New PP Sky After Perfect Storm

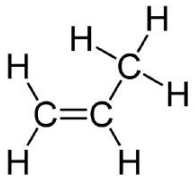
The 14th PTT Group Petrochemical Outlook Forum

Wednesday, 12 July 2023

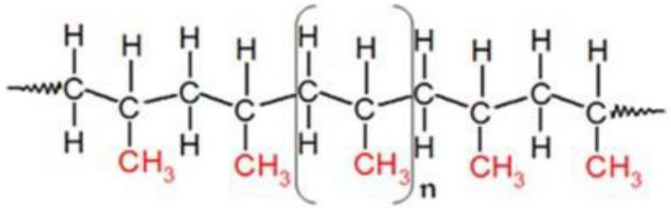


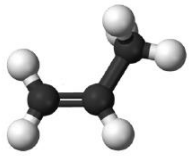
What is Polypropylene?

- Polypropylene is a thermoplastic polymer, produced through polymerization of propylene monomers

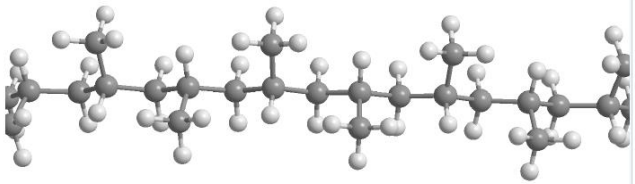


Polymerisation



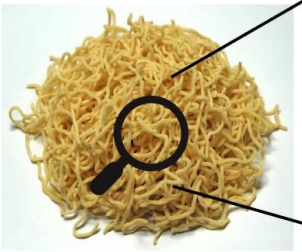


Polymerisation





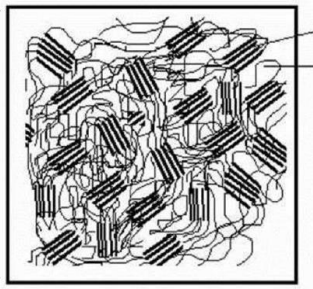
PP pellets



Molecules

Short chain molecule

Long chain molecule



Molecular Structure

Crystalline: Strength, Opacity

Amorphous: Elongation, Transparency

Polypropylene Market Application

Healthcare & Hygiene

Medical | Spunbond



Industrial Products

Pipes | Automotive | Appliances | Compounds | Industrial Products



Rigid Packaging

Caps and Closures | Crates & Pails | EBM and ISBM | Thermoforming | TWIM | Houseware



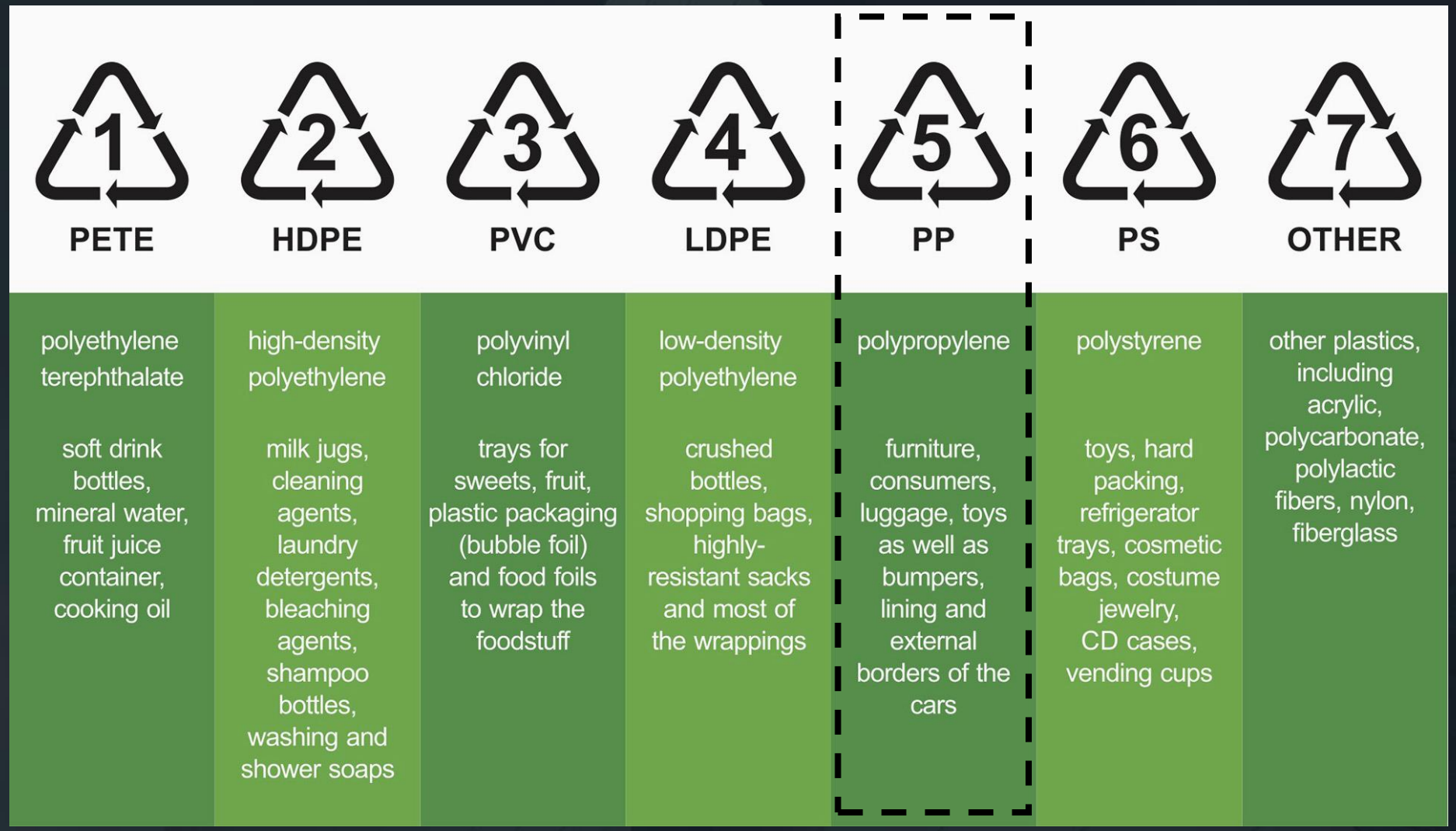
Flexible Packaging

Blown Film | BOPP | CPP | IPP | POF Shrink film | Raffia | Coating



Source: HMC Polymers

Plastic Recycling Types



Source: WCPSolutions.com

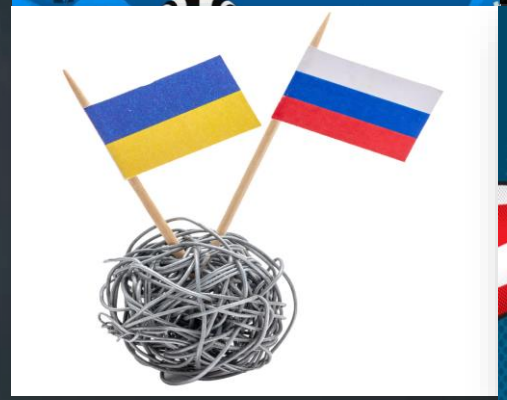
Economic Outlook in Asia Pacific

Challenges

- Short term: US bank stress and massive budget deficit, OPEC oil production cut
- Mid-long term: Geopolitical tension (Russian – Ukraine, US – China)









Opportunity

- Short term: Chinese stimulus package
- Mid-long term: Easing FED monetary policies in 2024-25, growth in sectors such as service, manufacturing, automotive, growth in India and SEA countries







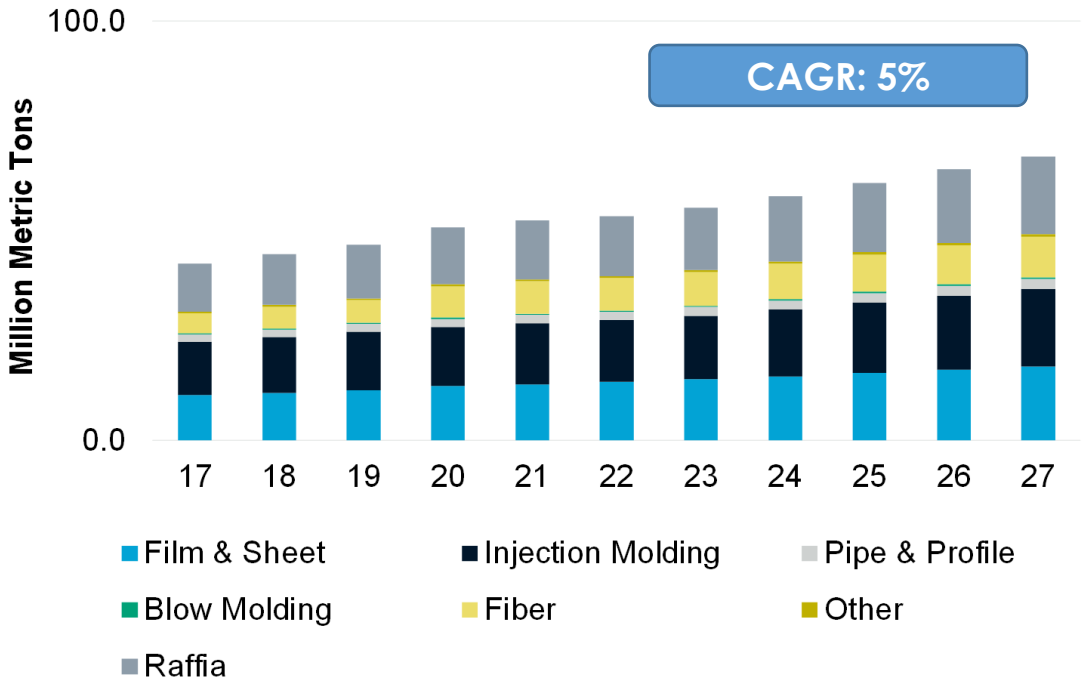




Business Outlook

Asia Pacific PP Demand Continues to Grow

Asia Pacific PP Demand



Source: CMA and HMC Polymers analysis

- **Driving forces include**

Food safety & access – flexible and rigid packaging

Quality healthcare – medical products / equipment

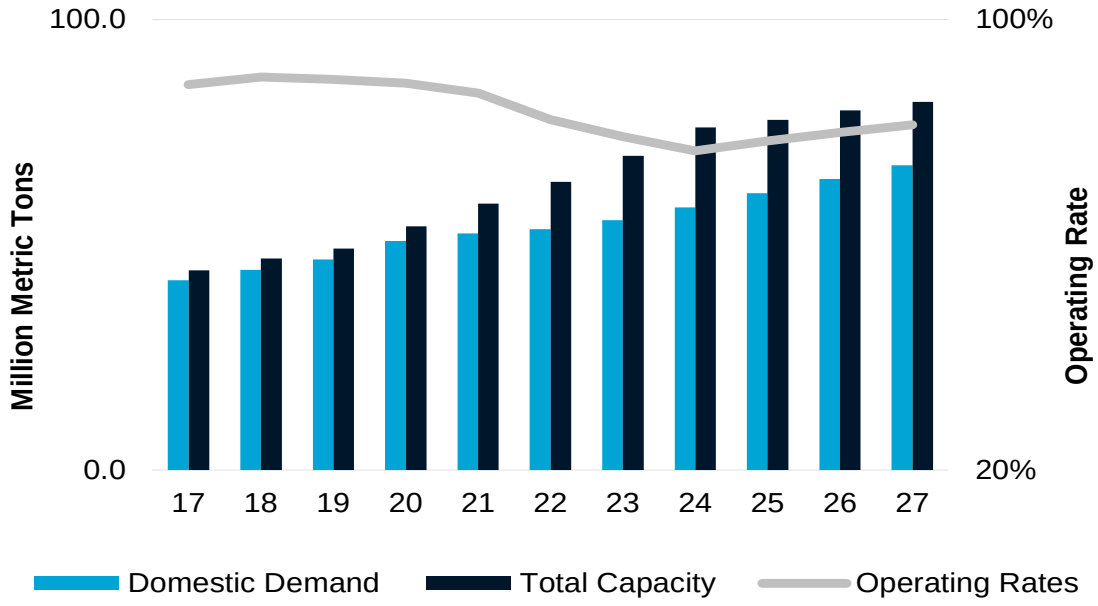
Cleaner air & fuel efficiency – lighter and stronger plastic

Sustainable & modern living – recycled products and sustainable materials

Business outlook

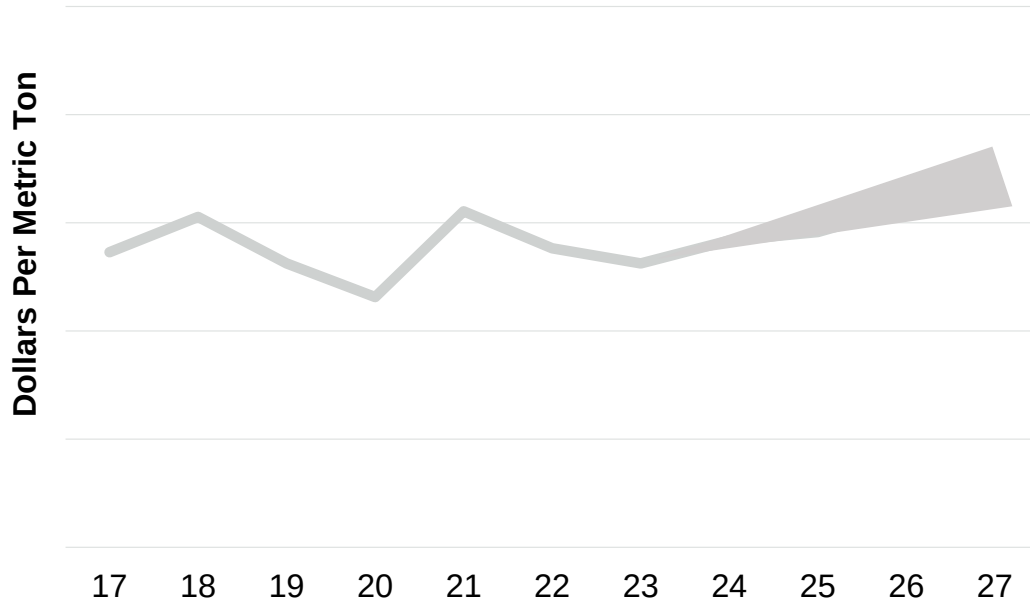
Oversupply to Ease in 2024-25

Asia Pacific PP Supply and Demand



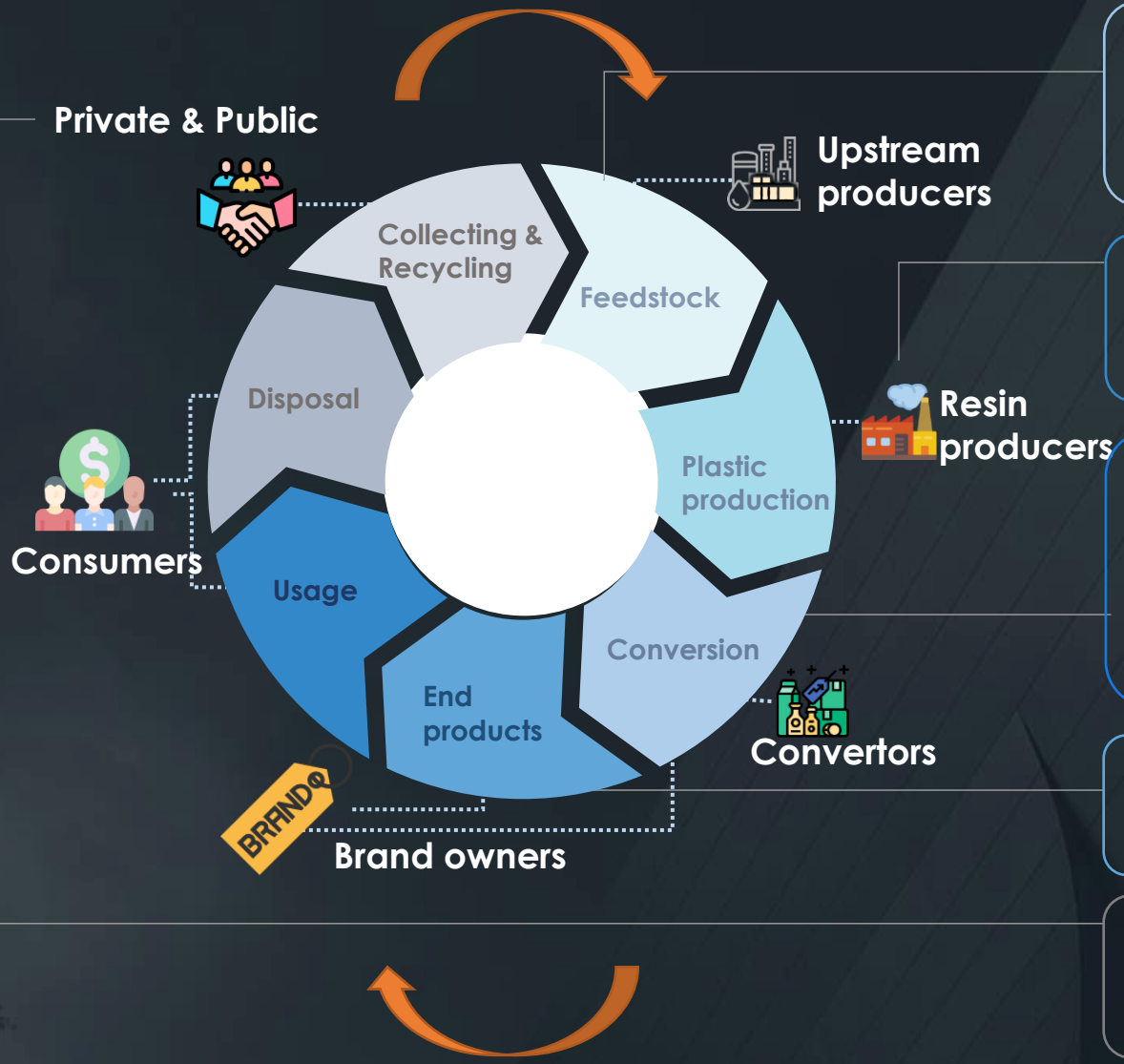
Source: CMA and HMC Polymers analysis

SEA PP-Naphtha Spread



Source: HMC Polymers Analysis

Plastic Sustainability Trend Along Value Chain



- **Renewable feedstock:** bio-based, alternative energy for utilities
- **Decarbonization**

- **Elimination of unfavorable chemicals**
- **Improvement of yield** and **Energy efficiency**

- **Redesign** to facilitate reduce/reuse/recycle—e.g. mono-materials
- **Efficiency** energy, productivity, downgauging
- **Recycled content/ Recyclable product**

- **Upcycling** to create more value of wastes
- **Reuse/ Recycle/ Refill**

- **Waste stream management & tech**
- **Recycling tech development:** mechanical, advanced

- Regulation, CBAM, carbon credit / tax

Key Takeaways



Despite near-term turbulence, **easing FED monetary polities and countries stimulus packages** in couple with **strong growth** from countries such as **India and SEA countries** are expected to drive global recovery in mid-long term



Market drivers include **food safety & access, health care, cleaner vehicle efficiency,** and **sustainability**



Supply/demand situation is expected to **improve** from 2024-2025



Sustainability trend along value chain is foreseeable and essential for business growth in long run.


“Hard times always lead to something great”

THANK YOU

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