What is Seawater Air Conditioning (SWAC)?

- SWAC replaces traditional air conditioning systems
- Cold seawater is pumped to cooling plant
- The cold temperature of the seawater is transferred to freshwater in a closed-loop system
- The chilled freshwater is provided to buildings for air conditioning usage
Why SWAC in Waikiki?

Hawaii’s Challenges

- Electrical rates are near the highest in the U.S.

SWAC Solutions

- Reduce customer electrical consumption by up to 40%

<table>
<thead>
<tr>
<th>Waikiki SWAC (25,000 tons)</th>
<th>Fossil Fuels (barrels/yr.)</th>
<th>Electrical (kWh/yr.)</th>
<th>Emissions (tons/yr.)</th>
<th>Water (gallons/yr.)</th>
<th>Sewage (gallons/yr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAVINGS</td>
<td>118,750</td>
<td>53,750,000</td>
<td>56,250</td>
<td>175,000,000</td>
<td>77,500,000</td>
</tr>
</tbody>
</table>
Electrical Trends

HECO rate increase:
- 12.3% per year
- $0.0225 kWh per year
- 86% aggregate increase
## Customer Savings

### 5 Year Increments

<table>
<thead>
<tr>
<th></th>
<th>1 – 5</th>
<th>6 – 10</th>
<th>11 – 15</th>
<th>16 – 20</th>
<th>21 – 25</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electricity</strong></td>
<td>379,300</td>
<td>1,572,451</td>
<td>3,268,595</td>
<td>5,634,309</td>
<td>8,886,591</td>
<td>19,741,246</td>
</tr>
<tr>
<td>% Savings</td>
<td>4%</td>
<td>13%</td>
<td>21%</td>
<td>28%</td>
<td>35%</td>
<td>24%</td>
</tr>
</tbody>
</table>

### HECO Rate Increase

<table>
<thead>
<tr>
<th></th>
<th>Base (5%)</th>
<th>Average (10%)</th>
<th>Best (15%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL SAVINGS</td>
<td>$ 42,575,536</td>
<td>$ 131,261,707</td>
<td>$ 331,771,025</td>
</tr>
<tr>
<td>% Savings</td>
<td>16%</td>
<td>37%</td>
<td>59%</td>
</tr>
</tbody>
</table>

### TOTAL SAVINGS

<table>
<thead>
<tr>
<th></th>
<th>4,694,606</th>
<th>3,298,092</th>
<th>5,962,648</th>
<th>12,064,928</th>
<th>16,555,262</th>
<th>42,575,536</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Savings</td>
<td>19%</td>
<td>11%</td>
<td>13%</td>
<td>18%</td>
<td>17%</td>
<td>16%</td>
</tr>
</tbody>
</table>
Customers

Letters of Intent for 42% of Waikiki SWAC load
Development Components

Finance
- $200M State approved Special Purpose Revenue Bonds (Act 129)
- Private Equity

Customers
- Identified 50,000 tons of customer load
- Letters of Intent for 42% of Waikiki SWAC design load

Entitlements
- City, State, & Federal agency coordination
- Ala Wai channel, directional drilling

Site Location
- In negotiation with City, State, & private landowners
- Proximity to the Ala Wai canal
Ancillary Uses

- Waikiki beach replenishment
- Education & research lab
- Ala Wai canal flushing
- Desalination facility
- Chilled soil agriculture