



## Best practice in the emerging advanced recycling sector

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CSIRO - Ending Plastic Waste Symposium

7<sup>th</sup> August 2024



# Advanced recycling enables a **continuously circular economy** for soft plastic

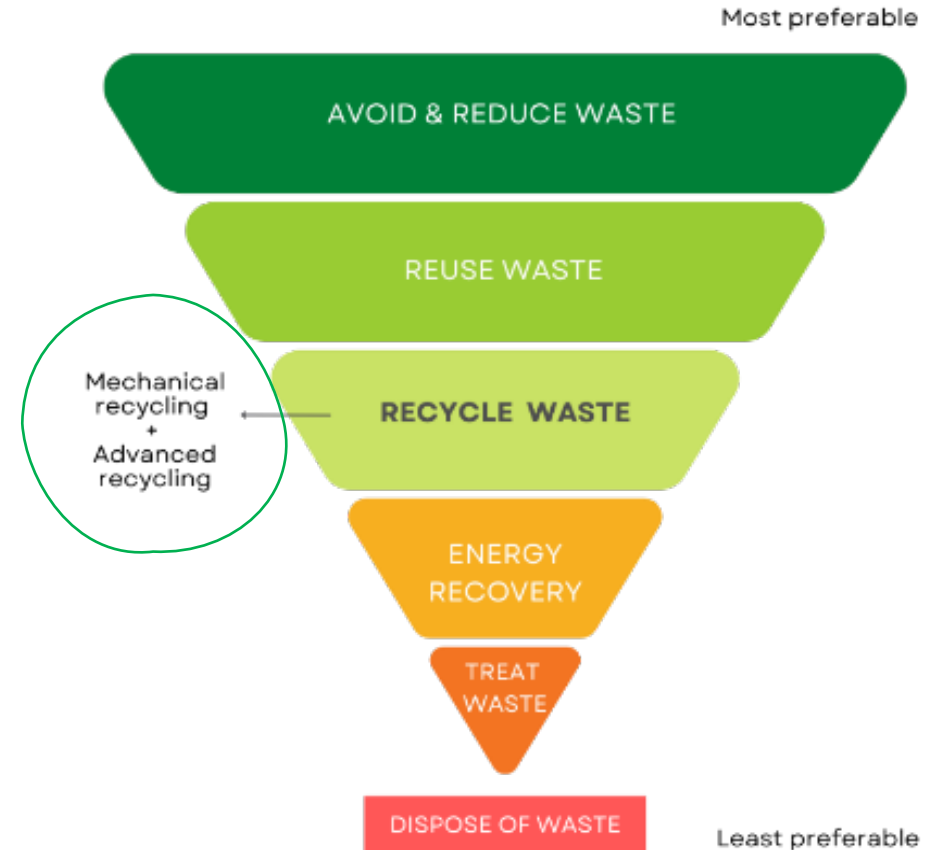


All plastic produced from advanced recycling is **chemically identical to virgin plastic** from fossil resources

# Australia cannot get to zero carbon without a circular economy<sup>1</sup>

A circular economy for plastic is a key piece of the puzzle

- Advanced recycling is **the only pathway to food-grade, recycled plastic packaging**
- A 2023 LCA by the EU’s JRC confirmed importance of advanced recycling within Waste Hierarchy<sup>2</sup>
  1. All recycling is preferable to energy recovery
  2. Hydrothermal liquefaction (HTL) has a global warming potential that is ~50% lower than pyrolysis
  3. HTL complements mechanical recycling by processing residual plastic waste streams



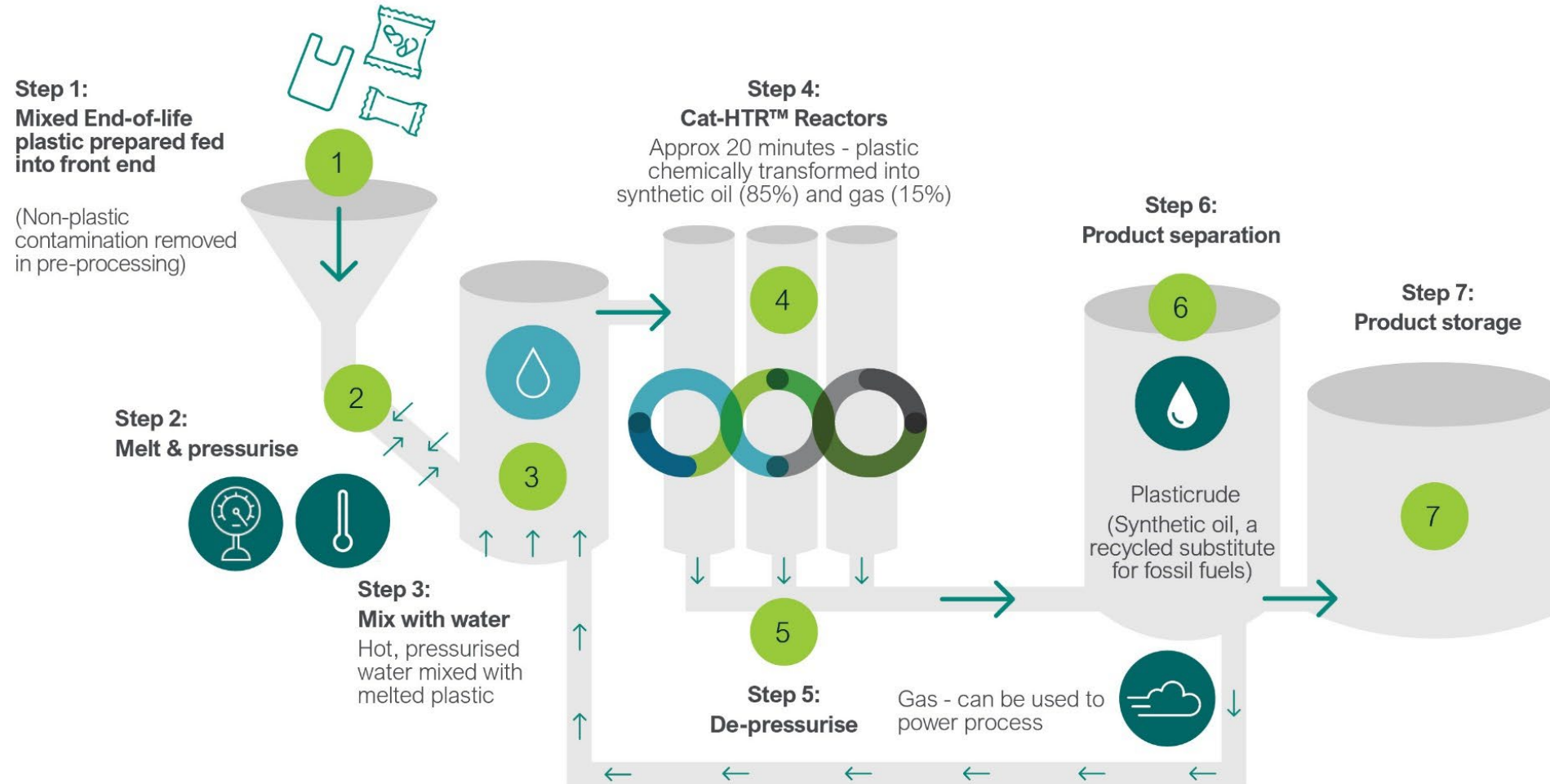
1. Ellen Macarthur Foundation, 2019, Completing the picture - How the circular economy tackles climate change.

2. JRC REPORT (2023). Environmental and economic assessment of plastic waste recycling.



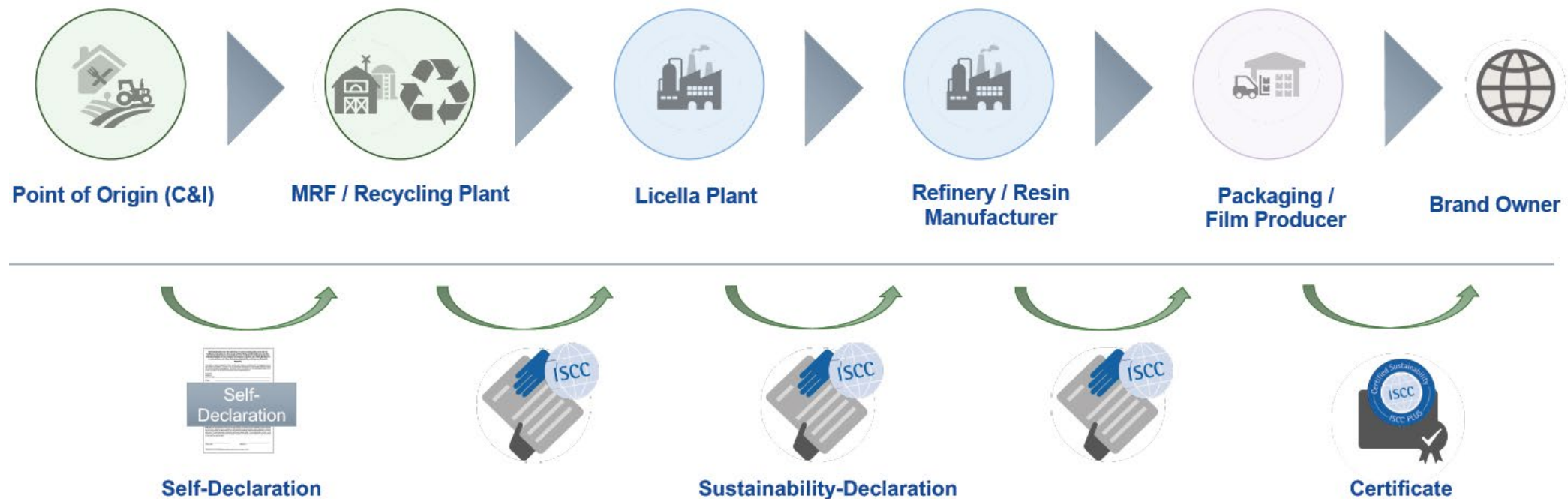
# The technology

## How hydrothermal liquefaction works



# The mass balance approach

- Enables circular based feedstocks and fossil material to be physically or chemically mixed and still be certified under the International Sustainability and Carbon Certification (ISCC+) Scheme
- Recycled content is considered “ISCC Compliant” when entire upstream supply chain is ISCC appropriately audited and certified
- European Commission currently developing Directive (EU) 2019/904 for the calculation of recycled content that will underpin the future of chemical recycling in Europe but impact circularity rules other markets as well



# The role of best practice to achieve plastic circularity

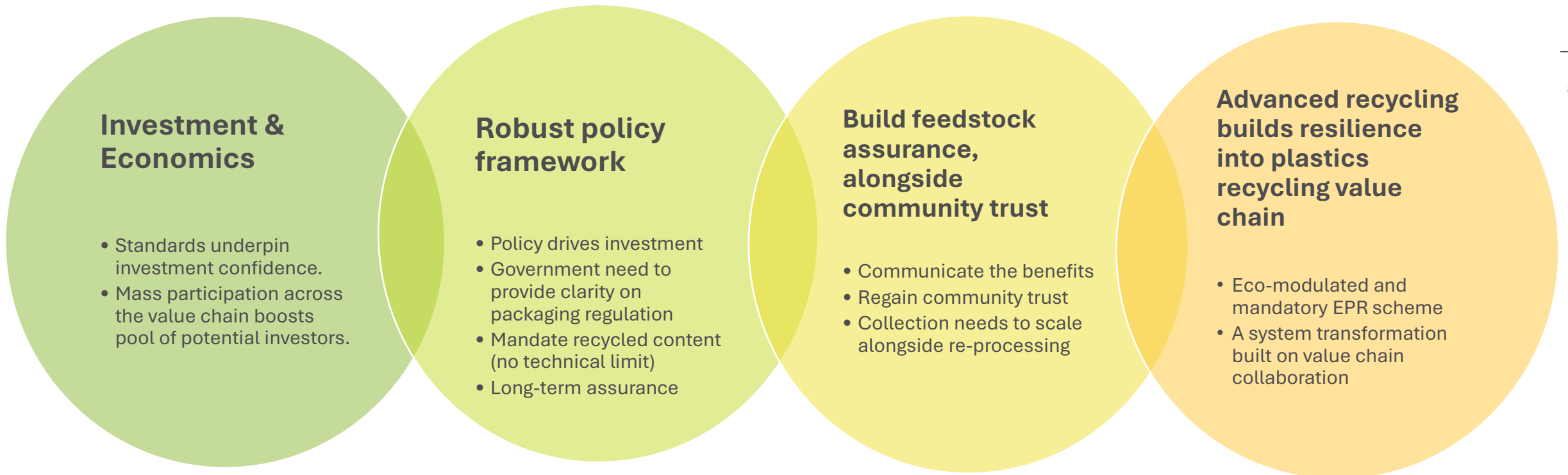
Linear economy is still more profitable.

Lack of clarity to underpin investment confidence.

Availability of feedstock at scale - at price that doesn't destroy emerging value chain.

Without a systems approach, we continue to create blocks and not achieve circularity.

## Transparency, policy & standards underpin building a new plastic value chain





Building a local circular economy for waste plastic is possible but requires a systems-wide change.

This will only be achieved by if a new 'circular' value chain rebuilds community's faith in recycling.