

WELCOME TO UPM KAUKAS

2.9.2014

Jaakko Nousiainen

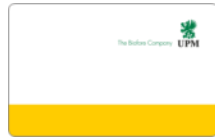


Welcome!

Safety first.



Please take the time to read the safety instructions given to you



Keep your visitor badge visible



Stay with your host and follow instructions



Mind the steps, hold onto the railings



Smoking, alcohol and other intoxicating substances are prohibited on the premises



Photography, videotaping and recording are prohibited without a written permission



Kaukas emergency number is +358 2041 54 112

Kaukas site map

n. 1200 employees

Wood usage 5 milj. m3/a

Equals 270 trucks/day

Sourcing radius 200 km in Finland

Imports from Russia

Logistics: Train, truck, boat & floating

Products:

Chemical pulp	740 000 t/v
Paper	580 000 t/v
Sawn timber	530 000 m3
Biofuels*	100 000 t/a
KauVo: Electricity	125 MW
Steam	152 MW
District heat	110 MW



1. Effluent treatment plant
2. Research Centre
3. Biorefinery construction site
4. Bio-power plant

5. Pulp mill
6. Debarking plant
7. Sawmill
8. Paper mill
9. Main gate / ICE call center



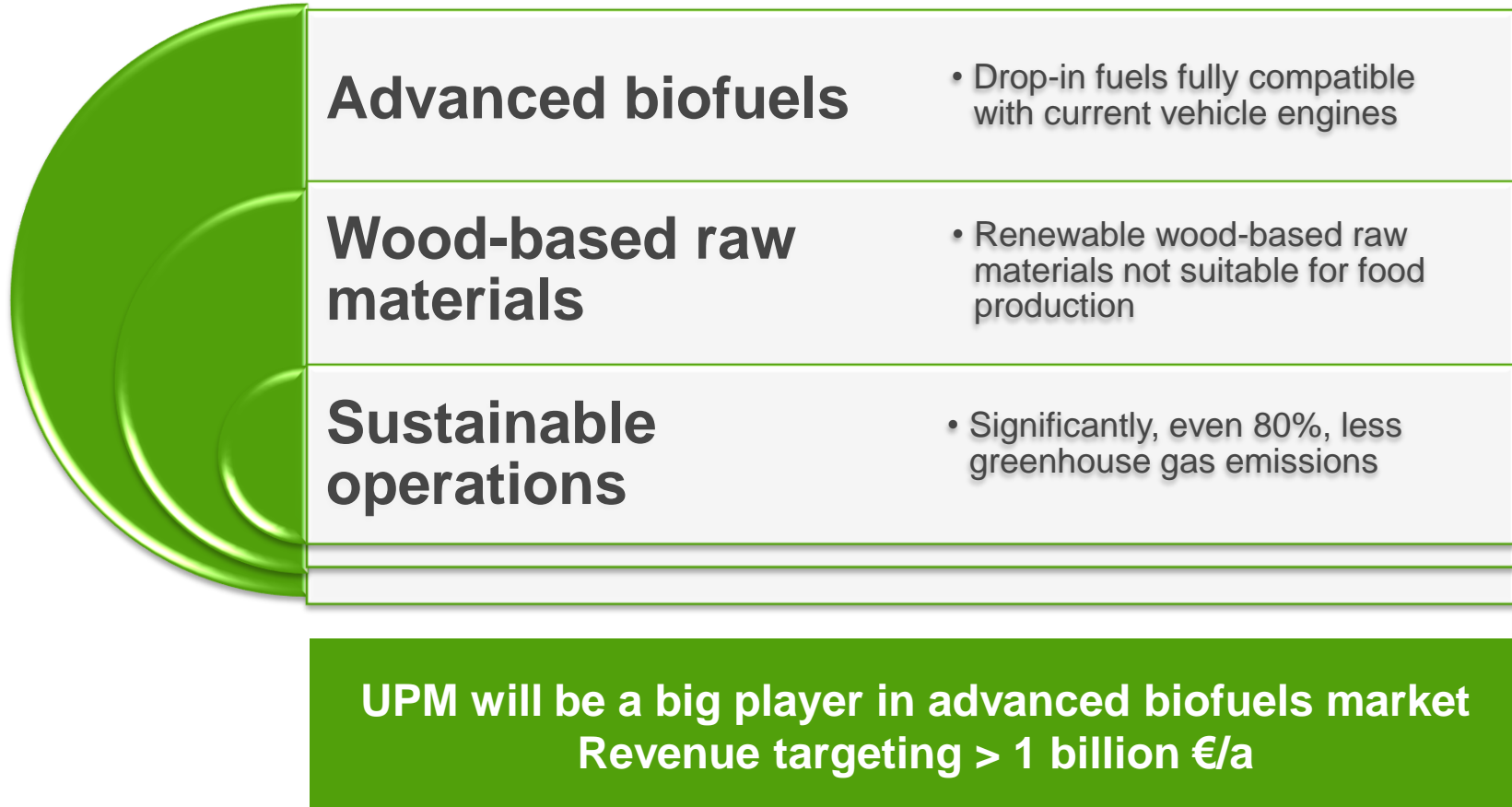
The Biofore Company

UPM

UPM BIOFUELS

– Biofuels from wood-based raw materials





UPM Biofuels growth strategy

ENTERING BUSINESS



HYDROTREATMENT

Tall oil ➤ UPM Lappeenranta Biorefinery start-up 2014

EXPANDING BUSINESS



THERMAL CONVERSION

Solid wood materials ➤ Gasification (BtL) /Pyrolysis

GROWTH OF BUSINESS



FUTURE DEVELOPMENT

New technologies, processes & raw materials
R&D activities & co-operation with strategic partners

Products are drop-in hydrocarbons – Ready components for commercial blends

UPM Lappeenranta Biorefinery

– commercial scale investment



Key facts:

- Product: Renewable diesel
- UPM investment: 150 M€
- Capacity: 100,000 tonnes/a
- UPM Patents & Applications: 200
- Commissioning: Summer 2014
- Employment: 200 persons
- Contributes approximately 25% of Finland's biofuel target

UPM BioVerno – Renewable drop-in diesel suitable for all diesel engines



RENEWABLE
RAW MATERIAL

100 %



CO2 EMISSIONS
(VS. FOSSIL FUEL)

–80 %



HYDROCARBON FUEL,
COMPATIBLE WITH
DIESEL STANDARD EN590

100 %



Driver's seat in advanced biofuels





The Biofore
Company

OHJEITA VIERAILIJOILLE INSTRUCTIONS TO MILL VISITORS



Liitu vain isännän seurassa
At the site, stay with your host



Käytä isännän sinulle antamia suojaimia
Use protective equipment provided by your host



Älä koske koneisiin ja laitteisiin
Do not touch machines or products



Työkonetta on tehdasalueella etuajaoikeus
Mill machinery and vehicles have the right of way at the mill site



Alueella 40 km/h nopeusrajoitus, paikoin 20 km/h
Speed limit on site is 40 km/h, in some places 20 km/h



Valo- ja videokuvaukset tehdasalueella on kielletty
Photographing (incl. video) is forbidden on site



Tupakointi kielletty tehdasalueella 1.1.2013 alkaen
Smoking is forbidden on site since 1.1.2013.



Tehdasalueellamme on kameravalvontaa
Camera surveillance on the site



Hätätilanteissa noudata isännästä antamia ohjeita
In an emergency, follow instructions provided by your host



Yksityisautoilla liikkuminen tehdasalueella on kielletty ilman asianmukaista ajolupaa ja opastusta.
Pääsääntöisesti ajoneuvot jätetään parkitusalueelle tehdasalueen ulkopuolelle.

Private cars are not allowed into mill site, they should be left at the mill car park.



The Biofore Company UPM

TERVETULOA UPM KAUKAAN TEHTAALLE

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Vierailun isäntä

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Puh.



1. Paperitehdas 2. Sellutehdas – kuitulinjat 3. Sellutehdas – kutvauskoneet 4. Pääportti 5. Kaukaan Voima Oyj:n biovoimalaitos 6. Tutkimuskeskus 7. Biojalostamo-projekti 8. Biopuhdistamo