



DISRUPTING THE WIND INDUSTRY BY MAKING IT ECONOMICALLY VIABLE

FEBRUARY 2024

FORWARD LOOKING STATEMENT

CERTAIN INFORMATION IN THIS PRESENTATIONS CONTAINS FORWARD-LOOKING INFORMATION. ACTUAL RESULTS COULD DIFFER MATERIALLY FROM CONCLUSIONS, FORECASTS OR PROJECTIONS IN THE FORWARD-LOOKING INFORMATION, AND CERTAIN MATERIAL FACTORS OR ASSUMPTIONS WERE APPLIED IN DRAWING CONCLUSIONS OR MAKING FORECASTS OR PROJECTIONS AS REFLECTED IN THE FORWARD-LOOKING INFORMATION. THE FORWARD-LOOKING INFORMATION IN THESE SLIDES CONTAIN INFORMATION ABOUT THE MATERIAL FACTORS AND RISKS THAT COULD CAUSE ACTUAL RESULTS TO DIFFER MATERIALLY FROM THE CONCLUSIONS, FORECASTS OR PROJECTIONS IN THE FORWARD-LOOKING INFORMATION AND THE MATERIAL FACTORS OR ASSUMPTIONS THAT WERE APPLIED IN DRAWING A CONCLUSION OR MAKING A FORECAST OR PROJECTION AS REFLECTED IN THE FORWARD-LOOKING INFORMATION.

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BUFFALO INFRASTRUCTURE MISSION

MAKING WIND ECONOMICALLY VIABLE

Buffalo Infrastructure Mission

We seek to maximize cash flow while reducing capital and operating costs on an accelerated timeline.

Innovation is key to sustainable and economically viable wind power production that maximizes the value of marginal land.

“Insanity is doing the same thing over and over again and expecting different results.”

- Albert Einstein

Plan

Identify wind resource targets, secure offtake and site, permit

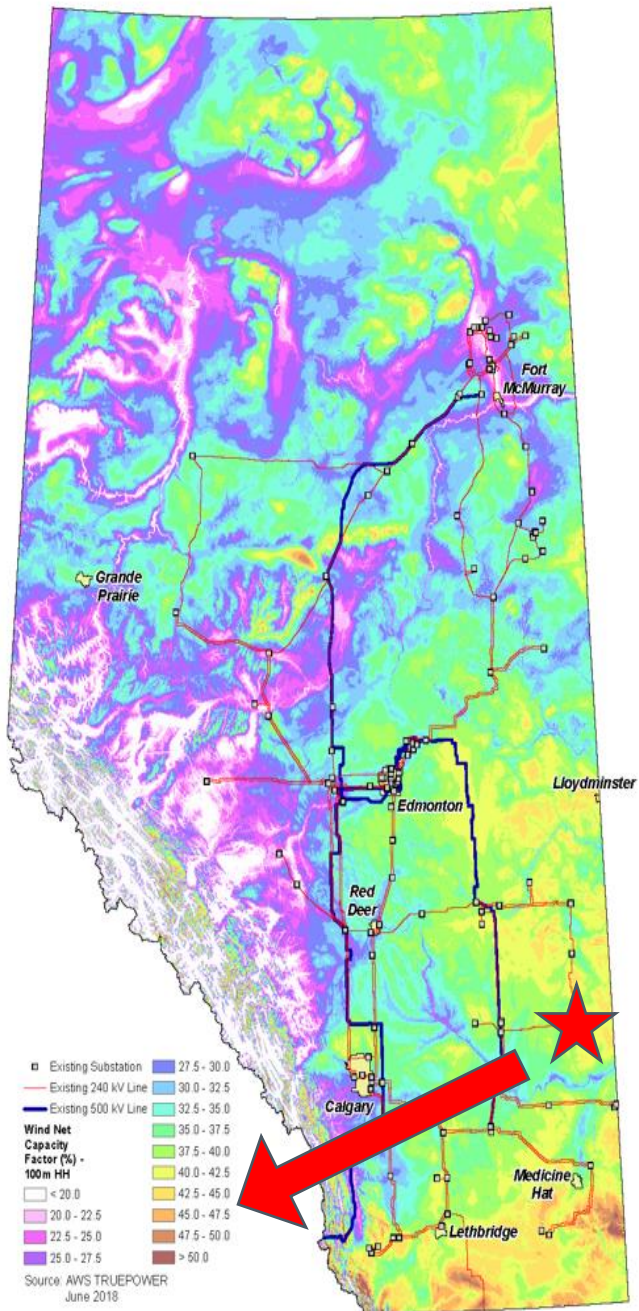
Build

Build out generation site and power on

Cash Flow

Harvest cash flow to fund growth and provide a consistent return to shareholders through elevating share buybacks

Figure 4.5-1: Alberta's wind resource potential



THE PROBLEM: STATUS QUO

Bigger. While economies of scale on larger wind turbines help, most manufacturers are losing money and developer costs are rising as projects are heavily debt financed often up to 80% leverage. Bigger also brings additional challenges for grid tie in, transportation and construction costs

INNOVATION

Maximize energy at the “end of the blades”. This results in an **85% reduction** in equipment, installation, transportation, and financing costs compared to typical wind developments

APPLICATION

The system results in modular scalable wind power with reduced capital and operating costs suitable for a variety of terrains at lower wind speeds

GROWTH OPPORTUNITIES

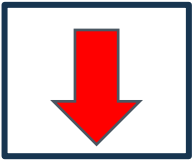
Flexible and scalable development:

- Developments start at 1MW and can be scaled up
- Configurations can be flexible to match terrain
- Development can be matched to offtake demand eliminating grid connection costs

PROBLEM

C\$2.3

Capital Cost in millions of dollars per MWH per wind turbine installed



Manufacturers lose money on every turbine sold while debt financing costs are rising

SOLUTION

C\$0.6

Capital Cost in millions of dollars per MWH with the Airloom system installed



Operators reach project payout in a fraction of the time due to lower capital and debt servicing costs

INDUSTRY NOTES

In addition, rising prices for raw materials and components as well as regulatory delays have caused writedowns and losses across the wind industry despite robust demand for renewable technology. Turbine makers have been particularly hit.

"You see the terms and conditions of the projects being too difficult for investors and project developers to take. So we are in a standstill," said Danny van Doesburg, senior portfolio manager at Dutch APG Asset Management, which according to LSEG data owns stakes in Vestas, Orsted and Siemens Energy.

"The market is not functioning anymore," he added, calling for a stronger role for governments to help deliver a functioning market model that distributes profits throughout the value chain. – Feb 7, 2024

<https://www.reuters.com/business/energy/wind-power-giants-give-bleak-view-2024-challenges-persist-2024-02-07/>

Vestas reported a \$1.2 billion EBIT loss in 2022

GE Renewables reported a \$2.24 billion loss in 2022

Siemens Gamesa reported a \$5 billion loss in Q3-2023 and needed a German government bailout to refinance their debt

"Shares in the world's biggest wind power company fell 25% on Wednesday after it told investors it had no choice but to take a 28.4bn Danish kroner (£3.3bn) impairment charge and stop the developments off the New Jersey coast.

Ørsted said it had cancelled the Ocean Wind I and II schemes because of high inflation, rising interest rates and supply chain bottlenecks." – Nov 1, 2023

<https://www.theguardian.com/environment/2023/nov/01/rsted-cancels-two-us-offshore-windfarm-projects-at-33bn-cost>

CONVENTIONAL WIND LCOE IS STAGNANT



Levelized cost of electricity (LCOE) (USD/MWh)

Technology & timeframe	Average annual deployment growth (%)	Average annual cost reduction (%)
EV batteries (2010-20)	69	-19
Solar PV modules (2010-20)	24	-18
Wind, onshore (2010-20)	13	-4
Wind, offshore (2010-20)	19	-4

Sources: Lawrence Berkeley National Lab: https://eta-publications.lbl.gov/sites/default/files/wind_lcoe_elicitation_ne_pre-print_april2021.pdf. Airloom forecast from internal modeling that leverages NREL methodology, and input from outside consultants.

This is due to:

1. Increasing the size of wind turbines has reached the point of diminishing returns
2. Supply chain challenges for custom parts and specialized materials
3. Larger turbines require large infrastructure and specialized handling equipment (e.g., jack-up ships & large cranes)

The immense scale of these turbines is a barrier to innovation & mass manufacturing, and limits where utility scale wind can be installed.

BOTTOM LINE:

Conventional wind turbines will no longer be cost competitive within a decade.

Sources: IEA; Lafond, Greenwald and Farmer (2022); Zeitlin (1995); Abernathy and Wayne (1974); Grubler, Nakicenovic and Victor (1999)
 Note: the datasets for US aircraft production in WWII run from 1939 to 1944 for average annual deployment growth and 1942 to 1945 for average annual cost reduction.



AIRLOOM TECHNOLOGY SOLUTION



USD	Utility-Scale HAWT*	Airloom Technology
Device CapEx	\$0.85/W (e.g., \$2.1M for 2.5 MW turbine)	Less than \$0.09/W (e.g., under \$225K for 2.5 MW AirLoom)
Site CapEx	\$1.25/W (e.g., \$25M for 20 MW wind farm)	Less than \$0.21/W (e.g., under \$6M for 20 MW wind farm)
LCOE	\$0.038/kWh	\$0.013/kWh

*Lazard, October 2021

Why Bill Gates Is Betting Big On Wind Power Startup Airloom: Company's Novel Turbines are More Efficient And Much Smaller Than Traditional Giant Pinwheel Designs – Nov 17, 2023

<https://finance.yahoo.com/news/why-bill-gates-betting-big-190414510.html>

Airloom is Higher Energy Density

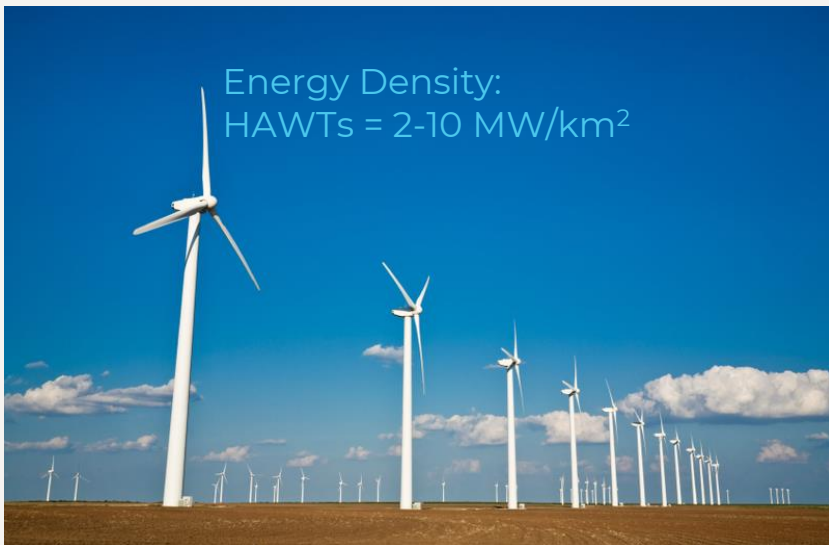
Generating *more* energy in *less* space.

Effective Swept Area: **31.42%**



3 diameter spacing

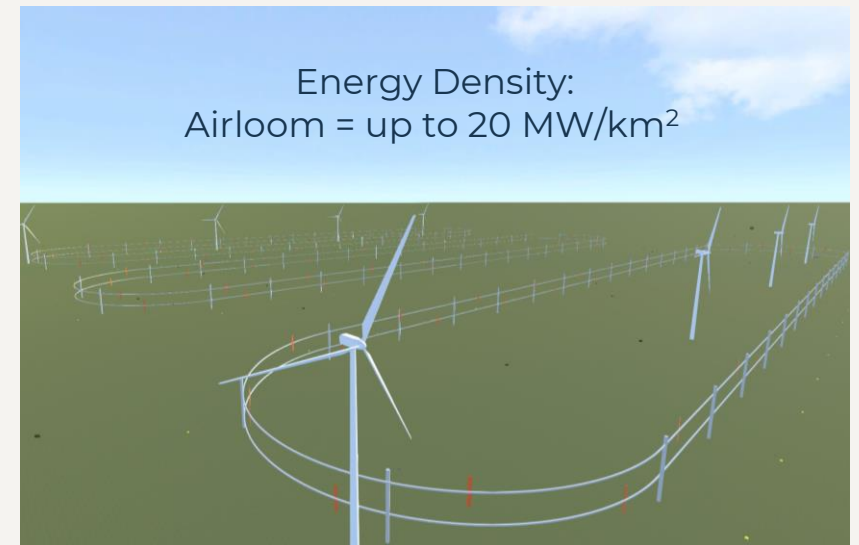
HAWT swept area is circles interacting perpendicular to the wind



Effective Swept Area: **100%**



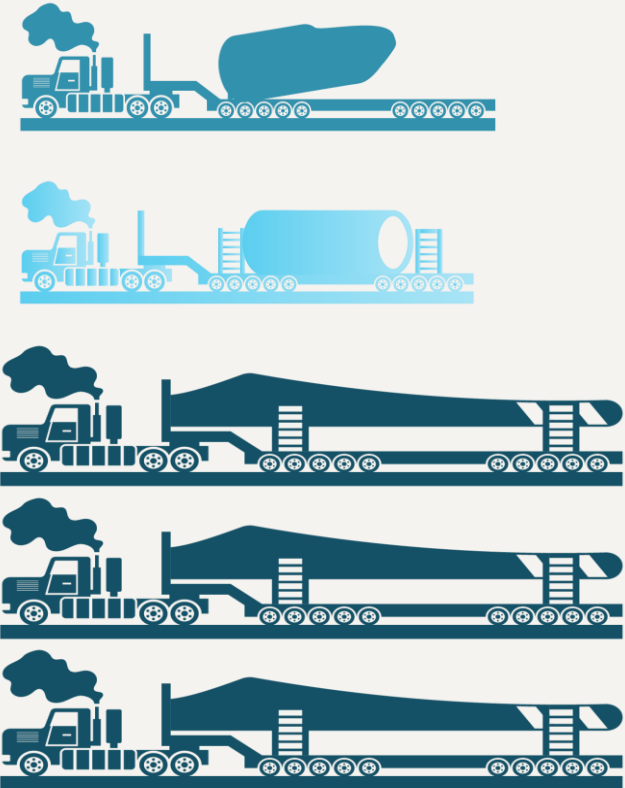
Airloom swept area is a rectangle interacting perpendicular to the wind



Reduced Transportation and Installation Costs



1.6 MW conventional wind turbine



VS

1.6 MW Airloom

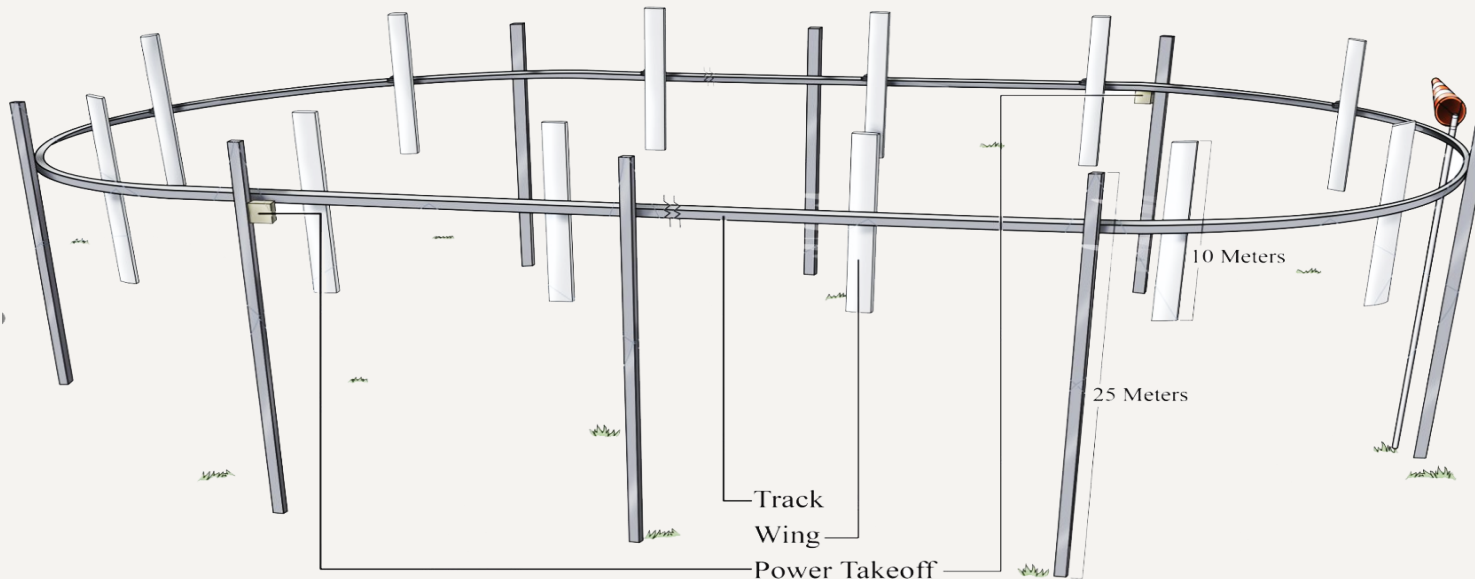


Easy, inexpensive transport and no cranes required

How It Works

Airloom harnesses the power of the wind to propel wings along a lightweight track. The unique geometry generates the same amount of electricity as conventional turbines at a fraction of the cost.

10-meter wings travel across a lightweight track that can stretch meters or miles. 25-meter towers are held in place by a patented bridling system. High or low, short or long, the configuration is highly flexible depending on landscape and use.

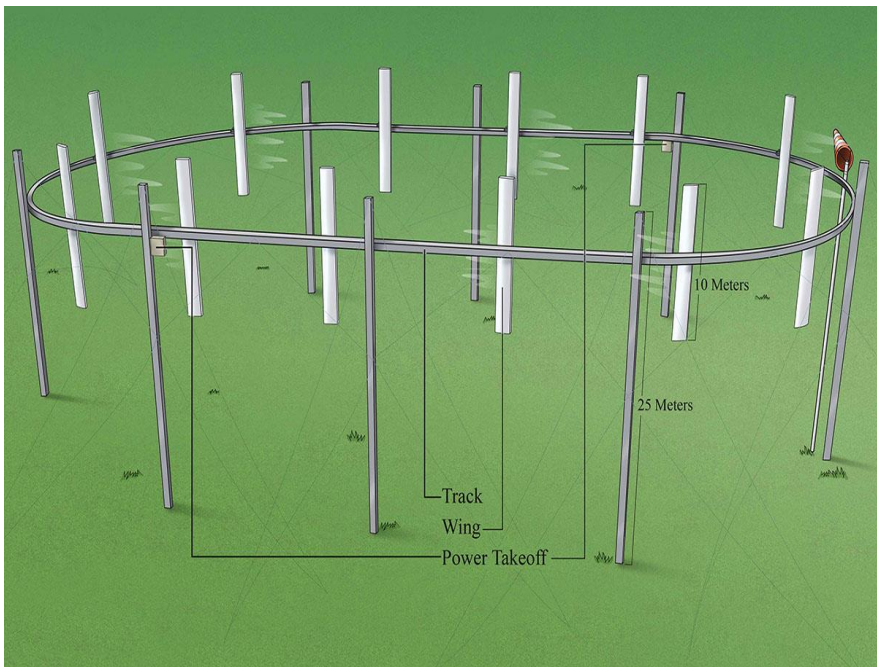


- Simple, modular structure enables low cost, scalable swept area that efficiently converts kinetic wind energy into mechanical energy
- Site layout requires fewer roads, less electrical collection cabling, and less overall infrastructure vs. HAWT
- Airloom uses low-cost, mass manufacturable components
- Smaller parts and lower mass simplifies transportation, installation, and maintenance

Major Components:

- Towers: 40 ft. steel towers
- Rails: Extruded aluminum
- Airfoils: Pultruded fiberglass
- Generators: from standard suppliers (e.g. ABB, Toshiba)
- Power Electronics: modules available from Infineon, Microsemi, Wolfspeed, etc.

HOW IT WORKS



CHEAPER

- Capital Costs are reduced by 85% on a per MWH basis versus typical wind turbines
- conventional materials
- short airfoils of 35 feet vs 180+ foot blades
- smaller generators versus large generators

TRANSPORTATION

A 2.5MW unit weighs 15 tonnes and can be transported in a single truck load versus trains and special transport vehicles for typical wind turbines

INSTALLATION

- Less concrete
- Normal crane installation for poles versus specialized cranes
- Days of installation versus months

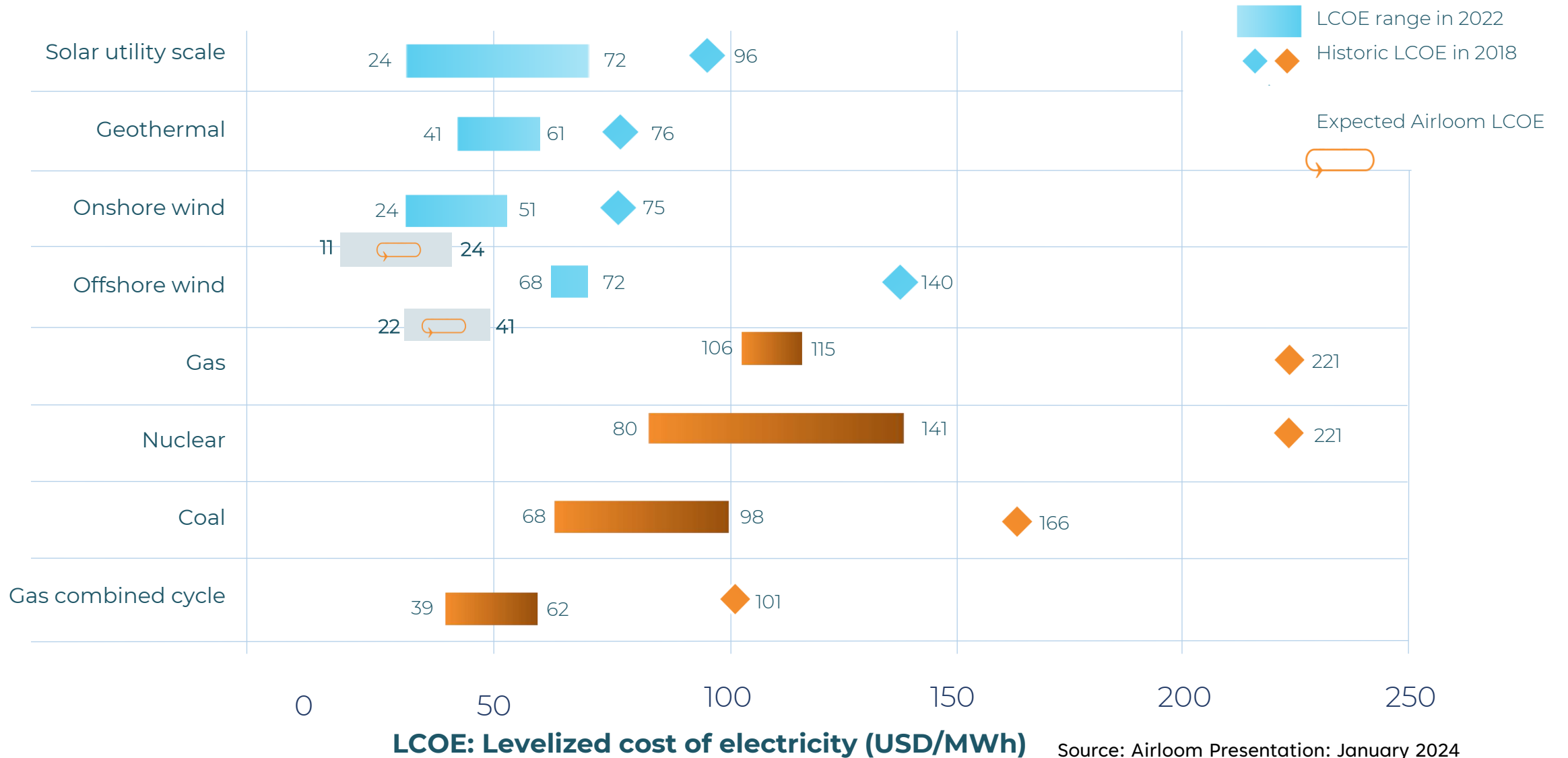
OPERATION AND MAINTENANCE

- Real time data reporting
- Minimal maintenance
- Conventional readily accessible parts

EFFICIENT

- Power takeoffs are “at the tips” where wind energy is greatest

AIRLOOM COULD BE THE LOWEST COST ENERGY OF ANY TYPE

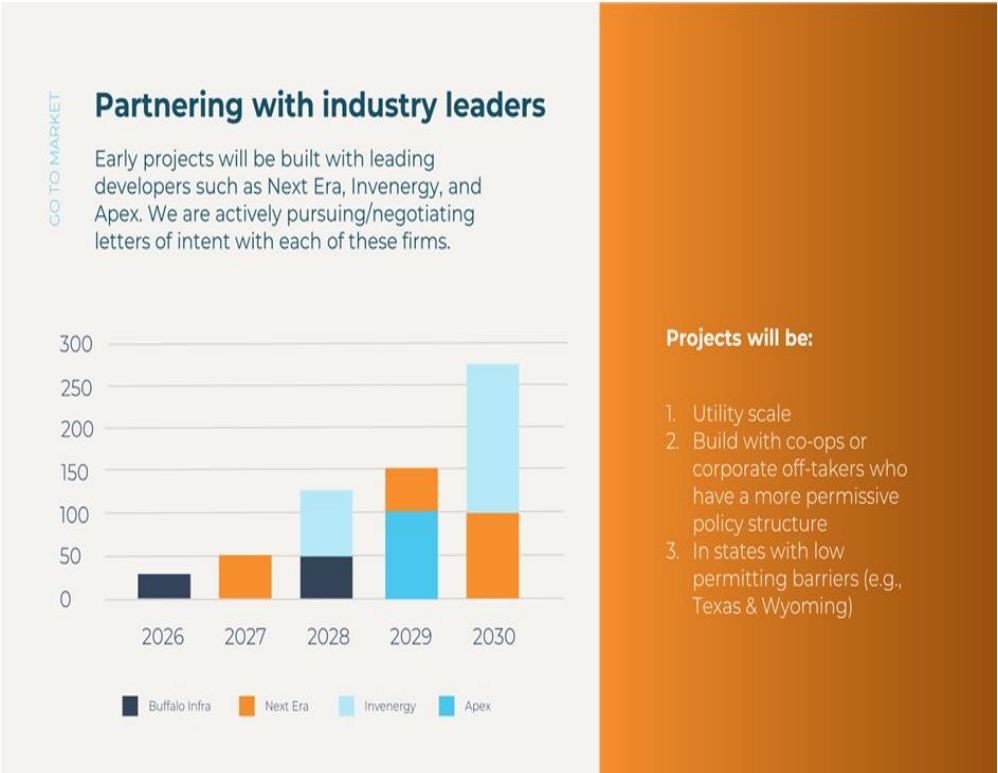


BUFFALO LEADING SIGNIFICANT DEVELOPERS

Buffalo LOI with Airloom provides an 8 year exclusivity in Alberta for the Airloom system

Buffalo - Airloom LOI covers the installation of 25MW in Alberta

Industry leading partners are signing LOI's for larger utility scale projects



Airloom is securing industry leading partnerships to expand installations across North America

Buffalo is at the forefront of these partnerships with an LOI in place for a minimum of 25MW of capacity and planning 75MW in total

Other Airloom partners:

Next Era: Largest North American wind developer including 119 wind projects including an 82MW wind project in neighbouring Kneehill County in Alberta

Invenergy: Global renewable energy project developer and operator with 117 wind projects developed, under development, and contracted with 18.6GW of wind developed since 2004

Apex: 2015MW under management across the US; supply agreements with Starbucks, Ikea, US Army, Walmart, Samsung, and others

Source: Airloom Presentation January 2024

ALBERTA ELECTRICITY MARKET

\$134

Average price per MWh in Alberta for 2023

\$120

Assumed long term price in Buffalo Infrastructure Financial Model escalated at 5%/year



Supply constrained by coal fired closures, rising carbon taxes, regulatory uncertainty for natural gas generation and growing demand

In 2015 the Government of Alberta announced the elimination of emissions from coal power generation by 2030. Alberta is rapidly reducing emissions and targeting a carbon-neutral grid by 2050. Electricity emissions have declined by 53% since 2005 and the province will have phased-out all coal generation by early 2024.

<https://www.alberta.ca/climate-coal-electricity#:~:text=In%202015%20the%20Government%20of,coal%20generation%20by%20early%202024.>

Alberta's large emitters currently pay \$50 per tonne of CO2 emissions. The carbon tax will increase to \$65/tonne in 2023, rising by \$15 each year until it reaches \$170/tonne in 2030.

<https://financialpost.com/commodities/energy/alberta-carbon-tax-triple-federal-emissions-pricing-schedule#:~:text=Alberta's%20large%20emitters%20currently%20pay,reaches%20%24170%2Ftonne%20in%202030.>

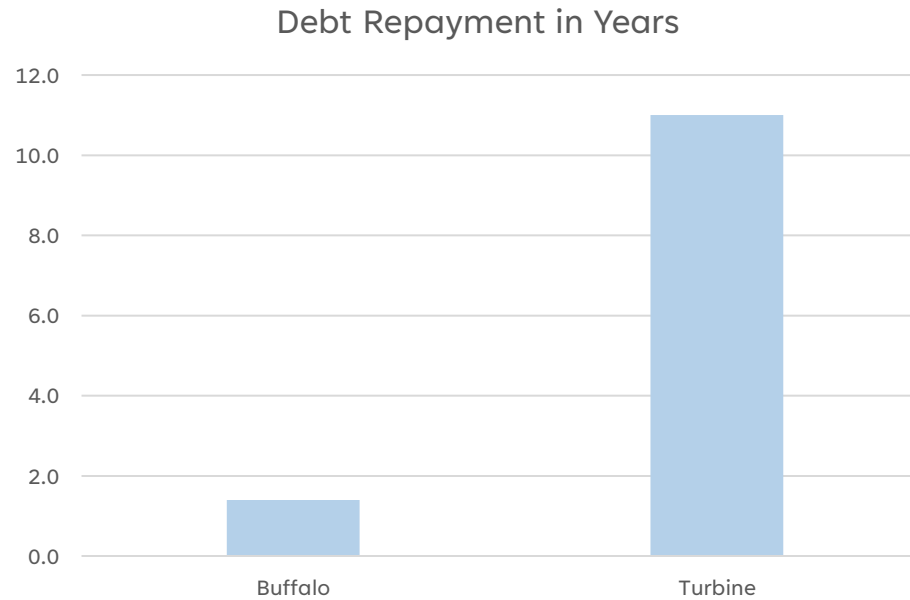
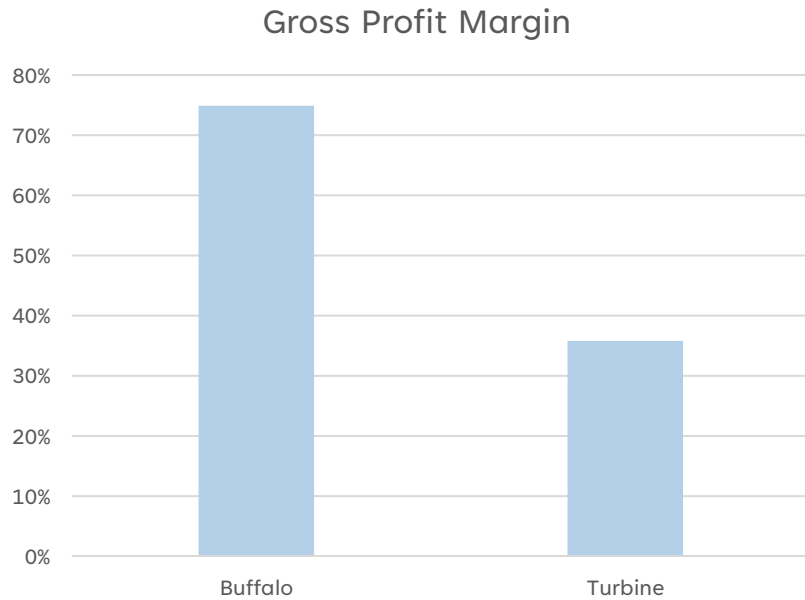
Experts estimate that by 2050 Canada will require an increase in supply between 62 per cent and 210 per cent.

<https://calgaryherald.com/opinion/columnists/opinion-albertas-electricity-sector-faces-unique-combination-of-challenges>

BUFFALO AIRLOOM VERSUS VESTAS WIND TURBINE

75% vs 36%: Buffalo gross profit margin versus Vestas 4.3MW wind turbine

1.3 vs 11: Debt repayment in years versus Vestas 4.3MW wind turbine



Oyen Alberta Wind Project Comparison*		
Interest	7%	
Debt Financing	75%	
Price/MWh \$	120.00	
Capacity Factor	30%	
4.3MW Installation	Buffalo	Turbine
Capital Cost \$	1,720	\$ 10,020
Debt \$	1,290	\$ 7,515
Equity \$	430	\$ 2,505
Revenue \$	1,337	\$ 1,337
Operating Expenses \$	45	\$ 133
G&A \$	200	\$ 200
Interest \$	90	\$ 526
Gross Profit \$	1,002	\$ 478

*Comparison to the Lanfine wind project that finished completion in 2023 at Oyen Alberta

\$134: Alberta Average Power Price per MWh in 2023



PROJECT DEVELOPMENT ROADMAP

1. Screening: The first step is to screen potential sites for energy development. This includes assessing the resource distribution, access, long term utilization, evaluating costs and revenues, and identifying potential risks and challenges.
2. Feasibility: Once a site has been identified, a feasibility study is conducted to determine the technical and economic viability. This includes many input factors to determine if a site is suitable for investment above a threshold return.
3. Development: If the feasibility study is positive including ensuring the project meets expected economic hurdles, then next steps include securing land leases, obtaining permits and approvals, conducting environmental studies, and designing the project.
4. Contract Execution: After the project has been developed, the next step is to execute contracts with suppliers, contractors, and customers. This includes negotiating power purchase agreements, equipment supply agreements, and construction contracts.
5. Project Delivery: Once the contracts are in place, project construction can commence. This involves building access roads, installing equipment, constructing electrical infrastructure, and commissioning the project
6. Project Operation: After the project is commissioned, it enters the operation phase. This involves ongoing maintenance and monitoring of the project to ensure it operates safely, environmentally responsibly and efficiently

Due to the low capital cost nature of the development Buffalo Infrastructure can self fund growth to scale up generation without being subject to debt and capital markets and/or buyback shares from investors.

IDENTIFIED SITES: 75MW OF GENERATION IN ALBERTA



Agricultural land & facility: 150 acre site to build a utility scale facility of 50MW capacity with 2.5MW on PPA Grid connected to 240kV transmission line with 466MW of capacity, tie-in across the road, 150MW wind farm borders to the south and west, 300MW wind farm to the north



Agricultural Production facility: 2.5MW PPA
19 acre site, 5MW capacity grid connection
Operating wind farms are located to the west, south, and north



Agricultural land: 20MW utility scale
50 acre site, irrigation demand, grid connected to 144kV transmission line with 100MW capacity



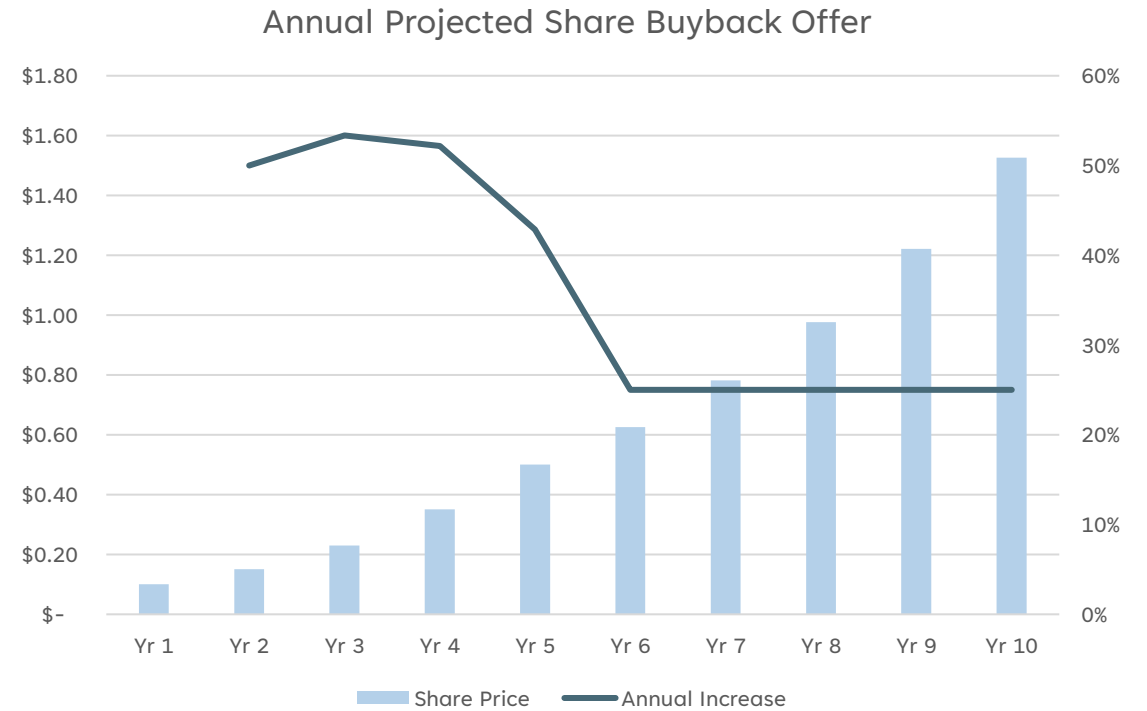
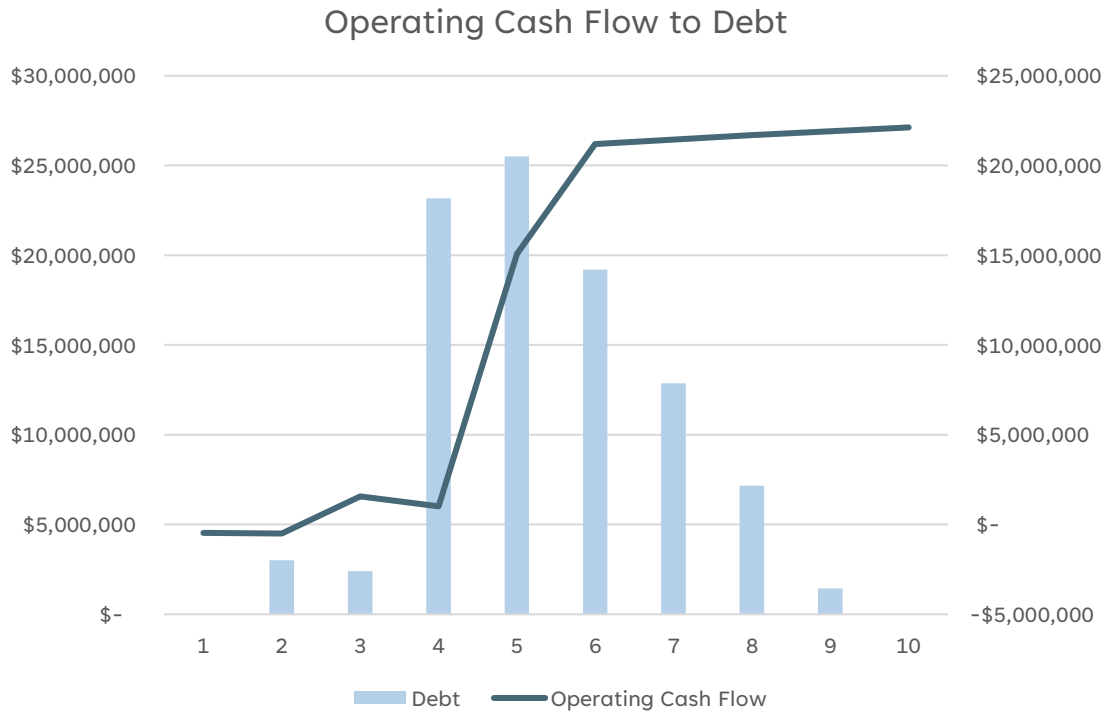
Oil battery: 2.5MW PPA
4 acre site, 5MW capacity grid connection

SHAREHOLDER YIELD BUSINESS MODEL

Consistent Share Price Appreciation with enhanced returns in the initial 4 years

Buffalo Infrastructure will buy back shares at rising levels using 20% of cash flow

Shareholder Yield Definition: how much money shareholders receive from a company that is in the form of cash dividends, net stock repurchases, and debt reduction.



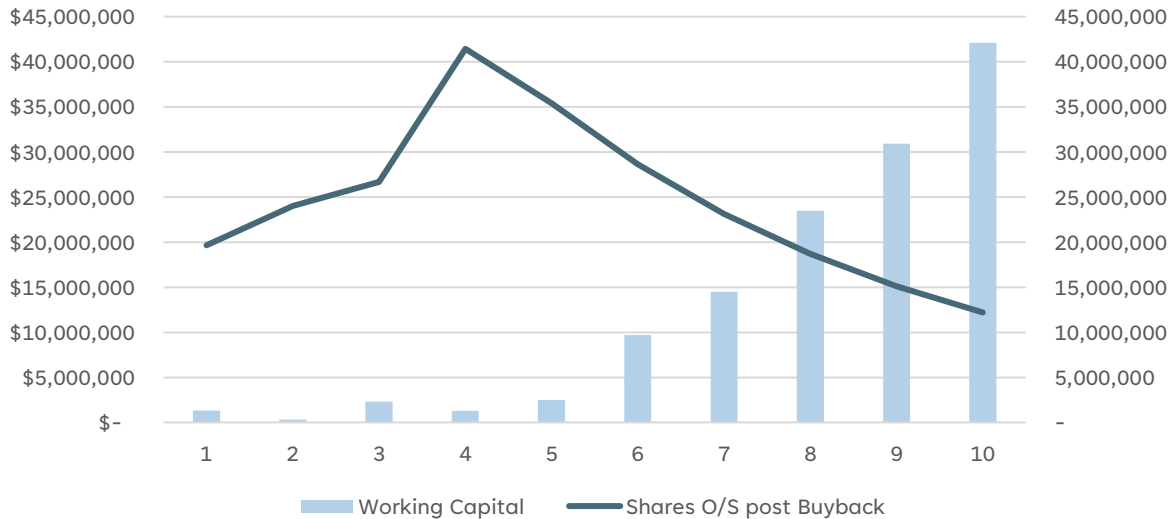
\$134: Alberta Average Power Price per MWH in 2023

SHAREHOLDER YIELD BUSINESS MODEL

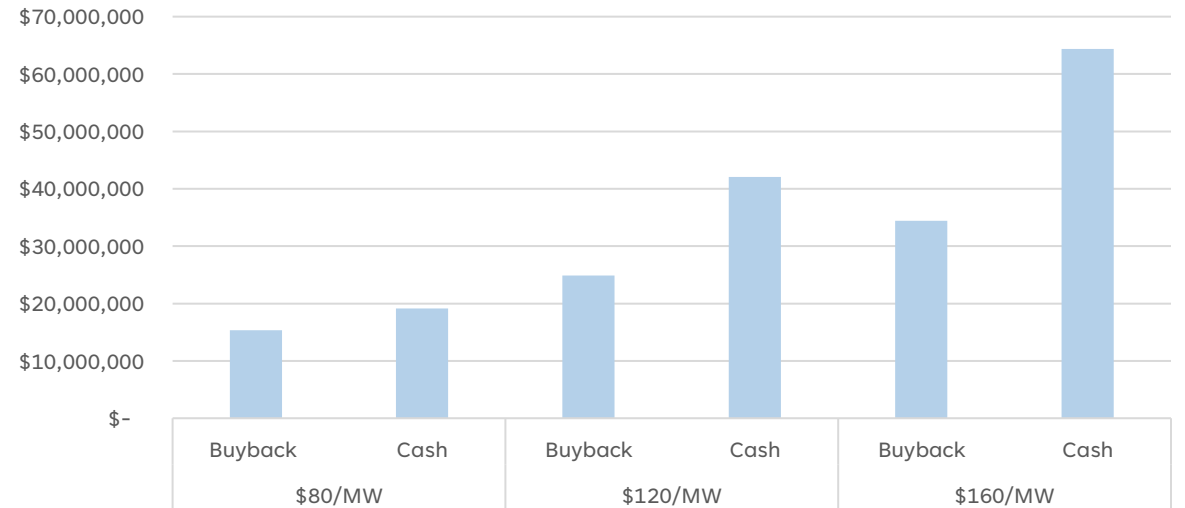
Rising Cash Flows fund larger buybacks at higher prices enhancing shareholder returns and providing liquidity for investors

Buybacks start in Year 3

Shares Outstanding & Working Capital



10 Yr Cumulative Shareholder Yield Sensitivity to P/MW



Equity Capital of \$10.24mm raised

\$3.44/share in cash in Yr 10 if full buyback offer is tendered to each year

Over a 10 year period, the cumulative combined cash plus buyback is:

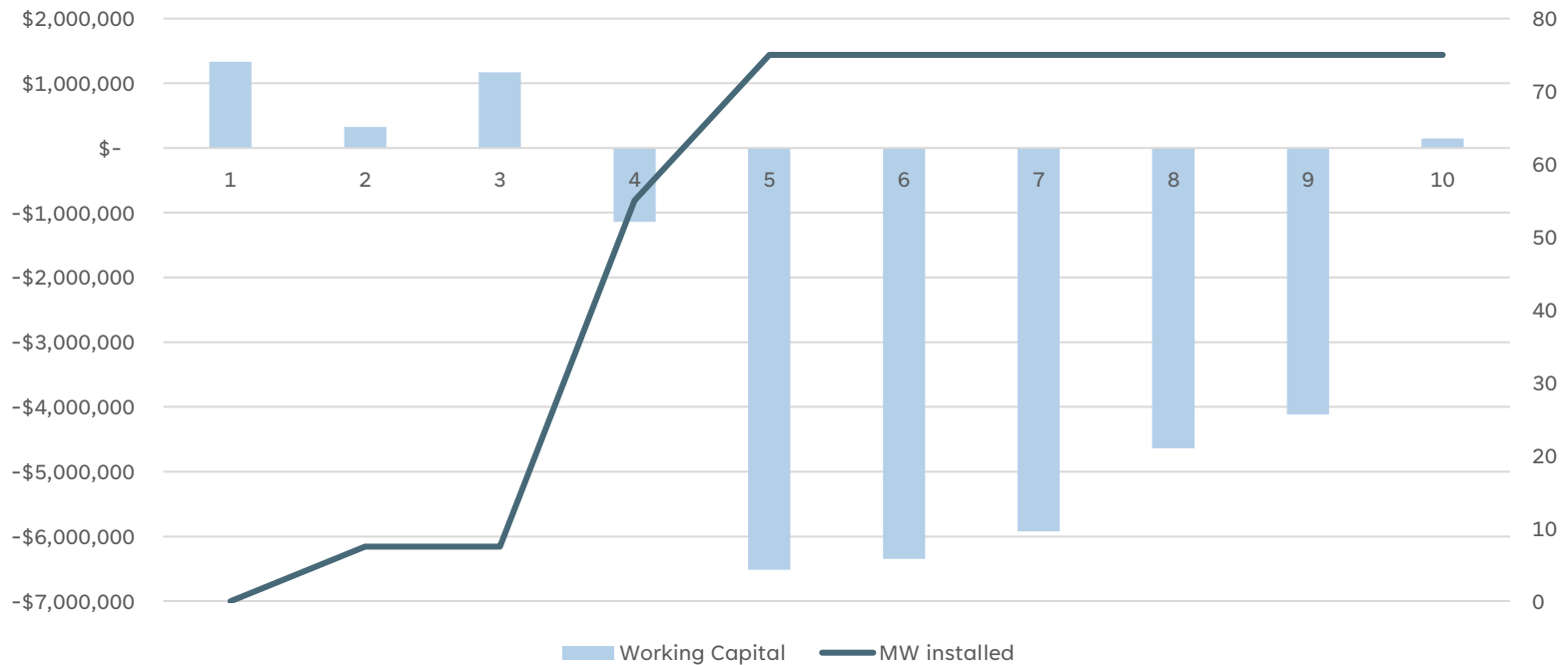
\$80/MWh: \$34.5mm

\$120/MWh: \$67mm

\$160/MWh: \$98mm

CASH FLOW BREAKEVEN AND NET CAPACITY

\$48/MWh Working Capital at 75MWh Capacity



No carbon credits or government grants assumed. Receiving any would enhance cash flow and reduce break even

- 75MWh of capacity in operation
- Cash Flow break even at \$22/MWh
- Net cash positive and all debt repaid at \$48/MWh at 8% interest, 5 yr amortization
- 30% of installed capacity assumed versus AESO at 35%

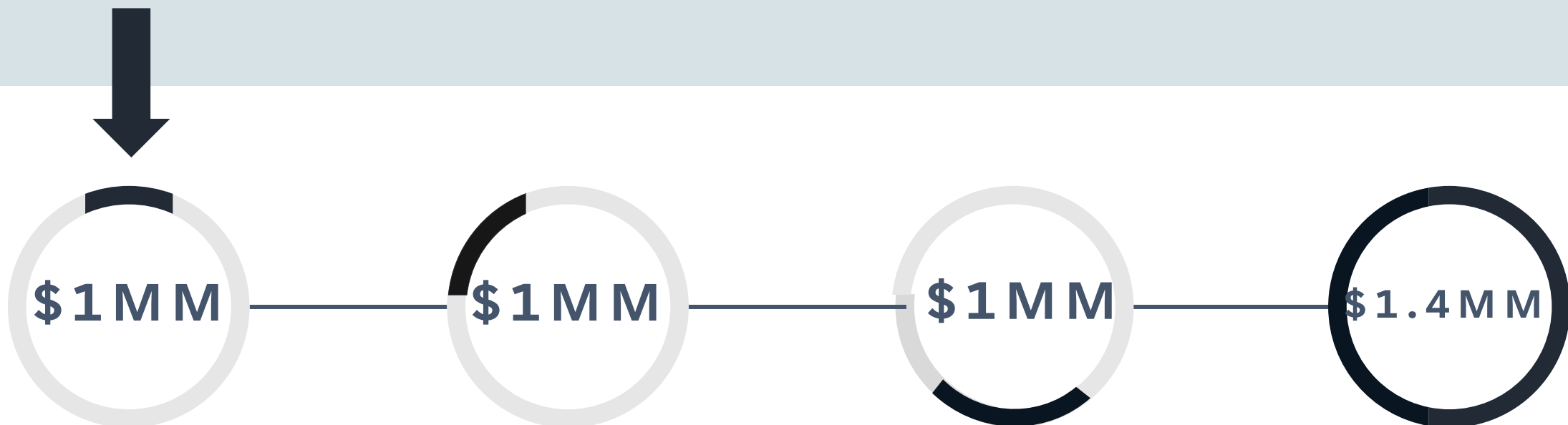
10 YEAR FINANCIAL MODEL

Cash Flow	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
Revenue	\$ -	\$ -	\$ 2,449,440	\$ 2,449,440	\$ 17,962,560	\$ 24,494,400	\$ 24,494,400	\$ 24,494,400	\$ 24,494,400	\$ 24,494,400
Debt		\$ 3,000,000		\$ 21,375,000	\$ 7,200,000					
Equity	\$ 2,000,000	\$ 1,000,500	\$ 1,360,000	\$ 5,880,000						
Total Revenue/Capital	\$ 2,000,000	\$ 4,000,500	\$ 3,809,440	\$ 29,704,440	\$ 25,162,560	\$ 24,494,400	\$ 24,494,400	\$ 24,494,400	\$ 24,494,400	\$ 24,494,400
Annual Expenses										
CAPEX	\$ 200,000	\$ 4,500,000	\$ -	\$ 28,500,000	\$ 12,000,000	\$ -	\$ -	\$ -	\$ -	\$ -
Operating	\$ -	\$ 115,000	\$ 230,000	\$ 460,000	\$ 690,000	\$ 920,000	\$ 1,150,000	\$ 1,380,000	\$ 1,610,000	\$ 1,840,000
Financing	\$ 160,000	\$ 80,040	\$ 108,800	\$ 470,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest			\$ 240,000	\$ 192,000	\$ 1,854,000	\$ 2,040,000	\$ 1,534,800	\$ 1,029,600	\$ 572,400	\$ 115,200
Principal Repayment			\$ 600,000	\$ 600,000	\$ 4,875,000	\$ 6,315,000	\$ 6,315,000	\$ 5,715,000	\$ 5,715,000	\$ 1,440,000
G&A	\$ 310,000	\$ 313,000	\$ 316,000	\$ 322,000	\$ 338,100	\$ 355,005	\$ 372,755	\$ 391,393	\$ 410,963	\$ 431,511
Operating Cash Flow	-\$ 470,000	-\$ 508,040	\$ 1,554,640	\$ 1,005,040	\$ 15,080,460	\$ 21,179,395	\$ 21,436,845	\$ 21,693,407	\$ 21,901,037	\$ 22,107,689
Depreciation & Flow Through	-\$ 1,000,000	-\$ 950,500	\$ 174,500	\$ 1,175,000	\$ 8,300,000	\$ 11,250,000	\$ 10,125,000	\$ 10,125,000	\$ 3,000,000	\$ -
Tax Loss/Gain Balance	-\$ 1,470,000	-\$ 2,928,540	-\$ 1,548,400	-\$ 1,718,360	\$ 5,062,100	\$ 14,991,495	\$ 26,303,340	\$ 11,568,407	\$ 18,901,037	\$ 22,107,689
Tax (23%)	\$ -	\$ -	\$ -	\$ -	\$ 1,164,283	\$ 3,448,044	\$ 6,049,768	\$ 2,660,734	\$ 4,347,239	\$ 5,084,769
Share Buyback			\$ 310,928	\$ 201,008	\$ 3,016,092	\$ 4,235,879	\$ 4,287,369	\$ 4,338,681	\$ 4,380,207	\$ 4,421,538
Working Capital	\$ 1,330,000	\$ 322,460	\$ 2,326,172	\$ 1,285,204	\$ 2,510,289	\$ 9,690,761	\$ 14,475,469	\$ 23,454,461	\$ 30,913,052	\$ 42,074,435
Per share pre-tax income	-\$ 0.02	-\$ 0.03	\$ 0.06	\$ 0.02	\$ 0.43	\$ 0.74	\$ 0.93	\$ 1.16	\$ 1.45	\$ 1.81
After-Tax Income	-\$ 470,000	-\$ 508,040	\$ 1,794,640	\$ 1,197,040	\$ 15,770,177	\$ 19,771,351	\$ 16,921,877	\$ 20,062,273	\$ 18,126,199	\$ 17,138,121
Debt	\$ -	\$ 3,000,000	\$ 2,400,000	\$ 23,175,000	\$ 25,500,000	\$ 19,185,000	\$ 12,870,000	\$ 7,155,000	\$ 1,440,000	\$ -
Shares O/S Pre-buyback	19,666,667	24,016,667	28,016,667	42,016,667	41,442,358	35,410,174	28,632,768	23,144,936	18,702,126	15,113,860
Share Buyback Offer	\$ 0.10	\$ 0.15	\$ 0.23	\$ 0.35	\$ 0.50	\$ 0.63	\$ 0.78	\$ 0.98	\$ 1.22	\$ 1.53
Shares Repurchased			1,351,861	574,309	6,032,184	6,777,406	5,487,832	4,442,810	3,588,266	2,897,699
Shares O/S post Buyback	19,666,667	24,016,667	26,664,806	41,442,358	35,410,174	28,632,768	23,144,936	18,702,126	15,113,860	12,216,161
% of shares bought back				1%	15%	19%	19%	19%	19%	19%
Post Tax Income per share	-\$ 0.02	-\$ 0.02	\$ 0.07	\$ 0.03	\$ 0.45	\$ 0.69	\$ 0.73	\$ 1.07	\$ 1.20	\$ 1.40
MW installed	0	7.5	7.5	55	75	75	75	75	75	75

Key Assumptions:

- \$120/MWh + 5% annual escalation
- 20% of cash flow used for share buybacks
- 25% annual share price escalator from Year 5
- \$0.6mm/MWh installed and tied in
- 5 year debt amortization
- No carbon credits are assumed but would be a catalyst to cash flow
- No government grants are assumed but would reduce equity requirement

FINANCING PLAN



SEED CAPITAL

2024: \$0.10 common equity share

FLOW THROUGH

2024: \$0.15/share
100% CRCE deduction

FLOW THROUGH

2025: \$0.23/share
100% CRCE deduction

FLOW THROUGH

2026: \$0.34/share
100% CRCE deduction

Equity raise could be reduced by up to \$2 million depending on receipt of government grants being applied for

USE OF PROCEEDS

	Feb-24	Q2-24
Equity Financing Proceeds	\$ 1,000,000	
Flow Through Proceeds		\$ 1,000,000
Professional Fees	-\$ 50,000	-\$ 50,000
Commissions	-\$ 80,000	-\$ 80,000
Feasibility Study, Construction, G&A	-\$ 120,000	-\$ 1,140,000
Ending Working Capital	\$ 750,000	\$ 480,000

Financing Proceeds of \$1 million @ \$0.10/share in Q1 2024

Financing Proceeds of \$1 million @ \$0.15/share in Q2 2024

Professional fees includes legal, (Carscallen LLP), and accounting, (MNP), expenses

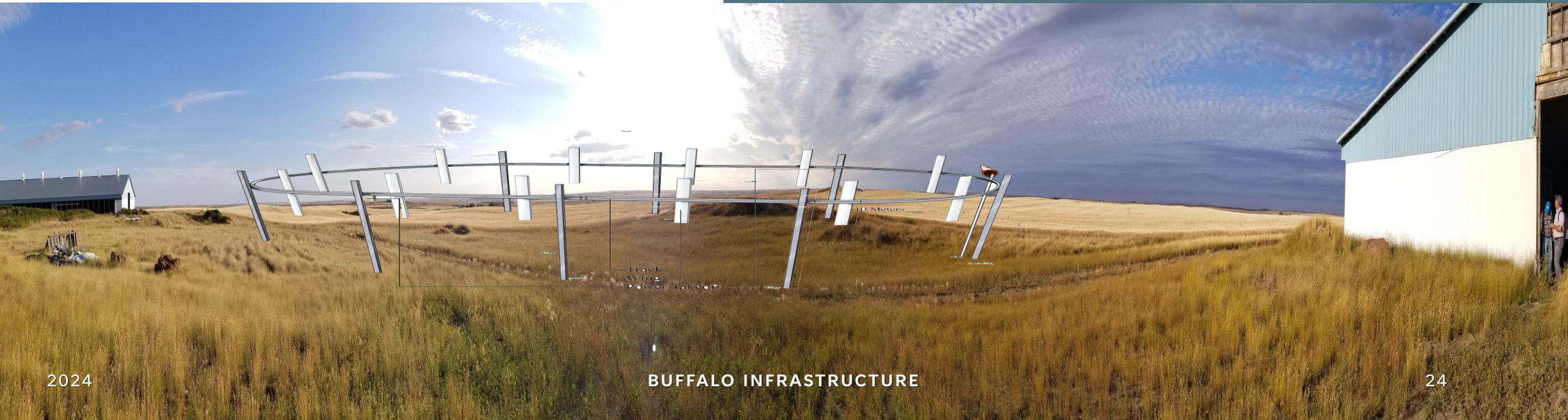
Commissions for equity sales

A \$1 million 2.5MW development can be funded from the Flow Through offering and generate \$550,000/year in net operating income, (NOI), and achieve payback within 2 years



SUMMARY

“Innovate to enhance cash flow” is Buffalo Infrastructure’s operating philosophy that is based on maximizing cash flow with reduced capital costs on an accelerated timeline. Innovation is key to sustainable power production that is economically viable and maximizes the value of marginal land.





THANK YOU

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