



Battery Day

April 5, 2022

Battery Day Agenda



VoltaXplore

- Welcome and Introductions
- Safety Briefing
- Tour of Demonstration Facility
- Presentation
- Question and Answer Session



VoltaXplore Team



VoltaXplore



Chairman, VoltaXplore

Pat D'Eramo
President and CEO
Martinrea International Inc.



CEO, VoltaXplore

Soroush Nazarpour
Founder and CEO
NanoXplore, Inc.



Rob Wildeboer
Executive Chairman
Martinrea International Inc.
Vice Chairman
NanoXplore, Inc.



Mohsen Badv, M.Eng, PMP
Director, Battery Technology
VoltaXplore, Inc.



Bruce Johnson
Executive Vice President
Martinrea Innovation Development



Nima Moghimian, Ph.D.
Global Director, R&D
NanoXplore, Inc.

Special Note Regarding Forward-Looking Information



VoltaXplore

Special Note Regarding Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of applicable Canadian securities laws including statements and expectations related to expectations of the benefit of graphene to battery production, estimated costs and economics of the project, estimated costs of batteries, the need for battery technology to evolve and VoltaXplore's related strategy and the expectation of building a larger gigawatt facility, including conditions required to complete. The words "continue", "expect", "anticipate", "estimate", "may", "will", "should", "views", "intend", "believe", "plan", "outlook" and similar expressions are intended to identify forward-looking statements. Forward-looking statements are based on estimates and assumptions made by VoltaXplore, Martinrea and NanoXplore in light of their experience and their perception of historical trends, current conditions and expected future developments, as well as other factors that they believe are appropriate in the circumstances, such as expected sales and industry production estimates, current foreign exchange rates (FX), timing of product launches and operational improvements during the period and any current Board approved budgets. Many factors could cause actual results, performance or achievements to differ materially from those expressed or implied by the forward-looking statements, including, without limitation, the industry trends and risk factors outlined in the most recent Management Discussion and Analysis and Annual Information Form and other public filings for each of Martinrea and NanoXplore which can be found at www.sedar.com. These factors should be considered carefully, and readers should not place undue reliance on the forward-looking statements. VoltaXplore, Martinrea and NanoXplore have no intention and undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

An Overview



VoltaXplore



- Manufacturer and supplier of advanced components and solutions based on proprietary graphene technology
- Largest graphene producer in the world, with approximately 35% of global nameplate capacity
- Global company headquartered in Montreal employing approximately 400 people



- Leading Tier One automotive supplier in lightweight structures and propulsion systems
- One of the fastest growing automotive suppliers since 2001
- Operating in 57 locations (including sales and engineering centers) in 10 countries: Canada (headquartered in Toronto), United States, Mexico, Brazil, Germany, Spain, Slovakia, China, South Africa, and Japan
- Over 16,000 employees worldwide

An Overview



VoltaXplore

- VoltaXplore is a Canadian Li-Ion Battery manufacturer for electric transportation and grid storage
- Joint venture between NanoXplore, Inc. (TSX:GRA) and Martinrea International Inc. (TSX:MRE)
- VoltaXplore benefits from NanoXplore's proprietary graphene anode technology
- VoltaXplore commissioned a 1 MWh demonstration battery facility in March 2022
- Technology has been validated
- Customer discussions are progressing well
- In mid-2022, VoltaXplore anticipates building a 2 GWh battery plant to start production in 2024, conditional on validated economics, financing and site selection

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Plant Tour – Safety Briefing



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VoltaXplore Demonstration Facility

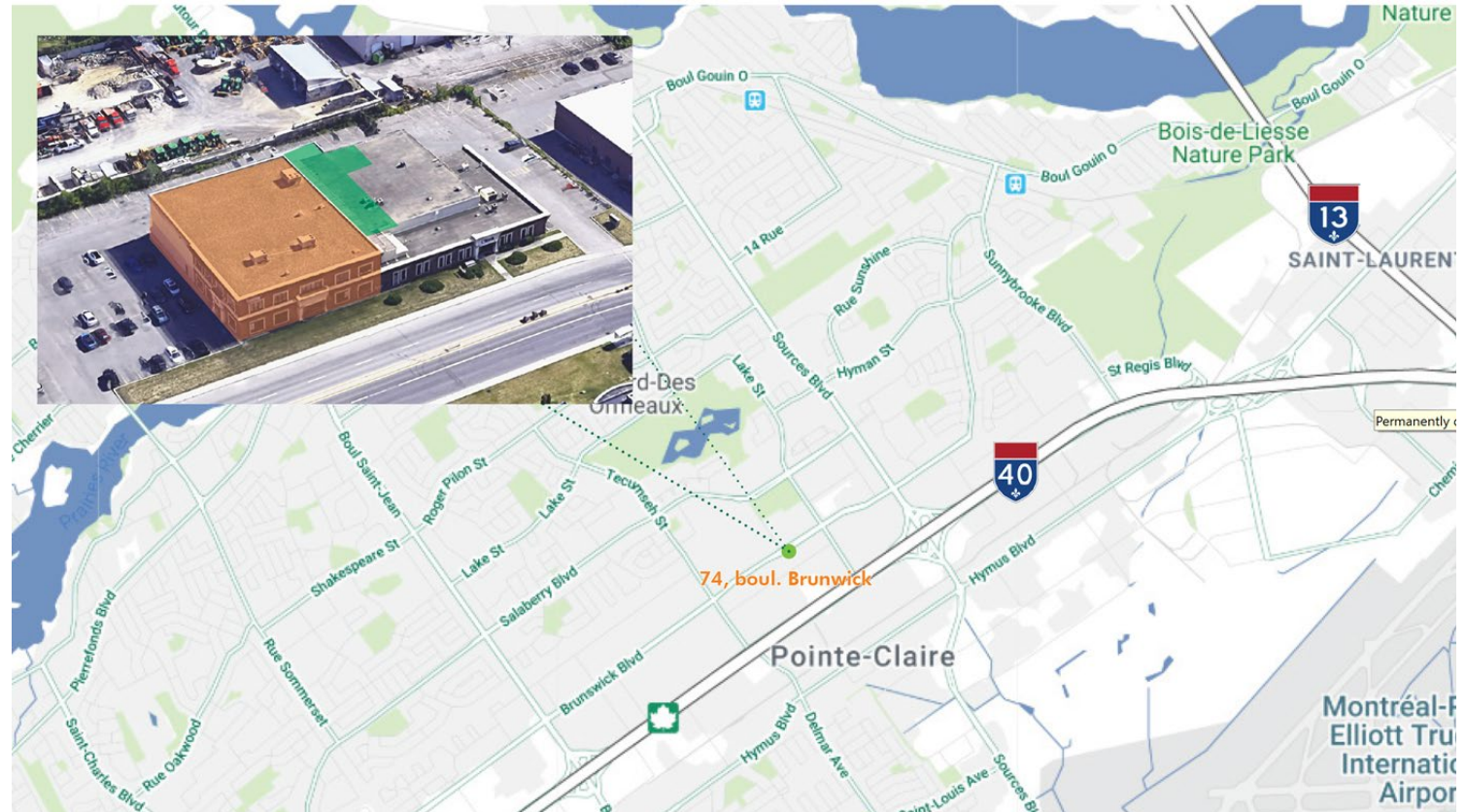


VoltaXplore

74 Brunswick Blvd, DDO,
Montreal

Commissioning is done. Production
started in March 2022.

18650 cylindrical battery production
facility with 1MWh capacity



1 MWh Demonstration Facility



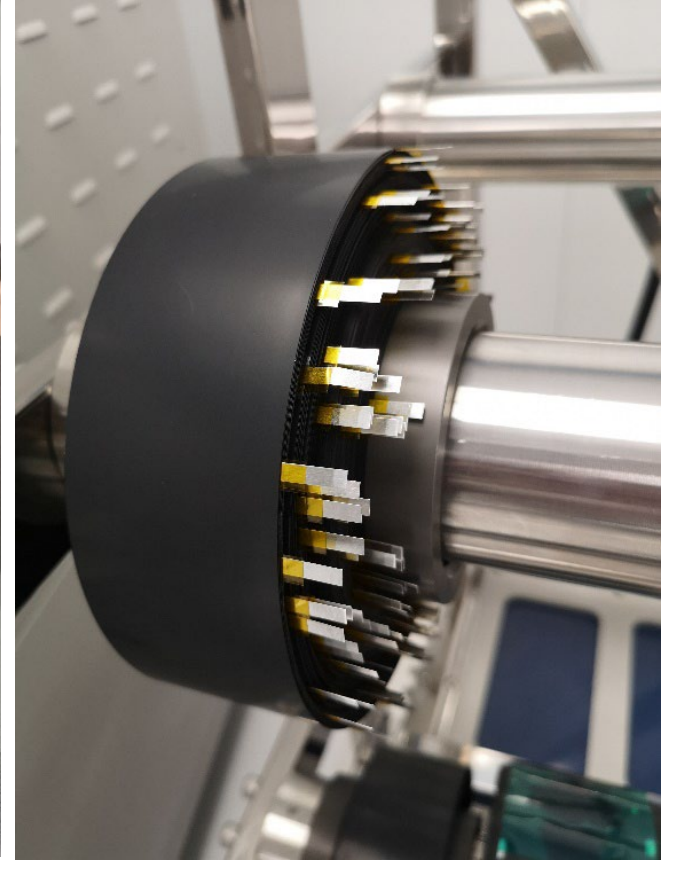
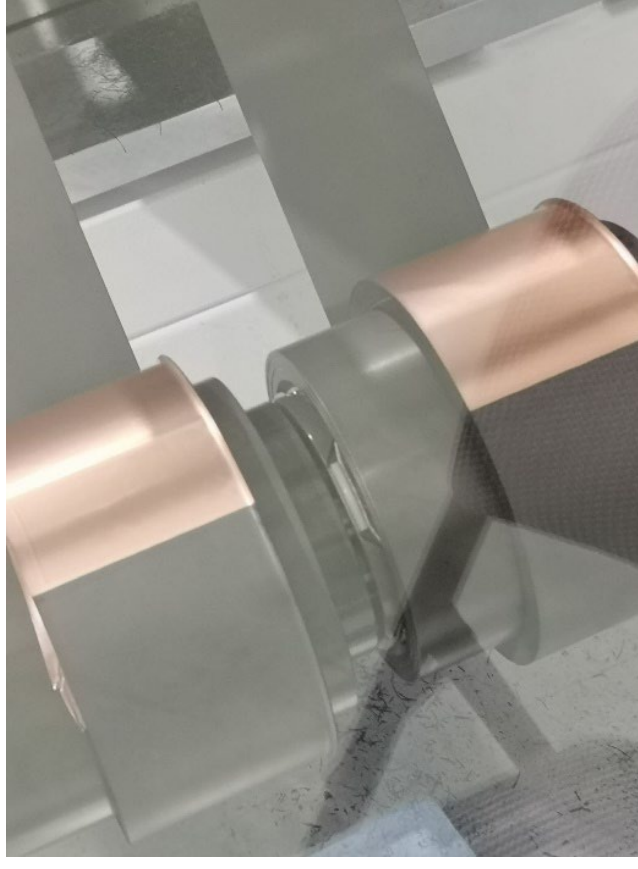
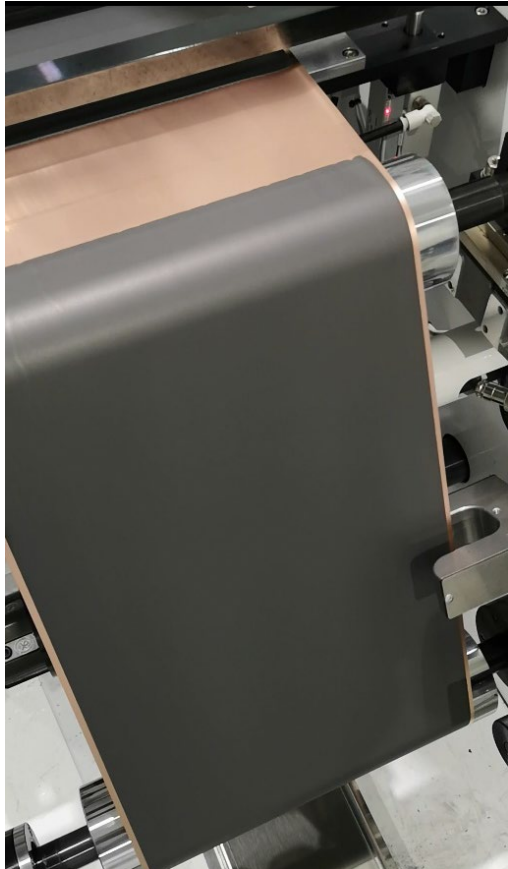
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1 - Electrode Coating and Tab Welding



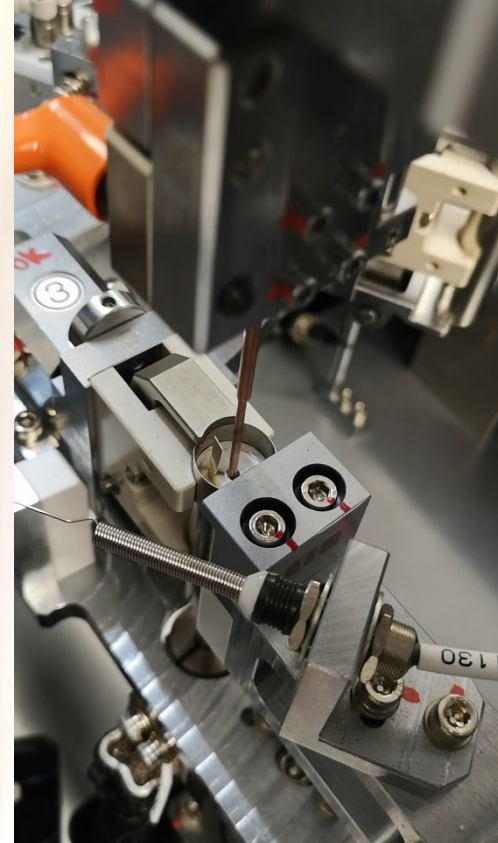
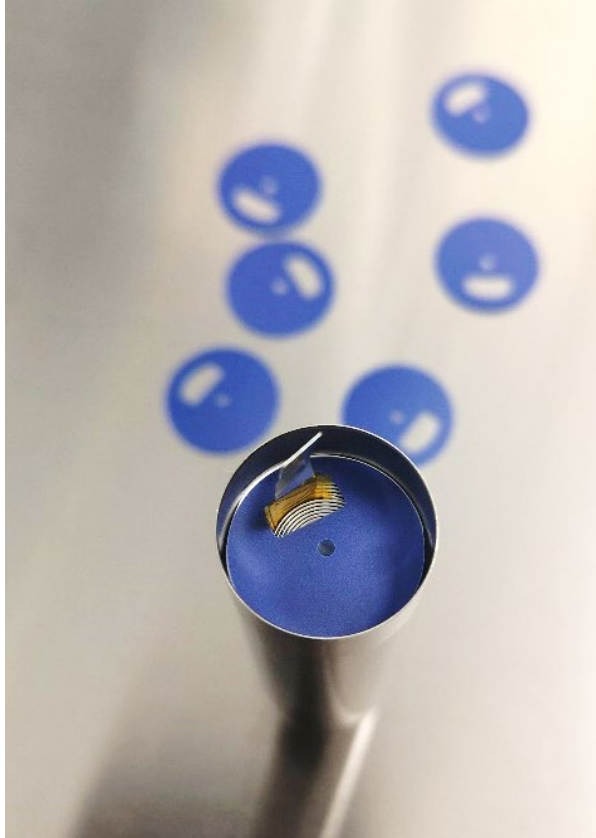
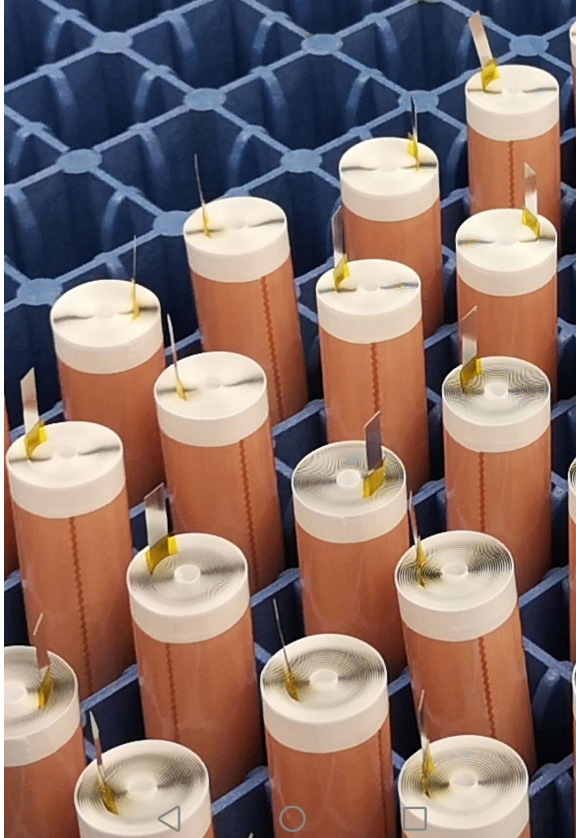
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2 - Jelly Roll and Insulator Insertion



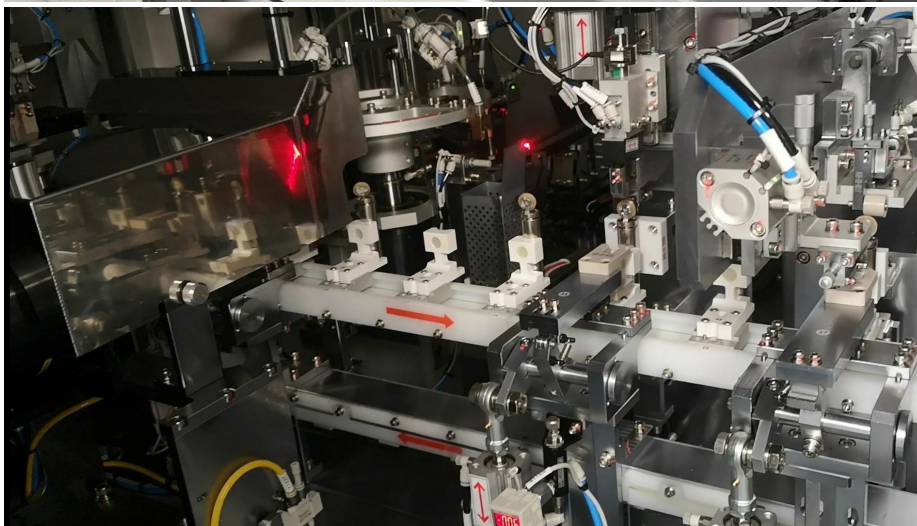
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3 - Electrolyte Filling and Assembly



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4 - Formation



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VoltaXplore Timeline



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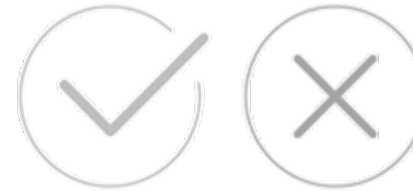
2021

Secure
Demonstration
facility



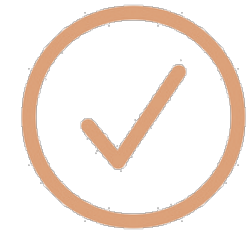
Early 2022

Commissioning
and SOP of
Demonstration
facility



Mid-2022

Start construction on a
two GWh battery plant
to start production in
2024, conditional on
validated economics,
financing, and site
selection



Mid-2024

SOP of first phase
(two GWh facility)

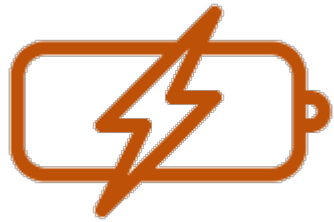
Challenges With Existing Battery Technologies



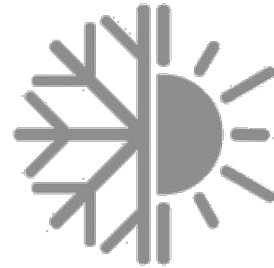
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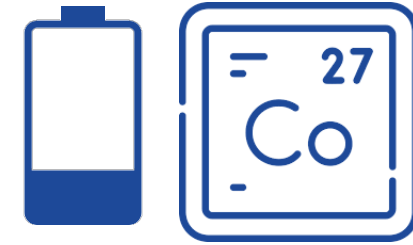
Range anxiety continues to prevent broader adoption of battery electric vehicles (BEVs)



Rapid charging causes battery degradation, which reduces driving range



Extreme temperatures (cold or hot) will increase the degradation of the battery



Batteries today are highly dependent on Cobalt

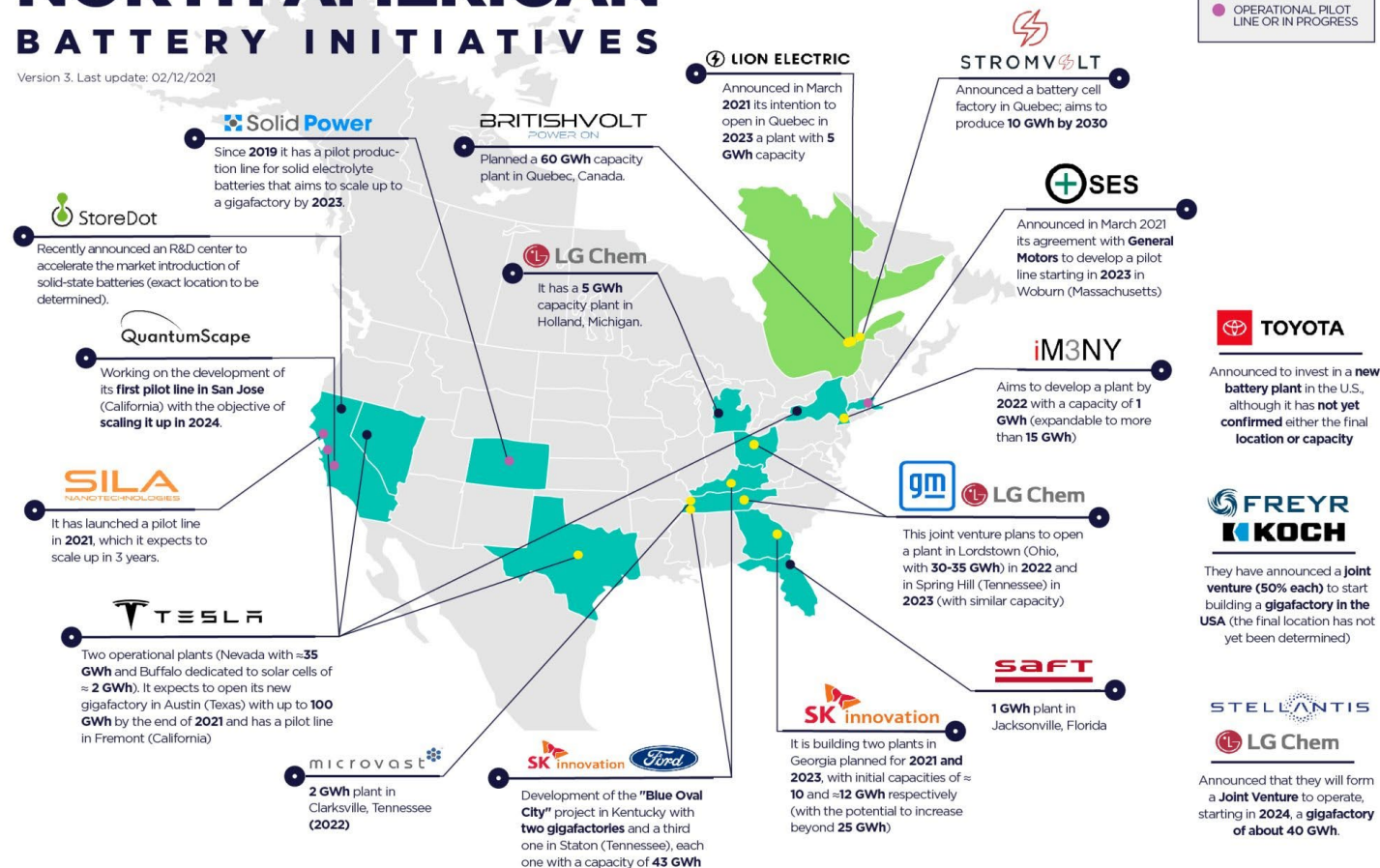
- Cobalt is rare and expensive
- Battery technology will need evolve to reduce dependency on Cobalt in order to bring down price (High Ni NMC and LFP cathode chemistries)

North American Battery Initiatives

NORTH AMERICAN BATTERY INITIATIVES

Version 3. Last update: 02/12/2021

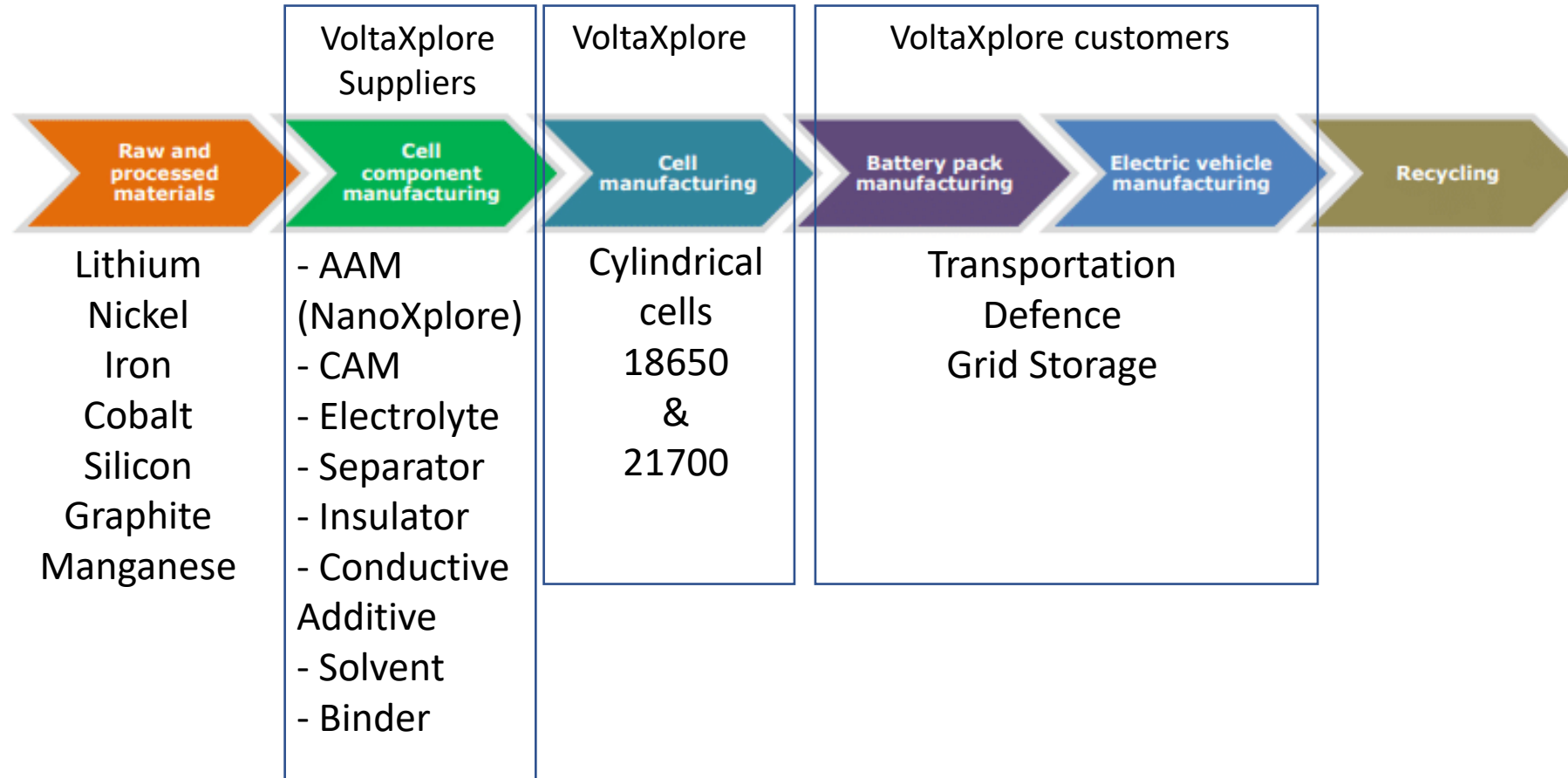
Analysis by CIC **energiGUNE**¹



Li-ion Battery Supply Chain



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Spotlight on Graphene in Batteries



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— Graphene as an additive

- ***Carbon black replacement***: Replacing conductive carbon black in both anodes and cathodes enables faster charging. Currently, battery cell capacity drops at high charging speeds. Graphene enables faster charging with much lower capacity drop.
- ***Heat management***: Heat buildup deteriorates the performance of the batteries and could result in thermal run away. Adding graphene to the cell increases the heat dissipation and maintains the working temperature, making the batteries safer.

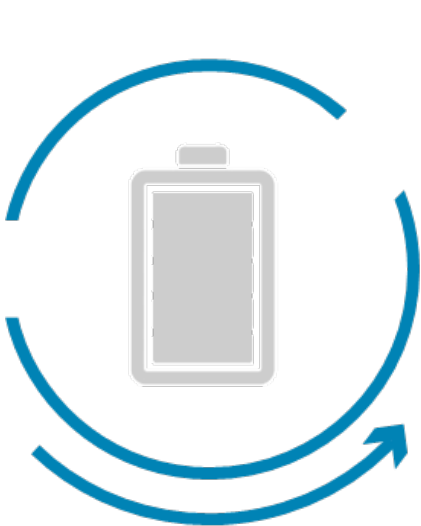
— Graphene as an active material

- ***Silicon anode***: Silicon anodes are 10 times more efficient than graphite, though their lifetime is limited due to significant volume expansion upon charge and discharge. Graphene acts as a protective material around the silicon, reducing swelling and pulverization.
- ***Graphene anode***: It is proven that graphene can replace spherical graphite by enabling lithiation on the surface of carbon sheets. Accordingly, graphene shows improvement in lithiation vs. spherical graphite.

Advantages of Graphene-Enhanced Batteries

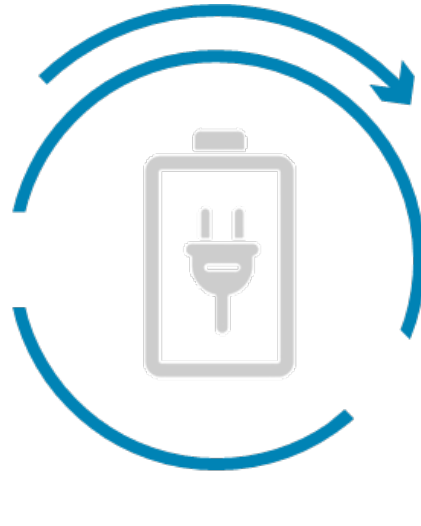


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BATTERY CAPACITY

Graphene enables the use of silicon in anodes and improves energy density and driving range



CHARGING SPEED

High conductivity of graphene improves charging speed



BATTERY LIFE

Graphene-coated silicon spheres in anodes results in higher capacity retention



BATTERY COST

Targeting lower production cost



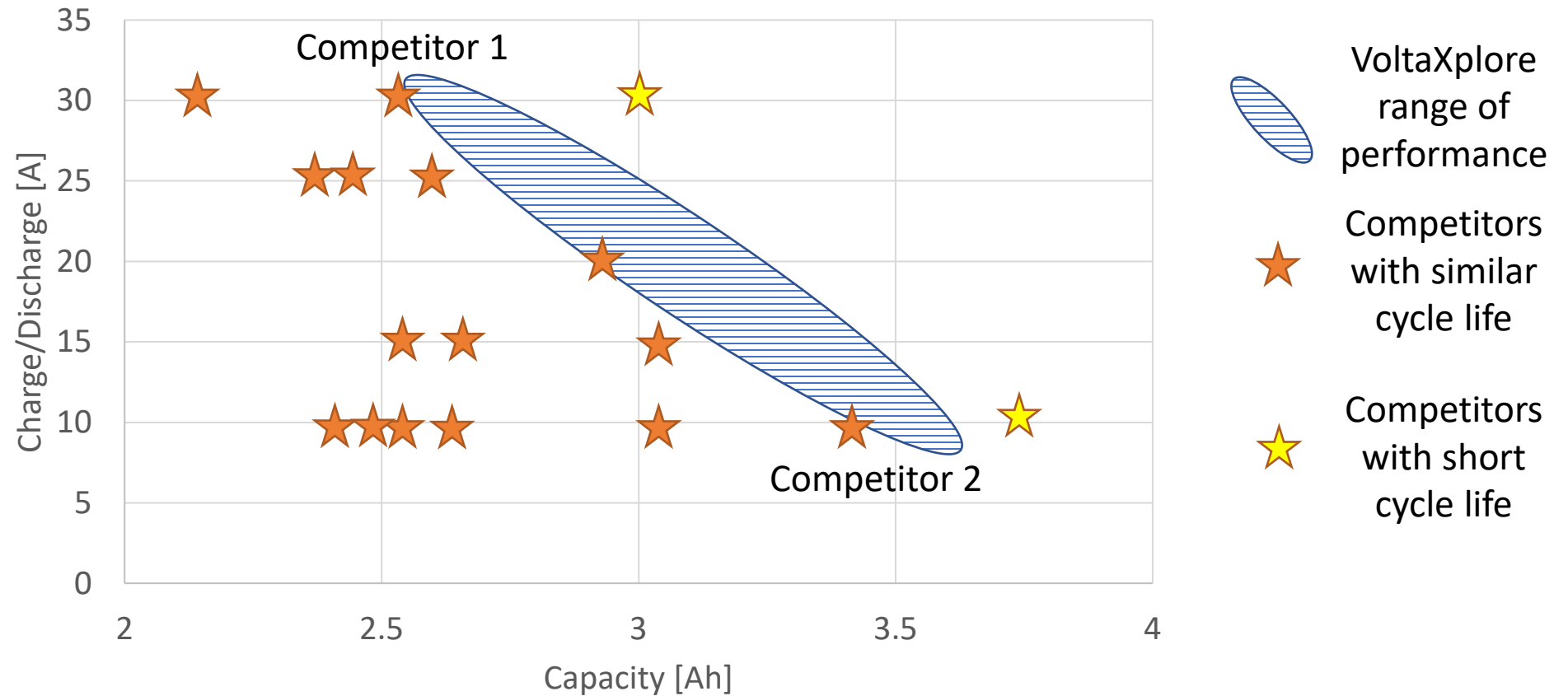
IMPROVED SAFETY

High thermal conductivity of Graphene provides greater temperature control, reducing the risk of fires

Capacity Map



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Product Offering



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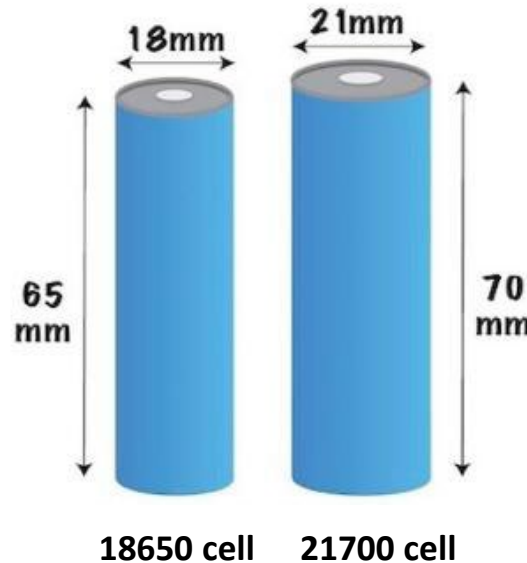
18650 Battery cells:

We are capable of producing batteries with different chemistries and designs:

Design 1: LFP with Graphite/Graphene
Low cost, low performance, high safety
(1000-2000mAh, 2000+cycle)

Design 2: NMC with Graphite/Graphene
(2000-3000mAh, 2000+cycle)
Mid performance and long cycle life

Design 3: NCA with Graphene and Silicon-Graphene (+3000mAh, 800 cycles)
High performance and short life



21700 Battery cells:

We are looking to build 21700 cells in the Gigafactory. 21700 cells have 50% more capacity than 18650 cells.

Markets



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Transportation and Heavy
Commercial Vehicles



Military and Defense



Grid Storage

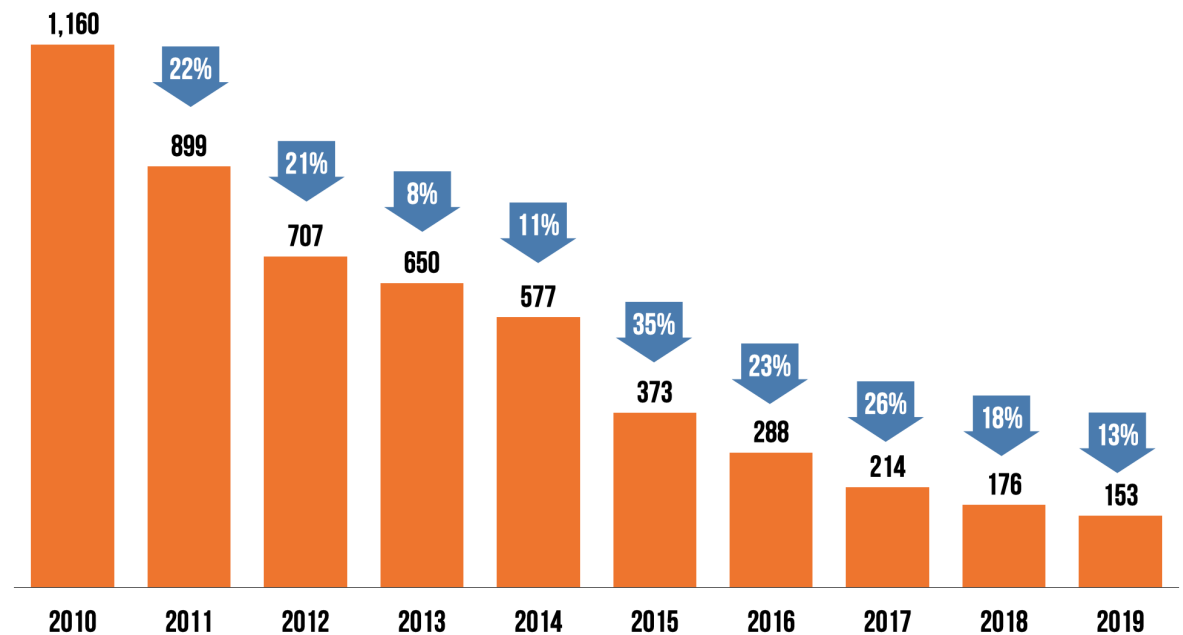
Cost/kwh at Cell Level (\$US)



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- Batteries need to become cheaper, pack more density, be safer and reduce dependency on Cobalt
- The cost of a battery in 2021 was approximately US\$130/kwh
- VoltaXplore is targeting to reduce this cost by enabling denser cylindrical cells, minimizing the use of cobalt, and extracting more energy by utilizing silicon additives

PRICE OF A LI-ION BATTERY PACK, VOLUME-WEIGHTED AVERAGE
Real 2018 dollars per kilowatt hour



Source: BloombergNEF



Estimated Project Economics (\$CAD)



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Plant Capacity: 2 GWh

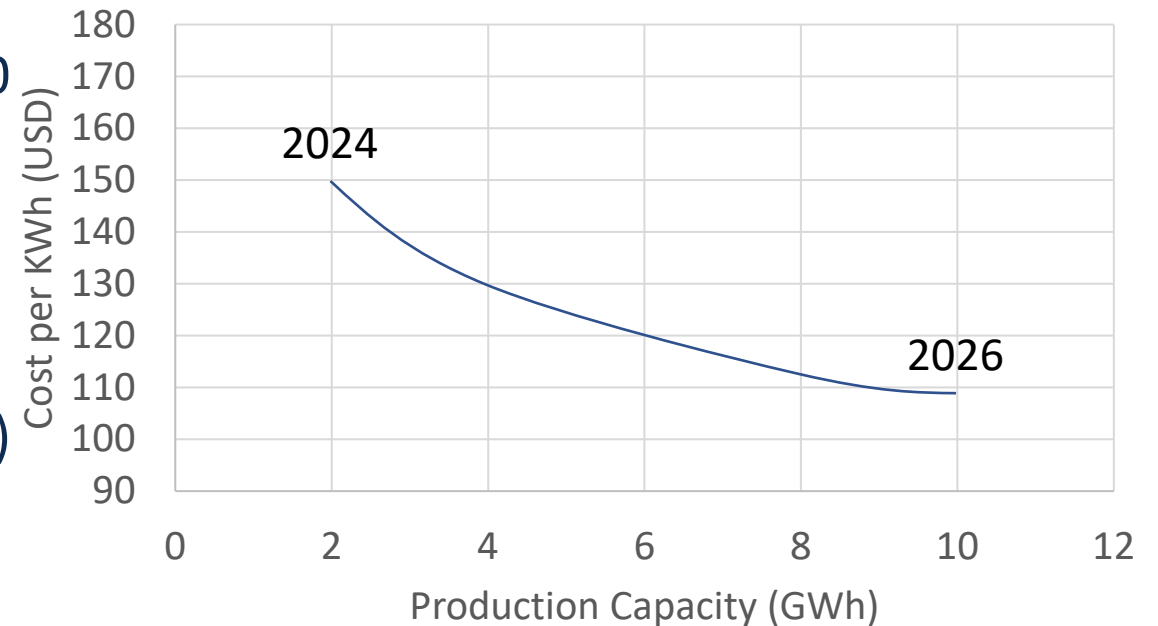
Production Capacity of 21700 cells: 130M cells/year in 400,000 sq. ft. facility (around 400 employees)

- Full CAPEX: CAD\$450M

- Annual Revenue: CAD\$500M (CAD\$3.80/cell)

- Average Cost: CAD\$375M (CAD\$2.85/cell)

- Gross Profit: CAD\$125M (25%)



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