

APPENDIX G

Consultation Materials

Fact Sheet



Bear Head ENERGY

- Green Hydrogen And Ammonia Production, Storage, And Loading Facility Located In The Point Tupper Industrial Park
- At Full Build Out And Peak Power Inflow, The Project Could Produce 350,000 Tonnes Of Hydrogen And 2 Million Tonnes Of Ammonia Per Year
- Bear Head Will Be Constructed In Phases Driven By The Availability Of Renewable Power
- Peak Power At Full Build Out Could Be As High As 3 Gigawatts Including 2 Gigawatts Of Electrolyzer Capacity

Strong Ownership And Support

- In May 2022, Bear Head Was Acquired By Buckeye Partners, L.P., Owner And Operator Of 5,500 Miles Of Pipeline And 135 Liquid Petroleum Product Terminals With An Aggregate Capacity Of Approximately 130 Million Barrels
- Buckeye Partners, L.P., A Wholly Owned Investment Of Global Institutional Infrastructure Manager IFM Investors ("IFM"), Is The Premier Infrastructure And Logistics Provider For The World's Energy Needs, Today And Tomorrow
- Buckeye's Purchase Of Bear Head Is Representative Of their Commitment To Contribute Directly To The Decarbonization Of The Broader Economy By Becoming A Net Zero Business Through Investment In And Development Of Renewables, Cleaner Fuels, Alternative Energy, And Other Sustainable Innovations. Buckeye Currently Has More Than 7 Gigawatts Of Clean Alternative Energy Under Development
- Buckeye Has Vast Experience In Engineering And Construction Management And Safe And Responsible Terminal Operations That Will Support The Development Of Bear Head Energy, And It Has The Capital To Fund Bear Head's Development And Construction

Bear Head Energy's Tremendous Site Advantage

- Located In Point Tupper Industrial Park On The Strait Of Canso
- Deep, Ice-Free, And Protected Harbour With Short Shipping Distances To Key European And U.S. Green Energy Markets
- 250 Acre Site With An Additional 68 Acre Water Lot
- \$150 Million Already Spent On Civil Engineering and Construction
- Access To Ample Water Supplies And Low Cost Renewable Power

Safety

Bear Head Energy Is Taking A Safety-First Approach To All Aspects Of Facility Design And Construction

- Bear Head Energy Proactively Engaged Lloyd's Register To Develop A Code Of Practice That Could Be Used To Develop A Safe Design For The Facility. The Province Of Nova Scotia Has Reviewed And Provided Helpful And Constructive Feedback On The Code Of Practice That Is Informing Facility Design
- Bear Head Energy Retained Industry Experts And Is Conducting Thorough Consequences Modelling And Quantitative Risk Assessment To Estimate Extent Of Impact And Risk To Public Safety.
- Detailed Facility Design Will Utilize Quantitative Risk Assessment In Decision Making To Inform Facility Design, Mitigation Measure, And Layout

FOR MORE INFORMATION OR TO SUBMIT YOUR COMMENTS OR QUESTIONS:

www.bearheadenergy.ca  info@bearheadenergy.ca

First Nations

Bear Head Energy Is Located In Mi'kmaki, The Ancestral And Unceded Territory Of The Mi'kmaq People, And We Acknowledge Them As The Past, Present, And Future Caretakers Of This Land. We Are Committed To Building On The Relationships We Have Developed, Respecting Mi'kmaq Rights, And Supporting The Social, Cultural, Environmental, And Educational Goals Of Our First Nations Partners.

- Bear Head Energy Is Finalizing A Memorandum Of Understanding (MOU) With The Mi'kmaq Rights Initiative (KMKNO) To Guide Refining Mutual Benefits Agreement (MBA) Signed With The Assembly Of Nova Scotia Mi'kmaq Chiefs In 2019
- The MBA Will Ensure First Nations Participation In The Project, Including Adequate Training

Community

- A Community Liaison Committee (CLC) With Representatives From Local Municipal Government, Mi'kmaq, And Residents Has Been Established To Facilitate Two-Way Dialogue Between The Community And Bear Head Energy
- Bear Head Proudly Partners With And Supports A Variety Of Charities, Community Events, And Local Projects, Including Granville Green, Port Hawkesbury Civic Centre, Specialized Hydrogen And Ammonia Training With NSCC, Zamboni For Richmond County, And PHAST – Port Hawkesbury Antigonish Swim Team.

Regional Economic Benefits

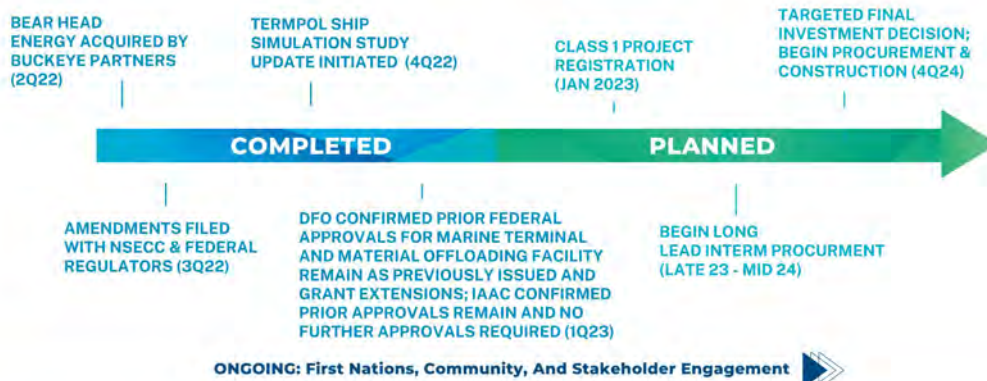
Bear Head will help establish Atlantic Canada as a global leader in green hydrogen and ammonia production and supports the development of associated new businesses.

- Jobs And Training In Community And Region
- Use Of Local Personnel, Goods, And Services
- Diversification Of Local Economy
- Capacity Building And Skills Training
- Increased Municipal, Provincial, And Federal Tax Revenue
- Up To 700 Jobs During Construction
- Up To 70 Permanent Direct Jobs During Ongoing Operations And Maintenance

New Industry Potential

- Onshore And Offshore Wind Farm And Transmission System Operations And Maintenance
- Electrolyzer Manufacturing And Maintenance
- Green Fertilizer And Steel Production

PROJECT TIMELINE- SAFETY OVER SPEED



FOR MORE INFORMATION OR TO SUBMIT YOUR COMMENTS OR QUESTIONS:

www.bearheadenergy.ca



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Display Boards

BEAR HEAD ENERGY PROJECT

- ▶ Green Hydrogen And Ammonia Production, Storage, And Loading Facility Located In The Point Tupper Industrial Park
- ▶ At Full Build Out And Peak Power Inflow, The Project Could Produce 350,000 Tonnes Of Hydrogen And 2 Million Tonnes Of Ammonia Per Year
- ▶ Project Will Be Constructed In Phases Driven By Availability Of Renewable Power
- ▶ Peak Power At Full Build Out Could Be As High As 3 Gigawatts Including 2 Gigawatts Of Electrolyzer Capacity
- ▶ Maximum Average Usage Of Water Supplied By Landrie Lake Water Utility (LLWU) Could Be As High As 4 Million Gallons/Day
 - *Water Conservation Measures Under Evaluation To Efficiently Use Water Resource*



BEAR HEAD ENERGY'S TREMENDOUS SITE ADVANTAGE

WORLD CLASS REGIONAL ADVANTAGES

- ▶ Wind Regime Providing Low Cost Renewable Power
- ▶ Landrie Lake Water Utility's Infrastructure And Available Fresh Water

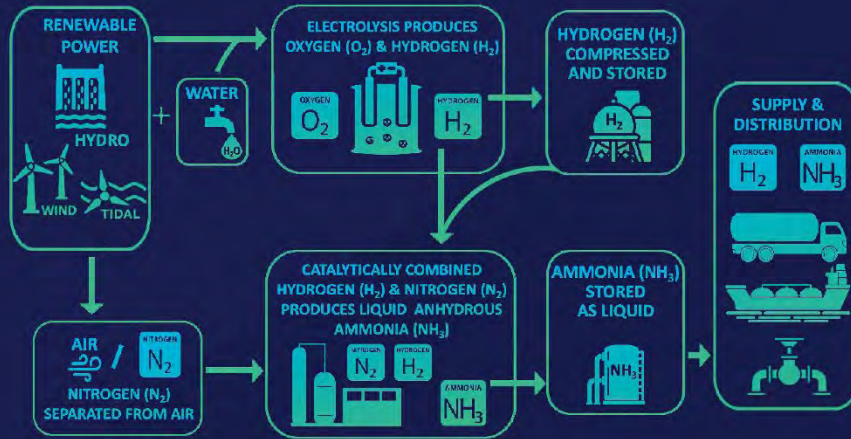
GLOBAL ADVANTAGES

- ▶ Short Shipping Distances To Key European And U.S. Green Energy Markets

LOCAL SITE ADVANTAGES

- ▶ Located In Point Tupper Industrial Park On The Strait Of Canso
- ▶ Deep, Ice-Free, And Protected Harbour
- ▶ 250 Acre Site With An Additional 68 Acre Water Lot
- ▶ \$150 Million Already Spent On Civil Engineering And Construction

HOW IS GREEN HYDROGEN & AMMONIA PRODUCED?



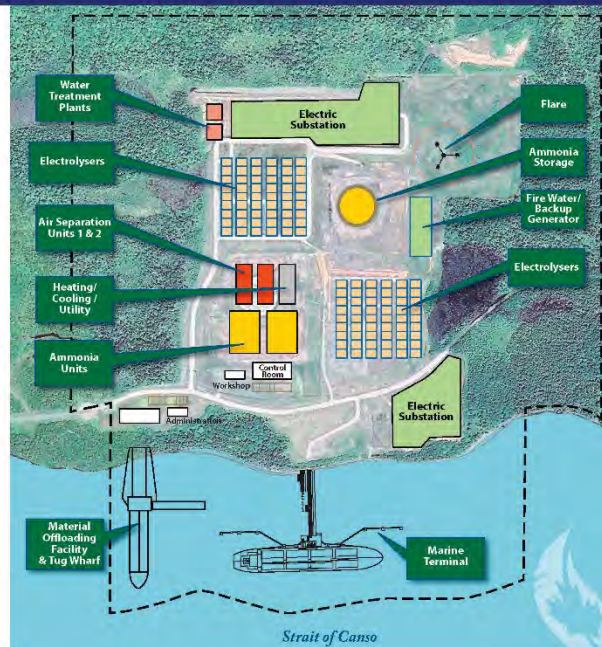
BEAR HEAD ENERGY SITE LAYOUT

KEY EQUIPMENT

- ▶ **Electrolyzers:** Converts Water (H_2O) Into Hydrogen (H_2) And Oxygen (O_2)
- ▶ **Air Separation Units:** Captures Nitrogen (N_2) From The Air
- ▶ **Ammonia Synthesis:** Combines Nitrogen (N_2) And Hydrogen (H_2) To Create Ammonia (NH_3)
- ▶ **Ammonia Storage:** Refrigerated Liquid Anhydrous Ammonia Storage Tank
- ▶ **Electrical Switch Gear And Substation**

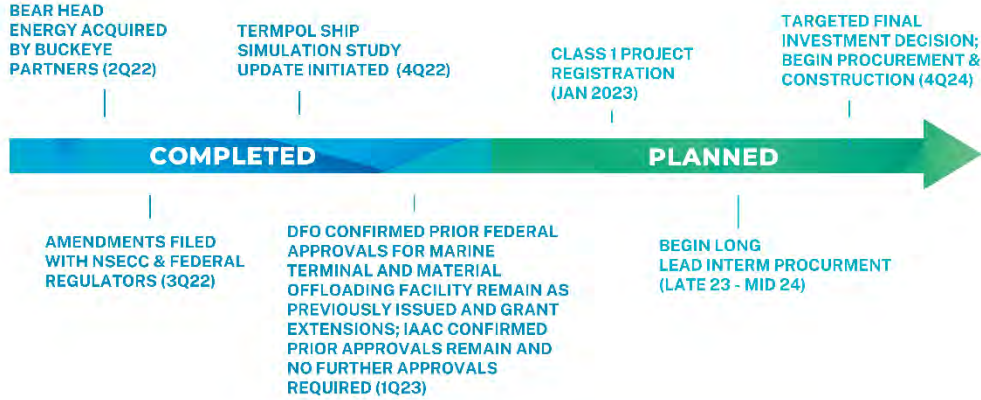
SITE LAYOUT AND ATTRIBUTES

- ▶ All Equipment And Buildings Within Previous Environmental Assessments
- ▶ No Wetland Or Watercourse Alterations Planned
- ▶ Minimal Additional Civil Works
- ▶ Marine Terminal And Material Offloading Facility To Remain As Designed And Approved



PROJECT TIMELINE

SAFETY OVER SPEED



ONGOING: First Nations, Community, And Stakeholder Engagement

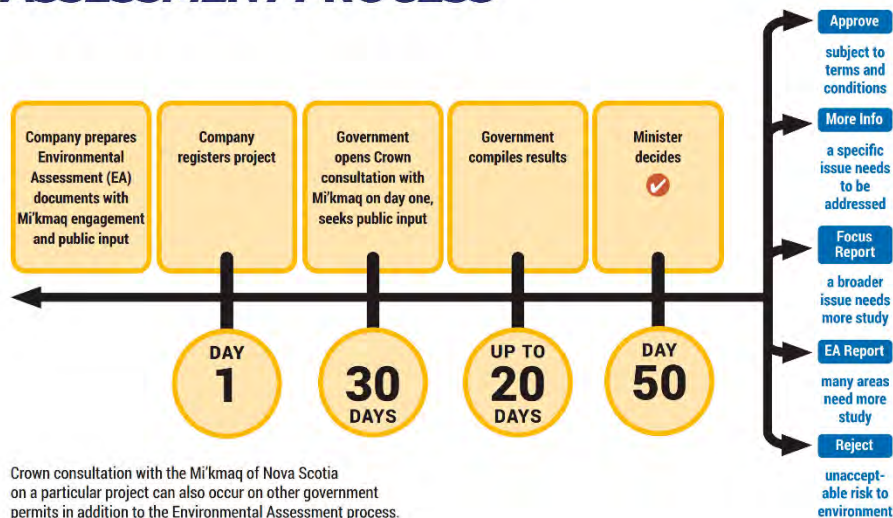


ENVIRONMENTAL ASSESSMENT

- ▶ Project Requires Class 1 Environmental Assessment (EA) Registration
 - Anticipated Filing January 2023
- ▶ EA Registration Builds On Previously Approved EAs For Former LNG Projects On The Bear Head Site
- ▶ Comprehensive Safety And Consequences Modelling To Understand The Potential Consequences And Impacts To Inform Facility And Site Engineering And Design
- ▶ Civil Work Was Conducted Previously For Approved LNG Project; Minimal New Clearing And Grubbing Required For Project
- ▶ Marine Terminal Will Be Constructed As Previously Designed And Approved For The LNG Project
- ▶ Project Will Generate Less Noise Than The Previously Approved LNG Project
- ▶ Very Limited To Zero Green House Gas Emissions
- ▶ Project Will Generate Reject Process Water For Management And Disposal
- ▶ EA Will Consider The Following Valued Components:
 - Atmospheric Environment
 - Groundwater Resources
 - Surface Water Resources
 - Vegetation And Wetlands
 - Wildlife And Wildlife Habitat
 - Freshwater Fish And Fish Habitat
 - Marine Environment
 - Land Use And Communities
 - Fisheries, Aquaculture And Marine Harvesting
 - Cultural And Heritage Resources



CLASS 1 ENVIRONMENTAL ASSESSMENT PROCESS



FIRST NATIONS

Bear Head Energy Is Located In Mi'kma'ki, The Ancestral And Unceded Territory Of The Mi'kmaq People, And We Acknowledge Them As The Past, Present, And Future Caretakers Of This Land. We Are Committed To Building On The Relationships We Have Developed, Respecting Mi'kmaq Rights, And Supporting The Social, Cultural, Environmental, And Educational Goals Of Our First Nations Partners.

- ▶ Finalizing A Memorandum Of Understanding (MOU) With The Mi'kmaq Rights Initiative (KMKNO) To Guide Refining Mutual Benefits Agreement (MBA) Signed With The Assembly Of Nova Scotia Mi'kmaq Chiefs In 2019
 - Ensures First Nations Participation In The Project, Including Adequate Training
 - Since 2015, We'koqma'q First Nation Has Provided Site Security And Safety And Continue To Do So Through First Alliance Security
- ▶ Ongoing Engagement With L'nu Affairs, KMKNO, We'koqma'q First Nation, Potlotek First Nation And Other First Nation Communities In Mi'kma'ki



ABOUT BUCKEYE PARTNERS

- ▶ Buckeye Partners, L.P., A Wholly Owned Investment Of Global Institutional Infrastructure Manager IFM Investors ("IFM") Is The Premier Infrastructure And Logistics Provider For The World's Energy Needs, Both Today And Tomorrow
- ▶ Buckeye's Purchase Of Bear Head Is Representative Of Their Commitment To Contribute Directly To The Decarbonization Of The Broader Economy By Becoming A Net Zero Business Through Investment In And Development Of Renewables, Cleaner Fuels, Alternative Energy, And Other Sustainable Innovations
 - More Than 7 Gigawatts Of Clean Alternative Energy Under Development
- ▶ Founded In 1886, Buckeye Owns And Operates A Diversified Global Network Of Integrated Assets Providing Midstream Energy Logistic Solutions
 - Approximately 5,500 Miles Of U.S. Pipelines
 - More Than 135 Liquid Petroleum Products Terminals With An Aggregate Tank Capacity Of Approximately 130 Million Barrels
 - Vast Experience And Project Support In
 - *Engineering And Construction Management*
 - *Safe And Responsible Terminal Operations*
 - Capital To Fund Development And Construction
- ▶ At Buckeye, Health And Safety Is At The Core Of Our Values; It Is Fundamental To Our Business, And It Guides The Way We Operate Each Day. We Aim To Integrate Programs And Processes That Prevent Or Properly Mitigate Incidents To Ensure The Continued Health And Wellness Of Our Employees, Contractors, And The Communities In Which We Operate



WHY GREEN HYDROGEN & AMMONIA?



Hydrogen Is One Of The Most Abundant Elements On The Planet, And Does Not Emit Any Carbon Or Other Greenhouse Gases When Combusted

Because Of This Attribute, Hydrogen Is Widely Viewed As The Best Way To Decarbonize Many Hard To Abate Industries And Is Expected To Become A Key Pillar Of Global Decarbonization Efforts

The Production Of Green Hydrogen Uses Renewable Energy And Is CO₂ Emission-Free

Green Hydrogen Is Produced By Splitting Water (H₂O) Into Hydrogen (H₂) And Oxygen (O₂) Via Electrolysis, A CO₂ Emission-Free Process That Is Powered By Electricity From Renewable Sources, Such As Wind, Hydro, Or Tidal. The Traditional Hydrogen Process Is The Exact Opposite, As It Releases CO₂ Into The Atmosphere When Fossil Fuels (E.G., Coal Or Natural Gas) Are Burned To Produce Electricity And During The Process Of Breaking Hydrogen (H₂) From Natural Gas Or Other Fossil Fuels



Hydrogen Is Difficult To Transport And Store Due To Its Low Energy Density, So It Is Often Combined With Nitrogen From The Air To Safely Produce Green Ammonia To Efficiently Transport Hydrogen

Hydrogen And Ammonia Are Industrial Materials That Are Commonly Produced And Stored In A Safe Manner

Our Green Versions Of These Materials Will Be No Exception



In Addition To Use In Fertilizer, Green Ammonia Can Be Used To Create Electricity And Heat Or As A Transportation Fuel

GREEN HYDROGEN AND AMMONIA USES

There Are Abundant Uses Of Green Hydrogen And Ammonia To Decarbonize Existing And New Industries, With Europe And Asia Leading The Current Market Demand.

Bear Head Energy Is Committed To Supporting The Development Of A Green Hydrogen And Ammonia Economy In Atlantic Canada To Create New Opportunities For The Region.

GREEN HYDROGEN

ELECTRICITY:

Green Hydrogen Can Be Used As Fuel In Gas Turbines, Engines, Or Fuel Cells

HEAT:

Green Hydrogen Can Generate High Temperature Heat Used In Processing Facilities And Steel Production

MOBILITY:

Green Hydrogen Is Replace Gasoline And Diesel And Could Be Used To Produce Zero (Or Negative) Carbon Intensity Fuels

GREEN AMMONIA

FERTILIZER:

Anhydrous Ammonia Is A Core Component In Fertilizer

FUEL ALTERNATIVE:

Green Ammonia Can Be Used As A Fuel Replacement In Fossil Fuel Burning Engines And Turbines For Air, Rail, And Marine Transportation, Thus Removing CO₂ Emissions

CHEMICAL FEEDSTOCK:

Green Ammonia Can Be Used In The Mass Production Of Various Essential Chemical Products

COMMUNITY

- ▶ Bear Head Energy Is A Long Standing, Proud And Active Member Of The Port Hawkesbury, Richmond County, And Surrounding Communities.
- ▶ We Remain Committed To Meaningful Engagement With Residents And Expanding Our Relationships Throughout The Development, Construction, And Operations Phases.
- ▶ A Community Liaison Committee (CLC) With Representatives From Local Municipal Government, Mi'kmaq, And Residents Has Been Established To Facilitate Two-Way Dialogue Between The Community And Bear Head Energy.
- ▶ Bear Head Proudly Partners With And Supports A Variety Of Charities, Community Events, And Local Projects, Including:
 - Granville Green
 - Port Hawkesbury Civic Centre
 - Specialized Hydrogen And Ammonia Training With NSCC
 - Zamboni For Richmond County
 - PHAST- Port Hawkesbury Antigonish Swim Team

Stay informed And Sign-Up To
Receive Updates At
www.BearHeadEnergy.ca



REGIONAL ECONOMIC BENEFITS

Bear Head Energy Will Help Establish Atlantic Canada As A Global Leader In Green Hydrogen And Ammonia Production And Supports The Development Of New Businesses Associated With Green Hydrogen And Ammonia Production.

The Construction And Operation Of Bear Head Energy's Facility Will Create Significant Direct And Indirect Economic Benefits For Local Communities, The Province, And Region.

► Regional Economic Benefits

- Jobs And Training In Community And Region
- Use Of Local Personnel, Goods, And Services
- Diversification Of Local Economy
- Capacity Building And Skills Training
- Increased Municipal, Provincial, And Federal Tax Revenue

► Local Employment

- Construction Phase: Up To 700 jobs
 - *Currently Refining Our Existing Agreement With The Cape Breton Building And Construction Trades Council Which Ensures Access To Skilled Labour And Opportunities For Local Tradespeople*
- Ongoing Operations And Maintenance: Up To 70 Permanent Direct Jobs

► New Industry Potential

- Onshore And Offshore Wind Farm And Transmission System Operations And Maintenance
- Electrolyzer Manufacturing And Maintenance
- Green Fertilizer And Steel Production



ENVIRONMENTAL ASSESSMENT

KEY TECHNICAL STUDIES

- ▶ Noise Assessment
 - Noise Modelling To Predict Operational Sound Levels At Nearest Receptors
- ▶ Quantitative Risk Assessment
 - Consequence Modelling And Risk Assessment For Accidental Risk Scenarios To Inform Engineering Design And Assess Risk To Human Health And Environment
- ▶ Preliminary Assimilative Capacity Study For A Marine Outfall To Assess Facility's Effluent Without Negatively Impacting Aquatic Life
- ▶ 2022 Field Surveys
 - Bat Acoustic Survey (Aug-Sep 2022)
 - Eelgrass Survey (Sep 2022)
 - Aquatic Habitat Survey (Nov 2022)
 - Preliminary Walkover Survey For Mammals, Herpetiles, Wetlands And General Habitat (July, Sept, Nov 2022)
 - Winter Track Surveys (Jan-Feb 2023)
- ▶ Utilize Significant Studies And Data Developed From The Prior Two Environmental Assessments Approved For The Site
- ▶ Additional Field Surveys Planned In 2023 Post-EA, Prior To Construction Start



SAFETY

Bear Head Energy Is Taking A Safety-First Approach To All Aspects Of Facility Design, Construction, And Operations. Large-Scale Green Hydrogen And Ammonia Production, Storage, And Transportation Is A Relatively New Industry. Doing Things Safely From The Very Beginning Will Guide Project Timelines.

SAFETY CODES OF PRACTICE

- ▶ Bear Head Energy Diligently Reviewed Available Codes And Standards For Designing Green Hydrogen And Ammonia Plants In Nova Scotia And Canada And Determined That A Comprehensive Code Of Practice Did Not Exist
- ▶ Bear Head Energy Proactively Engaged Lloyd's Register To Develop A Code Of Practice That Could Be Used To Develop A Safe Design For The Facility
- ▶ Bear Head Has Shared The Code Of Practice With The Province Of Nova Scotia And Received Helpful And Constructive Feedback That Is Informing Facility Design

RISK ASSESSMENT AND CONSEQUENCES MODELLING

- ▶ Bear Head Energy Retained Industry Experts And Conducted Thorough Consequences Modelling And Quantitative Risk Assessment To Estimate Extent Of Impact And Risk To Public Safety
 - Multiple Scenarios Were Modelled
 - Potential Risks From The Facility Are Low When Compared To Canadian Best Practice Guidance From The Canadian Society For Chemical Engineering (CSChE)
- ▶ Detailed Facility Design Will Utilize Quantitative Risk Assessment In Decision Making To Inform Facility Design, Mitigation Measures, And Layout
- ▶ The Modelling Is Being Finalized And Will Be Included In The Bear Head Environmental Assessment Registration Document

