System

- Vernon Interconnected to CAISO through Five 66-kV lines
- No plan to add new transmission lines



Power Resource Needs

Increase Renewable Energy (SB 350 RPS Requirement)

- **Biomethane**
 - Use of Biomethane Fuel at the MGS Plant
- **Solar PV Projects**
- **Landfill Gas Facility**



Power Resource Needs

Increase Renewable Energy (SB 350 RPS Requirement)

- Starting in 2022, there will be an increasing need for Renewable Energy to meet 50% RPS Requirements:
 - ❖ Expiration of Renewable Contracts
 - ❖ Load Growth
 - ❖ RPS Requirements



Vernon Action Plans

- **DSM and EE Program Projections:**
 - The City will continue to offer cost effective EE savings and DSM to achieve annual savings target and assist customers in managing their energy bills.



Vernon Action Plans

■ **GHG Emissions Reduction Goals**

- Vernon relies on MGS Combined Cycle Power within the City of Vernon for a significant share of its current power supply
- The City will achieve significant GHG emission reductions by:
 - ❖ Displacing power from MGS with Renewable Sources
 - ❖ Buying electricity from CAISO wholesale market



Vernon Action Plans

■ **AB 2514: Energy Storage Requirements**

- In October 2014, VG&E staff evaluated Costs/Benefits of various Energy Storage projects submitted in response to a SCPPA RFP
- Over the next 15 yrs., Costs of ES technologies exceed the value of Benefits, and do not provide cost-effective
- No justification to procure ES within the City for applications of AS, outage mitigation, renewable integration, deferral of transmission and distribution upgrades, load leveling, grid support or stabilization.
- The City is committed as required by AB 2514 to reevaluate ES procurement by end of 2016



Vernon Action Plans

- **Increase Renewable Power Generation**
 - Secure contracts with developers for new renewable resources (time and cost considerations)
 - Work with SCPPA or other utilities to find new renewable opportunities



Vernon Action Plans

- **Consider Adding to Vernon's Existing Portfolio with Conventional Resources (Simple Cycle CT Plant)**
 - Vernon has an on-going capacity need

