



LHUSD#1

# SOLAR PHOTOVOLTAIC ELECTRIC GENERATING SYSTEM



PRESENTED 4-05-2011 BY:

**APS** *energy* **SERVICES**

**Solar**Siting

# ORIGINAL PROJECT GOALS

- Reduce LHUSD Future Operating Costs by Locking In Energy Expenditures at Today's Budget - **New Pricing Includes 1% Annual Escalator**
- Provide Clean Pollution-Free and Environmentally Friendly Energy Generation
- Provide Lowest Cost to District Using Incentives from Federal, State and Utility Sources
- Comply With Utility Requirements
  - UNES now requiring \$65K increase
- **Benefits:**
  - Shaded Parking (**walk-way cover gone**)
  - Design Accommodates Future Classroom Additions
  - System Sized to Produce 100% Campus Energy in Year **10 (was 20)**



Arizona State University  
West Campus Carports – 1.2 MW

# LHUSD AERIAL SITE MAP CHANGES



Committed to safety  
Accountable to each other  
No excuses  
Driven by integrity  
Obtain the triple bottom line

# LAST YEAR'S BILL WAS ABNORMALLY LOW

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- Cooling Degree Day = 24 hours of 1 degree F > 65 degrees
- Lake Havasu Five Year Average Annual Cooling Degree Days = 5035
- Lake Havasu Last Year Average Annual Cooling Degree Days = 4305
- “Mother Nature” Would have to Increase Last Year by **17% to get to Average**
- UNES Rate Increase in October = **\$506,395 Annual Projected Payment** based on last Year's Usage
- If the District **does nothing** and the usage returns to normal causing the Bill to Increase by 17%, the district may end up paying **\$592,265**

# SOLAR PRICING

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- Year 1 (2012) = \$506,395 vs. \$592,265
- Year 2-20 Increase Year 1 Payment by 1% Annually (Year 20 = \$611,781)
- \$124,291 Demand and Tax Allocation Included for Remaining UNES Bill

## Benefits:

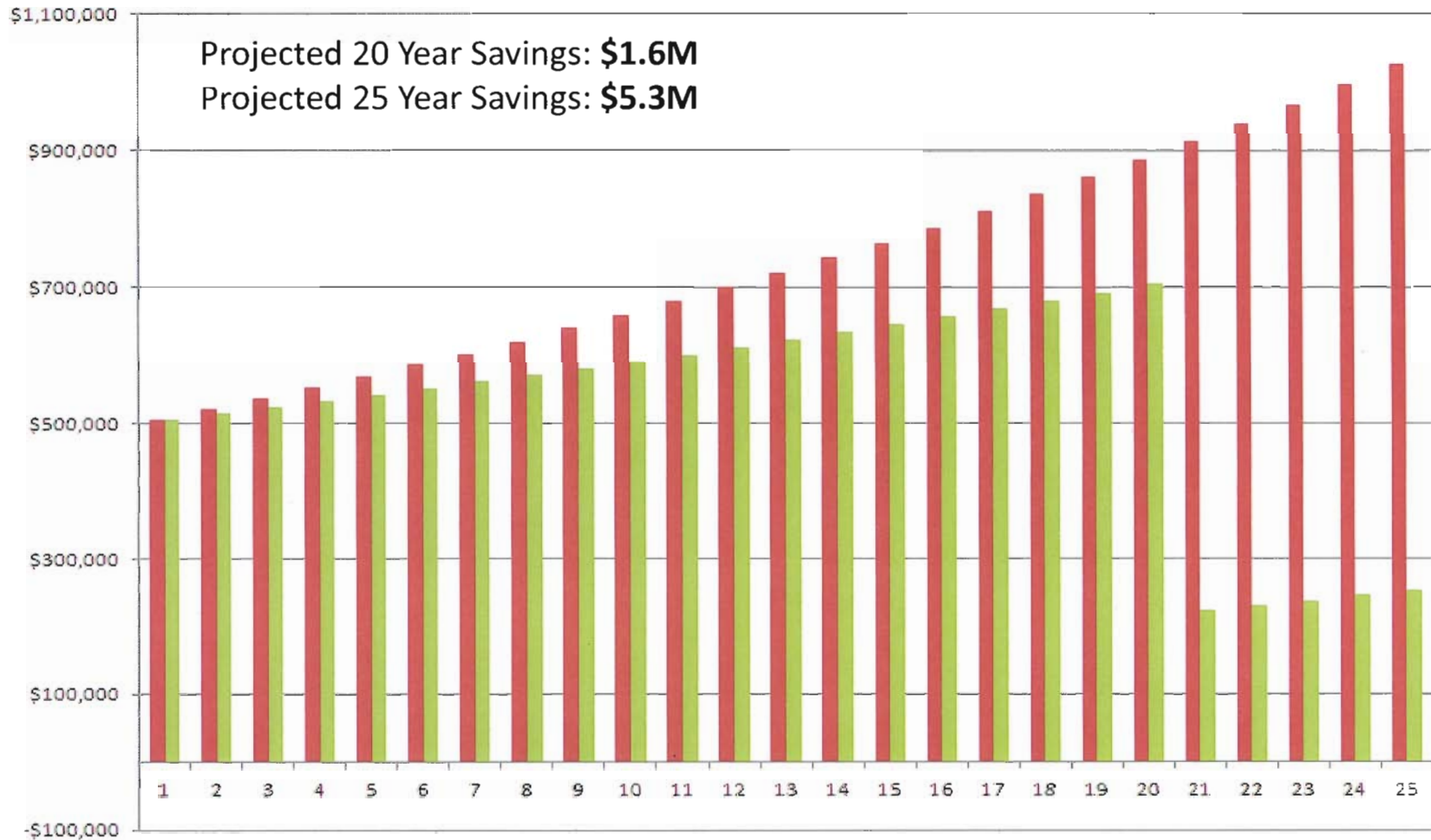
- You can now accurately forecast your electric bill
- \$5.3M potential savings over next 25 years vs. historical rate projections
- Receive \$13.2 Million System while paying only \$8.7 Million for Solar Energy
- “Free” Covered Parking
- Internet Accessible Energy Performance Data & Science Curriculum

# HISTORICAL ELECTRICITY PRICES



# 25 YEAR UTILITY COSTS COMPARISON

3% ANNUAL UTILITY PRICE ESCALATION ASSUMED



# NEXT STEPS

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	<b>DATE</b>
<ul style="list-style-type: none"><li>● <b>Vote to Authorize Staff to Sign Agreements</b><ul style="list-style-type: none"><li>○ Interconnect Agreement (LHUSD &lt;-&gt; UNES)</li><li>○ Renewable Energy Credit / Incentive Agreement (LHUSD &lt;-&gt; UNES)</li><li>○ Solar Service Agreement (SSA or PPA) (APSES &lt;-&gt; LHUSD)</li><li>○ Assignment Agreement (APSES &lt;-&gt; LHUSD) (Transfers SSA to Solar Siting Upon Financing)</li></ul></li><li>● <b>Other Agreements</b><ul style="list-style-type: none"><li>○ Engineer, Procure, Construct Agreement (APSES &lt;-&gt; Solar Siting)</li><li>○ 20-Year O&amp;M Service Agreement (APSES &lt;-&gt; Solar Siting)</li></ul></li></ul>	<b>4-5-2011</b>
<ul style="list-style-type: none"><li>● <b>Submit Proof of Signed Agreement to UNES</b></li></ul>	<b>4-8-11</b>
<ul style="list-style-type: none"><li>● <b>Obtain Conditional Financial Commitment Letter</b></li></ul>	<b>4-15-2011</b>
<ul style="list-style-type: none"><li>● <b>Formal Project Financing Commitment to UNES</b></li></ul>	<b>5-15-2011</b>
<ul style="list-style-type: none"><li>● <b>Project Construction</b></li></ul>	<b>Jun – Dec 2011</b>