



**PIERIDAE** ENERGY

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# Corporate Presentation

June 7, 2019

**Pieridae Energy**  
**PEA.V**

# Cautionary Statements

## Cautionary Note Regarding Forward Looking Information

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Forward-looking statements involve significant risk and uncertainties. A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements including, but not limited to, risks associated with oil and gas exploration, development, exploitation, production, marketing and transportation, loss of markets, volatility of commodity prices, currency fluctuations, imprecision of resources estimates, environmental risks, competition from other producers, incorrect assessment of the value of acquisitions, failure to realize the anticipated benefits of acquisitions, delays resulting from or inability to obtain required regulatory approvals and ability to access sufficient capital from internal and external sources and the risk factors outlined under "Risk Factors" in the Company's AIF. The recovery and resources estimates of Pieridae's reserves provided herein are estimates only and there is no guarantee that the estimated resources will be recovered. As a consequence, actual results may differ materially from those anticipated in the forward-looking statements.

Forward-looking statements are based on a number of factors and assumptions which have been used to develop such forward-looking statements, but which may prove to be incorrect. Although Pieridae believes that the expectations reflected in such forward-looking statements are reasonable, undue reliance should not be placed on forward-looking statements because Pieridae can give no assurance that such expectations will prove to be correct. In addition to other factors and assumptions which may be identified in this document, assumptions have been made regarding, among other things: the impact of increasing competition; the general stability of the economic and political environment in which Pieridae operates; the timely receipt of any required regulatory approvals; the ability of Pieridae to obtain qualified staff, equipment and services in a timely and cost efficient manner; the ability of the operator of the projects which Pieridae has an interest in, to operate the field in a safe, efficient and effective manner; the ability of Pieridae to obtain financing on acceptable terms; the ability to replace and expand oil and natural gas resources through acquisition, development and exploration; the timing and costs of pipeline, storage and facility construction and expansion and the ability of Pieridae to secure adequate product transportation; future oil and natural gas prices; currency, exchange and interest rates; the regulatory framework regarding royalties, taxes and environmental matters in the jurisdictions in which Pieridae operates; timing and amount of capital expenditures, future sources of funding, production levels, weather conditions, success of exploration and development activities, access to gathering, processing and pipeline systems, advancing technologies, and the ability of Pieridae to successfully market its oil and natural gas products.

Readers are cautioned that the foregoing list of factors is not exhaustive. Additional information on these and other factors that could affect Pieridae's operations and financial results are included in reports on file with Canadian securities regulatory authorities and may be accessed through the SEDAR website ([www.sedar.com](http://www.sedar.com)), and at Pieridae's website ([www.pieridaeenergy.com](http://www.pieridaeenergy.com)). Although the forward-looking statements contained herein are based upon what management believes to be reasonable assumptions, management cannot assure that actual results will be consistent with these forward-looking statements. Investors should not place undue reliance on forward-looking statements. These forward-looking statements are made as of the date hereof and Pieridae assumes no obligation to update or review them to reflect new events or circumstances except as required by Applicable Securities Laws.

Forward-looking statements contained herein concerning the oil and gas industry and Pieridae's general expectations concerning this industry are based on estimates prepared by management using data from publicly available industry sources as well as from reserve reports, market research and industry analysis and on assumptions based on data and knowledge of this industry which Pieridae believes to be reasonable. However, this data is inherently imprecise, although generally indicative of relative market positions, market shares and performance characteristics. While Pieridae is not aware of any misstatements regarding any industry data presented herein, the industry involves risks and uncertainties and is subject to change based on various factors.

The reporting currency is the Canadian dollar. All amounts are presented in Canadian dollars unless otherwise stated. US Dollar figures in the context of this presentation have been converted into Canadian dollars at a rate of C\$0.75/US \$1.00

# Pieridae's Advantage

- Construction ready LNG export project
- Low-cost reserves to supply facility
- Low cost of capital to build LNG terminal and gas production base
- Strong access to international markets
- Continued community, labour and First Nations support



# Pieridae's Achievements

- Canada's only fully independent, integrated LNG company
- Pieridae is developing the USD \$10 billion Goldboro LNG project (\$8 billion facility, \$2 billion upstream)
- All major environmental, import, export and construction permits are in place
- The German Government has approved USD \$4.5 billion in principle in loan guarantees
- Pieridae has signed an export contract with Germany's Uniper for 20 years
- A benefits agreement has been signed with the Nova Scotia Mi'kmaq
- Project labour agreement in place with the 15 trades that make up the Mainland Nova Scotia Trades
- Respected global firm KBR to review Goldboro designs and provide a detailed cost estimate



# Unique Business Model



- 'Field to flange business model': we own the gas, liquefy it and sell it overseas
- Pieridae management developed LNG export model in 2007 with the Kitimat LNG project
- Economic theory: use the upstream as the primary method of managing commodity risk
- The company has negotiated space on existing pipelines to transport natural gas to the Goldboro facility



# Revitalize, Repurpose, Reuse



- Revitalize Alberta & Atlantic Canada natural gas assets to serve new offshore markets
- Repurpose and expand Alberta midstream assets, and existing Canadian natural gas pipelines
- Reuse waste heat from Goldboro facility which is a natural by-product of the liquefaction process

# Strong Upstream Gas Supply



Upstream Assets <sup>(1)</sup> (all \$ figures in CAD Millions)

Proved and Probable Producing (P&P) Reserves (bcf)	642
P&P Reserves Value	\$488
Base Production Decline Rate	~10%
Net Undeveloped Land (Acres)	~400,000
Replacement value of ~1800 km of pipelines & processing facilities	~\$600
Q1 2019 Average Daily Production (mmcf/d)	~102
Q1 2019 Average Daily Production (BOE/d)	~17,000

**Notes:**

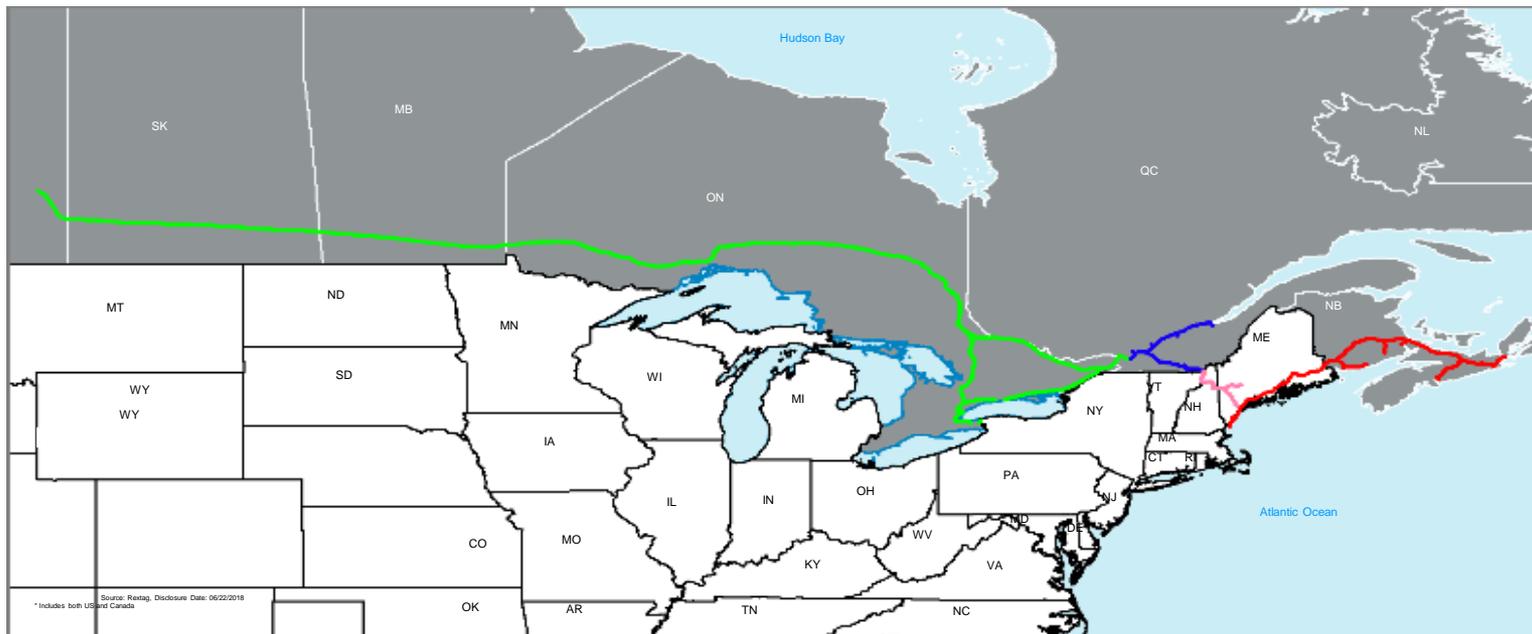
1. As of December 31, 2018 based on Deloitte report
2. Estimated net working interest replacement value
3. Excludes Sulphur production

- Pieridae acquired Western Canadian gas producer Ikkuma in December 2018
- Gas reserves are primarily conventional with very low declines
- Ikkuma cost ~\$7,500 CAD per barrel, a similar transaction in the Marcellus or Permian Basin would cost significantly more
- Reserves can reach production of 500 mmcf/d through development, increasing to 800 mmcf/d with further conventional acquisitions

# Lowering Risk: No New Pipelines Needed

- Pieridae will use existing pipelines and has negotiated tolls to access this infrastructure to move Western Canadian gas to supply Goldboro LNG
  - Advantageous tolling structure
  - TC Energy: Empress to Westbrook, Maine
  - Enbridge: Westbrook to Goldboro, Nova Scotia

## Pipeline Transportation – Facility/Train 1



# Goldboro LNG

- The plant will be built in Nova Scotia, 250 km northeast of Halifax
- It would include two liquefaction facilities (or 'trains'), each producing ~5 million tonnes of LNG each year
- The production from the first train has been sold to German utility Uniper – a 20-year binding contract with a 10-year extension
- 1.6 Bcf/d of natural gas is needed to supply a 2-train (two facility) project
- Alberta will provide majority of the gas needed for train 1



Cleared Goldboro LNG site in Nova Scotia

## Operating Statistics

Commercial Operations	Commence by 2023/2024
Send-Out Capacity	Up to 10 mmtpa (2 trains)
Shipments Expected	7 – 13 / Month
Max LNG Carrier Capacity	145,000 – 250,000 m <sup>3</sup>

## On Site Facilities

Liquefaction Plant	2 x 5 mmtpa
LNG Storage Tanks	2 x 190,000 m <sup>3</sup>
Gas Access	<ul style="list-style-type: none"> <li>• Maritimes &amp; Northeast Pipeline</li> <li>• Direct pipeline from offshore</li> <li>• TC Energy pipeline</li> </ul>
Power Generation	<ul style="list-style-type: none"> <li>• 200 MWh of on site generation</li> <li>• Emergency backup generators</li> </ul>
Marine Facilities	<ul style="list-style-type: none"> <li>• 2 x loading berth</li> <li>• Jetty trestle for LNG transfer lines</li> <li>• 1 x marine offloading wharf</li> </ul>
Water Pipeline & Intake	<ul style="list-style-type: none"> <li>• Supply pipeline from Meadow Lake</li> <li>• Onsite treatment facilities</li> </ul>
Buildings & Utilities	<ul style="list-style-type: none"> <li>• Admin, control and maintenance</li> <li>• Utilities to support the Project</li> </ul>

# Goldboro Construction Options & Costs

## Total Project Costs – USD \$10 billion:

- Train 1 USD \$6 billion (includes upstream)
- Train 2 USD \$4 billion (includes upstream)

## Current Options (Focused on Option #2):

1. 1 train (one facility), 5 mmtpa (million tonnes per annum) project, smaller utilities, no immediate expansion plans
  2. **2 train, 10 mmtpa project, full utilities, train 1 built first, train 2 built at a later date**
  3. 2 train, 10 mmtpa project, both trains built at the same time
- Expected project financing structured with a high debt-to-equity ratio
  - USD \$4.5 billion in loan guarantees confirmed in principle by German Government
- ‘Anticipated low cost of capital and amount of leverage represents a significant advantage over competitors’**

# All Major Permits in Place

- 🇨🇦 Environmental Assessment Approval
- 🇨🇦 National Energy Board LNG Export License
- 🇨🇦 National Energy Board Import License
- 🇺🇸 US DOE LNG FTA Export Permit
- 🇺🇸 US DOE NFTA Export Permit
- 🇨🇦 Construction Permit

***Project is truly 'shovel ready'***

# Pieridae Has a Significant Global Advantage

- We are building for the future, not the past
- Future global LNG market to resemble current crude oil market: convergence and transparency of price, shorter contracts
- Shipping distance a key part of the economic solution
- **Goldboro is half the distance to Europe, and closer to South America and South Asia (via the Suez) compared to ships coming from the U.S. Gulf Coast and Qatar**

Pieridae Market Reach



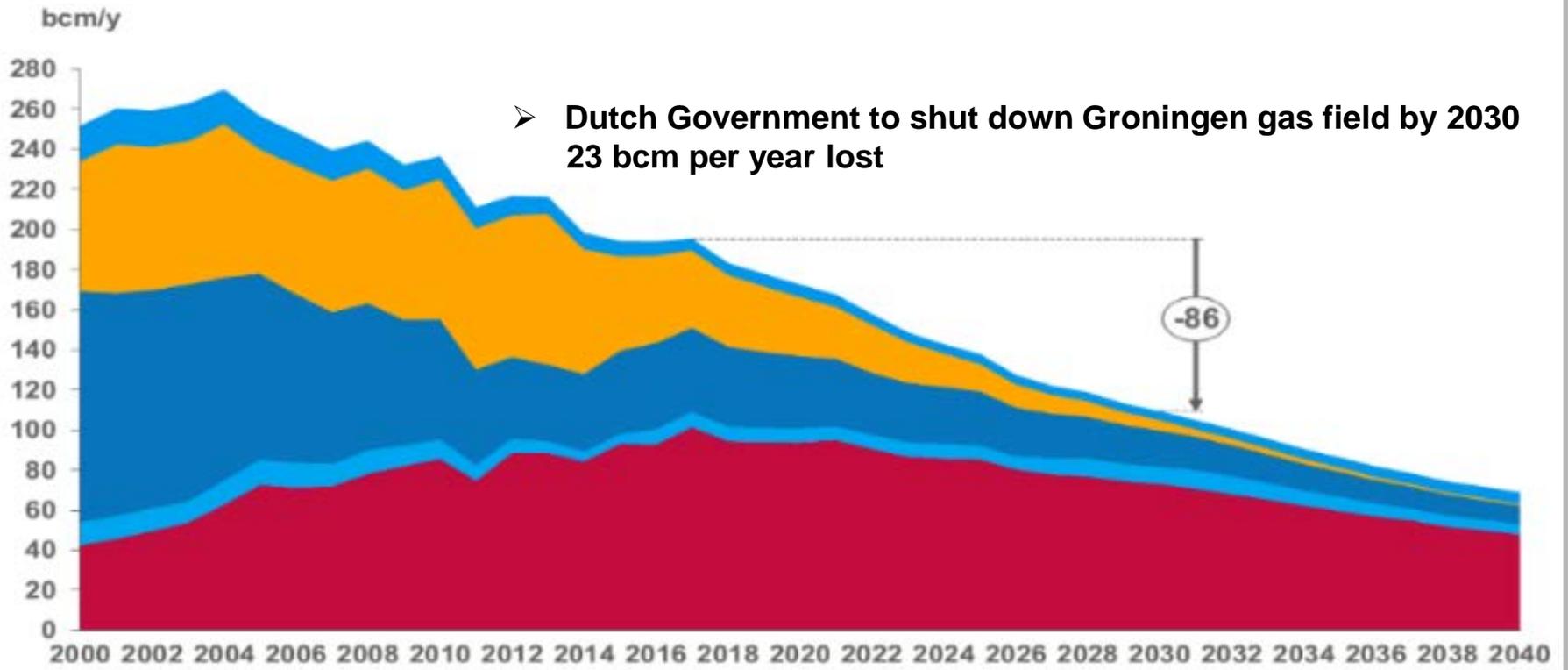
Shipping Days to Market

Location	Goldboro	Gulf Coast	Qatar
Zeebrugge (Belgium)	6.5	10.9	14.5
Dragon LNG	5.0	10.8	14.5
Swinoujscie (Poland)	6.8	12.0	16.0
Fos Sur Mer (France)	7.6	12.0	10.5
Barcelona (Spain)	7.5	11.6	10.5
Middle East or India	17.1	22.0	0.1

Source: Searates.com

# LNG Global Shortage Predicted in 2023/2024

- NW European Gas Production Has Been Declining, Will Drop Further

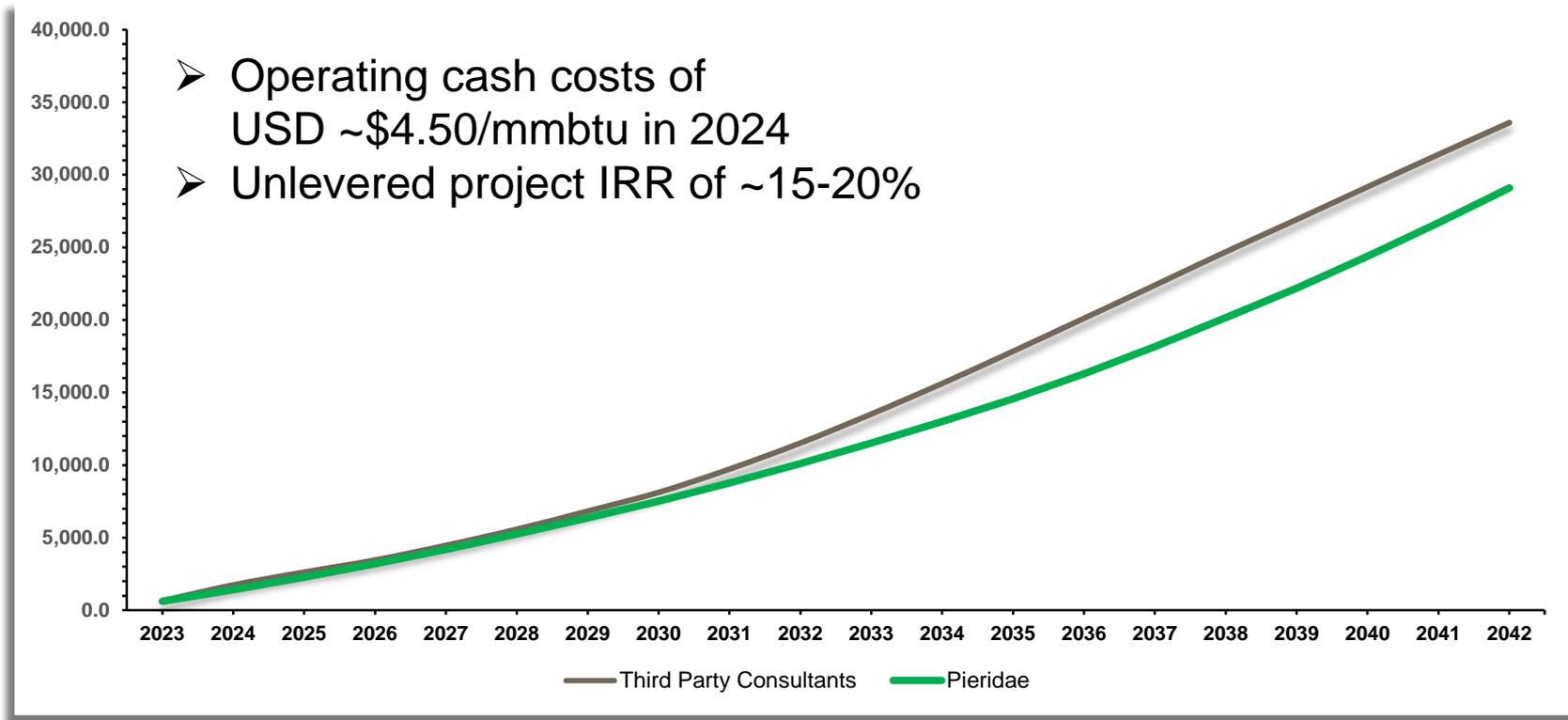


Source: IHS Markit July 2018

# Capital, Financing & Cash Flow

## Cumulative Excess Cash (After Debt Service) – Train 1

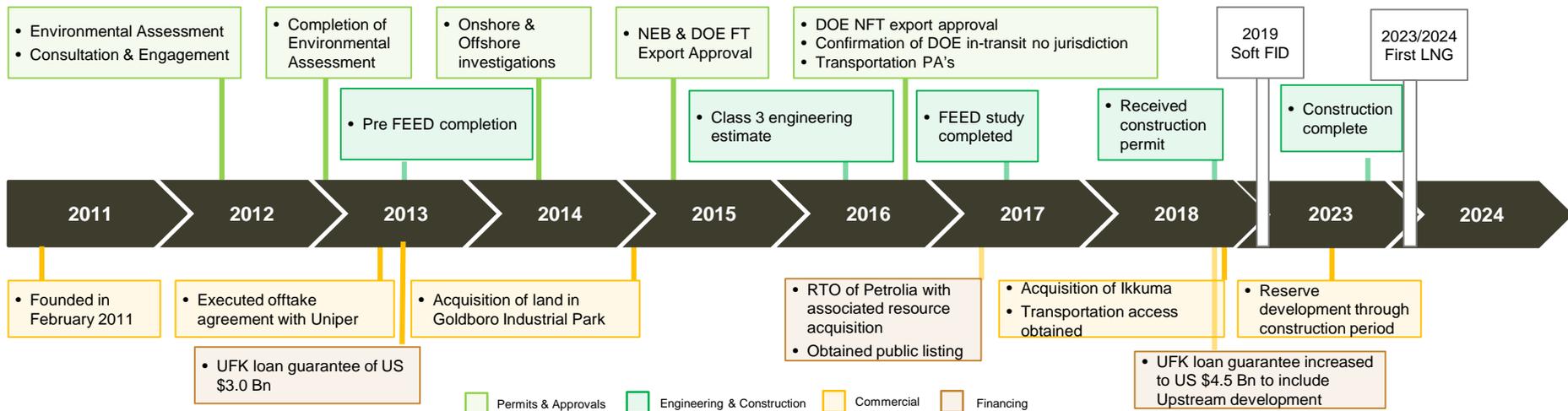
USD Millions



### Assumptions:

- Train 1 Capital and associated Upstream of ~ USD \$6 Billion
- Operating Cash Costs include Net Upstream Costs (F&D & all Opex costs, net of Non Gas Revenues (i.e.: Sulphur and Condensate)), Pipeline Tolls, LNG Plant costs and contractually obligated costs associated with the Train 1 Offtake agreement (Buyer's margin, Shipping and Regas costs)
- Phased Approach scenario assumed which is a 2 Train, 10 mmtpa project with full utilities and a phased construction schedule with Train 1 built in the near term and the second Train built at a later time
- Pieridae forecast LNG price of USD \$8.21/mmbtu in 2024; Third Party Consultant forecast price varies between USD \$8.50 and \$9.00/mmbtu
- Assumed 75/25 debt/equity leverage
- Cumulative Excess Cash is Pre Tax and Undiscounted

# Goldboro Project Timeline



# Industry-Experienced Management Team

## Management

### **Alfred Sorensen**

*President, CEO & Director*

- Founder of Continental Energy Marketing Ltd
- Former President of Duke Energy Canada
- Former President of Duke Energy International, London, UK
- Founder of Galveston LNG and the Kitimat LNG project in British Columbia

### **Tim de Freitas**

*Chief Operating Officer & Director*

- Founder of Manikot Energy and Ikkuma Resources (CEO, Director, and COO rolls)
- Former COO of Drako Energy & Amarak Energy
- 25 years+ of technical and managerial upstream international and domestic experience at BG, Talisman Energy, Exxon, Imperial Oil and Nexen

### **Melanie Litoski**

*Chief Financial Officer*

- Chartered Professional Accountant (CA) with over 25 years of financial experience
- Variety of industries including transportation, utilities, financial services and retail
- Previously with KPMG, J.D. Irving, First Student, ENMAX, Dollar Financial and Founders Advantage Capital

### **Martin Belanger**

*SVP Goldboro LNG*

- Former interim CEO and board member at Petroliia
- Over 25 years of oil and gas experience
- Previously with Talisman Energy, PrimeWest Energy, TAQA, Laricina and TC Energy

### **Thomas Dawson**

*SVP Business Development*

- Founder of Galveston LNG and the Kitimat LNG project in British Columbia
- Over 25 years of leadership experience in the global energy industry
- Previously with Duke Energy, Engage Energy and Coastal Corp

### **Yvonne McLeod**

*SVP Upstream Operations*

- Professional Engineer with 25+ years international and domestic experience with drilling and completion engineering in Trinidad, Alaska, Peru, Canada and the U.S.
- Former VP operations, drilling and completion with Ikkuma Resources and Manikot Energy
- Former technical and engineering leadership rolls in Talisman & Exxon.

### **Rob Dargewitz**

*SVP Finance and Risk Management*

- Over 20 years of oil and gas experience primarily in finance
- Former Treasurer of North West Redwater Partnership, with a \$10 billion financing completed
- 15 years with Shell Canada in various roles
- Retired Canadian Forces Army officer (Captain)

## Independent Directors

### **Myron Tétreault - Chairman**

*President, Calafate Holdings*

### **Andrew Judson**

*Director, Daytona Power Corp.*

### **Charles Boulanger**

*CEO, Leddartech Inc.*

### **Kjell Pedersen**

*Former Director,  
Det Norske Oljeselskap AS*



# The Pieridae Advantage

1

Veteran management team with extensive experience developing LNG projects, committed to 12% of company's outstanding shares

2

Owner of underutilized, economically stranded gas assets which can be sold at international energy prices

3

Fully integrated strategy delivering gas from ground to ship, providing customers with unprecedented price stability and visibility

4

Underpinned by 20-year take-or-pay contract with an investment grade German utility

5

US\$4.5 Billion in German government loan guarantees with potential tied ECA support from other European countries of an additional US\$2.5 Billion

6

Extensive support from Canadian Federal and Provincial governments, First Nations, local communities, Germany and other countries



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