

Picuris Pueblo 1MW Community-Scale Solar Array



Indian Energy

Ten percent of the energy resources in the United States are located on Indian lands, which together occupy land areas the size of Texas (5% of US land area).

Historically, these resources have been exploited for non-Indian use, with Indians receiving only a small portion of their potential benefit.

Indian Energy Development

Barriers:

- Capacity, Experience
- Commercialization
- Energy Pricing / Investment
- Federal Regulations
- Complex Project Options
- Funding, Tax Incentives
- PPA/ Interconnect

Advantages:

- RoW (Policy Act 2005 - Section 1813)
- Government / Business
- Funding
- Utility Formation
- Sovereignty / Self Regulation

Northern Pueblos Housing Authority

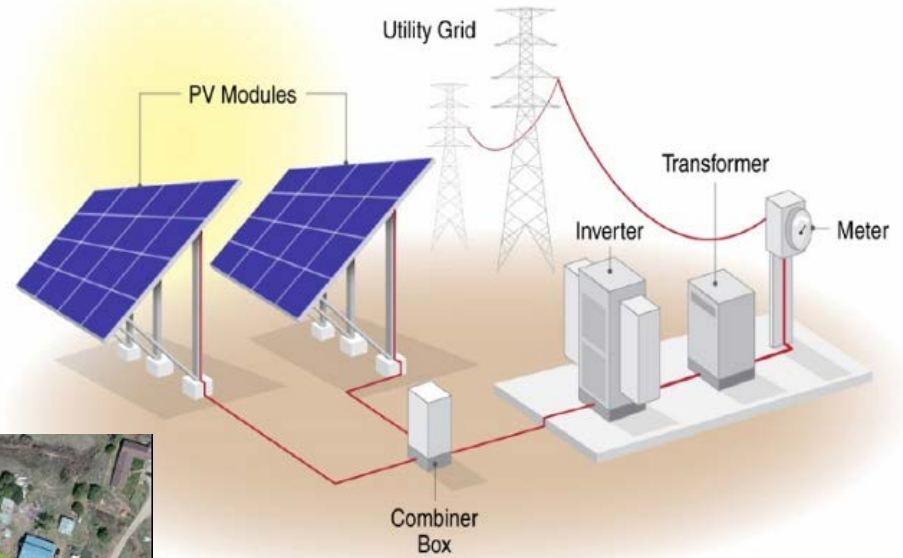


Figure 2. Ground-mounted array diagram

Source: NREL



Indian Energy

NPHA - Picuris Pueblo

- NPHA - TDHE
- Housing and Economic Development
- Picuris Pueblo Community Energy Plan
- Smallest, Isolated and Most Economically Challenged of New Mexico's 19 Pueblos
- Progressive Government – Community Support

What has come together

- Kit Carson Electric: Solar experience / PPA / Interconnect
- Site – Three-phase power / Access / Insolation
- NPHA – Tribal Commitment
- Funding
 - Enterprise Community Partners Grant
 - BIA Grant – Pre-Construction
 - DOE – START / Clean Energy in Indian Country
 - Investors - PLR

Picuris Project

1 MW – single axis tracking - 3,200 panels

6 to 7 acres – 1.2MW – DC

Total project gross revenue (25 yrs.) - \$7M

Estimated construction cost – \$2.2M

Estimated total project - \$2.75M

PPA – grid tied – 25 years

Tribal power cost offset (100% solar
powered Tribe.)

(Picuris Hotel Santa Fe – REC's)

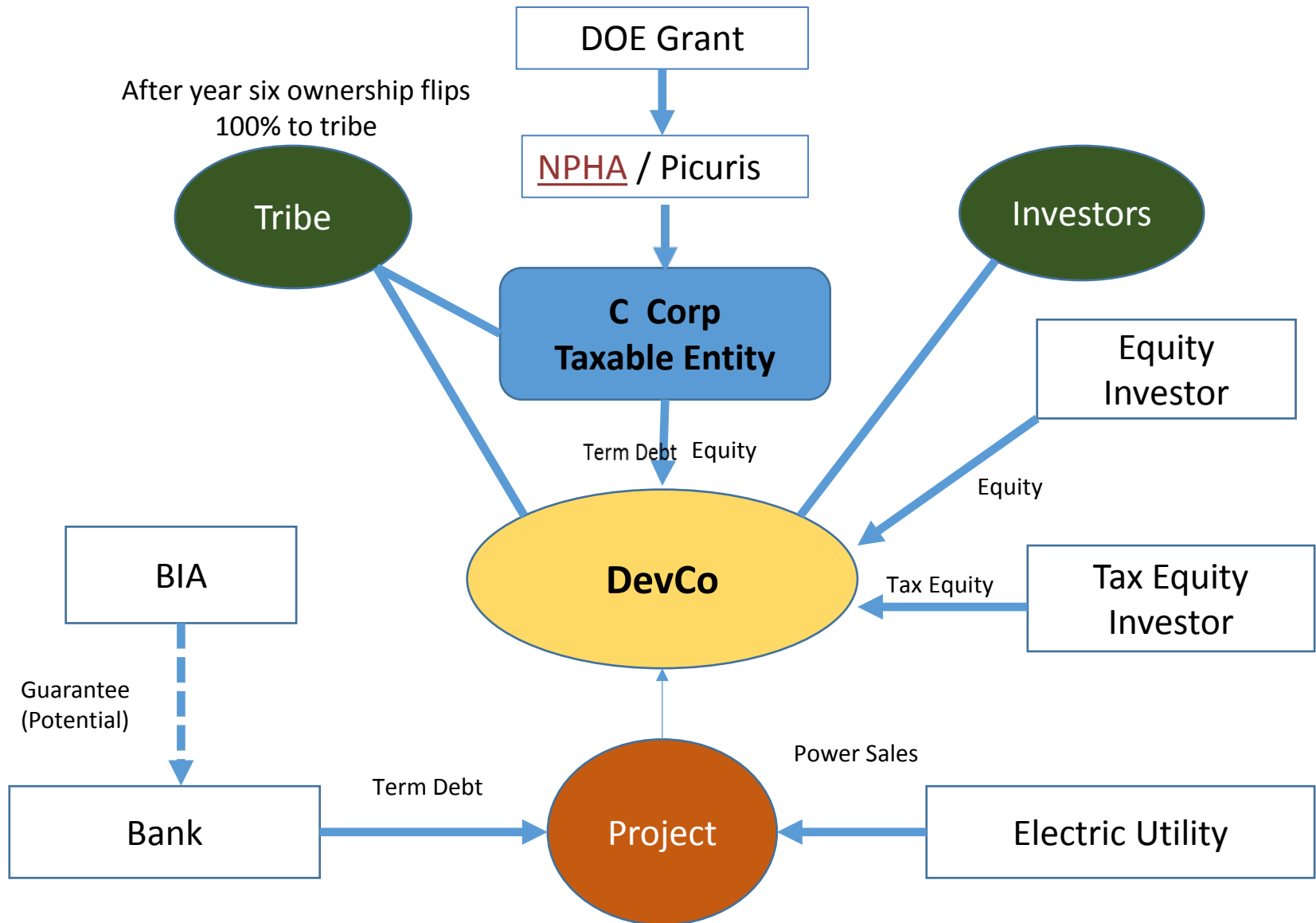
(Net-zero Fire Station)

(Solar water pump)

Picuris Project Financing

PPA			Investment
	25 year term		DOE grant
	Attractive price per kWh		Tax Equity Investor
Capital Costs			Equity Investor
	Ttl estimated Construction \$2.2M		Six-Year Buyout
	(\$1.83 / kWh)		Return
	Dvlpmnt/ Site prep/Transaction/ Legal		ITC
	Total Project estimate - \$2.75M		Depreciation
Expenses			Fees
	O&M, G&A, Inverter Replace, Insurance		Before Tax return to tribe - approx \$5M

Picuris 1 MW Solar Project – Proposed Partnership Structure



Northern Pueblos Housing Authority

Activity Name	Resources Assigned	Resource Cost	Jun 16					Jul 16			
			29	5	12	19	26	3	10	1	
<i>Commitment from Governor/ Tribe</i>	NPHA, Tribe	\$0	◆								
<i>Secure PPA</i>	KCEC, NPHA	\$0	◆								
<i>Confirm Site / obtain maps/ EA</i>	NPHA	\$0	◆								
<i>Secure Attornies/ accountant</i>	NPHA	\$0	◆								
<i>Rsrch Tax Incentives / structure</i>	Attny, NPHA	\$0	◆								
<i>Apply for START Grant</i>	NPHA	\$0	◆								
<i>Develop Initial Budget</i>	NPHA	\$0	◆								
<i>Apply for BIA IEED Grant</i>	NPHA	\$0	◆								
<i>Identify Potential Investors</i>	NPHA	\$0	◆								
<i>Secure Council Resolution</i>	NPHA, Tribe	\$0	◆								
<i>Apply for DOE grant</i>	NPHA	\$0	◆								
<i>Secure Environmental firm</i>	NPHA	\$0	◆								
<i>Prepare Project Summary</i>	NPHA	\$0	◆								
<i>Secure Initial Investor</i>	NPHA	\$0	◆								
<i>Visits to site</i>	NPHA	\$0	◆								
<i>Prepare Project Pro-forma</i>	Invstr, NPHA	\$0	◆								
<i>Initial Agreements-Investor, KCEC</i>	Invstr, KCEC, NPHA	\$0	◆								
<i>Site Study (Insolation)</i>	NPHA, NREL	\$0	◆								

KCEC - Kit Carson Energy
NPHA - Northern Pueblos Housing
Attny - Attorney
INVSTR -Investor
NREL - Nat'l Renewable Energy Lab
Marron - Marron & Associates

Northern Pueblos Housing Authority

Activity Name	Resources Assigned	Resource Cost	Jun 16					Jul 16				
			29	5	12	19	26	3	10	17	24	
Phase II Type: Text, Stored: per Row												
<i>Environmental</i>												
Complete new EA	Marron	\$15,500										
Organize SPE's	Attny1, Invstr, NPHA	\$10,000										
Complete Lease - BIA approval	NPHA	\$0										
<i>New Investor</i>												
Develeop structure / pr-formas	Invstr	\$0										
Complete Interconnect Agrmnt	KCEC, Srngy	\$0										
Complete LOI- EPC cost - DOE		\$0										
<i>Attorney</i>												
Review Pro-forma - taxes	Acct, Invstr, NPHA	\$20,000										
Enter into contracts / agreements	Attny1, Invstr, SolPura	\$10,000										
Phase III												
<i>Pre-construction</i>												
Secure EPC	NPHA, Srngy	\$0										
Topo-survey	Cntrct1, EPC	\$2,500										
Geo-tech	Cntrct2, EPC	\$4,500										
Land prep		\$0										
Electrical	Cntrct3, EPC	\$15,500										
Structural	Cntrct4, EPC	\$16,000										
Design Pkge	Cntrct5, EPC	\$10,000										
Permits	NPHA	\$0										
Phase IV - Construction		\$0										