



AMPHITHEATER

P U B L I C S C H O O L S



SOLAR ELECTRIC SYSTEM PROJECT UPDATE

AUGUST 11TH 2015 GOVERNING BOARD MEETING

Presented by Jim Burns, Executive Manager, Operational Support



Since project award of RFP 14-0015 to Natural Power and Energy in early February, a significant amount of solar project start-up activity has been conducted. Key events and milestones to date include:

- ✓ Successful submittal of interconnection applications to TEP with a view to ensuring all District meters to which systems will be interconnected will receive the current net metering tariff.
- ✓ Selection of System Owner Constellation, a subsidiary of Fortune 500 Exelon (one of the nation's leading utility companies) following completion of a competitive financing procurement process.
- ✓ Solar Services Agreement (SSA) review in process and pricing confirmed for 25-year agreement term based on an aggregate project size of approximately ~9.47 MW.



Additional key events and milestones to date include:

- ✓ Extensive site due diligence underway on systems planned at 24 District sites and 37 meter interconnections, with a majority featuring solar integrated shade structures and some roof systems.
- ✓ Proactive school stakeholder and community outreach media development underway with open sessions planned for late August through September according to current site deployment schedule.
- ✓ Integration of Solar STEM (Science, Technology, Engineering & Math) lesson plans and activities to support K-12 curriculum underway.

PROJECT BENEFITS



- **Price Certainty:** The District's solar energy cost is fixed for 25 years at a flat rate per kilowatt-hour.
- **Savings:** The project is estimated to save Amphitheater approximately \$100,000 in the first year and more than \$23 million¹ in energy costs over the 25-year life of the project, providing significant cost savings to taxpayers.
- **Environmental Impact:** District-exclusive reduction in CO2 footprint of approximately 17,340 tons/year², equivalent to the carbon sequestered by 14,213 acres of U.S. forests per year³.
- **The District will retain full ownership** of the environmental attributes/Renewable Energy Credits (RECs) associated with the project's clean energy output.
- **Approximately 64%** of the electricity required at all the sites is expected to be produced by approximately 30,000 polycrystalline modules (solar panels), with many sites offsetting ~80% of their annual electricity requirements.
- **Shade provided** for children to play under and park vehicles – especially valuable in summer.
- **Real-time data monitoring** and Solar Science, Technology, Engineering and Math (STEM) student curriculum integration.

¹ Assuming 3% annual utility rate escalation vs. current savings rates.

² NPE estimates based on TEP-specific fuel mix.

³ US EPA Greenhouse Gas Equivalencies Calculator.



The **Solar Services Agreement (SSA)** is a long-term contract allowing **Amphitheater Public Schools as the Host Customer** to benefit from the systems installed at the District's schools and pay only for the energy the systems produce. There is no upfront cost to the District.

The ownership of the systems and the ongoing operation, maintenance, monitoring and payment administration is carried out by **Constellation, the System Owner**.

Over the 25-year term of the SSA, pricing to the District will be \$0.101/kWh (excluding sales tax, excluding property tax) with system purchase options beginning at year 6.



The estimated project savings are expected to be significant, take into consideration applicable sales tax assumptions and estimate a range of potential annual utility rate increases.

Based on a current project size of 9.47 MW, savings are estimated as follows:

	Estimate
Estimated Savings – <i>Year One</i>	~ \$100,000
Estimated 25-Year Savings – <i>1.5% Annual TEP Rate Escalation</i>	~ \$11,500,00
Estimated 25-Year Savings – <i>3.0% Annual TEP Rate Escalation</i>	~ \$23,000,000



In support of the project roll-out, multiple community outreach activities and ongoing mass media communication are being implemented in order to keep stakeholders informed, elicit feedback and provide consistent project messaging.

Community Outreach Activities include:

- ✓ Solar project dedicated web pages on Amphi.com providing project background, current and upcoming events, project FAQs, draft system layouts by school and other valuable project details.
- ✓ Community Presentations/Q&A sessions to be conducted at multiple school and District sites, to be initiated in late August and run throughout September.
- ✓ Outreach to external stakeholders such as Oro Valley, Tucson, City Wards and Pima County.
- ✓ Leveraging local TV/Internet/Radio/Print media through planned project press releases and status updates.
- ✓ Additional meetings for individual school site councils, neighbor properties and community members, as required.

PHASING PLAN



Phasing

Survey / Community Outreach

Design and Permitting

Construction

Phase 1

Cross Middle School - PC	Cross Middle School - PC	Cross Middle School - PC
Harelson Elementary - PC	Harelson Elementary - PC	Harelson Elementary - PC
La Cima Middle School - PC	La Cima Middle School - PC	La Cima Middle School - PC
Walker Elementary - PC	Walker Elementary - PC	Walker Elementary - PC
Walker Elementary (2) - PC	Walker Elementary (2) - PC	Walker Elementary (2) - PC
Donaldson Elementary - PC (outreach Ph.2)	Donaldson Elementary - PC	Donaldson Elementary - PC
Holaway Elementary - CoT	Holaway Elementary - CoT	Holaway Elementary - CoT
Holaway Elementary (2) * - CoT	Holaway Elementary (2) * - CoT	Holaway Elementary (2) * - CoT
Preschool * - CoT	Preschool * - CoT	Preschool * - CoT
Warehouse/Graphics/Print - CoT	Warehouse/Graphics/Print - CoT	Warehouse/Graphics/Print - CoT

Phase 2

Coronado K-8 (1) ++ - PC	Mesa Verde Elementary - PC	Mesa Verde Elementary - PC
Amphitheater High School (1) ++ - CoT	Keeling Elementary (1) - CoT	Keeling Elementary (1) - CoT
Amphitheater Middle School (1) - CoT	Keeling Elementary (3) * - CoT	Keeling Elementary (3) * - CoT
Amphitheater Middle School (2)	Rillito Center (1) - CoT	Rillito Center (1) - CoT
Prince Elementary - CoT	Rillito Center (2) - CoT	Rillito Center (2) - CoT
Rillito Center (1) - CoT	Well Site * - CoT	Well Site * - CoT
Rillito Center (2) - CoT	Nash Elementary - CoT	Nash Elementary - CoT
Well Site * - CoT	Rio Vista Elementary - CoT	Rio Vista Elementary - CoT
Canyon Del Oro High School (1) +++ - OV	Transportation Bus Barn - CoT	Transportation Bus Barn - CoT
Canyon Del Oro High School (2) - OV	Transportation Food Service - CoT	Transportation Food Service - CoT
Canyon Del Oro High School (3) - OV	Administration (1) - PC	Administration (1) - PC
Canyon Del Oro High School (4) - OV	Administration (3) - PC	Administration (3) - PC
Ironwood Ridge High (1) - OV	Administration (4) - PC	Administration (4) - PC
Ironwood Ridge High (2) - OV		

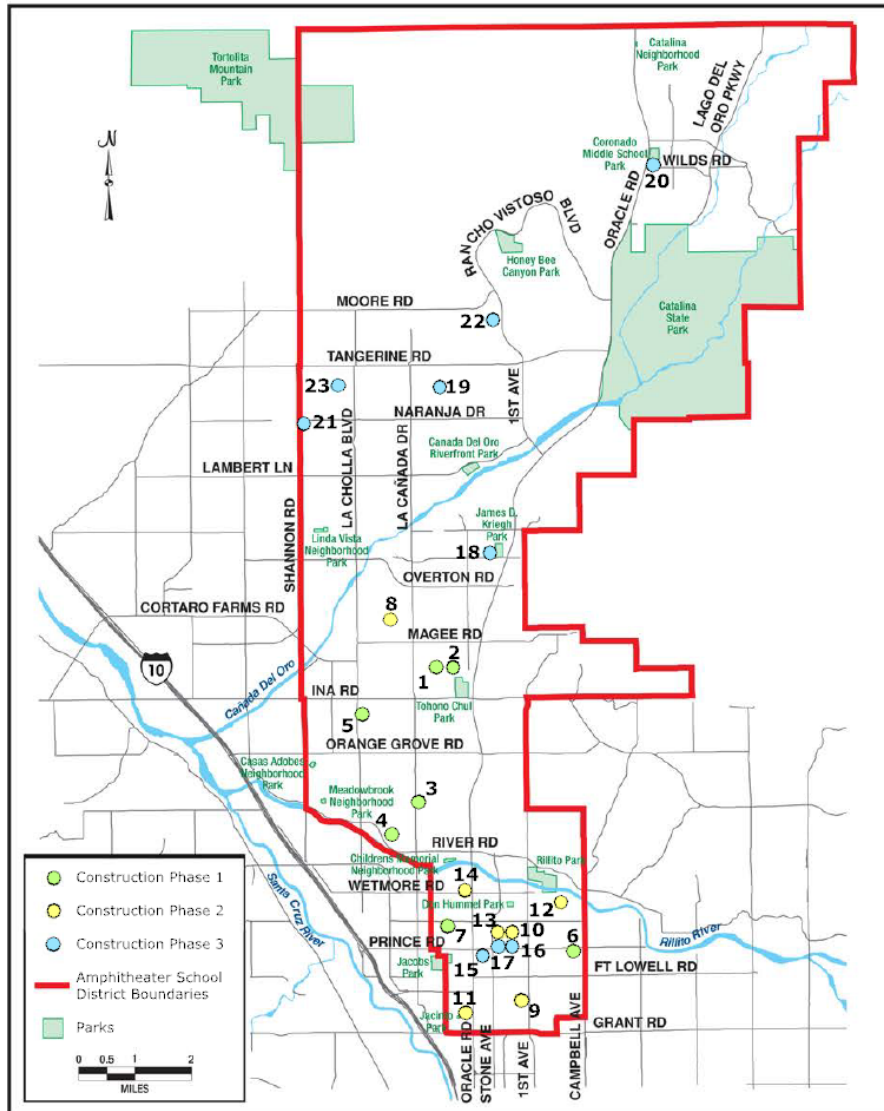
Phase 3

Mesa Verde Elementary - PC	Amphitheater High School (1) ++ - CoT	Amphitheater High School (1) ++ - CoT
Keeling Elementary (1) - CoT	Amphitheater Middle School (1) - CoT	Amphitheater Middle School (1) - CoT
Keeling Elementary (3) * - CoT	Amphitheater Middle School (2)	Amphitheater Middle School (2)
Nash Elementary - CoT	Prince Elementary - CoT	Prince Elementary - CoT
Rio Vista Elementary - CoT	Canyon Del Oro High School (1) ++ - OV	Canyon Del Oro High School (1) ++ - OV
Administration (1) - PC	Canyon Del Oro High School (2) - OV	Canyon Del Oro High School (2) - OV
Administration (3) - PC	Canyon Del Oro High School (3) - OV	Canyon Del Oro High School (3) - OV
Administration (4) - PC	Canyon Del Oro High School (4) - OV	Canyon Del Oro High School (4) - OV
Transportation Bus Barn - CoT	Copper Creek Elementary - OV	Copper Creek Elementary - OV
Transportation Food Service - CoT	Painted Sky - OV	Painted Sky - OV
Copper Creek Elementary - OV	Ironwood Ridge High (1) - OV	Ironwood Ridge High (1) - OV
Painted Sky - OV	Ironwood Ridge High (2) - OV	Ironwood Ridge High (2) - OV
Wilson K-8 - OV	Wilson K-8 - OV	Wilson K-8 - OV
	Coronado K-8 (1) ++ - PC	Coronado K-8 (1) ++ - PC

KEY: * Projects smaller than 50 kW AC
++ Projects greater than 300kW AC

CoT - City of Tucson
PC - Pima County
OV - Oro Valley

CONSTRUCTION PHASES



AMPHITHEATER SCHOOL DISTRICT

Construction Phase 1

1. Cross Middle School – 1000 W Chapala
2. Harelson Elementary School – 826 W Chapala Dr
3. La Cima Middle School – 5600 N La Cañada
4. Walker Elementary School – 1750 W Roller Coaster Rd.
5. Donaldson Elementary School – 2400 W Omar Dr
6. Holaway Elementary School – 3500 N Cherry Ave
7. Warehouse/Graphics – 1001 W Roger Rd

Construction Phase 2

- 8*. Mesa Verde Elementary School – 1661 W Sage St (Depending on current construction schedule)
9. Keeling Elementary School – 2837 N Los Altos
10. Rillito Center – 266 E Pastime Rd
11. Nash Elementary School – 515 W Kelso
12. Rio Vista Elementary School – 1351 N Limberlost
13. Facilities/Transportation – 200 E Roger Rd
14. Wetmore Center – 701 W Wetmore

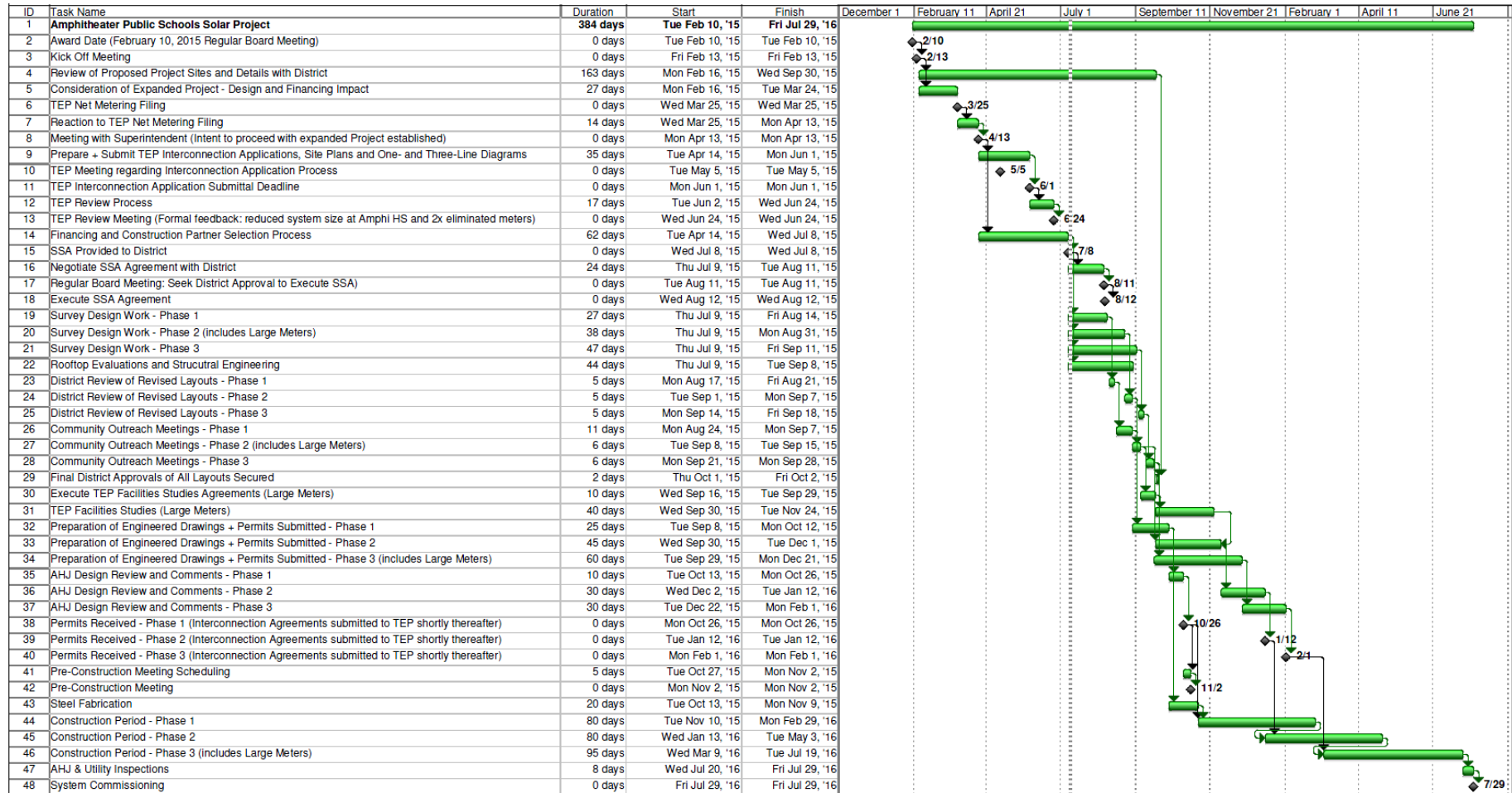
Construction Phase 3

15. Amphitheater High School – 125 W Yavapai Rd
16. Amphitheater Middle School – 315 E Prince Rd
17. Prince Elementary School – 125 E Prince Rd
18. CDO High School – 25 W Calle Concordia
19. Copper Creek Elementary School – 11620 N Copper Spring Tr
20. Coronado K-8 School – 3401 E Wilds Rd
21. Ironwood Ridge High School – 2475 W Naranja Rd
22. Painted Sky Elementary School – 12620 N Woodburne
23. Wilson K-8 School – 2330 W Glover Rd



www.amphi.com
(520) 696-5000

ESTIMATED PROJECT SCHEDULE



QUESTIONS & ANSWERS

