Recycled Plastics Reality Check

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2024 Canadian Stewardship Conference

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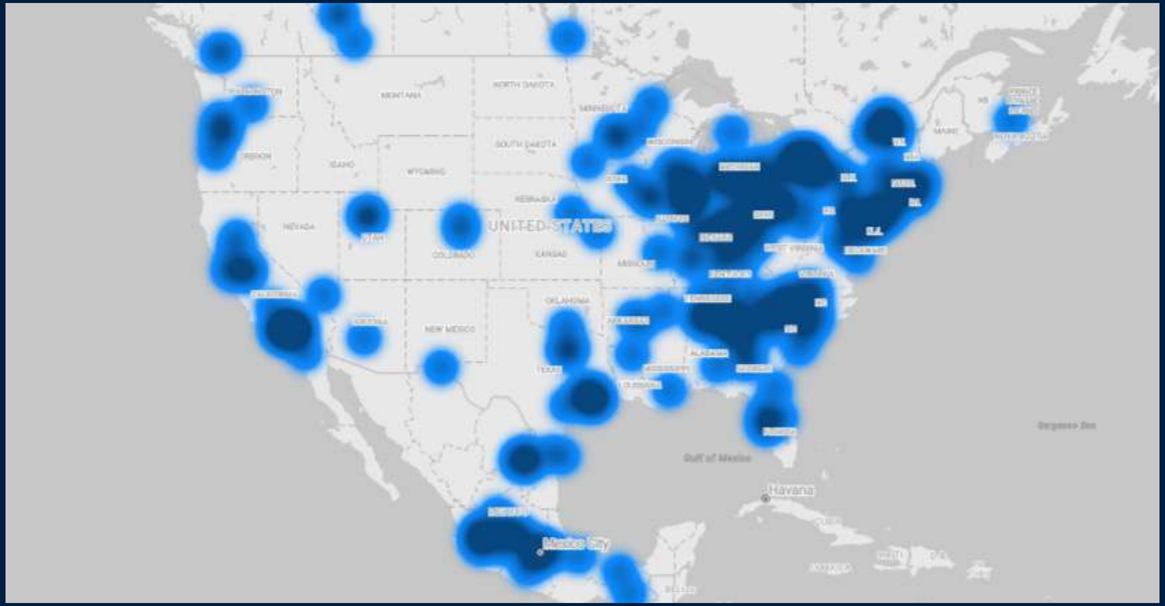
01 | Recycled Plastics Reality Check

Plastic Recycling Infrastructure and Supply

Mechanical recycling relatively established in comparison to nascent but fast developing chem recycling

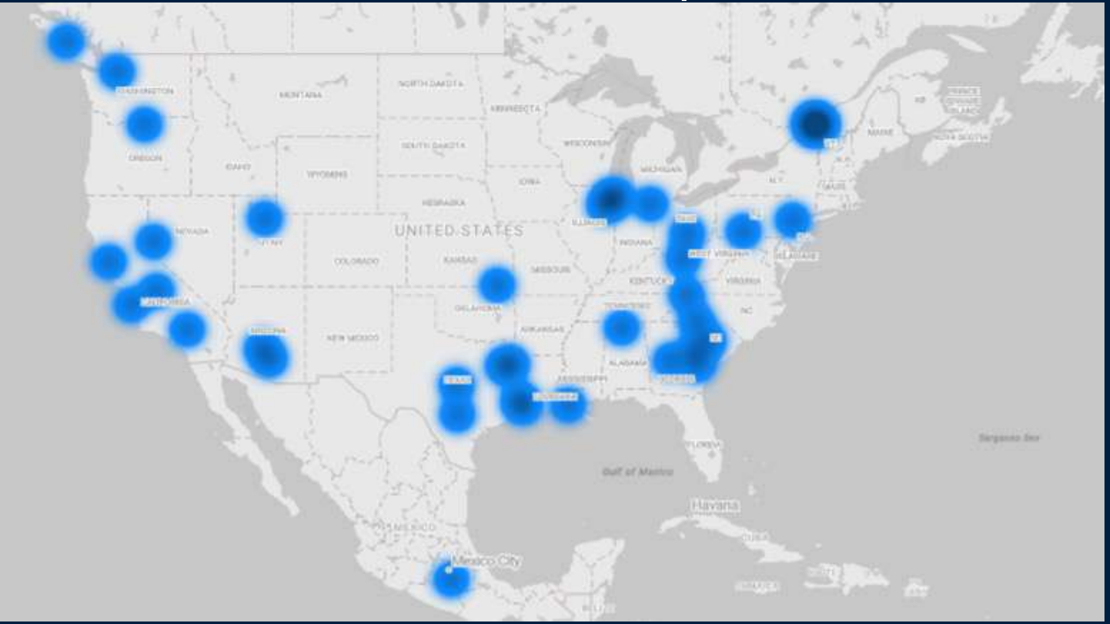
Mechanical recycling plants*, operating and announced (FID) ~330 plants



Key developments:

- Converter upstream, waste company downstream integration
- Virgin producer involvement
- Growth in film, PP recycling

Chemical recycling plants**, operating and announced ~40 plants



Key developments:

- Proving reliability at scale
- Unlocking affordable feedstocks
- Regulatory pushback, support

Includes PET, PE and PP capacities

***Includes all types for all polymers and all plant scales (both pre-commercial and commercial)*

Source: ICIS Recycling Supply Tracker – Chemical & Mechanical, 2024

Canadian recycling infrastructure supports local, US markets

Mechanical recycling plants*, operating and announced (FID)

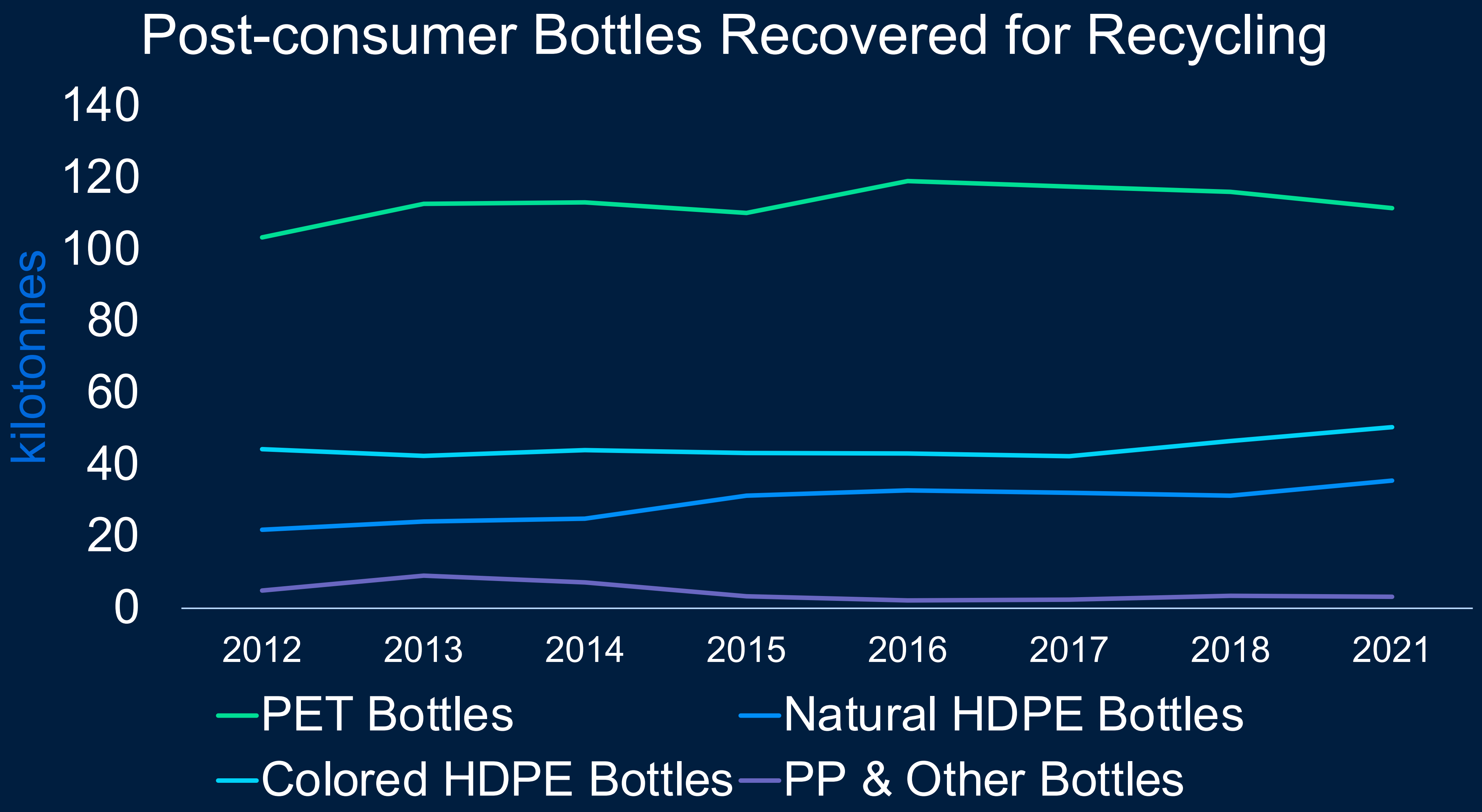
Capacity: 1.3 M tonnes/year

Plant Count: ~50

* *Includes PET, PE and PP capacities*

Source: ICIS Recycling Supply Tracker – Chemical & Mechanical, 2024

Canadian bottle recycling shows little growth



Source: Stina Inc., NAPCOR 2023

Reality Check: Model Assumptions

Plastic packaging demand

(Total CA plastics demand * packaging subsector)

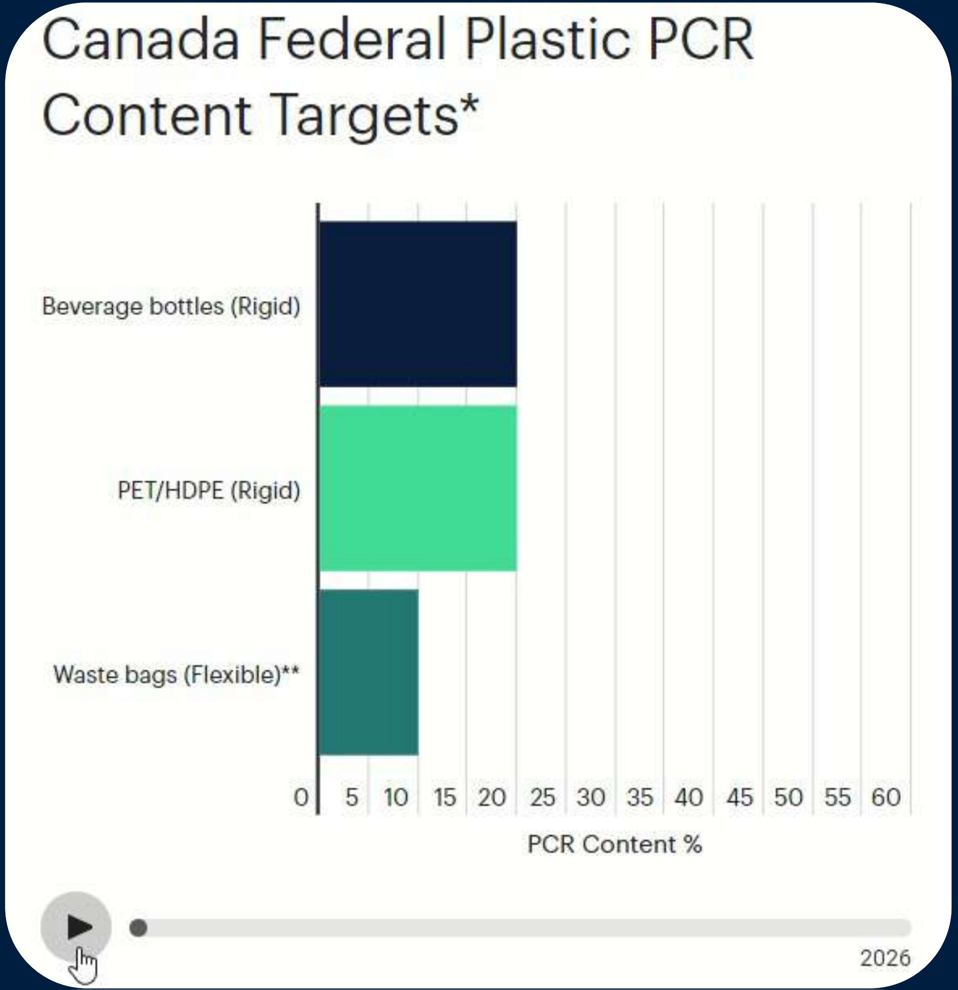
Mechanically recycled plastic output

(split by polymer)

PCR targets:

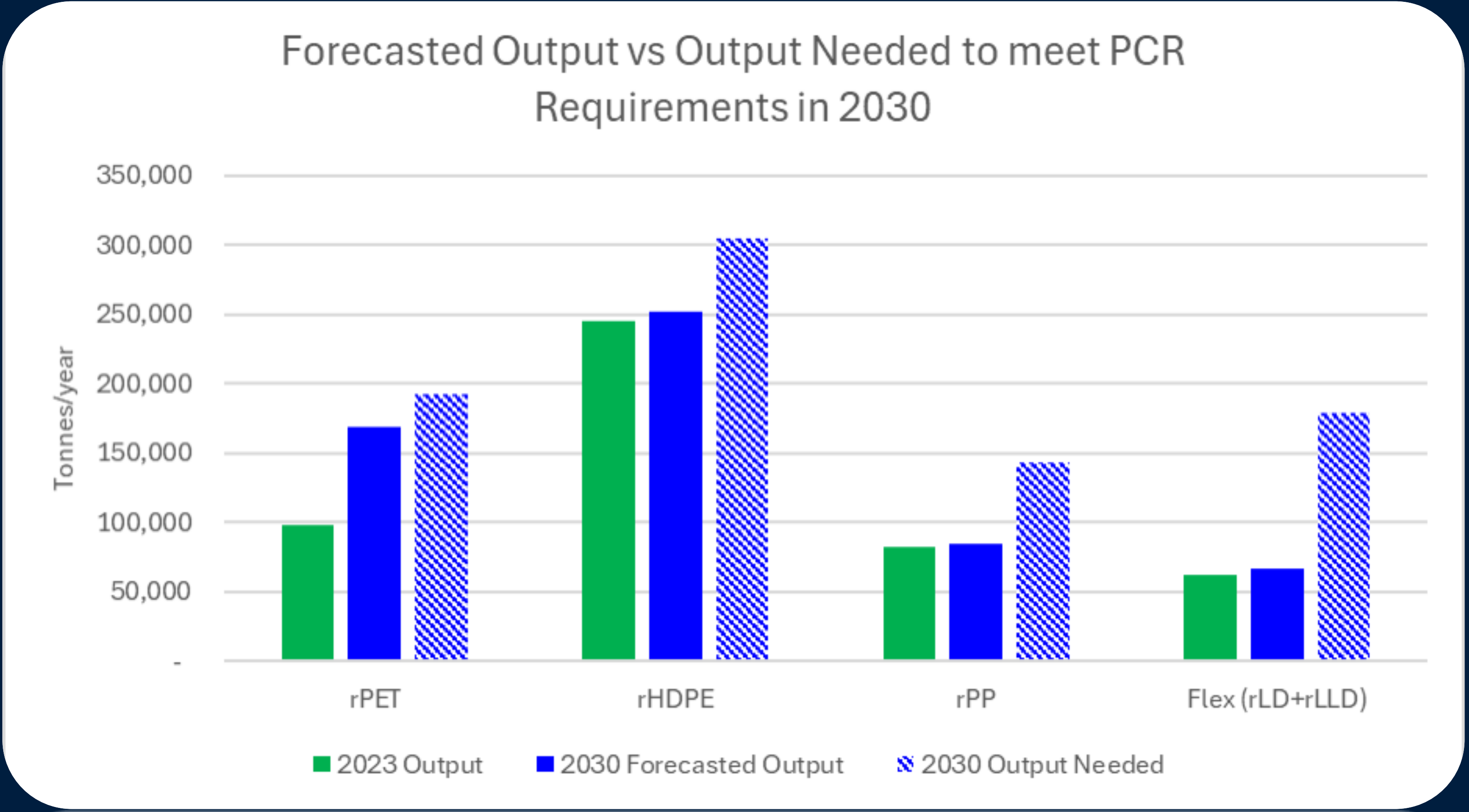
Rigids 60%

Flexibles 40%



*Canada's Zero Plastic Waste Agenda draft targets, pending finalization
** Displaying max requirement; waste bag requirement based on thickness

Significant capacity investment still needed to reach proposed goals

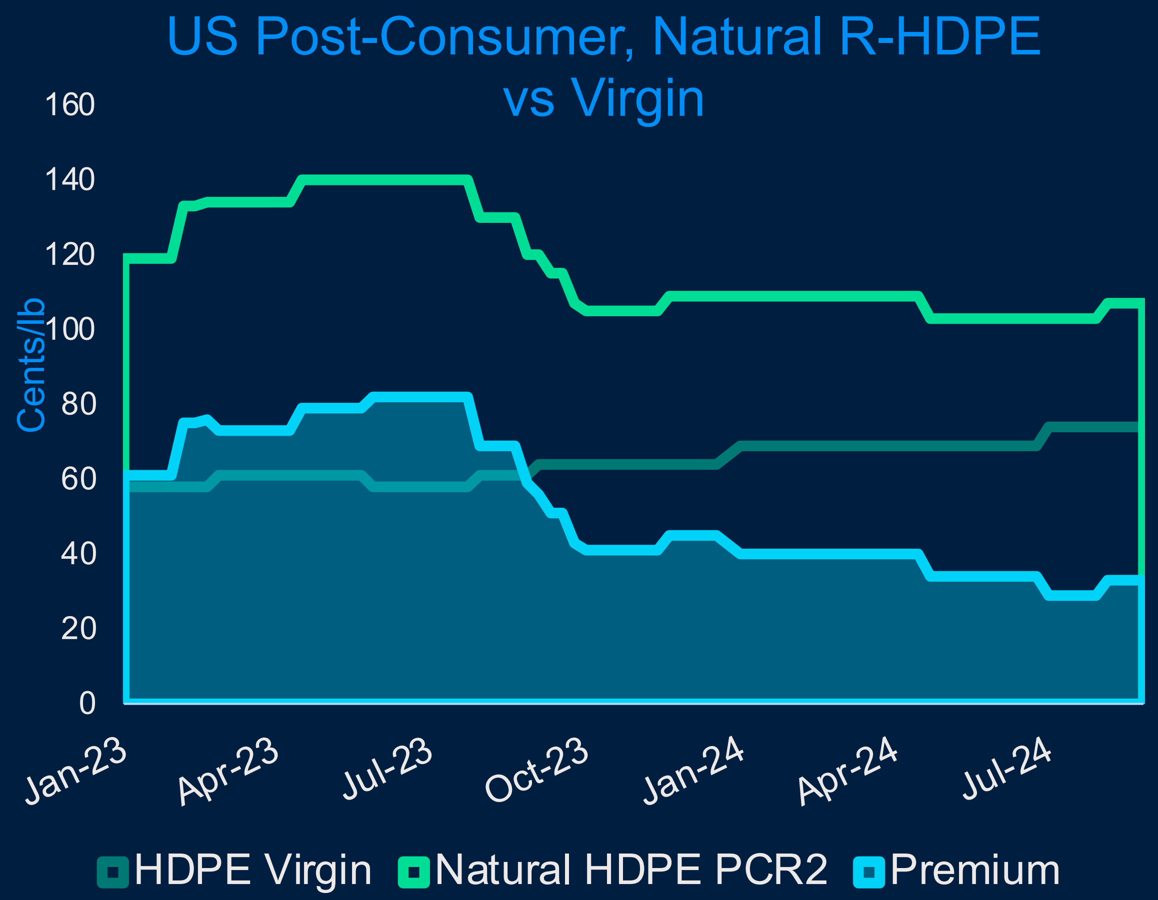


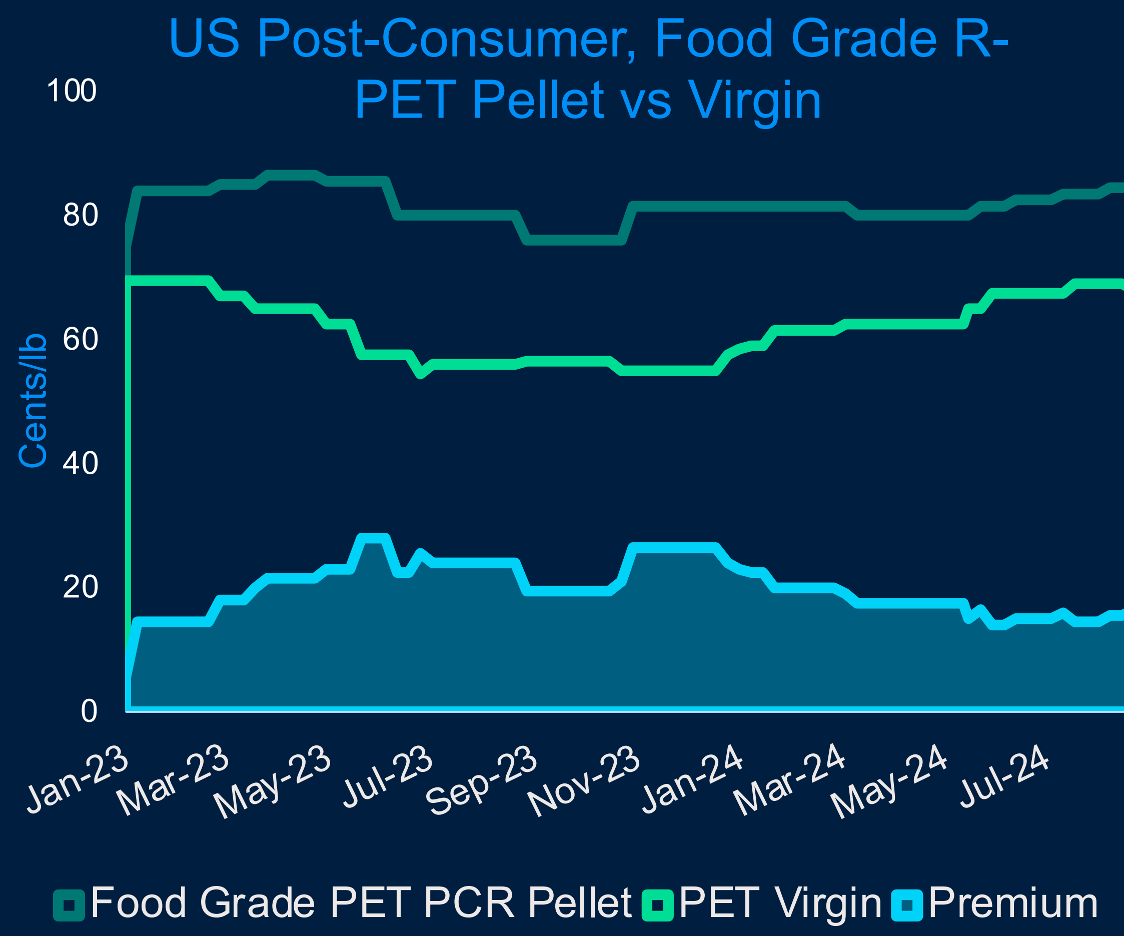
+25

Additional recycling plants with ~13,200 tpy output to achieve 2030 goals from 2023 output

Source: ICIS Recycling Supply Tracker - Mechanical, ICIS Supply and Demand Database, ACC

Current conditions subject sustainability-driven grades to feedstock volatility



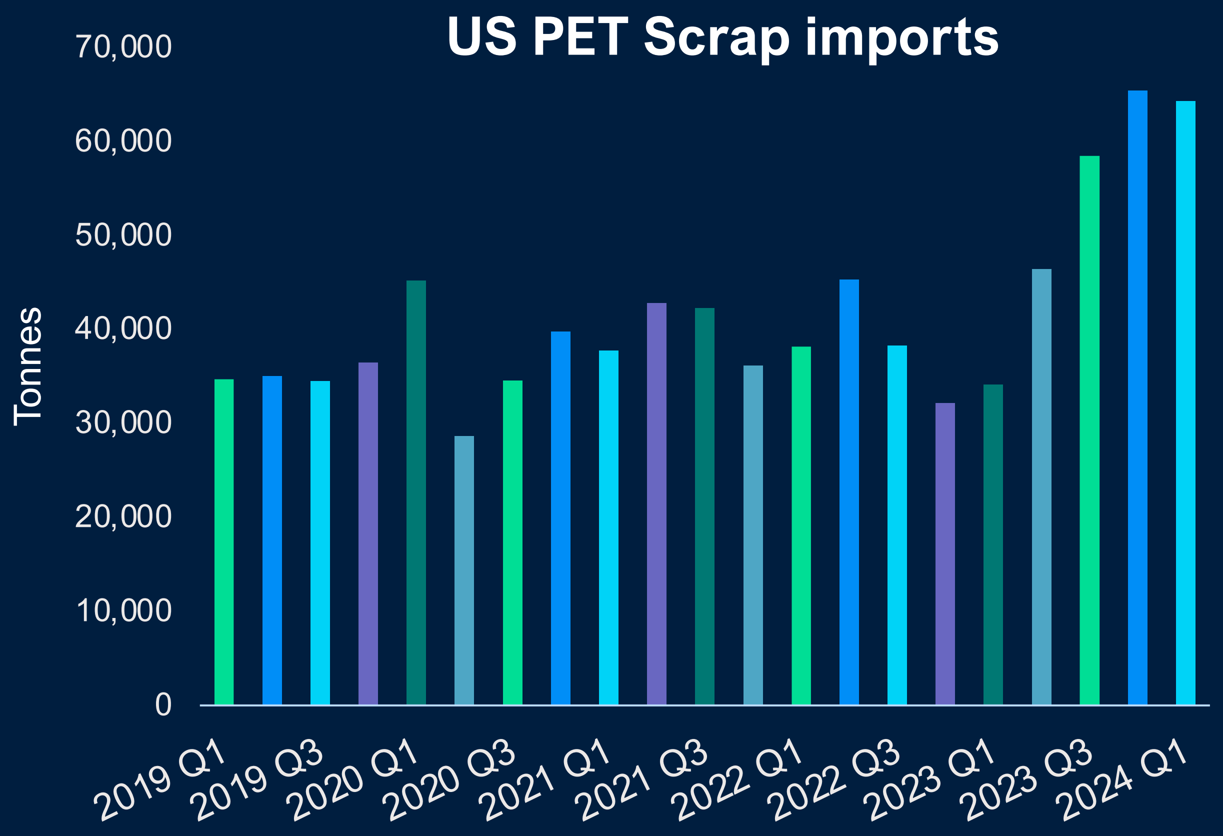


Source: ICIS Recycled Polyethylene Terephthalate and Recycled Polyethylene Commodity Reports

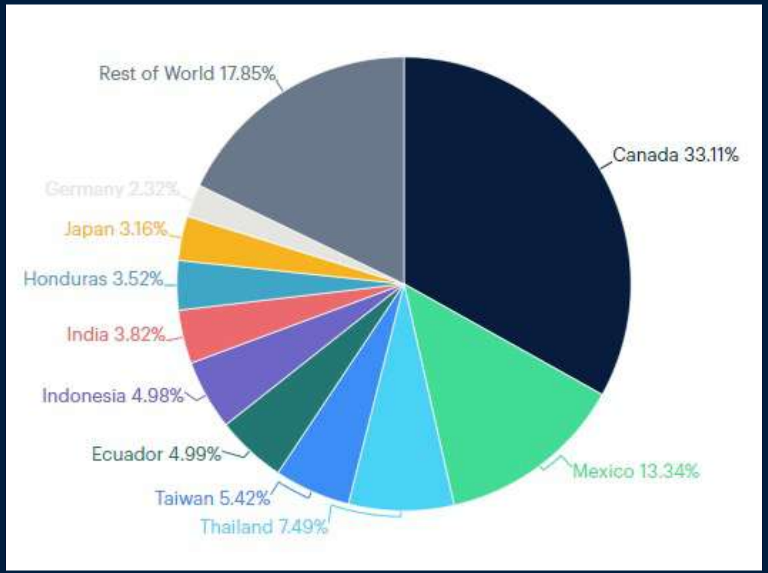
02 | Recycled Plastics Reality Check

Future Market Disruptors

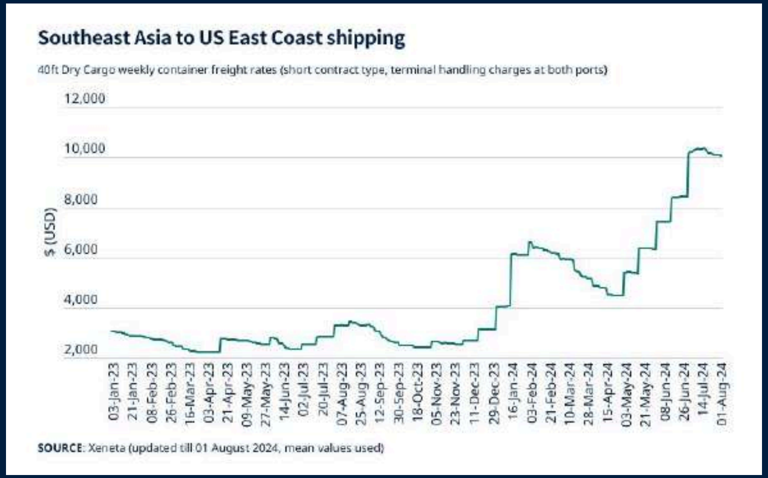
North American market facing onslaught of imported recycled resins, threat and opportunity



US Scrap Imports by Country

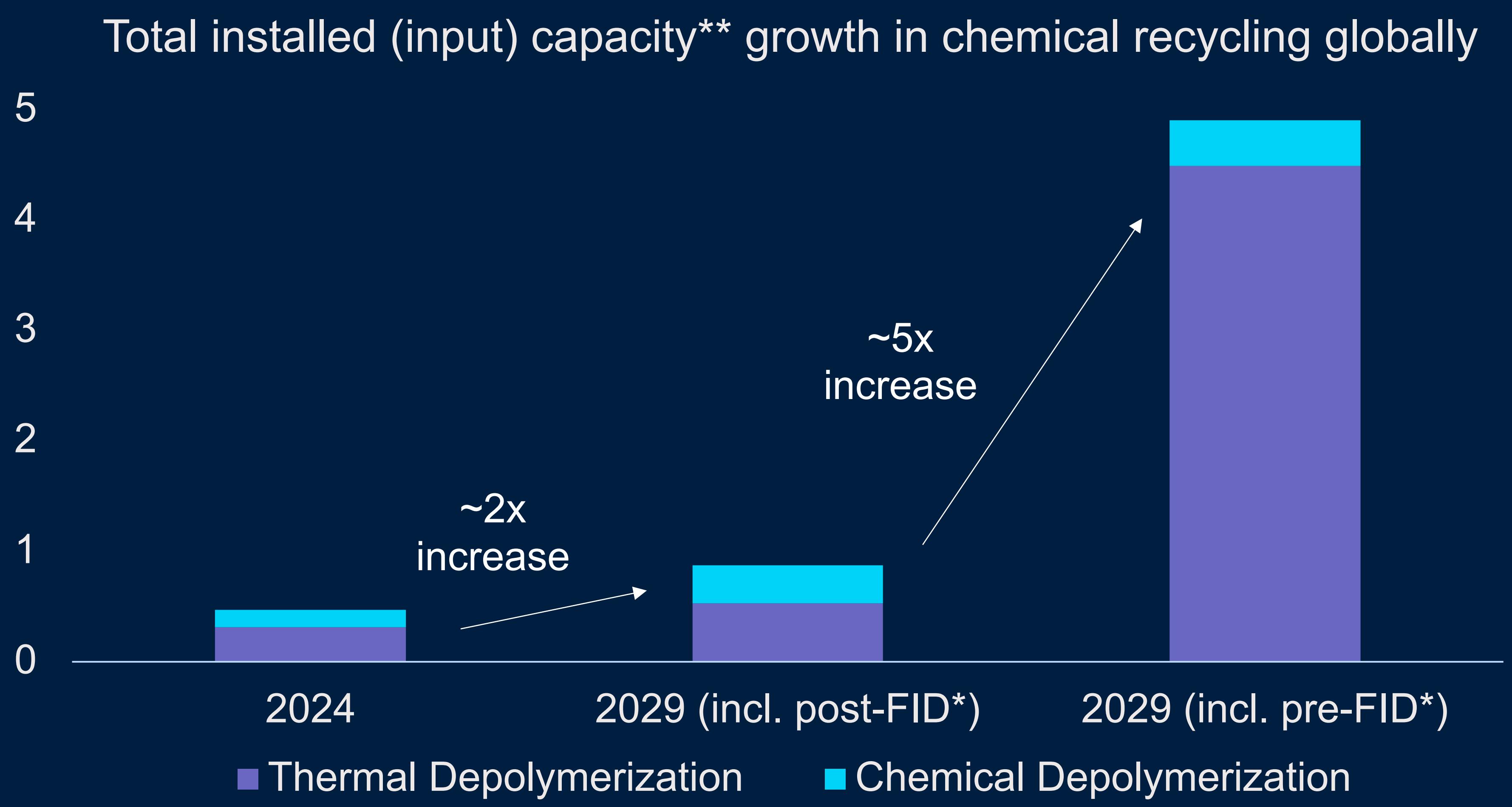


Asia-US Freight Rates



Source: US International Trade Commission

Chemical recycling could unlock additional feedstock, capacity

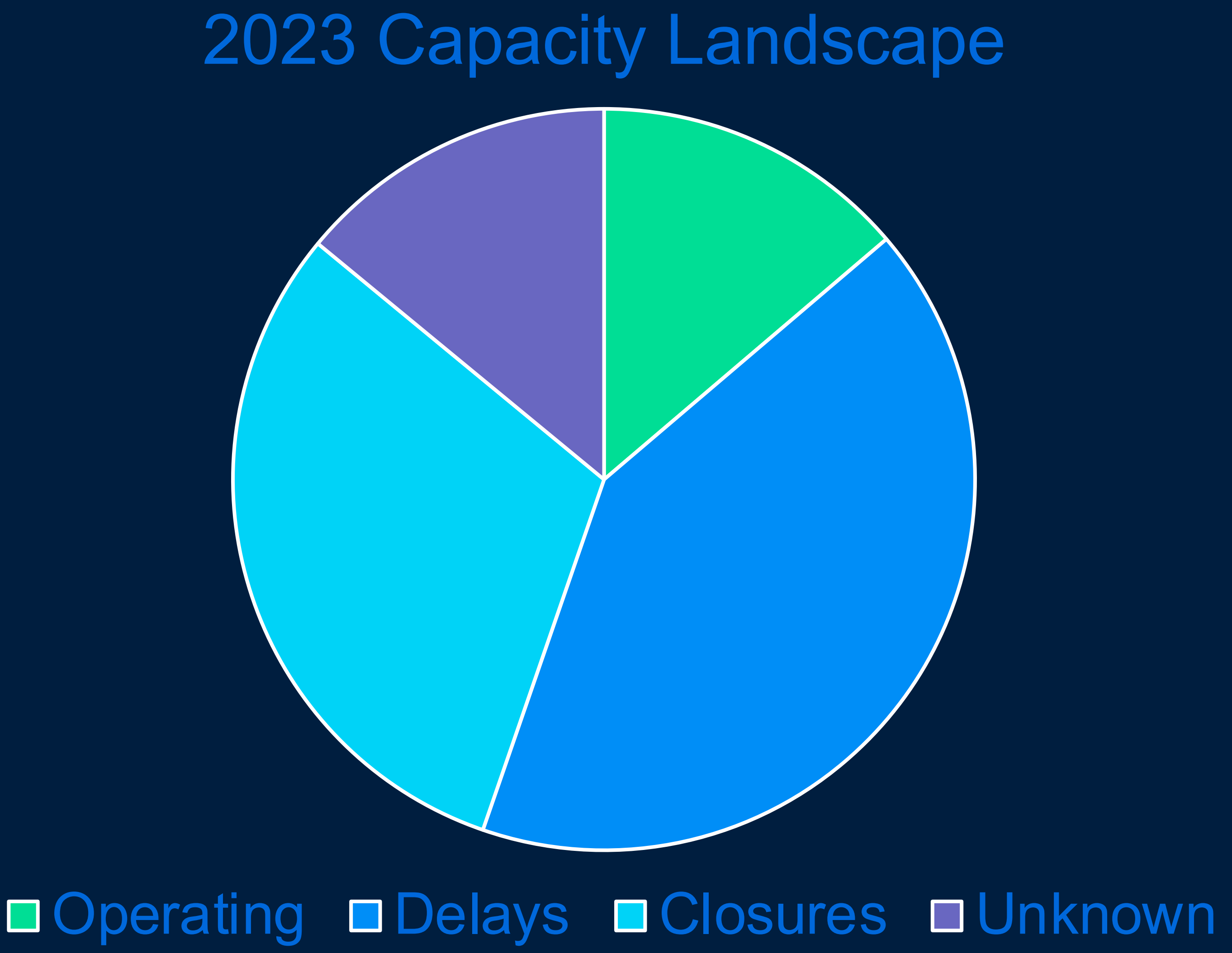


Source: ICIS Chemical Recycling Supply Tracker

Chemical recycling capacity still faces challenges

EX: Delays in chemical recycling capacity — 2023

Expected online capacity by 2024 was 6x from start of 2023, but largely remained the same



Top of mind facility updates

Film	Nova Chemicals/Novolex (Indiana)
	GDB International running Myplas (Minnesota)
	EFS (Pennsylvania)
	Dow running Circulus (Arkansas & Oklahoma)
PET	Republic Services (Indiana)
	Eastman (Tennessee & FID on Texas)
	Circularix (Florida)
	EFS (Alberta)
HD	Blue Polymers (Nevada, Indiana)
	LyondellBasell running PreZero (California)
PP	Blue Polymers (Nevada, Indiana)
	Kal-Polymers (Georgia & Ontario)
	PureCycle (Ohio)

North America Key 2024 Outlook Positions

Bales

- PET to tighten through winter
- Increased export competition
- Natural HDPE in up-cycle, supply remains tight

Market Disruptors

- Import competition to persist
- Increasing capacities, new players
- Ramp up of chemically recycled resin

PCR

- R-PET seasonality diminishing
- Packaging demand to strengthen with new programs
- Durables markets showing interest

Other

- Continued economic recovery
- Fragmented legislation activity to increase (new and existing EPR, PCR)
- Global Plastics Treaty outcomes uncertain

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