



# Investor Update

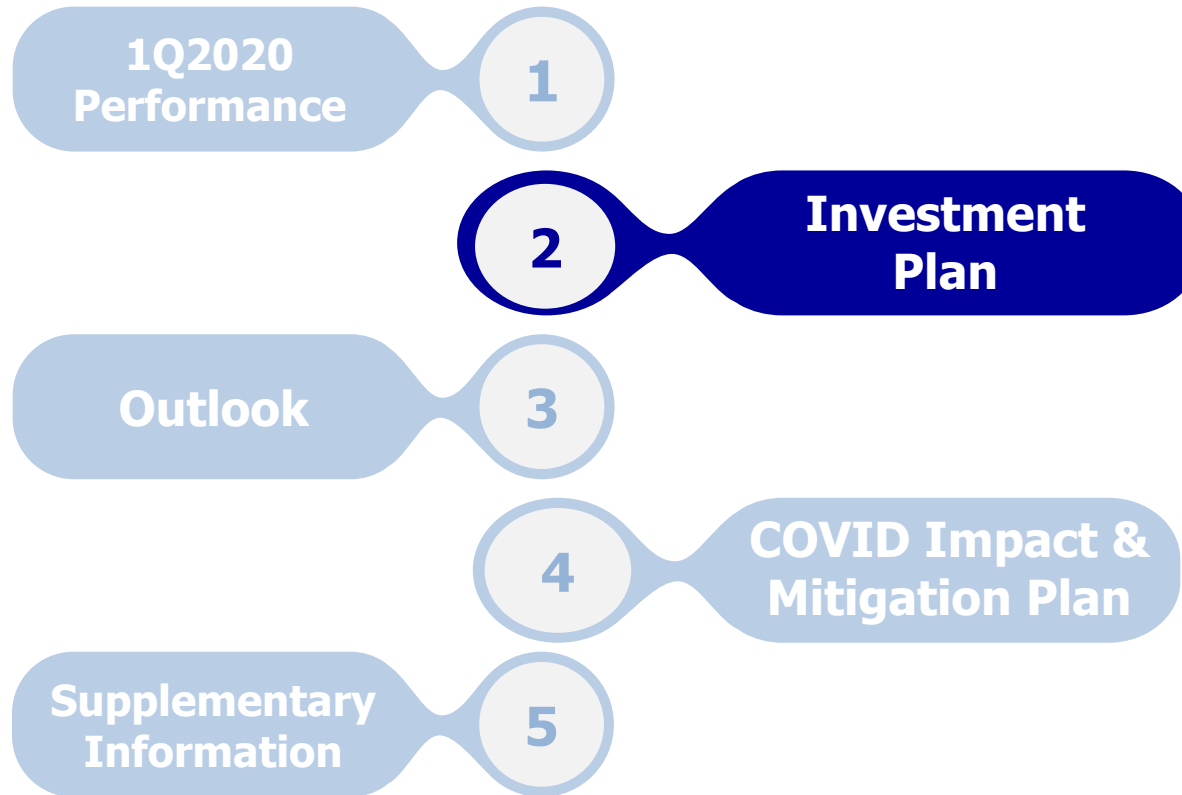
## Virtual Conference by Macquarie Securities

21 May 2020



*SUSTAINABLE GROWTH FOR ALL*





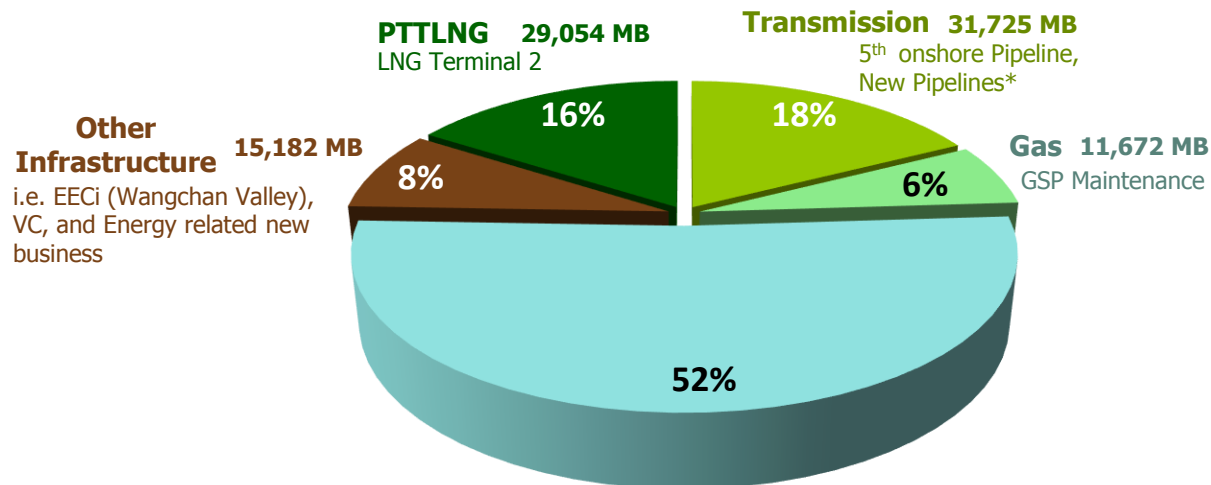


# PTT: Committed CAPEX (PTT and Wholly Owned Subsidiaries)



Focus on core businesses (Gas and Downstream)

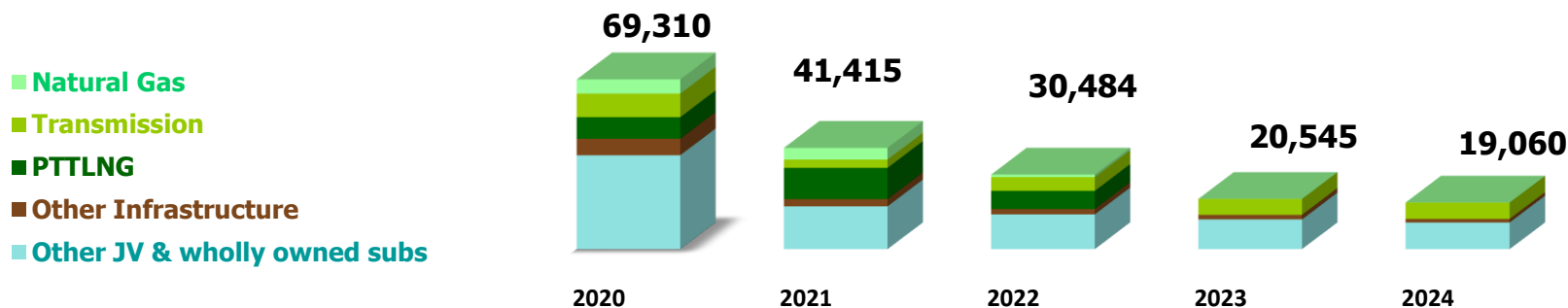
**PTT 5-Years (2020-2024) Committed CAPEX Plan totaling Baht 180,814 million or ~ USD 6 bn**



**Other JV & wholly owned subsidiaries 93,181 MB**  
mainly downstream businesses  
i.e. Oil and retail businesses, MTP Phase#3 (PTT Tank)

*Note: Excluded "Decrease-Discard-Defer" policy*

Unit: MMTHB



*Note: 2020-2024 CAPEX budget approved by BOD on 16 Jan 20*

*\* Subject to project's approval*

**The Provisional CAPEX ~Bt 204 bn which mainly focus on LNG Value Chain/LNG Hub, Gas-to-power project and New Businesses (Renewable energy, Life Sciences)**

# Committed CAPEX: PTT Group



Total committed CAPEX during 2020-2024\* : ~Bt 865 bn or USD 28 bn

Unit: MMTHB

## Downstream Business

### Key Projects

- **TOP**: Clean Fuel Project (CFP)
- **GC**: Olefin reconfiguration Plant, Propylene Oxide/Polyols,
- **IRPC**: MARS
- **PTTOR**: Oil & Retail Expansion in domestic & international

## Power Business

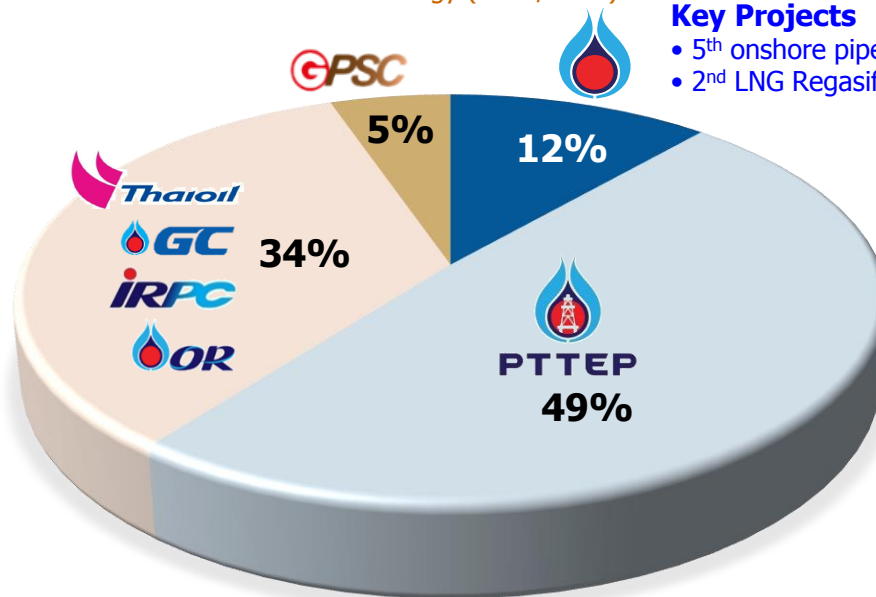
### Key Projects

- ERU
- Synergy Capture
- Renewable Energy (Solar/Wind)

## PTT Business

### Key Projects

- 5<sup>th</sup> onshore pipeline
- 2<sup>nd</sup> LNG Regasification Terminal



## Upstream Business

### Key Projects

- Onshore and Offshore Exploration and Production in Thailand (Bongkoch, Erawan etc.)
- Algeria HBR
- Southwest Vietnam
- SK410B
- Mozambique LNG

Note: Excluded "Decrease-Discard-Defer" policy

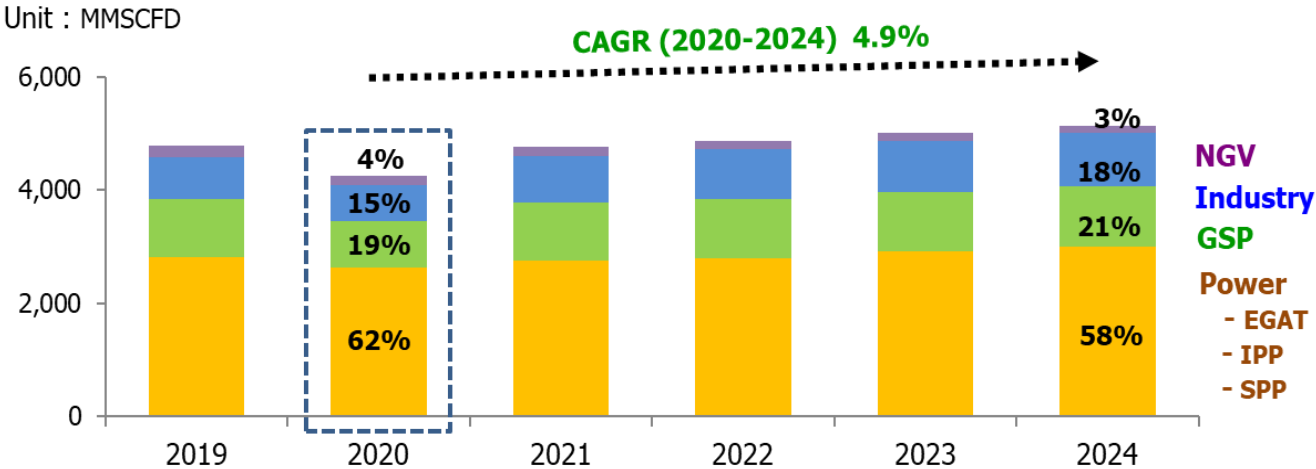


# Gas Business Roadmap

## Short term Gas Demand growth be maintained



### Thailand Gas Demand Outlook (Short Term – 5 year plan)



New Supply	Murphy	Bongkot Erawan	Mozambique
Additional capacity (mmscfd)		700 800	

Major Project : COD	5th pipeline
Cum. Pipeline Length (Km)	RA#6 Pipeline
	4,702

LNG new project	LNG Terminal 2
Cum. Capacity (MTA)	19.0

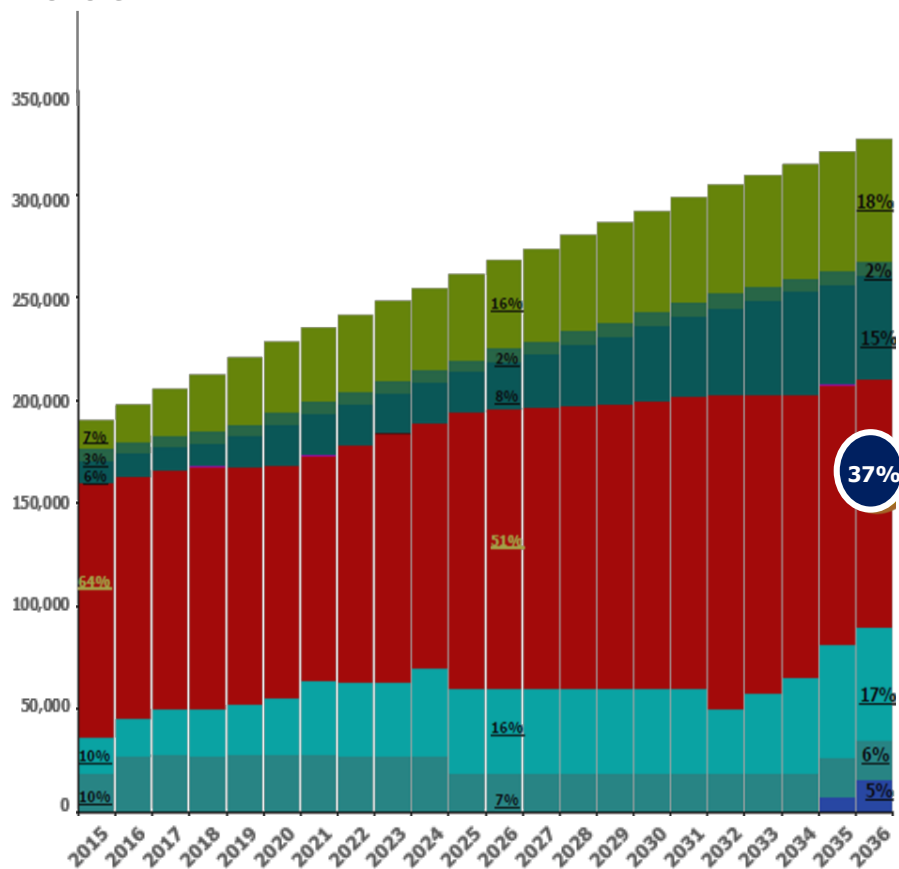
# Newly Thailand Power Development Plan

Stronger demand of NG for power plants

## PDP 2015\*

**Natural Gas growth upon  
Government fuel diversification policy  
for power generation**

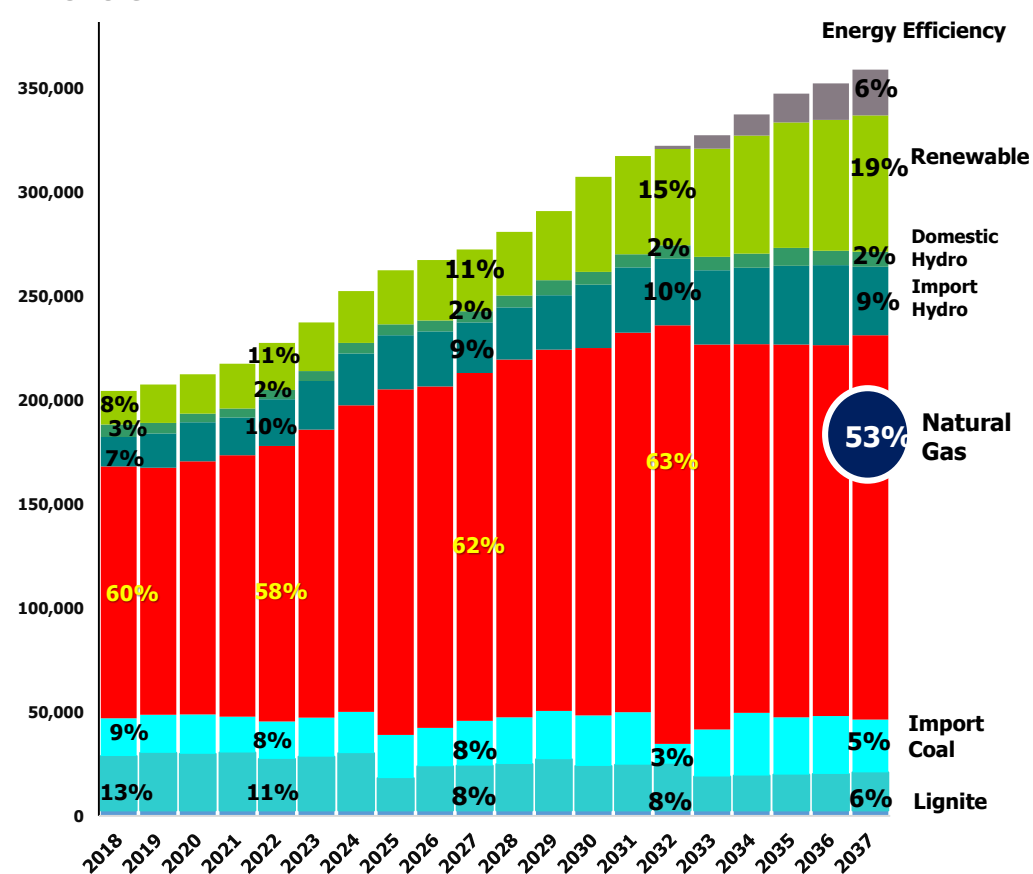
Unit: GWh



## PDP 2018\*\*

**Natural Gas  
be the most important source of energy  
with highest portion among other fuels**

Unit: GWh



\*Source: Ministry of Energy

\*\* Source : EPPO (Public Hearing presentation)

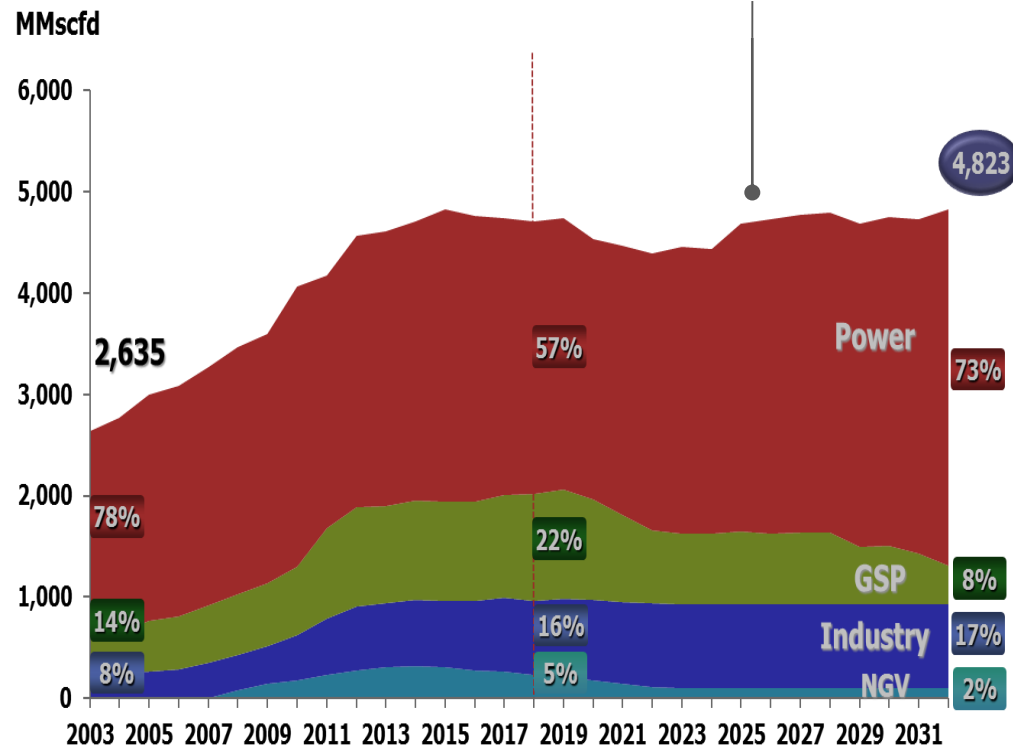
# Natural Gas : Growth of natural gas upon Government fuel diversification policy for power generation

**Old\***

**Thailand Gas demand forecast (CAGR during 2018-2032)**

: Total	~	0.1%
: Power	~	2%
: GSP	~	-7%
: Industry	~	1%
: NGV	~	-6%

Thailand Gas Demand  
Replace :  
Coal ๓๓๓ (800 MW),  
EE 30%



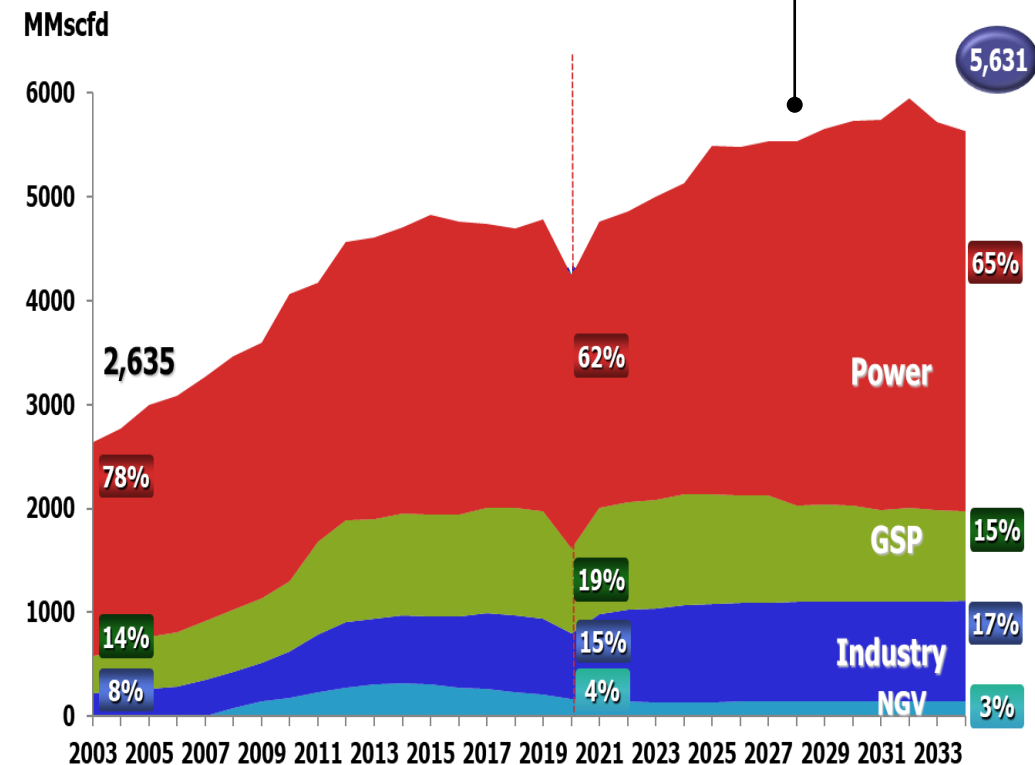
\*Source: Ministry of Energy

**NEW\*\***

**Thailand Gas demand forecast (CAGR during 2020-2034)**

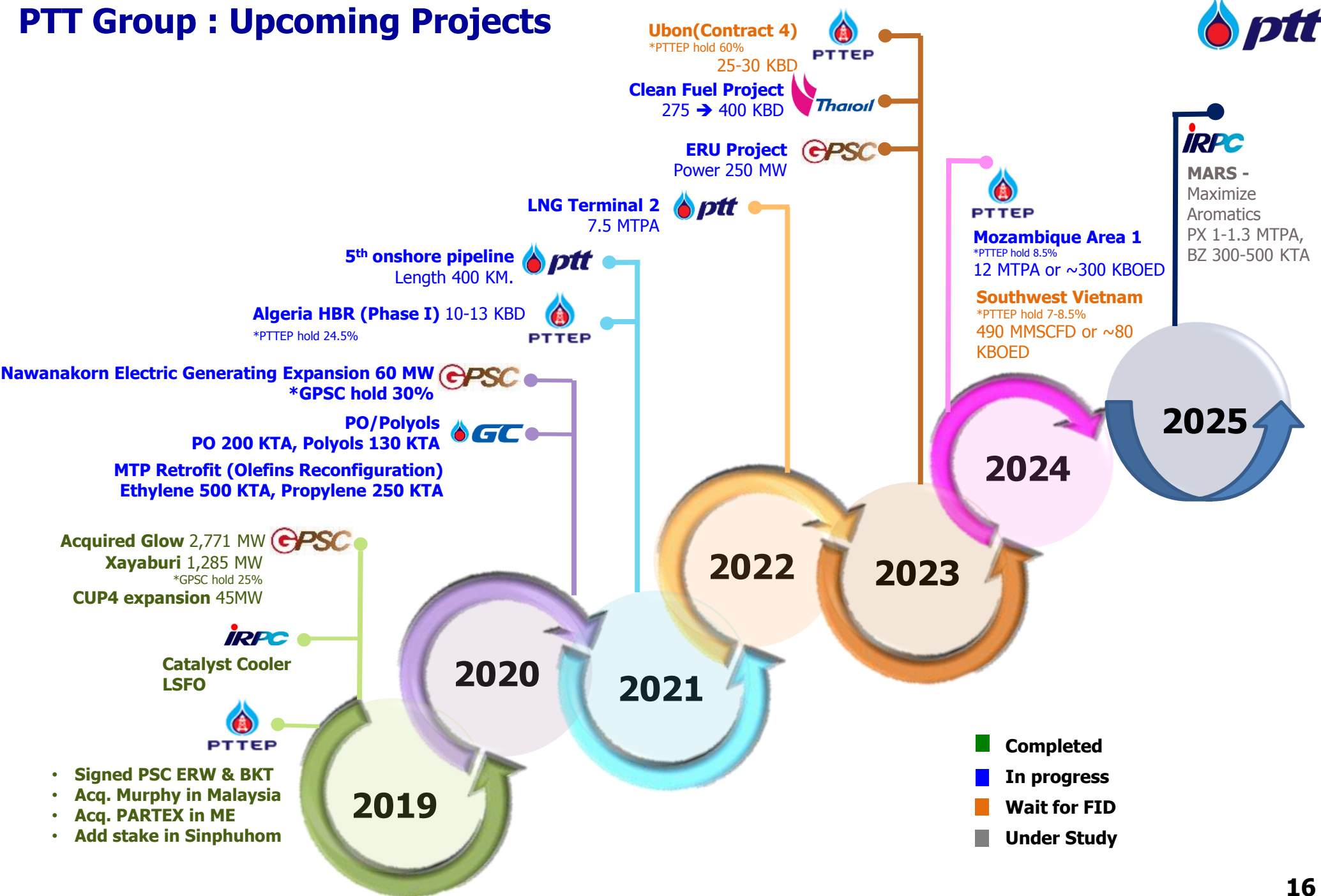
: Total	~	2%
: Power	~	2%
: GSP	~	0%
: Industry	~	3%
: NGV	~	-1%

Thailand Gas Demand :

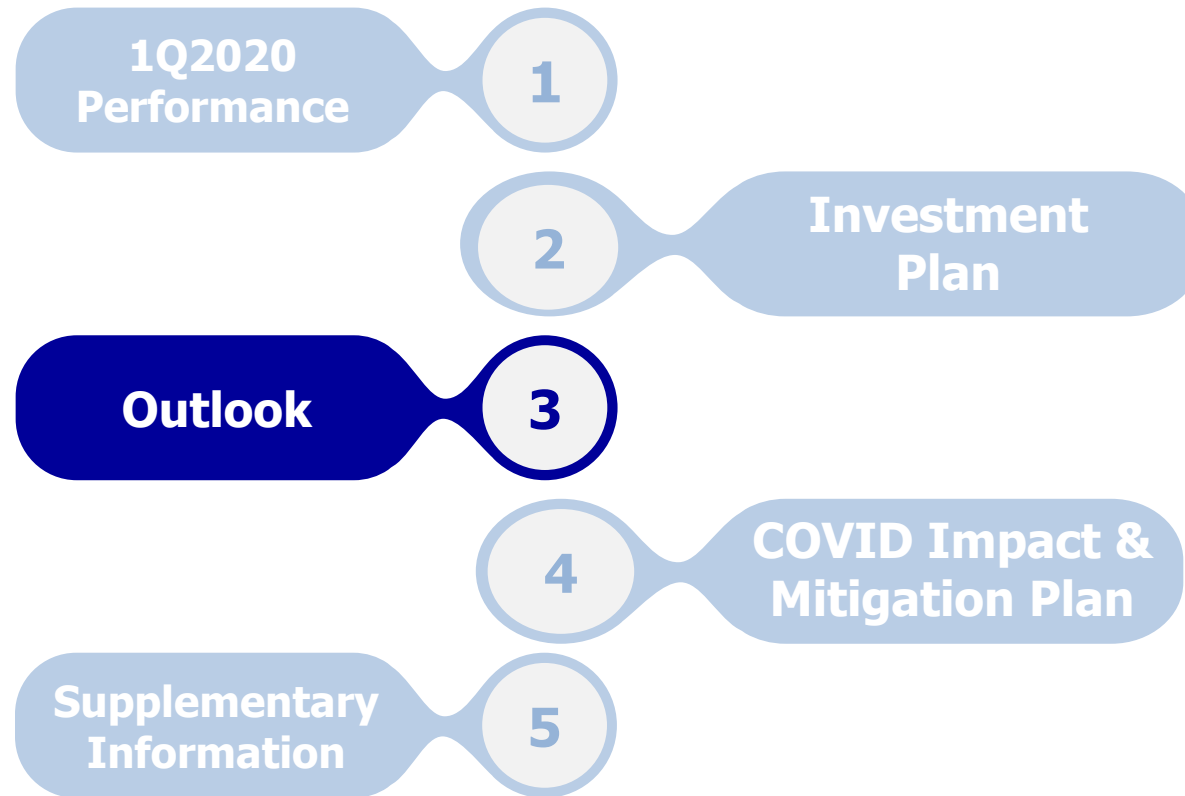


\*\* Source : PTT Business plan 2020 approved by BOD on 16 Jan 2019

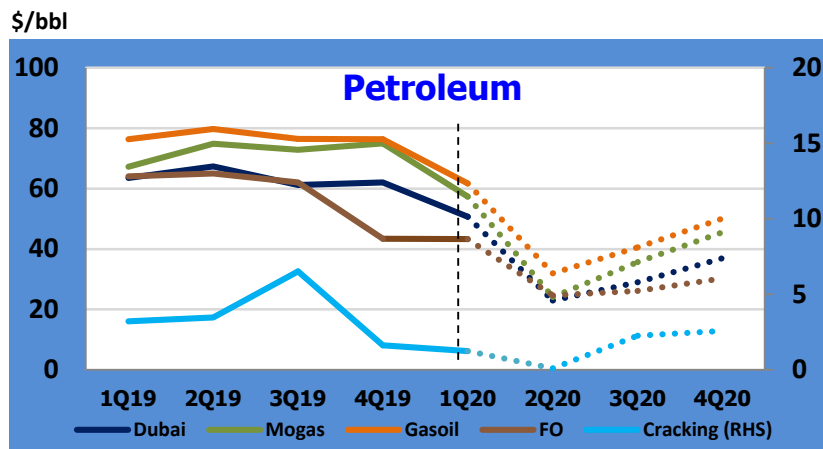
# PTT Group : Upcoming Projects



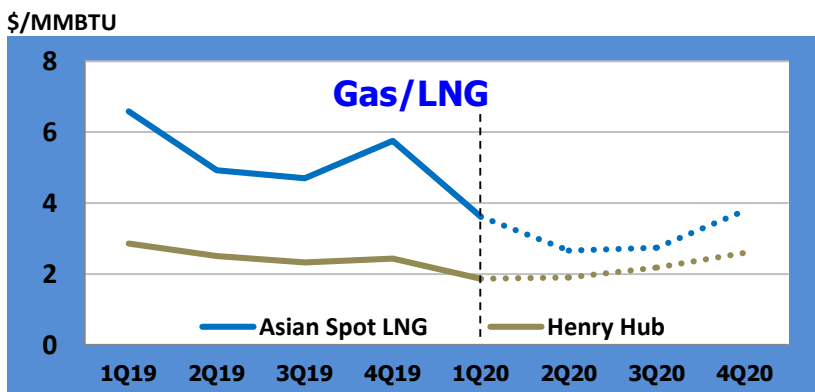




# 2020 Petroleum and Gas Outlook



Price	2019(A)	1Q20(A)	Apr20(A)	Y20(E)
Dubai	63.5	50.7	20.4	30-40
Mogas	72.5	57.4	20.5	35-45
Gasoil	77.2	61.7	28.7	40-50
FO (3.5%)	58.7	43.4	23.3	25-35
Singapore GRM	3.7	1.2	(0.2)	2.0-3.5



Price	2019(A)	1Q20(A)	Apr20(A)	Y20(E)
Asian Spot LNG	6.0	3.6	2.2	2.7- 3.8
Henry Hub (HH)	2.5	1.9	1.8	1.8 - 2.6

Source: PTT, PRISM  
Petroleum Rolling as of Apr 2020

## Dubai

- ▼ **COVID-19 outbreak** dampens global economy and oil demand
- ▼ **Surging Non-OPEC oil production**, led by U.S.; however, low oil prices may cause producers to reduce output
- ▲ **OPEC+ cut oil output** to balance oil market
- ▲ **Geopolitical Risks**; U.S. conflicts with Iran, and Venezuela, plus unrest in other oil producing countries such as Libya

## Mogas

- ▼ **Collapsed demand** as several countries continue lockdowns to contain the spread of COVID-19
- ▲ **Heavy turnaround and refinery cut run** to curtail supply and cope with demand loss

## Gasoil

- ▼ **Sluggish demand from transportation and industrial sectors** caused by the COVID-19 pandemic
- ▲ **Expected recovering business activities** after reaching peak of COVID-19 would stimulate fuel consumption in 2H2020

## Fuel Oil

- ▼ **IMO regulation** effective 1 Jan 2020
- ▲ **Lower HSFO production** after the implementation of IMO 2020
- ▲ **Expected HSFO demand for power sector to improve** during summer

## Singapore GRM

- ▼ **Lower crack margins** affected by a significant drop in demand

## Gas/LNG

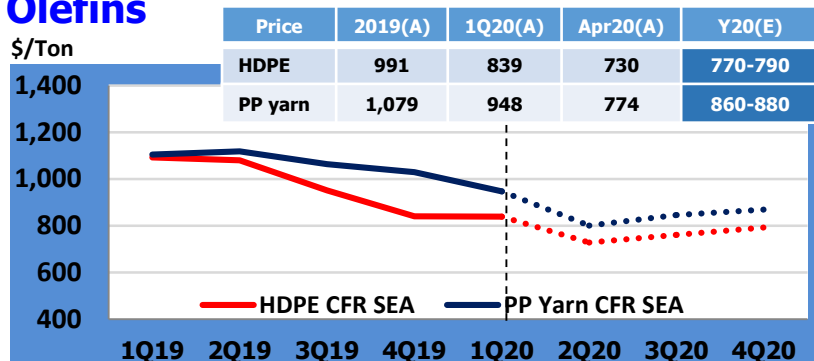
### ▼ **Asian Spot LNG:**

- Asian LNG demand is pressured from COVID-19 effect but expected to recover in 4Q2020
- Weak regional demand and limited storage availability further depress prices

- ▼ **Henry Hub:** Lower expected global demand for natural gas put downward pressure on prices.

# 2020 Petrochemical Outlook

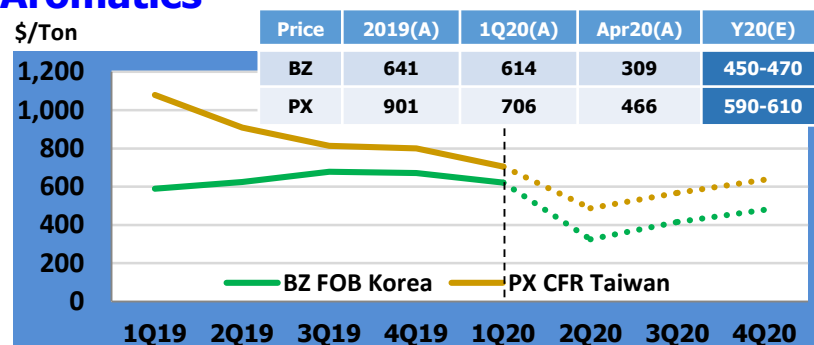
## Olefins



## Olefins

- ▼ **Downstream demand is affected** by government measurement to control COVID-19 spread and economic slowdown across the regions
- ▼ **PRefChem** (Malaysia) plans to start PP and HDPE units in 2H2020
- ▲ High demand from **single-use** applications i.e. food packaging, garbage bag
- ▲ Expect **economic to recovery** from easing government restriction across the regions toward 2H2020

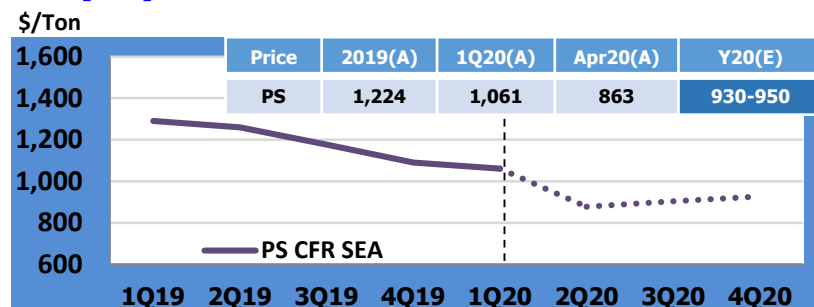
## Aromatics



## Aromatics

- ▼ **Downstream demand**, especially textile, automotive and appliance, is largely affected by COVID-19 pandemic and nationwide lockdown across the regions
- ▼ **Saudi Aramco** (Saudi Arabia) and **Sinochem** (China) plan to start PX facilities at the end of this year
- ▲ **Chinese PX demand** gradually improve from improving PTA and textile production but market sentiment still concern on global economic outlook and 2<sup>nd</sup> wave of COVID-19 spread

## Polystyrene



## Polystyrene (PS)

- ▼ **PS downstream demand**, especially Chinese appliance export sectors affected by lockdown across the regions
- ▼ **PS demand is likely slow** as Ramadan between 23 Apr to 23 May and low season around May and Jun.
- ▲ **Chinese PS producers** currently reduce operating rate in accordance with concern on global economic slowdown
- ▲ **Firm demand for PS food packaging** as ongoing COVID-19 concern

## Gas Business Guidance

### ▪ Pooled gas price

2Q20



2020



Soften avg. pooled gas price  
in Y2020 especially in 2H20  
- All sources



### ▪ GSP : major turnaround

- 2Q2020 GSP#1 major TA (25 days)  
GSP#1 & GSP#5 50% TD for inventory management (23 days)
- 2H2020 minor turndown of GSP#5 and GSP#6



### ▪ NGV & LPG Subsidy



#### • NGV

- Public vehicles : Reduce 3 baht/kg : 13.62 baht/kg -> 10.62 baht/kg  
(1 Apr 20 – 30 Jun 20)
- Private vehicles : Fixed price at 15.31 baht/kg  
(16 Mar 20 – 15 Aug 20)

#### • LPG

- Only subsidy thru “State Welfare smart card” to low-income households at the maximum subsidy of 30 MB till Jun. 20
- = Revised down LPG Ex-Refinery prices down from 17.1795 baht/kg -> 14.3758 baht/kg (24 Mar 20 – 23 Jun 20) -> Subsidized by LPG Fund

## Upcoming Projects in 2020



### ▪ Gas Master Sales Agreement

- Target within MID 2020



### ▪ On-scheduled projects

- IRPC** 2Q20: COD of Floating solar project
- GPSC** 3Q20: NNEG Expansion Project
- GC** 2H20: COD of MTP Retrofit & PO/Polyols

## PTT Group's Maintenance Schedule



2Q20: Planned TA (HDPE II)

3Q20: Planned TA (LDPE, LLDPE II,  
Aro II, PS)

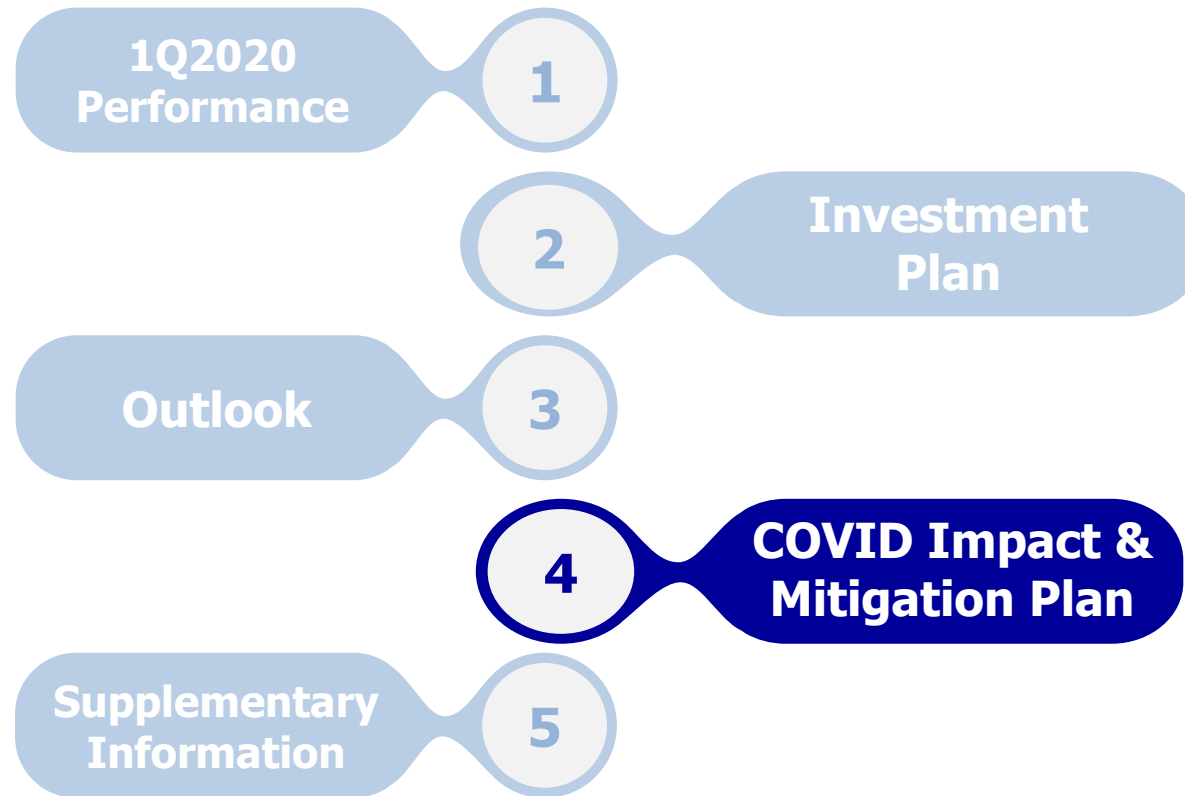


3Q20: Planned Major TA (LAB)



2Q20: Planned TA (PP)





# Impact from COVID & Price War to PTT and PTT Group : Likely case



## Upstream



- Optimal supply according to Power and Petrochemical demand
- **Expected E&P sales volume in 2020**  
↓ ~ 7%\*

\*Note: compared to Business Plan



## Intermediate



### Gas Pipeline

- Performance maintain as per committed volume of pipeline

### S&M

- Gas consumption in relation to domestic GDP both for power and industrial customers

### GSP

- Optimal utilization rate to align with Petrochemical demand and domestic LPG demand

**Total Gas volume ↓ ~ 5-10%  
: mainly due to industrial's and transportation's demand**



Maximize utilization to mitigate gas market volatility



## Downstream



### Trading

- Crude/project supply and procurement optimization according to market
- **Expected trading volume**  
↓ ~ 3-5%



- **Sales volume both oil and non-oil businesses relative to country GDP**



- **PTT group refinery U-Rate in 2020 range from 90%-100%**
- Running optimization with group central balance model to get optimal In & out take plan as a group

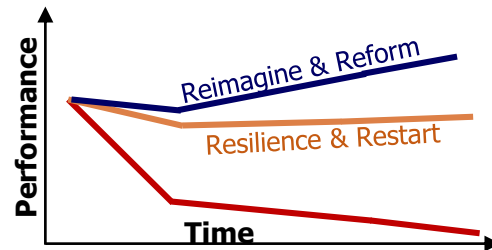
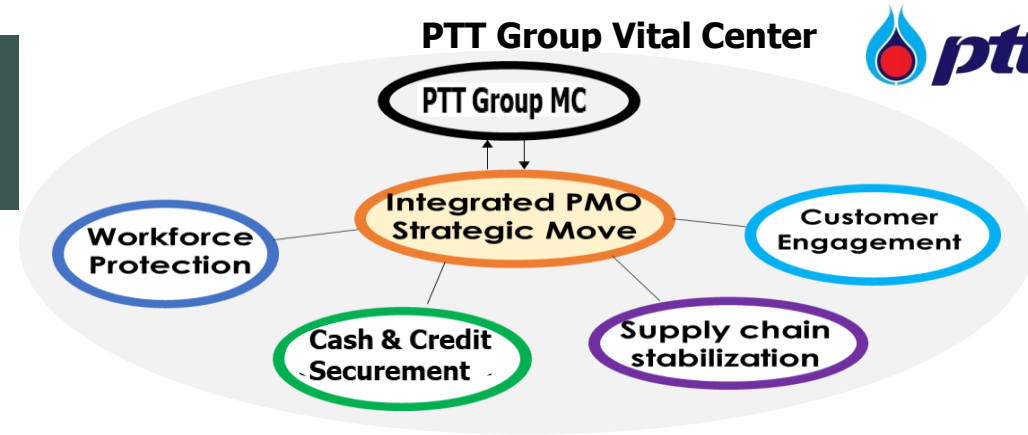


## Infrastructure



- **Some reduction in Industrial users demand volume**
- No impact to EGAT volume (incl. IPP & SPP)

# PTT group mitigate the Impact thru "PTT Group Vital Center"



## 4R's levers

Group's immediate focus & strengthening with closed monitoring

Strong foundation for growth thru any crisis

01



### Resilience

Immediate actions to address challenges and ensure resiliency

- Stress tests & adaptive planning
- Spend smarter & Prioritize CAPEX
- Liquidity mgmt. & Credit Rating
- PTT group value chain optimization
- Safeguard employees & WFH
- Protect & care for customers

02



### Restart

Restart the business back to scale quickly and ensure competitiveness

- New normal operation thru Group synergy
- Maintain financial strength and business competitiveness
- Efficient & agile workforce
- Engage and retain customers

03



### Re-imagination

Initiates & design business models for opportunities (Next Normal)

- Reimagine Upstream
- Reinforce Downstream
- Reignite S-Curve into action

04



### Reform

Reform corporate & businesses to operate in every situation

- Org. / structure / business transformation readiness for regulatory and environment shift

**Present focus on Resilience & Restart  
... to New normal**

**Reimagine & Reform  
... for Next normal**

# Present Focus on Resilience & Restart

## "Decrease-Discard-Defer" Measures & Prioritize CAPEX



### Decrease

- Donation/CSR
- Outsources/ Advisory



### Discard

- SG&A
- Advertising/ Events



### Defer

- Maintenance
- New projects

### OPEX

**10% - 15%  
reduction  
from Spend  
Smarter  
Program**

- + Spending from procurement
- + Expense reduction i.e. SG&A
- + Addition from process redesign

**SPIRIT+D**

Cultivate Cost Conscious Culture

### CAPEX

- **Prioritize**
- **Reconsider**

**PTT Group  
Planned CAPEX 2020**

~250  
billion  
baht

**10%-15%**

**Revision**

CAPEX reduction; new projects under study, non-core asset disposal

Continued CAPEX: Under-construction project



# Thank you



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