



First Nations
Power Authority™

2nd Yukon First Nations Energy Forum

Whitehorse, Yukon
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Presented By:
Tracey Pascal,
Membership & Communications Manager

FNPA is...

- What?
 - A membership-based not-for-profit corporation
 - 100% of voting memberships held by Aboriginal Membership
- Why?
 - Arose of out a growing interest among Aboriginal People and Independent Power Producers (IPP) to work together in the power sector
- Our Role?
 - Develop and deliver real business opportunities for our Membership in the power sector

National Aboriginal Economic Development Board Best Practices

NAEDB Recommendations	FNPA Approach
1. Connect Aboriginal communities to industry.	FNPA’s model directly links Aboriginal and Industry business interests through Membership and jointly developing project opportunities.
2. Strengthen the framework for Collaboration.	FNPA has a structured project development model that supports and optimizes Aboriginal involvement throughout project development process.
3. Develop Human Capital.	Knowledge transfer, jobs and training are a mandatory requirement of all projects through FNPA.
4. Promote Information Sharing and Awareness.	Foundational to FNPA service delivery, Aboriginal businesses benefit from the shared and continually evolving expertise from a centralized organization mandated to support their advancement in the power sector.

FNPA Long Term Goals

- To reduce project development risk for Aboriginal and Industry Members in the power sector.
- To build Aboriginal CAPACITY – governance, corporate, organizational, individual.
- To facilitate genuine Aboriginal engagement in the economy – fill a gap that is being experienced by both the market and within communities.
- To provide Aboriginal business interests with multiple and non-restrictive opportunity pathways to power industry-related projects in the energy sector.

FNPA Members

General Members: 11

FHQ Developments, Flying Dust First Nation, Fond Du Lac Denesuline First Nation, George Gordon Developments Ltd., Beardy's and Okemasis First Nation, KDM Business Development Corp, Sakimay First Nation, Hatchet Lake Denesuline First Nation, Silver Sage Housing Corp., Muscowpetung Saulteaux Nation, Saskatoon Tribal Council.

Industry Members: 22

Algonquin Power (HQ: Ottawa, International); BluEarth Renewable Energy (HQ: Calgary, National); Energizing Co (HQ: Los Angeles, International); GE Energy (HQ: Ottawa, International); Lockheed Martin Canada (HQ: Kanata, International); Renewable Energy Systems Canada (HQ: Montreal, National), Global Transportation Hub, Points Athabasca FHQ Contracting LP, Points Athabasca Contracting LP, Solar Logix, Greatland Group, Innergex Renewable Energy Inc., Valard Construction LP, Shermco Industries Canada Inc., H & H Development Corp., Roots Rock Renewables, PMT Industrial Group Ltd., Harbert Power Fund V, LLC., Mastic Transmission Services Canada Ltd., Canadian Solar Cities Project, Sweeney Electric Ltd.

FNPA Team

Leah Nelson Guay, Chief Executive Officer

Ian Loughran, VP Projects & Business Development

Chris Hornsby, VP Business Development

Geoff Scott, Senior Advisor, Finance & Engineering

Tracey Pascal, Manager, Membership & Communications

Brad Wolbaum, Manager, Finance & Operations

Candy Seifert, Financial Administrator

Rebecca Agecoutay, Administrative Coordinator

FNPA Board of Directors

Chief Felix Thomas Chairperson (*Saskatoon Tribal Council*)

Ben Voss Past Chairperson (*MLTC RDI*)

Lee Ahenakew Vice Chair, Governance & Nominations Committee Chair
(*BHP Billiton Canada*)

Harvie Campbell Projects Committee Chair (*Bastion Power*)

Mariana Mora Treasurer, Finance & Audit Committee Chair (*RBC Commercial*)

Dean Owen (*President, MGM Communications*)

Chief Reginald Bellerose (*Chair and CEO, Muskowekwan Resources Ltd.*)

Crystal Fafard (*Partner, Rounce & Fafard Law*)

AJ Felix (*Founder & President, Jasper Enterprises Inc.*)

Darryl McDonald (*CEO, Fond du Lac Economic Development Corp.*)

Robert Merasty (*Independent*)



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WHAT YOU NEED TO KNOW ABOUT THE POWER INDUSTRY

Three Key Facts about Power Development

1. **POWER DEVELOPMENT** is not a sure thing – there are far more projects than contracts. Ultimately crown utilities or large industrial users choose which project is the best fit based on technical and economic merits.
 - *Developer must have the right project, at the right place, the right time and for the right price.*
2. If successful, it's a great **INVESTMENT OPPORTUNITY**. Power Purchase Agreements are 20+ years long and change communities future economic development capacity for generations.
3. The **UTILITY INDUSTRY** is very technical and must be approached with credible partners.

Power Project Development Timeframes



POWER GEN TYPE	Identify Project	Contract Negotiation/ Procurement	Technical Review	PPA / Legal	Vendors / Permits / Finance	EPC	TOTAL DEV'T CYCLE
Solar (IPP)	0.5-1 year	1-2 years	1-2 years	0.5 year	0.5-2 years	1.5- 2 years	5.5-10 yrs
Wind (IPP)	1-3 years	1 year	1-2 years	0.5 year	1.5-3 year	1-1.5 years	6-11 yrs
Hydro (IPP)	1-5 years	1-5 years	3-5 years	1-3 years	2-5 years	3-5 years	11-25+ yrs
Natural Gas (SPC)	1-3 years	0	0	0	1-2 years	1.5-2.5 years	3.5-7.5 yrs

PROJECT UNDER DEVELOPMENT

Significant time and investment is made in developing and negotiating the idea for a power plant – **at any point before financing has been secured, the project can be cancelled.**

Why Invest in Power?

- Power infrastructure globally requires unprecedented levels of investment – over \$15 Billion will be spent in renewing and building new power system infrastructure. The time is now!
- Power is a growing area of importance for Aboriginal Economic Development and Investment
 1. Reliability Issues
 2. Rising Utility Costs
 3. Environmental Impacts
 4. Cornerstone Infrastructure to Attract and Build New Industry and New Businesses
 5. Infrastructure Projects Generate Spin-Off Business Opportunities
 6. Long Term and Stable Investments

Power Industry Challenges?

1. Electricity, its transmission and distribution is a very complex system. It is very much like an ecosystem where an impact in one area will impact another very directly.
2. Highly technical and international regulated industry.
3. Performance standards must meet international requirements
4. Very specific 'needs' must be met – right project, right time and right place.
5. Long development timelines.
6. High upfront development costs. No guarantee of returns.
7. Despite the experience of many power developers in other jurisdictions – Saskatchewan has its own approach and own regulatory environment.

Best Approach to Challenges

1. Do your homework.
2. Portfolio approach.
3. Credible partners.
4. Think long-term / start now!

Power Development Game Plan

Question To Be Answered	Answer
1. Do we want to invest in power?	1. Power industry is one of many investment opportunities. Gain an understanding of how a power project fits into your current and long-term economic development portfolio.
2. How do we get started?	2. Get educated on the industry for the least amount of financial investment as possible. FNPA is an excellent resource for you here.
3. How risky is power development?	3. Very. Experienced developers have 10+ projects 'under development' knowing that 1 or 2 may be successful. For a single community, it is an all or nothing investment risk.
4. How expensive is power development?	4. Cost to put together a successful project opportunity ranges from \$250,000 to \$5M+ depending on the type of power generation. Wind is less expensive, hydroelectricity is the most expensive.
5. Best approach to mitigate your development risks?	Get unbiased information. Find good partners. Keep your options open, try to avoid exclusive relationships in early days.

Advantages of PARTNERSHIP

- Gain specialized and broader expertise quickly - sometimes available by no other means
- Gain access to new business networks
- Creates & expands a collective bargaining tool
- Encourages government to actively participate
- The broader the partnership – multiplier effect





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What you need to know to talk power!

POWER INDUSTRY ESSENTIALS

What is Electricity?

- Electricity is a manufactured product – packets of energy ‘generated’ by a power generation facility
- Generation refers to the production of electricity
- Renewable – Hydroelectricity, Biomass, Solar, Geothermal, Biofuel, Wind, Wave/Tidal
- Non-Renewable – fossil fuels: coal, gas, oil, diesel
- Combined Benefits/ Challenges - Nuclear

What is Transmission?

What is Distribution?

Power Transmission is the movement of electricity from its place of generation to a geographic location where there is demand for energy (eg) towns, cities, large industrial users. Think large power lines as you drive down the highway!

Power Distribution is the movement of electricity from a high volume transmission line (big buckets!) through a sub-station that brings electricity down to a lower voltage (small buckets!) where it can be consumed by a customer. Think power meter on your house!

Together - the combined transmission and distribution network is known as "**the grid**".

It takes lots of math, people, communication systems and infrastructure to make it all work together to deliver **SAFE** and **RELIABLE** power to your home!

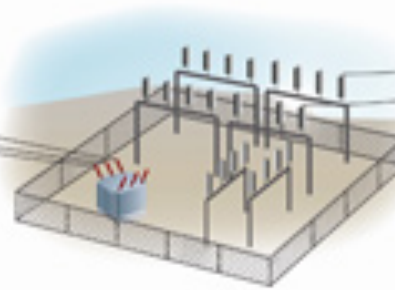
The Power System



Generation:
Electricity is generated by BC Hydro and independent power producers



Transmission:
Electricity is moved from where it is produced to where it is used



Substations:
Voltage is reduced at substations to provide power suitable for use in homes and businesses

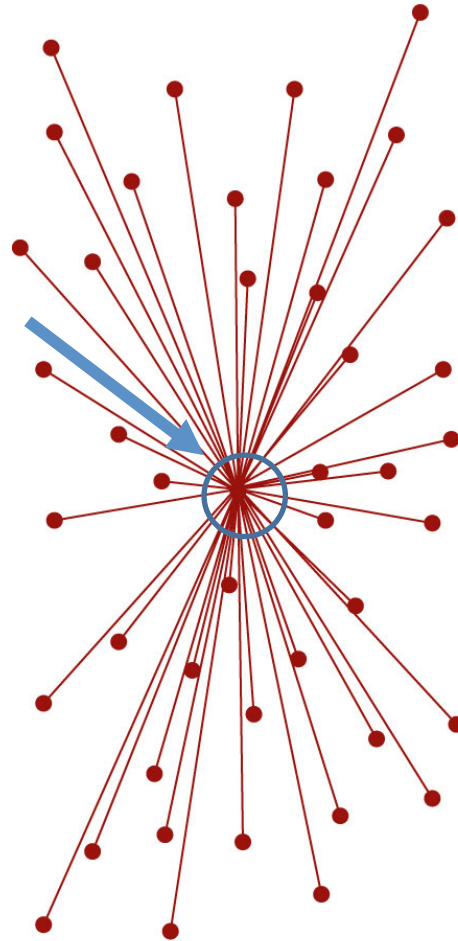


Distribution:
Low voltage electricity is provided to neighbourhoods and businesses

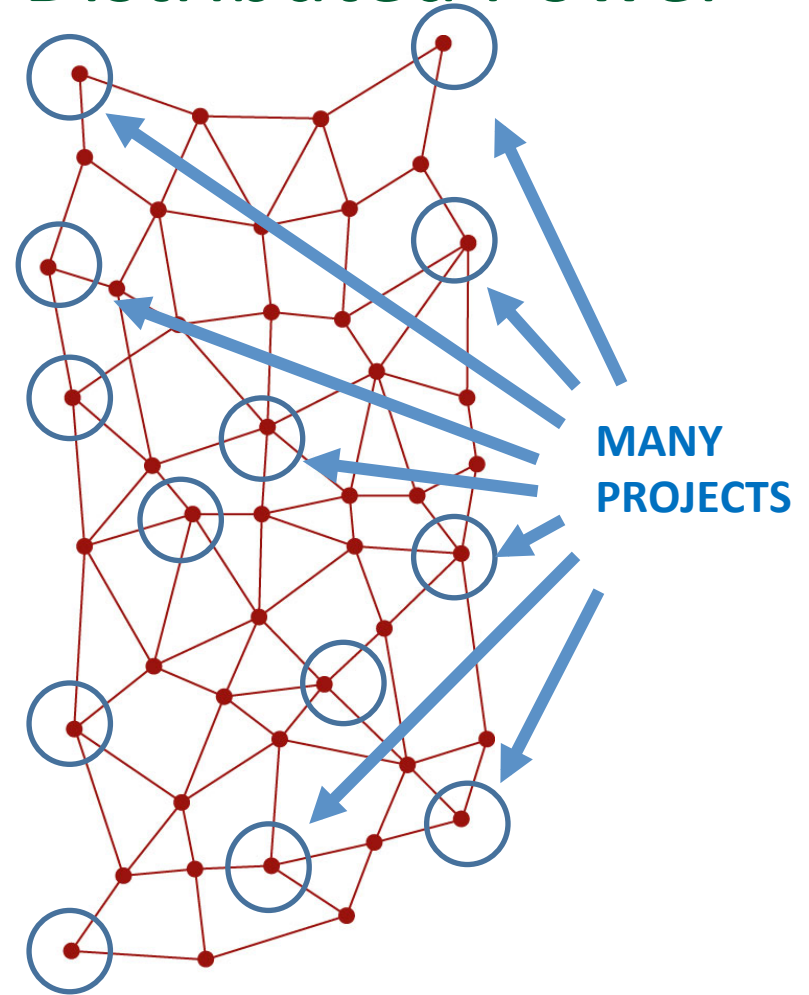
Centralized Power vs. Distributed Power

ONE
PROJECT

VS...



Centralized Network



MANY
PROJECTS

Distributed Network

FNPA Expertise

- Over **1,100MW of projects under-development**, all renewable or environmentally-preferred
- **Installed solar energy** projects – both southern and northern
- **Proven project development process** – step-by-step guide through both small and large power projects
- In-House Experience – through our Board and internal team, FNPA holds **100+ years** in power project development
- Industry Members – believe in the importance of **tangible Aboriginal partnerships** and represent a source of global experience and knowledge base
- One-of-a-Kind – FNPA is the only organization in Canada that **starts with knowledge** sharing to develop informed customers.



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QUESTIONS?

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