

ERRA Webinar

Supported by:



REGULATION OF LNG SUPPLY AND TERMINALS

May 11, 2021

PTTLNG Terminal in Thailand

Apiwat Detwarasiti

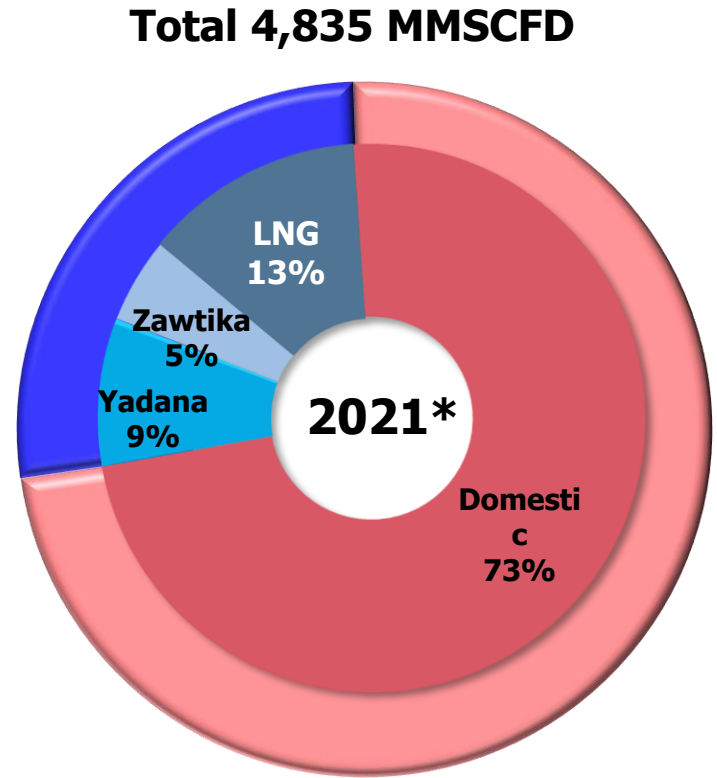
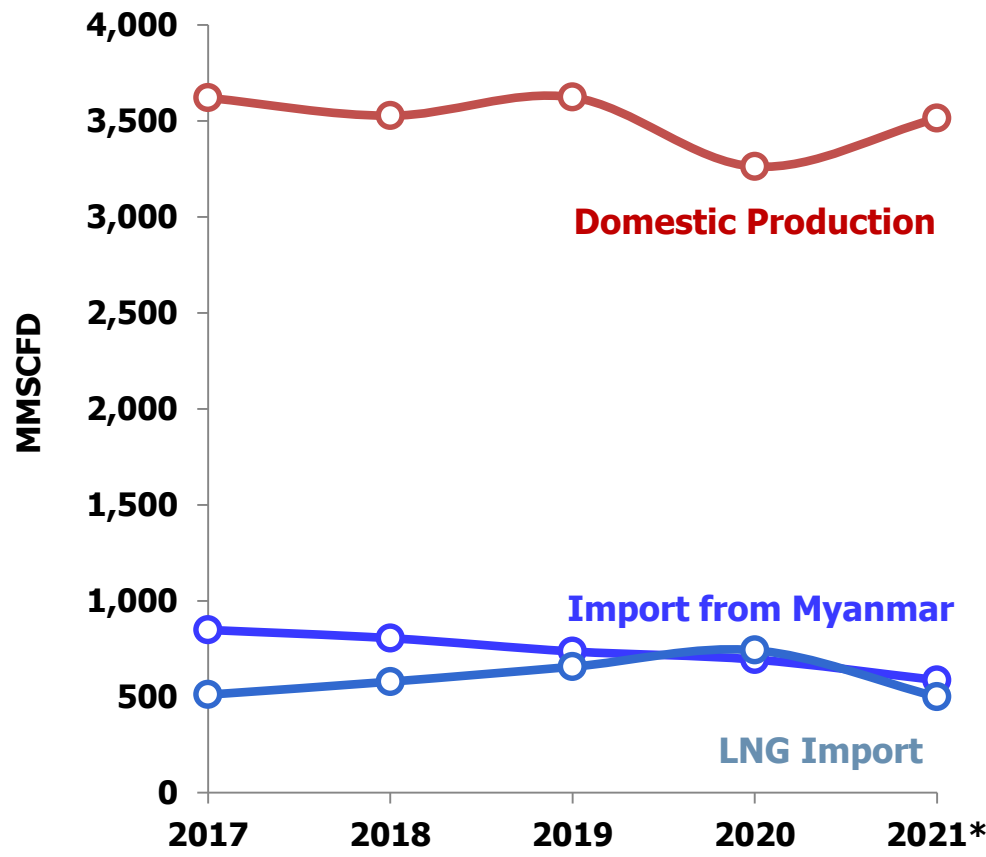
Executive Vice President in Corporate Strategy, PTTLNG



ERRA Webinar on Regulation of LNG Supply and Terminals

May 11th, 2021

Natural Gas Supply in Thailand



73% Domestic Production

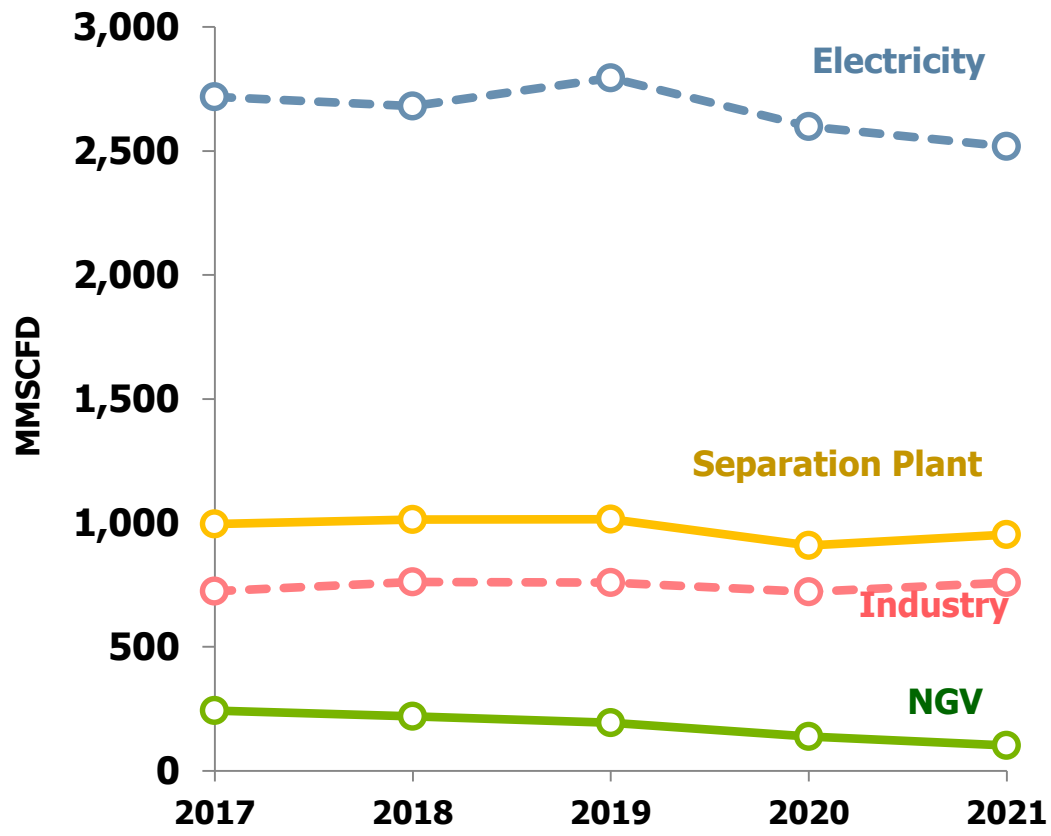
14% Import from Myanmar
Yetagun, Yadana and Zawtika

13% LNG Import

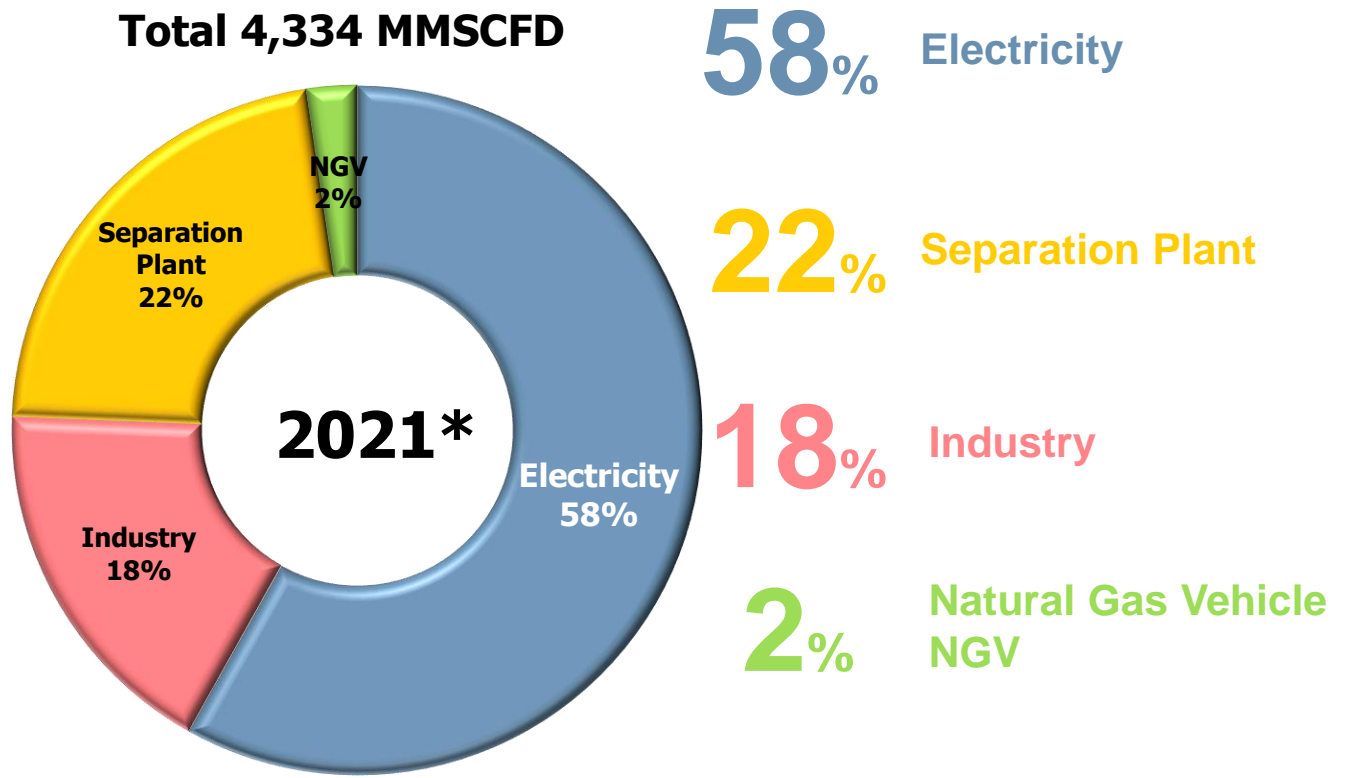
*2021 : Data of Jan – Feb

Natural Gas Supply **2.8%** ↓

Natural Gas Demand in Thailand



Natural Gas Demand 4.9% ↓



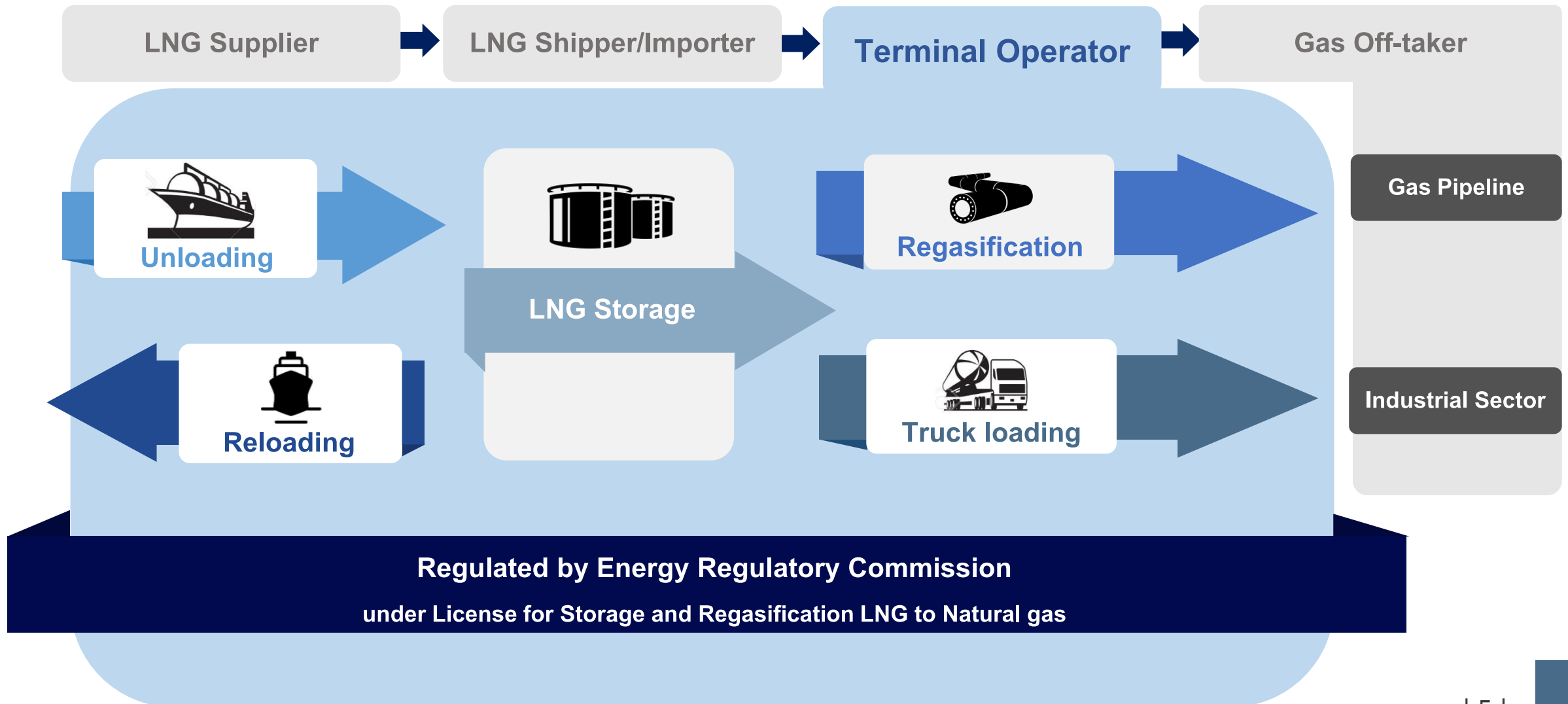
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LNG Terminal Objectives



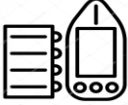




- Increase capability to meet growth in gas demand.
- To strengthen national energy security.

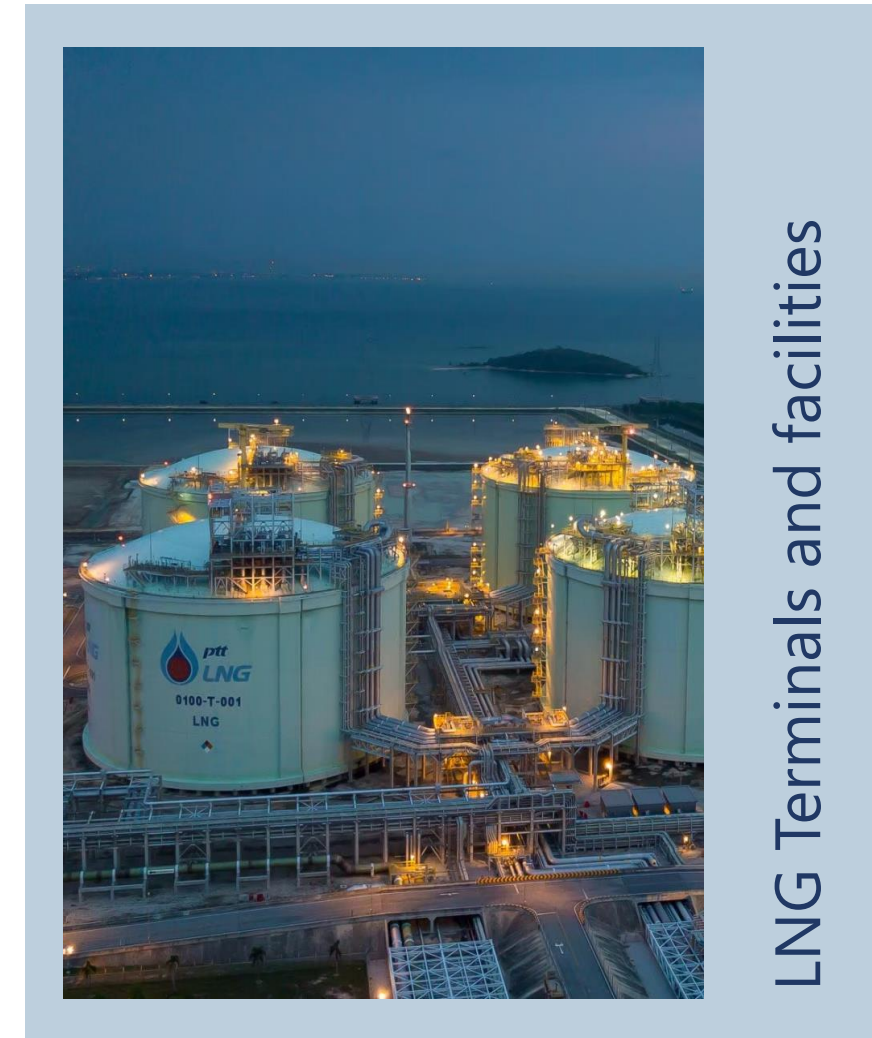
PTTLNG Responsibility



PTTLNG Facilities



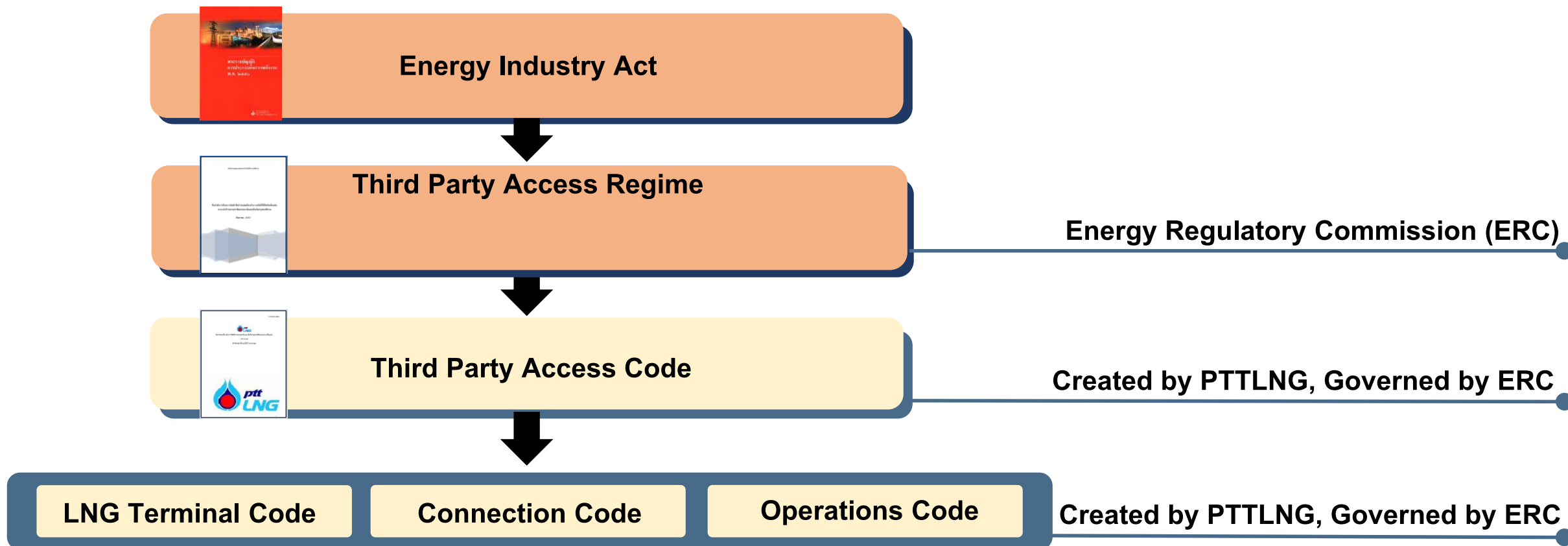
Facilities	Map Ta Phut Terminal	Nong Fab Terminal
 Jetty	3	2
 Vessel Size	2,500 m3 and 125,000 m3 - 264,000 m3	125,000 m3 - 264,000 m3
 LNG Tank	160,000 m3 x 4	250,000 m3 x 2
 Capacity	11.5 MTPA	7.5 MTPA
 Truck Loading	500 ton/day	-
Project Completion	11.5 MTPA since 2018	2022



LNG Terminals and facilities

The concept of Third Party Regulation

▶ Third Party Access Hierarchy



1. Access rules: Primary and Secondary capacity allocation

1 Primary Market



Open-Season



Available capacity to those who show intention to utilize capacity on a **“first come, first served”** basis

2 Secondary Market

- Available capacity from Primary Market
- Transfer capacity
- UIOLI, Short-term contract



Transfer capacity right from Primary Market



Use-It-Or-Lose-It (UIOLI)



Third party use who willing to use Short term contract

2. Tariffs: Regulated

Regulated Business

- ✓ Regulated by Energy Regulatory Commission
- ✓ Guarantee Return
- ✓ Fair fee and Equal access to use terminal

3. Transparency rules and Regulatory monitoring

Transparency rules

- ✓ Transparency is the key of TPA code
(*Open Season, Capacity Allocation, UIOLI*)

Regulatory monitoring

- ✓ To address complex multi-user capacity allocation and utilisation issues



3. Transparency rules and Regulatory monitoring



Regulated by Energy Regulatory Commission

- **Third Party Access Code**
- **Tariff Model : Demand charge and Commodity charge**
- **Inventory Management (Inventory Days and Allowable Inventory for Unloading)**
- **Allocation capacity (Open Season/UIOLI)**



Report to Energy Regulatory Commission

- **Terminal Variable cost**
- **Unloading cargoes/Storage utilization/Regasification rate**
- **Truck loading service**



**Monthly
Report**



**Yearly
Report**

4. Now and New service development of PTTLNG

1 Terminal Services

- ✓ Unloading, Storage, Regasification
- ✓ Truck loading/ISO Container
- ✓ Reloading
- ✓ Small ship loading



2 Cold Energy Utilization



LNG Cryogenic Power Generation



Cooling Air Inlet



Cooling Building (HVAC)



Agricultural (Temperate, Tropical)

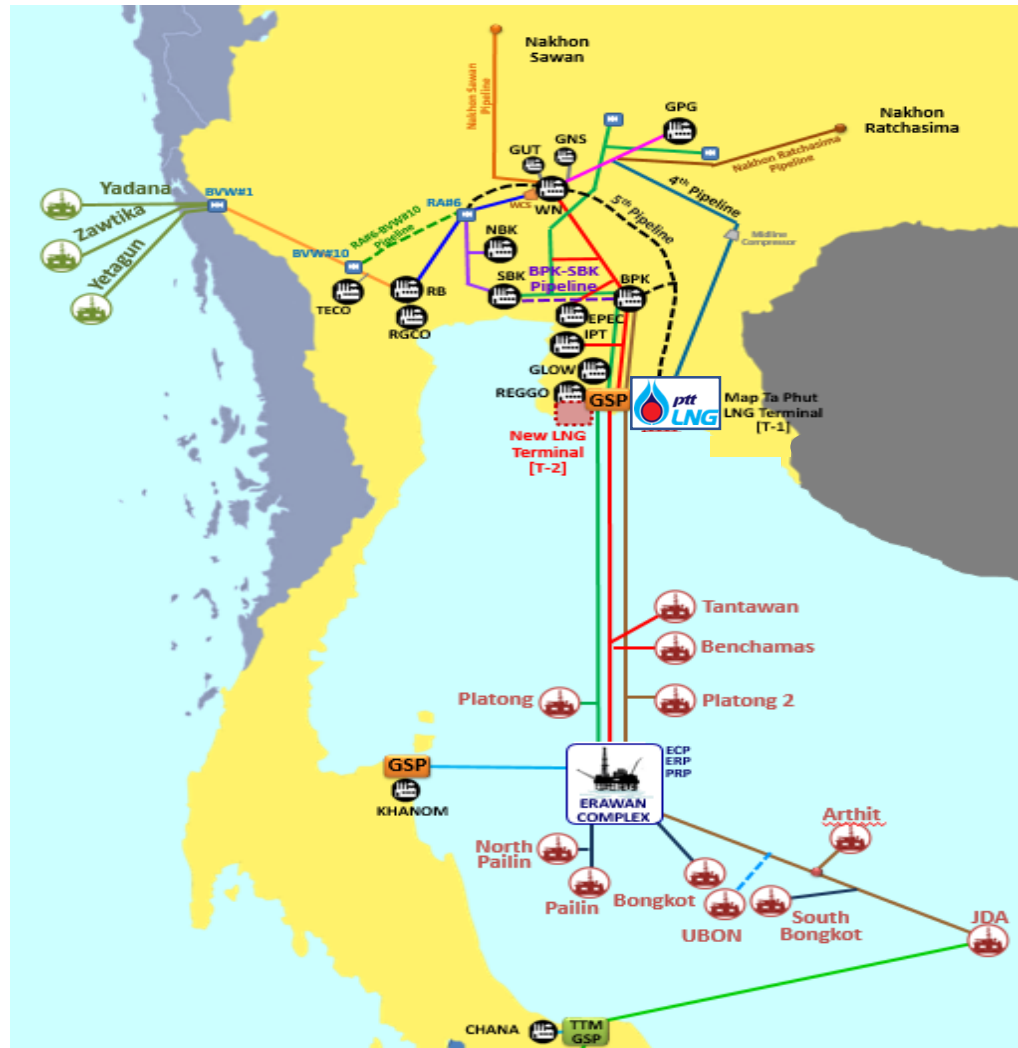


Cooling for Air Separation Plant



Cooling for Gas Separation Plant

5. Gas Infrastructure Network Integration in Thailand



Thailand's natural gas transmission infrastructure integrating the Gulf gas fields, LNG terminal, and transmission pipelines from the Yadana, Yetagun, and Zawtika fields of Myanmar at the border to several gas separation plants, power plants, and hundreds of industrial users throughout the country.

✓ TPA Code of Pipeline

In conclusion



Security

Increase capability to meet gas demand growth and strengthen national energy network integration.



TPA

Open up Thai gas market liberalization and promote competition to the private sectors which also improve transparency within the existing energy network.



Service Facilities

Deliver efficient performance services together with enhancement of cold energy utilization.





**THANK YOU
FOR YOUR ATTENTION!**