Pryme

making plastics circular

Pioneering plastic circularity

Pryme converts plastic waste at unmatched scale.

Company Presentation

September 12, 2024

Important information

This presentation (the "Presentation") has been produced by Pryme N.V. (the "Company" or "Pryme"). This Presentation and any information contained herein or provided at this Presentation are being made available for informational purposes only, and may not be distributed to any other person, reproduced, published or used in whole or in part for any other purpose. If does not constitute, and should not be construed as, any offer or invitation or recommendation to buy or sell any of the securities mentioned or described herein.

No representation, warranty, or undertaking, express or implied, is made to, and no reliance should be placed on any information, including projections, estimates, targets and opinions, contained herein, and no liability whatsoever is accepted as to any errors, omissions or misstatements contained herein, and, accordingly, the Company accepts no liability whatsoever arising directly or indirectly from the use of this Presentation, or its contents or otherwise arising in connection therewith.

All information in this Presentation is subject to verification, correction, completion and change without notice. In giving this Presentation, the Company undertakes no obligation to provide the recipient with access to any additional information or to update this Presentation or any information or to correct any inaccuracies in any such information

This Presentation contains several forward-looking statements relating to the business, financial performance and results of the Company and/or the industry in which it operates. Forward-looking statements concern future circumstances and results and other statements that are not historical facts, sometimes identified by the words "believes", expects", "predicts", "intends", "projects", "plans", "estimates", "aims", "foresees", "anticipates", "targets", "will", "should", "may", "continue" and similar expressions.

Forward-looking statements include statements regarding objectives, goals, strategies, outlook and growth prospects; future plans, events or performance and potential for future growth; liquidity, capital resources and capital expenditures; profit; margin, return on capital, cost or dividend targets; economic outlook and industry trends; developments of the Company's markets; the impact of regulatory initiatives; and the strength of the Company's competitors.

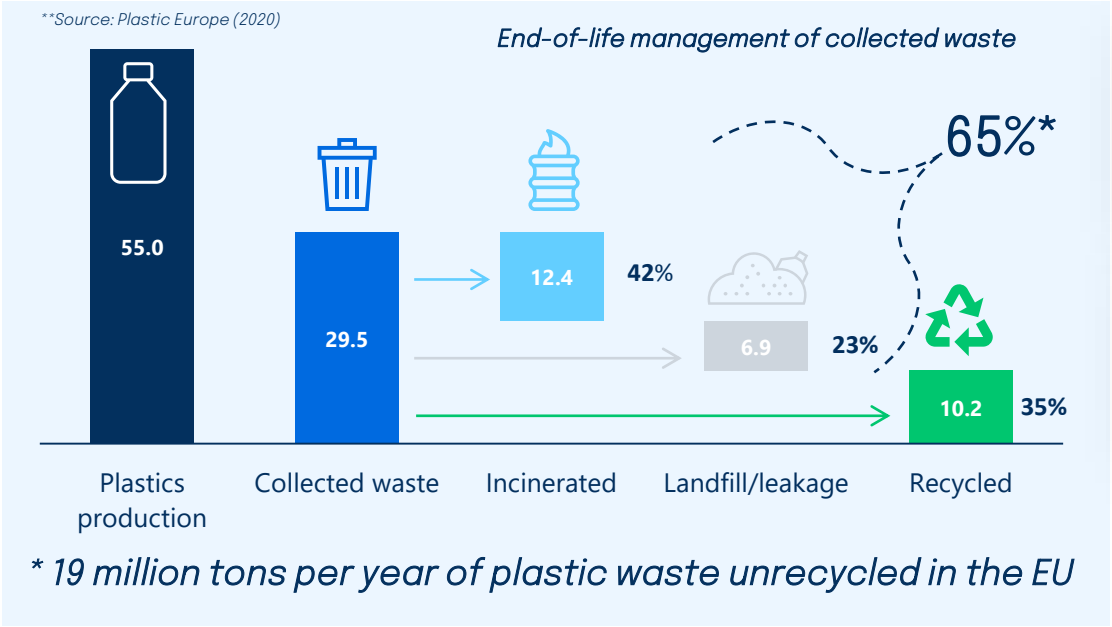
The forward-looking statements contained in this Presentation, including assumptions, opinions and views of the Company, are based upon various assumptions, including without limitation, management's examination of historical operating trends, data contained in the Company's records and other data available from third party sources. Although the Company believes that these assumptions were reasonable when made, the statements provided in this Presentation are solely opinions and forecasts that are uncertain and subject to risks, contingencies and other important factors which are difficult or impossible to predict and are beyond its control.

A number of factors can cause actual results to differ significantly from any anticipated development expressed or implied in this Presentation. No representation is made that any of these forward-looking statements or forecasts will come to pass or that any forecast result will be achieved, and you are cautioned not to place any undue reliance on any forward-looking statement. The information obtained from third parties has been accurately reproduced and, as far as the Company is aware and able to ascertain from the information published by that third party, no facts have been omitted that would render the reproduced information to be inaccurate or misleading.

This Presentation has not been reviewed, approved, authorized or registered with any public authority, stock exchange or regulated marketplace.

Advanced recycling: key to unlock plastic waste circularity

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



** 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 by complementing the limited plastics recycling feasible for mechanical recycling.

Pryme One: starting up installation attracts ample waste supply

Pryme's 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 is currently working with more than 8 waste suppliers.

- *These feedstock suppliers provide varying qualities of feedstock in order for Pryme to determine the optimal feedstock blend/mix.*

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

1 *Plastic Waste* → 2 *Melted Plastic Waste* → 3 *Thermochemical Cracking* → 4 *Plastic Pyrolysis Oil - PPO*

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

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

Exclusive reactor technology
5 tons per hour on a single reactor
20 m3 oxygen-free vessel
Electrically heated above 600°C

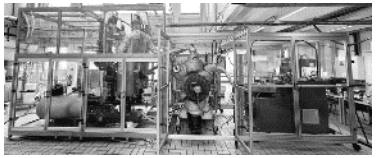
Two step condensation unit
Streamlined & versatile process
Non-condensable management
PPO batch storage unit

PRYME'S TECHNOLOGY EDGE:

High-capacity reactor with precision heat controls

Key differentiators

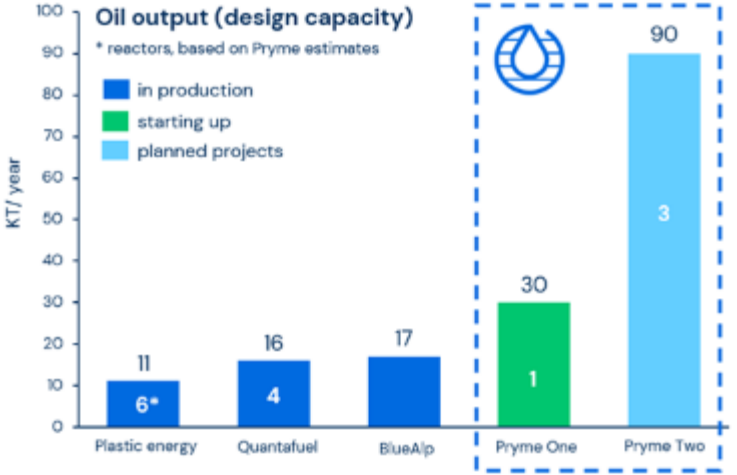
- ✓ *Delivers up to 7x the capacity of competitor reactors in use.*
- ✓ *Superior core temperatures compared to existing thermal technologies.*
- ✓ *Improved temperature control for optimized thermochemical cracking.*
- ✓ *Yields plastic pyrolysis oil with increased quality consistency.*
- ✓ *Dry odourless,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



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

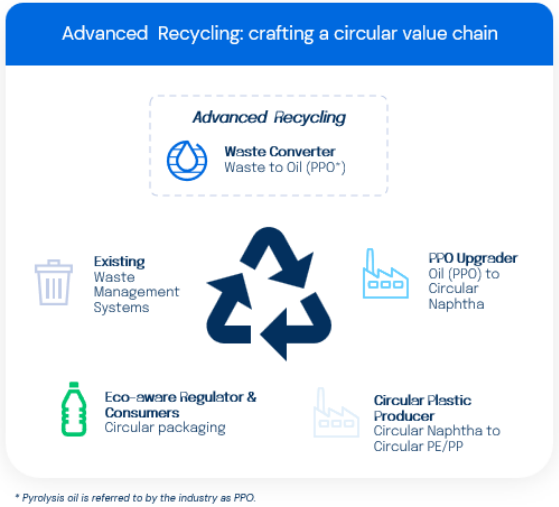
Right: Ash residue from Pryme One

40k tons plastic waste expected through one reactor



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

Strong fundamentals for Pryme and advanced recycling



* Pyrolysis oil is referred to by the industry as PPO.

- ✓ ***Pryme*** *focuses on efficiently converting plastic waste into PPO, prioritising volume & scale.*
- ✓ ***Upgraders / petrochemicals*** *demonstrate flexible PPO intake specifications to supply circular products to consumers.*
- ✓ ***Pryme*** *successfully secured, for its first two plants, three PPO sales contracts with prominent downstream players.*
- ✓ ***Market Projections*** *indicate that demand for pyrolysis oil will exceed supply for the foreseeable future strongly supported by EU regulations mandating all packaging material to be recyclable by 2030.*
- ✓ *The entire supply chain is gearing up for the increased demand from advanced recycling; feedstock suppliers, petrochemicals, chemicals and brand owners.*

Shells PPO upgrading unit starting up in 2024 and is partly supplied by Pryme One.

Market developments validate Pryme's strategic role in pioneering the circular plastic value chain And focusing on converting plastic waste into plastic pyrolysis oil (PPO).

Pryme One: Production Status

- *Pryme's focus regarding the start of production at Pryme One has been on verifying the technology and improving the production process. The Pryme One installation technology is based on proven technology blocks although the application for the purpose of processing plastic waste is new.*
- *As Pryme One is a pioneering installation, the hot commissioning of the plant has highlighted many areas for improvement. Such improvements have been implemented during the period following the production of first oil.*
- *The optimization of the processes and installation has been the primary focus rather than producing the highest possible volume of pyrolysis oil. Pryme One is Pryme's first installation serves as a basis for Pryme's future plants. Thus, the focus on optimizing the processes.*
- *Since the production of first oil at Pryme One, almost 20 production runs at varying lengths and production rates have taken place. During these runs around 170 metric tons of pyrolysis oil have been produced. The majority of this oil has been sold to customers. More than 250 tons of plastic waste has been processed.*
- *The Pryme One production process is based on the feeding from 2 extruders into a single reactor. To date, all the production has taken place by utilizing one extruder only. The start-up of the second extruder is scheduled for September 2024. When running both extruders simultaneously Pryme expects to be able to approach the 5 tons per hour nameplate capacity for the reactor. The highest production rate to date has been around 2.7 tons per hour through a single reactor, most likely the highest ever production rate for a European production facility.*
- *The various production runs have utilized many qualities and sources of feedstock providing valuable learnings to Pryme.*
- *Multiple process improvements have been implemented since the first oil was produced. Most of these improvements are related to optimizing the reliability of the installation for longer production runs.*
- *The ambition for Pryme One is to achieve stable production levels in Q4 2024.*

Pryme has converted more than 250 metric tons of plastic waste into more than 170 metric tons of pyrolysis oil in 2024 at rates of up to 2.7 tons per hour of plastic waste input.

Pryme: expected plant economics

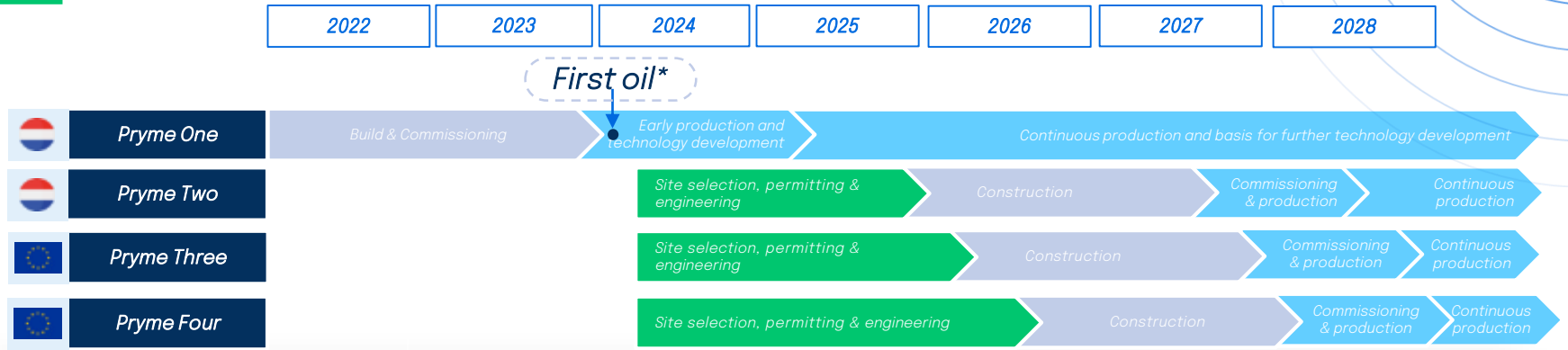
Expected Plant Economics				
	Unit	Pryme One 2024**	Pryme One at nameplate capacity	Pryme Two at nameplate capacity
Annual capacity	MT* of pyrolysis oil	12.000	30.000	90.000
Selling price pyrolysis oil	€ /MT of pyrolysis oil	1200	1200	1200
Cost of plastic waste feedstock (delivered)	€ /MT of pyrolysis oil	300	300	300
Energy Cost	€ /MT of pyrolysis oil	130	130	90
Other plant OPEX	€ /MT of pyrolysis oil	500	220	150
Plant EBITDA	€ /MT of pyrolysis oil	270	550	660
Annualized Plant EBITDA @ annual capacity	**€ Million**	**3,2**	**16,5**	**59,4**
Approximate replacement investment	€ Million	40,0	40,0	110,0
Annualized Plant ROI	**% p.a.**	**N/A**	**41%**	**54%**
Memo: Annual non-plant related overhead	€ Million	5	6	12

* MT = Metric Tons

** Pryme One in 2024 represents a ramp up year. Pryme anticipates the ramp up process to continue into 2025. The figures for "Pryme One 2024" represent run rate figures and may not reflect actual FY 2024 performance.

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

Pryme: gearing up for an ambitious rollout



- *Pryme One offers valuable insights for our next commercial scale plants. It will serve as the technical basis for Pryme's future plants*
- *Pryme has concluded a pre-feasibility study of potential future plant sites. The number of sites have been narrowed down to 6 sites.*
- *The number of sites will be narrowed down to 3 sites in the next months followed by commercial analyses and permit applications.*
- *In parallel, work is largely completed for a BOD (basis of design) for Pryme's future plants. This will be followed by more detailed engineering activities.*
- *The speed of the rollout of new plants will be determined by access to funding, finalizing terms for each site and obtained permits which all are prerequisites for the start of construction.*
- *In order to compress lead-times, some of the workstreams will be overlapping, for example by constructing skid plant modules.*

** First production of PPO realized in January 2024.*

Pryme aims to start production at Pryme's next plant in the 2027 :

- *Pryme intends to finalize feasibility studies, obtain permits and conclude project approvals for up to three plants within the next 12-18 months, pending successful funding being obtained.*

Strong investment case backed by measurable circularity impact

- ✓ ***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 adaptation of circularity for plastics*
- ✓ ***Europe's largest capacity*** *advanced chemical recycling plant*
- ✓ ***Backed by*** *significant shareholders: LyondellBasell, Taranis, Invest NL & Infinity Recycling*
- ✓ ***First oil*** *produced early 2024 followed by successful limited production runs with 170 metric tons of pyrolysis oil produced to date.*
- ✓ ***Attractive off-take contracts*** *in place*
- ✓ ***Clear and ambitious growth strategy*** *focused on value creation*

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

Thank you

ir@pryme-cleantech.com

www.pryme-cleantech.com