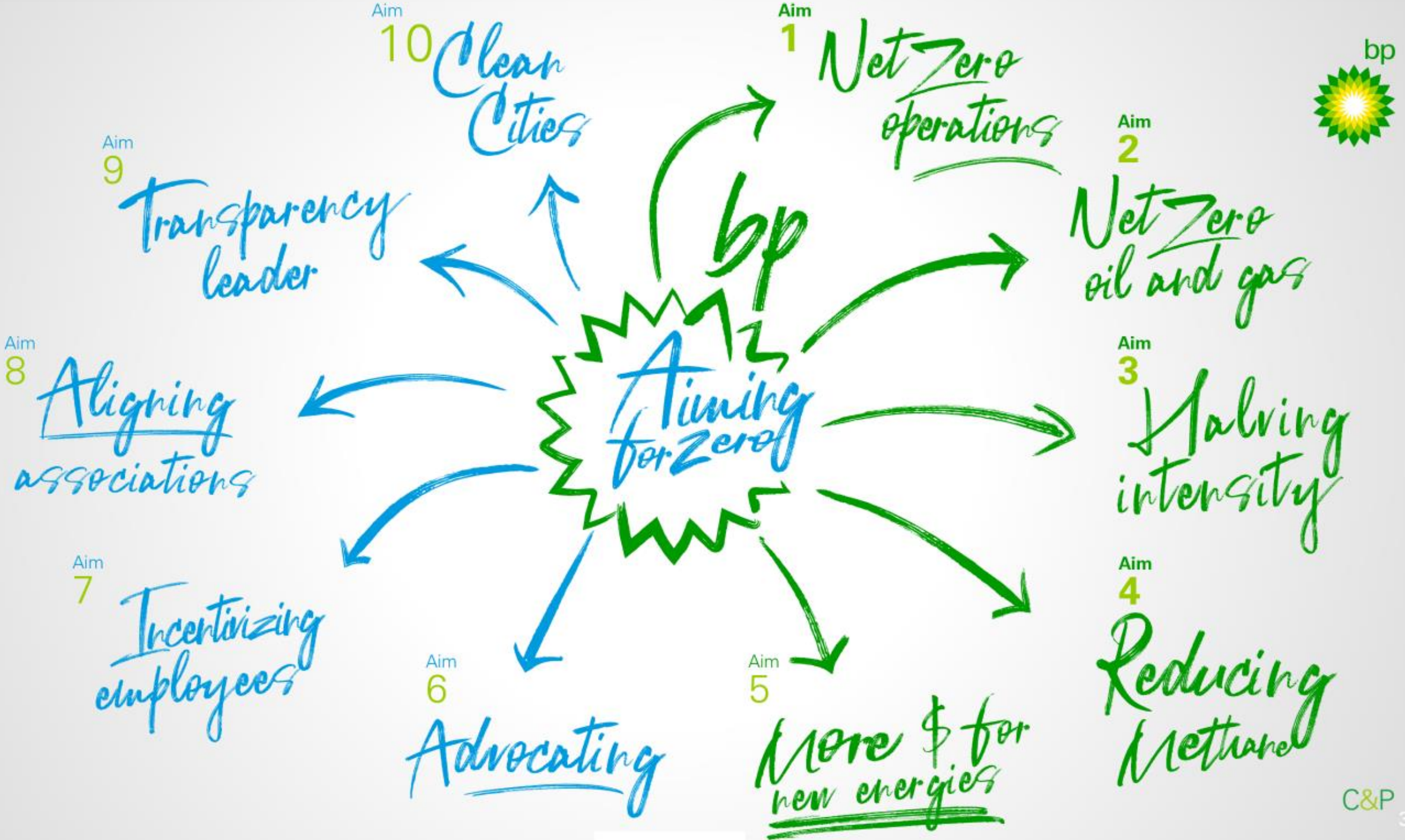
Establishing Supply Routes for SAF

ISCC stakeholder meeting Dec 3rd 2020

Air bp, Juergen Kuper

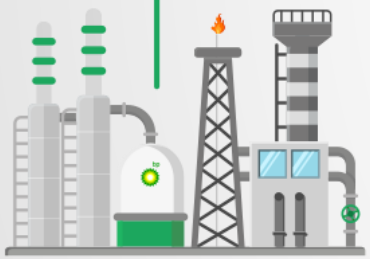
bp

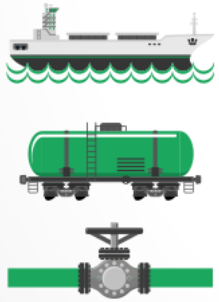
from IOC to IEC

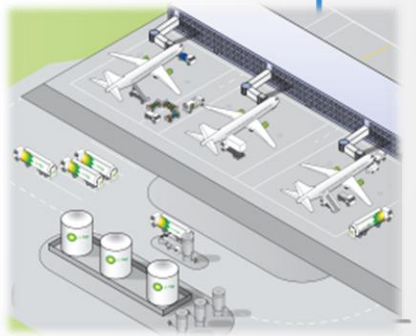

bp
Aiming for zero
Aim 1 Net Zero operations
Aim 2 Net Zero oil and gas
Aim 3 Halving intensity
Aim 4 Reducing Methane
Aim 5 More $ for new energies
Aim 6 Advocating
Aim 7 Incentivizing employees
Aim 8 Aligning associations
Aim 9 Transparency leader
Aim 10 Clean Cities

Reducing, Improving, Creating

Along the entire logistics chain







Many of our feedstock and product transports are by pipeline, the safest and most energy-efficient transport method

Waterways and rail, on which larger quantities can be transported, protect both material and the environment.

Air bp procured rail transportation using 100% green energy

Use of digital technology
for efficient and environmentally friendly logistics

target neutral

bp Target Neutral

Global programme, carbon offsetting solutions for Air bp solus locations. Component of a comprehensive corporate CO_2 management strategy

Energy and carbon emission reduction projects and initiatives onsite:

- Product vapour recovery during supply
- Start-stop system on vehicles
- Electric engines and pumps
- Solar energy solutions

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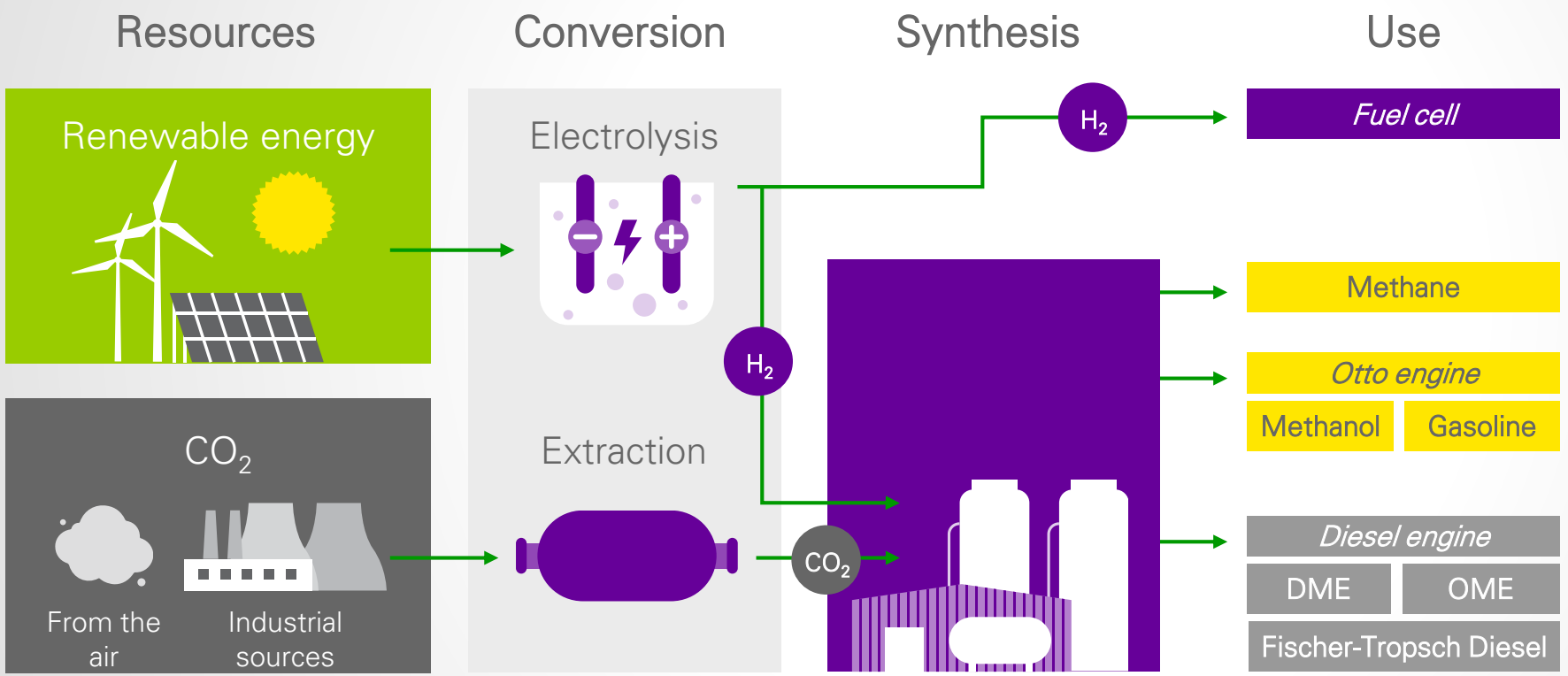
Synthetic fuels

Eagerly awaited, but when will the become reality?



E-fuels are needed in the long run for climate neutrality, especially for the aviation and petrochemicals sectors

E-fuels in principle are available in unlimited quantities and can be **completely climate-neutral** when used in combination with renewable electricity

There are no large-scale plants as yet; studies estimate production costs at

5 – 7x fossil equivalent in 2020 und

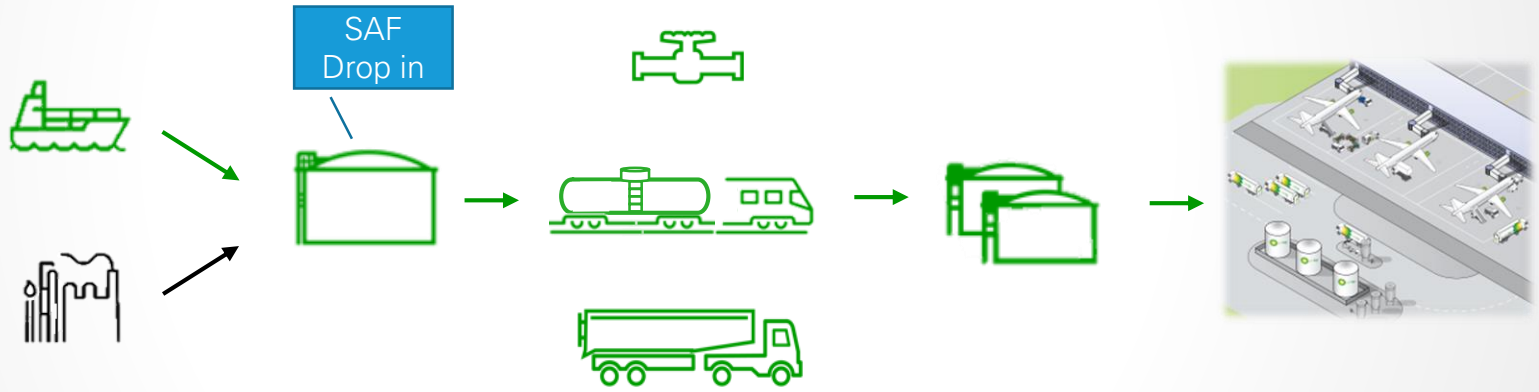
2 - 3x in 2050


Lingen
Green Hydrogen
North Sea wind farm:
Generation of green
electricity
bp refinery Lingen:
Production of
more sustainable
fuels
Hydrogen tanks
50 MW electrolysis:
production of
green hydrogen
Existing electricity
grid connection

Integration of SAF into the Jet A-1 Supply Chain

- Goal for integration is to minimize additional cost and CO_2 emissions
- Early injection of SAF into the supply chain enables distribution to multiple customers at several locations. The existing supply routes and infrastructure can be used and the SAF supply benefits from economy of scale from the very first beginning

exemplary SAF Supply Chain



Production / Import | Intermediate storage | Transport | Airport storage | Refueling

Segregated Supply Chain | Co-mingled Supply Chain

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Book and Claim Proposal

Air bp delivers SAF ('**Books**')

Air bp delivers SAF to "location A"

SAF is co-mingled in airport storage tanks. Air bp re-brands SAF as regular Jet A-1, before selling (as regular Jet A-1) to customers lifting at "location A".

"customer X" pays for ('**Claims**') SAF

"customer X" purchases regular Jet A-1 at "location B"

Air bp charges "customer X" for SAF at "location B" under the book & claim methodology

"location A"

"location B"

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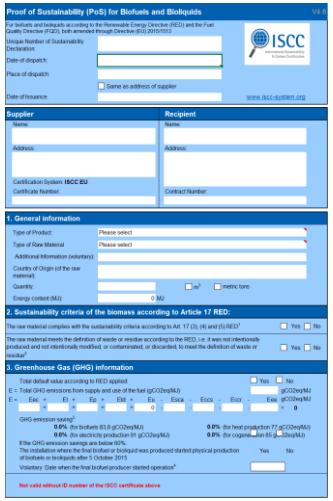
Book and Claim Proposal

Air bp delivers SAF (‘**Books**’)

Air bp writes off ISCC certification of the SAF product at this location. Stripping any sustainable credentials from the product before it is sold as regular Jet A-1



“location A”

“customer X” pays for (‘**Claims**’) SAF

Air bp issues ‘book-and-claim’ documentation to “customer X”

“location B”

Conclusion

3 key messages

- The exemplary shown and already existing supply chain is what we hope will become the standard one (in order to avoid segregated SAF logistics in smaller, higher energy consuming lots).

- However, a lot of customers don't accept this yet, and request segregated supply chains for SAF.

- B&C – “book and claim” is a concept being requested by some General Aviation customers who have a highly distributed demand.

Thanks a lot for listening!

C&P