UPM Biofore Beyond Fossils

Investor presentation
October 2023
This is UPM

SALES 2022
EUR 11.7 BILLION

Wood-based raw materials
Low-carbon energy

BUSINESSES:
- UPM FIBRES
- UPM ENERGY
- UPM RAFLATA
- UPM SPECIALTY PAPERS
- UPM COMMUNICATION PAPERS
- UPM PLYWOOD
- UPM BIOREFINING

55 production plants
17,200 employees in 44 countries

RENEWABLE AND RECYCLABLE PRODUCTS FOR:
- PACKAGING
- LABELLING
- TRANSPORTATION
- ELECTRIFICATION
- CONSTRUCTION

10,500 customers
170 million end-users globally

SALES 2022
EUR 11.7 BILLION
Our businesses

UPM Pulp
A versatile range of chemical pulp for many growing end uses

UPM Timber
Certified sawn timber for joinery, packaging, furniture, planing and construction

UPM Forest
Sourcing wood raw material for sustainable and recyclable products

UPM Energy
Zero-emission electricity generation of hydro, nuclear and thermal power

UPM Raflatac

UPM Specialty Papers
Labelling materials, release base papers, flexible packaging papers, office and graphic papers

UPM Communication Papers
Magazine paper, newsprint and fine papers for a wide range of end uses

UPM Plywood
Plywood and veneer products for construction, vehicle flooring and LNG shipbuilding

UPM Biofuels
Wood-based renewable diesel and naphtha

UPM Biochemicals
Glycols, lignin products, renewable functional fillers

UPM Biomedicals
Wood-based biomedical products for medical and life science applications

UPM Biocomposites
Composite decking materials and wood-based biocomposites
We create a future beyond fossils

Biofore strategy drives stakeholder value creation and our transformation as the frontrunner of bioeconomy

**Growth**
- We respond to megatrends and meet customers’ changing needs
- Creating new markets and enabling sustainable choices

**Innovation**
- Creating new business and competitive advantage
- Replacing fossils with biomaterials

**Performance**
- Continuous improvement
- Agile operating model
- Corporate synergies

**Responsibility**
- Renewable & sustainable solutions
- Responsible operations and value chain

**Portfolio choices**
- Strategic access to sustainable renewable raw materials
- Investing in businesses with strong long-term fundamentals for growth and high barriers to entry
- Effective capital allocation with attractive returns
Long-term value creation driven by our spearheads for growth
Our climate commitment

WE ACT THROUGH FORESTS
Committed to climate-positive forestry and enhancing biodiversity

WE ACT THROUGH EMISSION REDUCTIONS
-65% from own CO₂ emissions
-30% from CO₂ emissions of supply chain

WE ACT THROUGH PRODUCTS
Innovative products
Scientifically verifying the climate impact of all our products

BUSINESS AMBITION FOR 1.5°C

DRIVING AMBITIOUS COP26 CLIMATE ACTION

THE CLIMATE PLEDGE
Paris...10 years Early
Towards net-zero emissions (UPM 2022)

**WE ACT THROUGH FORESTS**

-2.3 MtCO$_2$ eq
Carbon sink
Trees and soil

**WE ACT THROUGH EMISSION REDUCTIONS**

+4.5 MtCO$_2$
Own emissions
Scope 1 ja 2

-2.0 MtCO$_2$
Fossil energy substitution

+1.6 MtCO$_2$
Temporary carbon storage
Wood-based products

**WE ACT THROUGH PRODUCTS**

+5.0 MtCO$_2$
Value chain emissions
Scope 3

-5.8 MtCO$_2$
Fossil-based products substitution

Research partners: LUKE, SYKE, IFEU
Bioeconomy offers a sustainable alternative to fossil-based economy

Biomass use is not increasing CO₂ to carbon cycle

Use of fossil resources increases CO₂ amount

Use of fossils has increased global CO₂ emissions

Source: IEA, Our World in Data
Leader in responsibility
Transformation in growth phase – business mix drives earnings and shareholder value

Communication Papers
Growing businesses

Gross sales 2009
EUR 9.6bn

- 60% Communication Papers
- 40% Growing businesses
- 6% 5-year average EBIT margin (2018-22)

Gross sales 2022
EUR 13.1bn

- 37% Spearheads for growth*)
- 63% EBIT margin >20%*)

Future sales *)

*) This is an illustration, not a forecast
Growth investments have increased capital employed, significant earnings potential as they start to contribute.

**Industrial operations:**
Further growth, attractive return targets

**Forest and energy assets:**
Sustainable value creation

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**Capital employed 2019**

- **EUR 11.0bn**
  - 52% 18% 5-year average ROCE (2018-22)
  - 48% 6%

**Capital employed end of 2022**

- EUR 17.9bn
  - 60%
  - 18%
  - 40%
Group financial targets

Comparable EBIT

Target: EBIT growth

Comparable ROE

Target: 10%

Comparable ROE Target: 10%

Net debt and leverage

Net debt EURm

4 500

Net debt/ EBITDA (x)

3,0

Policy: ≤ 2x

Comparable EBIT

Net debt

EURm

Comparable ROE
Business area long-term return targets

*) Shareholdings in UPM Energy valued at fair value

**) Year 2021 restated, UPM Biofuels moved into Other Operations as of 1 January 2022.
5-year capital allocation for 2018-2022

Performance focus
Strong operating cash flow

Attractive dividend
EUR 3.4bn

High return investments
EUR 4.6bn

Strong balance sheet
Net debt increase EUR 2.2bn

Net debt / EBITDA
0.94x
at the end of 2022

Net debt / EBITDA < 2x
Illustrative capital allocation*) for the next 5 years (2023-2027)

Performance focus
- Strong operating cash flow

Attractive dividend
- EUR ~4–4.5bn

High return investments
- EUR ~3.5–4.5bn

Strong balance sheet
- Net debt/EBITDA < 2x

Maintain headroom

*) This is not a forecast
Dividend policy and capital allocation

- UPM aims to pay attractive dividends, targeting at least half of the comparable earnings per share over time.

- UPM plans to allocate capital to
  - *Invest to grow the company and its earnings*. UPM targets growth in comparable EBIT and comparable return on equity exceeding 10%.
  - *Pay attractive dividend*. The targeted earnings growth drives dividend growth over time.
  - *Maintain a strong balance sheet*. Net debt to EBITDA ratio to be less than 2.
  - *Share buybacks*. They are a complementing tool that may be used relative to investment opportunities and company valuation.
Dividend: 15% increase to EUR 1.50 per share

Dividend policy
- UPM aims to pay attractive dividends, targeting at least half of the comparable earnings per share over time

Dividend for 2022
- EUR 1.50 (1.30) per share, totalling EUR 800m
- 49% of 2022 comparable EPS
Transformative growth projects in the most intensive phase in 2021-2022

Capex estimate for 2023
- Total EUR 1,100m
- Includes EUR 900m on the transformative growth projects, pulp in Uruguay and biochemicals in Germany
- Operational investment needs consistently low
Net debt and leverage

- Net debt EUR 2,363m at the end of Q3 2023
- Net debt / EBITDA 1.27
- Cash funds and committed credit facilities EUR 6.5bn at the end of Q3 2023
- No financial covenants
- UPM pays the dividend of EUR 1.50 per share for 2022 in two instalments. The first was paid on 21 April 2023 and the second instalment of EUR 0.75 per share will be paid on 2 November 2023
Q3 2023: UPM delivers improved results from previous quarter and continues to build long-term growth

- Sales decreased by 24% to EUR 2,584m (3,420m in Q3 2022)
- Comparable EBIT decreased by 72% to EUR 220m, 8.5% of sales (779m, 22.8%)
- Pulp and electricity sales prices significantly lower than last year, impacting UPM Fibres and UPM Energy
- Successful margin management in other business areas
- Demand for many of UPM's products started to gradually recover
- UPM Paso de los Toros pulp mill and the OL3 nuclear power plant unit contributed significantly to deliveries
- Operating cash flow was strong at EUR 641m (-201m)
Focus on margin management as destocking is phasing out

- Market shipments in most products well below end-use demand and long-term trends due to destocking
- Consumers impacted by inflation, interest rates and uncertainty, affecting underlying end use-demand
- The impact of destocking is expected to gradually phase out during H2 2023
- The long-term growth prospects remain intact and attractive
- Variable costs are expected to decrease in H2 2023 compared to H1 2023
Comparable EBIT in Q3 2023

EURm

<table>
<thead>
<tr>
<th>Q3/22</th>
<th>Prices</th>
<th>Volumes</th>
<th>Fixed costs</th>
<th>Currencies</th>
<th>Other</th>
<th>Q3/23</th>
</tr>
</thead>
<tbody>
<tr>
<td>779</td>
<td>22.8%</td>
<td></td>
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<td></td>
<td>220</td>
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</table>

EURm

<table>
<thead>
<tr>
<th>Q2/23</th>
<th>Prices</th>
<th>Volumes</th>
<th>Fixed costs</th>
<th>Currencies</th>
<th>Other</th>
<th>Q3/23</th>
</tr>
</thead>
<tbody>
<tr>
<td>114</td>
<td>4.5%</td>
<td></td>
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<td>220</td>
</tr>
</tbody>
</table>

8.5%
Comparable EBIT by business area

*) Year 2021 restated, UPM Biofuels moved to Other Operations as of 1 January 2022
Outlook for 2023

• Full-year 2023 comparable EBIT is expected to decrease from 2022. UPM’s comparable EBIT in H2 2023 is expected to be on similar level or increase compared to H1 2023.

• UPM’s delivery volumes are expected to increase in H2 2023 from H1 2023. Deliveries were unusually low during H1 2023, held back by significant destocking in the various product value chains. Destocking is expected to gradually phase out during H2 2023, enabling UPM’s deliveries to recover towards the underlying end-use demand. The production ramp-up of the UPM Paso de los Toros pulp mill and the OL3 nuclear power plant unit will add to UPM’s deliveries in H2 2023.

• Chemical pulp and electricity market prices were historically high during H2 2022 and declined rapidly to estimated bottom-of-the-cycle levels during H1 2023. H2 2023 started with low pulp and electricity prices, impacting these commodity price-driven businesses. In the other businesses UPM continues to manage margins.

• Variable costs are expected to decrease in H2 2023 compared to H1 2023. In addition, UPM is implementing measures to reduce fixed and variable costs.
The UPM Forest Action programme takes a holistic view, covering the five fundamentals of responsible forestry:
Developing our forest assets

<table>
<thead>
<tr>
<th>UPM forests and plantations</th>
<th>2008</th>
<th>2022</th>
<th>Area distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest and plantation land (own and leased) (1,000 ha)</td>
<td>1,012</td>
<td>1,070</td>
<td>US 8% 90%</td>
</tr>
<tr>
<td>Forest growth (million m³)</td>
<td>4.3</td>
<td>6.7</td>
<td>Finland 47%</td>
</tr>
<tr>
<td>Wood sourced from UPM forests and plantations (million m³)</td>
<td>2.2</td>
<td>4.5</td>
<td>Uruguay 46%</td>
</tr>
<tr>
<td>Value of forests and plantations, including land (EURm)</td>
<td>1,270</td>
<td>3,421</td>
<td></td>
</tr>
</tbody>
</table>

Climate-positive forestry and maintenance of carbon sinks
Investing in strategic forest assets in Uruguay
Productivity with active management and nurseries
Enhancing biodiversity
Active forest strategy – UPM’s forest assets are increasingly productive and valuable

**Uruguay plantations**
“fast turnover, low inventory”
- Value EUR 1.6bn
- Continuous productivity improvement (pulp tonnes/ha)
- Investing in strategic forest assets

**Finland and other northern forests**
“slow turnover, high inventory”
- Value EUR 1.8bn (+43% since 2008, EUR/ha +140% since 2008)
- Decreased area (-42% since 2008), focusing on forests close to mills
- Improved growth (m³/ha)
- Trend price (EUR/m³)

*) leased land included from 2019
New business in wood-based biochemicals

Responding to strongly growing demand for sustainable solutions

Industrial scale biorefinery in Leuna, Germany

Alternatives to fossil materials in various consumer-driven end-uses

EUR 1 180 million investment
Total annual capacity of 220,000 tonnes

Scheduled to start up by the end of 2024
UPM Leuna biochemicals refinery project progressing well according to the updated schedule

• Operating permit obtained in May, the commissioning will be implemented in phases starting in Q4 2023
• Start-up expected by the end of 2024
• Investment estimate is EUR 1,180 million
• In Q3, UPM Biochemicals acquired the German-based SunCoal Industries
• We have full confidence in profitable biochemicals business, and the technologies used in UPM Leuna
• Interest for our renewable products replacing fossil materials has proven to be high
• First large-scale sales contracts with Dongsung and Brenntag
Renewable product range

- **Bio-monoethylene glycol (bMEG)**
  for textiles, PET bottles, packaging, deicing fluids

- **Renewable functional fillers**
  for rubber applications as a sustainable, light-weight and high-purity alternative to carbon black and silica

- **Bio-monopropylene glycol (bMPG)**
  for composites, pharma, cosmetics, detergents

- **Industrial sugars**
  for various applications in chemicals industry
Large growth markets – unique sustainability value

• The global glycols market is more than 30 million tonnes, with expected annual growth of approx. 4%.

• The global market of carbon black and silica is more than 15 million tonnes, with expected annual growth of approx. 3%.

• Current market supply based on non-renewable raw materials.

• Customers increasingly committed to sustainable solutions.

• UPM’s renewable raw material and new technologies provide significant reduction in carbon footprint.

• UPM biochemicals fit directly into customers’ processes and the existing recycling infrastructure.
UPM Paso de los Toros will grow UPM Pulp by over 50%

Highly competitive cash cost of USD 280 per delivered tonne of pulp

- Pulp mill and deep seaport terminal in Montevideo
- Jobs and other opportunities for the residents of the region
- Pulp is used in tissue, specialty and packaging papers, for example
- USD 3.47 billion investment
- Total annual capacity of 2.1 million tonnes of eucalyptus pulp
- Started up in April
Transformative step in UPM’s pulp business and in UPM’s future earnings

• Significant step for UPM’s future earnings
  – One of the most competitive mills in the world
  – Expected cash cost level of USD 280 per delivered tonne of pulp*)
  – Attractive returns in various market scenarios
  – Carefully prepared to ensure long-term competitiveness and to minimise risks both in the project phase and during continuous operations

• Step change in UPM’s pulp business

*) including variable and fixed costs of plantation operations, wood sourcing, mill operations and logistics delivered to the main markets
Eucalyptus availability secured through UPM’s own and leased plantations and wood sourcing agreements with private partners.

UPM’s own, leased and managed plantations in Uruguay cover 504,773 hectares, supplying both UPM Fray Bentos and the new Paso de los Toros mill.

30 years experience of sustainably managed and productive plantations.
Efficient logistics set-up

USD 280 million investment to a deep sea pulp terminal in Montevideo port
- Direct rail access from the mill with 4-6 trains/day + 1 chemical train/day to the mill
- Operating 24/7
- >50,000 m warehouse for ~2 million pulp tonnes
- Deep sea port with 100 pulp ships a year ➔ Direct, efficient access to global markets

Railway modernisation
- Public-private-partnership agreement by the government and the construction company

Road improvements
Market pulp consumed in growing end-uses – alternative white fibre demand overcoming graphical paper decline

Graphic papers
Based on white fibre

Containerboard
Based on brown fibre

Growing end-uses of white fibre

- Tissue & Fluff 12 %
- Specialty 11 %
- Cartonboard 12 %

Total fibre consumption (2020): 421 million tonnes

Sources: AFRY, UPM estimate
Moderate numbers of decided projects in the short-term and expansion mainly in BHKP

Entry of bleached market pulp capacity


Net additional capacity, 1000 t/a

-4000 -3000 -2000 -1000 0 1000 2000 3000 4000 5000 6000 7000

Exits New mill/line Other expansion Decided projects

Note: including BHKP, BSKP, excluding fluff and dissolving

5-year-average market pulp exit rate: 1.7Mt

Sources: AFRY, UPM estimate
Chemical pulp market prices

Pulp market prices, EUR

Pulp market prices, USD

Source: FOEX Indexes Ltd
UPM Energy

<table>
<thead>
<tr>
<th>UPM Energy’s power generation</th>
<th>MW</th>
<th>EURm</th>
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<tbody>
<tr>
<td>Hydropower holdings</td>
<td>552</td>
<td>1,014</td>
</tr>
<tr>
<td>Nuclear power OL1 and OL2</td>
<td>588</td>
<td>1,666</td>
</tr>
<tr>
<td>Nuclear power OL3 (PTO 03/2023)</td>
<td>494</td>
<td>312</td>
</tr>
<tr>
<td>Thermal power</td>
<td>133</td>
<td>1</td>
</tr>
<tr>
<td>UPM Energy’s shareholdings in total, valued at fair value</td>
<td>1,765</td>
<td>2,993</td>
</tr>
<tr>
<td>UPM own hydropower assets</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>UPM Energy’s in total (incl. OL3)</td>
<td>1,936</td>
<td></td>
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<tr>
<td>UPM Energy capital employed</td>
<td></td>
<td>3,291</td>
</tr>
</tbody>
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UPM Energy sources electricity from part owned energy companies at full cost (cost-price principle, mankala principle)

Illustration

Cost of sourced electricity from shareholdings

- Sales
- Opex
- Depreciations
- Interest and finance cost
- Contribution to EBITDA from shareholdings
- UPM hydro EBITDA
- UPM EBITDA
UPM Energy's assets are competitive, CO₂-free and increasingly valuable

Hydropower
- Flexible generation, crucial to balance the volatile system
- Renewable, CO₂-free
- Value EUR 1.3bn

Nuclear power
- Reliable baseload generation
- CO₂-free
- Unique and safe solution for final disposal of spent fuel
- Value EUR 2.5bn
OL3 in regular commercial electricity production

We create a future beyond fossils: OL3 grows UPM Energy’s carbon free electricity generation by nearly 50%.

Reliable CO₂-free baseload energy to support the electrification of the society.

Finland’s electricity self-sufficiency significantly improved, carbon neutral generation to about 90%.

UPM’s agile and competitive energy business platform opens growth opportunities in the green transition.
Cost efficient generation enables robust profitability in changing market environment

### UPM Energy

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<tbody>
<tr>
<td>Comparable EBIT, EURm</td>
<td>123</td>
<td>185</td>
<td>171</td>
<td>270</td>
<td>381</td>
<td>139</td>
</tr>
<tr>
<td>% of sales</td>
<td>31.5</td>
<td>44.4</td>
<td>45.0</td>
<td>51.3</td>
<td>52.0</td>
<td>31.9</td>
</tr>
</tbody>
</table>
Self adhesive labels in various end-uses

- Food
- Wine, spirits & beverage
- Pharmaceuticals
- Personal care
- Home care
- Durables
- Transport & logistics
- Industrial Chemical
- Retail
- A4 & cut-size
- Security & brand protection
- Tyre
The self-adhesive labelstock market

- >EUR 10bn global market
- ~3-4% p.a. growth
- Private consumption driven
- Largest of the labelling technologies
- <25% of total self adhesive materials markets
UPM Raflatac

The labelstock markets have solid long term demand growth trends – short term can be more volatile

The long term demand growth outlook remains a solid 3-4% p.a.

- Packaging unit growth in Food, Personal Care, Beverage
- E-Commerce growth & parcel logistics
- Niche segments (e.g., pharmaceuticals)
- Further trends benefitting labelstock: sustainability, wet glue substitution

However in the short term the demand changes can be more dynamic

- Consumer stockpiling
- Lockdowns
- Value chain inventory cycle
- Private consumption changes

The demand of UPM Raflatac’s end use portfolio is relatively resilient

Indicative share of UPM Raflatac business (%)

- ~70% High resilience
- ~15% Medium resilience
- ~15% Low resilience

Resilience of demand:
- Food
- Beverage
- Home care
- Pharma
- Logistics
- e.g., durables, tyre, luxury goods

Growth drivers

Packaging unit growth in Food, Personal Care, Beverage

E-Commerce growth & parcel logistics

Niche segments (e.g., pharmaceuticals)

Further trends benefitting labelstock: sustainability, wet glue substitution

Impact to labelstock demand

Consumer stockpiling

Lockdowns

Value chain inventory cycle

Private consumption changes

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E-Commerce growth & parcel logistics

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UPM Specialty Papers

Sales by product*

- Fine
- Label & release
- Packaging

EBITDA 230 M€ in 2022

Sales by market*

- APAC
- EMEIA
- North America & LATAM

Sales 1,677 M€ in 2022

ROCE 17.2% in 2022

*2021 figures
UPM Specialty Papers

Growth expected to continue in main markets

**LABEL & RELEASE**

Market development forecast, CAGR 2021-2026

- **Global release liner**: ~4%
- **Global label face papers**: 2-3%

**UPM Specialty Paper**

Leading position in growing global label and release paper markets

**PACKAGING PAPERS**

- **Global flexible packaging**: 2-4%

Selective approach in consumer packaging area. Well positioned for future growth.

**APAC FINE PAPERS**

- **APAC graphic papers**: stable/declining
- **APAC office papers**: 1-2%

One of the leading players in office papers, focused niche player in graphic papers

Source: AWA, Pira, UPM
We co-create a future beyond fossils with renewable, recyclable and remarkable papers.

- Committed value creation
- Brand based value
- Globally recognized leadership
- Focused, committed and agile
- Co-creating remarkable products
UPM Communication Papers

Graphic paper prices

Europe

North America

China

Sources: PPI, RISI
Paper price vs. cash cost of marginal cost producer

Sources: PPI, RISI, AFRY
UPM Plywood

UPM Plywood focuses on three end use segments

Construction

Vehicle flooring

LNG shipbuilding

**UPM’s position and direction**

- Leading position in high and medium range standard products in Europe through well established distribution network providing easy access to WISA® plywood
- Uncompromised sustainability, certified products and operations
- New growth sought by strengthening position in selected emerging markets

**UPM’s position and direction**

- Leading position in Europe
- Competitive edge built on smoothly running operations and needs-based product design creating value to both vehicle manufacturers and operators
- Growth sought by expanding to new markets and related end use segments

**UPM’s position and direction**

- Leading supplier in LNG plywood
- Competitive edge based on right quality and accurate on-time deliveries
- Long term commitment and benchmark service level
- Focus to secure leading position in LNG carriers and to extend offering into related applications using the same technologies (e.g. land storage tanks)
UPM Plywood

UPM’s key markets are in the high and mid segments primarily in EMEA region

**Strategic choices**

1. Demanding industrial applications
2. High and medium range standard products
3. Selected customers
4. EMEA region and LNG business globally

- **Sales by category**
  - Industrial applications: 0.7
  - Construction / Panel Trading: ~683tm³

- **Relevant market**
  - ~5.1Mm³

- **Low-end market**
  - ~12Mm³

- **EMEA market**
  - ~12Mm³

- **Non-footprint market**
  - ~90Mm³
Moving forward with biofuels growth plans

Basic engineering phase of a next generation biorefinery

Potential industrial scale biofuels biorefinery

Products would significantly reduce carbon footprint in the road transport and aviation

Capacity would be up to 500,000t of renewable fuels incl. sustainable jet fuel

Potential investment in Rotterdam, the Netherlands.
UPM Biofuels’ competitive edge to be built on resilient ecosystem and agility to select markets

NEW SUSTAINABLE BIOMASS
Sustainable and uniquely upstream integrated feedstock pool
- Additionality
- Climate positive land use

Carbon stored to soil in each cycle

CLIMATE-POSITIVE FUELS
Efficient carbon neutral production

Cellulosic fuels
Renewable diesel, gasoline and jet
E-fuels future potential

DECARBONIZED TRANSPORT AND PETROCHEMICALS
Flexibility to create maximum value from several end uses and market geographies

Carbon stored to soil in each cycle
Decarbonisation will require 
synthetic fuels and new 
low-emission electricity generation

• demand for e-fuels will be driven by 
  regulation and EU’s target to decrease 
  dependency on Russian fossil fuels

UPM has competitive advantage

• experience and in-depth knowledge 
  on energy markets
• decarbonisation and energy 
  optimization tools and skills
• experience on biorefinery operations
• available biogenic CO₂ needed in the 
  production of some e-fuels

UPM and hydrogen – growth opportunities in 
large-scale green hydrogen solutions