



**HMC Polymers**

**A Most Admired Company**

*An associate of PTTGC & LyondellBasell*

# FY2020 Update



## Customer Focus

Acquiring insight into customer needs and responding rapidly to ensure customer satisfaction.



## One Team

Ensuring cooperation, trust, mutual respect and alignment towards common goals.



## Strive for Excellence

## Innovation

Detailed understanding of strategies, continuing personal development, and assuming accountability for excellence.



## Innovation

Readiness to think and operate in different ways to create more value.

# Vision and Mission

## Vision

***To be A Most Admired Company and Asia's Preferred Partner***



## Mission

***To capture and deliver the full potential of polypropylene and HMC for our customers***

We deliver **exceptional value** by bringing **the latest technology** that improves the **quality of people's lives**.

We **differentiate** our business through **customer service and operational excellence** based on **ethical and sustainable practice and uncompromised safety**.

# Medical Personal Protective Equipment

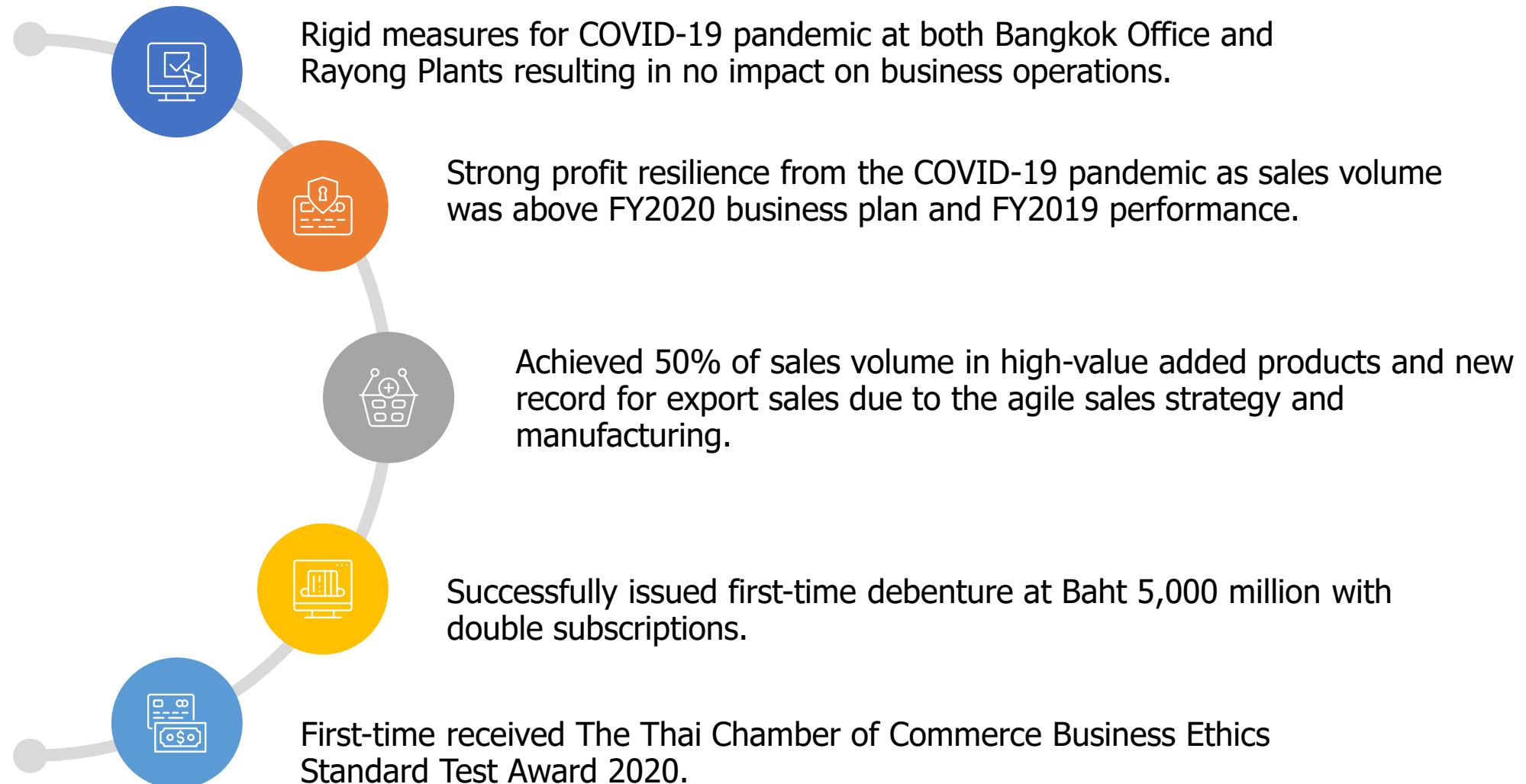
Fighting against the COVID-19 pandemic



We provided more than 10,000 pieces of specially produced Personal Protective Equipment made from our resins including isolation gowns and face masks to assist doctors, nurses and frontline workers at hospitals nationwide.

# 2020 Key Highlight

Moving forward amid cyclical petrochemical market and the COVID-19 pandemic



# Agenda

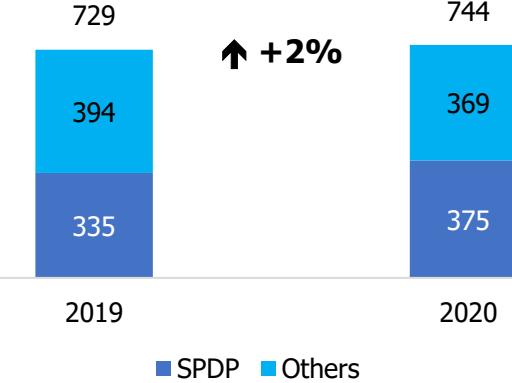


- 1. Financial Performance and Projection**
- 2. Strategic Directions**
- 3. Operation Highlights**
- 4. Market Outlook**

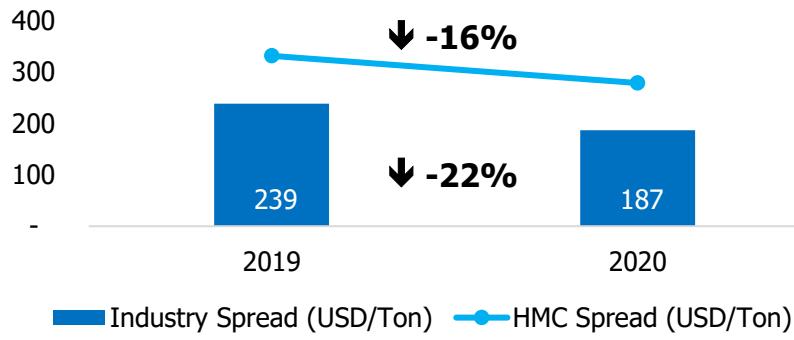
# 2020 Financial Performance

Profit resilience amid cyclical petrochemical market and the COVID-19 pandemic

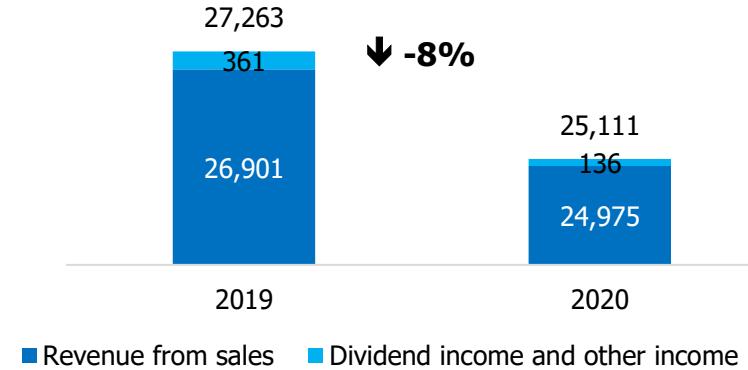
## Sales Volume in Kilo Tons



## Polypropylene - Propylene Spread in USD



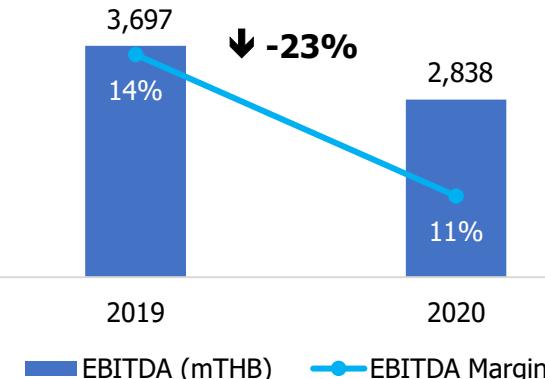
## Total Revenues in mTHB



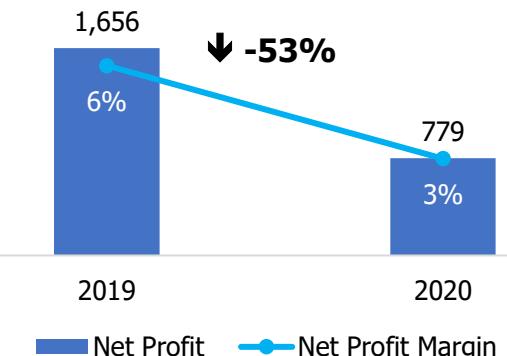
### Highlights

- Focus on **high-value-added products** resulting in EBITDA margin of 11%.
- High sales SP&DP = 375KT above plan by 6%** and product mix at 50% from high demand of food packaging.
- Sales volume +2.1%** amid the COVID-19 pandemic resulting from flexible sales plan and agile sales and marketing channels
- New record of monthly export sales in Sep = 37KT** due to peak demand from China market in Q2 and Q3.
- Spread margin protection** around USD 100 per ton above market (49% in 2020 | 39% in 2019).
- Successful issuance of debenture** amounting to Baht 5,000 million.
- Quick win initiatives** to enhance work efficiency and cost savings amounting to Baht 450 million.

## EBITDA in mTHB



## Net Profit in mTHB



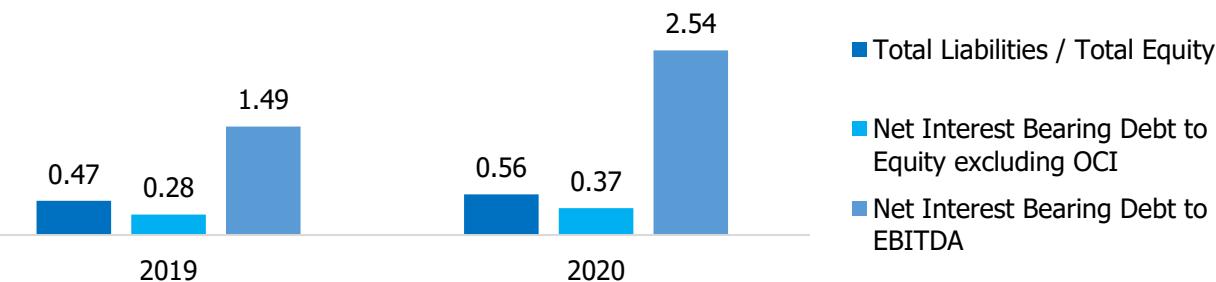
# 2020 Financial Position

Robust financial standing with strong capital base and low leverage ratio

## Financial Position in mTHB

	2019	2020	
Cash and cash equivalents + temporary investments	32,980	35,300	
1,337	1,835	Interest bearing debt	
Investment held as AFS	4,755	4,860	
2,685	2,685	Other liabilities	
Other long-term investments	3,695	3,672	
Other assets	24,203	25,921	Equity excluding OCI
	19,421	19,500	
	3,008	3,091	Other components of equity

## Financial Ratio



**Fitch Ratings** **A-(tha)**  
17 September 2020

### Capital Structure

- Net IBD to Equity  $\leq 1.0x$
- Net IBD to EBITDA\*  $\leq 2.0x$

\* During PP4 construction, Net IBD to EBITDA will be increased. Net IBD to EBITDA will decrease to below 2.0x by 2025.

### Liquidity

- Voluntary cash reserve for next loan installment with minimum cash around Baht 1 billion
- Committed revolving credit facility of Baht 5 billion available for use

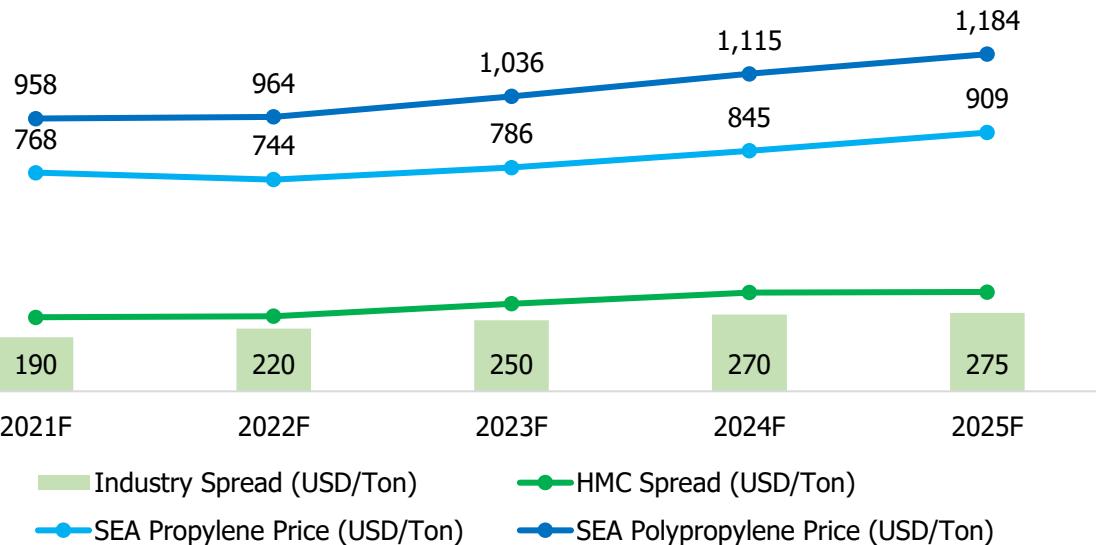
### Dividend

- Free cash available after reserved funds as required by law, current and due debt obligations, ongoing expenditures and CAPEX.

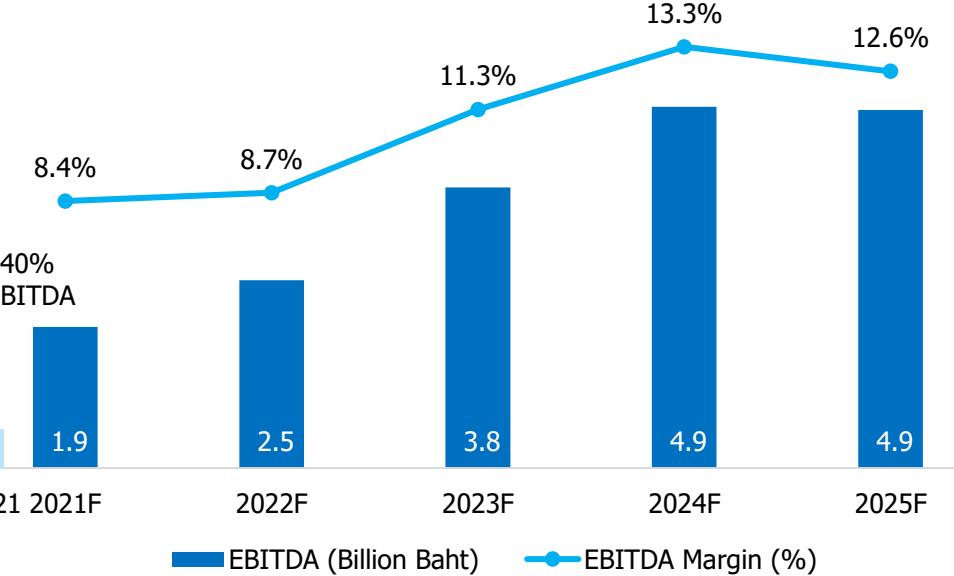
# 5 Years Conservative Financial Projection

Escalate growth in specialty and differentiated products

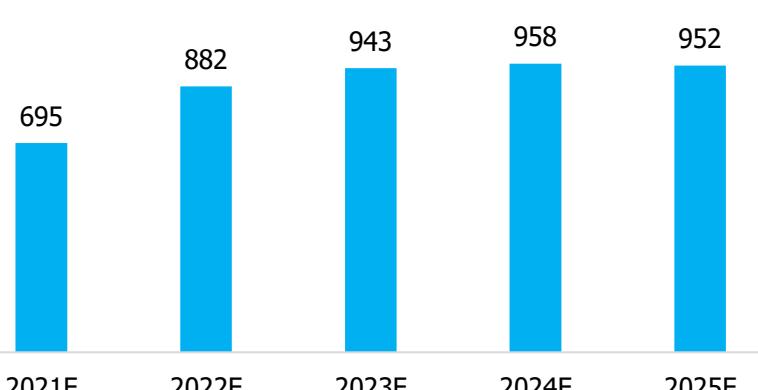
## Propylene and Polypropylene Price and Spread



## EBITDA and EBITDA Margin



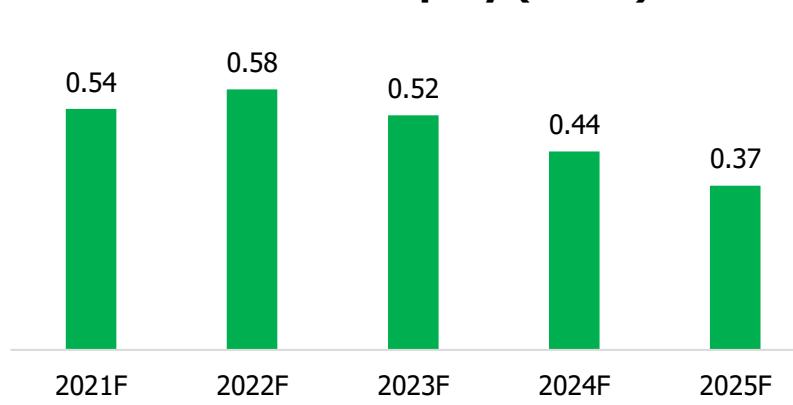
## Sales Volume (Kilo Tons)



## Key Assumptions

- Operates under production constraint until the completion of silo repairment due to fire loss (expected to be completed in Aug 2021).
- Expected PP4 start-up in 2022Q2 as planned.
- Sales continue to grow due to the increase in demand in APAC especially China and Indian subcontinents amid new PP plants in the region.
- 2 *Spherizone* Plants to support specialty and differentiated products with higher premium.
- Planned turnarounds for PP is every year and PDH are once in every 2 years.

## Net IBD to Equity (times)



# Agenda



1. Financial Performance and Projection
2. **Strategic Directions**
3. Operation Highlights
4. Market Outlook

# HMC Strategic Direction



## Market Leading Innovation – *Capture business opportunity by leveraging our asset utilization, innovation and marketing*

- Become **an innovation leader** in strategic applications such as consumer, industrial and medical sectors.
- Expand and **diversify product portfolio** in durables & industrial, transportation and construction sectors.
- Leverage **capabilities of new PP Line IV** for strategic products including piping, coating and in-line blending of recycled PP.



## Outstanding Customer Orientation – *Escalate growth in specialty and differentiated applications*

- Ensure long-term growth by profitable **product mix and sales channels**.
- Continue customer-oriented approach to establish **partnership and co-development** with downstream strategic customers.



## World Class Operational Excellence – *Aim towards world class operational excellence*

- Create differentiation through **“Quality in the Eyes of Customers”**.
- Uplift **integrated planning and supply chain system** allowing secured and competitive feedstock.
- Exploit **digitalization tools** to accelerate business growth such as HMC Digital Business Process.
- Step up **sustainability scheme** and drive circular economy.



## The Most Result-Oriented, Experienced and Engagement People – *Strive for excellence in employee development*

- Enhance HMC Culture – **One Team**.
- **Drive people expertise**, agility and growth to align with company's strategic direction and investment.
- Implement **career development plan**.

# Strategic Investment to Grow Business

through Product Portfolio Diversification

Industry	Packaging	Hygienic & Medical	Durables & Industrial	Automotive	Construction
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## APAC

Market Size 47 MnT/A

CAGR 4-5% (2021-25)



## Presence



## Leverage Marketing Channels



Direct Sales and Agents

## Remark

- Packaging includes flexible and rigid packaging.
- Consumer and medical include spunbond, fiber and textile.
- Durables and industrial include appliances, crates and pails.
- Construction includes piping.

# Upstream Integration and Diversified Feedstock

HMC Polymers

through PDH plant and secured & diversified long-term contracts with suppliers

## Feedstock

## Polymerization

## Distribution Channels

  
GC SPRC  
ROC

Propylene

PP Plant 1&2  
Spheripol 450 KTA

 ptt  
Propane

HMC PDH  
UOP Oleflex 300 KTA

Propylene

PP Plant 3  
Spherizone 360 KTA

  
Import

Propylene

PP Plant 4  
Spherizone 250 KTA (2022Q2)

1,060 KTA in 2022Q2

The Largest PP Producer in The Region

43%

57%

Current

50%

50%

Target 2030

- Domestic
- Export

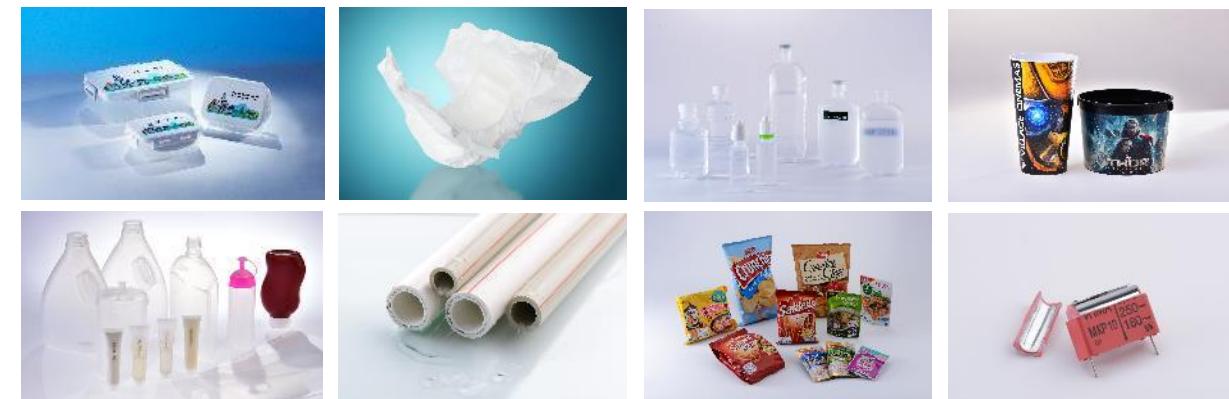
 HMC Polymers

 GC MARKETING

Direct Sales and Agents

 lyondellbasell

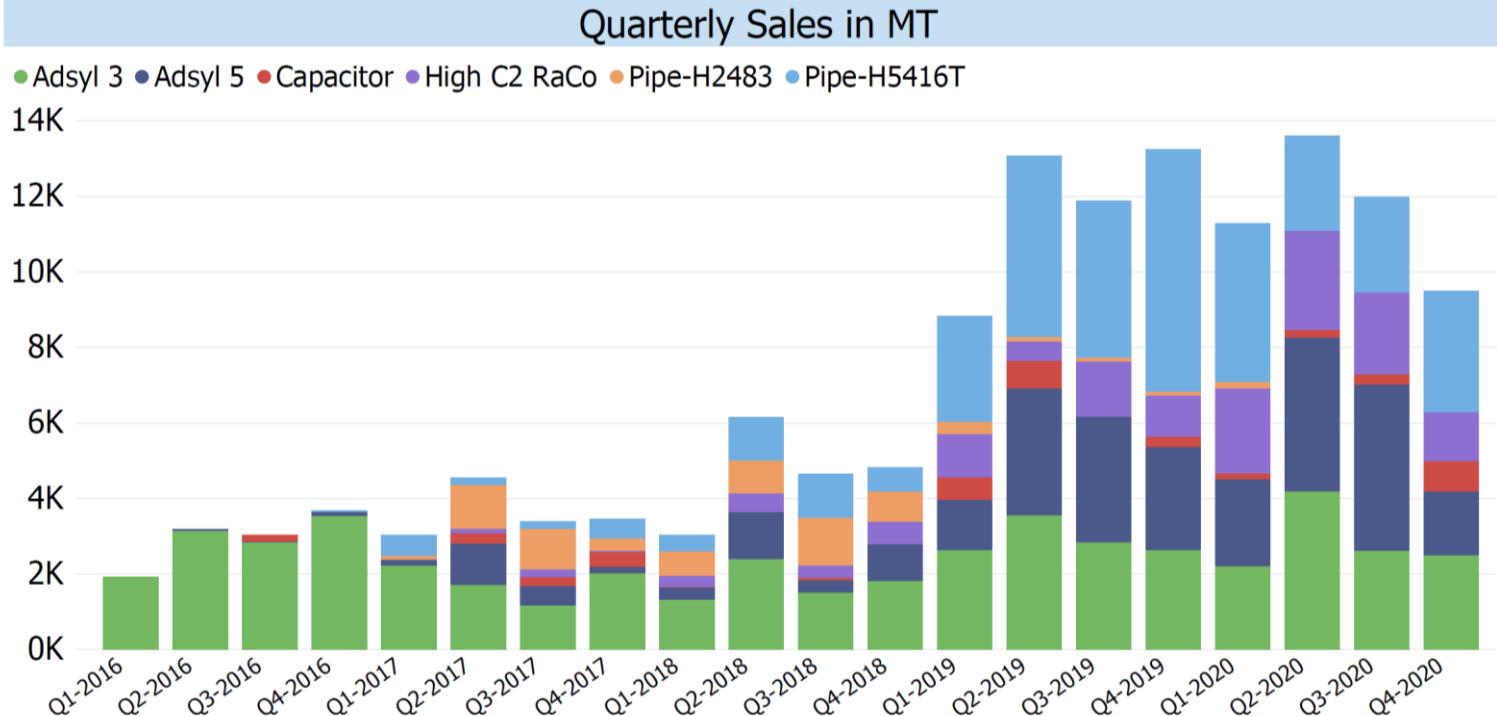
 POLYMERS MARKETING CO.,LTD.



Product Portfolio

# Market Leading Innovation

Growth in sales of specialty and differentiated products



**Leveraging the capabilities of *Spherizone* Technology and/or innovative catalysts from LYB. HMC is actively developing materials to further expand the product portfolio into new applications:**

- Dielectric film for capacitors
- Pressure pipe and high stiffness sewage and drainage pipe
- Specialty resins for film functional layer
- Highly modified random copolymers for application requiring softness and transparency

**Capacity will be further enhanced by PP4.**

### Market Leading Innovation – Capacitor

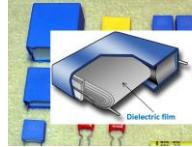
**Polypropylene used for Dielectric Film needs to meet stringent requirements**

- Purity and catalyst residues
- Stiffness and heat resistance
- Processability

**Moplen HP6047 features:**

- Ash content < 20 ppm
- Flexural Modulus 1700 MPa
- Technically approved at several Capacitor Film producers in China and India
- Submitted for testing at Capacitor Film producers in Europe

**So for this combination of properties could only be achieved by a few PP producers employing 50 year-old slurry technologies including a high cost washing step.**



#### Purell RP171G

- Medical grade High C2 RaCo for Blow Filled Seal (BFS) and EBM applications
- Targeting higher softness and transparency in combination with sterilizability replacing LDPE
- Approved at global leading machine manufacturers such as Rommelag and Brevetti Angela



**In our Adsyl5 product family HMC** is leveraging the capabilities of *Spherizone* technology to incorporate high amounts of ethylene and butene as co-monomers:

- Excellent sealing properties
- Sealing Initiation Temperature 105°C – in line with best in class competitors in Asia
- Third generation products to be launched soon
- Fourth generation products (C6 based) to be launched in 2023

### High-Stiffness | High Impact PP-HM

**COMPANY | HMC Polymers**  
HMC Polymers is a leading polypropylene manufacturer in the Asia Pacific region. Based in Thailand, HMC Polymers is a JV of Mitsubishi Chemical and HMC. HMC Polymers has a PP capacity of 850,000 t/a. HMC utilizes Spherizone® and Spherizone® Unique technologies to serve the Australian market through LyondellBasell Australia.

**SPECIFICATIONS | Hestelene PP-HM483**  
Hestelene PP-HM483  
MFR (200°C, 30)  
0.7 kg/min  
Density  
0.905 g/cm³  
Tensile Strength at Yield  
27.5 MPa  
Elongation at Yield  
1800%  
Impact Strength at 23°C  
520 J/m²

**THE BENEFITS | Hestelene PP-HM483**  
• Full range of stringent European standards  
• EN 13763 (Double Wall Pipe)  
• Lower wall thickness than PE or materials such as HDPE  
• Lower cost due to higher stiffness and lower weight  
• High production throughput  
• Excellent optical properties

**THE PRODUCT | Hestelene PP-HM483**  
High stiffness PP impact copolymer for non-pressure pipes  
• Suitable for underground storage, irrigation and water distribution systems  
• One of the most cost effective pipes available

**• Classified as PP-HM according to EN13763**  
• One of the most cost effective pipes available

**Hestelene PP-HM483 for pipe systems definition:**  
• Exceptional softness of 1800 J/m² (per EN13763)  
• Good low temperature impact properties  
• High stiffness  
• Excellent chemical resistance (including hydrogen sulphide)



### Market Leading Innovation – High C2 RaCo (Spherizone Unique)

**Cymell RC472** is a highly modified random copolymer PP specially designed for improved printability versus competitors alternative.

It can also be used as sealing layer in BOPP film providing good ink adhesion, good sealing properties and excellent optical properties.

**Excellent ink adhesion**  
• Good ink adhesion  
• Excellent optical properties

**Good Film Properties**  
• High clarity and gloss  
• Easy processing in high speed BOPP lines

**Enabled by Spherizone technology**  
• Good Sealing Properties  
• Sealing Initiation Temperature 115°C

# Product Portfolio by Product Strategy

Target to achieve 70% SPDP in 2030

- **Target to achieve 70% SPDP in 2030**
- Continues YoY growth enabled by additional plant capabilities of PP4 and organization focus
- Promotes SP and DP in the long run
- Target market in China, Australia, India, Japan and Europe

## Specialty Product (SP)

is disruptive product, low or no other competitors, high entry barrier, high profitability end application and low-price sensitivity

## Differentiated Product (DP)

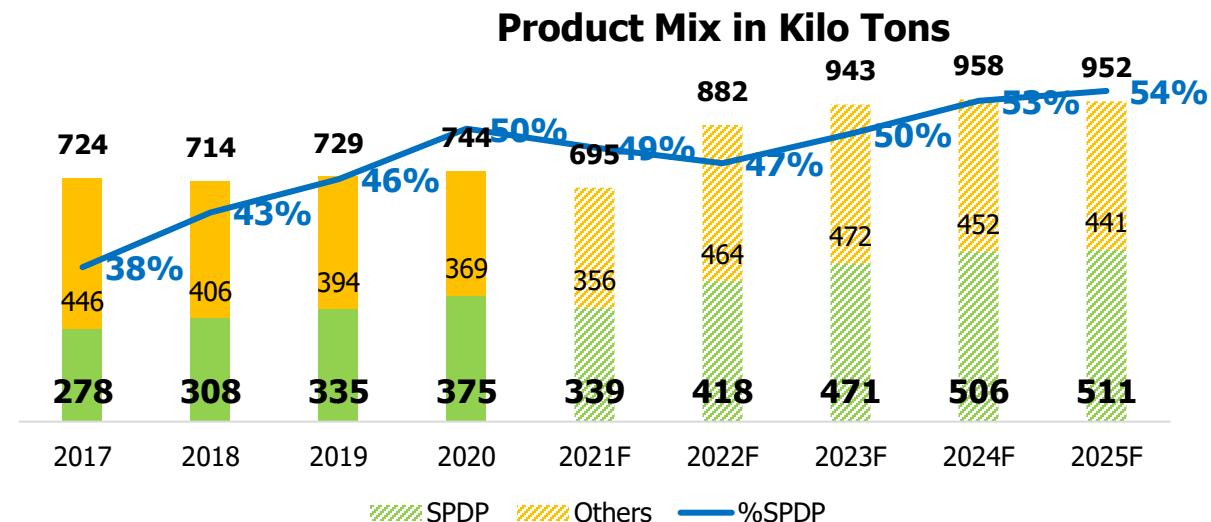
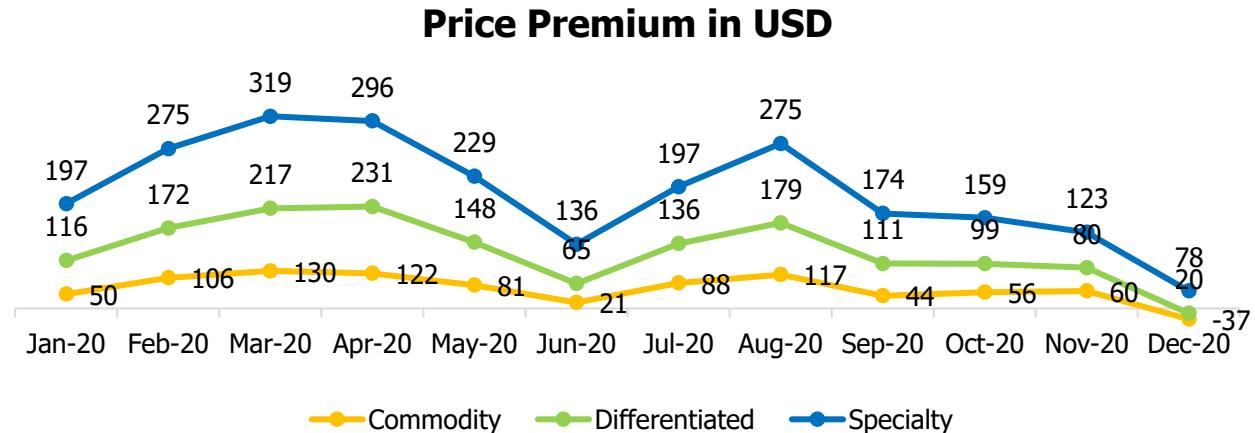
is selected product, high growth, limited producers and superior profitability of end application.

## Commodity

is general commodity product, low entry barrier, high competition, low value end application and high price sensitivity.

## Non-Prime

is transition products and off-specification.



Slight decrease of %SPDP in

- 2021 due to production constraint from fire incident in Nov 2020
- 2022 due to PP Line 4 start-up with more commodity products during trial run

# HMC as A Most Admired Company

Achieving sustainability through Environmental, Social and Governance

In 2020, HMC was recognized with environment awards for outstanding operational performance with respect to environmental impact.

1. EIA Monitoring Award (Excellent Level) from Ministry of Natural Resources and Environment
2. Smart ECO 4.0 from Ministry of Industry (Thailand)
3. Eco Factory from Federation of Thai Industries
4. Green Industry Certificate level 4 (Green Culture) from Ministry of Industry (Thailand)
5. Certificate of Carbon Footprint for Organization from Thailand Greenhouse Gas Management Organization
6. Plaque of Honor from Thailand Voluntary Emission Reduction Program (T-VER)
7. IEAT Environmental Governance Award from Industrial Estate Authority of Thailand



Thailand Voluntary Emission Reduction

Carbon Footprint for Organization



# HMC as A Most Admired Company

Achieving sustainability through Environmental, Social and Governance



HMC has consecutively obtained this CSR-DIW Award since 2010 from Department of Industrial Works as our belief in Care and share for the better life.



# HMC as A Most Admired Company

Achieving sustainability through Environmental, Social and Governance

- In November 2020, HMC was awarded The Thai Chamber of Commerce Business Ethics Standard Test Award 2020.



- We are relentlessly developing an anti-fraud culture. Both newcomers and existing employees are trained on Anti-Fraud Policy and Gifts, Entertainment and Travel Policy to ensure that ethical business conduct can be expected.



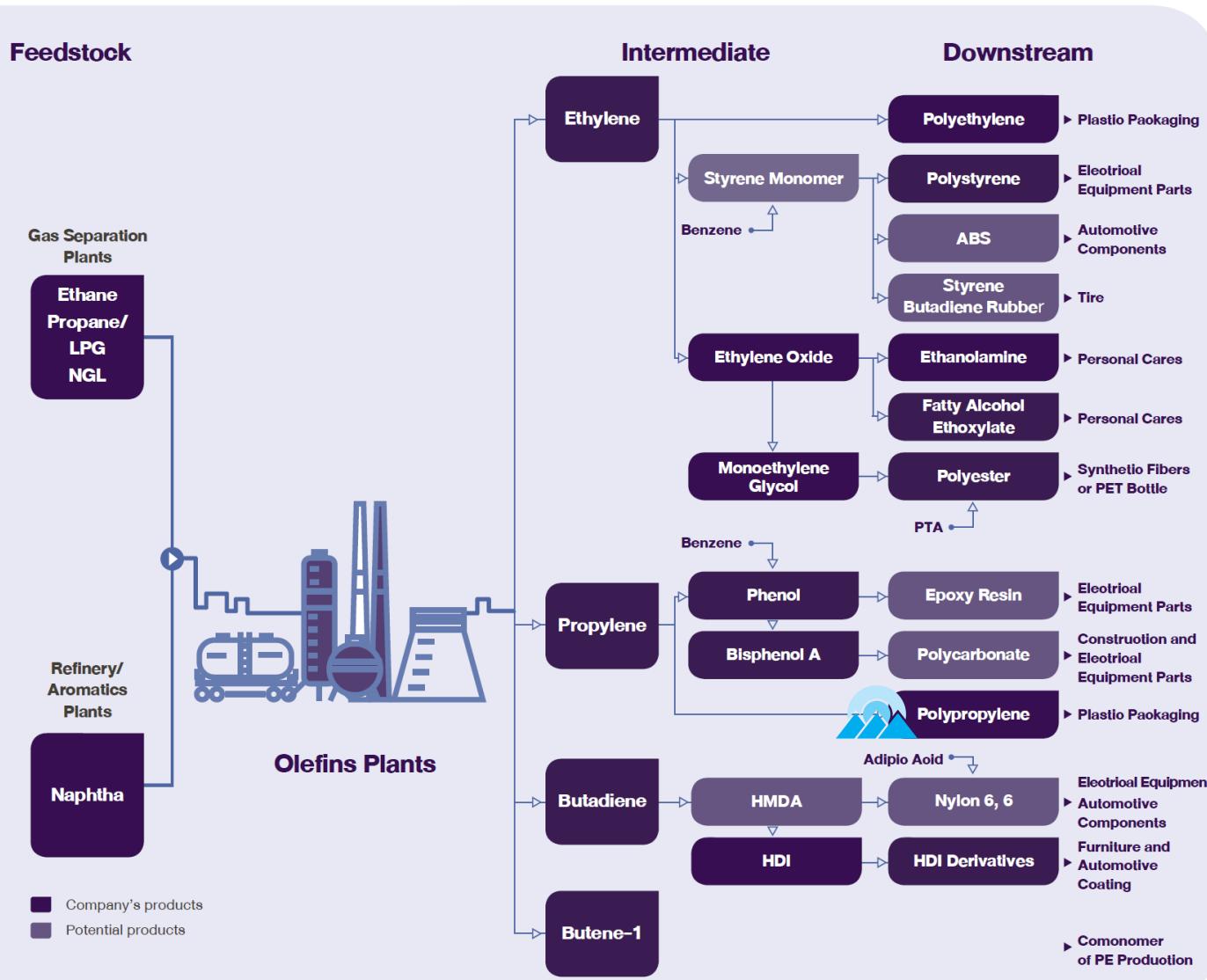
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# HMC as a PP Flagship of PTTGC

## PTTGC Performance Center – Olefins



# HMC Measures for COVID-19 pandemic

Care for the well-being of our employees

## ❑ Setup task force team, led by President as Chairman with weekly meeting

- ✓ Follow measures by government agencies and deflection reporting

## ❑ Setup 14 preventive measures for employees and contractors

- ✓ Perform 100% of body temperature check before entering the area
- ✓ Provide facial masks and alcohol gel
- ✓ Keep social distancing
- ✓ Screen contractors
- ✓ Monitor daily health report

## ❑ Separate key persons and control rooms from usual activities

- ✓ Setup a control room as a restricted area
- ✓ Quarantine boardmen and shift team leaders in a safe house

## ❑ Keep communicating and regular share knowledge

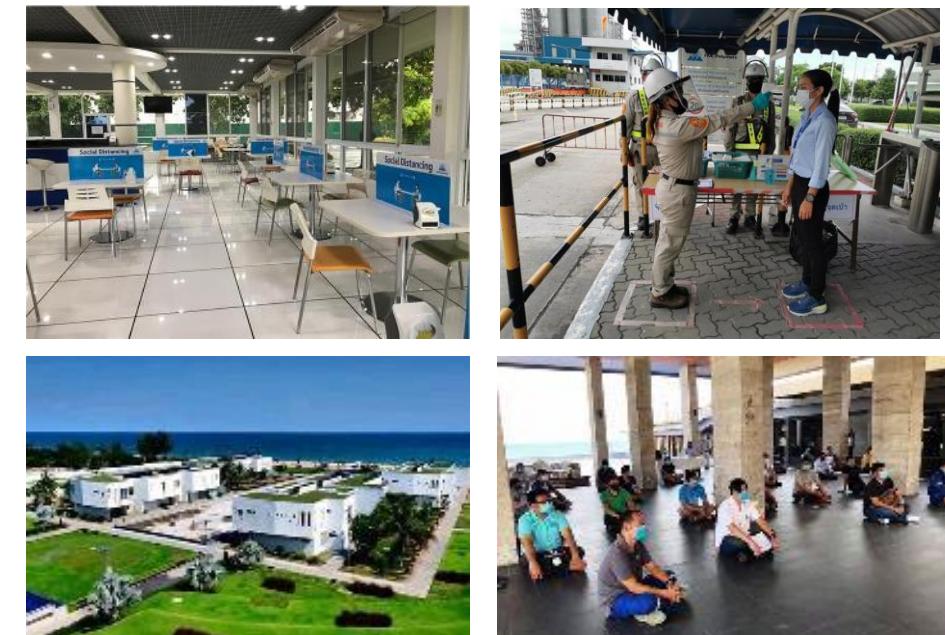
- ✓ Promote awareness through screen and board, computer pop-up and e-mail

## ❑ Activate Work From Home Program

- ✓ Bangkok office 100% of employees
- ✓ Rayong plants by separating into 2 groups and swap on the weekly basis

## ❑ Contact Rayong Provincial Health Office

- ✓ Rayong Disease Control Department came to audit in April 2020 with positive results



# PP4 Project

The most advanced PP plant ever built

- The new PP Plant Line IV site, planning and site preparation is now well underway bringing the Company's total PP capacity to 1.1 mtpa further boosting its position as the largest PP producer in ASEAN.
- Expected PP4 start-up in 2022.

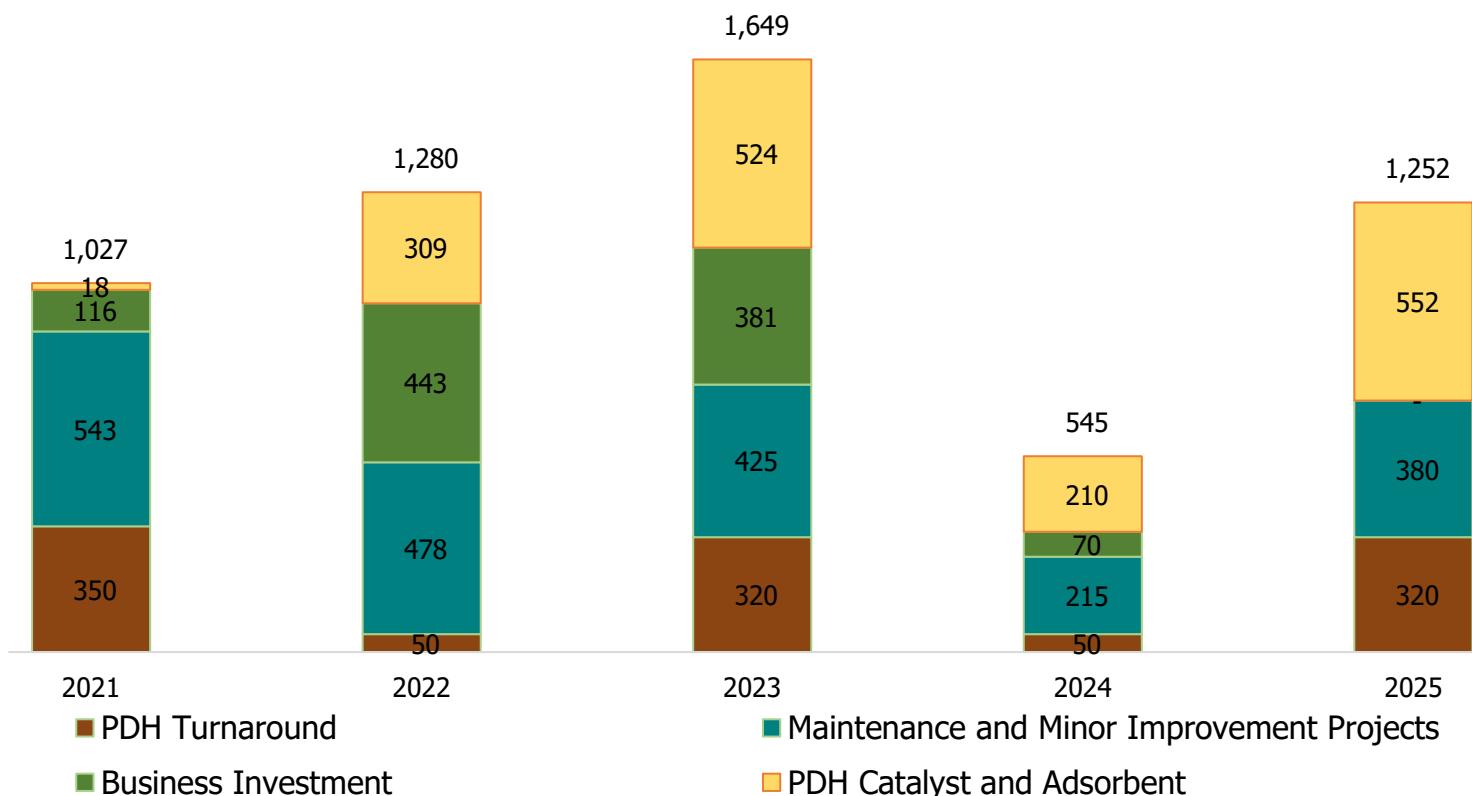
Cumulative Progression	as of 26 Feb 21
• Engineering	99%
• Procurement	87%
• Construction	31%
• Overall	<b>73%</b>



# 5-Year CAPEX Plan

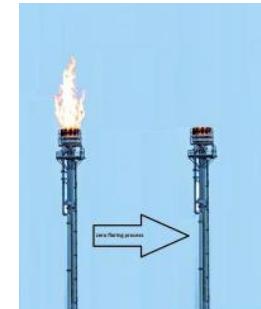
Capital projects to enhance Safety, Reliability, Efficiency and Sustainability

in Million Baht



## CAPEX Highlight

- PP Zero Flare from 2021 to 2023 with the value of Baht 550 million aiming CO<sub>2</sub> emission reduction and monomer yield enhancement for sustainable utilization.



- PDH Turnaround from 2021 to 2025 with the value of Baht 1,090 million reaching higher level of reliability and efficiency.

# Agenda

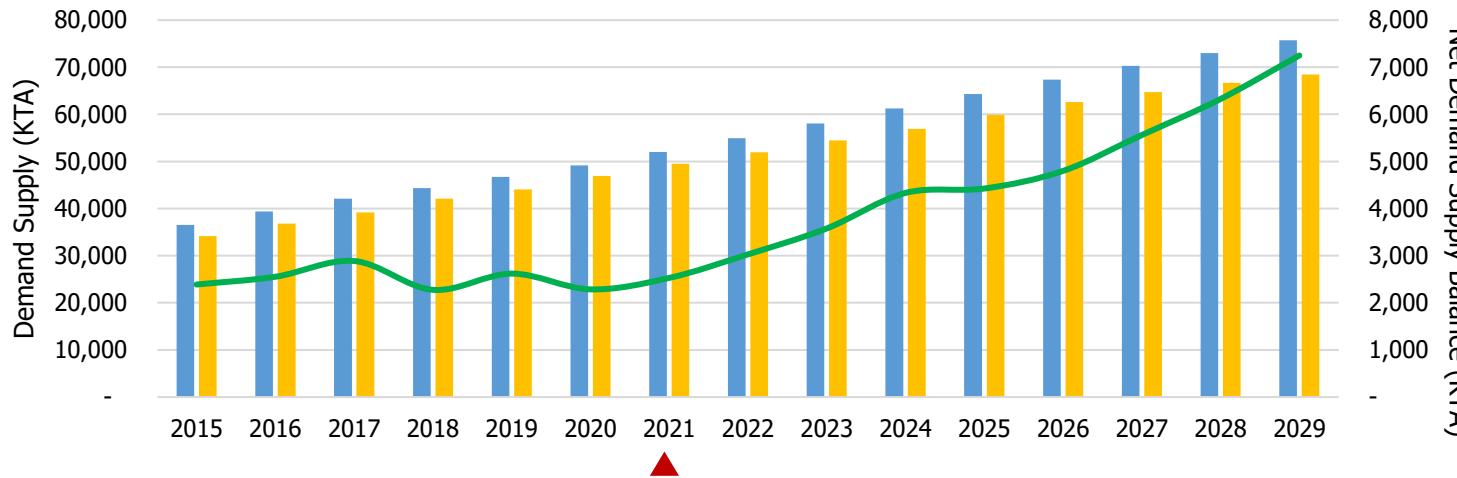


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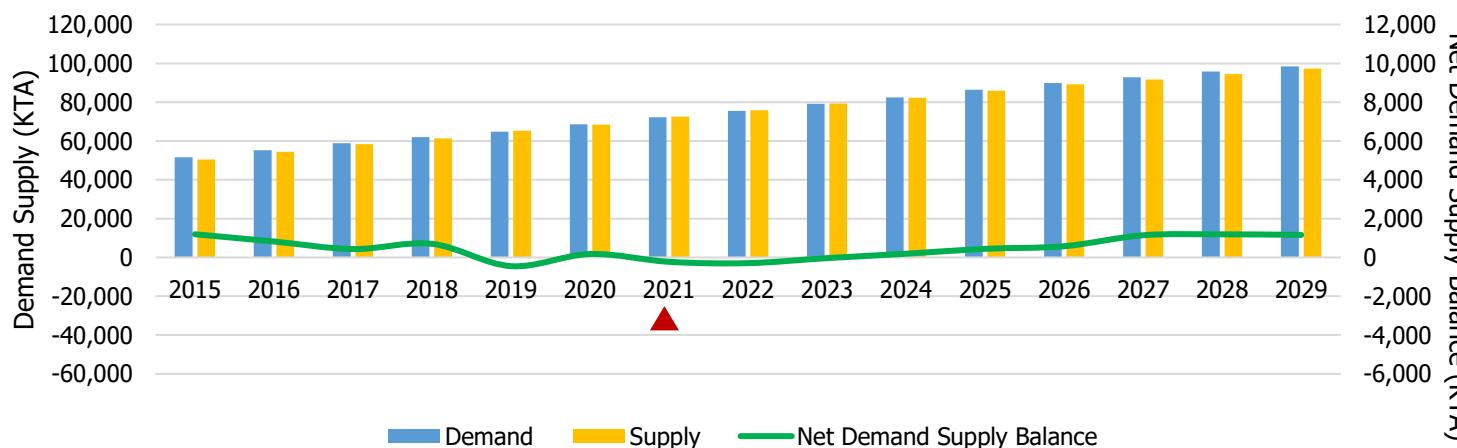
# Polypropylene and Propylene

## Demand Supply Balance in Asia Pacific

### Polypropylene Demand and Supply in Asia Pacific



### Propylene Demand and Supply in Asia Pacific



Source: IHS

- Asia Pacific comprises Northeast Asia, ASEAN and Indian subcontinent.
- In 2020, petrochemical industry and crude oil demand decline due to the COVID-19 pandemic. **However, PP demand in packaging, consumer and medical sectors experience positive advantages.**
- Some new polypropylene players, planned to start up in 2020, are expected to roll over to next years.
- **Propylene market in Asia Pacific is expected to be a bit tighter from 2022, driving the slight import volumes.**

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## A Most Admired Company



## Latest News



24 December 2020

### Debenture Closing Ceremony

Closing Ceremony for HMC's Inaugural Debenture Offering On 23 December 2020, HMC conducted a closing ceremony for its inaugural... [read more](#)



25 November 2020

### PP Line IV Update

The new HMC PP Plant Line IV site, planning and site preparation is now well underway. HMC's total PP capacity of 4 production lines... [read more](#)

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- [Frequently Asked Questions](#)

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**HMC Polymers**

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*An associate of PTTGC & LyondellBasell*

# Thank you for your attention

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