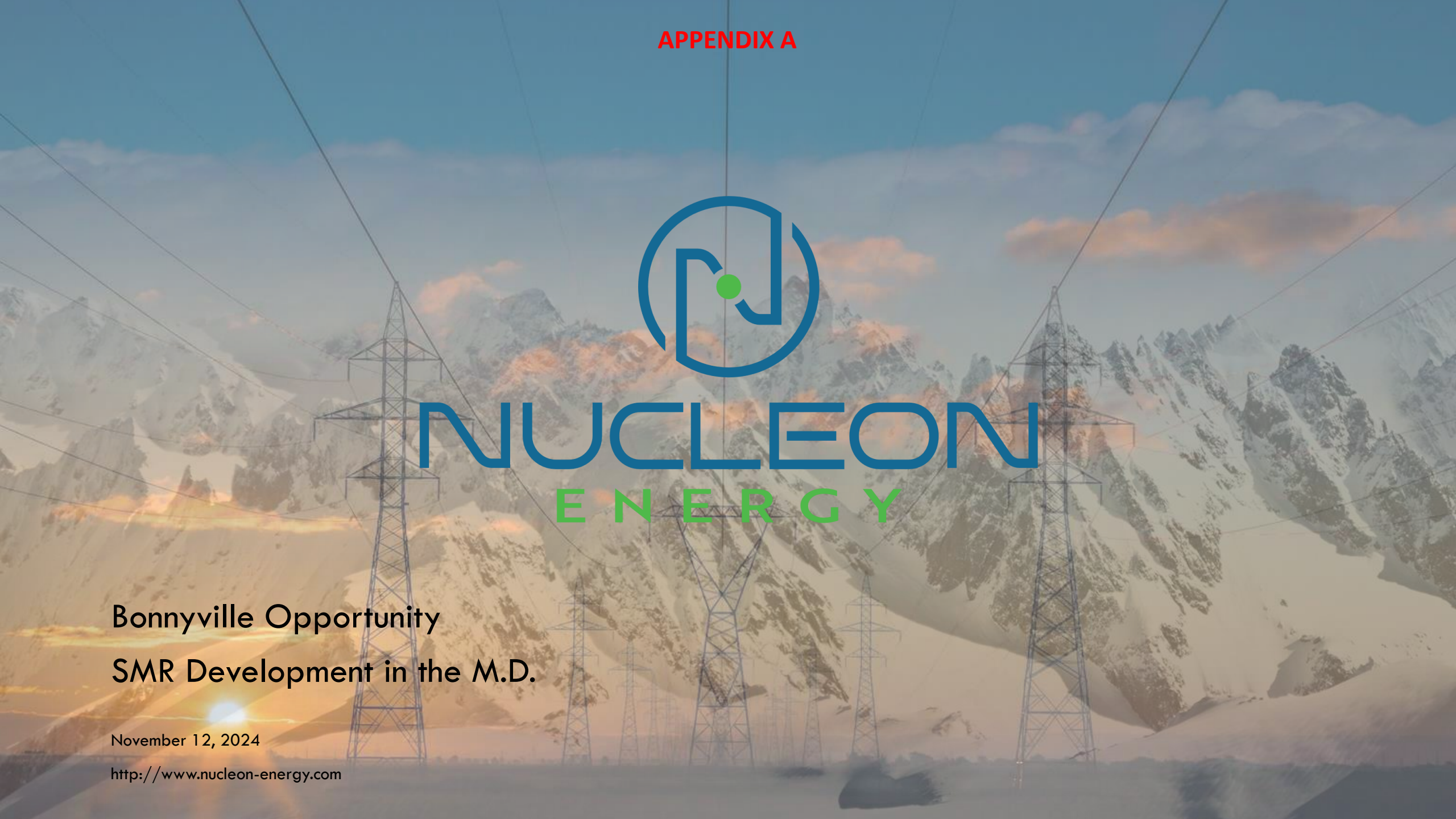
APPENDIX A



NUCLEON ENERGY

Bonnyville Opportunity

SMR Development in the M.D.

November 12, 2024

http://www.nucleon-energy.com

Introduction

Nucleon Leadership Team – Industry Experience

Founders

Dustin Wilkes

Andrew Keeping

Will Bridge

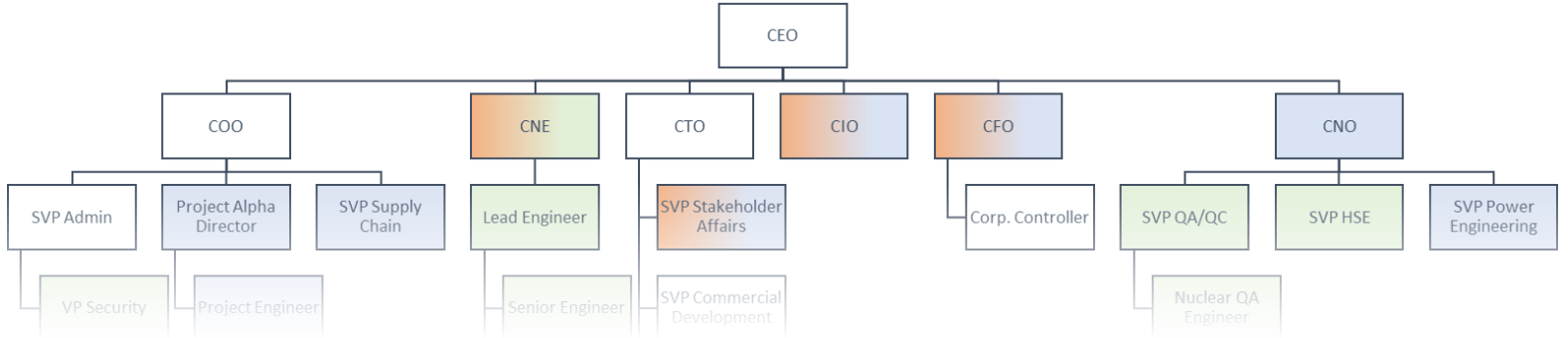
Ryan Tourigny

Broad coverage of energy project siting, development, construction, operations, and financing

Expert Advisors

- Nuclear Technologies: **Christopher Deir (CNO Portland Holdings / former OPG DNNP)**
- Corporate Policy / QA&QC: **Cathy Clavel (Chair CSA N286)**
- Environment/Engineering: **Dr. Robert Ion (Sr. Engineer Nuclear Technology Engineering)**
- Nuclear Licensing/Regulatory: **Robin Manley (Former SVP Regulatory OPG DNNP)**
- Nuclear Commercialization & Operations: **Duncan Hawthorne (Former CEO Bruce Power)**

Management Team



Nucleon's Expanded Team – Management & Advisors

Founders & Management (10 Alberta leaders)

Experience: Power Development; First Nations Partnerships; Provincial & Federal Regulatory processes; Transmission Systems; Construction; Engineering; Technology Development; Cybersecurity; and Finance

PLUS

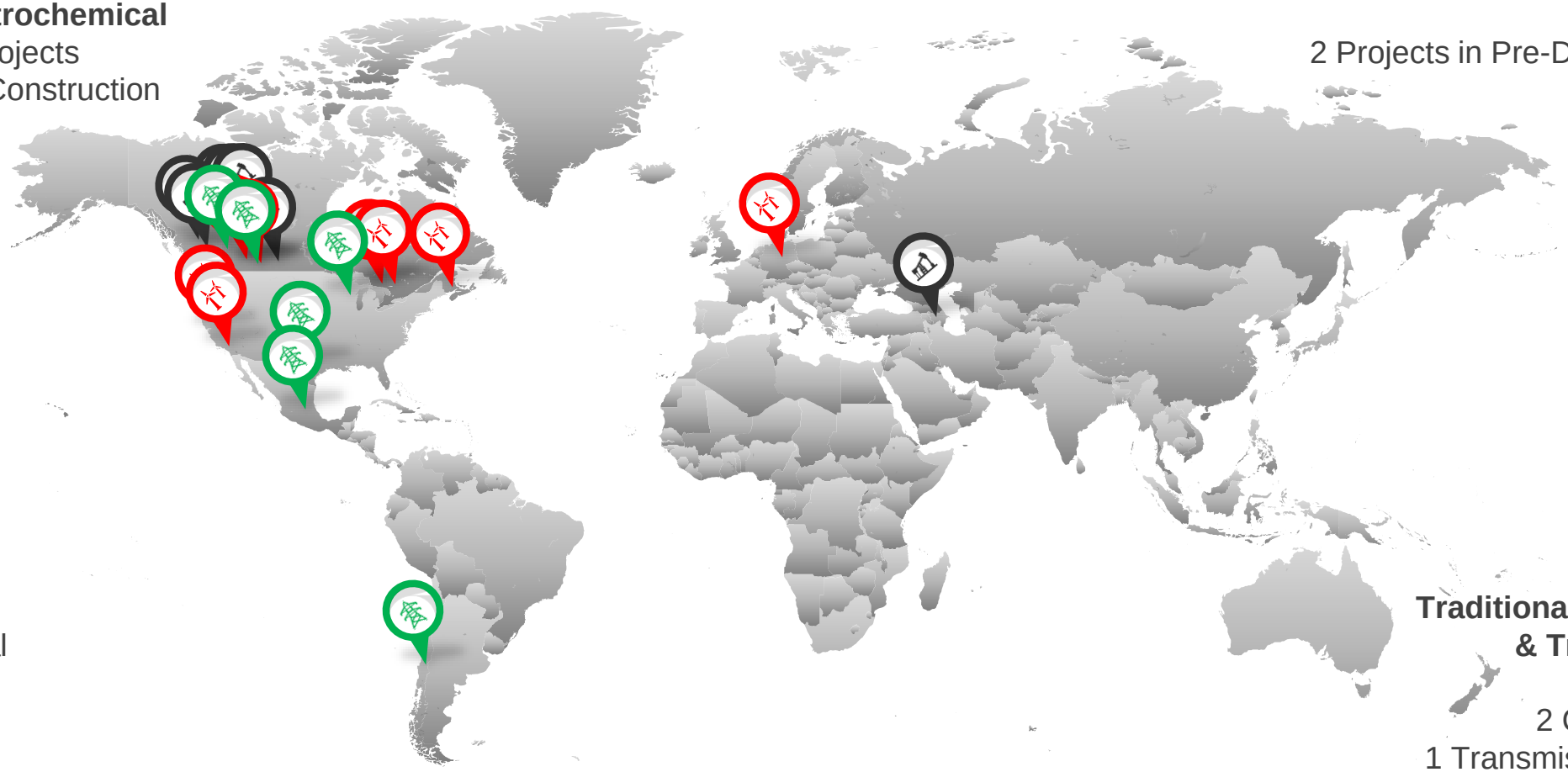
Key Industry Partners and Advisors

Engineering & Environment	Nuclear (Regulations & Standards)	Siting & Public Communications
• Hatch Engineering • Matrix Environmental • Power Team Engineering • Yellowbike Environmental	• C. Deir (OPG, CNO) • D. Hawthorne (CEO, Bruce Power) • R. Manley (OPG, CNSC) • A. Wagland (CNSC, CSA) • Dr. Robert Ion (IAAC) • E. Clavel (CSA N286)	Birch Hills County, AB Smoky River M.D., AB Bonnyville M.D., AB (Land Option) Crestview Strategy VizworX Inc. N. Alexander (Nuclear Expert)

Nucleon's Founders - Energy Development & Construction Experience

Oil, Gas, Petrochemical
>15 Major Projects
Design and Construction

Nuclear
2 Projects in Pre-Development



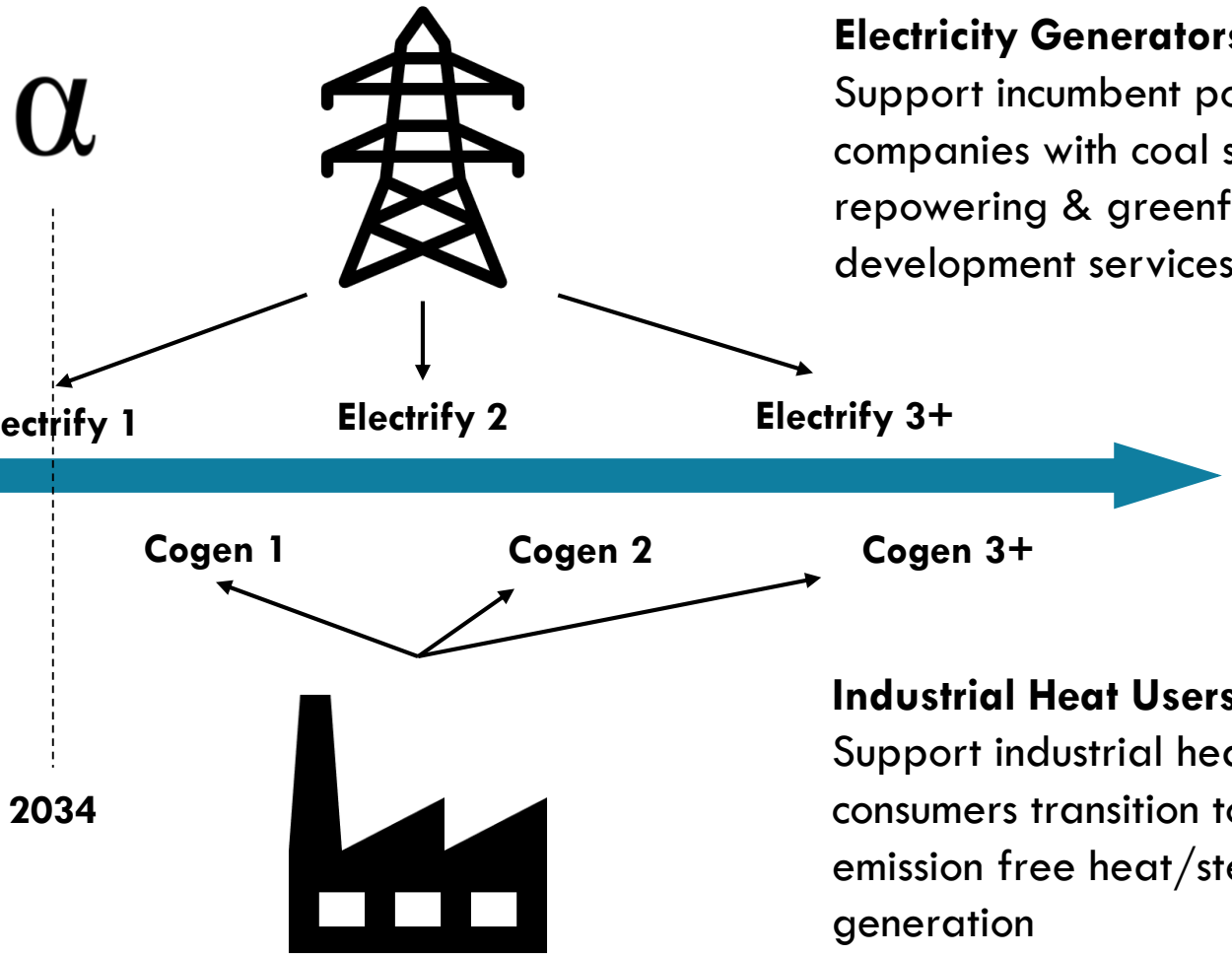
Renewables
3 Geothermal
2 Battery
5 Solar
9 Wind
1 Pumped Hydro
Development, Operations & Financing

Traditional Generation & Transmission
1 Coal
2 Cogeneration
1 Transmission System

Nucleon's Business Model

Nucleon Provides Licensing, Development and Operations services to Power Companies and Industrial Heat Consumers
[Neutral / Independent Operator]

Nucleon is **Technology and Asset Ownership Agnostic**



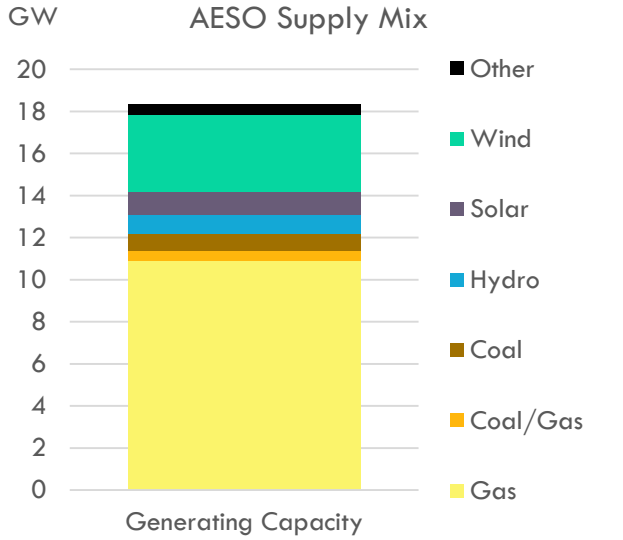
Electricity Generators
Support incumbent power companies with coal site repowering & greenfield development services

Industrial Heat Users
Support industrial heat consumers transition to emission free heat/steam generation

Alberta Power Market Need

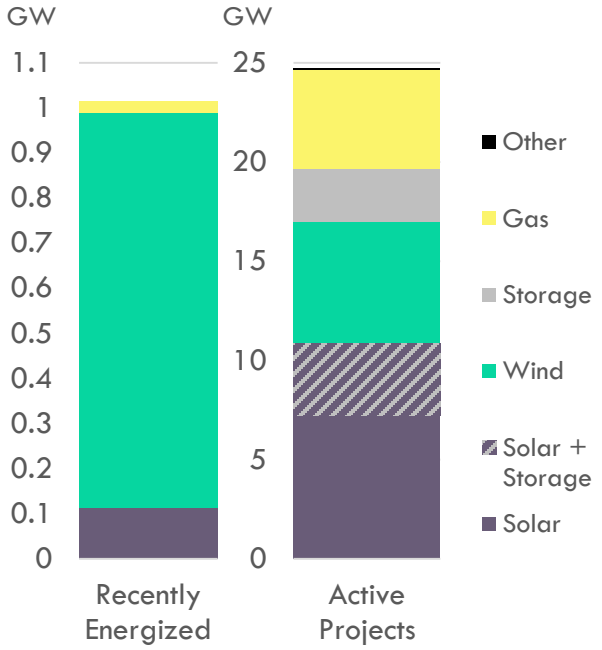
Alberta needs SMR to affordably decarbonize baseload electricity supply

Gas-dominated supply mix with significant renewable capacity



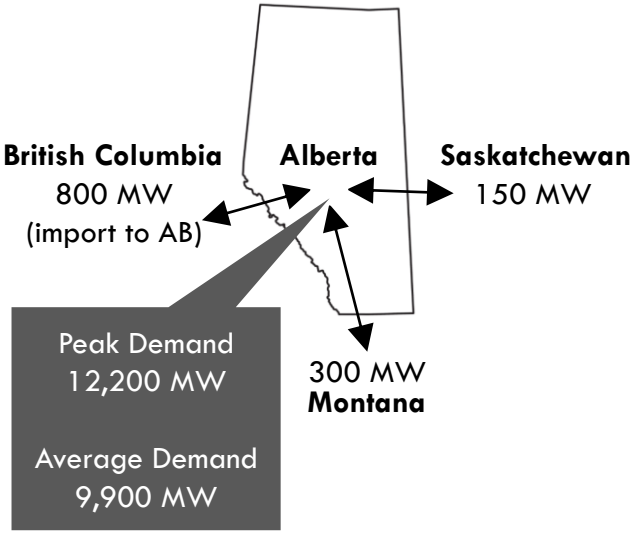
- Gas firing has replaced coal
- Last coal-fired station (Genesee) converts by 2024
- Significant supply from intermittent wind and solar

More renewables coming but new gas development is uncertain



- Future gas development likely required to include carbon capture, doubling costs

Interconnections are small relative to demand: not the solution



- Imports cannot service more than 10% of peak demand, new lines are difficult to develop

"Resource adequacy may be challenging beyond 2035 under all high variable generation penetration scenarios analyzed..." Alberta Electric System Operator – August 2023

Source: AESO as of January 2023, Capital Power investor reports

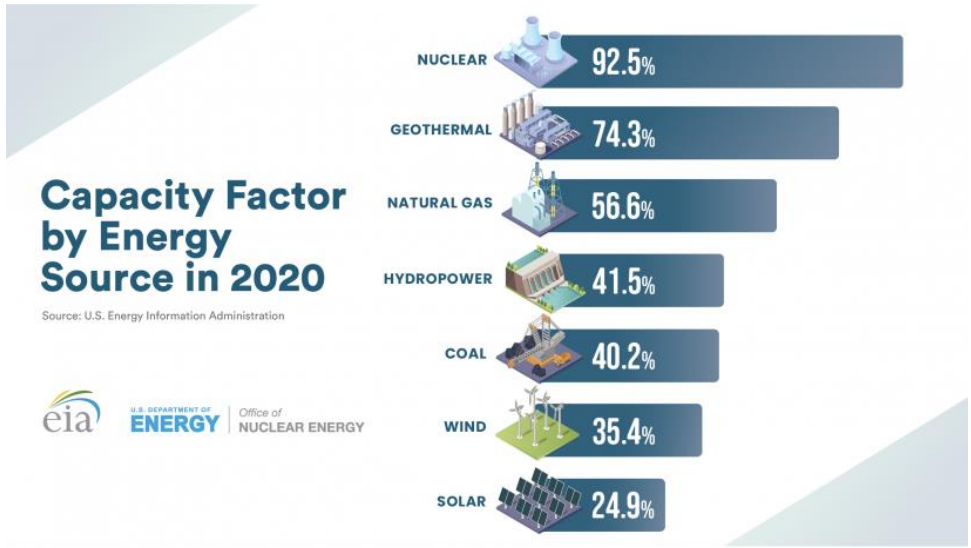
Power Market Dynamics

Alberta Power market transitioning to net-zero

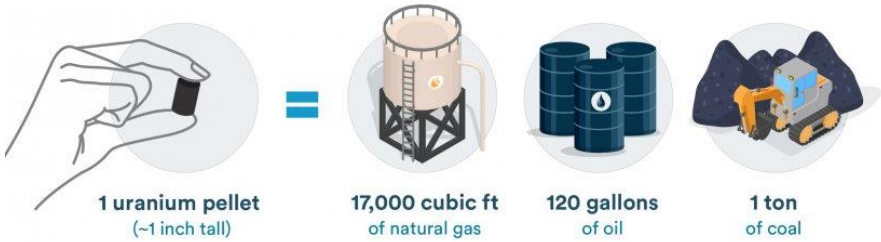
Alberta will need to transition electricity generation from a 70% dependency on fossil fuel emitting resources to reliable non-emitting sources

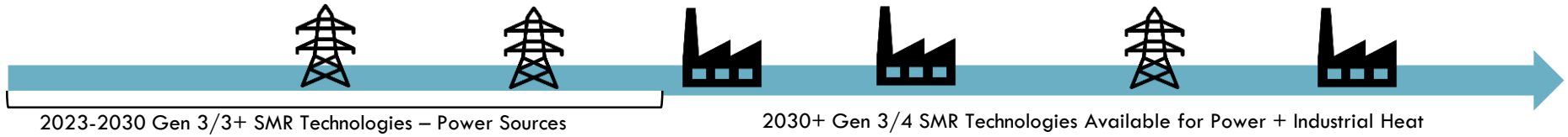
Competing technologies include:

- Renewables combined with long-duration storage
- Natural Gas-fired Generation with CCS
- Hydrogen-fired Generation; and
- Nuclear Power



Energy Favours Density



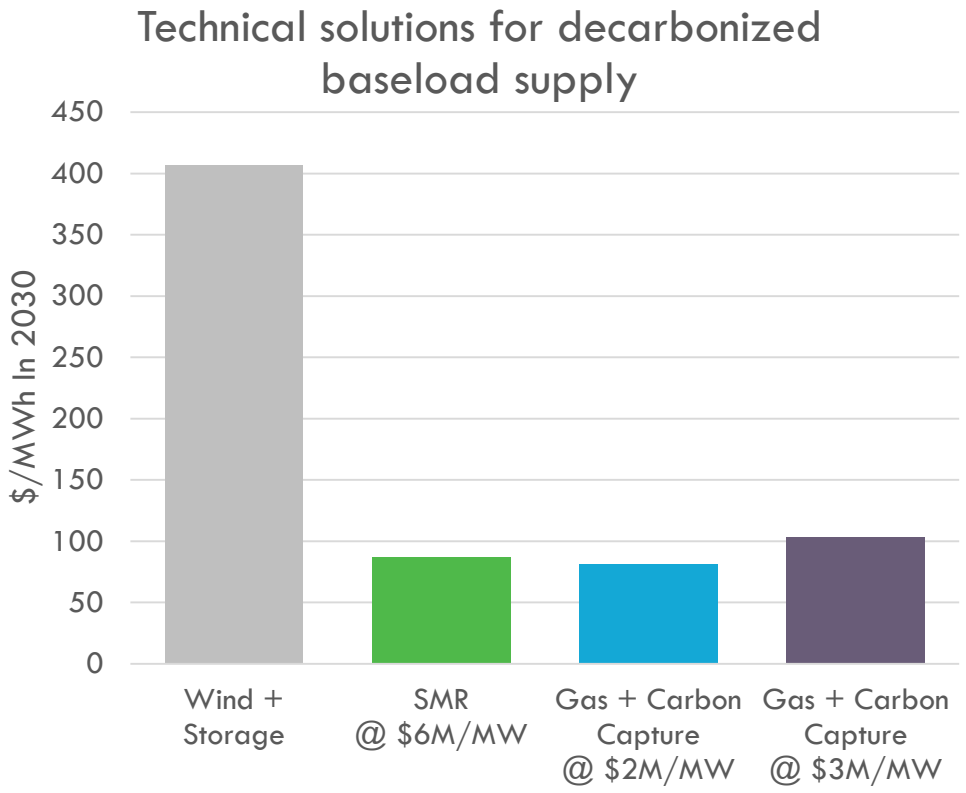


Source: US Department of Energy, Nuclear Energy www.energy.gov/ne

The cost of new sources of power generation (long term)

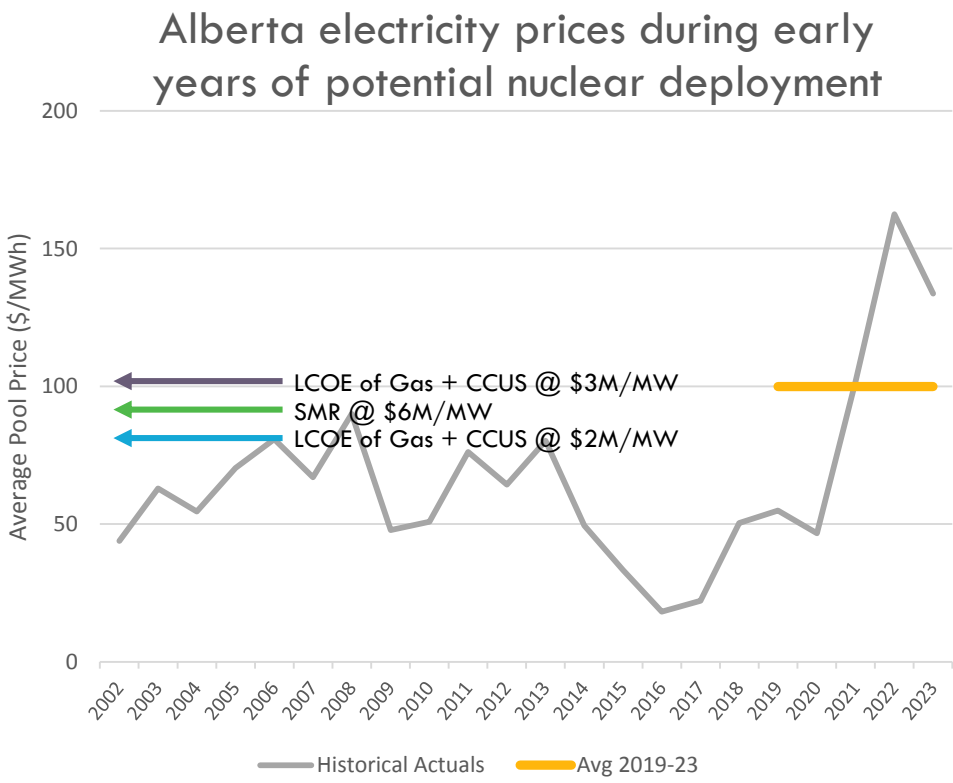
Fossil Fuels are Challenged; Renewables are intermittent; and SMRs are now emerging commercially

Fully-firming intermittent renewables with energy storage is cost prohibitive. Baseload electricity requirements will be serviced by a mix of gas with carbon capture and nuclear.



Market prices expected to support entry of decarbonized baseload in 2030s

With policy putting a price on carbon emissions or even requiring physical sequestration of carbon, the effect on existing electricity supply and future demand (e.g. EV adoption) should produce the price outcomes necessary for entry of nuclear and CCUS.



Sources: LCOE (Levelized Cost of Energy; Nucleon analysis)

Overview and Economics of Small Modular Reactors

SMR's are different than GW Scale Reactors – important distinction

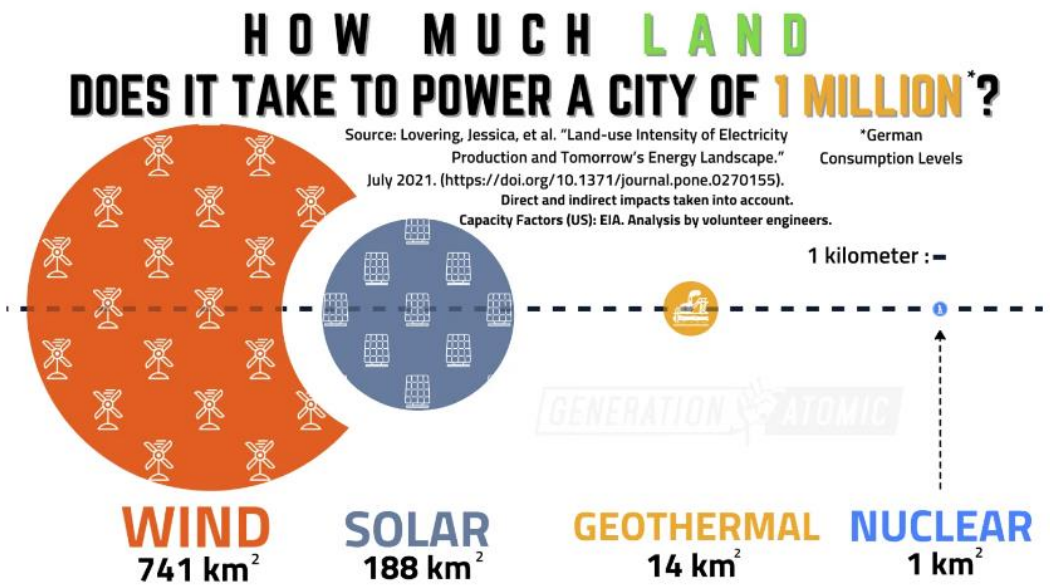
1000MW+ Reactors

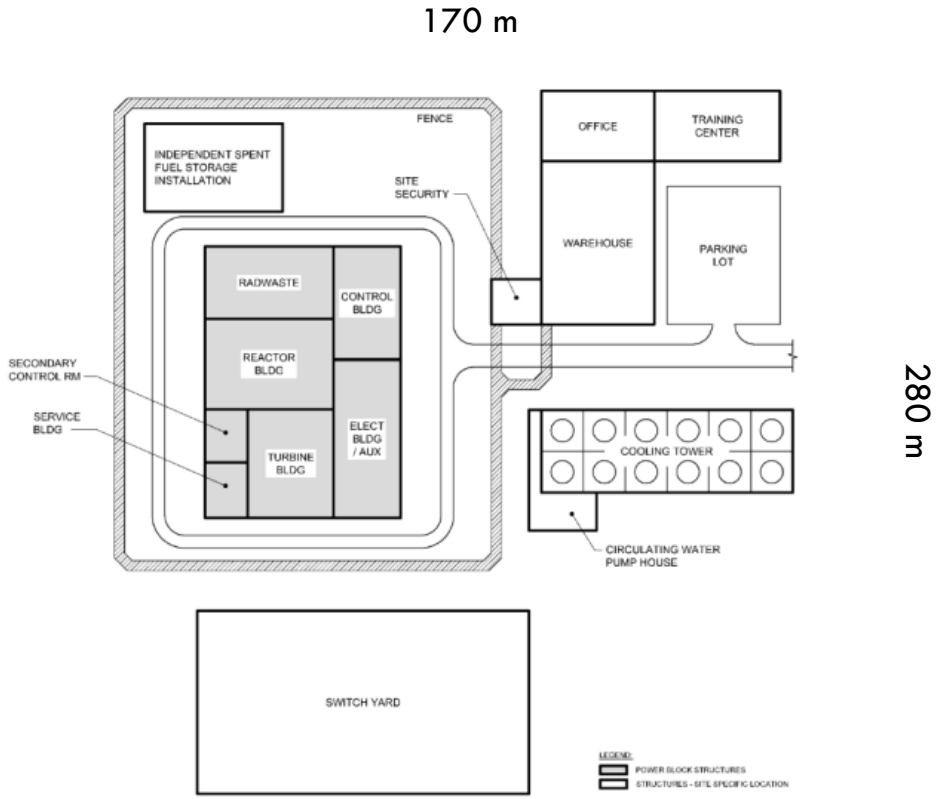
SMRs – 200MW-300MW

Left: Hinkley Point C – EPR-1750 Reactor;

Right: GEH BWRX-300

Typical Layout





300 MW SMR ~ 11-20 Acres

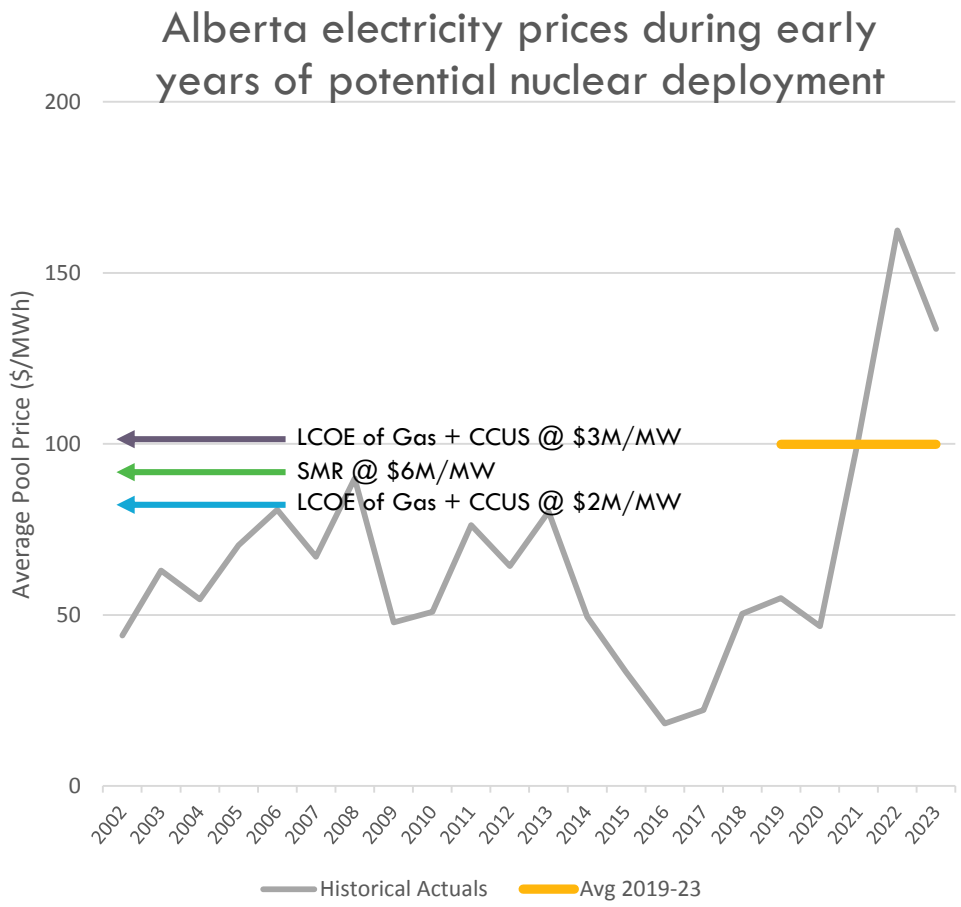
Costco Footprint ~20 Acres

Is SMR Power economic? – Yes

Cost of Electricity from 300MW SMRs

- The average power price in Alberta going back to the very beginning – 1996 – has averaged about $65/MWh.
- The cost of power from an SMR with $6M/MW capital costs is about $85/MWh when contracted. (60-year life is valuable) *
- SMRs don't have to trigger new Transmission System Build which is a benefit to consumer power costs which is not considered in the numbers above.
- Note: SMR Technology Developers are promoting cost projections lower than $85/MWh in their marketing materials. (for nth of a kind deployment) – may or may not be real.

Market forecast (2023) vs SMR at $6M/MW



- At the Alberta Utility Commission's current approvals for Equity Return and Debt, $6M/MW equates to $85/MWh escalating at 2% from 2024
- Escalation used to normalize SMR asset life at 60 years+ compared with ~30 years for thermal generation

Federally Qualified Operator Unique Licensing

Eastern Dominated Ecosystem Today

Nuclear power industry

Reactors operating in Canada

Reactor Name	Model	Reactor Type	Net Capacity (MWe)	Construction Start	First Grid Connection
Bruce 1	CANDU 791	PHWR	732	1971-06-01	1977-01-14
Bruce 2	CANDU 791	PHWR	732	1970-12-01	1976-09-04
Bruce 3	CANDU 750A	PHWR	750	1972-07-01	1977-12-12
Bruce 4	CANDU 750A	PHWR	750	1972-09-01	1978-12-21
Bruce 5	CANDU 750B	PHWR	822	1978-05-31	1984-12-02
Bruce 6	CANDU 750B	PHWR	822	1978-01-01	1984-06-26
Bruce 7	CANDU 750B	PHWR	822	1979-05-01	1986-02-22
Bruce 8	CANDU 750B	PHWR	795	1979-07-30	1987-03-09
Darlington 1	CANDU 850	PHWR	881	1982-04-01	1990-12-19
Darlington 2	CANDU 850	PHWR	881	1981-09-01	1990-01-15
Darlington 3	CANDU 850	PHWR	881	1984-09-01	1992-12-07
Darlington 4	CANDU 850	PHWR	881	1985-07-01	1993-04-17
Pickering 1	CANDU 500A	PHWR	508	1966-06-01	1971-04-04
Pickering 4	CANDU 500A	PHWR	508	1968-05-01	1973-05-21
Pickering 5	CANDU 500B	PHWR	516	1974-11-01	1982-12-19
Pickering 6	CANDU 500B	PHWR	516	1975-10-01	1983-11-08
Pickering 7	CANDU 500B	PHWR	516	1976-03-01	1984-11-17
Pickering 8	CANDU 500B	PHWR	516	1976-09-01	1986-01-21
Point Lepreau	CANDU 6	PHWR	660	1975-05-01	1982-09-11

BrucePower™

Énergie NB Power

ONTARIOPOWER GENERATION

Source: World Nuclear Association

Note: PHWR = Pressurized Heavy Water Reactor

Alberta's Challenge – Nuclear licenses are issued to operators, not owners

Nuclear Energy Autonomy Matters

Canada's Federal Regulator will only issue licenses to a Qualified Nuclear Operator (QNO)

Alberta Energy companies (Oil/Gas/Power) currently cannot access nuclear technology without partnering with an existing QNO

The only QNOs in Canada are Ontario Power Generation (OPG) and Bruce Power

Our Response

Nucleon is building a Service Company that will provide Regulatory Access to all Energy Companies in Alberta

Nucleon is building a made-in-Alberta Private Sector Nuclear Operator by hiring key people and investing in the necessary management systems and controls to meet Canadian Nuclear Safety Commission (CNSC) and Canadian Standards Association (CSA) N286 & N299 standards for the development, licensing and operation of nuclear facilities.

Opportunity for Bonnyville M.D.

Background - Development Roadmap & Timing

$30 Million
Year 1 to 4
Finalize Site for Project Alpha
Concept design
Vendor RFI process
Complete Project Description for application for LTPS
Enter IAAC (or equivalent)
Complete site survey
Complete Impact Statement
Complete Pre-Feasibility Engineering for PPE
Receive LTPS

$50 Million
Year 4 + 5
Complete Development Funding Round
Reactor vendor selection
Start FEED study
Complete FEED study
FID

$20 Million
Year 6 + 7
Develop application for LTC
Develop application for LTO
Receive LTC
Receive LTO
Commence construction financing

CAPEX Cost: $3.6 Billion
CAPEX Ref: $6 Million/MW
Capacity: 2x300 MW
Year 7 to 10
Operating life 60+ years
Turbine overhaul @ 30 Years
2 year refueling cycle

Development Phase 1 | Development Phase 2 | Development Phase 3 | Build + Operate

Local Development
Operator JV
Conventional Management

Execution Teams
Project teams
CNO, CFO, CIO
Operational teams

CNE
QA/QC, HSE
Engineering, etc.

Talent Acquisition

Nuclear & Asset Development Acronyms
CNE – Chief Nuclear Engineer
CNSC – Canadian Nuclear Safety Commission
FID – Final Investment Decision
GR – Government Relations
IAAC – Impact Assessment Agency of Canada
LTPS – License to Prepare Site
LTC – License to Construct
PPE – Plant Parameter Envelope
PR – Public Relations
QA/QC – Quality Assurance/Control

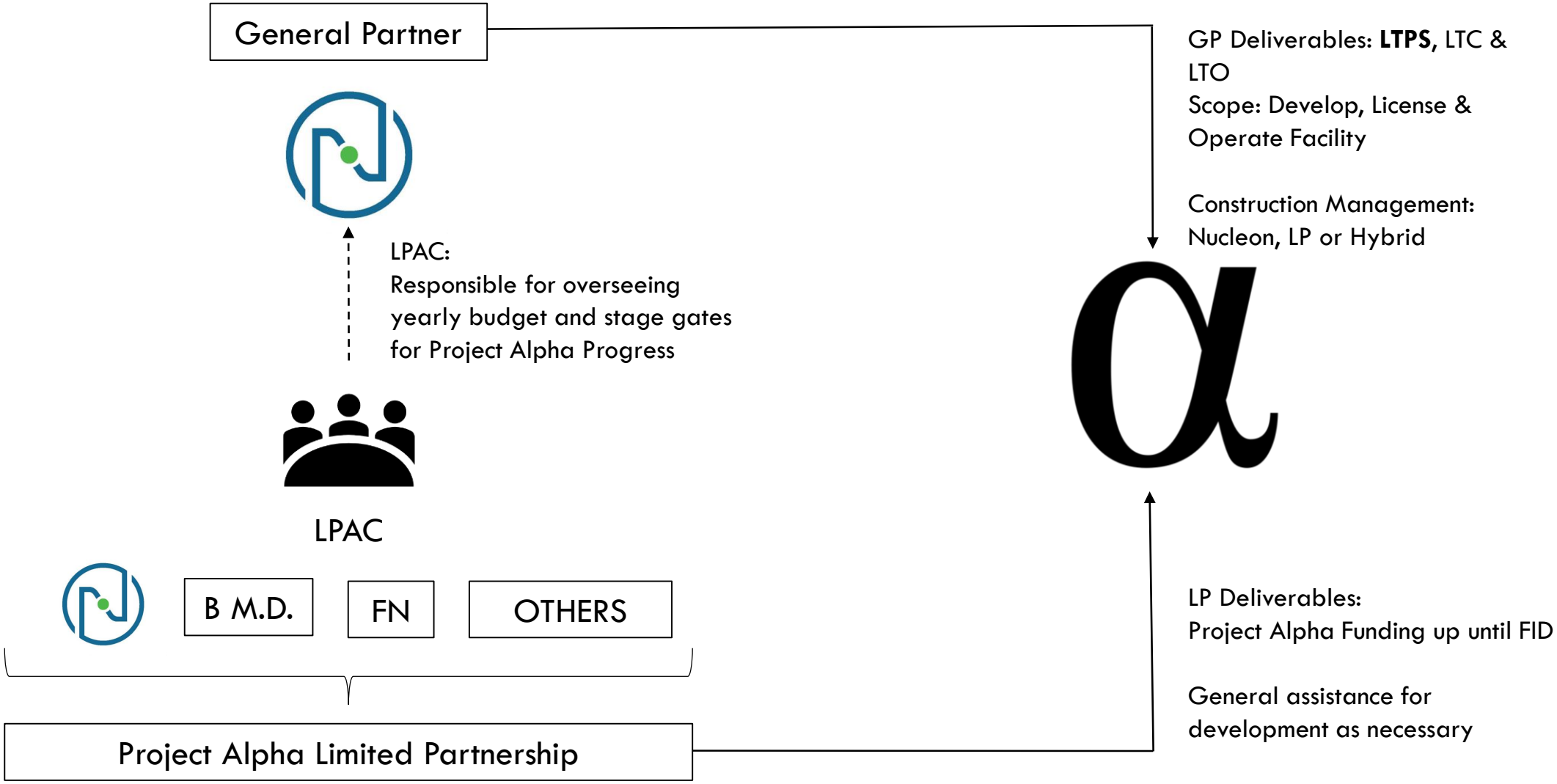
Opportunity – Development Cooperation and/or Partnership

There is an opportunity for Nucleon, Bonnyville, and local First Nations to <u>EITHER</u>;

work together to site the SMR, <u>AND/OR</u> partner on the SMR development project.

- Nucleon and Bonnyville will work together to site the project in the M.D. near the AESO 240kV system. Bonnyville is one of few 'uncongested' areas on the Alberta power grid.
- Nucleon, Bonnyville, and First Nations will equally own the development project from the outset.
- Bonnyville will have no obligation to invest money through the development.
- Ownership percentages would change over time (dilution of non-investors) as Nucleon funds the development program through to the License to Prepare Site; however, the M.D. would have a seat at the table throughout the development.
- Bonnyville M.D. will ultimately benefit from the tax base that a $3.6B facility would provide. (~$40M/yr)

Mechanics of how the Partnership Structure & Governance can work



Questions ?

Disclaimer

This presentation contains certain forward looking statements and forward looking information (collectively referred to as "forward looking information") within the meaning of applicable securities legislation. This forward looking information is identified by words such as "toward" "potential", "beyond", "will", "strategy", "emerge", "expand", "forecast", "future", "growth", "next", "new", "update", "predict", "plan", "anticipate" "will" or similar expressions and include matters that are not historical facts and suggestions of future outcomes. In particular, forward looking information in this presentation includes, but is not limited to, the statements regarding: the expected growth of the Company; the expected growth of pipeline infrastructure inspection markets; potential cost savings to customers; future services and technologies offered by the Company; the potential benefits thereof; eliminating current ways of doing business; growth within the industry over the next ten years; predictions of operational efficiencies; updates to vendor data; the commercialization of the sync data; the resulting monetization of the Company's strategy; predictions of operational efficiencies; reducing payment disputes; potential capitalization; details of the Offering, including size thereof, use of funds and closing date. Readers are cautioned not to place undue reliance on forward looking information, although we believe that the expectations represented by such forward looking information are reasonable, there can be no assurance that such expectations will prove to be correct and, as such, is not a guarantee of future performance.

Developing forward looking information involves reliance on a number of assumptions and consideration of certain risks and uncertainties, some of which are specific to Nucleon Energy and others that apply to the industry in general. Such risk factors and uncertainties include, but are not limited to: highly competitive industry; adverse changes in the relationship with our customers; factors adversely affecting our financial condition and operations; failure to adequately protect our intellectual property rights; claims against UPI from third parties with respect to intellectual property rights; failure to attract and/ or retain key employees; failure to maintain brand recognition and to do so in a cost-effective manner; failure to attract and/ or retain customers and to do so in a cost-effective manner; failure to meet future capital needs; and failure to secure additional debt or equity financing on acceptable terms. Readers are cautioned that the foregoing list of important factors is not exhaustive. Events or circumstances could cause our actual results to differ materially from those estimated or projected and expressed in, or implied by, the forward looking information. We make no representation that actual results achieved will be the same in whole or in part as those set out in the forward looking information. The forward looking information contained in this presentation are made as of the date hereof and the Company undertakes no obligation to update publicly or revise any forward looking information, whether as a result of new information, future events or otherwise, unless expressly required by applicable Canadian securities laws.

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