



# Pioneering plastic circularity

Pryme converts plastic waste at unmatched scale.

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Investor Presentation  
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## *Today's presenter*

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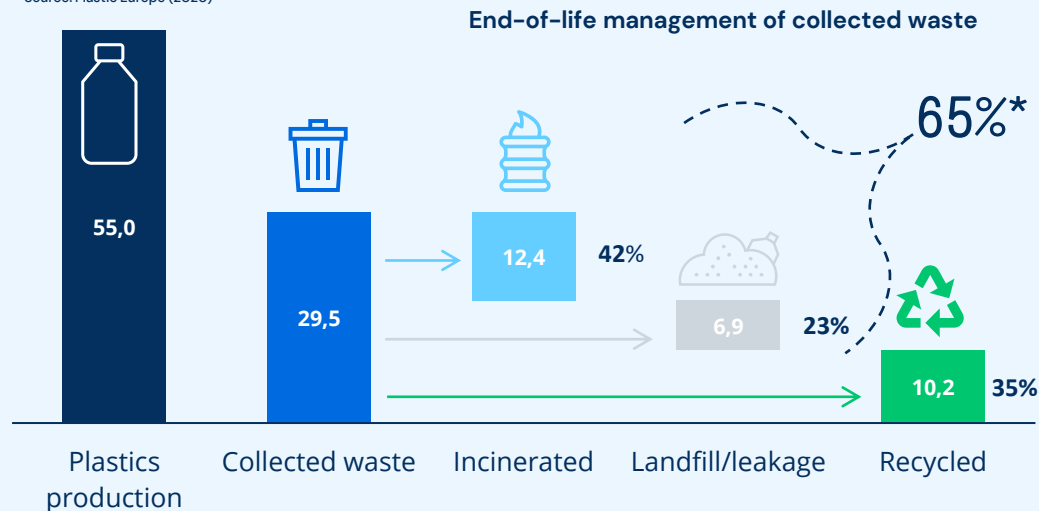
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# Advanced recycling: key to unlock plastic waste circularity

## European plastics end-of-life management in 2020 (Mt) \*\*

\*\*Source: Plastic Europe (2020)



**\* 19 million tons per year of plastic waste unrecycled in the EU**

### Pillars of advanced recycling



Converts hard to  
recycle plastics



Produces virgin  
like plastic



Reduces fossil  
dependency



Cuts emissions  
from incineration



Advanced recycling is required to achieve meaningful scale in the circularity of plastic while vastly outperforming biobased solutions in mitigating its criticality.

# Advanced plastic recycling, a call for action

- **Plastic waste:** a critical societal issue to be addressed, at par with reduction in carbon emissions.
- **Regulation & consumer demand** drives the transition from linear to circular plastic packaging.
- **Petrochemical players:** gearing up through technology investments & downstream capacity build-up.



## IMPACT

**Pryme** enables circular plastic through advanced recycling at industrial scale, reducing waste, emissions & demand for fossil resources.



## FUNDING

**Pryme** secured €69 million through an IPO on Euronext Oslo, two subsequent private placements, debt financing & subsidies.



## ACTIONS

**Pryme** has deployed funds raised towards three primary objectives underlying key actions to deliver on its ambitious IMPACT:

Pryme One design  
build & startup

Liquefied  
plastic waste\*  
sales

Plastic waste  
sourcing



\* Pyrolysis oil is commonly referred to as Liquefied Plastic Waste (i.e., LPW)

# Pryme One: pioneering scale in advanced plastic recycling



**CAPEX**  
EUR 40 Million\*  
\*Including capitalized expenses



**TEAMS**  
>35 FTE in  
Rotterdam

**Pryme**  
*funded, designed, built and now*

**starts-up**

*Europe's largest*

*advanced plastic recycling installation*

**Pryme One**



**INTAKE**  
40KT p/a plastic  
waste



**OIL**  
30KT p/a LPW\*  
\*At full capacity



Q1 2022

Q4 2023

Euronext Oslo IPO  
Q1 2021

Start of Build  
End of 2021

Civil Works & Steel Erection  
H1 2022

Process Blocks Installation  
H2 2022

Piping, Electrical & Automation  
H1 2023

Extruders Commissioning  
First Melted Plastic  
Q3 2023

Reactor Commissioning  
Reactor reaches 600°C  
Q4 2023

Production Starts  
First Oil Expected  
January 2024



Pryme transformed a PowerPoint concept into a fully staffed operational petrochemical facility in just over 2 years.

# Pryme One: up to 40k tons plastic waste through one reactor

1

*Plastic Waste*

## **PW bulk reception & storage**

Densified or fluff PE – PP waste  
Up to 350 tons storage capacity  
Unloading & transfer of 1 truck / hour



2

*Melted Plastic Waste*

## **Industry proven extrusion**

5 tons per hour installed capacity  
Degassing of moisture & volatiles  
From 20°C to 350°C in 30 seconds



3

*Thermochemical Cracking*

## **Exclusive reactor technology**

5 tons per hour on a single reactor  
20 m3 oxygen-free vessel  
Electrically heated up to 600°C



4

*Liquefied Plastic Waste\**

## **Two step condensation unit**

Streamlined & versatile process  
Non-condensable management  
LPW batch storage unit



\* Pyrolysis oil is commonly referred to as Liquefied Plastic Waste (i.e. LPW)

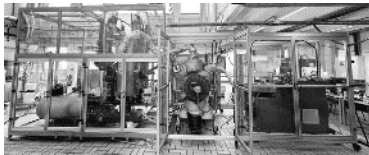


## PRYME'S TECHNOLOGY EDGE:

High-capacity reactor with precision heat controls

### Key differentiators

- ✓ Delivers up to 7x the capacity of competitor reactors in use.
- ✓ Superior core temperatures compared to existing thermal technologies.
- ✓ Improved temperature control for optimized thermochemical cracking.
- ✓ Yields liquefied plastic waste with increased quality consistency.
- ✓ Dry & free flowing ash residue evidencing complete reaction.

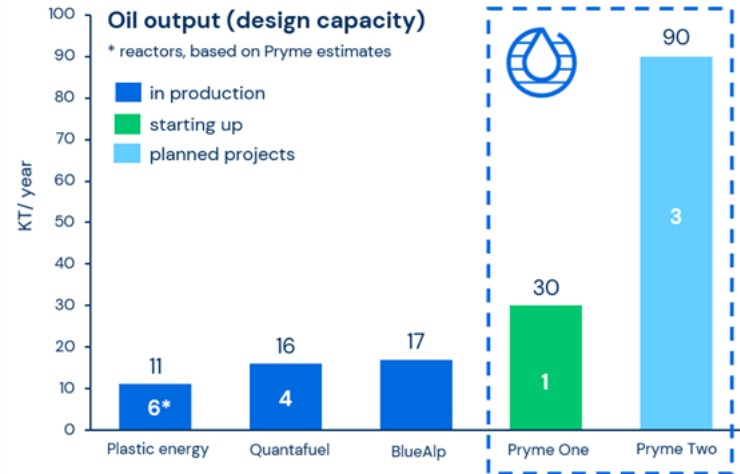


Left: Pilot Plant – mini Pryme, in operations since Q1-2023.



Right: Ash residue from mini Pryme.

### 40k tons plastic waste expected through one reactor



Pryme's electrically heated reactors is expected to achieve temperatures up to 40% higher than competitors.



# Pryme One: status of commissioning & startup



## Reactor Commissioning per Market Update, October 27<sup>th</sup>, 2023:

Factory insulation design with heating ring connectors inside the reactors panels resulted their overheating. Consequently, 500 heating rings/wiring connectors required modification leading to a delay.

## Reactor Corrective Actions per January 15<sup>th</sup>, 2024:

**100% completed**

- Externalization of 500 heating ring connectors
- Electrical connections between heating rings & cabinets, ~6km of cables
- Individual testing of heating rings above 600 °c.
- Re-insulation

**Reactor completed successful blank test for 72 hours at +600 °c & +20 rpm, on January 15<sup>th</sup>, 2024.**

## Next Steps – First Oil Expected End of January 2024

**On-going**

**Phase One:** End of January & February 2024

- Direct reactor feeding of *non-melted plastic* waste from varied specifications & sources (post industrial & consumer)
- Operational calibration of the oil condensation process and efficient management of non-condensable gases

**Phase Two:** March to September 2024

- Feeding of the reactor with *melted plastic* from the extruders via the melt pipe (the process' front-end)
- Integrating the front & back end (reactor & condensation) enabling continuous high throughput production



Having completed corrective actions with the reactor, Pryme is on the verge of producing its first oil.

# Pryme One: starting up installation attracts ample waste supply



Pryme' technology flexibly handles varied polyolefin & contamination contents.

Pryme starting up has attracted firm interest from established waste processors.

## Pryme focused on a pragmatic approach to plastic waste sourcing:

- Pryme integrating with existing waste systems avoids the need for extra investments ensuring a reliable and available feedstock supply.
- RDF pellet producers efficiently convert post-consumer & industrial plastic waste bales.
- This includes shredding, gravity separation, dust & metal extraction, drying & densification.
- The output meets density/moisture standards without solids, safeguarding equipment's.
- The quality of the input bales determines the final polyolefin content.
- Europe has an adequate supply of baled material meeting Pryme's specifications.



*Pryme working with RDF producers aligns with our IMPACT purpose of diverting plastic waste from incineration while reducing emissions.*

\* RDF: Refuse-Derived Fuel



Availability of pre-processed densified plastic waste is expected to exceed Pryme' demand.

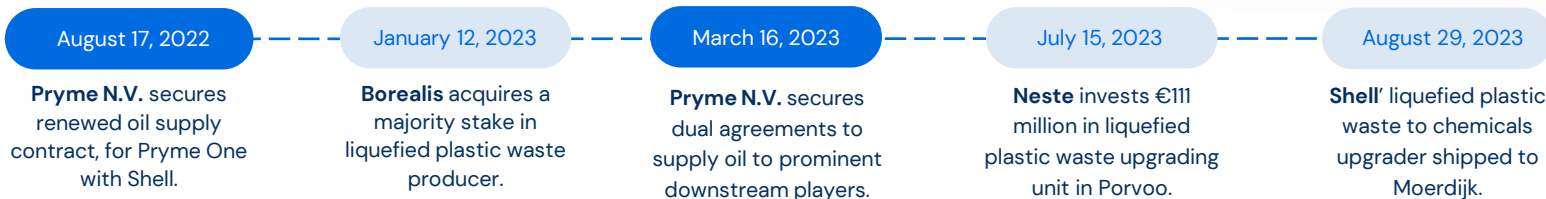
# Pryme: strong tail winds fueling growth prospects



- ✓ **Pryme** focuses on efficiently converting plastic waste into liquefied plastic waste, prioritising volume & scale.
- ✓ **Upgraders / petrochemicals** demonstrate flexible LPW intake specifications to supply circular products to consumers.
- ✓ **Pryme** successfully secured, for its first two plants, three LPW sales contracts with prominent downstream players.
- ✓ A **fourth LPW sales contract** with pre-agreed commercial terms is in draft.
- ✓ **Limited** competing advanced recycling capacity is projected to emerge.

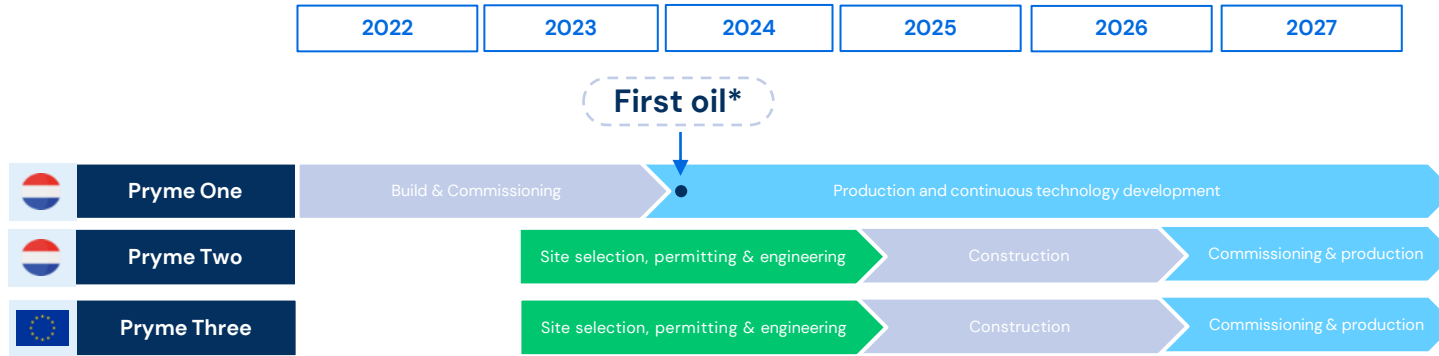


Shells LPW upgrading unit starting up in 2024 will be supplied by Pryme One.



Market developments validate Pryme's strategic role in pioneering the circular plastic value chain while emphasizing strong demand growth from upgrading facilities for liquefied plastic waste.

# Pryme: gearing up for an ambitious rollout



**Pryme One** will offer valuable insights for our next commercial scale plants

**Pryme** is actively developing multiple options for its next plant locations

**Construction** will follow site location permitting & derived learnings from Pryme One



*Pryme aims to raise up to €12 million in the short term to fund:*

- Investments in post start-up process & technology developments
- Ongoing permitting & rollout activities for Pryme Two & Three
- Fund Pryme into the start of 2025

\* First production of LPW anticipated end of January-24.



## Pryme: expected plant economics

	Unit	Pryme One 2024	Pryme One At capacity	Pryme Two At capacity
Annual capacity	MT oil	12 000	30 000	90 000
Oil price*	EUR / MT oil	800	800	1 200
All in plastic waste cost	EUR / MT oil	300	300	300
Energy cost	EUR / MT oil	130	130	90
Other plant opex	EUR / MT oil	500	220	150
<b>Plant EBITDA</b>	<b>EUR / MT Oil</b>	<b>( 130)</b>	<b>150</b>	<b>660</b>
Annual plant EBITDA	million EUR	( 2)	5	59
Investment (incl. working cap.)	million EUR	40	40	110
<b>Annual Plant ROI</b>	<b>%</b>	<b>/</b>	<b>11%</b>	<b>54%</b>
Memo: Annual non-plant related overhead	million EUR	5	5	10

\* Management expects the average selling price for oil to be around €800/MT from the first plant due to certain supply commitments through existing supply and technology agreements and commitments to deliver oil as a requirement for certain grants and subsidies. For the second and subsequent plants, management's market price estimates have been used supported by Pryme's supply agreements.



Current market prices, already signed oil supply agreements, advanced technology and large-scale efficient operations provide for attractive plant economics for Pryme.



# Strong investment case backed by measurable circularity impact



- ✓ **Final commissioning underway** with first oil expected within the next 2 weeks
- ✓ **Dedicated & committed team** of industry veterans pioneering a new value chain
- ✓ **Scalable & flexible** industrial processes combining existing proven technologies
- ✓ **Attractive growth** potential through increasing needs for circular plastic demand
- ✓ **Regulatory support** bolstering the adoption of circularity for plastics
- ✓ **Europe's largest** advanced chemical recycling plant
- ✓ **Backed by** significant investors: LyondellBasell, Invest NL & Infinity Recycling



Pryme expects to deliver above average returns through large-scale plants by leveraging purpose developed established technology.



An aerial photograph showing a circular road loop that encircles a dense, green forest. The road is a light gray color, and the surrounding forest is a vibrant green. The road forms a complete circle around the central forest area, with a small section of the road visible at the bottom of the frame.

Thank you

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