Financing Solar Energy:
Forest County Potawatomi Community Example
October 2, 2019
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Forest County Potawatomi Community

► Environmental Mission Statement:

"The traditional values of the Forest County Potawatomi Community teach us to respect all living things, to take only what we need from mother earth, and to preserve the air, water, and soil for our children. Reflecting these values, we take leadership in creating a sustainable and healthy world. We resolve to reduce our own environmental impacts and to take steps to remedy the impacts of others. We encourage others to do the same. We also seek legislative and policy changes that protect the environment for all people, including generations to come."

▶ Sara Drescher, Attorney

Godfrey & Kahn, S.C.

- ➤ Wisconsin-based law firm 175 lawyers
- ➤ Renewable Energy Strategies Team Leader John Clancy 18 years experience working with tribes in environmental protection, renewable energy development, beginning with assisting FCPC successful opposition to sulfide mine

Strategy

- 1. Use tribal/housing energy consumption and energy efficiency opportunities as assets, rather than just liabilities;
- 2. Take advantage of Federal, State, utility and private grants and programs; and
- 3. Partner with taxpaying entities to take advantage of tax incentives.

Energy Consumption / Costs

- Actual energy costs depend on the local utility.
- ► High current energy costs can be beneficial for financing solar because the cost savings from the conversion are greater, increasing the potential return for investors, which translates into more investor money to finance the solar facilities.

2017 Average Residential Electricity Consumption & Cost

| State | Avg. Monthly Consumption | Average Price | Average Monthly Bill |
|-------------|-----------------------------|-------------------|-------------------------|
| U.S. | 867 kWh | @ 12.89 cents/kWh | = \$111.67 |
| Connecticut | 690 kWh | @ 20.29 cents/kWh | = \$139.97 |
| Maine | 546 kWh | @ 15.97 cents/kWh | = \$87.21 |
| Wisconsin | 660 kWh | @ 14.35 cents/kWh | = \$94.37 |
| Florida | 1,089 kWh | @ 11.61 cents/kWh | = \$126.44 |
| Alabama | 1,136 kWh | @ 12.55 cents/kWh | = \$142.55 |
| Louisiana | 1,187 kWh | @ 9.74 cents/kWh | = \$115.54 |
| Arizona | 1,033 kWh | @ 12.44 cents/kWh | = \$128.40 |
| California | 554 kWh | @ 18.31 cents/kWh | = \$101.49 |
| Hawaii | 506 kWh | @ 29.50 cents/kWh | = \$149.33 |

2017 Average Commercial Electricity Consumption & Cost

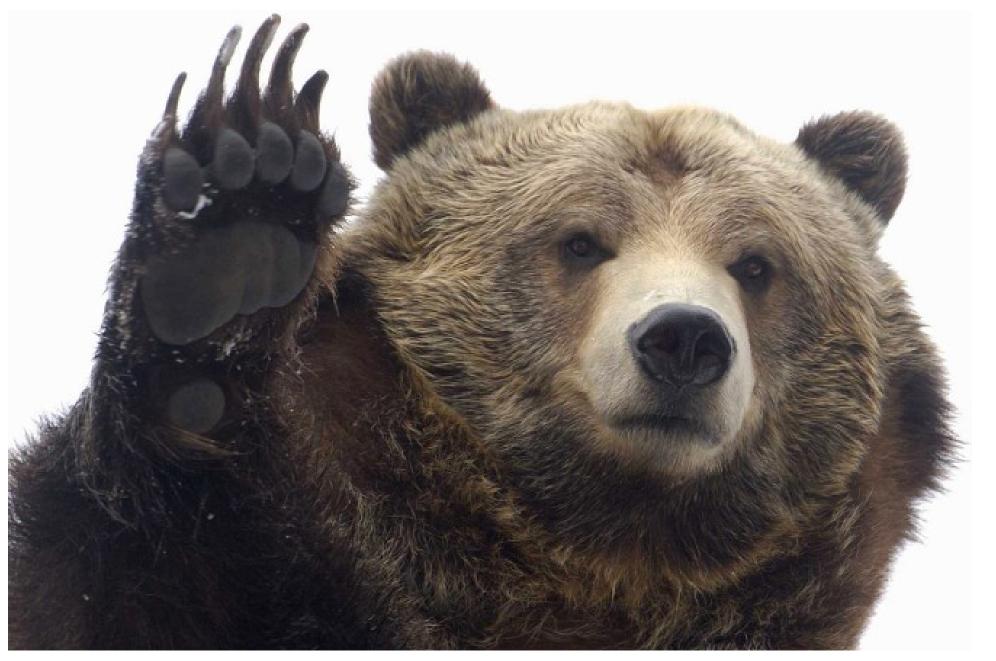
| State | Avg. Monthly Consumption | Average Price | Average Monthly Bill |
|-------------|-----------------------------|-------------------|-------------------------|
| U.S. | 6,141 kWh | @ 10.66 cents/kWh | = \$654.71 |
| Connecticut | 6,723 kWh | @ 16.06 cents/kWh | = \$1,079.88 |
| Maine | 3,286 kWh | @ 12.12 cents/kWh | = \$398.11 |
| Wisconsin | 5,602 kWh | @ 10.87 cents/kWh | = \$609.13 |
| Florida | 6,506 kWh | @ 9.35 cents/kWh | = \$608.19 |
| Alabama | 5,123 kWh | @ 11.60 cents/kWh | = \$594.06 |
| Louisiana | 7,006 kWh | @ 8.95 cents/kWh | = \$626.99 |
| Arizona | 7,716 kWh | @ 10.50 cents/kWh | = \$809.85 |
| California | 5,782 kWh | @ 15.76 cents/kWh | = \$911.53 |
| Hawaii | 4,194 kWh | @ 26.77 cents/kWh | = \$1,122.79 |

Renewable Energy Basics: Wind and Solar Limitation

- ► Electricity is consumed not only during the day but also in the evening and at night.
- A solar array produces energy only during daylight.
- Wind produces energy only when the wind blows.
- ► Which means a key to renewable energy finance is ...

Renewable Energy Basics: Net Metering

- Net Metering: An arrangement by which the Tribe sells the renewable energy it produces, but does not consume itself, *into the grid* and receives a credit against the amounts it pays for energy purchased *from the grid*.
- ▶ Interconnection: Process of connecting energy generation system with utility grid.
- Net Zero: The goal of producing enough renewable energy to meet the Tribe's entire energy needs.





Federal Grants

- ▶ DOE Tribal Energy Program
- ► HUD Indian Housing Block Grant and Indian Community Development Block grant
- ► USDA Rural Energy for America Program, Rural Utilities and Community Facilities
- ► And more

Financing: Key Sources

- ► Federal Grants, especially:
 - ▶ Indian Community Development Block Grants (ICDBGs)

 - Department of Energy Renewable Energy Grant
- ▶ USDA Rural Electric Loan/Guarantees (Treasury rates plus/up to 35 years)
- ► State, Utility and Private Programs
- ► Renewable Energy Investment Tax Credits

► Indian Community Development Block Grant:

➤ Objective is "development of viable Indian and Alaska native communities, including decent housing, a suitable living environment, and economic opportunities, principally for persons of low and moderate income" (i.e., < 80% of area median income). 24 CFR 1003.2

- ► Tribes can apply or pass resolution permitting TDHE to apply
- ► FY 2018 Notice of Funds Available was published 10/22/18
- www.hud.gov/program_offices/public_indian housing/ih/grants/icdbg
- ► Last round, applications were due 1/7/19

- ► Eligible Uses include:
- ► Acquisition of real property
- ► Housing rehabilitation, including improvements to increase energy efficiency through installation of storm windows and doors ...[etc.] and modification or replacement of heating and cooling equipment, including the use of solar energy equipment."
- ► 1003.202(b)(4)

Eligible Uses (cont.)

- ► Public facilities and improvements
- ► Private utilities
- ➤ Technical assistance to increase capacity to "carry out eligible neighborhood revitalization or economic development activities"

► Maximum Grants

| | Eastern | Woodlands | \$700 | ,000 |
|--|---------|-----------|-------|------|
|--|---------|-----------|-------|------|

| ,000 |
|------|
| 1 |

Northern Plains \$800,000

Northwest \$500,000

Alaska \$600,000



SWONAP

| 50,001+ | \$4,000, | 000 |
|----------|----------|-----|
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10,501-50,000 \$2,000,000

7,501-10,500 \$1,600,000

Below 7,500 \$800,000



DOE EERE Tribal Energy Grant

Energy Infrastructure Deployment on Tribal Lands issued under the Indian Tribal Energy Development and Self Determination Act of 2005 25 USC § 3501 et seq.

The 2019 FOA was issued on March 14, 2019.

Source for all DOE 2019 Grant information is https://eere-exchange.energy.gov/FileContent.aspx?FileID=98266714-eac7-407d-9947-9751cbc8cf3f



DOE 2019 Grant: FOA Summary

Tribes, Intertribal Organizations, and Tribal Energy Development Organizations can apply for funds to:

- 1) Energy Generating System(s) and/or Energy Efficiency Measure(s) for Tribal Building(s) (Topic Area 1)
 - a. Energy Generating System(s) (Topic Area 1.a.)
 - b. Multiple Energy Efficiency Measures (Topic Area 1.b.)
 - c. Energy Generating System(s) and/or Energy Efficiency Measure(s) (Topic Area 1.c.) Or,
- 2) Community-Scale Energy Generating System(s) Deployment (Topic Area 2); Or,
- 3) Energy System(s) for Autonomous (Independent) Operation (Topic Area 3)
 - a. Powering Essential Tribal Facilities (Topic Area 3.a.)
 - b. Tribal Community Resilience (Topic Area 3.b.)

DOE Grant: Award Amounts

In 2019, DOE made awards that range from:

- ▶ \$50,000 to \$1,000,000 for Topic Area 1 (Energy Efficiency Measures and/or Energy Generating System(s) for Tribal Building(s));
- ▶ \$250,000 to \$2,000,000 for Topic Area 2 (Community-Scale Energy Generating System(s) Deployment)
- ▶ \$50,000 to \$1,000,000 for Topic Area 3.a. (Powering Essential Tribal Facilities); and
- ▶ \$250,000 to \$2,000,000 for Topic Area 3.b. (Tribal Community Resilience).
- ► AVAILABLE WITHOUT REGARD TO INCOME LEVELS OF PERSONS BENEFITTED.

Larger Grant Amounts and Declining Price of Solar

- ► Especially for larger installations.
- ➤ Consider ability to take advantage of economies of scale.
- ► Especially if community solar or other similar options are available.
- ➤ Serve larger buildings or groups of buildings.

DOE Grant: Cost Share Requirement

A 50% cost share of the total allowable costs of the project (i.e., the sum of the DOE share, and the Recipient share of allowable costs equals the total allowable cost of the project) is required.

DOE September 27th Announcement of Intent to Release FOA

"Through the planned FOA, the Office of Indian Energy intends to solicit applications . . . to:

- ► Install energy generating system(s) and/or energy efficiency measure(s) for tribal building(s); or,
- Deploy community-scale energy generating system(s) or energy storage on Tribal Lands; or,
- ▶ Install integrated energy system(s) for autonomous operation (independent of the traditional centralized electric power grid) to power a single or multiple essential tribal facilities during emergency situations or for tribal community resilience; or,
- Deploy energy infrastructure or integrated energy system(s) to electrify tribal buildings.

. . . Under the planned FOA and as required by statute, a 50% recipient cost share of the total project costs is required and must come from non-federal sources, unless otherwise allowed by law."





Tribal Solar Accelerator Fund

- ► "GRID Alternatives has a long-standing partnership with the Wells Fargo Foundation, which has supported the national expansion of GRID's renewable energy access work since 2012.
- ▶ In 2018, GRID Alternatives received a 3-year, \$5 million grant from the Wells Fargo Foundation to support GRID's National Tribal Program as well as provide new, independent funding to tribes for renewable energy projects.
- ► This concept and program scope was developed into what is now the Tribal Solar Accelerator Fund (TSAF)."

Source: https://tribalsolaraccelerator.org/apply/

TSAF Priorities

- ► "The TSAF will provide necessary capital to support the development of new solar demonstration projects in tribal communities around the country
- ► The TSAF supports solar education, training, and workforce development in tribal communities
- ► The TSAF prioritizes the development of long-term energy plans to increase tribal energy security and resiliency."

Source: https://tribalsolaraccelerator.org/apply/

TSAF Funding Areas

Each TSAF funding area has its own application for funding; please go to tribalsolar.org to download the application(s).

"DOE Matching Funding - Application deadline: May 3rd

- Matched Funds: Tribes that have a cost-share funding need, or an outstanding U.S. Department of Energy grant matching funds requirement
- ► Proposals will be funded up to \$250,000 per project

Tribal Solar Project Funding - Application deadline: May 3rd

- ➤ Tribal Facility Solar Projects: These projects can include rooftop, carport or ground-mount solar installations that meet the energy needs of the tribal community
- ► Tribal Residential Solar Projects: These projects will be for low-income single-family homes in tribal communities
- ▶ Proposals will be funded up to \$200,000 per tribe"

Source: https://tribalsolaraccelerator.org/apply/

Public Communications Expectations

The following are GRID's commitments to and expectations of tribal partners participating in TSAF projects.

Our Commitments to You (TSAF grantee):

- 1. GRID Alternatives will provide you with a single point of contact for all TSAF-related communications activities.
- 2. GRID Alternatives will collaborate with your designated communications representative to develop a set of communications activities that is appropriate for the project and your tribe. Activities may include one or more of the following:
 - Press release announcing receipt of TSAF grant for local, regional or national audience
 - News item on GRID Alternatives' website(s) and/or newsletter about the project
 - News item on Wells Fargo Stories about the project
- 3. GRID Alternatives will provide you the opportunity to review and approve all external-facing communications assets and their intended use prior to their release.

Source: https://tribalsolaraccelerator.org/apply/



State Incentives

➤ State incentives for Renewables and Efficiency can be very significant and should be thoroughly explored. NC Clean Energy maintains a database:

http://www.dsireusa.org/

RENEWABLE ENERGY INVESTMENT TAX CREDITS



Key Tax Credit for Renewable Energy: the ITC

The Renewable Energy Investment Tax Credit ("ITC"):

- Available for solar and small wind
- ► Potentially available for battery storage installed with new solar facilities subject, however, to restrictions that may be less attractive to investors.
- Source of funds that don't need to be repaid like a grant from the tribal perspective
- ▶ Delivers up to 30% of cost of development
- ➤ Survived the "Tax Cuts and Jobs" Act of 2017, Public Law 115-97

Key Timing Issues

Beginning in 2020, the 30% ITC will phase down per IRC Section 48(a)(2) and (6):

- ▶ 26% for projects whose construction begins January 1 - December 31, 2020, if placed in service by January 1, 2024, otherwise 10%;
- ➤ 22% for projects whose construction begins January 1 December 31, 2021, if placed in service by January 1, 2024, otherwise 10%.
- ▶ 10% for projects whose construction has not begun by January 1, 2022.

Tax Credits: Key Business Terms

▶ Depreciation: The right to deduct capital costs, over time, from taxable income

► Tax Credit: A dollar for dollar credit against income taxes otherwise due

► LLC: Limited Liability Company: A partnership-like structure that allows for allocation ownership interests for tax purposes of profits and losses

How Tax Credits Work in Indian Country

- Tribes and TDHEs don't pay income tax so they have to partner with the investors who do.
- ▶ The Tribe/TDHE forms a partnership with the investors for a limited period of time.
- ► Tribe contributes grant; investor contributes remaining costs.
- ► The investor owns 99% of the partnership so that it can claim 99% of the tax credits that the Tribe/TDHE can't use. The investor also gets 99% of the depreciation tax deductions on the equipment it funds.
- ► The investor exits the LLC and goes away once the IRS rules have been satisfied (minimum five years control) and the project has been paid off (normally after 5-10 years assuming substantial grant funds).
- ▶ Investor right to sell for as low as 5% of its investment amount.
- ▶ If investor does not exercise, Tribal right to purchase interest at fair market value.

Funding of FCPC Solar Project

- ► Approximately \$2.8 million installation cost.
- ► Approximately \$1.4 million DOE grant
 - >FCPC made capital contribution of grant to LLC.
 - >FCPC received full credit under LLC Operating Agreement for grant.

Funding continued

- ► Approximately \$831,000 tax credit value.
 - >\$2.8 million x 30 percent x 99 percent.
 - Provided by investor to FCPC through LLC Operating Agreement.
- ► The \$569,000 paid back to investor through Power Purchase Agreement (PPA) and its right to sell.

PPA and Right to Sell

- ▶ 6 years at 80% of utility rates
- ➤ Or prepayment option (approx. \$443,000)
- ➤ Prepayment or prepayment in escrow can address investor risk concerns.
- Investor right to exit at end of year 5 at about \$70,000.
- ► Total Payments to investor: about \$513,000.

Forest County Potawatomi Community Solar Systems Performance Data

| FCPC Solar Systems Performance Data (January to March 2017) | | | | | | | | |
|---|-------------------------------|-------------------------------------|-----------------------------------|---|--------------|--|--|--|
| Location | Solar System Size (kVI) | Average Energy Rate (\$/kV/h) | FCPC Solar System Cost (\$) | Total Energy Production January to March 2017 (kV/h) | (January - | Total Approximate savings earned so far | Amount Remaining to Achieve Pay back (\$) | Estimated Time Until Pay back is Achieve d (yrs) |
| Air Monitoring* | 12.5 | 0.115 | \$ 6,947.83 | 2,312.47 | \$ 265.93 | \$ 1,788.68 | \$ 5,159.15 | 3.6 |
| AODA* | 12.4 | 0.115 | \$ 6,892.25 | 1,77843 | \$ 204.52 | \$ 1,730.54 | \$ 5,161.70 | 3.5 |
| Caring Place | 86.5 | 0.095 | \$ 48,078.99 | 6,406.58 | \$ 608.62 | \$ 13,575.30 | \$ 34,503.69 | 5.1 |
| Family Resources | 23.56 | 0.123 | \$ 13,095.27 | 3,24094 | \$ 398.64 | \$ 5,680.36 | \$ 7,414.91 | 26 |
| Gte Ga Ne s Prescho | 24.8 | 0.115 | \$ 13,784.50 | 3,845.11 | \$ 442.19 | \$ 3,491.75 | \$ 10,292.75 | 3.4 |
| Miwaukee | 447.64 | 0.09 | \$248,810.14 | 59,445.00 | \$ 5,350.05 | \$ 84,589.38 | \$ 164,220.76 | 3.7 |
| Muse um* | 49.6 | 0.1 | \$ 27,568.99 | 6,802.84 | \$ 680.28 | 5 3,434.26 | \$ 24,134.73 | 82 |
| Natural Resources | 22 | 0.128 | \$ 12,228.18 | 2,262.30 | \$ 289.57 | \$ 5,529.58 | \$ 6,698.60 | 2.4 |
| Ordinance* | 9 | 0.115 | \$ 5,002.44 | 1,631.68 | \$ 187.64 | \$ 835.25 | \$ 4,167.19 | 5.8 |
| Property Manageme | 24.8 | 0.115 | \$ 13,784.50 | 4,937.42 | \$ 567.80 | \$ 1,965.95 | \$ 11,818.54 | 7.0 |
| Rec Center | 62.25 | 0.124 | \$ 34,600.20 | 10,649.99 | \$ 1,320.60 | \$ 16,684.68 | \$ 17,915.52 | 1.9 |
| Rising Sun Daycare* | 24.8 | 0.115 | \$ 13,784.50 | 3,527.07 | \$ 405.61 | \$ 3,332.28 | \$ 10,452.22 | 3.7 |
| Solid V\aste | 19.5 | 0.127 | \$ 10,838.62 | 157.23 | \$ 19.97 | \$ 5,301.63 | \$ 5,536.98 | 2.1 |
| Stone Lake C-Store* | 80.6 | 0.047 | \$ 44,799.61 | 10,332.83 | \$ 485.64 | \$ 4,450.21 | \$ 40,349.40 | 10.6 |
| Utilities | 23 | 0.126 | \$ 12,784.01 | 3,073.09 | \$ 387.21 | \$ 6,576.35 | \$ 6,207.66 | 1.9 |
| *Phase II Stes | | TOTAL | \$513,000.00 | 120,402.96 | \$ 11,614.29 | \$158,966.19 | \$ 354,033.82 | |

Crandon Recreation and Administration Building Solar Sites





Milwaukee Casino Roof Solar Site





AGREEMENTS THAT MAKE IT WORK



ITC: LLC Operating Agreement

- ➤ Provides rules for Tribe's partnership relationship with investor.
- ► Capital contributions by Tribe and investor.
- ➤ Covers both construction and operation & maintenance.
- ▶ Sets cash flows to investor and Tribe.
- ➤ Rights to sell and purchase investor's interests.

ITC: Documenting LLC's ownership and access

- Monetizing tax credits requires a lease or permit to establish the LLC's control of the wind or solar facility for tax purposes.
- ► Lease: BIA Part 162 Leasing Regulations
 - ▷ Include Special Provisions for Wind and Solar Resource Leases.
 - Still Require BIA approval of all leases.
 - ▶ Leave in doubt whether agreements for installation and access are "permits," "rights of way" or leases.

ITC: Documenting LLC's ownership and access

► The HEARTH Act:

- ➤ Permits tribes to avoid future BIA lease approval by adopting a BIA-approved leasing ordinance.
- ▶ Includes Tribal Environmental Review Procedures.

Over twenty tribes have BIA-approved ordinances. All tribes should consider doing the same.

ITC: Documenting LLC's ownership and access

- ▶ Permits avoid BIA approval process. According to 25 C.F.R. 162.007, they generally:
- ▶ Do not grant a legal interest in Indian land;
- ► Are of shorter terms than leases;
- ➤ Give permittee has a non-possessory right of access, not a right of possession or right to "limit or prohibit access by others;"
- ► Are revocable "at any time."

ITC: Tribe's Deal with the Design-Builder

- ➤ The LLC, owned by the Tribe (1%) and the Investor (99%), enters into a contract with the Design-Builder to install the system
- ► May be an AIA A141 Standard For of Agreement Between Owner and Design-Builder.
- ► Issues include:
 - > Federal Procurement Requirements
 - Subcontracting, employment and training opportunities for tribal members
 - ▶ Warranties

ITC: Procurement Strategy to Maximize Benefit to Tribe

➤ Procurement may seek design-builder who can not only install facilities but also bring ITC investor who could potentially help finance up-front installation and transaction costs, reducing Tribe's out-of-pocket costs

ITC: Power Purchase Agreement

- ► The Power Purchase Agreement ("PPA")
- ▶ Determines what the Tribe/TDHE will pay to the LLC for energy during the payback period.
- Could some be less than what the Tribe/TDHE currently pays to state-regulated utility.
- ➤ Will constitute part of the investor's "return on investment."

Interconnection and Net Metering Agreements

Agreements with the utility that allow the LLC to

- connect to the grid and
- ▶ receive retail credit for the energy produced by the solar facility when the Tribe isn't using the energy
- ▶ Is no net metering, important to use all energy on site. (FCPC did this for larger systems.)

Tribal Utility Ordinances

- ► A tribal ordinance may play an important role
- Exercise of sovereignty
- Authorizes sales of energy from wholly-owned Tribal entities to wholly-owned Tribal entities on Reservation lands
- ➤ Strengthens the Tribe's case if the state should seek to impose restrictions on the LLC, Tribe or utility under state law. (Cf. White Mountain Apache v. Bracker cases)

OTHER EXAMPLE PROJECTS



AHA Solar Farm





AHA Solar Farm Serving Sunrise Acres and more than 100 homes

- ▶ 1,247 kw DC
- ► Pre-payment of PPA with DOE and HUD grant
- ▶ Option to purchase after year 6 for FMV which is likely to be less than remaining PPA amount
- ▶ Value of Distributed Energy Resources ("VDER") Billing credits at approximately 10¢ per kWh
- ► LMI Tribal member subscribers
- ► Subscribers pay small percentage of value of credits

AHA High Energy Efficiency Initiative

- ► Energy efficiency measures at 97 homes
- ► Evaluations of sample homes under NYSERDA program
- ▶ \$600,000 ICDBG
- ► Combined with NYSERDA incentives
- ► Meets 25 percent leveraging and allowed expanded project

Spokane Indian Housing Authority "Children of the Sun Solar Initiative"

- ► About 650 kW
- Serving 22 total buildings (9 Tribal buildings, 12 homes and 11 duplex units)
- ► Total of 32 buildings and homes
- ► Fully paid for with \$1 million DOE grant, tax credits worth about \$600,000 plus Wells Fargo grant of about \$500,000.
- ➤ \$80,000 to tribal entity that is being trained to maintain systems.

Children of the Sun Solar Initiative

| Type of Building | Size of PV System (kW) | Projected Energy Annual Production (kWh) |
|--------------------|---------------------------|--|
| 9 Tribal Buildings | 456.6 | 562,003.0 |
| 12 Homes | 133.2 | 165,537.0 |
| 11 Duplex Units | 62.7 | 80,972.0 |
| 22 Total Buildings | 652.5 | 808,512.0 |

Children of the Sun Solar Initiative





Children of the Sun Solar Initiative





Take Aways

- ► There are significant federal and state incentives for renewable energy and energy efficiency
- ► These incentives can often be combined with investment tax credits and depreciation benefits to dramatically reduce the cost of renewable energy and energy efficiency development
- Any remaining costs can normally be financed through energy savings

Next Steps / Strategies

- Identify priority project(s)
- Identify federal and state grants and other incentives that best match the priority project(s)
- Confirm tax credits that apply to the priority projects
- ► Pursue federal and state grants and incentives
- ► Identify partners, e.g., installer and investor
- ► Tax benefits become less valuable beginning in 2020

Getting Help Getting Going

HUD ONAP Training/Technical Assistance Process:

- ► The TDHE sends regional coordinator a Request for Training/Technical Assistance. To get the form, go to http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/ih/codetalk/training and click on the link "Technical Assistance Request Form"
- ► HUD contacts one of the authorized T/TA providers.
- ▶ G&K is a subcontractor in the area of renewable energy finance and development.



MILWAUKEE | MADISON | WAUKESHA | GREEN BAY | APPLETON | WASHINGTON, D.C.

Thank you.



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