National Tribal Land Association Conference

April 3, 2024

Renewable Energy 101: A Short Primer of Major Aspects

Pilar M. Thomas, Esq.
Partner

Quarles

Agenda

1. Background
2. Jurisdictional / Laws / Regulations
3. Scale and Scope of Projects
4. Project Development
5. Due Diligence

Quarles

Why Do Clean Energy Project

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

Quarles

Climate Change is Real

- Built environment:
  - Energy systems - extraction, conveyance, power/heat generation, transmission/distribution
  - Water systems – irrigation, drinking/waste water
  - Critical infrastructure – hospitals, public safety, schools, casino
- Impacts
  - Extreme weather
  - Flooding
  - Wildfires
  - Drought/water shortages
- Vulnerabilities
  - Downed power lines
  - Frozen pipelines
  - Generation off-line
  - Reduced efficiency
  - System stress
- Adaptation:
  - Hardening - make the infrastructure more durable
  - Resiliency – ensure the infrastructure can recover quickly, keep operating

Clean Energy Development Trends

- Federal energy policy emphasis on decarbonization, carbon emission reduction, substantial financial support
- State-centric climate change and renewable energy policies and programs will remain in many states
- Utility model is shifting and resistance to distributed energy (unless controlled by them)
- Federal tax incentives now available to tribes; tax parity for tribes and tribal enterprises
- Corporate sustainability and green goals
- More and more companies demanding 100% renewable

Multi-Jurisdictional Considerations

- Federal jurisdiction over tribal land development, environmental laws, certain energy regulatory roles
- Tribal jurisdiction over economic activity, energy development
- State jurisdiction over regulated utilities and off-reservation aspects of project, but also non-Indian activities on reservation

Federal Permitting /Regulatory

- EPA
  - Clean Air Act – Clean Power Plan
  - Clean Water Act – WOTUS
- Army Corp
  - Clean Water Act – WOTUS, National Permit Conditions
- DOI
  - Animal and Species Protection
  - BIA - Indian lands laws/ NEPA/NHPA
- FERC
  - Federal Power Act – hydro electric, transmission, wholesale power
  - PURPA – public utilities

Quarles

Federal Indian Land Use Laws

- Indian Mineral Development Act, 25 USC §§ 2101 - 2108
- Long Term Leasing Act (as amended by the HEARTH Act), 25 USC § 415
- General Right of Way Act, 25 USC §§ 323 - 328
- Contracts Act, 25 USC § 81
- Indian Energy Development and Self Determination Act, 25 USC § 3501 et seq (as amended)

Tribal Law Considerations to Promote Clean Energy

- Climate Change Mitigation, Adaptation, and Resiliency Plan
- Energy Security and Assurance Policy and Planning
- Policies – tribal and non-tribal energy-related activities
  - Utilities Regulation
  - Self-generation of energy
  - Regional planning
- Building codes for critical buildings – hospitals, schools, community centers, casinos
- Environmental protection codes – natural and cultural resource protection
- Leases and ROWs
  - Climate adaptation (hardening, resiliency) standards
  - Retain regulatory jurisdiction
- Treatment as State status under federal environmental laws
  - Clean Air Act – air permits
  - Clean Water Act – water infrastructure; water permits

Renewable Energy Project Options

- Commercial Development (Utility Scale)
  - Sell to utilities, off-takers
  - Wholesale, market pricing
  - Access to transmission, transportation
  - Multi-jurisdiction implications
- Community Development (rooftop, community-scale, microgrids)
  - Self-use
  - Retail pricing
  - Access to distribution system
  - Ownership / control

Utility Scale Project and Transmission System

Quarles

Competitive Business Model / Power as a Commodity

Role: Independent power producer (IPP)/non-utility generator (NUG)

Commercial-scale: Long-term, revenue-generating facility on tribal land that sells power to one or more utilities

Rewards: Typical Goals

- Generate revenue for Tribe
- Job creation (construction, O&M)
- Available, Tribe-controlled location
  - May/may not be Tribe-owned
- Found interested party to off-take/purchase power
- Have enough capital for a large-scale project
- Environmental sustainability
- Self-sufficiency, pride

Challenges

- Capital intense
- Development risk and time
- Involves external players
- Combination of market forces

A commercial project is dependent upon market forces. The project needs to be competitive with non-tribal projects and/or provide a clear differentiator.

See *Tribal Business Structure Handbook* www.irs.gov/pub/irs-tege/tribal_business_structure_handbook.pdf

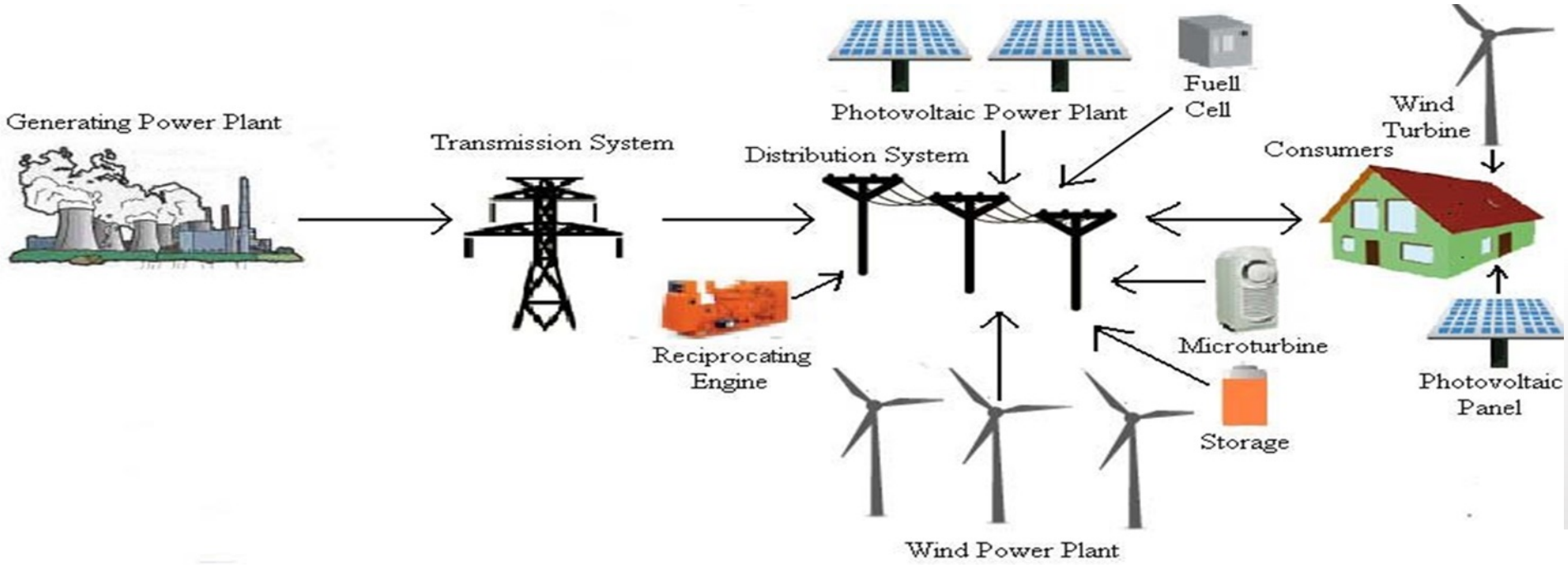
Quarles

Community / Distributed Generation

Defined: generation located in distribution grid, customer-owned generation, storage, demand-side management

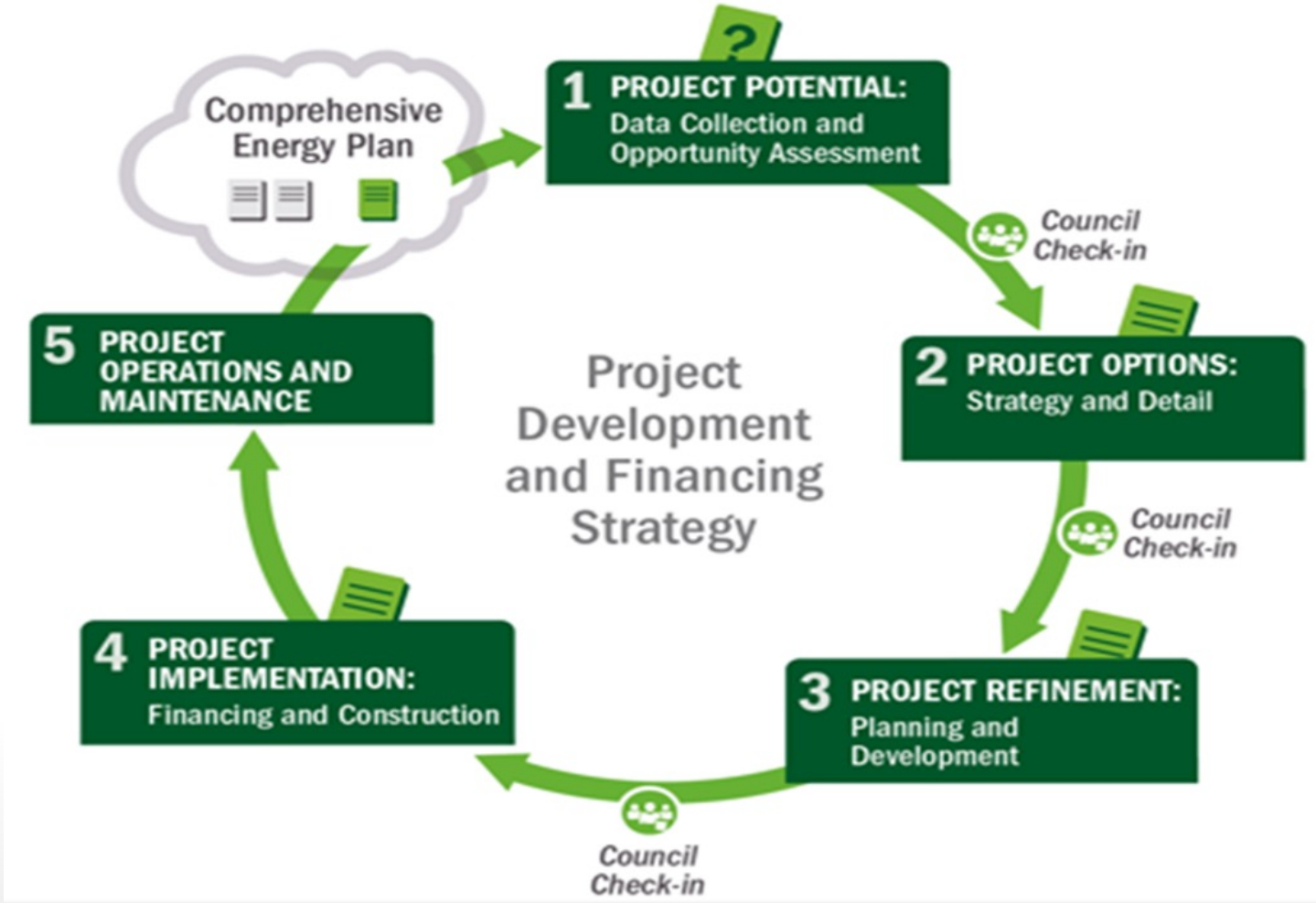
Customer owned: rooftop solar, small wind, community solar or wind (such as solar gardens), energy storage, diesel / natural gas generators, microgrids (multiple generation technologies)

Can be “behind the meter” or “in front of the meter”



Quarles

DOE Project Development Phases



Quarles

Project Phases – Key Outcomes

- Phase I: Potential/Planning
  - Feasibility / Resource Assessments
  - Tribal goal setting – ownership, structure, risk identification
  - Market / regulatory environment
- Phase II: Options
  - Permitting, siting, development/options agreements
  - Project team identification
  - Capital requirements
- Phase III: Refinement
  - Negotiate leases, ROW, power purchase agreements, TERO
  - Finalize financing, pro forma
  - Finalize permitting (NEPA, NHPA)
  - Interconnection agreements
- Phase IV: Implementation
  - Finalize project agreements
  - Complete interconnection
  - Construction
- Phase V: Operations and Maintenance
  - O&M Contracts

Quarles

Phase I: Tribal Roles

Title	Role
Project Company	Legal entity that owns the project, also called special purpose entity
Resource/Landowner	Legal and/or beneficial owner of land and natural resources
Sponsor/Developer	Organizes all of the other parties and typically controls project development and makes an equity investment in the company or other entity that owns the project
EPC Contractor	Construction contractor provides design, engineering, and construction of the project
Operator	Provides the day-to-day O&M of the project
Feedstock Supplier	Provides the supply of feedstock (i.e., energy, raw materials) to the project (e.g., for a power plant, the feedstock supplier will supply fuel)
Product Off-taker	Generally enters into a long-term agreement with the project company for the purchase of all the energy
Lender	A single financial institution or a group of financial institutions that provides a loan to the project company to develop and construct the project and that takes a security interest in all of the project assets
Tribal Host	Primary sovereign of project site

Quarles

Phase I: Types of Energy Planning Activities

- Planning – policy
- Environmental assessment
- Site assessment
- Resource assessment
- Cultural, water, biological, vegetation, historical resources
- Economic costs and benefits
- Infrastructure
- Construction

Phase II: Tribal Team Members are Key

- Professional, experienced, diverse
  - Finance, including tax
  - Technical
  - Legal
  - Transactional
  - Project management
- Governmental
  - Workforce development (TERO/Apprenticeship)
  - Environmental / natural resource
  - Tax commission
  - Realty
  - Legal
  - Finance

Phase II: Detailed Project 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

Quarles

Phase II: Project Development Risks

	Risks
Development	• Poor or no renewable energy resource assessment • Not identifying all possible costs • Unrealistic estimation of all costs • Community push-back and competing land use
Site	• Site access and right of way • Not in my backyard (NIMBY)/build absolutely nothing anywhere (BANANA) • Transmission constraints/siting new transmission
Permitting	• Tribe-adopted codes and permitting requirements • Utility interconnection requirements • Interconnection may require new transmission, possible NEPA
Finance	• Capital availability • Incentive availability risk • Credit-worthy purchaser of generated energy
Construction/ Completion	• EPC difficulties • Cost overruns • Schedule
Operating	• Output shortfall from expected • Technology O&M • Maintaining transmission access and possible curtailment

Quarles

Project Development Due Diligence (Risk Reduction / Mitigation)

- Resource & Markets Assessment
- Economics
- Development
- Transmission/Interconnection
- Capital Requirements
- Management, Operations, Maintenance

Quarles

Due Diligence: Development

- What is the proposed scale (MW capacity) for the project?
- How will construction be accomplished?
- How long will development and construction to commercial operation date (COD) take?
- Where is the renewable energy (RE) generation development proposed to be sited?
- What will the initial project design and/or layout look like?
- What direct and surrounding land impacts are expected from on-site development and access routes?
- How will the community be impacted?

Phase II: Initial Project Agreements

- Option to Lease, Easement
- Development Support
- Consultants (NEPA, Resources, Technical, Financial)

Quarles

Phase II: Capital Requirements / Sources of Capital

- Development, Construction, Asset Management
- Capital Markets
  - Commercial Banks
  - Venture Capital/Equity Investments
- Public Finance
  - Taxable bonds
  - Tax Exempt bonds
- Federal and State Financial Assistance
  - Grants
  - Loans/loan guarantees

Initial Development: Option to Lease, ROW

- Give exclusive right to secure land needed for project
- Authorize initial environmental review studies
- Generate payments to tribe for option rights
- If structured correctly, does not need BIA approval

Initial Development: Development/Regulatory Support

- Compensation to tribe to cover tribal development costs
- Staff time
- Outside expert support (tax, finance, legal)
- Travel costs
- Participation in environmental reviews
- NEPA process
- NHPA consultation process
- May also negotiate portion of development fee
- Could also be included in Option Agreement

Phase III: Project Agreements

- Lease / ROW
- Power Purchase Agreement
- Interconnection Agreement
- Equity Investment Agreement
- Finance Agreement
- Engineering, Procurement and Construction
- O&M Agreement

Project Agreements: Lease

- Sets out terms for energy project siting
- Typical terms cover:
  - Compensation
  - Jurisdiction / regulatory applicability
  - Indemnification / insurance
  - Construction / operations
  - TERO compliance
  - Dispute resolution
  - Sovereign Immunity waivers
  - Environmental/resource protection/mitigation requirements
- Compliance with 25 CFR 162, Subpart E (Wind and Solar Leases)
- BIA approves lease, except if tribe has HEARTH Act leasing authority

Quarles

Project Agreements: Easements

- Terms for right of way grant for transmission lines and/or roads
- Might be included in lease – but can be separate
- Same basic terms as lease
- But grant of easement can only be approved by the BIA
- Compliance with 25 CFR Part 169

Project Agreements: PPA

- Potential off-take portion of energy production
  - Price for power
  - Amount of power
  - Sale of renewable energy credits (RECs)
  - Curtailment
- Long-term procurement benefits
  - Stable, knowable price of power
- Utilities typically have form PPA

Project Agreements: Interconnection

- Pro forma agreement approved by FERC and/or state utility commission
- Technical standards
- Costs and cost recovery
- Curtailment / disconnect / back feeding
- Dispute resolution

Project Agreements: EPC

- Turnkey or design-build
- Key milestones
- Tribal law requirements – environmental, TERO, building codes, taxes, etc.
- Liquidated damages – for missing milestones, failure to deliver on time
- Performance guarantees – not the same as warranties
- Inter-related to interconnection and PPA
- Tax credit eligibility – prevailing market wage, apprenticeship, domestic content (40% tax credit)

Conclusion

- Project development, risks, and opportunities – depends on scale, purpose
- Bring leadership and staff in at the beginning
- Have a clear plan and objectives
- Identify key actions that can take place BEFORE get started on any size project – there's alot that Tribes can control, and alot they don't: KNOW THE DIFFERENCE

Quarles

Questions?
Thank you

Quarles