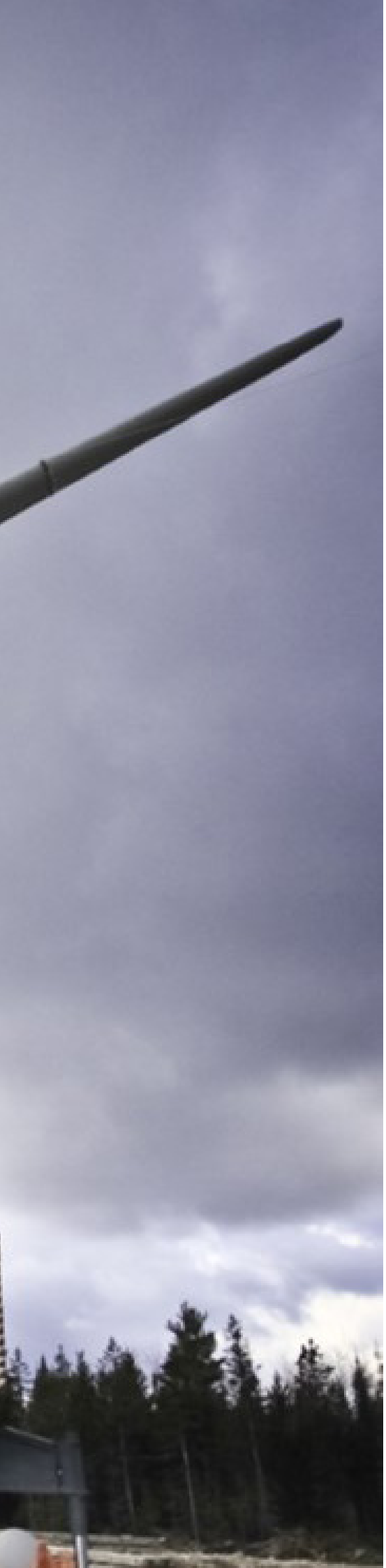
MOTHER EARTH RENEWABLE ENERGY PROJECT (MERE)

2001 - 2022 REPORT

2022 REPORT



MERE 2001 - 2022 REPORT

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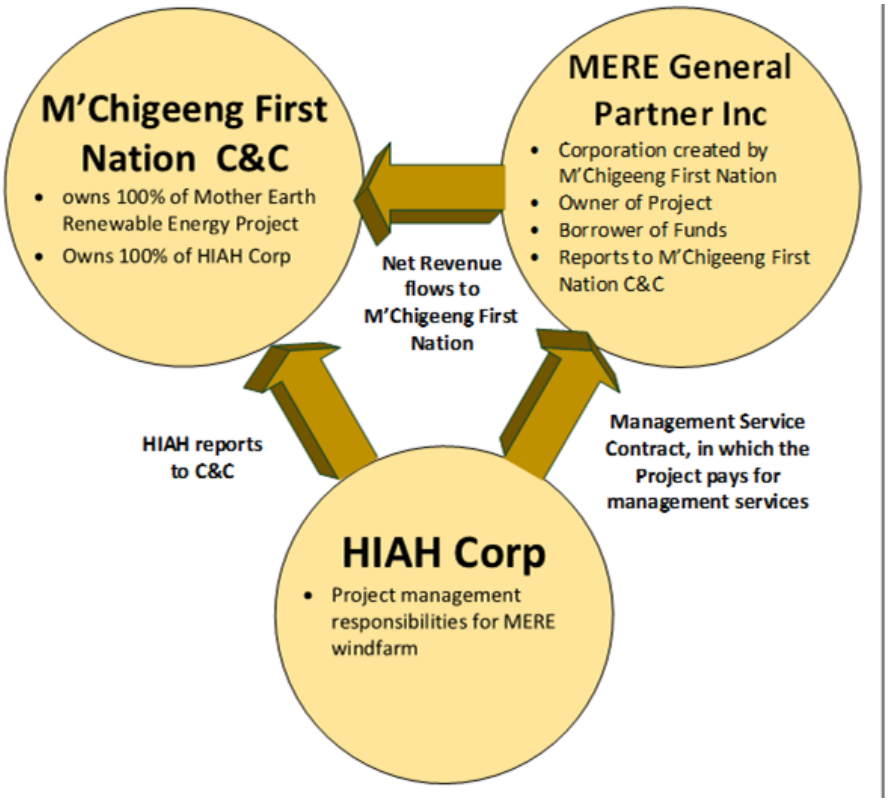
CELEBRATING 10 YEARS IN OPERATION

Initial work began in 2001 with M'Chigeeng First Nation leadership, Chief and Council members of the day, determined to create a project where the First Nation could provide for its own energy needs utilizing wind technology. Design work and an environmental assessment were completed.

There were regulatory barriers to the Project being able to supply energy directly to individual Band member homes, but this challenge became unnecessary when the Ontario Feed In Tariff ("FIT") program was introduced in 2009. This year, in June 2022, the MERE Windfarm Project crossed an important mark in time, the 10th year of successful operations of the Mother Earth Renewable Energy Project. We wish to highlight the many accomplishments and progress that were features of the journey to building and owning this project.

We wish to tell the stories of why this project has been good for M'Chigeeng First Nation and where it is headed in the future.

The Feed In Tariff was an energy procurement contract that offered a fixed energy price for owners of wind turbines, for 20 years. M'Chigeeng First Nation applied and received notice of approval of a contract in May 2010. That started a 2-year effort to get the project constructed.



MERE PROJECT OWNERSHIP

M'CHIGEENG FIRST NATION OWNS 100% OF THIS PROJECT

In order to protect M'Chigeeng First Nation from liability and as a condition of the long term loan, the project was placed inside a corporation created especially for the project, called **MERE General Partner Inc.** This corporation is the borrower of funds used to build the project and it will repay all loans.

M'Chigeeng First Nation created and owns MERE General Partner Inc ("MERE"). MERE General Partner Inc, through their Board of Directors, is responsible for the operations of the wind farm. The company contracts with HIAH Corp for operational management services and with M'Chigeeng First Nation for financial management services. MERE's Board of Directors reports to C&C.

TIMELINE FOR DEVELOPMENT

2001 - Wind Energy visioning begins

2002 - Community Meeting #1

2003 - Meteorological testing begins

2004 - Community Meeting #2

2005 - Cooperative Structure established

2006 - Community Meeting #3; Continued support established; Feasibility Studies commenced

2007 - Environmental assessments complete; Community Meeting #4; Hydro connection denied; Connection lobbying campaign begins

2008 - Community Meeting #5; Change in project scope adopted by Council to 2 turbines and restricted to band owned land only

2009 - Green Energy and Economy Act; includes guarantees for hydro connection

2010 - FIT Contract Awarded

- Lobbying begins to achieve exemption from Renewable Energy Approval from Ontario
- Ontario concedes on Renewable Energy Approval on the basis of federal jurisdiction and Native lands
- Turbines ordered
- MERE Corporation formed

2011 - Aboriginal Renewable Energy Fund Application submitted

- Ontario Finance Authority Loan Guarantee approved
- Pre-Construction tenders begin
- Financing finalized

2012 - Notice to Proceed from Ontario, which allows construction to proceed

- Grand Opening - June 21, 2012
- Official Operation of FIT contract begins September 4, 2012

TIMELINE FOR CONSTRUCTION

May 10, 2010 — FIT Contract award

May 2010 — Request to Minister of Environment to waive requirement Ontario Renewable Energy Approval on account of federal jurisdiction

July 2010— Application for a loan guarantee (first indigenous community in the province to apply)

November 2010 — Minister of Environment accepts M'Chigeeng First Nation's federal Environmental Screening

March 2011 — Road and forestry work commences

April 2011 — Wind turbine supply agreement is finalized

May 2011 — Ontario commits to the loan guarantee

June 2011— Foundation excavation

July 2011 — Foundation assembly and concrete pouring, funded by the loan

Sept 2011 — Arrival of turbine crane equipment (hits CBC National News!!!)

October to December 2011— Wind turbine assembly

January to April 2012 — Substation construction

May to June 2012 — Commissioning the equipment

June 21, 2012 — Opening Ceremony with David Suzuki

July to August 2012 — Submission of compliance documents to Ontario

Sept 4, 2012 — FIT Contract and revenue commences

MERE
FINANCIALS

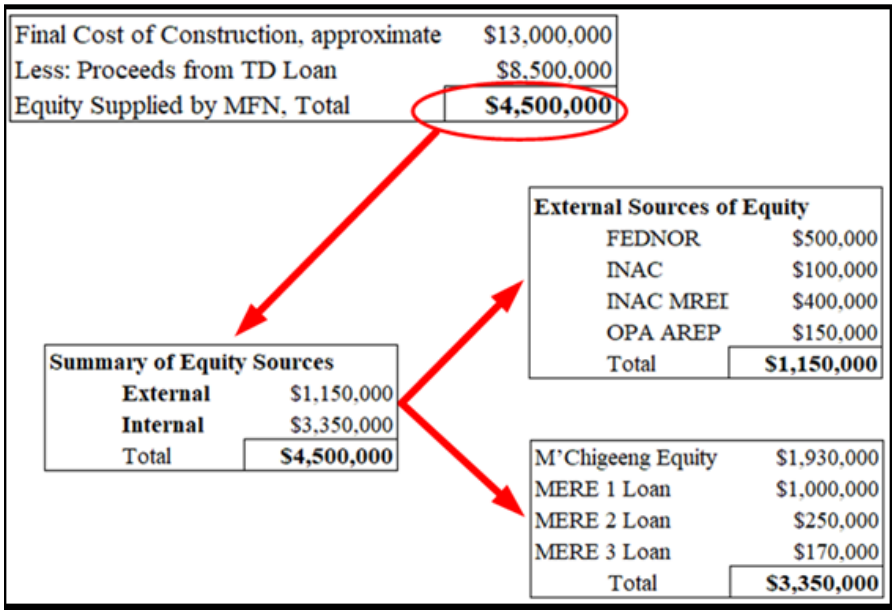
EQUITY & LOAN DETAILS, REPAYMENTS

How Does M'Chigeeng First Nation Benefit?

CAPITAL STRUCTURE

What Does Capital Structure mean?

It refers to how the project was funded, and for MERE there were many different layers of dollars used. Some layers were from government sources, as grants, some layers were from M'Chigeeng First Nation as repayable loans, and a significant portion was from M'Chigeeng First Nation as an equity contribution. There was also a long term loan provided by TD Bank.



The Project cost $13 million to construct. A total of approximately $4.5 million in equity was used, on top of $8.5 million borrowed from TD Bank in the form of a term loan. Some of the $4.5 million in equity came from external sources as grant money, and some came from M'Chigeeng First Nation as repayable loans as well as cash equity.

SOURCES OF EQUITY

The project is 100% owned by M'Chigeeng First Nation. This was achieved by capital grants from the federal government totalling $1 million plus in M'Chigeeng First Nation's own equity dollars plus a long term loan supported by the Ontario Government Aboriginal Loan Guarantee program. The loan guarantee program was created by Ontario to assist First Nations in acquiring assets with the use of commercial debt. Commercial lenders normally limit their lending to situations where they can take security over the assets, which cannot be accomplished easily on First Nations lands. The Indian Act presents challenges when a lender is taking First Nation land assets as collateral.

ANNUAL CASH FLOW

This refers to all the money available to M'Chigeeng First Nation from net profits and after loan repayments.

ANNUAL REVENUE

Annual production energy has averaged 8,500,000 KWh per year. This translates into revenues of approximately $1.4 million per year. Revenue comes from Hydro One, who acts as the agent of the Crown with whom MERE has a sales contract.

Revenue commenced in September 2012.

Every year the project earns roughly $1.4 million in revenue. Below is a summary of annual expenses and loan repayments:

Operating Expenses ——————————— 500,000

Net Cash Flow ——————————— — — ———— 890,000

Less: Loan Repayments TD Bank ——————————765,000

Less: Loan Repayments to M'Chigeeng ———— 100,000

Cash Available annually to M'Chigeeng — Approx 30,000

Accumulated Cash Benefits of MERE to M'Chigeeng First Nation	
1/ Free cash after all debt repayments	$800,000
2/ Interest on internal equity loan	$430,000
3/ Land payments	$160,000
	$1,390,000

Accumulated Loan Repayments Achieved by MERE (to 2022)	
1/ Repayment of the TD Bank Loan	$6,300,000
2/ Repayment of internal $1,000,000 equity loan	$600,000
3/ Repayments of three early internal loans	565,000
	$7,465,000

Note: These figures are estimates

Cash Coming To M'Chigeeng First Nation

MERE's cash comes to M'Chigeeng First Nation by three different ways:

Firstly, the project has repaid and is continuing to repay equity loans provided by M'Chigeeng First Nation to fund construction.

Secondly, MERE pays M'Chigeeng First Nation all of its free cash after debt and operating expenses have been paid, after making early pre-payments of the TD Bank Loan (further details on the next page).

Thirdly, MERE pays M'Chigeeng First Nation land rental for the privilege of occupying the 100 acre property where the turbines are located.

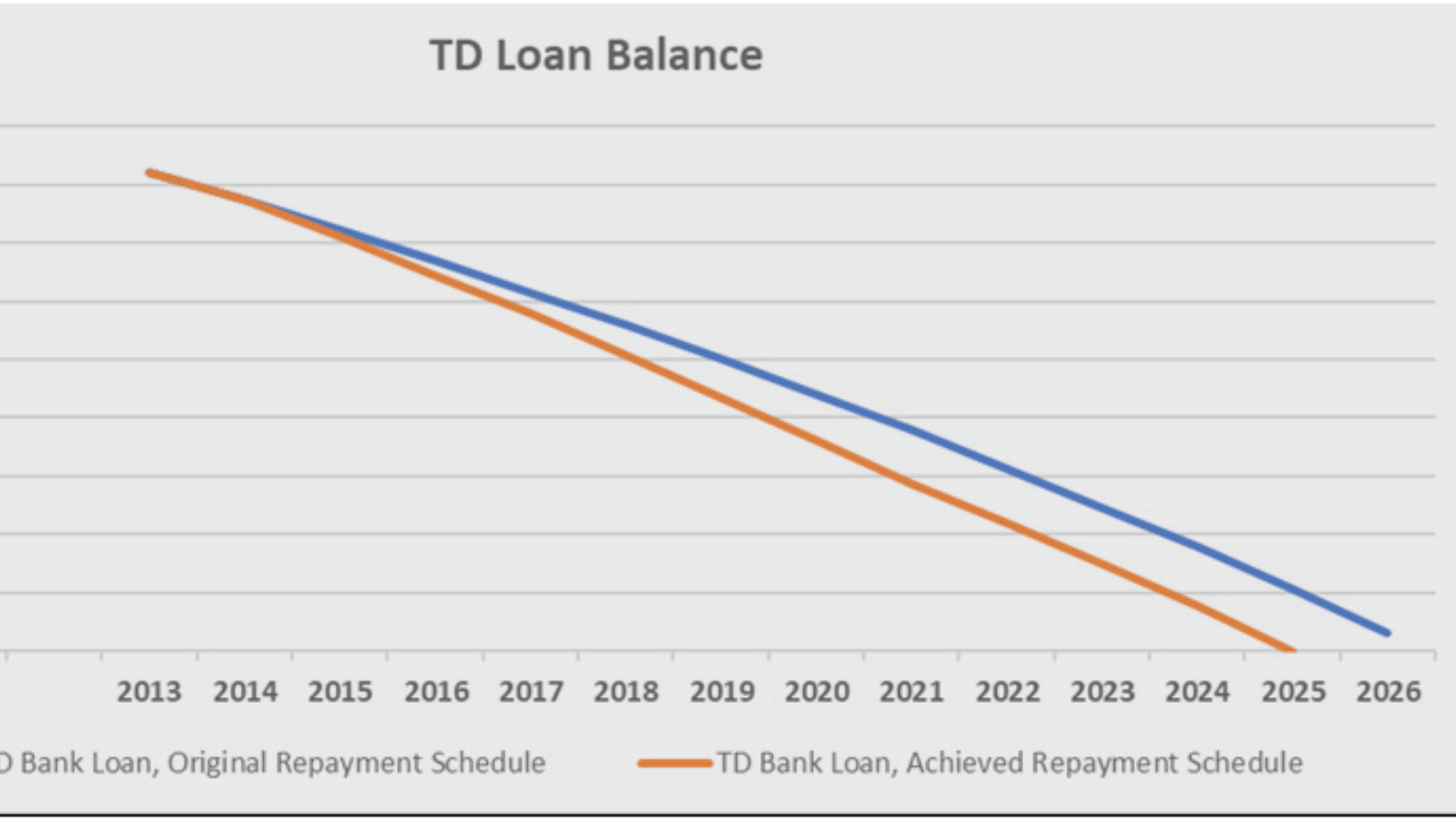
CASH BENEFITS & LOAN REPAYMENTS

In total, and to date in 2022, the project has repaid over $1 million of the internal loans.

M'Chigeeng First Nation inserted some of its equity in the form of repayable internal loans. There are five (5) loans in total.

Three of the loans were repaid in full within the initial 3 years, totaling $565,000.
A fourth loan initially for $1,000,000 continues and is repayable over 15 years at an interest rate of 6% annually. This loan is on track to be repaid in full by 2026.
A fifth loan for $500,000 remains outstanding and will be repaid at a later date when cash flow rises.

Starting in Fall of 2025, the Cash Available annually to M'Chigeeng First Nation after loan repayments and operating expenses will rise from approximately $30,000 to approximately $800,000 because the TD Bank loan will be fully repaid.



TD Bank Loan Repayments

M'Chigeeng First Nation borrowed $8.5 million from the TD Bank in order to pay for construction of the project.

The TD Bank loan was originally scheduled to be repaid over 14 years.

Each month the project pays the bank $63,909 and a portion of this goes toward paying down the remaining principle, just like a home mortgage.

At the end of each fiscal year, if there is money left over after all operating costs and debt repayments, M'Chigeeng First Nation pays half of the net profits to the TD Bank as an accelerated repayment and the other half goes to M'Chigeeng First Nation.

This has occurred every year since the beginning and now approximately $800 thousand in extra repayments have been made.

By continuing this practice the TD Bank loan will be repaid approximately 20 months ahead of schedule!

PROJECT DEVELOPMENT

The Details & the Challenges

CONSTRUCTION CHALLENGES

Challenges included:

- Nemi Road Use Agreement
- Writing the forestry tender
- Band BCR's for Everything!
- Not enough copper wire in the ground
- Foreign Exchange Hedge and making the first payments in Eurodollars
- Property Leasing Agreements
- Getting Ontario to accept Federal Jurisdiction on the EA Road Use Agreement
- The Crane Mishap... which made National News on CBC!
- Domestic Content challenges by Ontario
- Getting the Gov't of Canada to accept use of the land (weirdly on behalf of the Band)
- Indian Act Land Provision
- The FIRST Loan Draw
- OEB Generator License
- Road not wide enough!
- Radio Signal Connections; building a radio tower, and then leasing another radio tower!
- Arranging rights of way for the power line
- Getting Internet services at the site
- Navigation Canada Acceptance
- Constructing a Switching Station with an inexperienced contractor.

SUMMARY OF TOTAL PROJECT COSTS

Reported as of February 2013

MERE PROJECT
FINAL COST SUMMARY

	Planned	Actual
I. DEVELOPMENT COSTS	$ 400,000	$ 450,000
II. DESIGN, ENGINEERING, FINANCING & LEGAL COSTS	$ 1,500,000	$ 1,800,000
III. WIND TURBINE GENERATORS	$ 7,200,000	$ 7,200,000
IV. ROADS AND FOUNDATIONS	$ 1,300,000	$ 1,400,000
V. ELECTRICAL INFRASTRUCTURE	$ 1,800,000	$ 2,600,000
VI. GENERAL CONDITIONS, INSURANCE	$ 160,000	$ 170,000
VII. CONTINGENCY	$ 280,000	$ -
PROJECT TOTAL Cost	$ 12,000,000	$ 13,100,000

CONSTRUCTION COST VARIANCES

In the world of construction, onsite conditions change planned outcomes, usually for normal and acceptable reasons. The MERE project had a few surprises.
The biggest variances from the planned MERE capital expenditure are explained below.

COST ITEM	VARIANCE QUANTITY	EXPLANATION
Development costs	**$35k**	higher land access fees
Engineering, Procurement, Project Management	**$100k**	Electrical engineering as well as Owner Engineer costs for construction. The latter went up when the turbine foundation costs exceeded expectations and the project team needed to deal with process contingencies.
Construction Financing, Legal & Misc Soft Costs	**$130k**	Legal fees went about $40k above expectations. Internal M'Chigeeng First Nation management fees represented the balance.
Interest During Construction	**$110k**	Caused due to delays in finishing the switching station and winter construction.
Civil & Mechanical	**$140k**	Mostly road construction (because the crane required a wider road between turbines than was originally specified plus a decision to widen Tower Road, the approach road, for winter safety).
Electrical & Controls	**$800k**	Mostly caused by the switching station which was built during winter 2011-2012. Plus the Hydro One additional connection charges, an extra $200k. Extra switching station costs were triggered by Hydro One changing the switching station design late in the process, when the turbines were almost onsite. This made a Fall 2011 completion impossible since a new switch was required, custom made and ordered in September 2012. This delayed the ESA approval of the switching station until December 7, 2011. Also extra grounding costs for the switching station due to high soil resistivity. Enercon was forced to absorb $50k in extra grounding cost at their foundations for similar reasons.
General Conditions	**$8k**	Some savings and some unexpected costs.

PROJECT OPERATIONS

The Details & Ongoing Work

> ***There is no significant seasonal difference in turbine reliability despite wide seasonal changes in wind.***

OPERATIONS
WHO IS INVOLVED

Maintenance is undertaken by the original turbine supplier, **Enercon Canada**, under a 12-year maintenance contract agreement. Up until Year 12, Enercon takes on all aspects of maintenance and replacement of equipment and parts, with a contract that involves 100% warranty coverage on all risks of failure (other than Acts of God), and which meets a minimum performance target. From Year 12 onwards, Enercon will renew the maintenance agreement but with reduced scope of warranty coverage on replacement costs. Enercon sends maintenance technicians from a depot at Tiverton, Ontario, or sometimes from its Montreal Headquarters. MERE pays a quarterly fee for this service contract.

Insurance is provided by a national insurance broker, Aon Insurance, and the underwriter is Victor Insurance, based in London, UK. Total cost for insurance, covering liabilities, environmental, liabilities, turbine equipment replacement, loss of revenue, directors, cyber issues, is about $60,000 per year. This cost has increased by 70% since the initial years.

Local Control— HIAH, through its management services contract, is responsible for complying with Hydro One regulations and instructions about operating during times when line maintenance is ongoing and during emergency situations. Hence HIAH looks after operating the switchgear to ensure compliance. The turbines are under automatic control and can self-start when the power line is energized. Enercon monitors these machines from their HQ in Germany.

Financial Management is provided by M'Chigeeng First Nation Finance Department and auditing services are provided by M'Chigeeng First Nation auditors, KPMG.

From Year 12 onwards, Enercon will renew the maintenance agreement but with reduced scope of warranty coverage on replacement costs. Enercon sends maintenance technicians from a depot at Tiverton, Ontario, or sometimes from its Montreal Headquarters. MERE pays a quarterly fee for this service contract.

ANNUAL OPERATIONAL BUDGETS

Annual production energy has averaged 8,500,000 KWh per year. This translates into revenues of approximately $1.3 million per year. The revenue comes from Hydro One, who acts as the agent of the Crown with whom MERE has a sales contract.

MERE Annual Budgets

	Fiscal 2022-23	Fiscal 2021-22
REVENUE	**$ 1,323,267**	**$ 1,417,658**
EXPENSES		
Travel/mileage - site checks/ outages/ meetings	$ 1,200	$ 1,500
Communication Services - telephone/ internet/ digi-modem	$ 2,520	$ 2,580
Insurance	$ 54,210	$ 55,900
Bank Charges	$ 2,560	$ 2,560
Board of Directors - Honorarium	$ 21,058	$ 10,800
Project Management - HIAH CORP service fees	$ 75,578	$ 76,887
Legal Fees	$ -	$ 500
Audit Expenses & Coorparate Income Tax filing	$ 9,250	$ 9,000
OFA Financial Management + Guarantee fee	$ 17,400	$ 18,500
Asset Manager Fee -- 3G Energy Corp	$ 36,000	$ 45,000
Hydro One - Energy consumed at site	$ 4,995	$ 4,950
Communication - SEL equip/ Radio network Installation + Upgrades	$ 1,000	$ 3,000
3 Land Permits; # 6058437, #6058442, #6058446	$ 19,370	$ 19,155
Enercon Warranty & Service Agreement - Turbine Maintenance	$ 193,752	$ 205,196
Maintenance - Road Repairs, gate, and fencing	$ 24,340	$ 44,900
Maintenance - Snow removal	$ 10,000	(Included above)
Maintenance - Substation Equipment repairs/ upgrades	$ -	
Maintenance - On site tree/shrub removal	$ -	$ 500
Utility Line & Equipment Repairs - Pole Line Maintenance	$ 7,000	$ 7,900
Kagawong Tower rental - SBA Canada Inc.	$ 7,800	$ 7,910
Contingency		$ 5,000
Total Planned Expenses	**$488,033**	**$521,738**
Earnings before Interest and Ammortization	**$835,234**	**$895,920**
Principal and interest payments to TD Bank	**$765,000**	**$765,000**
Cashflow Available to MFN for internal debt and investment yield	**$70,234**	**$130,920**

NOTE: The amounts shown as available to M'Chigeeng First Nation from internal debt and investment yield, are further divided into a half which is used to make early repayments of the TD Bank loan and the second half which goes to M'Chigeeng First Nation.

OPERATIONAL MATTERS

Here are some of the operational situations that the MERE project team deals with on a regular basis:

HYDRO ONE *OUTAGES*

Some are planned, and many are unplanned. MERE is required to shut down so that line maintenance work can be done safely. This accounts for about 1-2% loss of annual production.

RADIO CONNECTION TO *LITTLE CURRENT*

There is a radio circuit that Hydro One uses to give operational commands to the wind farm. This radio gear requires maintenance from time to time, including Hydro One's gear. In one such occurrence, MERE's technicians diagnosed and repaired issues with Hydro One's radio gear after Hydro One informed MERE that MERE's radio gear was faulty. That was awkward. Generally the relationship with Hydro One is very good.

ROAD MAINTENANCE & *SNOW REMOVAL*

Getting to the site can be challenging.

REPORTING & *CONTRACT MANAGEMENT*

The project team reports on a regular basis to the Board of Directors of MERE General Partner Inc as well as to C&C, plus the Ontario Finance Authority and the TD Bank.

SWITCH *GEAR*

There are switches that break the power circuit to the two turbines automatically when remotely commanded by Hydro One's operations centre in Markham. This equipment, along with the control and communication devices, require periodic maintenance.

LOW *VOLTAGE*

During winter months and deep cold temperatures when residents on the Island are using lots of hydro for house heating, the voltage on the power lines drops and this causes the wind turbines to shut down for safety. MERE alerts the Hydro One control centre and they try to fix this by boosting voltages. Continuing upgrades in 2022 by Hydro One on the power lines on Manitoulin might be fixing this issue. There will an upward trend of this behavior as people convert to electric heating and powering electric vehicles.

MACHINE *REPAIRS*

Done by Enercon, but HIAH staff along with 3G Energy ensure the work is acceptable and done quickly.

WINTER *STORMS*

The blades get covered in ice and there are protocols for shutting down the machines for safety.

The turbines are rated for life well beyond 2032 when the FIT contract expires. Enercon has indicated they might be safe to operate for another 10-15 years beyond. At the end of their service life, it would be relatively simple to replace them and much less costly compared to the original project. Think of this idea as similar to hydro electric dams in North America, many of which are 100+ years old and have been upgraded numerous times. They have an almost unlimited lifespan assuming regular care and maintenance.

CONTRACT MANAGEMENT

The project team looks after contractual matters on an ongoing basis. The main contracts are as follows:

Power Purchase Agreement—stipulates how much generation capacity can be deployed, what the Province will pay for the energy, start and end dates of the contract, quantities of Domestic Content used in the creation of the project, etc. **Contract expires**: at midnight on September 3, 2032.

Connection Agreement with Hydro One — stipulates the technical parameters for the energy that is delivered to the Province—voltage, phases, frequency, Power Factor, power harmonics, current limits, type of metering measurement equipment, safety equipment and switchgear for interrupting operations on command and protecting line workers, connection and shutdown protocols, and much, much more. **Contract Expiry:** indefinite, continues as long as MERE is in compliance with technical requirements

Long Term Loan Agreement with TD Bank — covers the borrowing of the initial $8.5 million to assist in constructing the project. The interest rate was low, under 4%. **Loan Term:** 14 years.

Aboriginal Loan Guarantee with Government of Ontario — Covers the risk of failure if the project is incapable of repaying the long term TD Bank loan. The Ontario Finance Authority monitors this loan and charges a small annual fee for the loan guarantee, approximately $20,000. **Expiry:** When the term loan is fully repaid.

Enercon EPK Agreement — Covers annual maintenance and warranty services; costs about $200,000 per year. **Contract Expiry**: 12 years after commencement, June 24, 2024.

Asset Management agreement — Covers the services of an Independent Engineer; The engineer provides advice to the TD Bank and the Ontario Finance Authority in the event of loan issues, plus advice to MERE regarding EPK contract disputes, plus ongoing troubleshooting advice on wind turbine performance and maintenance matters. Cost is $36,000 per year. **Contract Expiry:** Contract renews every three (3) years.

Insurance Agreements — Renewed annually. Covers directors liability, environmental hazard, turbine equipment replacement, loss of revenue, plus replacement in the event of major destruction caused by Acts of God, tornados, earthquakes (but not floods). Cost is about $60,000 per year. **Contract Expiry:** Contract renews every April.

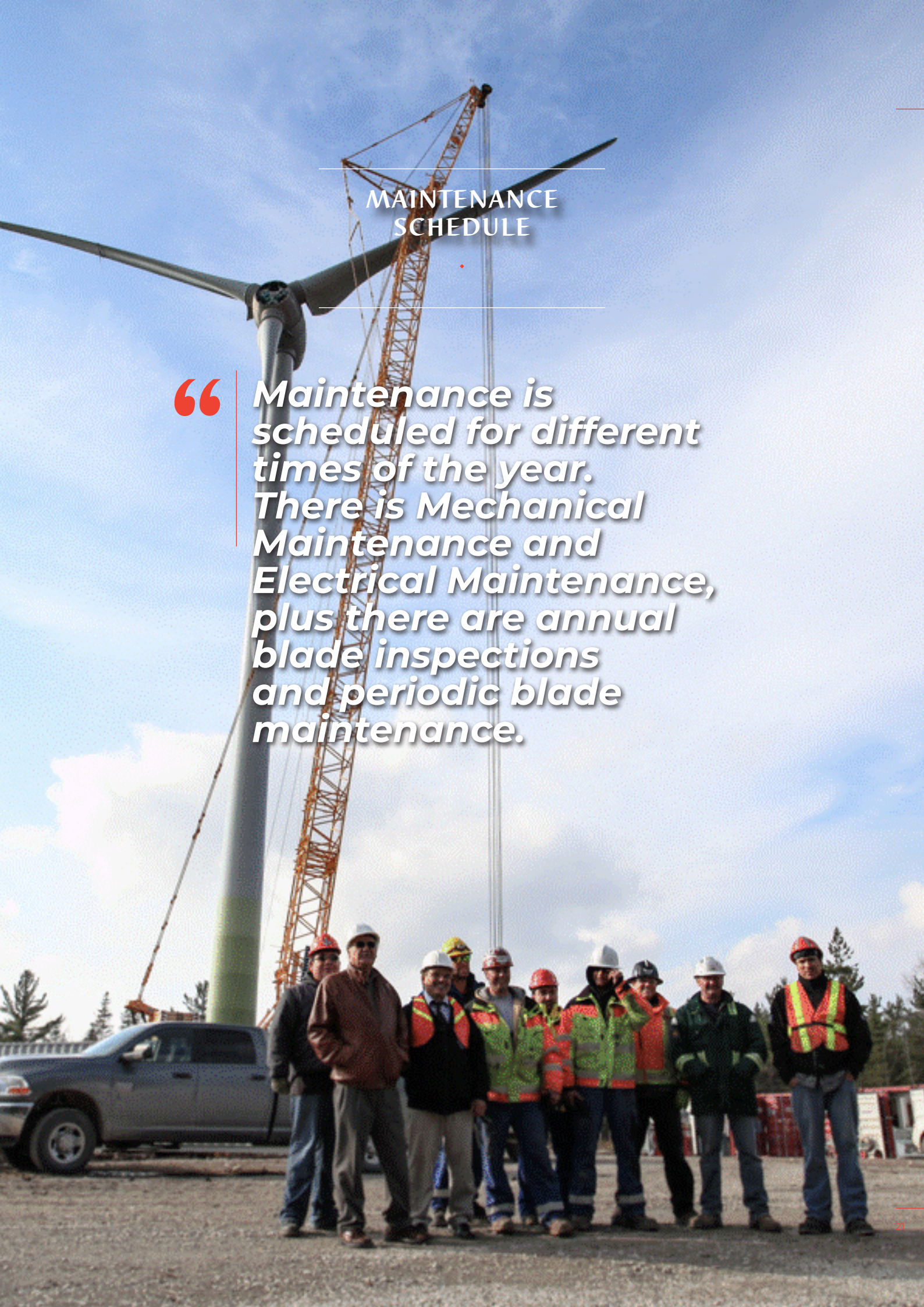
Kagawong Radio Tower Lease — MERE leases a position on a radio tower at Kagawong for the purposes of signaling to the Hydro One substation at Little Current. This is a 10-year lease, costing approximately $7,000 per year. **Contract Expiry:** December 31, 2022

Financial Management Services Agreement —The Project contracts with M'Chigeeng First Nation for financial services, including accounting and bookkeeping.

Project Management Services Agreement — with HIAH Corp

Property Lease Agreements — three agreements to lease space, on two Band members properties for the transmission line plus the M'Chigeeng First Nation property where the turbines are located.

Other Agreements — These are implemented on an as-needed basis —Snow plowing, pole line maintenance, switchgear maintenance, communication gear maintenance, etc.



MAINTENANCE SCHEDULE

> *Maintenance is scheduled for different times of the year. There is Mechanical Maintenance and Electrical Maintenance, plus there are annual blade inspections and periodic blade maintenance.*

Working Together
Members of the M'Chigeeng First Nation Team with Enercon workers

EXCERPT FROM THE ENERCON MAINTENANCE MANUAL

300h maintenance: The 300h maintenance is the first maintenance following commissioning. During this maintenance carry out all maintenance items described in this document and note them down on the checking report.

Visual maintenance (Blade Inspections): Annually

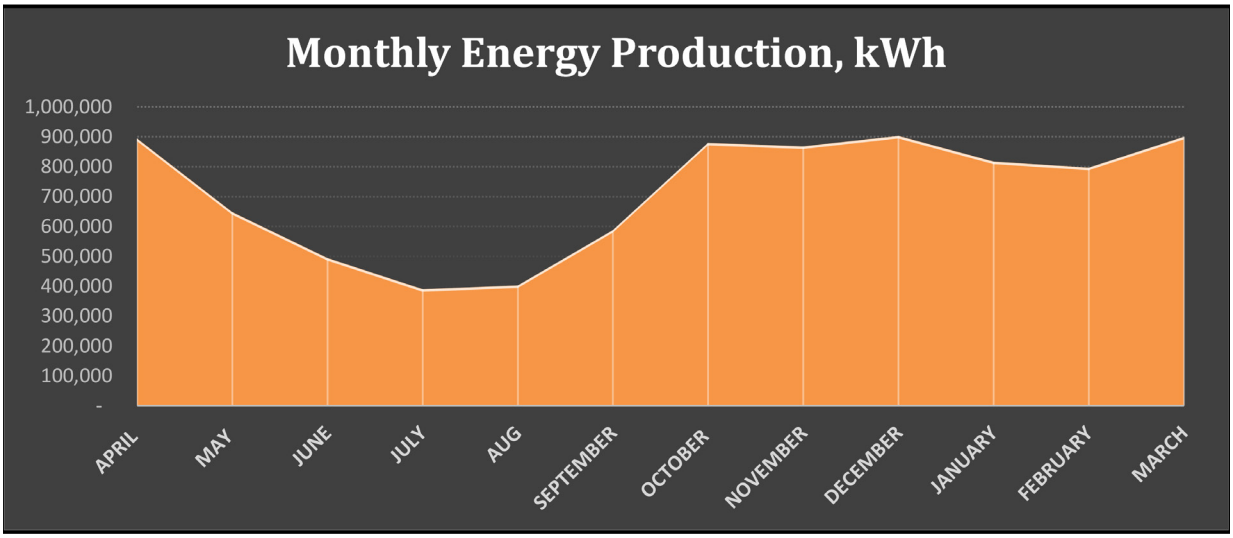
Grease maintenance: Annually

Electrical maintenance: Annually

Mechanical maintenance: During a mechanical maintenance carry out all maintenance items described in this document and cross them off on the checking report.

SEASONAL PATTERN OF ENERGY PRODUCTION

MERE's energy production varies on a seasonal basis. The windiest months are in the winter! Summer winds are quiet. MERE's energy production varies on a seasonal basis. The windiest months are in the winter! Summer winds are quiet.



SEASONAL RELIABILITY OF THE WIND TURBINES

There is no significant seasonal difference in turbine reliability despite wide seasonal changes in wind. This is because these turbines were designed for much stronger winds.

MERE Quarterly Plant Availability, %

CONTRACT YEAR (commencing June)

	Monthly Availability Data from Enercon SCADA Reports										Quarterly Average, %
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Q 1	80%	96%	95%	99%	100%	99%	100%	99%	99%	98%	97%
Q2	97%	97%	98%	100%	100%	99%	100%	96%	95%	100%	98%
Q3	100%	98%	100%	96%	97%	99%	100%	100%	100%	97%	99%
Q4	97%	100%	100%	99%	96%	100%	100%	100%	97%	99%	99%

HOW GOOD ARE THESE TURBINES?

These are among the best machines made.

They are highly reliable and over-engineered for the wind they are exposed to.

Key Performance Indicator 1 — Generator Reliability

The turbines are available for operations 98% of the time.

Key Performance Indicator 2 — Generator Output

The turbines are maintaining their rated power output.

CURRENT & FUTURE BENEFITS

M'Chigeeng First Nation is rewarded on an ongoing basis in the following ways:

- Financial rewards... Strong financial return on investment
- Job creation - Construction Jobs, On-Call Contractors, Renewable Energy Worker
- Internal loans - Without internal loans, the project would have required interest bearing loans from banks. These internal loans from M'Chigeeng First Nation allow M'Chigeeng First Nation to benefit from the interest earned from the loans.
- Lease agreements with two Band members and M'Chigeeng First Nation for land on which the power line runs and the turbines are situated.
- Band road contractors who are hired periodically for road repair work and winter snow clearing.

Financial returns — how good was this investment?

Comparing cash going to M'Chigeeng First Nation over 20 years with M'Chigeeng First Nation 's original investment of $2.35 million (net of government grants and bank loans):

The project will pay out all debt and provide M'Chigeeng First Nation almost 4 times its equity investment!

20 YEAR PROJECTIONS

The turbines are rated for life well beyond 2032 when the FIT contract expires. Enercon has indicated they might be safe to operate for another 10-15 years beyond. At the end of their service life, it would be relatively simple to replace them and much less costly compared to the original project. Think of this idea as similar to hydro electric dams in North America, many of which are 100+ years old and have been upgraded numerous times. They have an almost unlimited lifespan assuming regular care and maintenance.

What happens after the FIT contract expires in 2032?
In the beginning, M'Chigeeng First Nation leaders envisioned an arrangement where the energy produced by the turbines gets credited to individual band member home electrical accounts. It's an accounting matter accomplished with software that the electrical distributors such as Hydro One use, and this could possibly result in M'Chigeeng providing free energy to its band members.

In industry jargon, this is called **Virtual Net Metering. VNM** is common around North America and it is trending upward as US states and Canadian provinces implement carbon mandates.
But Virtual Net Metering is not allowed in Ontario. Regulations currently don't permit VNM. Incidentally, the current government overturned a move by the previous government to allow VNM, as soon as they got into power in 2018. The renewable energy industry has continued to advocate for the implementation of VNM and there is optimism it will come about in the future. Possibly within 5 years. MERE has another 10 years before it will be needed by M'Chigeeng.

MERE produces about **8,500,000 KWh** annually and this is about the amount that the Band's 400 homes could consume if they converted to all electric heating (and had good insulation). Currently most of the Band's homes are heated by propane, oil and /or wood, and these fuels are going to be phased out in Canada over the next 20 years due to carbon goals. This means that MERE's wind energy is going to become more important to M'Chigeeng in the future.

It is vital for M'Chigeeng to explain to governments that it desires to implement VNM in the future, in order to become energy self-sufficient for its members.

There is a Plan B if VNM is not implemented. Currently the Ontario Independent Electrical System Operator envisions a shortage of electrical energy arising in the late 2020's and into the 2030's. Why? Demand is growing in response to the electrification of vehicles as well as the conversion of housing off carbon fuels and onto electrical heating (mostly using heat pumps). Ontario is going to need all its sources of renewable energy, which suggests that the wind turbines could be contracted to continue producing well beyond the FIT expiry date in 2032.

Plan C? The idea exists that First Nations on Manitoulin Island could create their own electrical distribution entity serving the general public and replacing Hydro One. VNM would then be a mere policy issue decided within the organization of that new entity.

BEYOND THE FIT CONTRACT

A Better Future For M'Chigeeng

The Project will...

- contribute to M'Chigeeng First Nation's community energy self-sufficiency
- Create a reputation platform upon which new commercial scale projects can be schemed.
- Enhance M'Chigeeng First Nation's commercial experience and capacity to lead new partnerships
- Enhance employment within M'Chigeeng First Nation
- Stand as a beacon of accomplishment

SUMMARY

- The MERE project has been a huge success for M'Chigeeng First Nation.
- Despite challenges in accomplishing the construction, the project achieved its completion milestone within the allowable time and was approved by Ontario for 20 years of revenue under a Feed In Tariff contract.
- The benefits that have accrued are a combination of financial, capacity building and employment. And Pride of Accomplishment!!
- The Band has earned a positive reputation with TD Bank as well as the Ontario Finance Authority for management of its long term commercial loan. Going forward, these lenders are thinking positively about next project opportunities with M'Chigeeng First Nation.
- The FIT contract ends September 2032 and the prospects for continuing the project and benefitting M'Chigeeng First Nation are still anticipated.
- Meanwhile the money coming from the project will reach new heights in 2-3 years when the term loan is fully repaid.

TECHNICAL INSIGHTS

What is Equity?

Equity is the difference between the price of an asset and all the money borrowed to finance its purchase. Think of equity as the down payment on a car which is purchased with a loan from the dealership. The dealership rarely gives a loan for 100% of the purchase price and the dealership usually requires the purchaser to insert some of their own money alongside the loan. Sometimes equity is described as the money invested and which is “at risk of loss” to the investor.

What is a Kilowatt-hour? (abbreviated as kWh)

A kWh is a quantity of energy— think of it as the electrical equivalent of litres of gasoline. One kWh is the amount of energy expended if a person operates a hair dryer for about 45 minutes. In technical speak, it is 1000 watts of continuous energy consumption for 1 hour.
When each wind turbine is operating at full power, they produce at an output of approximately 2,000 kW of power and over one hour this equates to 2,000 kWh of energy created.

FIT Contract: Stands for **Feed-In-Tariff Contract**— MERE gets to generate and sell energy, meaning kWh’s, to Ontario continuously for 20 years. The end date of this contract is September 3, 2032. All energy delivered to Ontario (meaning inserted onto the wires alongside Highway 540) are sold for approximately 16 cents per kWh. The sales price rises slightly each year, accounting for inflation in the cost of operating the equipment.
The maximum allowable amount of generation capacity is 4 megawatts. This is stipulated by the FIT contract and this quantity is set mainly because of limitations of the power lines alongside Hwy 540 to accept more generation. There are thousands of places in Ontario currently with similar FIT contracts.
How much is 4 Megawatts? Thinking of approximately 5,000 toasters, all operating at the same time.