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<thead>
<tr>
<th><strong>Docket Number:</strong></th>
<th>16-OIR-01</th>
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<tr>
<td><strong>Project Title:</strong></td>
<td>General Rulemaking Proceeding for Developing Regulations, Guidelines and Policies for Implementing SB 350 and AB 802</td>
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<tr>
<td><strong>TN #:</strong></td>
<td>211142</td>
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<tr>
<td><strong>Document Title:</strong></td>
<td>City of Vernon's presentation of its Integrated Resource Planning at Lead Cmr Workshop on April 18, 2016.</td>
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<tr>
<td><strong>Description:</strong></td>
<td>City of Vernon: SB 350-Required Integrated Resource Plans workshop of April 18, 2016.</td>
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<td><strong>Filer:</strong></td>
<td>Marc Pryor</td>
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<td><strong>Organization:</strong></td>
<td>City of Vernon</td>
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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

![Pie chart showing that 99% of customers are Commercial/Industrial and 1% are Residential.](image-url)
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

IOU/POU Reliability

SAIFI per Year

- Bubank: 0.28
- Vernon: 0.44
- SDG&E: 0.52
- Riverside: 0.61
- Anaheim: 0.65
- LADWP: 0.78
- SCE: 0.87
- Glendale: 0.96
- PG&E: 1.19

Source: Vernon Staff Report
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.
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
Vernon Interconnected to CAISO through Five 66-kV lines

No plan to add new transmission lines
Increase Renewable Energy (SB 350 RPS Requirement)

- **Biomethane**
  - Use of Biomethane Fuel at the MGS Plant

- **Solar PV Projects**

- **Landfill Gas Facility**
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
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.
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