



# Interior Gas Utility

Board of Directors Work Session  
January 15, 2019 @ 4:00 PM  
100 Cushman Street, Suite 512, Fairbanks, Alaska

## **DRAFT AGENDA**

- I. Call to Order**
  - Roll call
  - Approval of Agenda
  - Public Comment – *limited to three minutes*
- II. New Business** (Board Discussion)
  - Public Meetings Act – Board Communications
- III. Unfinished Business** (Board Discussion)
  - Security of Supply Analysis.....Pages 2-20
    - HDR Report
- IV. Other Business**
  - Action Items List.....Page 21
- V. Closing Comments**
  - General Manager Comments
  - IGU Attorney Comments
  - Directors Comments
- VII. Adjournment**

*To participate via teleconference, call 1-800-315-6338; when prompted, enter 47499*



Interior Gas Utility  
**BOARD MEMORANDUM**  
No. 2019-01

Meeting Date: January 15, 2019

**From:** General Manager, IGU

**Subject:** **Recommendation Regarding LNG Production Expansion – Security of Supply**

The Interior Alaska Natural Gas Utility (IGU), has been evaluating options related to the expansion of Liquefied Natural Gas (LNG) production and the optimization of such expansion related to capital expense and the desired security of supply.

**Background**

The IGU, through its subsidiary Titan Alaska LNG, LLC (Titan), currently owns and operates an LNG production facility in Pt. Mackenzie. The Titan facility was constructed in 1997 and has been in continuous operation since 1998. It has expanded since its original installation to its current daily production capacity of approximately 50,000 gallons per day. Titan currently operates 17 LNG transports with a plan to add incremental transports as demand warrants.

The LNG facility serves two primary customers at this time; the Talkeetna Lodge and the IGU utility customers in the Fairbanks North Star Borough (FNSB). LNG is transported in LNG trailers via road to the LNG storage facilities located at the Talkeetna Lodge and in the FNSB.

The IGU owns and operates two existing LNG storage and vaporization facilities in the FNSB with a total storage capacity of 340,000 gallons. Certificates of Public Convenience and Necessity issued by the Regulatory Commission of Alaska mandate the minimum storage required is 5 days at peak demand. The IGU is constructing a 5.25 Million Gallon Storage facility with a planned completion date in the fourth quarter of 2019. This will provide enhanced security of supply and ensure the minimum required storage is maintained as IGU grows its customer base and demand in the FNSB. In addition, a smaller storage facility with a capacity of 150,000 gallons, to be located in North Pole and connected into the previously installed distribution system is in its final engineering and planning phase. If approved for construction this facility is planned to be completed in the fourth quarter of 2019.

Expansion of natural gas use in the FNSB necessitates an increased supply of LNG. The IGU is evaluating an expansion of its facilities in Pt. Mackenzie in addition to a potential third-party supply currently being discussed with Siemens.

Funding necessary for the expansion of facilities is governed by the Interior Energy Plan, through a Finance Agreement (FA) between the Alaska Industrial Development and Export Authority (AIDEA) and IGU. The FA includes an “Integrated Gas Utility Capital Program” (IGUCP) (Attachment #1). The IGUCP includes the expansion of LNG production through construction of Titan 2 and Titan 3 including a project cost of \$71,200,000.

The IGU Board of Directors has requested an analysis of the Security of Supply and has suggested the IGU ensure a high level of supply security from which its customers can rely on. The IGU’s goal is for the supply security to be maintained during an extended loss of production from its largest producing unit being relied on for supply at any given time. The IGU has contracted with HDR, Inc. to conduct the LNG supply security analysis.

**HDR Analysis**

HDR has completed an analysis utilizing an LNG Supply Security Model to evaluate several production scenarios with two assumptions related to customer demand and conversion rates. The reports are based on a 35% Conversion Rate (Attachment #2 – 10140951-HDR -RPT-0008 IGU Supply Security Summary Report 35% Conv 1-7-19), and a 50% Conversion Rate (Attachment #3 – 10140951-HDR-RPT-0009 IGU Supply Security Summary Report 50% Conv 1-7-2019).

The production Scenarios include the following:

**Plan A**

Plan A is the plan which is included in the currently adopted IGUCP.

Titan 1 – Existing 50,000 gallons per day (GPD)

Titan 2 – 100,000 GPD (2022)

Titan 3 – 100,000 GPD (2023)

**Plan B**

Plan B reduces the design capacity of the expansions in the early years so as to minimize any excess installed capacity versus demand.

Titan 1 – Existing 50,000 GPD

Titan 2 – 50,000 GPD (2022)

Titan 3 – 50,000 GPD (2023)

Titan 4 – 100,000 GPD (2024)

**Plan C**

Plan C advances the installation of Titan 3 so as to provide N+1 redundancy on installed capacity to enhance supply security.

Titan 1 – Existing 50,000 GPD

Titan 2 – 100,000 GPD (2022)

Titan 3 – 100,000 GPD (2022)

**Plan S**

Plan S is the integration of the proposed Siemens supply scenario with the existing Titan facility.

Titan 1 - Existing 50,000 GPD

LNGo 1 – 30,000 GPD (2021)

LNGo 2 – 30,000 GPD (2021)

LNGo 3 – 30,000 GPD (2021)

LNG Expansion 4\* – 100,000 GPD (2022)

\* The addition of the 100,000 GPD facility is referred to as Titan 2 in the HDR report, however it could be installed at the Siemens facility or Titan facility.

**Summary – 35% Conversion**

Plan	Installed Capacity	Largest Unit	5 Day Supply Maintained	Total Capital Estimate
A	250,000	100,000	Yes **	\$80MM
B	250,000	100,000	Yes	\$100MM
C	250,000	100,000	Yes	\$75MM
S	240,000	100,000	Yes	Unknown***

\*\* 5 Day supply maintained only if Titan 2 is installed in 2023. If Titan 3 is delayed to 2024, and demand matches projections a disruption of two months would result in storage levels below 5 days.

\*\*\* The capital cost for this scenario is unknown given the Siemens proposal is to deliver LNG to IGU FOB Fairbanks without disclosing the capital cost. If IGU elects to install the 100,000 GPD at Titan in 2022 the estimated capital cost is \$50MM in addition to any fixed charges that may result from a Siemens supply option.

**Summary – 50% Conversion**

As can be seen by the HDR reports (See Attached), in order to maintain secure supply with a 50% conversion utilizing plans A, B or C, IGU will need to keep conversions lower than the 50% mark until 2022 or expedite construction of the first units to be in service by 2021. IGU management does not believe this is possible given the construction schedule realities and the only practical solution would be to minimize conversion rates. Maintaining adequate security of supply for a 50% conversion will also necessitate the installation of an additional 100,000 GPD unit in 2024 under all scenarios.

Plan S will work with a 50% conversion only if an additional 100,000 GPD unit is installed in 2023.

**Additional Analysis & General Manager's Recommendation**

HDR was asked to model additional scenarios which are included in Attachment #2, Pages 7-9, Charts 6, 7, & 8. Given the capital cost for Plan B utilizing smaller 50,000 GPD units versus larger 100,000 GPD units in Plans A & C is significantly greater for the same total capacity, it is recommended the IGU eliminate Plan B as a potential project approach.

The General Manager recommends the IGU Board authorize advancement of the Front-End Engineering & Design to solidify project scope and budgets to include the installation of Titan 2 and Titan 3 in accordance with Plan A. The FEED should also address the addition of Titan 4 to prepare IGU to meet increased demands should conversions exceed the 35% baseline. The installation of Titan 3 can be deferred to 2023 and does not jeopardize security of supply and allows IGU to confirm conversion levels will support the additional investment. This will minimize the impacts additional capital expenditures will have on costs and rates - should conversions and gas demand be delayed. As shown by Attachment #2, Chart #6, Titan 1 & Titan 2 can sustain a 4-month outage with demand up to 2.1 Billion Cubic Feet (BCF) annually. It is recommended that IGU be prepared to ensure Titan 3 and additional units are installed as necessary once demand is reasonably assured to exceed 2 BCF. Demands below 2 BCF are assured security of supply with Titan 1, Titan 2 and completion of the 5.25 MM gallon storage facility.

Prepared and Submitted by: Dan Britton, General Manager

Approved:

\_\_\_\_\_  
Pamela Throop

\_\_\_\_\_  
Date

Chair, IGU Board of Directors

Attachments:    1. Integrated Utility Capital Program  
                      2. 10140951-HDR-RPT-0008 IGU Supply Security Summary Report 35% Conv  
                      3. 10140951-HDR-RPT-0009 IGU Supply Security Summary Report 50% Conv

**BM 2019-01  
ATTACHMENT #1**

**APPENDIX B – Integrated Utility Capital Program**

<b>APPENDIX B-1 INTEGRATED GAS UTILITY CAPITAL PROGRAM</b>				
<b>Item</b>	<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>	<b>Total</b>
<b>LNG Supply</b>				
Titan 2 LNG Plant (inc. Titan 1 upgrades)	\$ 24,350,000	\$ 21,850,000	\$ -	46,200,000
Titan 3 LNG Plant	-	-	25,000,000	25,000,000
ST - LNG Supply	\$ 24,350,000	\$ 21,850,000	\$ 25,000,000	71,200,000
<b>Transportation</b>				
LNG High-capacity Trailers & Equip	\$ 1,095,000	\$ 730,000	\$ 2,920,000	4,745,000
<b>Storage and Vaporization</b>				
FBKS 5.2mgal Storage	\$ 42,000,000	\$ -	\$ -	42,000,000
NP 150kgal Storage	10,000,000	-	-	10,000,000
ST - Storage	\$ 52,000,000	\$ -	\$ -	52,000,000
<b>Pentex Acquisition</b>				
IGU Acquisition of Pentex from AIDEA	\$ 59,575,000	\$ -	\$ -	59,575,000
<b>Distribution</b>				
Phase 1 IGU Buildout	\$ 23,400,000	\$ -	\$ -	23,400,000
Phase 2 IGU Buildout	-	-	25,670,000	25,670,000
Phase 3 IGU Buildout	-	-	38,290,000	38,290,000
FNG Expansion - Gas Mains	15,000,000	-	8,000,000	23,000,000
FNG - Future Peak Shaving Plant	-	-	2,000,000	2,000,000
IGU & FNG - New Services and Meters	-	1,141,400	18,007,600	19,149,000
ST - Distribution	\$ 38,400,000	\$ 1,141,400	\$ 91,967,600	\$ 131,509,000
<b>Program Management</b>				
Program Management	7,200,000	500,000	1,500,000	9,200,000
Customer Conversion Program	125,000	250,000	2,625,000	3,000,000
ST - Program Management	\$ 7,325,000	\$ 750,000	\$ 4,125,000	\$ 12,200,000
<b>Total Capital Program</b>	<b>\$ 182,745,000</b>	<b>\$ 24,471,400</b>	<b>\$ 124,012,600</b>	<b>\$ 331,229,000</b>
<b>Sources of Funds</b>	<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>	<b>Total</b>
Appropriations	\$ 42,440,000	\$ -	\$ -	\$ 42,440,000
SETS	125,000,000	-	-	125,000,000
AIDEA Bonds	-	19,451,400	121,092,600	140,544,000
Commercial Financing (bridge & LNG trailers)	15,305,000	(13,480,000)	2,920,000	4,745,000
Storage Credits	-	18,500,000	-	18,500,000
<b>Total Sources of Funds</b>	<b>\$ 182,745,000</b>	<b>\$ 24,471,400</b>	<b>\$ 124,012,600</b>	<b>\$ 331,229,000</b>

BM 2019-01  
ATTACHMENT #2

# Summary Report

Date: Monday, January 07, 2019

Project: IGU LNG Supply Security Model

To: Dan Britton, IGU General Manager

Prepared By: Alan Sheppard

Reviewed By: Kristi Duff

Subject: **Interior Gas Utility – LNG Supply Security Model with 35% Conversion Rate of Customers**

## 1. INTRODUCTION

This project involves the production of liquefied natural gas (LNG) from the Titan LNG plant located near Point MacKenzie, Alaska. The LNG is then transported by tanker truck from Point MacKenzie to Fairbanks, Alaska where the LNG is stored, re-gasified, compressed, and distributed by distribution pressure pipelines to residential and commercial customer meters.

This memo summarizes the Excel model (LNG Supply Security Model) HDR Engineering, Inc. (HDR) developed to show that the LNG production and delivery system can provide natural gas (NG) to customers in Fairbanks and North Pole in a safe, predictable, and reliable manner.

The LNG supply scenarios modeled were provided by IGU and are summarized as follows. The years listed are the in service dates:

1. Plan A – Titan 2 (2022) and Titan 3 (2023), 100,000 GPD each
2. Plan C – Same as Plan A but with Titan 2 and 3 (2022)
3. Plan B – Titan 2 (2022) 50,000 GPD, Titan 3 (2023) 50,000 GPD and Titan 4 (2024) 100,000 GPD
4. Plan S – Siemens has proposed building three LNGo facilities (2021) 30,000 GPD each and Titan 2 (2022) 100,000 GPD

It has been assumed in all project scenarios that the existing Titan 1 LNG Facility is operational and that the new 5.25 million (M) gallon LNG storage tank will be operational in October 2019.

All of the modeling scenarios listed in this summary report utilize a customer conversion rate of 35%. The interruptible demand for the University of Alaska Fairbanks (UAF) and Fairbanks Memorial Hospital (FMH) are not included.

The scenarios modeled reference various outage durations and months. The winter months were selected because these are the months with the largest natural gas demand.



## 2. MODEL RESULTS

### 2.1. PLAN A

The proposed Plan A buildout schedule is as follows:

1. The Titan 2 LNG plant (100,000 gallons per day [GPD]) is assumed to be in service in January 2022.
2. The Titan 3 LNG plant (100,000 GPD) is assumed to be in service in January 2023.

**Chart 1** depicts a four (4) month outage scenario (January thru April) of the Titan 2 facility beginning in 2023 and occurring every year thereafter. Under this scenario, there would be at least five days of LNG storage in the storage tank.

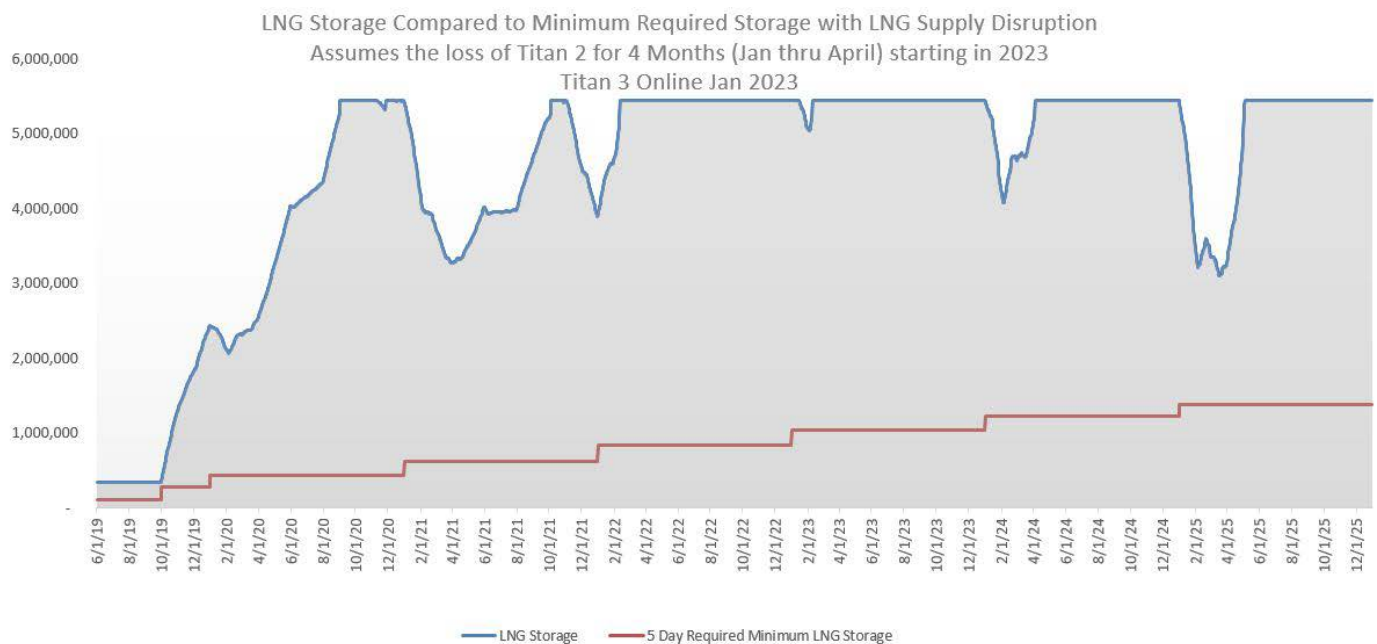


Chart 1 – LNG Storage compared to 5 Day Minimum for Plan A



**Chart 2** (Plan A) is the same as Chart 1 with the exception that the Titan 3 facility comes online in January 2024 and the outage duration is reduced to two months (January and February). The chart shows that there would not be sufficient LNG in storage if the Titan 3 buildout is delayed until 2024.

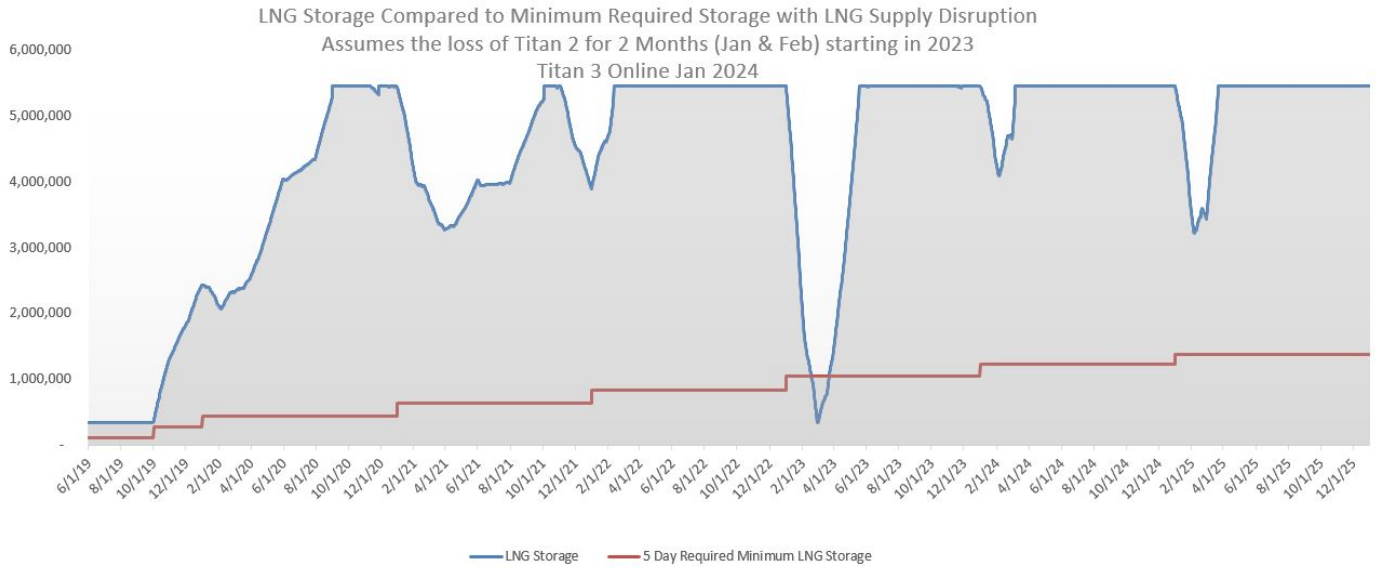


Chart 2 – LNG Storage: Plan A but with Titan 3 operational in 2024

## 2.2. PLAN C

The proposed Plan C buildout schedule is the same as Plan A except that Titan facilities 2 and 3 would both be in service by January 2022. Both facilities are assumed to be in service by January 2022 and operating at a capacity of 100,000 gallons per day (GDP).

**Chart 3** depicts a four (4) month outage scenario (January thru April) of the Titan 2 facility beginning in 2023 and occurring every year thereafter. Under this scenario, there would be at least five days of LNG storage in the storage tank.

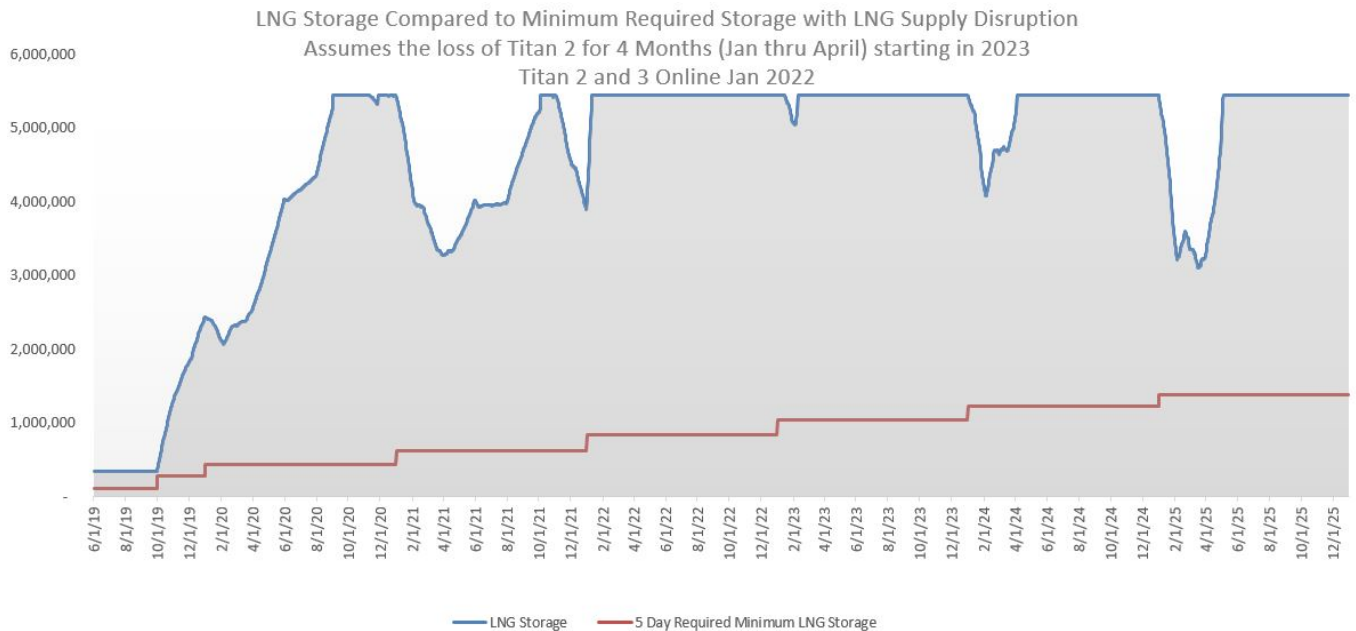


Chart 3 – LNG Storage compared to 5 Day Minimum for Plan C

### 2.3. PLAN B

The proposed Plan B buildout schedule is as follows:

1. Titan 2 LNG plant (50,000 GPD) is assumed to be in service in January 2022.
2. Titan 3 LNG plant (50,000 GPD) is assumed to be in service in January 2023
3. Titan 4 LNG Plant (100,000 GPD) is assumed to be in service in January 2024

Chart 4 depicts a four (4) month outage scenario (January thru April) of the Titan 2 facility beginning in 2023 and occurring every year thereafter. Under this scenario, there will be at least five days of LNG storage in the storage tank.

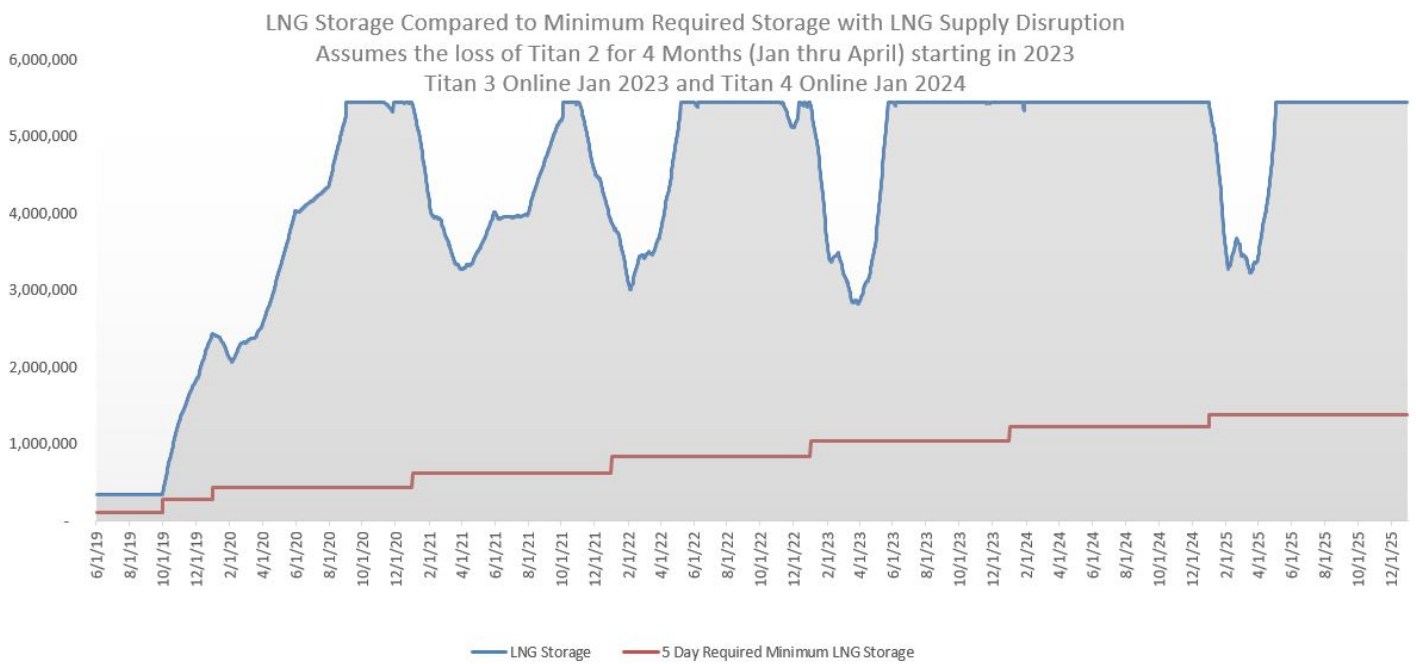


Chart 4 – LNG Storage compared to 5 Day Minimum for Plan B

## 2.4. PLAN S

The proposed Plan S buildout schedule is as follows. Siemens has made a proposal to build three of their patented small scale LNG facilities called LNGo.

1. LNGo 1 LNG plant (30,000 GPD) is assumed to be in service in January 2021.
2. LNGo 2 LNG plant (30,000 GPD) is assumed to be in service in January 2021
3. LNGo 3 LNG Plant (30,000 GPD) is assumed to be in service in January 2021
4. Titan 2 LNG Plant (100,000 GPD) is assumed to be in service in January 2022

**Chart 5** depicts a four (4) month outage scenario (January thru April) of the largest available LNG facility: Titan 1 facility in 2022 and the Titan 2 facility beginning in 2023 and occurring every year thereafter. Under this scenario, there will be at least five days of LNG storage in the storage tank.

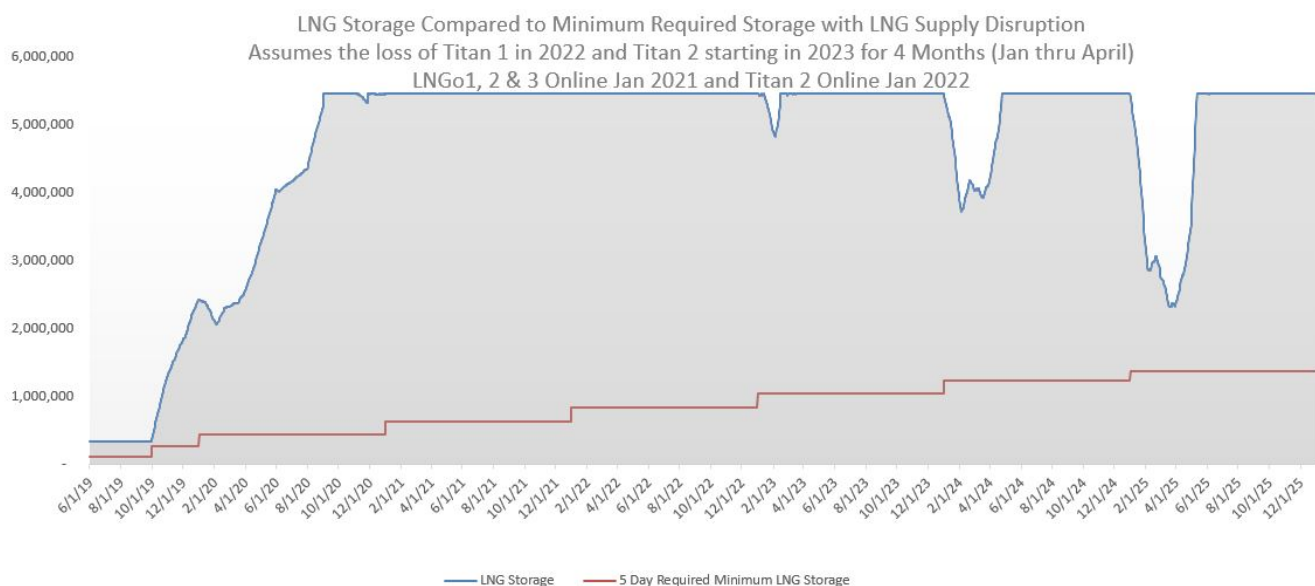


Chart 5 – LNG Storage compared to 5 Day Minimum for Plan S

## 2.5.ADDITIONAL MODEL RUNS

These three model scenarios were developed to determine different aspects of the LNG Supply Chain. They are directly associated with any of the proposed future buildout plans. The information derived from these scenarios is as follows:

1. Chart 6 – Assuming only Titan 1 and 2 are in service – what is the maximum demand that can be met with an extended outage (four months)? The answer is 25M GPY of LNG or about 2.1 Billion Cubic Feet (BCF).
2. Chart 7 – With the demand capped at the 2019 level and only Titan 1 in services, how long of an outage can the LNG supply chain handle? The answer is approximately five months assuming the months are January thru May.
3. Chart 8 – With demand capped at the 2019 level and only Titan 1 in service, the LNG supply chain support an increase of 2.5M gallons of demand added in 2021, 2022 and 2023? The answer is yes but only if the expected outage during is one month.

**Chart 6** depicts a four (4) month outage scenario (January thru April) of the Titan 2 facility beginning in 2023 and occurring every year thereafter. Under this scenario, the maximum LNG demand will be 25M gallons per year (GPY) while still maintaining at least five days of LNG storage in the storage tank. This model includes Titan 2 in the future build out scenarios and no other facilities (i.e. Titan 3, 4).

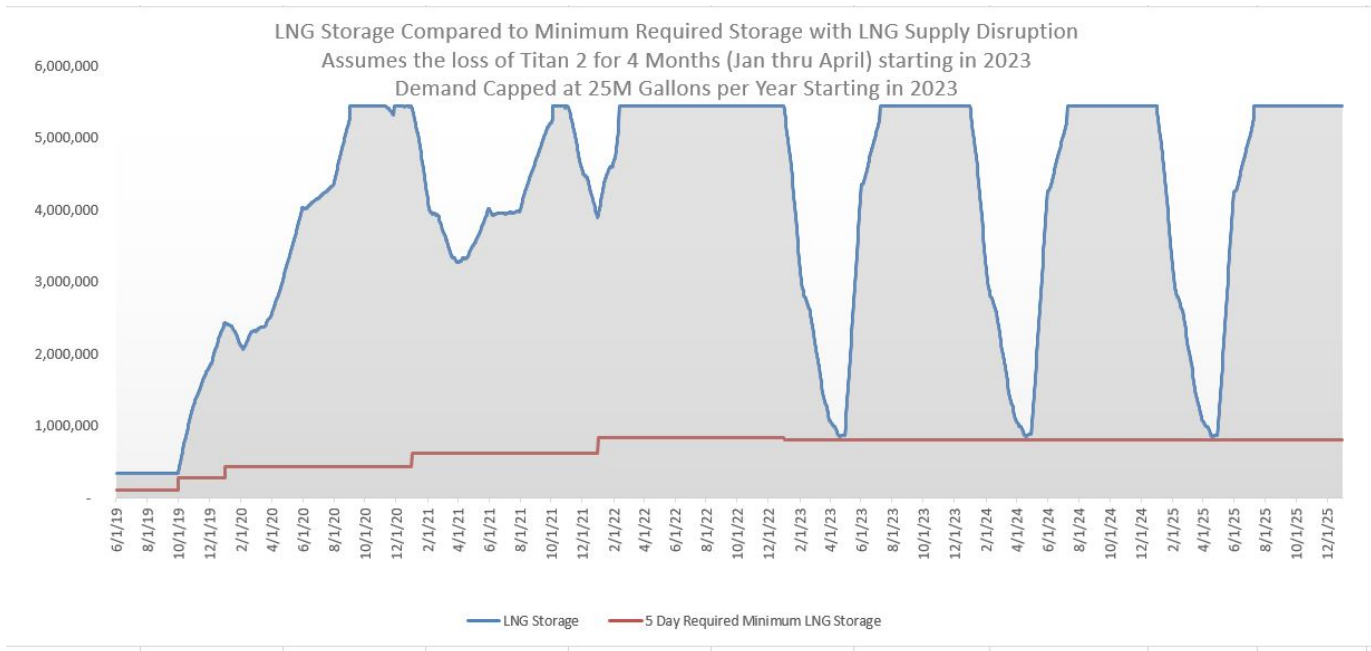


Chart 6 – LNG Storage with Titan 2 only and a capped demand of 25M GPY

**Chart 7** shows that with the demand capped at the 2019 level and only Titan 1 in service (no Titan 2, 3, etc), at least five days of LNG storage would be available if there were a Titan 1 outage up to five months (January thru May).

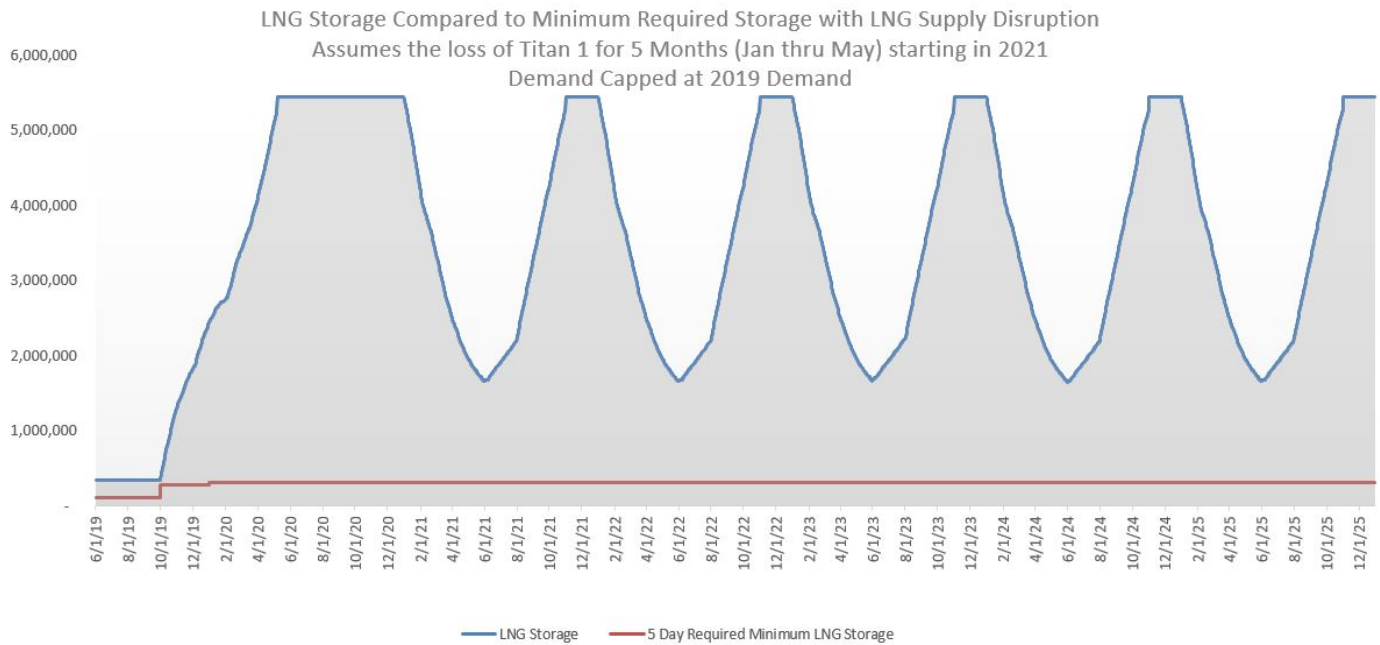


Chart 7 – LNG Storage with only Titan 1 facility, 2019 capped demand and a 5 month outage

### Chart 8 Assumes the following:

1. The demand capped at the 2019 level
2. 2.5M gallons of LNG demand added in 2021, 2022 and 2023 for a total demand of 17M gallons in 2023.
3. Only Titan 1 in service (no Titan 2, 3, etc)
4. A Titan 1 outage of one months (January) could occur every year

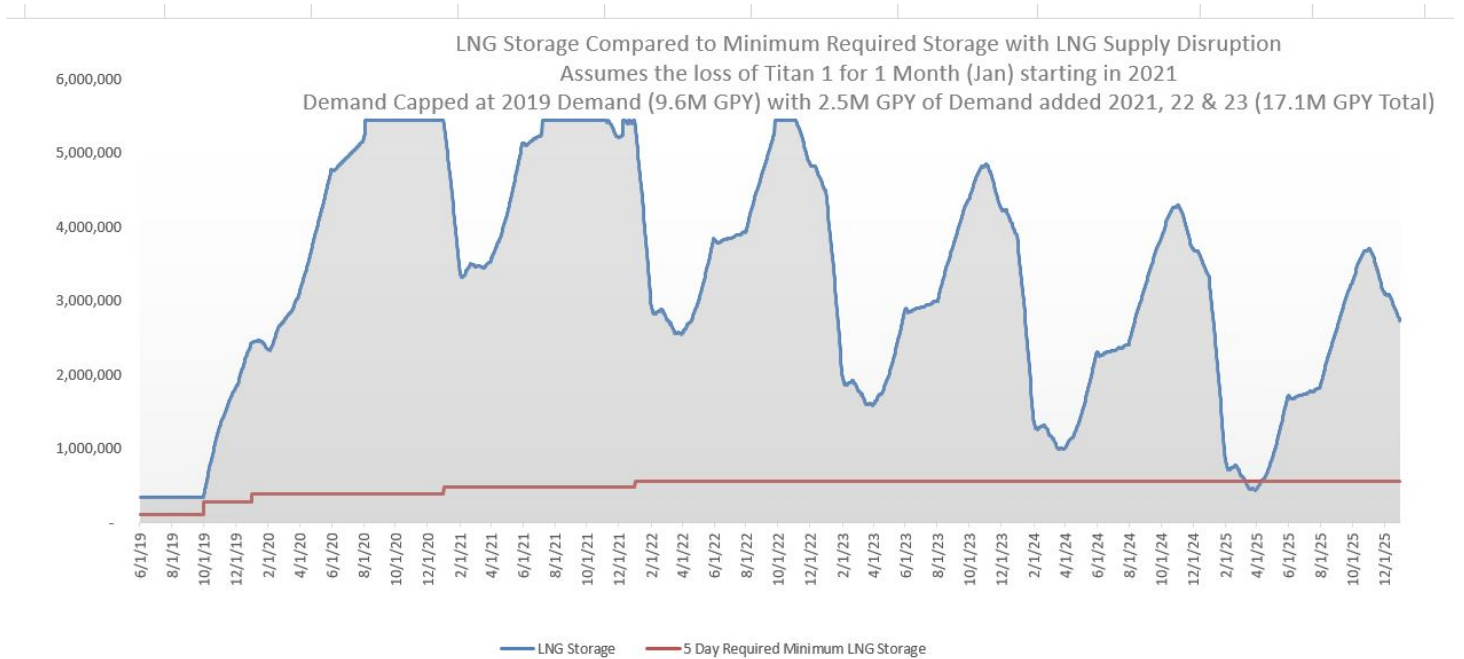


Chart 8 – LNG Storage with only Titan 1, 2019 capped demand, one month outage in January and additional LNG demand of 2.5M added in 2021, 2022 and 2023.

**BM 2019-01  
ATTACHMENT #3**

# Summary Report

Date: Monday, January 07, 2019

Project: IGU LNG Supply Security Model

To: Dan Britton, IGU General Manager

Prepared By: Alan Sheppard

Reviewed By: Kristi Duff

Subject: **Interior Gas Utility – LNG Supply Security Model with 50% Conversion  
Rate of Customers**

## 1. INTRODUCTION

This project involves the production of liquefied natural gas (LNG) from the Titan LNG plant located near Point MacKenzie, Alaska. The LNG is then transported by tanker truck from Point MacKenzie to Fairbanks, Alaska where the LNG is stored, re-gasified, compressed, and distributed by distribution pressure pipelines to residential and commercial customer meters.

This memo summarizes the Excel model (LNG Supply Security Model) HDR Engineering, Inc. (HDR) developed to show that the LNG production and delivery system can provide natural gas (NG) to customers in Fairbanks and North Pole in a safe, predictable, and reliable manner.

The LNG supply scenarios modeled were provided by IGU and are summarized as follows. The years listed are the in service dates:

1. Plan A – Titan 2 (2022) and Titan 3 (2023), 100,000 GPD each
2. Plan C – Same as Plan A but with Titan 2 and 3 (2022)
3. Plan B – Titan 2 (2021) 50,000 GPD, Titan 3 (2022) 50,000 GPD and Titan 4 (2023) 100,000 GPD
4. Plan S – Siemens has proposed building three LNGo facilities (2021) 30,000 GPD each and Titan 2 (2022) 100,000 GPD

It has been assumed in all project scenarios that the existing Titan 1 LNG Facility is operational and that the new 5.25 million (M) gallon LNG storage tank will be operational in October 2019.

All of the modeling scenarios listed in this summary report utilize a customer conversion rate of 50%. The interruptible demand for the University of Alaska Fairbanks (UAF) and Fairbanks Memorial Hospital (FMH) are not included.

The scenarios modeled reference various outage durations and months. The winter months were selected because these are the months with the largest natural gas demand.



## 2. MODEL RESULTS

### 2.1. PLAN A

The proposed Plan A buildout schedule is as follows:

1. The Titan 2 LNG plant (100,000 gallons per day [GPD]) is assumed to be in service in January 2022.
2. The Titan 3 LNG plant (100,000 GPD) is assumed to be in service in January 2023.

**Chart 1** shows that the natural gas demand will exceed the capacity of the proposed LNG buildout plan. No outage time is included. The Plan A buildout as proposed above with a 50% conversion rate does not work. Chart 2 shows a variation of Plan A that does work with the as proposed IGU 50% Conversion Rate demand.

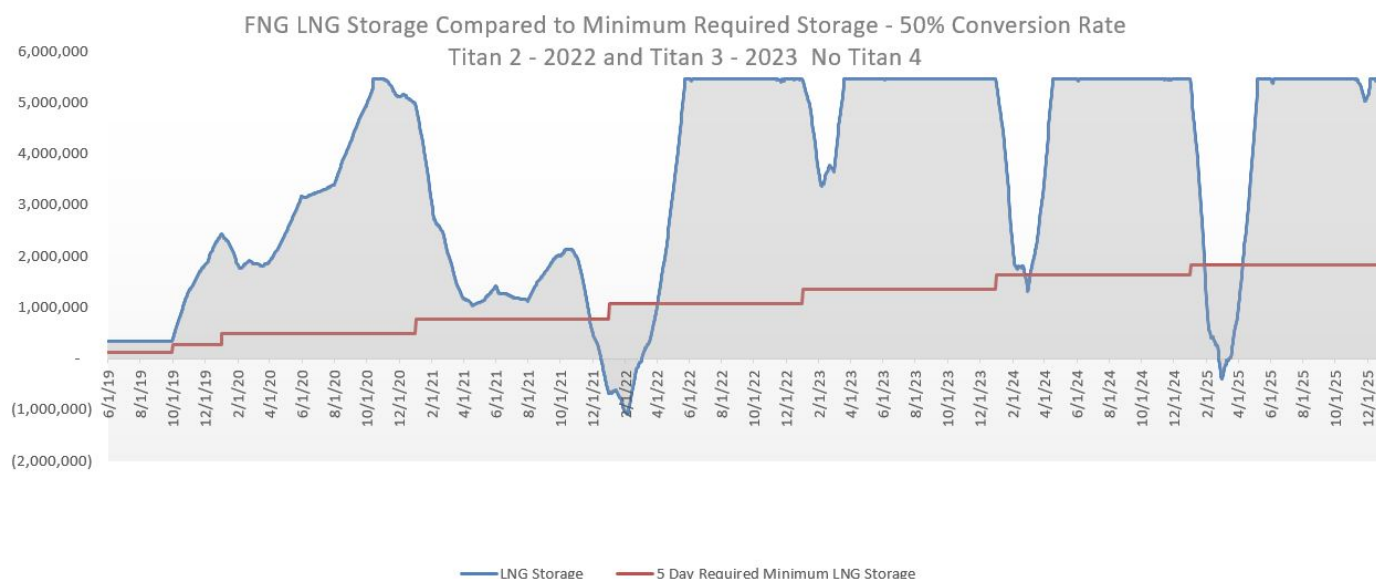


Chart 1 – LNG Storage compared to 5 Day Minimum for Plan A

**Chart 2** shows that in order to meet the IGU proposed 50% demand conversion rate and allow for a four month outage of the largest available LNG facility beginning in 2022 and occurring every year thereafter, the following buildout schedule would be necessary.

1. Titan 2 LNG plant (100,000 GPD) is assumed to be in service in January 2021
2. Titan 3 LNG plant (100,000 GPD) is assumed to be in service in January 2022
3. Titan 4 LNG plant (100,000 GPD) is assumed to be in service in January 2024

Having a Titan 2 facility in service by 2021 would be difficult so the 50% conversion rate demand would need to be delayed by one year which would allow for the in services date for each facility to slip one year: Titan 2 (2022), Titan 3 (2023) and Titan 4 (2025).

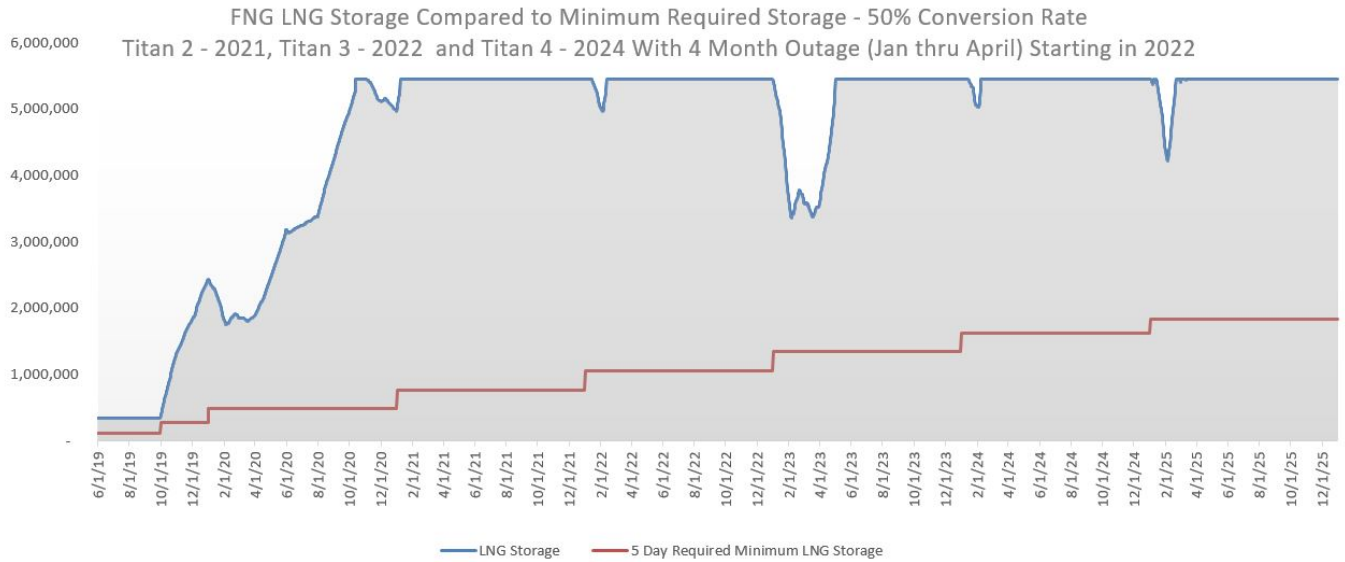


Chart 2 – LNG Storage: Titan 2 – 2021, Titan 3 – 2022 and Titan 4 – 2024

## 2.2. PLAN C

The proposed Plan C buildout schedule is the same as Plan A except that Titan facilities 2 and 3 would both be in service by January 2021 and operating at a capacity of 100,000 gallons per day (GDP). Like Plan A this scenario only works if a Titan 4 facility is in service in 2024 – see Chart 2.

### 2.3.PLAN B

The proposed Plan B buildout schedule is as follows:

1. Titan 2 LNG plant (50,000 GPD) is assumed to be in service in January 2021
2. Titan 3 LNG plant (50,000 GPD) is assumed to be in service in January 2022
3. Titan 4 LNG Plant (100,000 GPD) is assumed to be in service in January 2023

Chart 3 depicts a four (4) month outage scenario (January thru April) of the Titan 2 facility beginning in 2022 and occurring every year thereafter. Under this scenario, there will be at least five days of LNG storage in the storage tank.

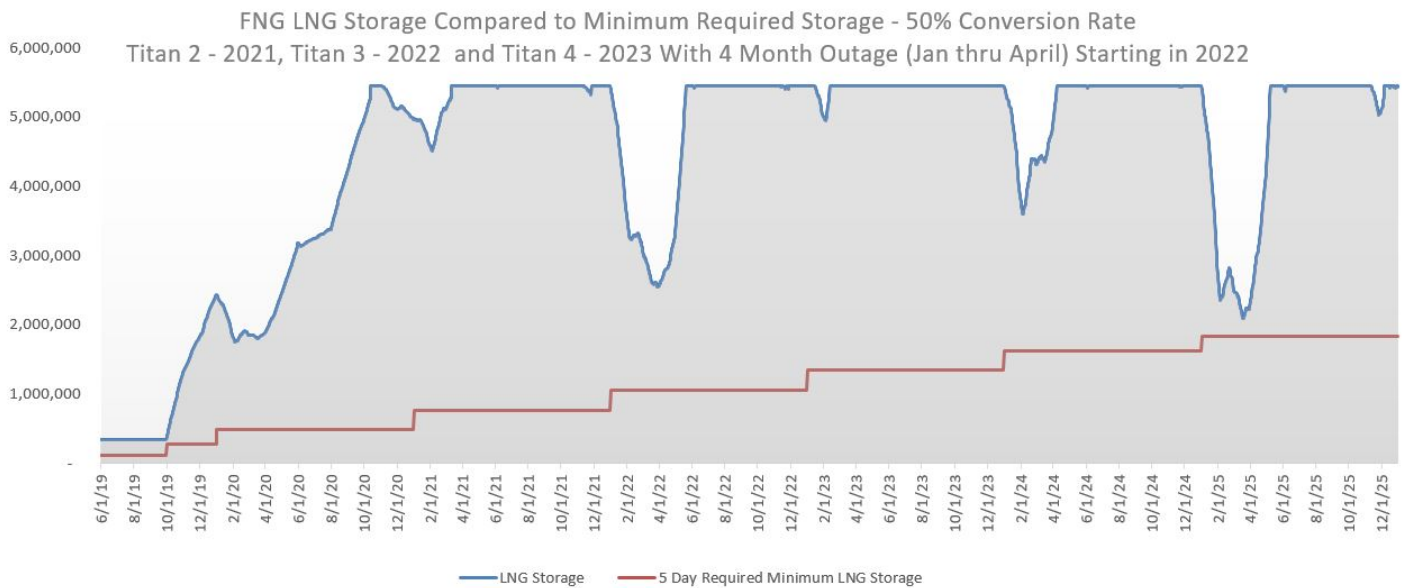


Chart 3 – LNG Storage compared to 5 Day Minimum for Plan B

## 2.4. PLAN S

The proposed Plan S buildout schedule is as follows. Siemens has made a proposal to build three of their patented small scale LNG facilities called LNGo.

1. LNGo 1 LNG plant (30,000 GPD) is assumed to be in service in January 2021.
2. LNGo 2 LNG plant (30,000 GPD) is assumed to be in service in January 2021
3. LNGo 3 LNG Plant (30,000 GPD) is assumed to be in service in January 2021
4. Titan 2 LNG Plant (100,000 GPD) is assumed to be in service in January 2022

Chart 4 depicts a four (4) month outage scenario (January thru April) of the largest available LNG facility: Titan 1 facility in 2022 and Titan 2 facility beginning in 2023 and occurring every year thereafter. Under this scenario, the LNG supply chain will not keep up with the demand unless an additional Titan 3 is installed in 2023.

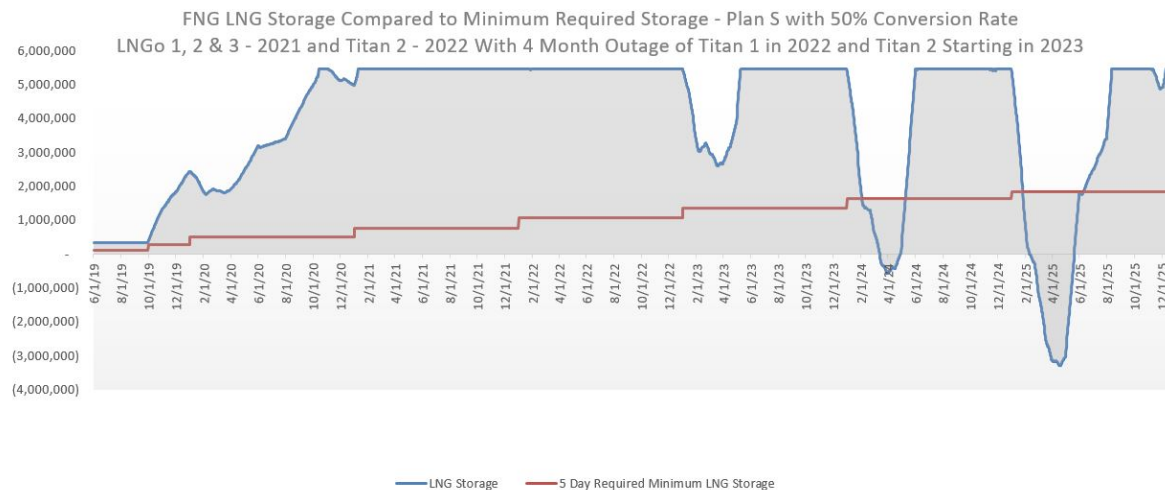


Chart 4 – LNG Storage compared to 5 Day Minimum for Plan S

# IGU Action Item List

Item	Action	Responsible Person	Date Initiated	Due Date	Status	Notes
1	Dan to look at what IGU BOD agreed to in the PSA re: North Slope Pad	Dan Britton	12/18/18		Completed	Zane is prepared to speak to the issue.
2	Send Mike Craft Press Release to BOD	Dan Britton	01/08/19		Completed	
3	FNG emails in compliance w Public Records Act.	Dan Britton & IGU Attorney	12/11/18		Drafting Policy	FNG has updated its email retention to ensure all emails are retained indefinitely.
4	Update Binders of Meeting Minutes & Attachments	Laura Steel	11/09/18	Ongoing	Ongoing	
5	Siemens Negotiations Schedule sent to BOD	Dan Britton		Weekly	Ongoing	
6	Finish modeling for comparisons	Brown Thornton		Ongoing	Ongoing	
7	Staffing plan for overall Project Management, Scope, Schedule and Budget	Dan Britton		Ongoing	Ongoing	
8	Identify gas supplies and negotiate price and terms	Dan Britton		Ongoing	Ongoing	
9	Global Plan going forward with the Utility, Update Capital Plan and Proforma	IGU Board		Ongoing	Ongoing	
10	Citizens for Clean Air Update	Director Lee		Monthly	Ongoing	
11	Siemens Negotiations Update under GM Report	Dan Britton		1st & 3rd Tuesdays	Ongoing	
12	FEED Update under GM Report	Dan Britton		1st & 3rd Tuesdays	Ongoing	
13	Hire Financial Advisors	Dan Britton			RFP issued 1/11/2019	
14	Hire media company for updating and integrating IGU and FNG's online/internet presence	Michelle Hollowell		12/31/18	Will issue an RFP	
15	Difference in cost for one train versus two trains	Dan Britton		End of December	Work Session 1/15/2019	
16	Storage levels in any given year as we grow our demand and recognize our security of supply	Dan Britton		End of December	Work Session 1/15/2019	
17	Discussion of Board Communications in compliance with Public Meetings Act	IGU Attorney	01/08/19		Work Session 1/15/2019	
18	Work w AIDEA and complete full DNR analysis, determine if we can move fwd w an appeal; report to BOD	Dan Britton	12/18/18		Board Meeting 1/22/2019	Appeal filed by AIDEA
19	IGU Policy 09 Relationship Between the IGU Board of Directors and the General Manager	IGU Board	09/04/18	Tabled on 9/4/18		
20	IGU Policy 10 Delegation of Authority by the IGU Board of Directors to the General Manager	IGU Board	09/04/18	Tabled on 9/4/18		
21	Policy Drafted on Public Records Retention	IGU Attorney	12/13/18			
22	Final Decision on North Slope Pad	IGU Board	12/18/18	01/22/19		
23	Ethical Procedures created	Director Nordale & IGU Attorney	01/08/19	Mid-February		
24	Consider forming a Board Improvement Committee	IGU Board	01/08/19			
25	Policy No. 05 Ethics and Conflicts of Interest updated	Director Nordale & IGU Attorney		Mid-February		
26	Policy No. 05 Ethics and Conflicts of Interest; Disclosure form created	Director Nordale & IGU Attorney		Mid-February		
27	Change the Code of Ethics	Director Nordale & IGU Attorney		Mid-February		
28	FEED scope to be completed and discussed with Braemar	Dan Britton				