Amador County Unified School District - Amador GOLD

Final Project Approval Board Presentation

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October 26, 2016
Jackson, CA
Amador GOLD: Program Vision and Objectives

Growing STEM Offerings
- Professional development
- Living laboratories of energy efficiency and solar
- Ready-to-go standards-aligned STEM energy curriculum

Opportunities for Engagement
- Involving students and teachers in the project as it progresses
- Engaging the community in the District’s progress (media, dedication event, updates on District website/social media)

Leading by Example
- Environmental stewardship
- Setting an example for students, community members, local institutions/businesses

Designed to Promote Learning
- Modernized classrooms and facilities
- Improved lighting, ventilation/air quality and acoustics
- Human centric lighting

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Amador CUSD Actual Utility Consumption Analysis

- **District is Projected to Spend $12.59 Million for Electricity and Gas Expenditures over the next 10 Years** based on Conservative PG&E Tariff Increases (5%)
- **District is Projected to Spend $31.5 Million for Electricity and Gas Expenditures over the next 20 Years** based on Conservative PG&E Tariff Increases (5%)
- **District is Projected to Spend $67.48 Million for Electricity and Gas Expenditures over the next 30 Years** based on Conservative PG&E Tariff Increases (5%)
Energy and Facility Infrastructure Improvements: Energy Conservation Measures (ECM’s): Scope of Work

ECM #1 (L-1)
- Lighting retrofit of 6800 lighting fixtures and components with occupancy sensors and dimming control

ECM #2 (M-1)
- Direct Digital Control (DDC) for HVAC equipment upgrade/retro-commissioning and expansion

ECM #3 (M-2)
- Replacement and Installation of 95 Aged and maintenance intensive HVAC Units

ECM #4 (PV-1)
- Photovoltaic/solar installation at Amador and Argonaut High Schools and solar farm in open area behind Argonaut HS
  - Amador GOLD STEM Education Program and Curriculum
Amador GOLD
Educational Program Components

Elementary
EXPLORE

Junior High
ENGAGE

High School
EMPOWER

Professional Development

Summer STEM Bridge Program

Professional Development

Student Internships

Career & College Clubs

Each component is grounded in the District's commitment to sustainability
Amador Program Financials: Accomplishing District Educational and Infrastructural Goals

- **Amador GOLD: $9.9 Million**

  - Program Savings:
    - $1,245,791 Average Program Savings Over 20 Years

  - Program Funding
    - Proposition 39 and Capital Contribution: $3,300,000
    - IRS Subsidized Certified Renewable Energy Bond (CREB): $3,835,000
    - Tax Exempt Lease Purchase (TELP): $2,863,885

  - Positive Cash Flow For Program
    - $813,169 of Average Annual Positive Cash Flow Over 20 Years After Annual Debt Service Payments
    - $16.06 Million Total Positive Cash Flow Over 20 years
    - $35.97 Million Total Positive Cash Flow Over 30 years
Environmental Impact
3.183 Million Annual kWh Reduction

- Substantial Environmental Benefits: Eliminates 2,179 Metric Tons in CO₂ Emissions Per Year

1. 460
   Passenger vehicles driven for one year

2. 5,221,367
   Miles driven by an average passenger vehicle

3. 245,145
   Gallons of gasoline consumed

4. 2,324,779
   Pounds of coal burned

5. 5,044
   Barrels of oil consumed

6. 322
   Homes’ electricity use for one year

https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator
Alternative Financial Modeling: Utility Marker Variables

- Solar-PV Consultant Referenced Potential PG&E/CPUC May Not Grandfather A-6 Rate in Transition From NEM 1.0-NEM 2.0
  - Remote Possibility But This Would Drop Solar Generation From $305,000 to $285,000
  - Positive 20 Year Cash Flow Would Drop to $15.64 Million

- Questions Relating To 5% Utility Rate Escalation
  - 3% Escalation = $12.56 Million of Positive Cash Flow Over 20 Years
  - 3% Escalation and Non A-6 Rate = $12.05 Million of Positive Cash Flow Over 20 Years
  - 0% Escalation = $8.45 Million of Positive Cash Flow Over 20 Years
  - 0% Escalation and Non A-6 Rate = $8.07 Million of Positive Cash Flow Over 20 Years
Action Plan for Next Steps

- **October 26, 2016** – Board Action
- **December 14, 2016** – Financing Approval
- **February 2017** – Project Groundbreaking Event For Community
- **February 2017 – September 2017** – Program Implementation
- **October 2017** – Ribbon Cutting Ceremony For Staff and Community and Media