

PRESENTATION ON  
RENEWABLE ENERGY & EFFICIENCY FOR TRIBAL  
COMMUNITY DEVELOPMENT CONFERENCE

ESTABLISHING A TRIBAL UTILITY  
AUTHORITY HANDBOOK

AUGUST 8, 2012



# AGENDA

- What is an Electric Utility?
- What makes up an Electric Utility system?
- Is a Tribal Utility Authority (TUA) the Right Choice?
- What are the Tribe's Expectations?
- How long will it take to form a TUA?
- Reasons for forming a TUA
- Types of Formation
- TUA Business & Operating organization
- TUA Service
- Evaluating the feasibility of Forming a TUA – Study Steps
- Pro forma Example
- Mitigation Risk
- Summary
- Questions
- Contact Information

## WHAT IS AN ELECTRIC UTILITY?

**It is a business that delivers electric power to its customers by operating, maintaining and constructing electric system facilities.**

# WHAT MAKES UP AN ELECTRIC UTILITY SYSTEM?



# IS A TRIBAL UTILITY AUTHORITY (TUA) THE RIGHT CHOICE?

- Tribal Leaders and Tribal Members will need to explore reasons why it wants to form a TUA. Some reasons include, but are not limited to those that follow:
  - Frequent and long power outages under current service
  - Lack of or poor working relationship with the serving electric utility
  - Little or no support for renewable energy projects or other tribal energy priorities
  - Lack of institutional knowledge about energy issues
  - Limited or poor interaction with state and/or federal entities to address reservation energy issues
  - Little or no incentive for existing utility to invest in improvement or expansion of service on reservation
  - Little or no control over the rates
  - Desire for self-governance
  - Create job opportunities for tribal members
  - Potential cost savings

# WHAT ARE THE TRIBE'S EXPECTATIONS?

- Some expectations include, but are not limited to those that follow:
  - **Positive**
    - Lower rates
    - More responsive customer service
    - Improved quality and reliability of service
    - Local presence provides more customer convenience
    - Employment of tribal members
    - Tribal input into planning and development of electric facilities on reservation
    - Knowledge and involvement in energy issues that affect tribe
  
  - **Negative**
    - Higher rates
    - Less responsive customer service
    - No improvement in quality and reliability of service
    - Increased complaints from disconnected customers
    - Obligations to set and enforce utility policies

# HOW LONG WILL IT TAKE TO FORM A TUA?

- Step 1 - Conduct a valuation and assessment of facilities.
  - Prepare a five to ten year pro forma analysis to determine preliminary cost/benefit.
  - Tribal leaders review results and make decision to proceed with or cancel the TUA formation.
- Step 2 – Negotiate agreements
  - Negotiate with incumbent utility for the purchase of the electric facilities and related land rights, or acquire new land rights and construct replacement facilities.
  - Negotiate purchase power agreement and transmission service.
  - Negotiate equipment and material arrangements.
  - Tribal leaders review results and make decision to proceed with formation decision or stop the TUA formation
- Step 3 – If approved, proceed to implement plans to form and operate a TUA
  - Prepare detailed business plan, outlining organization, services, equipment and operational procedures.
  - Develop rates, policies and procedures.
  - Hire staff, open office and begin operation.
  - Begin providing service and delivering power to customers.
- A reasonable overall time estimate
  - Step 1 – 6 to 12 months
  - Step 2 – 12 to 24 months
  - Step 3 – 36 to 60 months
  - Total – 54 to 96 months or 4 ½ to 8 years

# REASONS FOR FORMING A TUA

- Primary goal - provide reliable electric service at competitive prices to residents and commercial enterprises.
- Additional goals could include, but are not limited to, those discussed below.
  - Energy Self-Sufficiency
    - Create Energy Knowledge Base
  - Opportunities For Ownership Of Generation
    - Evaluation of the cost/benefits of participation in generating station ownership as well as opportunities to develop renewable energy projects on reservation.
  - Cost of Energy
    - Desire to keep rates as low as possible while observing sound business practices.
  - Customer Service
    - Establishment of a Local Presence and Jobs such as, including but not limited to, those listed below:
      - Administrative – Customer Service, Billing, Accounting and Human Resources
      - Technical – Engineering, Designing, Metering and Lineman
  - Provide Convenience and Flexibility for its customers
  - Improved Customer Service
    - By being local, the TUA could personally know their customers and their needs, and over time, provide more efficient service
  - Provide New Services
    - Ensure that tribal members historically lacking service are able to receive service by gradually extending service to underserved areas of the reservation.
  - Service Reliability
    - Staff is on-call 24/7 to respond to outages and service problems.
    - Improved Response Time
    - Improved On-Reservation Service Reliability through upgrades of existing electric facilities, expanding the electric system and reinvesting the returns back into reservation electric facilities.

# TYPES OF FORMATION

- There are many different options for organizing a TUA and the tribe should consult its legal counsel.
  - A good reference that discusses at length the different types of business formations is a 2008 handbook titled Tribal Business Structure Handbook, that was prepared by Karen J. Atkinson and Kathleen M. Niles as a tribal self-governance project of the Tulalip Tribes as funded by an economic development grant awarded by the U.S. Department of the Interior's Office of Indian Energy and Economic Development (IEED) to the Tulalip Tribes of Washington.
- The TUA must function as a business, be allowed to run without tribal government interference, and have a board of directors with knowledge and experience in at least some aspects of the electric utility industry.
- A tribe interested in forming a TUA should contact existing TUA's regarding their individual experiences.
- Formation Documents should include, but are not limited to:
  - A clear definition of the goals of the organization, the governing structure, board duties, and board responsibilities.
  - Allow the TUA to enter into agreements such as for transmission and purchase power requirements.
  - Establish clear rules for organization
  - Clearly delineate boundaries between tribal government and TUA Board
  - Define the duties and responsibilities of the TUA Board
  - Duties and responsibilities of the TUA

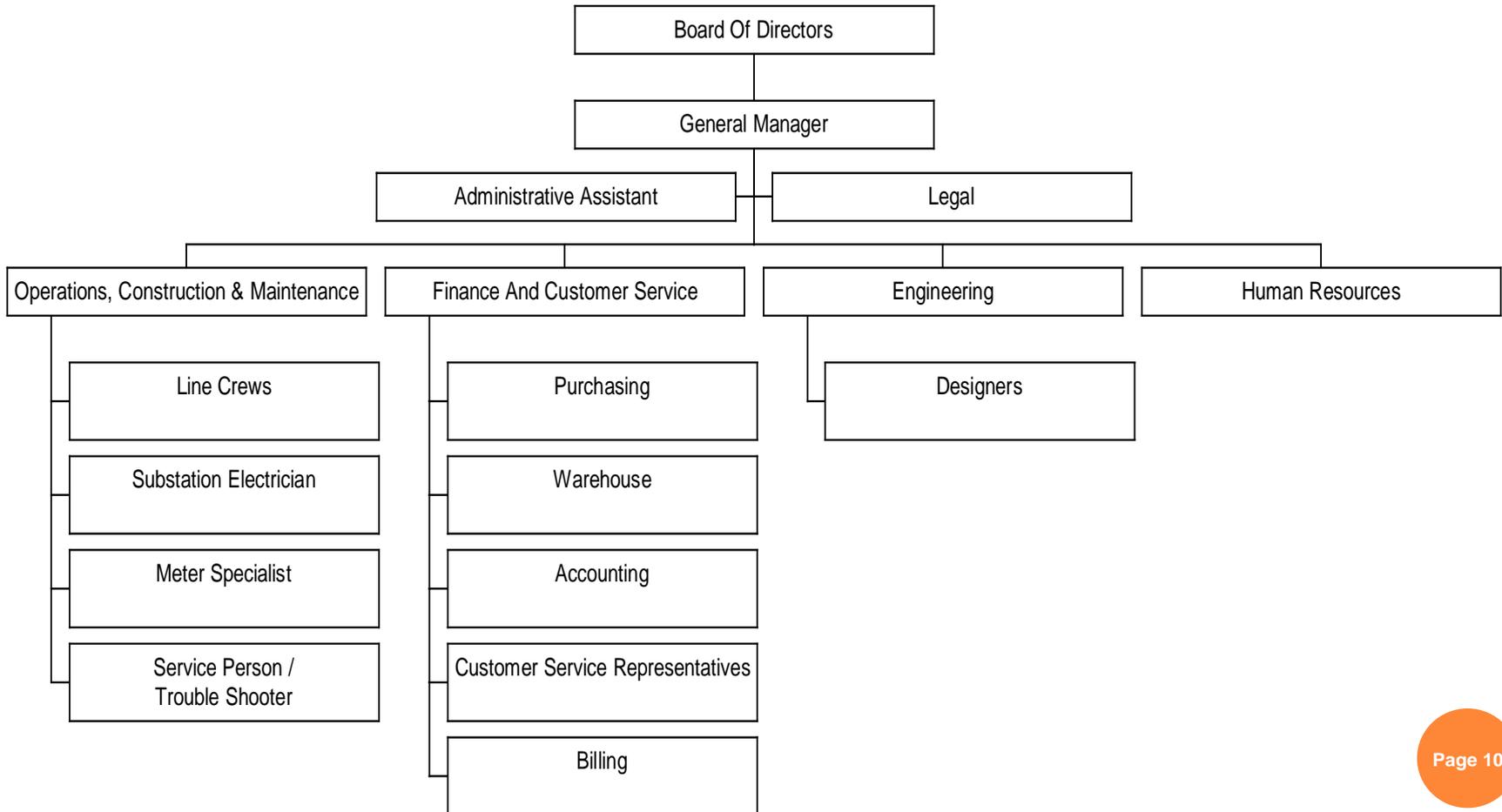
# TUA BUSINESS & OPERATING ORGANIZATION

- TUA organization has two distinct functions – Operations and Business
- Operations Function is generally responsible for
  - Engineering
  - Design
  - Warehouse & inventory,
  - Construction, maintenance & system operations
  - Trouble calls & outage response
  - Safety
- Business Function is generally responsible for
  - Rate setting & regulatory compliance
  - Accounting
  - Customer billing, new connections & customer questions
  - Human resources
  - Power purchases
  - Insurance
  - Administrative functions
  - Legal
- The size and type of both the business and operating functions is dependent upon the service area, the number of customers and **whether the services for each function is performed internally or by an external third party.**

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# TUA BUSINESS & OPERATING ORGANIZATION (CONTINUED)

Generic TUA Oganizational Chart



# EXAMPLES OF TUA SERVICES

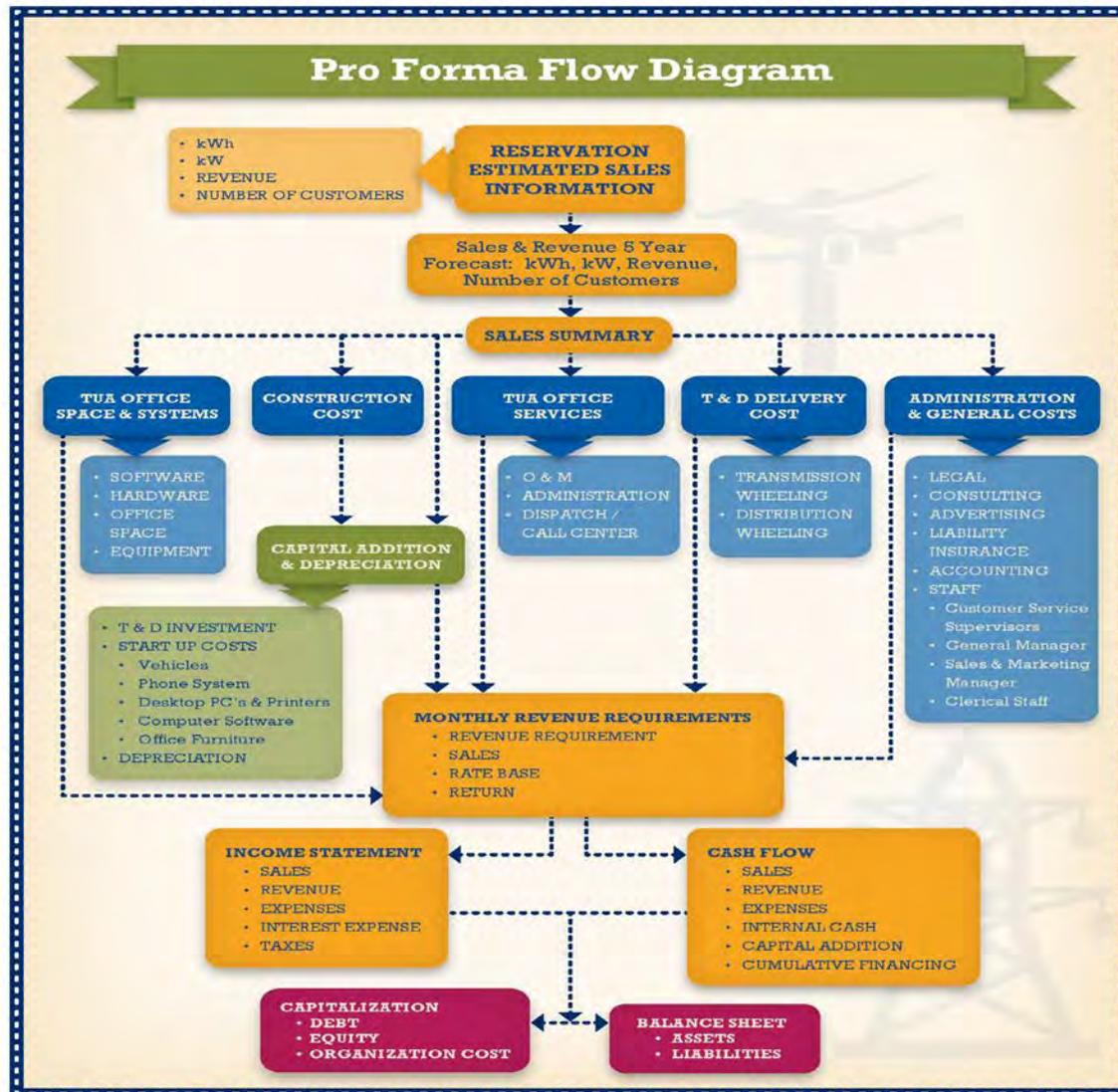
- Distribution System
  - Respond to outages and restore service
  - Design & build new or upgrades to existing facilities
  - Respond to customer voltage and other power issues
  - Conduct engineering studies
  - Develop mapping
  - Develop O&M plan
  - Develop load forecast
  - Procure power and transmission resources
  - Develop distribution system expansion plan
  - Perform system protection
  - Work with developers to install facilities
- Meters
  - Read meters to obtain usage
  - Install new meters
  - Change out faulty meters
- Billing
  - Issue monthly bills for service
  - Explain billing to customers
  - Issue past-due and disconnect notices
  - Develop payment plans
- Customer Service
  - Receive customer calls
  - Explain reason for past due or disconnect notices
  - Work with customer to resolve outstanding balance to avoid disconnection
- Accounting
  - Pay vendors
  - Receive payments
  - Prepare financial statements

# EVALUATING THE FEASIBILITY OF FORMING A TUA

- Step 1 - Conduct a System Valuation and Condition Assessment Study (SVACS)
  - Indication of the value of the system, how well maintained and required deferred maintenance
- Step 2 – Pro forma Statement
  - A forecast or estimate of the revenues and costs associated with the utility operations.
  - Demonstrates whether forming a TUA is economically feasible and would support the goals established by tribal leaders.
  - Shows that the TUA, as proposed, would provide for the necessary financial, professional, technical and managerial resources in order to provide safe and reliable service at a competitive cost.
  - The pro forma contains the following items:
    - Revenue and Customer Load Forecast
    - Purchased Power Costs
    - Transmission and Distribution Delivery Costs
    - Operation, Maintenance & Construction Costs
    - Administrative & General Costs
    - Revenue Requirements
    - Cash Flow Analysis
    - Capitalization Requirements
  - Pro forma statement will be updated continually as new information is obtained, to allow tribal leaders to make “Go” or “No go” decisions.
- Step 3 – Organization Documents
  - TUA Structure
  - Tribal resolutions

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# EVALUATING THE FEASIBILITY OF FORMING A TUA (CONTINUED.....)



# PRO FORMA EXAMPLE

	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Energy Sales At Meter</b>					
Area 1 Energy Sales At Meter (kWh)	9,647,981	9,810,098	9,980,530	10,153,835	10,330,063
Area 2 Energy Sales At Meter (kWh)	7,943,572	8,102,443	8,264,492	8,429,782	8,598,377
<b>Total Energy Sales - kWh</b>	<b>17,591,553</b>	<b>17,912,541</b>	<b>18,245,022</b>	<b>18,583,617</b>	<b>18,928,440</b>
<b>Revenue From Sales</b>					
Total Area 1 Revenue From Energy Sales - \$	\$ 1,064,417	\$ 1,083,790	\$ 1,104,198	\$ 1,133,984	\$ 1,173,663
Total Area 2 Revenue From Energy Sales - \$	\$ 911,433	\$ 973,905	\$ 1,038,695	\$ 1,098,348	\$ 1,137,191
<b>Total Revenue - \$</b>	<b>\$ 1,975,850</b>	<b>\$ 2,057,695</b>	<b>\$ 2,142,893</b>	<b>\$ 2,232,333</b>	<b>\$ 2,310,854</b>
Average \$/kWh	\$ 0.11232	\$ 0.11487	\$ 0.11745	\$ 0.12012	\$ 0.12208
<b>Disbursements</b>					
<b>Purchased Power Costs</b>					
<b>Purchase Power Costs</b>					
Primary Power Cost	\$ 227,388	\$ 231,935	\$ 236,574	\$ 241,306	\$ 246,132
Renewable Power Cost	\$ -	\$ -	\$ -	\$ -	\$ -
Supplemental Power Cost	\$ 1,028,228	\$ 1,080,479	\$ 1,135,625	\$ 1,193,411	\$ 1,253,962
<b>Total Area 1 Purchase Power Costs</b>	<b>\$ 1,255,615</b>	<b>\$ 1,312,414</b>	<b>\$ 1,372,199</b>	<b>\$ 1,434,716</b>	<b>\$ 1,500,093</b>
Average \$/kWh	\$ 0.07138	\$ 0.07327	\$ 0.07521	\$ 0.07720	\$ 0.07925
<b>Power Delivery Costs</b>					
<b>Power Delivery Costs</b>					
Transmission Delivery Cost	\$ 85,732	\$ 87,149	\$ 88,645	\$ 90,165	\$ 91,712
12 kV Distribution Delivery Cost	\$ 106,266	\$ 108,547	\$ 110,956	\$ 113,426	\$ 115,958
<b>Total Area 1 Power Delivery Costs</b>	<b>\$ 191,998</b>	<b>\$ 195,696</b>	<b>\$ 199,601</b>	<b>\$ 203,591</b>	<b>\$ 207,670</b>
<b>Total Power Delivery Cost - \$</b>	<b>\$ 191,998</b>	<b>\$ 195,696</b>	<b>\$ 199,601</b>	<b>\$ 203,591</b>	<b>\$ 207,670</b>
<b>Total Purchase Power &amp; Power Delivery Costs</b>	<b>\$ 1,447,613</b>	<b>\$ 1,508,110</b>	<b>\$ 1,571,799</b>	<b>\$ 1,638,307</b>	<b>\$ 1,707,763</b>
<b>Net Profit / (Loss)</b>	<b>\$ 528,237</b>	<b>\$ 549,585</b>	<b>\$ 571,094</b>	<b>\$ 594,025</b>	<b>\$ 603,091</b>
<b>Distribution System O.M.&amp;C</b>					
<b>Distribution System O.M.&amp;C</b>					
O&M Contract Service	\$ 24,444	\$ 25,334	\$ 26,268	\$ 27,238	\$ 28,243
2-Person Line Crew	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000
Equipment	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628
Engineering Services	\$ 25,000	\$ 25,750	\$ 26,523	\$ 27,318	\$ 28,138
Materials	\$ 46,600	\$ 46,816	\$ 47,034	\$ 47,255	\$ 47,477
Customer Service / Call Center	\$ 20,000	\$ 20,400	\$ 20,808	\$ 21,224	\$ 21,649
Meter Reading:	\$ 11,510	\$ 11,531	\$ 11,556	\$ 11,582	\$ 11,607
Billing	\$ 5,000	\$ 5,150	\$ 5,305	\$ 5,464	\$ 5,628
<b>OM&amp;C Cost subtotal</b>	<b>\$ 302,554</b>	<b>\$ 305,131</b>	<b>\$ 307,798</b>	<b>\$ 310,544</b>	<b>\$ 313,369</b>
<b>Total Distribution System O.M.&amp;C</b>	<b>\$ 302,554</b>	<b>\$ 305,131</b>	<b>\$ 307,798</b>	<b>\$ 310,544</b>	<b>\$ 313,369</b>
<b>Net Profit / (Loss)</b>	<b>\$ 225,682</b>	<b>\$ 244,454</b>	<b>\$ 263,295</b>	<b>\$ 283,481</b>	<b>\$ 289,722</b>
<b>Administrative &amp; General:</b>					
Rent	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251
Utilities (Water & Electric)	\$ 200	\$ 206	\$ 212	\$ 219	\$ 225
Telephone	\$ 1,200	\$ 1,224	\$ 1,248	\$ 1,273	\$ 1,299
Office Maintenance (Repairs, Exterminators, Janitor & Security)	\$ 100	\$ 103	\$ 106	\$ 109	\$ 113
Salaries & Benefits	\$ 60,000	\$ 61,200	\$ 62,424	\$ 63,672	\$ 64,946
Board Costs	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000	\$ 18,000
Travel	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251
Training	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251
Office Materials & Supplies	\$ 6,200	\$ 6,324	\$ 6,450	\$ 6,579	\$ 6,711
Auto (Insurance, Fuel & Maintenance)	\$ 20,000	\$ 20,400	\$ 20,808	\$ 21,224	\$ 21,649
Industry Experts	\$ 30,000	\$ 30,600	\$ 31,212	\$ 31,836	\$ 32,473
Accounting	\$ 5,000	\$ 5,100	\$ 5,202	\$ 5,306	\$ 5,412
Legal	\$ 5,000	\$ 5,100	\$ 5,202	\$ 5,306	\$ 5,412
Misc(Payroll Service, Advertising, Bank Charges, donations, dues)	\$ 500	\$ 515	\$ 530	\$ 546	\$ 563
<b>Total A&amp;G Cost subtotal</b>	<b>\$ 152,200</b>	<b>\$ 154,952</b>	<b>\$ 157,761</b>	<b>\$ 160,628</b>	<b>\$ 163,555</b>
<b>Net Profit / (Loss)</b>	<b>\$ 73,482</b>	<b>\$ 89,502</b>	<b>\$ 105,534</b>	<b>\$ 122,853</b>	<b>\$ 126,167</b>
<b>Debt Service</b>					
<b>Debt Service Total (P&amp;I)</b>	<b>\$ 65,864</b>	<b>\$ 83,358</b>	<b>\$ 100,851</b>	<b>\$ 118,345</b>	<b>\$ 135,839</b>
<b>Net Profit / (Loss)</b>	<b>\$ 7,619</b>	<b>\$ 6,144</b>	<b>\$ 4,683</b>	<b>\$ 4,508</b>	<b>\$ (9,672)</b>
<b>Reserves/Contingencies</b>					
<b>Reserves/Contingencies subtotal</b>	<b>\$ 5,000</b>	<b>\$ 5,100</b>	<b>\$ 5,202</b>	<b>\$ 5,306</b>	<b>\$ 5,412</b>
<b>Net Profit / (Loss)</b>	<b>\$ 2,619</b>	<b>\$ 1,044</b>	<b>\$ (519)</b>	<b>\$ (798)</b>	<b>\$ (15,084)</b>

# MITIGATION OF RISKS

- There are certain risks associated with electric utility operation.
- Efforts should be made to address risks as part of the formation of the TUA.
- The future cannot be predicted accurately, such that the TUA will need to be prepared to undertake other measures as situations occur to ensure the safe, reliable and financial viability of the TUA.
- Some examples of the types of risks that could adversely impact the success of any TUA's efforts, include but are not limited to the following:
  - Forecast of operating expenses is too low
  - Rapid customer growth and expansion of electric facilities could place a severe burden on the TUA's financial, operating and management systems
  - Customers do not pay their bills
  - The TUA's rates may be higher than the prior utility
- The actual list of risks and mitigation options are unique for each tribe and project.

# SUMMARY

- Forming a TUA will take **commitment** by tribal leaders; **perseverance and effort** by tribal staff, consultants and attorneys with the allocation of adequate resources, to see the job through to the end.
- There will be challenges and road blocks that will need to be overcome such as those listed below:
  - Load and revenue data limitations.
  - Serving utility does not want to cooperate with the tribe in forming a TUA.
  - Serving utility wants too much for the purchase of the system on-reservation
  - Transmission/substation interconnections require upgrades to be paid by the tribe.
  - Distribution system is in need of a lot of O&M to bring it up to acceptable utility condition or into code.
  - Rates may need to increase in the near term.
- Resolution or non-resolution of the challenges becomes part of the decision making process, along with the financial and policy considerations.
- The financial pro forma will provide tribal leaders with the cost-benefit issues that will need to be considered.
- Policy considerations will be addressed as the policies and procedures of the TUA are developed.
- Decisions will need to be made during the evaluation process as to whether to proceed or stop.
- The tribal leaders will have numerous opportunities to question the basis for proceeding with the formation of the TUA and to decide not to proceed.

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# SUMMARY (CONTINUED.....)

## First Go – No go

- Does the tribe want to form a tribal utility authority (TUA)?
- If go, proceed with following steps
- Undertake a System Valuation and Condition Assessment Study (SVACS)
- Prepare Base Case Pro forma that reflects preliminary estimates of
- Loads and Revenues
- Purchase of on-reservation facilities price
- Purchase Power costs
- Interconnection costs
- O&M costs
- Labor costs
- Materials and equipment costs
- Capital investments

## Second Go – No-Go

- Do the pro forma results indicate forming a TUA would be cost-effective for the tribe and/or address non-economic issues?
- If go, proceed with following steps:
- begin negotiations with serving utility for purchase of facilities
- Update Base Case Pro forma to reflect negotiated purchase price and any other refinements to other estimates

## Third Go – No-Go

- Do the revised pro forma results still indicate that forming a TUA would be cost-effective for the tribe and/or still addresses non-economic issues?
- If go, proceed with following steps:
- Begin negotiations for interconnection service.
- Undertake sensitivity analyses of the Base Case Pro forma to evaluate such factors as:
- Third-party contracts for OM&C services that would include, but not be limited to, providing line crews, dispatching, equipment and materials,
- Purchase power options
- Update Base Case Pro forma to reflect any refinements to other estimates and prepare Sensitivity Pro forma's to reflect estimates of other options.

## Fourth Go – No-Go

- Do the revised Base Case Pro forma results still indicate that forming a TUA would be cost-effective for the tribe and/or still addresses non-economic issues?
- Does the Sensitivity Pro forma(s) results indicate that forming a TUA based upon different assumptions would be cost-effective compared to the Base Case Pro forma for the tribe and/or still addresses non-economic issues?
- If go, proceed with following steps:
- Finalize various negotiations
- Update Base Case Pro forma and Sensitivity Pro formas as appropriate and prepare recommendation on which pro forma to implement
- Develop policies and procedures, as well as any other necessary documents needed for the running of the TUA.

## Final Go – No-Go

- Does the recommended pro forma still indicate that forming a TUA would be cost-effective for the tribe and/or still addresses non-economic issues?
- If go, proceed with the formation of the TUA by:
- Appointing a Board of Directors - Board of Directors sets up the TUA organization and operation by
- Hiring Staff
- Establishing an office
- Completing all agreements
- Setting up all systems
- Beginning to serve power to customers

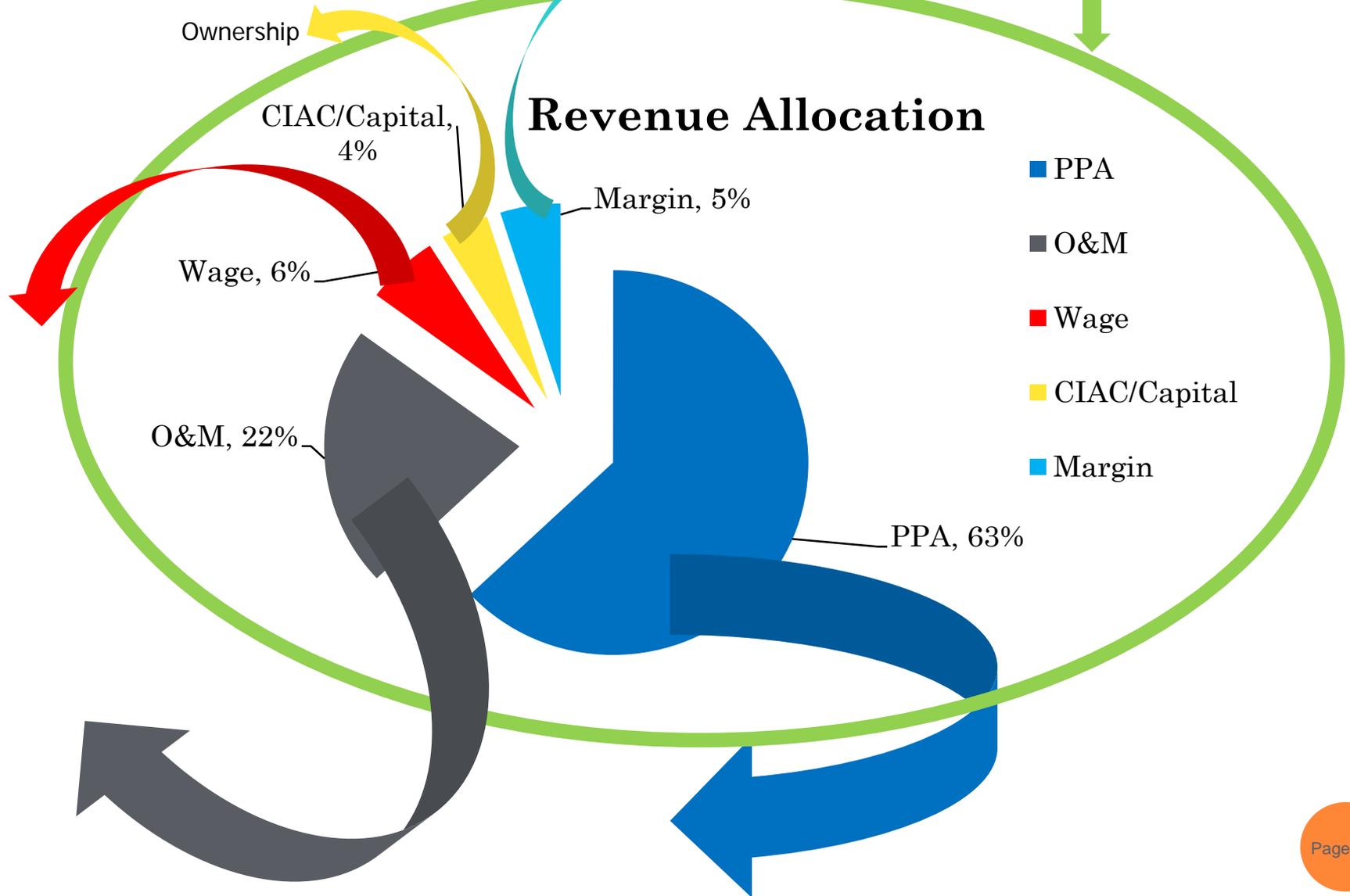
# SUMMARY (CONTINUED.....)

- There is a lot of analysis and discussion essential, not only for the formation of a TUA, but also for its continued success and operation.
- In making the commitment to form a TUA, tribal leaders need to clearly embrace the understanding that once the formation is completed, and the TUA is operating, there is no turning back.
- Assume the TUA will operate for many years.
- There may be times when the TUA's rates may exceed those of the Off-Reservation utilities, and that is when tribal leaders need to remember the reasons for forming the TUA and the long term goals that were set.
- In addition, the tribal leaders will rely heavily on the TUA board members to undertake the analysis, development and formation of the TUA.
- It will take time for the TUA to become established, but with the same commitment and perseverance exerted during its formation, the TUA will become the organization envisioned by the tribal leaders.

# Off-Reservation Utility

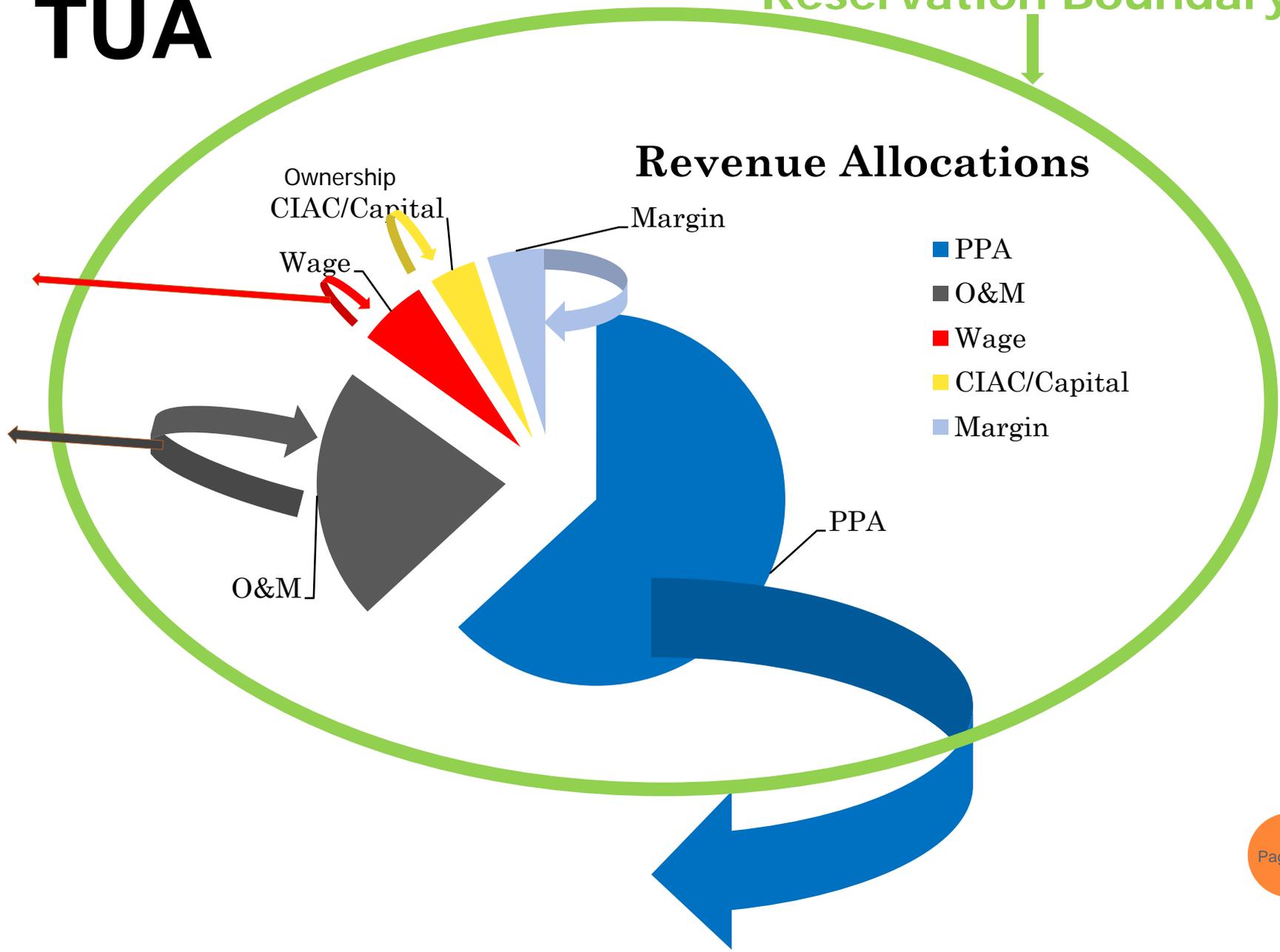
# Reservation Boundary

## Revenue Allocation



# TUA

Reservation Boundary



# QUESTIONS

# CONTACT INFORMATION

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