SCA Renewable Energy

Mikael Källgren

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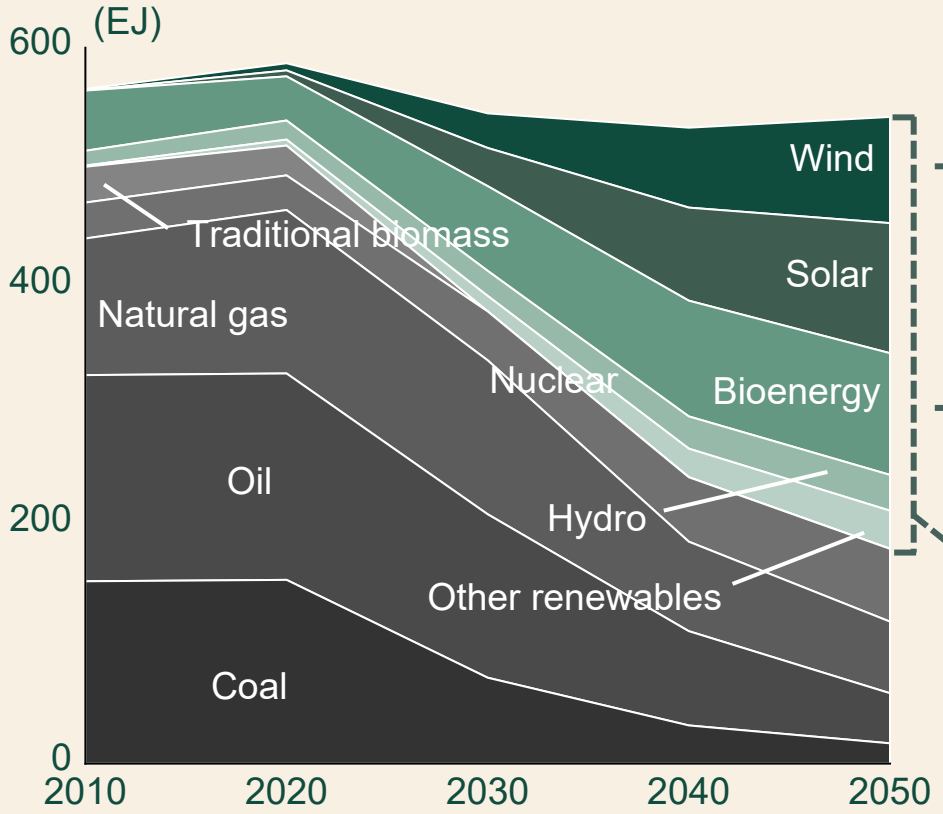
Net Zero policy will shape demand for renewables

Global CO_2 emissions pathways to Net Zero

Global energy supply towards Net Zero



SCA has competitive advantages in…

1. **Wind**
2. **Biofuels**
3. **Hydrogen & E-fuels**
   More renewable energy enables PtX

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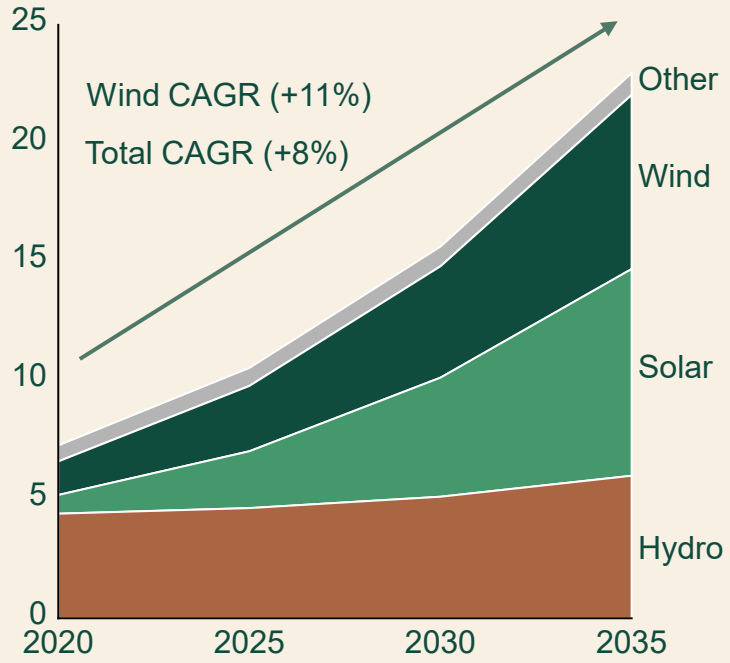
Renewable demand is growing significantly

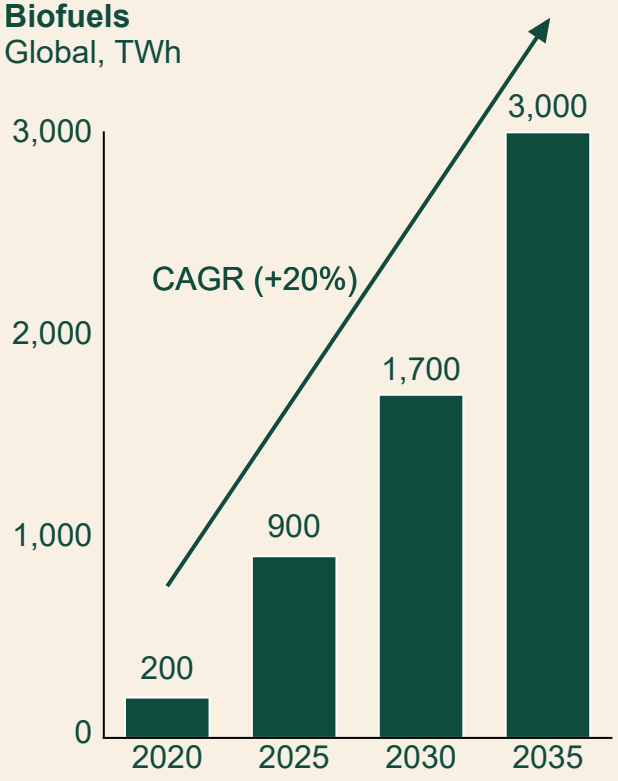
1 **Renewable electricity generation,**
Globally by source, PWh



Drivers of growth

LV transportation, industry & low temp. heating

2 **Biofuels**
Global, TWh



Drivers of growth

Aviation, maritime & HD transportation

3

Drivers of growth

Industrial feedstock, maritime, aviation & HD transportation

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Source: DNV-GL Energy Transition Outlook 2019 – A global and regional forecast to 2050; IEA; HIS; IRENA; BNEF; Neste

SCA uniquely positioned to capitalize on transformation towards renewables

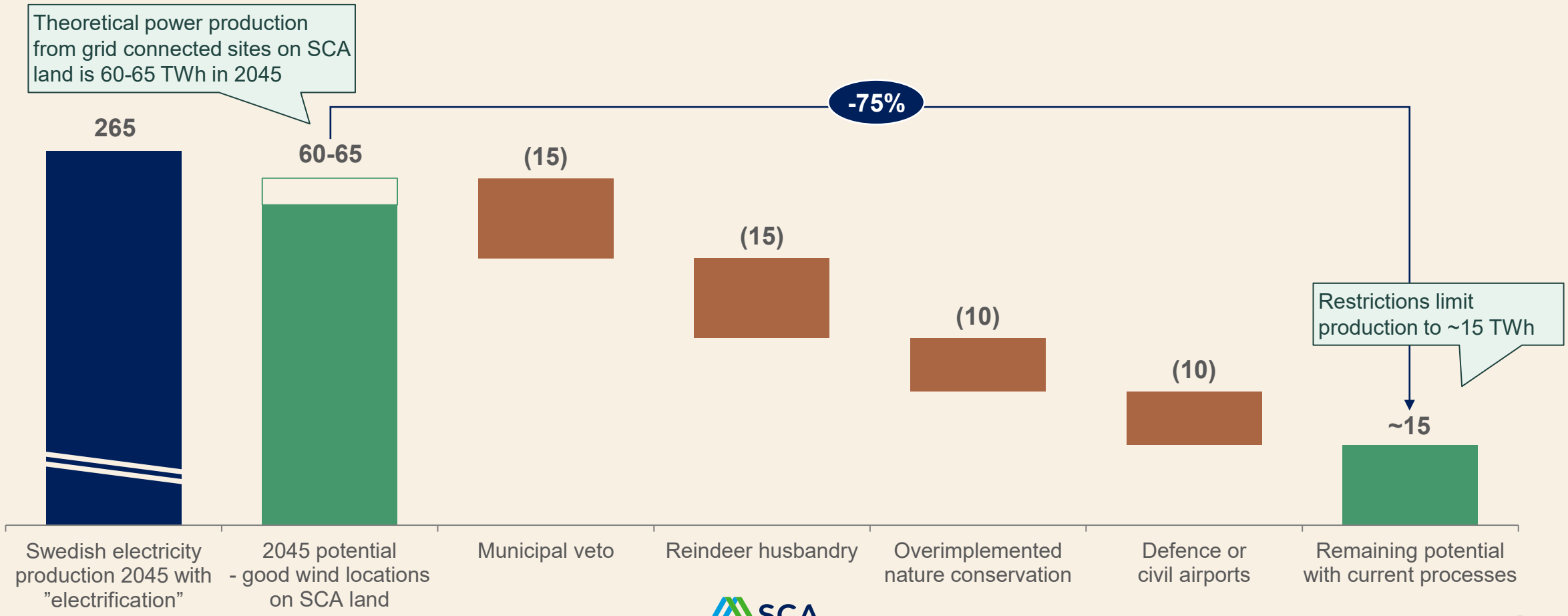
Wind power	Biofuels	E-fuels
Ownership of land with good wind conditions	Access to sustainable **biomass feedstock**	Access to **low-cost renewable energy**
Current **land lease agreements**	Existing **infrastructure**	Access to **biogenic CO2**
Experience from co-developing ~10 projects	**Relation** to key technology suppliers and partners	**Competences** from running large scale processing plants
20% of Swedish wind power on SCA land	Entering 100kt liquid bio **JV with St1**	Future project opportunities **at all of our mills**

Illustrative

65 TWh full potential is restricted by legislations

Changes in policies will increase SCA's potential revenues and profitability substantially

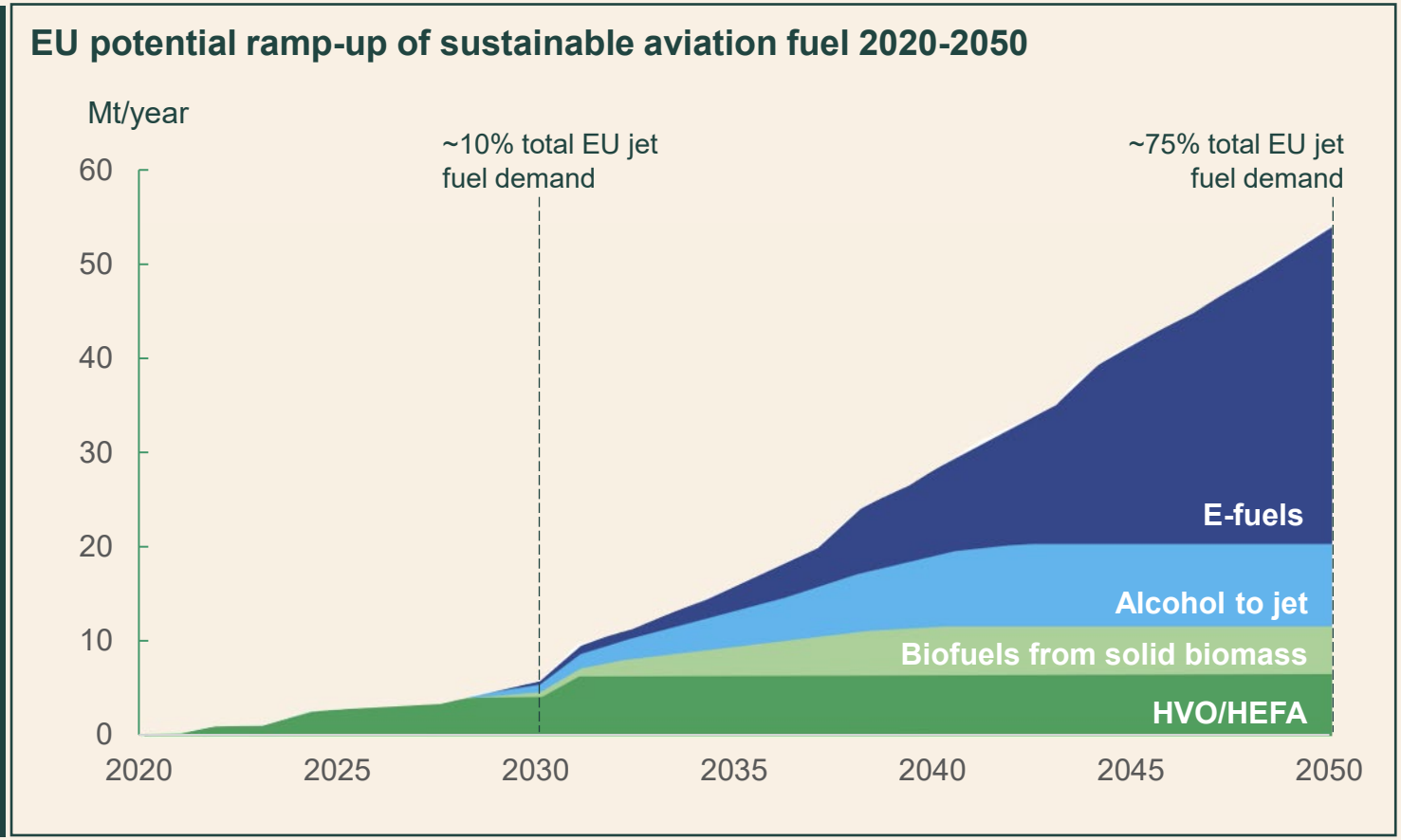
Installed wind power (TWh)



Source: SCA; Bain-analys; Energimyndigheten

The market for renewable fuels is expected to grow

1. **The greenhouse gas reduction quotas will increase as Europe redirects**
2. **The available biomass will not be sufficient**
3. **Access to renewable carbon dioxide and renewable electricity will be crucial**



Källa: World Economic Forum & European Energy Council

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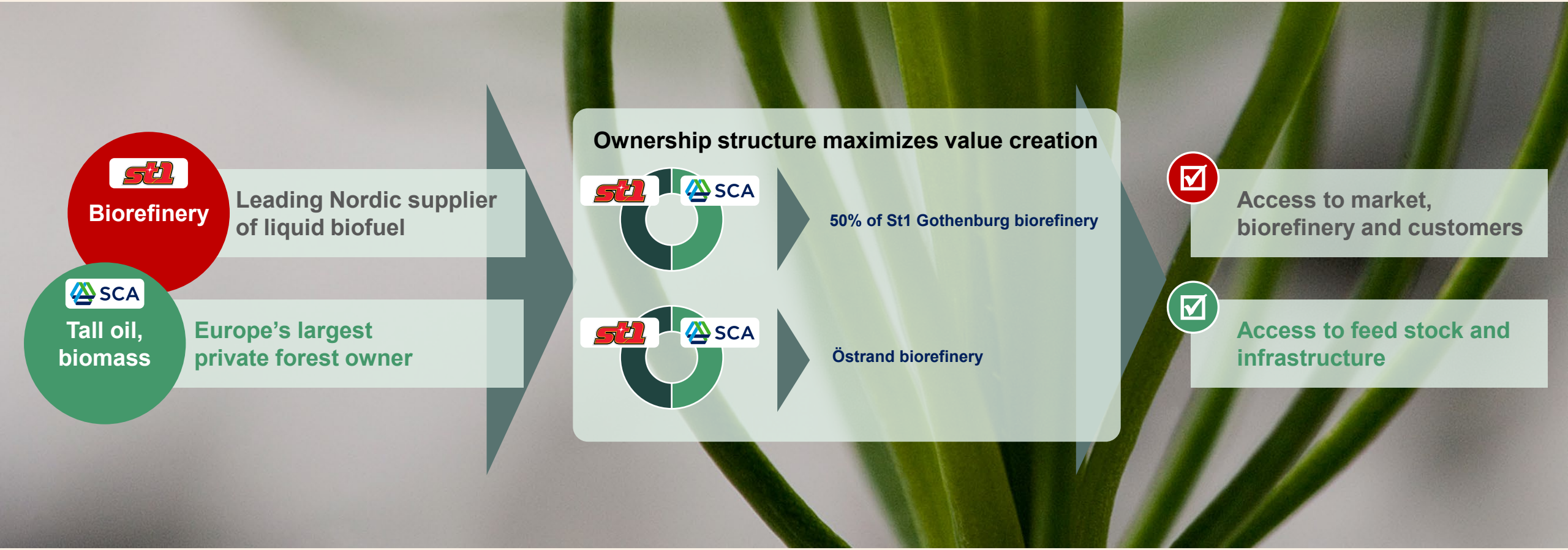
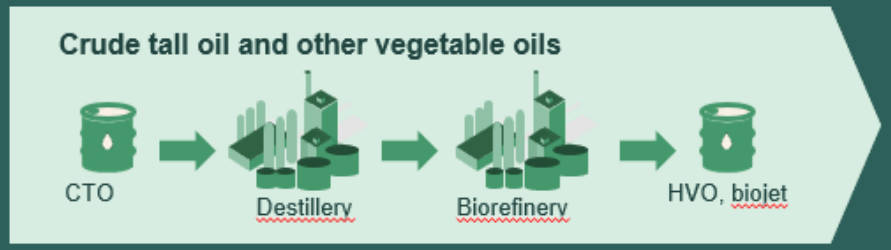
SCA and St1 creating two companies – from forest to fuel station



Gothenburg Biorefinery

St1 is constructing a biorefinery in connection with its oil refinery area in Gothenburg

- Expected to be completed during 2023 and production to start in Q4
- Flexible design allowing the use of a wide range of feedstocks with a yearly capacity of 200 kt (SCA share 50 kt)
- Capable of meeting current and future specifications of the renewable fuels to be produced, which include HVO diesel, jet fuel, and naphtha



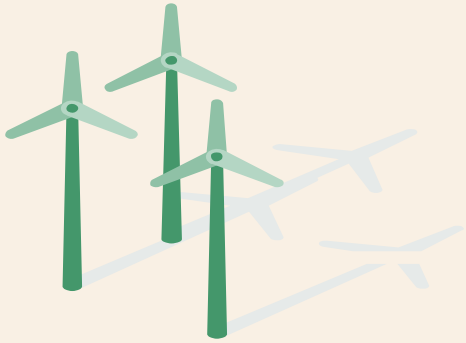
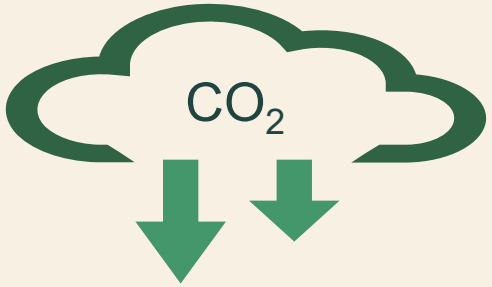
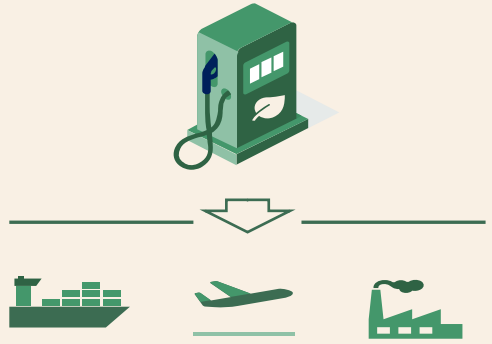
Östrand Biorefinery

Development company

- Next to Östrand pulp mill
- Land reclamation started
- Sustainable feed stocks and energy available
- Environmental permit received to build a biorefinery at the Östrand pulp mill
- 300,000 tonnes capacity
- Finalizing design phase

Long term option of large scale E-fuel production and new value chain from renewable power

/ ILLUSTRATIVE OPTION

	POWER PRODUCTION	BIOGENIC CO2	E-FUELS
			
Position of SCA	**Access to renewable power at low cost**	**3 Mt biogenic CO2** is available on existing sites	Potential for **~800 000 t E-fuels yearly**
Contribution to the value chain	Ensure competitive production cost for own wind farms	Enables production of biobased E-fuel and increased climate benefit	Gives locked-up Nordic electricity access to a growing, global market

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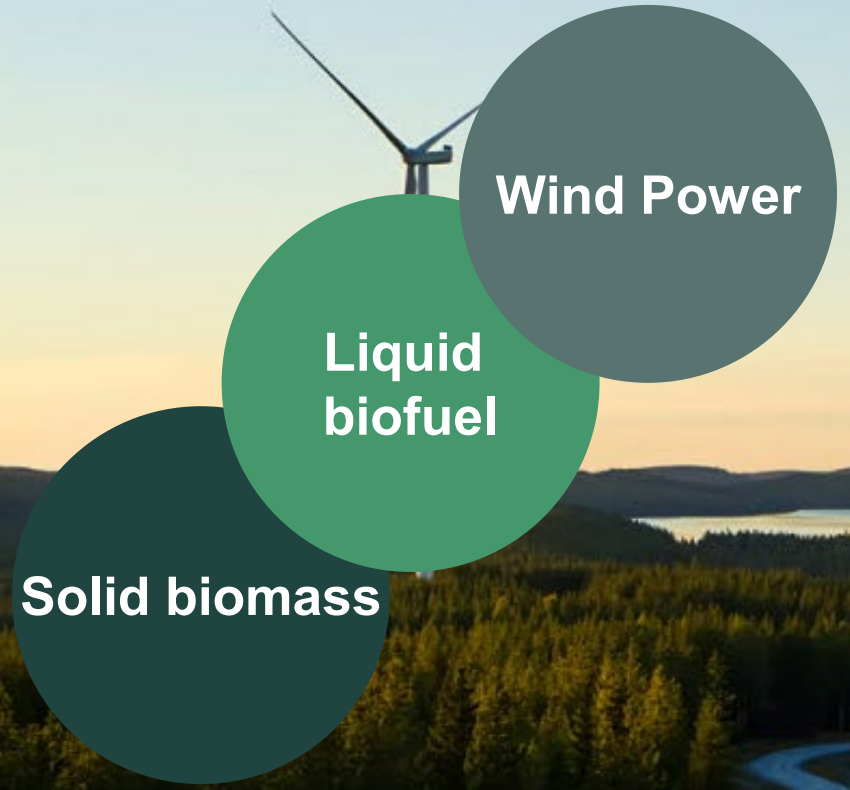
Summary



Invest in wind power:

- Build a portfolio of own wind power through M&A, development and repowering
- >3 TWh own wind power in ten years

Grow liquid biofuel:

- Start-up biorefinery in Gothenburg – IRR >20%
- Develop new position as supplier of liquid biofuels and green chemicals

Use the entire tree:

- Optimize production, product portfolio and profitability for the biofuel business (processed and unprocessed)

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SCA har potential att bidra med en stor andel av behovet

20% av svensk vindkraft finns på SCAs mark - tar position som producent

SCA investerar i biodrivmedel från tallolja och utvecklar biodrivmedel och elektrobränslen

SCAs värdekedja och mark har potential att bidra med:

- >65 TWh vindkraft på egen mark
- >300 000 m3 biodrivmedel
- >500 000 m3 elektrobränslen

Politiken helt avgörande

- Skapa verkliga incitament för de kommuner som beviljar vindkraft (inte straffa de som vill investera)
- Ta hänsyn till vindkraftens betydelse för Sverige vid tillståndsprövning och inför separat prövning vid repowering av befintliga vindparker
- Stabila villkor avseende inblandningskrav – i Sverige och inom EU
- RED annex 9A - säkerställ stark ställning för skogsbaserade råvaror
- Styr mot CCU och inte CCS – biogen CO2 är en förnybar råvara