### Power Basics

#### The Power Operation

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>$106.1 Million</td>
<td>$105.1 Million</td>
</tr>
</tbody>
</table>

Source: FY 2013-14 CAFR pg. 173-174

Number of Meters: 2,270

Source: A. Lee’s CAFR FY 14-15 sheet

#### Electric Revenues & Customers

<table>
<thead>
<tr>
<th>Customer Type</th>
<th>Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise and Other Full-Service</td>
<td>12-22 ¢/kWh</td>
</tr>
<tr>
<td>General Fund</td>
<td>5.75 ¢/kWh</td>
</tr>
<tr>
<td>Full-Service</td>
<td></td>
</tr>
<tr>
<td>Streetlights</td>
<td>2 ¢/kWh</td>
</tr>
<tr>
<td>Wholesale:</td>
<td></td>
</tr>
<tr>
<td>MID/TID and Market Sales</td>
<td>3-5 ¢/kWh</td>
</tr>
</tbody>
</table>

Source: 10 Year Financial Plan, A. Lee FY14-15 WIP

#### Electric Customers By FY07-15 Average

- **Enterprise and SFO**
  - 40% Of Energy Sales
  - 70% Of Revenues

- **MID/TID**
- **Market Sales**
- **General Fund**
- **SFO**
- **Other Full-Service**

Source: FY 2013-14 CAFR pg. 232, A. Lee’s CAFR monthly comparison and CAFR FY1415 spreadsheets

#### Power Supply vs. Full-Service Demand

- **Full-Service Demand (the red)** is fairly constant.
- **Power Supply (the blue)** peaks around Spring, and is weather dependent. In Fall/Winter, Generation falls below Demand.

#### SFPUC Power Generation

- **TOTAL Capacity ~ 396 MW**
  - **Hetchy 380.5 MW (96% of Total)**
  - **Powerhouse Holm**
  - **Kirkwood**
  - **Moccasin**

<table>
<thead>
<tr>
<th>Capacity MW</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>165</td>
<td>2</td>
</tr>
<tr>
<td>115.5</td>
<td>3</td>
</tr>
<tr>
<td>100</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Power Enterprise Overview Sheet

#### Small Renewables (4% of Total)

<table>
<thead>
<tr>
<th>Source</th>
<th>Solar</th>
<th>Small Hydro</th>
<th>Biogas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity MW</td>
<td>8</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>% of Total</td>
<td>2%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: J. Chiang’s Consolidated Annual Summary Updated August 2015

#### Production Mix (Averages: 2011-2014)

- **Holm 40%**
- **Kirk 33%**
- **Moc 25%**
- **Small Renewables 2%**

#### Average FY07-15

<table>
<thead>
<tr>
<th></th>
<th>1,000 MWh/year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Generation</strong></td>
<td>1,400 2,000 990</td>
</tr>
<tr>
<td><strong>Full-Service Demand</strong></td>
<td>960 980 940</td>
</tr>
<tr>
<td><strong>MID/TID Wholesale Sales (Primarily in Spring)</strong></td>
<td>300 550 100</td>
</tr>
<tr>
<td><strong>Other Wholesale Sales (Primarily in Spring)</strong></td>
<td>180 580 12</td>
</tr>
</tbody>
</table>

Source: FY 2013-14 CAFR, p.232, A. Lee CAFR FY1415 spreadsheet
**SFPUC’s Power Enterprise**

**In Perspective**

**California Utilities**
Size as % of Total 2013 CA Retail Electricity Sales

**Resource Mix**
- Renewables
- Large Hydro
- Nuclear
- Natural Gas
- Coal
- Unspecified

**SFPUC** – 0.37%
A mid-sized POU

**LADWP** – 8%
CA’s largest public utility (POU)

**PG&E** – 31%
CA’s largest private utility (IOU), providing almost a third of CA’s total electricity.

**Greenhouse Gas Free Generation**
- PG&E: 54%
- LADWP: 37%
- SFPUC: 100%
- Marin Energy Authority: 61%
- Alameda: 37%

Source: Power Content Labels 2013

**San Francisco’s Electricity**

- Total Use in 2012 ~ 5,877 GWh
- Average Peak Demand ~ 930 MW
- Average Demand ~ 670 MW

(Averages: 2010-12)

**Consumption By Sector**

- 8% Direct Access
- 17% Large Comm./Ind.
- 23% Residential
- 35% Commercial

**Generation By Provider**

- 75% PG&E
- 17% SFPUC


Our surplus generation is unusual. Most utilities purchase significant supplies to meet their full-service demand.

*SFPUC’s generation is for 2008-09, considered a “Normal Year”*