

# BC FIRST NATIONS CLEAN ENERGY OPPORTUNITIES AND CHALLENGES

NOVEMBER 2016 GENERATE FIRST NATIONS COURSE



# PURPOSE OF PAPER

- Set out current state of clean energy industry
- Define what opportunities exist for First Nations developing clean energy in BC
- Define Challenges and Barriers for First Nations in the province
- Lay out strategies and Options to increase opportunities, and look for solutions for challenges and barriers

# WHAT IS MARKET TODAY?

- With 2013 IRP, clean energy opportunities were reduced to 45 MW per year under the Standing Offer Program(SOP).
- SOP quota has been filled until 2019 so no opportunities
- No Clean Energy Call in foreseeable future-may do a Clean Capacity Call (firm power)
- Site C Dam power is scheduled to come online 2024 and will produce more power than BC needs-looking for markets
- Rates Review Plan underway and BC Hydro chose to cut \$65 million from SOP from 2020-2024. Has not set program for SOP past 2019 as to how much power they will want and price. (SOP is a legislated program)

# WHAT FIRST NATIONS CAN DO TO CREATE CLEAN ENERGY

WORK WITHIN COMMUNITY AND BE GRID INDEPENDENT



PREPARED BY KEKINSUQS, JUDITH SAYERS, DECEMBER  
2016

# CREATE CLEAN ENERGY FOR COMMUNITY

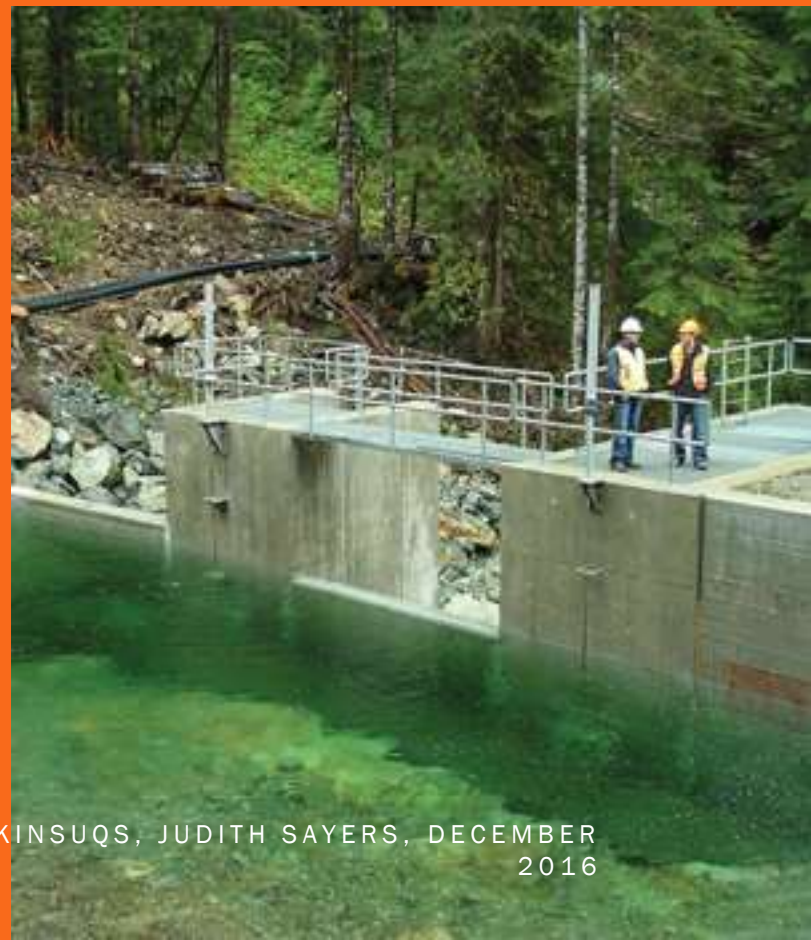
- Install clean energy to power homes, businesses, office & facilities
- Sell rest to grid on Net Metering program-if on grid & Have Smart Meters-up to 100kW
- Cuts down on power bills-\$ can be used for other things
- Create capacity by learning how to install clean energy
- Can move to bigger projects once opportunity arise

# COMMUNITIES THAT ARE DOING THAT

- T'souke-solar
- Kanaka Bar-solar
- Skeetchsn and Squamish schools-geothermal
- Lower Nicola-wind turbine and solar
- Lil'wat-geothermal
- Others-Lubicon Lake and Montana FN-AB

# TRANSMISSION LINES AS A BUSINESS OR A NECESSITY

IS A TRANSMISSION LINE COMPANY FEASIBLE?



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# TRANSMISSION LINES

- In 2012 the Conference Board of Canada has estimated that C\$35.8 billion will need to be invested in transmission in Canada by 2030. This is on renewal and expansions.
- There are 25 First Nations who are off grid in BC
- There are First Nations whose power is unreliable going into their communities
- Upgrades and expansions are necessary if First Nations want to get grid connected
- Micro-grids or expansion of micro-grids are needed in remote communities
- There are opportunities to build transmission lines but must explore feasibility both financial and regulatory



# BILATERAL AGREEMENTS WITH PROVINCE

AGREEMENTS OUTSIDE OF BC HYDRO PROGRAMS



PREPARED BY KEKINSUQS, JUDITH SAYERS, DECEMBER  
2016

# BILATERALS

- IRP says that ‘working with the B.C. Government, BC Hydro will enter into cost-effective bilateral procurements, benchmarked to competitive processes, where those procurements further the *Clean Energy Act (CEA)* British Columbia energy objectives. Eg. AltaGas to provide \$180 million to the Northwest Transmission Line (NTL) for its EPAs for Forrest Kerr, McLymont and Volcano power projects.
- As part of accommodation agreements, the Province has entered into bilateral agreement with Upper Nicola and the Okanagan First Nations for 15 MW wind and solar. Sauteau and possibly Ahousaht?
- Could pursue a bilateral agreement with the BC government in the form of a Reconciliation or accommodation agreement or a community and economic development agreement.

# STRATEGIES/OPTIONS

- There are no existing policies on how to get a bilateral agreement with BC. It is unknown how the province chooses to enter into an agreement with a First Nation other than an accommodation.
- No one really knows how you can get such an agreement to achieve that political willingness to offer you one so you have to use your own strategies with the province to get one.
- If your First Nation can lobby/negotiate/pressure the BC Government for a bilateral agreement to develop clean energy in our territory without going through the SOP or a power call, you have a very good opportunity to create clean power

# BC HYDRO CALL FOR POWER

NO CALLS IN FORESEEABLE FUTURE



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# POWER CALLS

- Was one of the main ways of creating a competitive calls for power
- IRP 2013 has no calls for power
- No opportunities in foreseeable future.
- Unless there is an increase in demand for future, there is great uncertainty as to whether there will be another call for power for some time.
- BC Hydro says they are looking into a capacity call-firm power

# BUY AN EXISTING PROJECT PARTNER WITH OTHERS?

A SMALL OPPORTUNITY IN YOUR TERRITORY



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# ANY PROJECTS FOR SALE?

- Some developers may want to sell projects. If renewals coming up soon check with BC Hydro as it is possible very little \$ is being offered to purchase power
- The IRP said that BC Hydro has assumed that about 50% of the bioenergy EPAs will be renewed; about 75% of the run-of-river EPAs that are up for renewal next 5 years will be renewed; and that all other EPAs will be renewed.
- There are some projects that might not get a renewal on their EPA and it would be important to ensure any projects being bought will be renewed.
- First Nations need to lobby the provincial government/BC Hydro to ensure rates offered in a renewal provide an adequate profit margin.

# CLIMATE CHANGE

LIVING WITH THE REALITY - GOAL OF 100% RENEWABLES



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# CLIMATE CHANGE

- On October 31, 2015, The BC Climate Leadership Team released its 32 Recommendations to the BC Government.
- BC government responded August 16, 2016 and did not adopt all of their recommendations but they did address 21 of them in some form.
- Had the BC government adopted all the recommendations, they would have increased electrification within BC and limiting Independent Power Producers as they are now doing would not have been necessary.
- Will not be easy to change BC Government's positions on climate change

# STRATEGIES/OPTIONS

- Lobby BC to change its Climate Leadership Plan dated August 2016.
- Push for more electrification for BC and decrease GHG emissions.
- Find allies to move forward with a more aggressive Climate Change
- First Nations need to strategize on what else they would want in the Climate Leadership Plan inclusive of a role in developing clean energy.
- One way to increase electrification would be to increase electric cars and support strategic investment in electric vehicle (EV) infrastructure.
- support federal government to enter into a North American Electric Auto Pact that would support infrastructure throughout North America for transportation corridors.
- First Nations would need to work with another to ensure the infrastructure for electric cars was installed along the routes as well

# REMOTE COMMUNITIES

## GETTING OFF DIESEL



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2016

# GETTING OFF DIESEL IN REMOTE COMMUNITIES

- There are 25 First Nations that are remote/off-grid communities in BC.
- Remote and off grid communities have the greatest opportunity to create clean energy in order to get off diesel.
- Problems with diesel generation are high GHG emissions, high cost of diesel, cost of transporting diesel; and risks associated with spilling diesel in transport or at location.
- Micro-grids are in place to deliver power to home but often need to be expanded due to growth in load in community. Energy storage is also necessary to look at and develop.
- Some First Nations communities have been able to take advantage of diesel generator efficiency programs, use of modular diesel generator units and battery storage which has helped to an extent

# STRATEGIES/OPTIONS

- Do feasibility studies for extension of transmission lines from BC Hydro grid to community.
- Use feasibility study to determine if there is a business opportunity for the First Nation or a collection of First Nations as they are doing in Northern Ontario.
- Do feasibility studies for extension of micro-grid in the community to take on the extra load.
- Determine ways to decrease use of electricity through Demand Side Management.

# MORE STRATEGIES/OPTIONS

- Do feasibility studies on the use of clean energy and determine if the deployment costs have gone down enough to make it economically feasible.
- Find partners that would be willing to work with the First Nations to put in place renewable energy in their communities.
- The opportunity to create clean energy for remote communities has increased as other opportunities in the province have decreased.
- Work with First Nations who have expertise in the various areas such as solar, run of the river, wind, geothermal and biomass.
- Work with Federal and BC on renewal and expanding transmission line on regulatory improvements, financing, and better community relations.

# FIRST NATIONS NEED TO GET ORGANIZED

LOBBYING, STRATEGIES, COMMUNICATIONS



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2016

# FIRST NATIONS NEED A COLLECTIVE VOICE

- As Governments are always changing policies and laws that impact directly on First Nations, First Nations need to do an organized lobby.
- It would be so much more effective if all the First Nations in the province could coordinate their efforts, or have one coordinating person who could set up meetings with appropriate government Ministers, Deputy Ministers, Assistant Deputy Ministers and other officials.
- As the Federal Government has been helpful in renewable energy, further lobbies to have them work with the province and put in place other funding opportunities would also be key work



# SETTING UP OFFICE?

- Set up a central Office to coordinate BC First Nations efforts in Clean Energy
- Look for funding from governments or other private sources to establish an office
- Hire a coordinator to run office that would set up meetings, acquire mandates from all First Nations in clean energy, coordinate efforts of First Nations, be a repository for information, Establish communications with First Nations on issues that affect them or funding opportunities on clean energy.

OR

- One First Nation offers up a staff person who can do the work outlined above.

OR

- Continue in the informal way that is being done now with one First Nation calling meetings when required.

# MEETINGS AND MANDATES

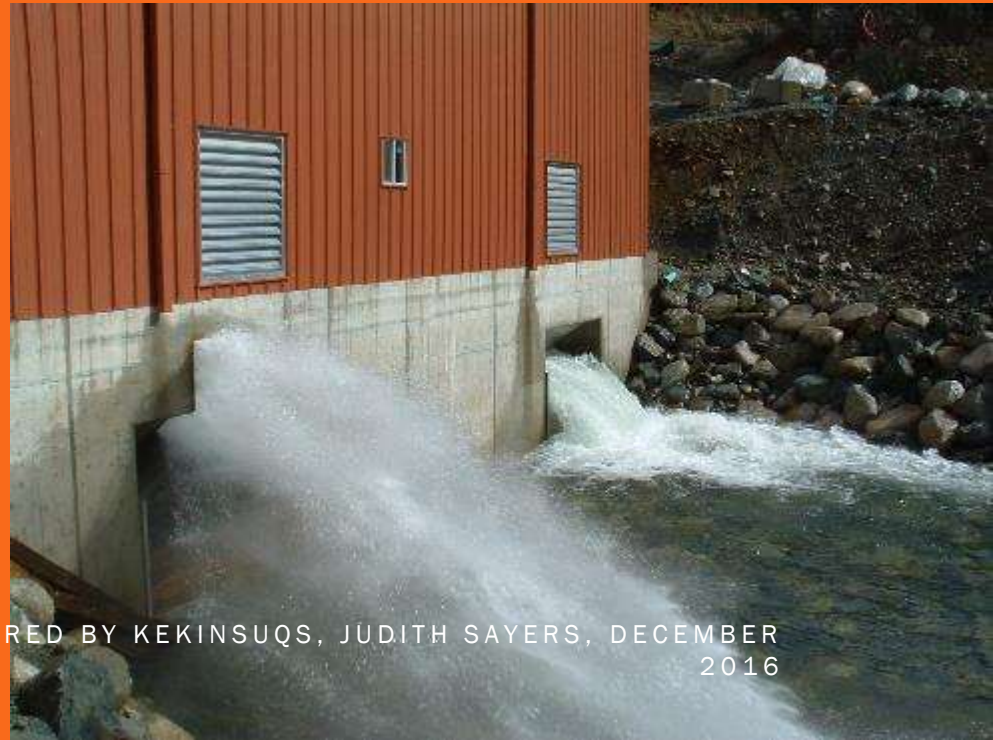
- Hold an organizing meeting to bring First Nations across the province involved in clean energy to determine how First Nations can work together, if there will be a formal or informal structure and how strategies can be created, implemented and carried out. Establish mandates for various teams/committees
- Hold regular meetings to set up strategies/mandates on increasing the opportunity to create clean energy and find ways to remove barriers.
- Ensure that any strategy or task is supported and carried out.

# COMMUNICATIONS

- Establish a Communications strategy for working with First Nations and external groups to help promote issues
- Collectively establish key messages that can be sent out by main office and First Nations
- First Nations use their twitter, Facebook and Linked in pages to send out these messages.
- If a coordinating office is put together, the communication strategy would be implemented. Key messages are sent out regularly and increased when needed.

# FIRST NATIONS ORGANIZED POLITICAL LOBBY

CHANGE IS NEEDED



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2016

# WHAT NEEDS TO BE LOBBIED?

- Lobby BC Govt and BC Hydro to not make cuts to the SOP. Lobby to not decrease the price as it would make many projects not financially viable
- Could lobby federal government to add the \$65 million into SOP
- Lobby BC Government to changes it's BC Climate Leadership Plan to embrace all 32 Recommendations of the Leadership team and ensure there is increased electrification throughout the province.
- Lobby governments to change policy that BC Hydro can partner with First Nations in building/expanding facilities in their territories.
- Lobby government to change revenue sharing from Heritage Assets.
- Lobby for a First Nations power Call or special price for power.

# LOBBYING ISSUES

- Lobby Government/BC Hydro to ensure that renewal rates give an adequate profit margin.
- Lobby federal and provincial governments to come up with programs and money to assist First Nations get off diesel generation or offset diesel generation and micro grids or expansion of transmission lines
- Lobby for loan guarantee program and feed in tariff like Ontario and other innovative programs
- Have a priority in any power call, SOP to projects with First Nations majority ownership
- Lobby to have BC and BC Hydro to negotiate compensation agreements of existing dams so this is not a barrier to moving ahead on other projects.

# FURTHER CAPACITY BUILDING

ALWAYS AREAS FIRST NATIONS CAN BUILD CAPACITY IN



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# WHAT OTHER CAPACITY BUILDING?

- First Nations have been working on their own capacity building in clean energy over the past 16 plus years.
- First Nations have become their own developers of projects or have a major role in projects with their partners.
- Capacity varies from First Nations who have not built a project but want to, to First Nations who have built several projects.
- First Nations can also make use of the BC First Nations Clean Energy Toolkit to help them develop projects

## Challenges

- Finding funding for capacity building
- Political will missing



# STRATEGIES/OPTIONS

- Work with various funding agencies to ensure there is money to do Community Energy Plans (CEP) for those communities that have not done one.
- Work with training agencies, colleges, etc to do energy related training programs for communities and community related training for energy developers
- Develop or implement common monitoring platform for implemented energy projects and track savings.
- Increase resources for Band Technical Service offices to serve as knowledge/implementation hubs for energy related projects, reducing project deployment costs.
- Make use of First Nations Clean Energy Toolkit. Possibly hold regional sessions to take First Nations through the toolkit so they know helpful it can be.
- Update toolkit on a regular basis.

# TECHNOLOGICAL DEVELOPMENTS

WAVE? TIDAL? FUSION? THERMAL? OTHER?



PREPARED BY KEKINSUQS, JUDITH SAYE, AND OTHERS IN FEBRUARY 2016

# INNOVATIONS IN CLEAN ENERGY

- Innovation is important in any industry. Finding new ways to create clean/renewable energy is critical for the industry
- First Nations could be on the leading edge of new technology by involving themselves in research.
- Or First Nations could find reputable technology companies to partner with where members could help create new innovations.

## Challenges

- Currently, policies in BC for testing out new technology requires that a new technology be used for 3 years in one jurisdiction before it can be used in BC to sell power to the grid. You could do testing of the technology in BC without connecting to the grid.
- The lack of procurement for more power in BC is a huge disincentive to creating new innovations in clean energy.

# STRATEGIES/OPTIONS

- Research innovations in clean energy
- Research companies that are testing out new innovation in clean energy and look for partnerships
- Develop a research company or partner with one.
- Find ways to test out new innovations in clean energy.
- Work on Developing the Electric Vehicle (EV's) industry

# RELATIONSHIP BUILDING

GOVERNMENTS, CEBC, DEVELOPERS, OTHERS



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# WHO TO BUILD RELATIONS WITH

- **BC Government:** Set up regular dialogue sessions with MEM to discuss greater opportunities for First Nations in renewable energy and other relevant Issues.
- **BC Hydro:** Re-establish working sessions on important issues
- **Federal Government:** Set up regular dialogue sessions with First Nations and Canadian government departments to work on opportunities in clean energy, technological advancement ,financing, training and capacity building opportunities.
- **Clean Energy BC:** Regular meeting of the working group to implement the MOU between Clean Energy. Work together on promoting the industry and other initiatives.
- **Other?**

# CONCLUSIONS

- If First Nations want to continue to build clean energy projects it is going to take a lot of work to change the minds of governments
- First Nations need to get collectively organized in order to lobby government and bring changes to policies, regulations and opportunities.
- First Nations can do smaller projects within their own Nations to continue to build their capacity and to become independent of the grid and high power bills.
- The Clean Energy opportunity is a good one for First Nations as it is within the values of First Nations and brings many different kinds of benefits to the community.