

### PHOENIX **CLEAN FUELS, LLC.**







Value Creation through Innovative Technology Solutions





## **Phoenix Clean Fuels**

- ➤ Scimation
  - Project Development/Management
  - ➢ Engineering

### ≻ TDX

- Project Management
- Operations and Maintenance

≻ SLR

- Environmental Engineering
- ➤ Compliance

- ≻ GE Oil & Gas
  - Liquefaction Technology
  - Engineering, Procurement, and Construction
- ➢ Alaska Industrial
  - LNG Transportation and Logistics



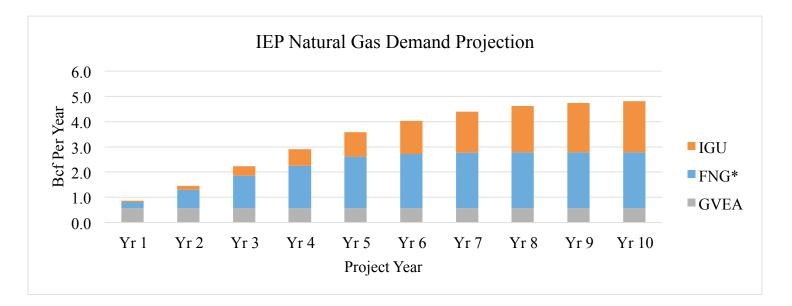
# **Our Strategy**

- Locate the liquefaction plant at source of lowest cost feed gas
- > Utilize proven, scalable technology backed by the industry leader in cryogenic processing
- > Team with Alaskan entities that have proven track records operating on the North Slope
- Control transportation costs by capitalizing the trailers
- > Apply the optimum combination of State financing and outside financing
- > Adopt a business model that provides the lowest cost LNG to Fairbanks



### Natural Gas Demand

- Two phase project approach
  - Phase one 3.0 Bcf/year capacity (100,000 gallons per day)
  - ➢ Phase two − 6.0 Bcf/year capacity (200,000 gallons per day)





# Liquefaction Technology

- Modular design
  - Ease of installation
  - Transportability
  - Reduced "sunk" costs
- Performance Guarantees
  - > Delivery
  - > Throughput
  - ➢ Efficiency
- Industry leader



# **North Slope Experience**

- ➢ Over \$50 MM of installed projects in Deadhorse, AK in 2014
  - > 1,000 barrel/day advanced oil recovery/processing plant
  - ➤ 15 megawatt expansion of power generation facility
- ➢ Over 13 years operating on the North Slope
  - Actual operating costs used
    - for estimating proposed project costs
- Team of accomplished entrepreneurs, engineers, management and financial experts



## **LNG Transportation**

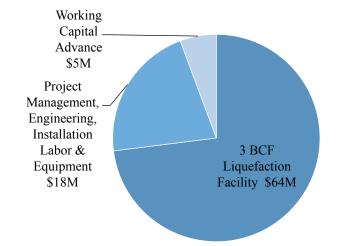
- Phoenix owned LNG trailers
- Experienced North Pole logistics company
  - Efficient integrated operations
  - Ability to scale up or down
  - Ability to provide trailer
    maintenance
- Long term agreement offers
  pricing certainty



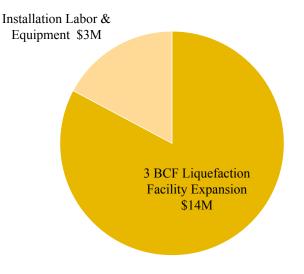


## **Phoenix Project Capital Costs**

#### **Phase One Capital Costs**



#### **Expansion Capital Costs**



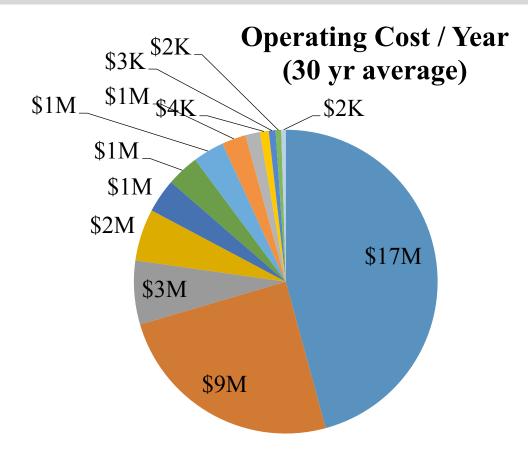
#### LNG Trailer Capital Costs – Phase One and Expansion

LNG Trailers -Expansion \$6M

LNG Trailers -Phase I \$5M



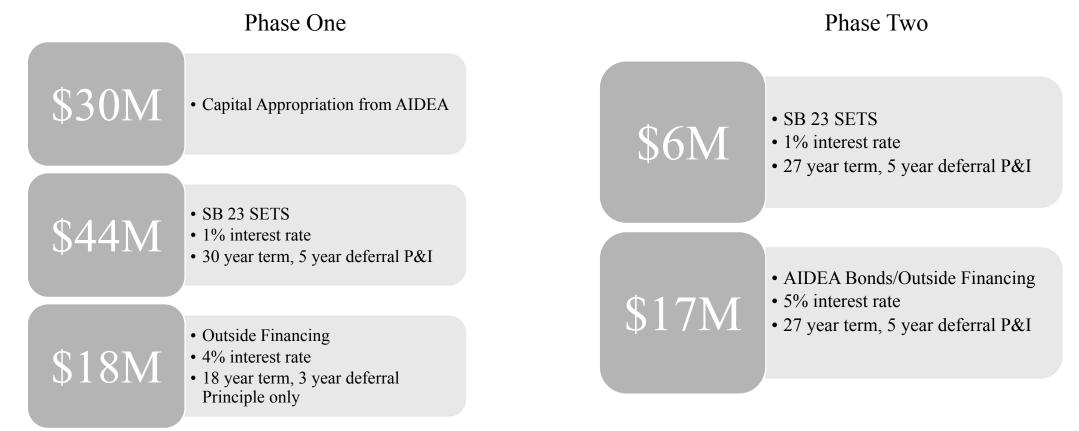
# **Phoenix Operating Costs**



- Transportation (T)
- Feedstock (V)
- Labor (F)
- Property Tax (F)
- Repairs (F)
- $\blacksquare G\&A(F)$
- Insurance (F)
- Contingency (F)
- Mgmt Fee (F)
- Natural Gas (F)
- Natural Gas (V)
- Other (F)
- Repairs (T)



# **Project Financing**



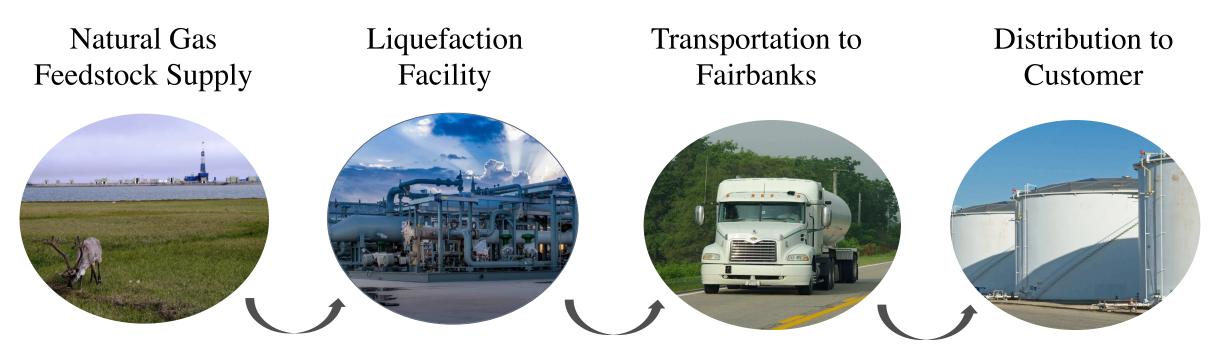


### **Project Schedule**

	Milestone	Start	End
Commercial			
	LNG Off Take Agreement(s)	1/16	4/16
	Natural Gas Feedstock Agreement	1/16	4/16
	Operating Agreements (MSAs)	3/16	6/16
Design and En	gineering		
	Front End Engineering and Design	2/16	7/16
	Design and Engineering	1/16	12/16
	Environmental Engineering/Permitting	4/16	9/17
Procurement			
	Site Improvement Contracting	7/16	10/16
	Site Installation Contracting	8/16	11/16
Fabrication			
	Modular Liquefaction Plant	4/16	2/17
	LNG Trailers	3/16	7/17
Installation an	d Commissioning		
	Site Improvement - Feed gas Pipeline Installation	1/17	4/17
	Site Improvement - Pad and Piling Installation	11/16	1/17
	Installation - Plant Foundations	2/17	3/17
	Installation - Plant Installation Labor and Equipment	4/17	6/17
	Installation - Plant Enclosures	5/17	6/17
	Liquefaction Plant Commissioning	6/17	9/17
<b>Operations</b> Pla	anning		
	Operator Certification and Training	2/17	6/17
Commence No	ormal Operations		
	Start of Normal Operations	9/17	9/17



### **The Results**



Cost: \$2.10/MMBTU

Cost: \$ 3.49/MMBTU

Cost: \$4.06/MMBTU

Cost: \$ 4.00-5.00/MMBTU



# Closing

- > Phoenix has engineered a solution to meet the needs of the Interior Energy Project
- Experienced project team that is assembled and ready to partner with AIDEA to execute the project
- The Phoenix project solves an environmental issue for the Interior and will also be something the State of Alaska will be proud of for many years