

The Tonto Apache Tribe

Presents:

The Department of Energy (DOE) 2017 Renewable Energy Grant
Project #2 "New Build"
270kW Roof Top Solar PV
*Follow up and reporting



Presenters:

Jackie Isenhower – Grant/Contract Director, TAT
Barry Coe – Principal SunRenu Solar



Presentation Outline

- Tribal Overview
- Summary of Current Project Objectives
- Progress to date
- Timelines and goals
- Future Projects
- Next Steps



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Tribal Overview

- The Tonto Apache Tribe gained Federal recognition in 1972
- The Federal Act Included 85 acres of reservation lands (Landless until 1972)
- Original Territory includes North Central Arizona (Mogollon Rim & surrounding areas)
- Tonto people originally settled at Rio Verde Reservation
- Tonto people relocated to San Carlos Apache Reservation & then to current location
- 20 years of reservation infrastructure development after Federal Recognition
- Residential planning & building
- Gaming and Tribal Facilities
- Long term vision – Sustainability and Residential growth



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Tribal Lands Today



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Tonto Apache Today

- Tribal Council Governed by 5 elected members
- Current Membership: 173 total & 140 live on the reservation
- Land Base: Original 85 acres + 293 acquired in land exchange 2010
- Economic Activities and Diversity
- Gaming: Mazatzal Hotel & Casino
- Fine Dining & Entertainment
- Smoke Shop, Gas Station, and other activities
- Tribal Government Infrastructures
- Renewable Project Management and Development



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Community Services & Infrastructure

- Tribal Governmental Services
- Police Station and Court
- Social Services: Health Programs, Youth Programs, Educational Services
- Continued: Elder Programs, & Cultural Preservation
- Infrastructure Support: Housing, water & sewer, roads
- Community REC Center includes gymnasium, pool, play grounds
- Tribal Government Infrastructures



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Partnership: The Tonto Apache Tribe & SunRenu Solar

- Strategic Partnership – 6 + years
- Identifying projects and execution
- Tenure – SunRenu is going on 10 years in the industry
- Track record of success
- Vetted for State of Arizona Gaming Vendor status
- Awarded the State of AZ PV Qualified Procurement Vendor status
- Financing – We excel here with Equipment Leasing, PPA's, SSA's
- Operations & Maintenance – Monitoring, uptime support, service, & reporting
- Licensing Qualifications – K-B1 (GC Commercial) & K-11 (Commercial Electrical)



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Summary of Project Objectives

- Grant Program compliance
- Tribal Council Communications – Approval based on success
- Budgets and Timelines (Updated Budget = \$770,303 (Started in January 2016))
- Energy modeling and technical support
- Design and Engineering
- Equipment Procurement
- Mobilization and staffing
- Proactive Project Management
- Interconnection
- Operations, Maintenance, and Asset Management long term



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Overview: Progress to Date

- Pre Engineering and technical support – 100% complete
- Energy modeling and systems sizes – 100% complete
- Grant Response – 100% complete
- Utility bill analysis – 100% complete
- Construction – 100% complete
- Budget Verification Process – 100%
- Project Management & Construction – 100% complete
- Interconnect – 100% complete (documentation heavy and third party inspections)
- OMM – Savings analysis & Reporting – on-going



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Timelines & Goals

- Grant Compliance
- Budget Verification Process – the project stayed within the budget
- Tribal Job Creation & sustainability – 1 Full Time position & 3 x 6 month positions (Trades)
- Construction Schedule – 100% complete to date
- Construction completed in Q1 2017
- Challenges – Utility Company compliance (Net Metering)
- Safety – No job site injuries!
- Offset & savings goals: the project is trending to make it's facilities savings goals of 33%
- Production started in March of 2017

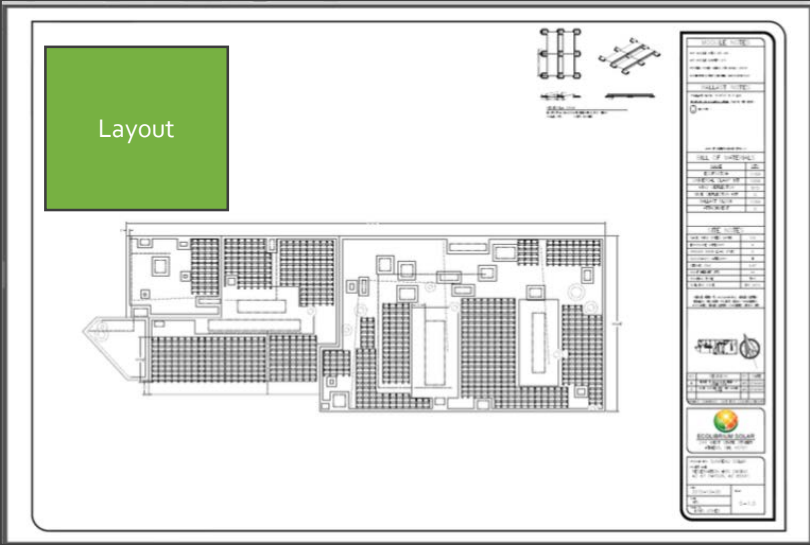


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ENGINEERING: 270kW "roof top" ballast systems and design

NO ROOF PENETRATIONS



Key Components: HOTEL & CASINO

- Solar Panels: Nine Hundred Seventy (970) Boviet 250W 60 Cell Poly Silver Frame (BVM6610P-250)
- Inverter(s) Thirteen (13) Fronius SYMO 15.0-3 208 LITE
- Racking: Ecolibrium ECOFOOT2+Base Racking

EcoFoot2+™

The next step in the EcoFoot line:
 PV installation professionals tested EcoFoot2, helped us find ways to make it even better, and the result is EcoFoot2+™ – now with more validation, fewer parts, and increased design flexibility.

Three main components

The Foot
 Our white UL-rated resin has heat deflection properties that deliver advantages on fully-exposed rooftops, and is Class A fire rated, UL2703.

Preassembled Universal Clamp
 The new preassembled universal clamp achieves integrated grounding without the use of grounding washers, UL2703.

Wind Deflector
 The corrosion-resistant wind deflector on every module helps reduce soiling and reduce ballast requirements.

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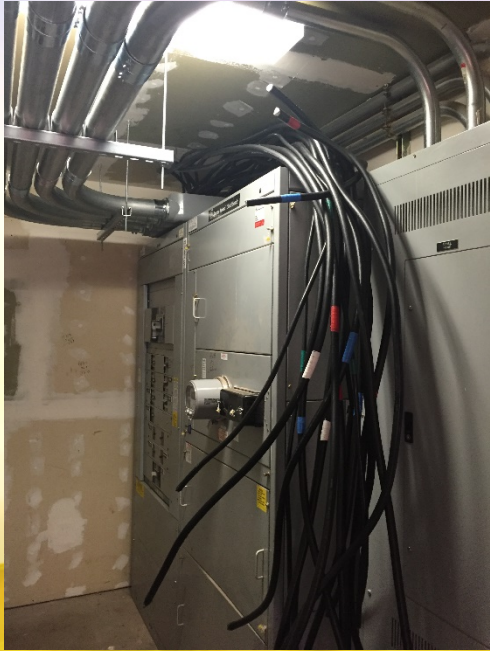
Construction Process: Completed Q1 2017



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Construction Process: Underground, SES, Inverter stations

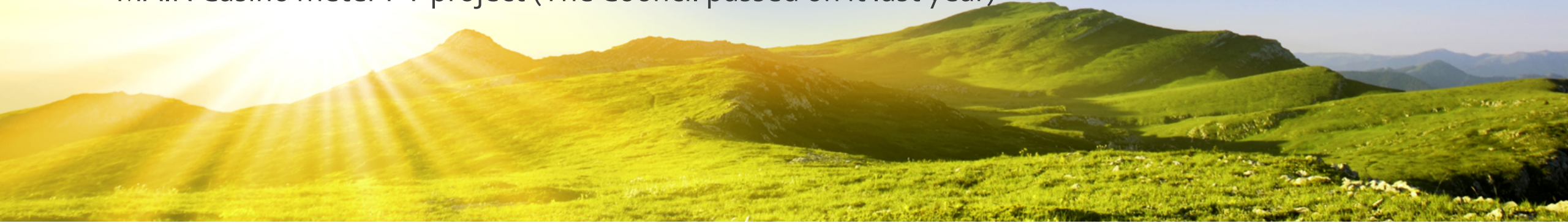


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Future Projects

- Casino energy efficiency
 - LED interior fixture and bulb replacement (Bid has been presented)
 - LED Interior bulb replacement (Casino floor & Hotel Rooms complete / 70% reduction on those lights)
- LED/Energy Efficient - Lighting casino and tribal offices (exterior and interior 100% complete)
- LED - Gas Station/Smoke shop LED retrofit (100% complete)
- MAIN Casino meter PV project (The Council passed on it last year)



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Next Steps

- Reporting and tracking production
- OMM – on-going
- Final budget reports
- System savings reports for DOE and Tribal Council
- Search for new Grant opportunities



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Closing Statements and Q&A:

THANK YOU!



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