Tribal Community Solar in New Mexico: Current Development and Funding Opportunities

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NM Tribal Community Solar Forum

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Quarles

Agenda

1. Summary of Community Solar Project Options
2. Community Solar Projects: Why do them
3. Models
4. Development Considerations
5. New IRA federal tax benefits
6. Federal Funding: BIL, IRA, Others
7. Putting it All Together

Summary of Community Solar Project Options

- Community-scale Development
  - Self-use
  - Retail pricing
  - Access to distribution system
  - Tribal jurisdiction
- Examples:
  - rooftop solar
  - community solar/wind
  - Microgrids
  - Storage (plus or standalone)

Community Solar Projects: Why do Them?

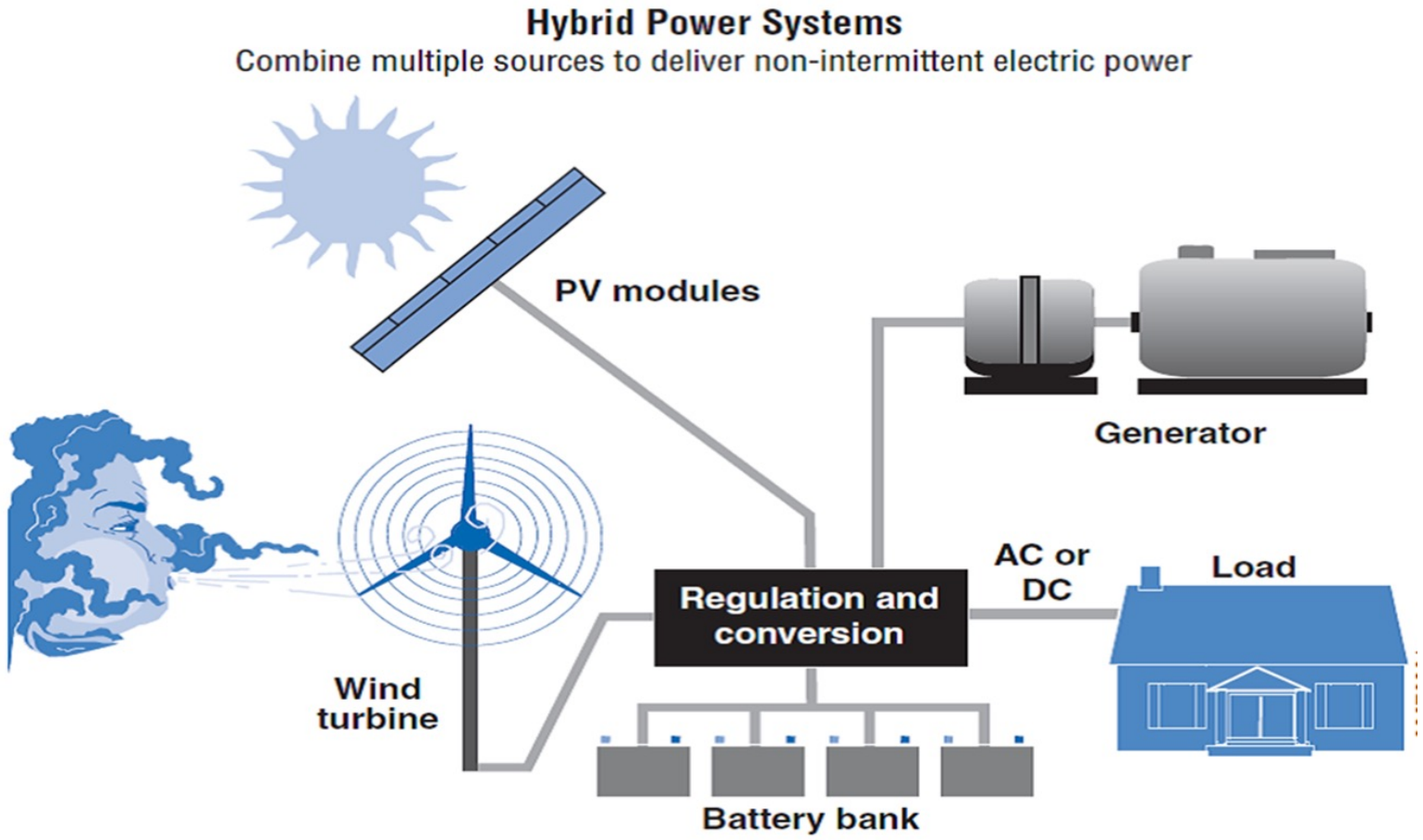
- Energy Self-Determination
  - Control of energy supply
  - Diversity of energy supply
  - Control of electricity costs (lower)
- Economic Development
  - Jobs
  - Sustainable business development / competitive advantage
  - Stable energy costs
- Climate Adaptation
  - Energy reliability
  - System adequacy and reliability (resiliency)
  - Reduced risk exposure to “centralized power” and transmission

Basic Models

- Microgrids
  - Blue Lake Rancheria
  - San Pasqual Band of Mission Indians
  - Colusa Rancheria
- Community Solar (+Storage)
  - Picuris Pueblo
- Subscription
  - State of New Mexico

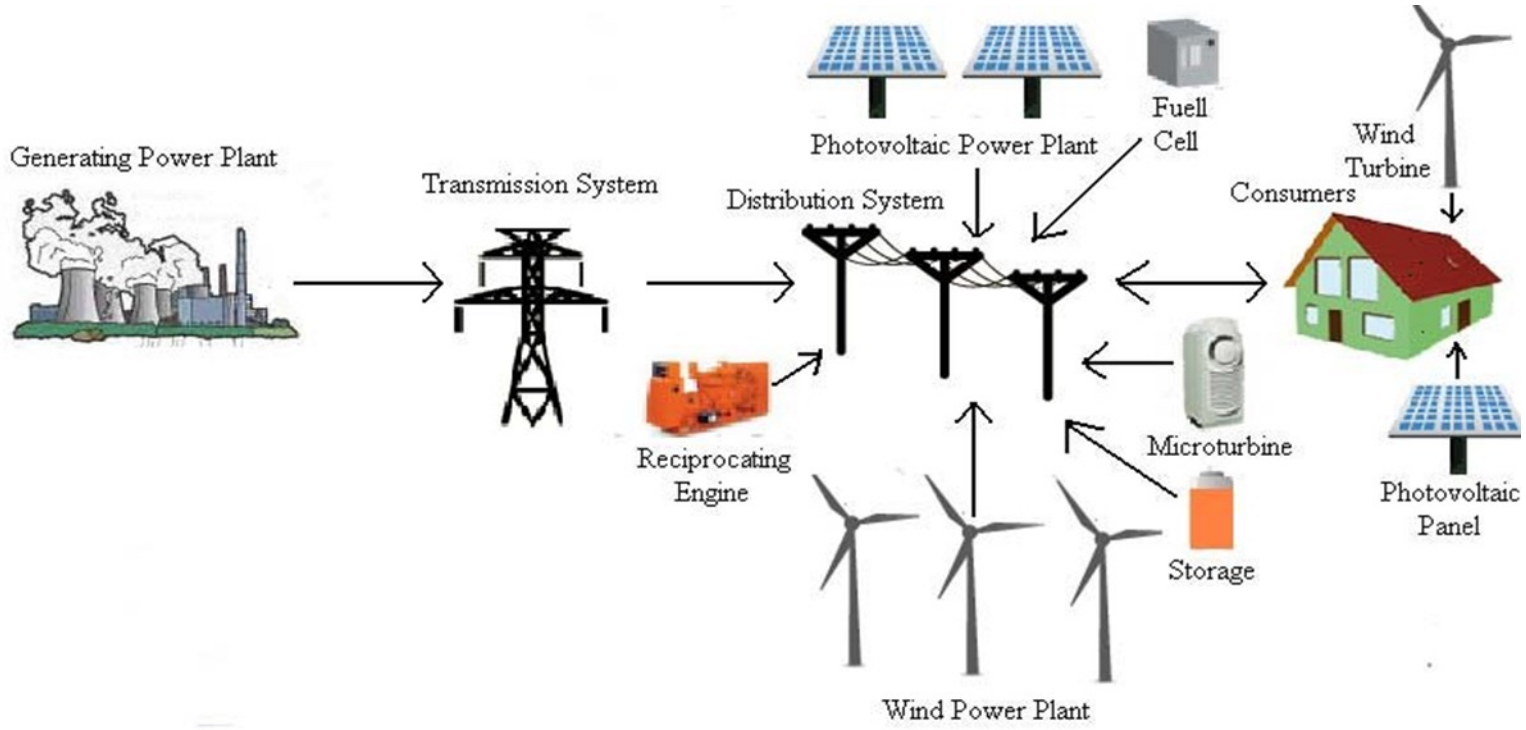
Community Microgrids

“Localized load and generation resources which normally operate connected to and synchronous with the traditional grid but can disconnect and function autonomously as an island within the grid”



Community Solar (+ Storage)

Defined: generation located in distribution grid, customer or third-party-owned generation, storage
Customer or Third Party owned: rooftop solar, small wind, community solar or wind (such as solar gardens), energy storage, diesel / natural gas generators, microgrids (multiple generation technologies)
Can be “behind the meter” (net metering) or “in front of the meter” (PURPA, CCA)

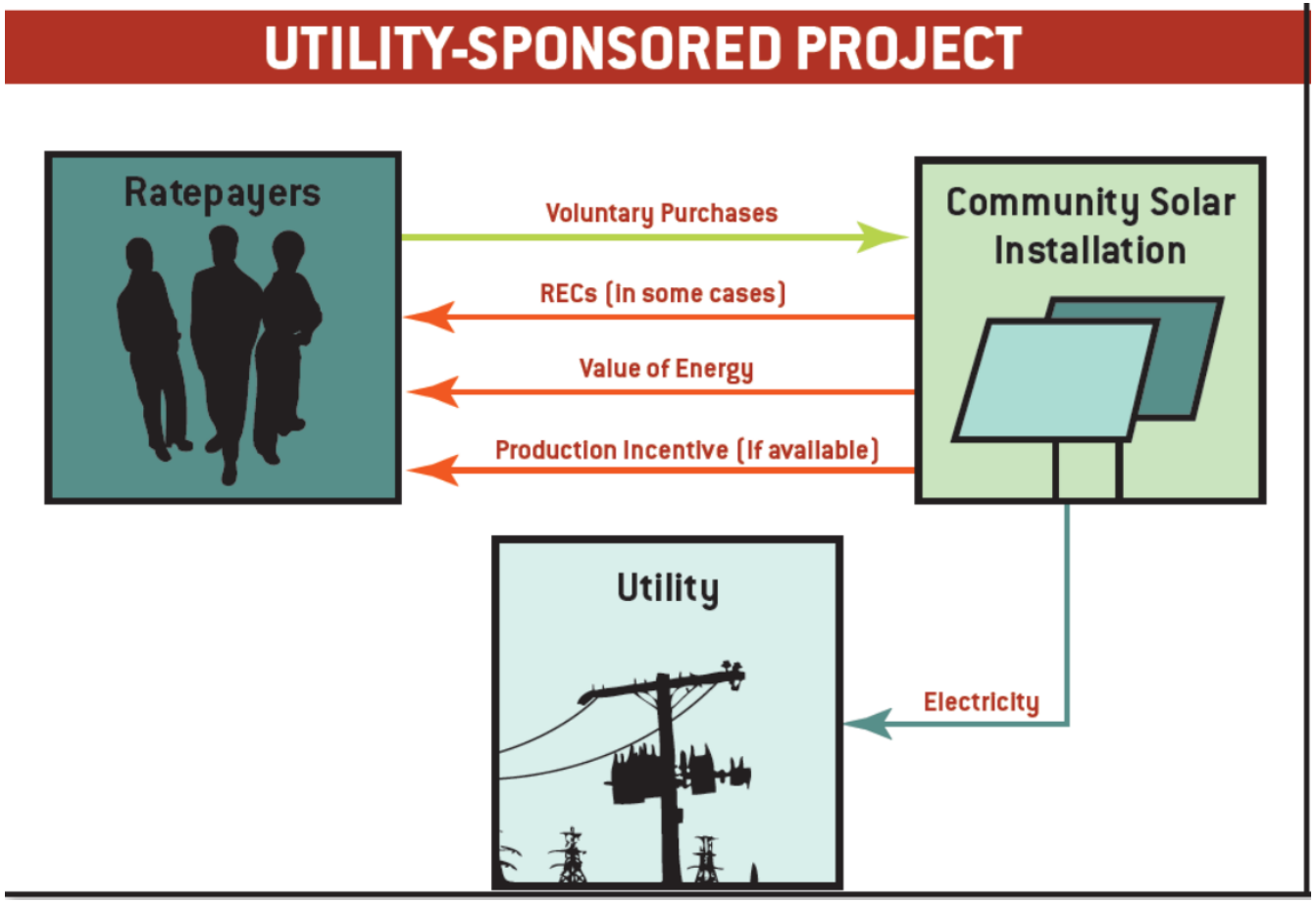


Subscription Solar (aka Solar Gardens)

- Definition: Subscription community solar allows residents, small businesses, organizations, municipalities and others to "buy-in" to the solar project and receive credit on their electricity bills for the power produced from their portion of a solar array, offsetting their electricity costs
- Ownership Models:
  - Utility-Sponsored Model, in which a utility owns or operates a project that is open to voluntary ratepayer participation.
  - Special Purpose Entity (SPE)Model, in which individual investors join in a business enterprise to develop a community solar project.
  - Non-Profit “Buy a Brick” Model, in which donors contribute to a community installation owned by a charitable non-profit corporation.

Basic Subscription Model

In subscription model, utility customers participate by paying a subscription ongoing payment to support a solar project. In exchange, customers receive a payment or credit on their electric bills that is proportional to 1) their contribution and 2) how much electricity the solar project produces. The project can be owned by the utility, the Tribe or a third party. The participating customer has no ownership stake in the solar system



Development and Funding Considerations

- Energy Planning
  - What do you want to do and why?
- Project Assessment and Feasibility
  - Technical and financial
  - Policy, law, and regulatory
- Project Pre-Development and Development Activities
  - Grant applications & funding options
  - Environmental and siting issues
  - Permitting, interconnection
  - Ownership/project structure
- Project Deployment
  - Financing
  - Construction
  - Workforce
- Operations and Maintenance

IRA Tax Credits & Benefits

Solar, Wind, Geothermal, Microgrids, Storage, Interconnection Tax Credits

- 30 – 70% of project costs

Elective Pay - payment equal to tax credits

Transportation Tax Credits

- 30% of EV commercial vehicles ($7500 - $40,000 max)
- 30% of EV charging stations ($100,000 max)

Residential Tax Credits

- 30% for renewable energy generation, storage
- Set amounts for efficiency, electrification technologies - $1600 -$2000 tax credit limit

Can combine with grants and incentives

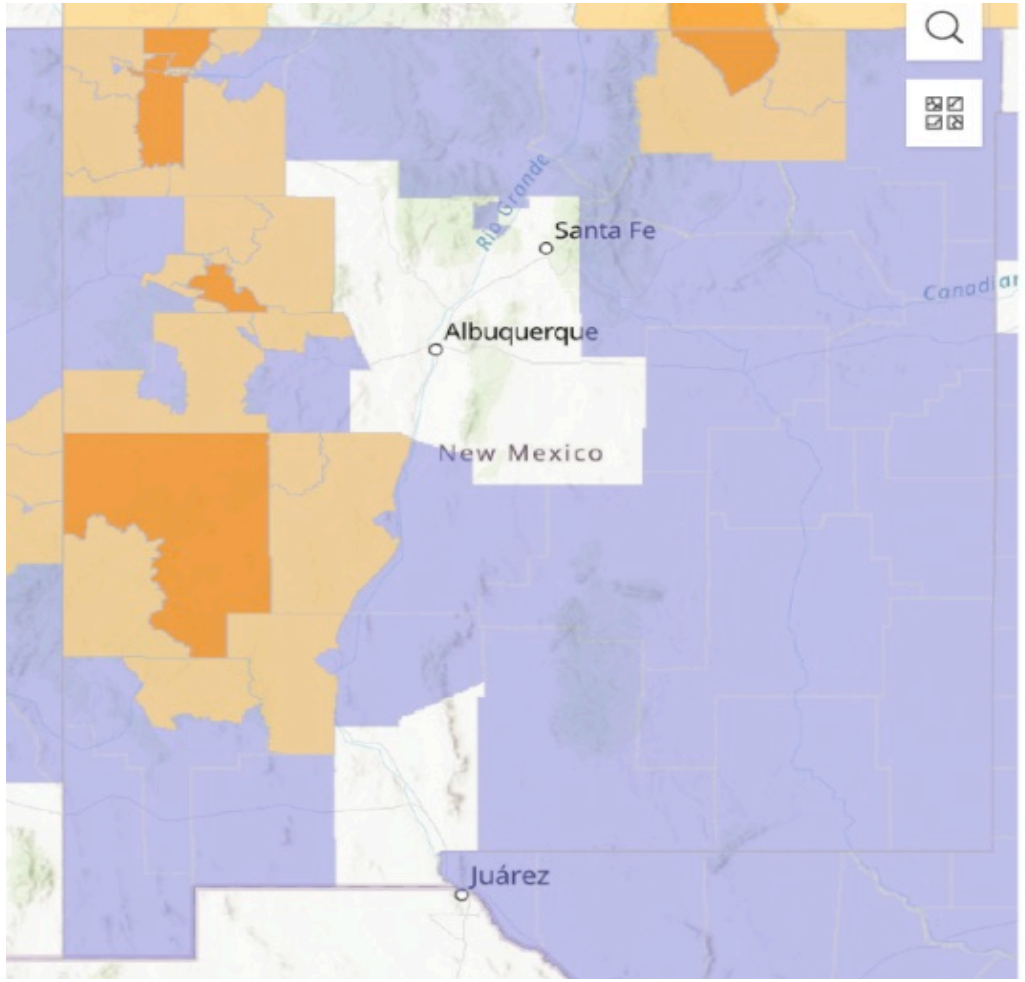
IRS Elective Pay

- Elective pay – applicable entity may file a tax return and claim a tax credit (in the form of a refund) equal to the amount of the eligible tax credit(s) for eligible energy property/projects
- Applicable entities – tribal governments, agencies, instrumentalities, subdivisions (housing authorities, utilities, gaming enterprises)
  - If own disregarded LLC, then apply on behalf of LLC; Sec. 17 considered disregarded
  - Other tribal enterprises – if can be treated as an instrumentality or subdivision
- Partnerships – unincorporated joint operating agreements, tenancy in common
  - Can form SPE LLCs, but must opt out of subchapter K (new rules proposed)
  - Intergovernmental agencies (joint powers authorities, joint tribal entities) – if opt out of subchapter K
- Grant / tax credit stacking – but can't exceed total cost of project
  - Federal, state, charitable grants – MUST BE SPECIFICALLY FOR CONSTRUCTION/PURCHASE OF ENERGY PROPERTY
- Pre-filing registration – entity and project
  - Lots of project information: name, location of project, est. tax credit, est. grants
- Tax Return – Form 990-T

Tax Benefits – Investment Tax Credit

- One time tax credit, received after placed into operation.
- Based on "cost basis" or "fair market value" of project.
- Extended to 2025; will be replaced with new "clean electricity investment tax credit" (CEITC) (technology neutral) from 2026 – 2033.
- Extended to geothermal heat pumps, standalone storage, microgrid controllers, interconnection costs if < 5 MW.
- Tax credit amount based on:
  - Prevailing wage/apprenticeship (30%) (not required for less than 1 MW)
  - Domestic content (10%) (not required for less than 1 MW)
  - Energy community (10%)

NM Energy Community Map



IRA Low-Income Bonus Credit Program (environmental justice credit allocation)

- Solar, wind, storage – 5 MW or less, ITC only
- 1.8 GW allocation per year for 10 years
  - 200 MW allocated to Indian lands projects (10% tax credit)
  - 200 MW allocated to low-income housing, inc. tribal housing programs (20% tax credit)
  - 700 MW allocated to low-income economic development programs (20% tax credit)
- Must apply for the allocation – next window will open in Spring 2024
- Tribes, tribal enterprises (majority owned), and qualified renewable energy orgs (majority owned by tribe) eligible to apply – receive priority if own project
- General limited rooftop and community solar
  - Must "benefit" low-income households – bill reduction of 20% or receive more than 50% of economic value of project

Summary of Tax Incentives for Community Solar

Project Size	Base ITC	PMW	Energy Community	Domestic Content	LICBCP	Total Potential Tax Credits
< 1 MW	30%	Not required	10%	10%	10% 20%	30 - 60% 30 - 70%
1 – 5 MW	6	30%	10%	10%	10% 20%	6 – 60% 6 – 70%
> 5 MW	6	30%	10%	10%	Not available	6 – 50%

Additional considerations:

- Interconnection costs and microgrid controller costs – eligible for 30% for < 5MW projects
- Storage eligible for total tax credits, regardless of size

Elective Pay – Reduced Payments

- BUT
- Elective Pay construction starting in 2024 must meet domestic content requirement (or receive a waiver) to receive full value of credit (not required if less than 1 MW), or will be reduced as follows:

  2024 – 90%

  2025 – 85 %

  After 2025 – 0%
- Can obtain a waiver from domestic content requirements if:
  - Cost increases by more than 25%
  - No domestic producer of covered equipment

IRS has just published initial guidance for obtaining a waiver from the domestic content requirements

Ownership Considerations

Type of Ownership	Capital Raise	Development	O&M	Tax Benefits	Revenues
Wholly owned	Equity Debt Grants	Responsible for development actions/costs	Responsible	Receive all eligible tax credits	Receive all revenues
Jointly Owned	Equity Debt Grants	Shared responsibility and cost	Shared	Share tax credits/depreciation	Share revenues
Third-Party Owned	Equity Debt	Responsible for development actions/costs	responsible	Receive all eligible tax credits/depreciation	Receive all revenues

Project Development Requirements

Site	Resource	Off-Take	Permits	Technology	Team	Capital
Securing site: No site, no project	Engineering assessment (input)	Power purchases: off-take contract – (revenue)	Anything that can stop a project if not in place…	Engineered system (output)	Professional, experienced, diverse	Financing structure
• Site control • Size and shape • Location to load and T&D • Long-term control • Financial control • Clear title • Lease terms • Collateral concerns • Environmental • Access • O&M access • Upgradable	• Volume/ Frequency • Variability • Charac-teristics (power/speed) • 24-hour profile • Monthly, seasonal, and annual variability • Weather dependence • Data history • Std. deviation • Technology suitability	• Credit of counterparty • Length of contract • Terms and conditions • Reps and warranties • Assignment • Curtailment • Interconnection • Performance • Enforcement • Take or pay • Pricing and terms	• Permitting/ entitlements • Land disturbance • Environmental and cultural impacts • Resource assessments • Wildlife impacts • Habitat • NEPA, EIS • Utility inter-connection • Other utility or PUC approvals • Lease and/or ROW approvals	• Engineering design plans • Construction plans • Not generic solar panel and inverter • Engineered resource/ conversion technology/ balance of system designs • Specifications • Bid set	• Business management • Technical expertise • Legal expertise • Financial expertise (including tax) • Transmission interconnection expertise • Construction/ contract management • Operations • Power marketing/sales	• Development equity • Project equity • Nonrecourse project debt • Mezzanine or bridge facility • Tax equity • Grants, rebates, other incentives • Environ-mental attribute sales contracts (RECs) • Bond finance