



Gasoil: Facilitating transitions to cleaner fuels for forty years

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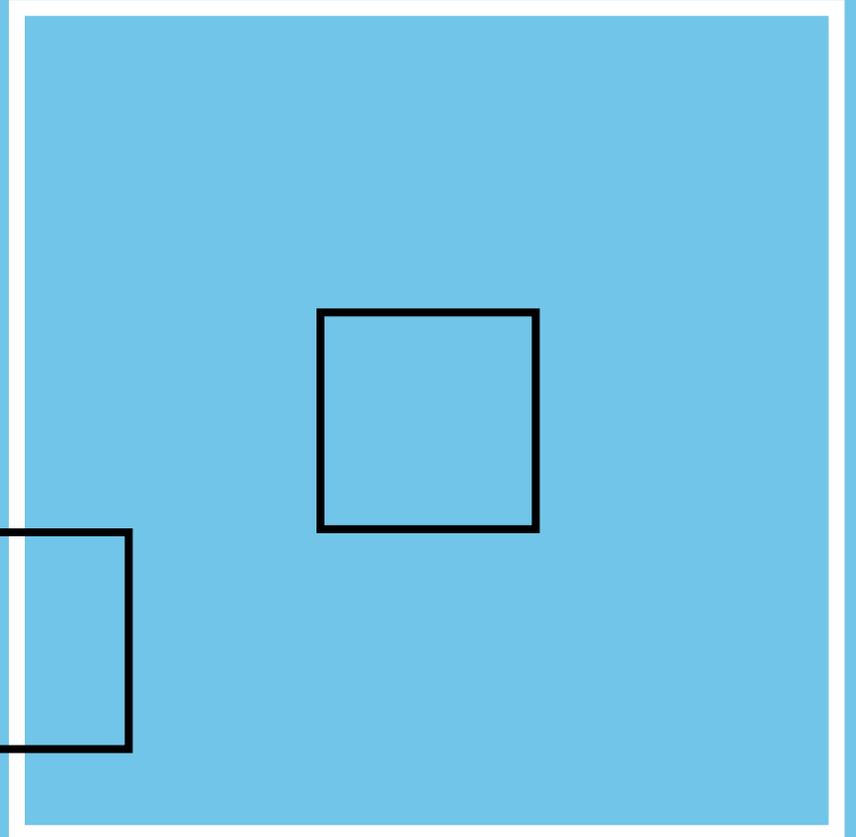
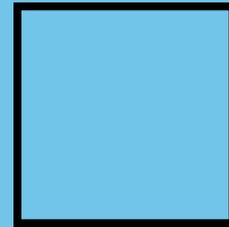
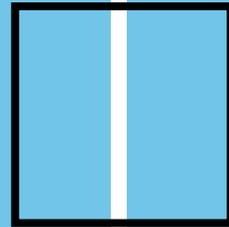
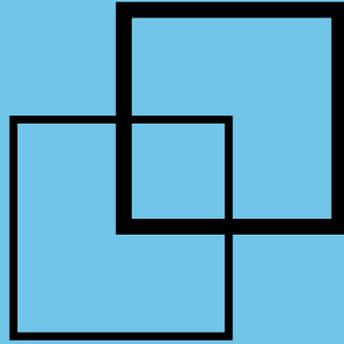
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Today's Topics

- A brief history and where we are now
- The fulcrum of refined products
- What lies ahead



A brief history and where we are now



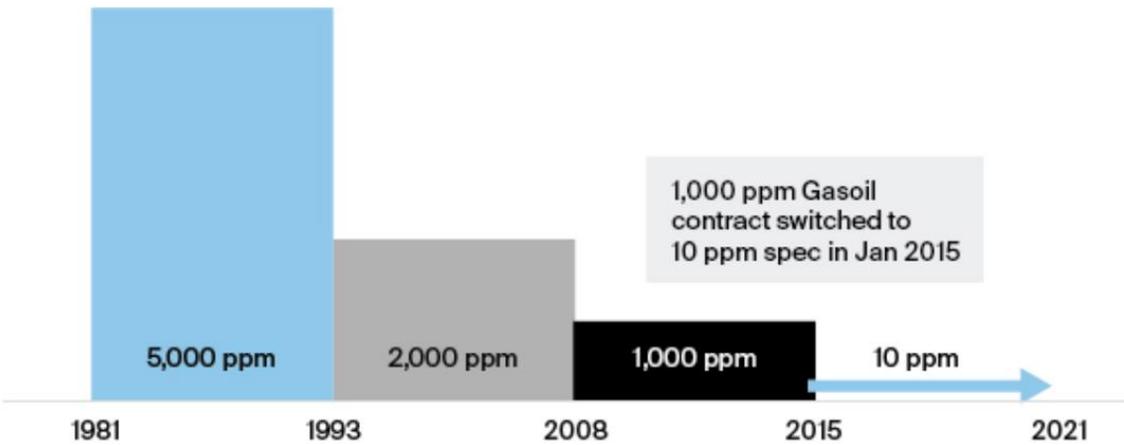
Forty years and counting

- Launched in April 1981
- Traded via 'open outcry' at the International Petroleum Exchange (IPE)
- Total Futures Volume traded in 1982: 600,000 lots
- Futures ADV in 2021: ~325,000 lots
- Used by many different types of market participant
- Over 500 market participants in 2021
- Gasoil Options launched in July 1987
- Contract mechanics relatively unchanged



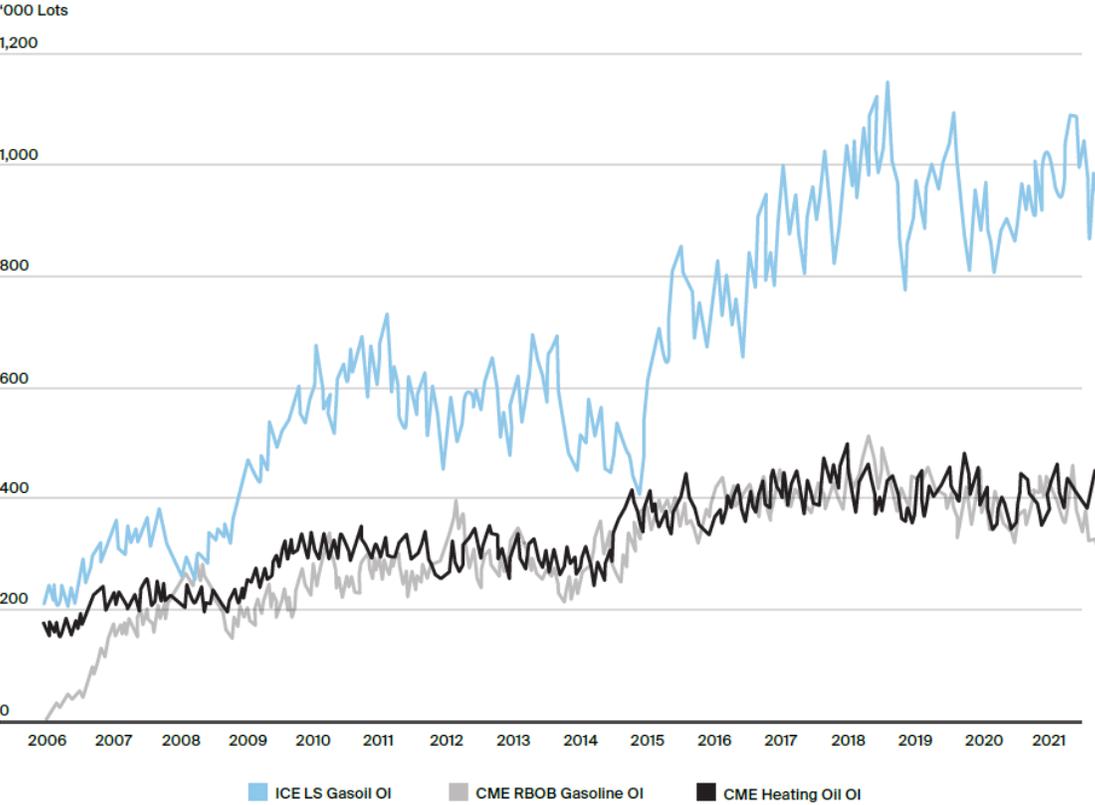
Sulphur content reduction

- From Heating Oil to Ultra Low Sulphur Diesel (“ULSD”)
- Reduction in sulphur content in line with mandates, market fundamentals and global clean fuel agenda
- LS Gasoil Futures OI double that of Heating Oil and RBOB Gasoline



Source: ICE

Comparison of ICE LS Gasoil Futures Open Interest vs. CME Heating Oil and RBOB Gasoline

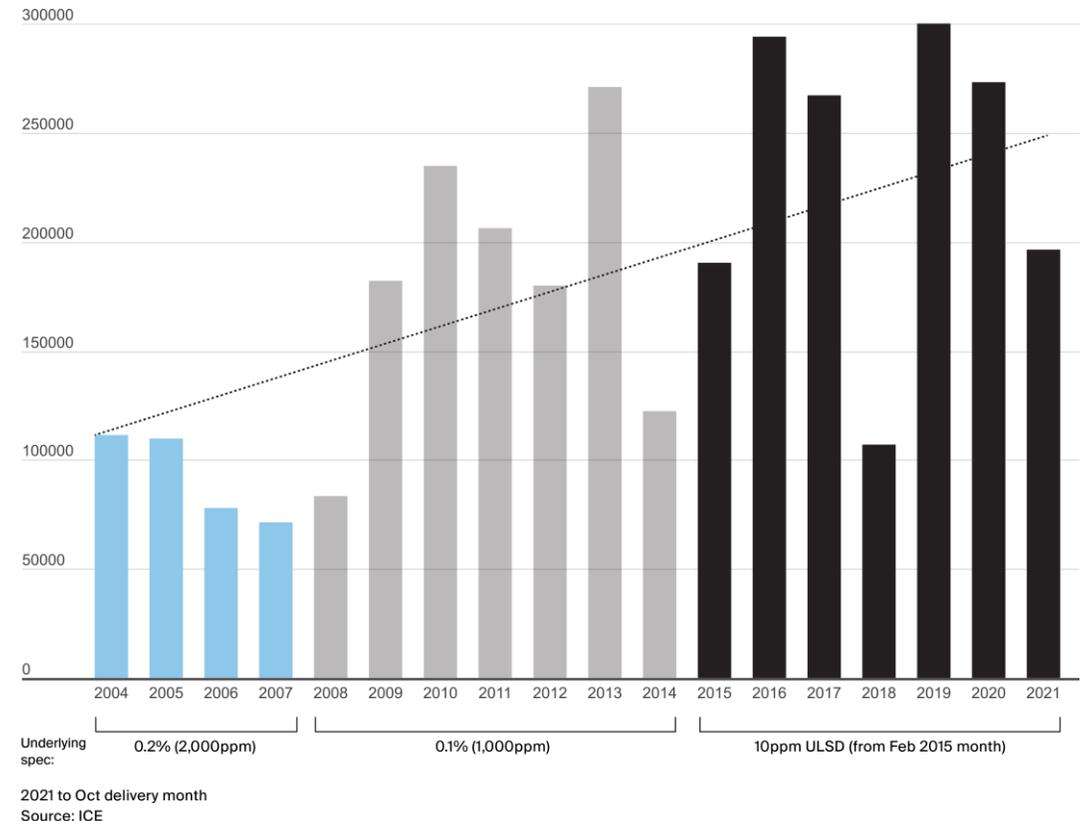


Data to end-Oct 2021
Source: ICE and CME

Physical Delivery via LS Gasoil Futures contract

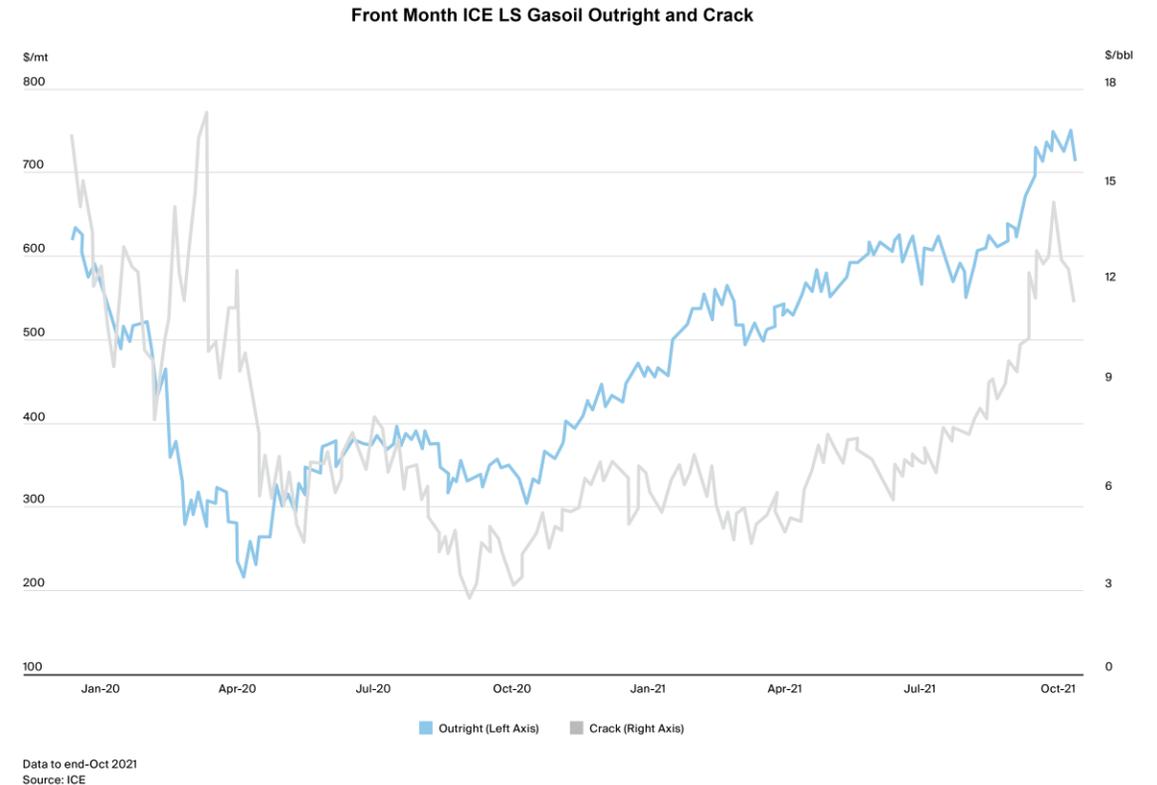
- Physical delivery occurs in the ARA region
- Delivery into a recognised storage installation or barge
- Overall delivery volumes have increased as sulphur content has declined
- 10ppm ULSD is now the largest component of the middle distillate market

Average monthly delivery volume via ICE Gasoil Futures (in mt)

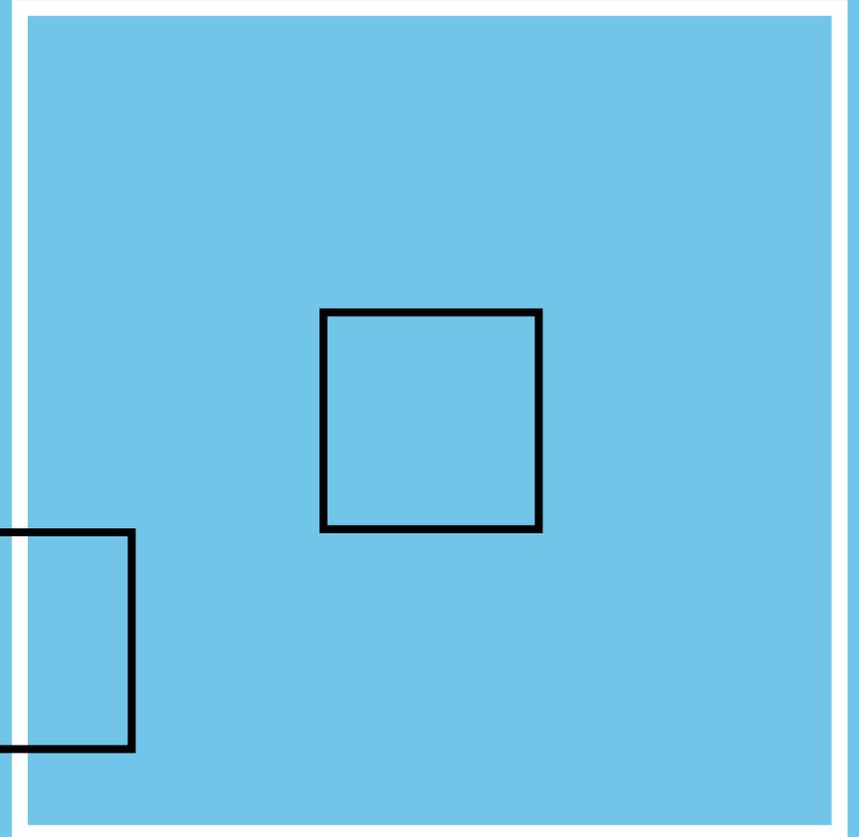
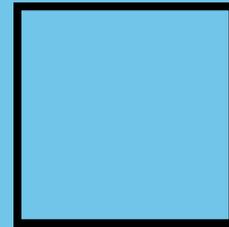
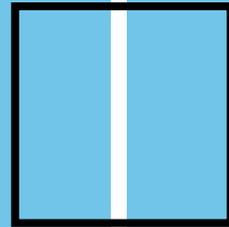
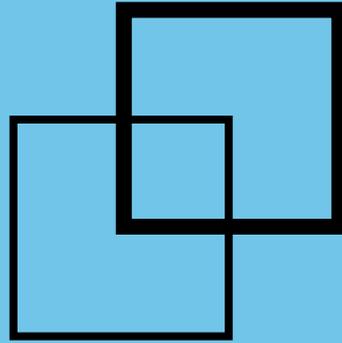


Where are we now?

- Outright and crack prices tumbled as the COVID-19 pandemic swept across the world
- Oil demand tumbled in 2020 and 1H 2021 as movement restrictions reduced transportation fuel consumption
- 2H 2021 – prices have risen as demand improves
- LS Gasoil Futures and related contracts helped participants navigate extreme price fluctuations
- In 2020, 84.5 M lots of LS Gasoil Futures traded; a third of that in Q1 2020

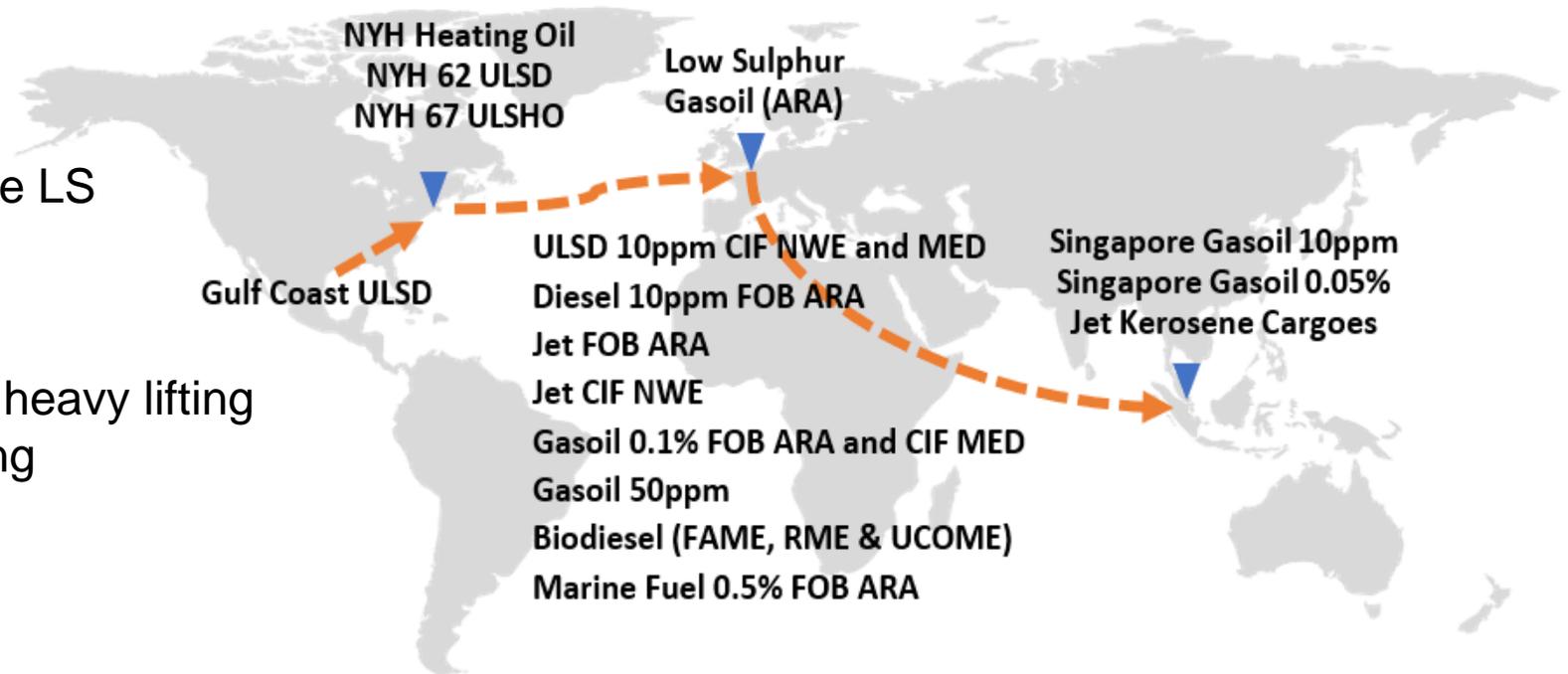


The fulcrum of refined products



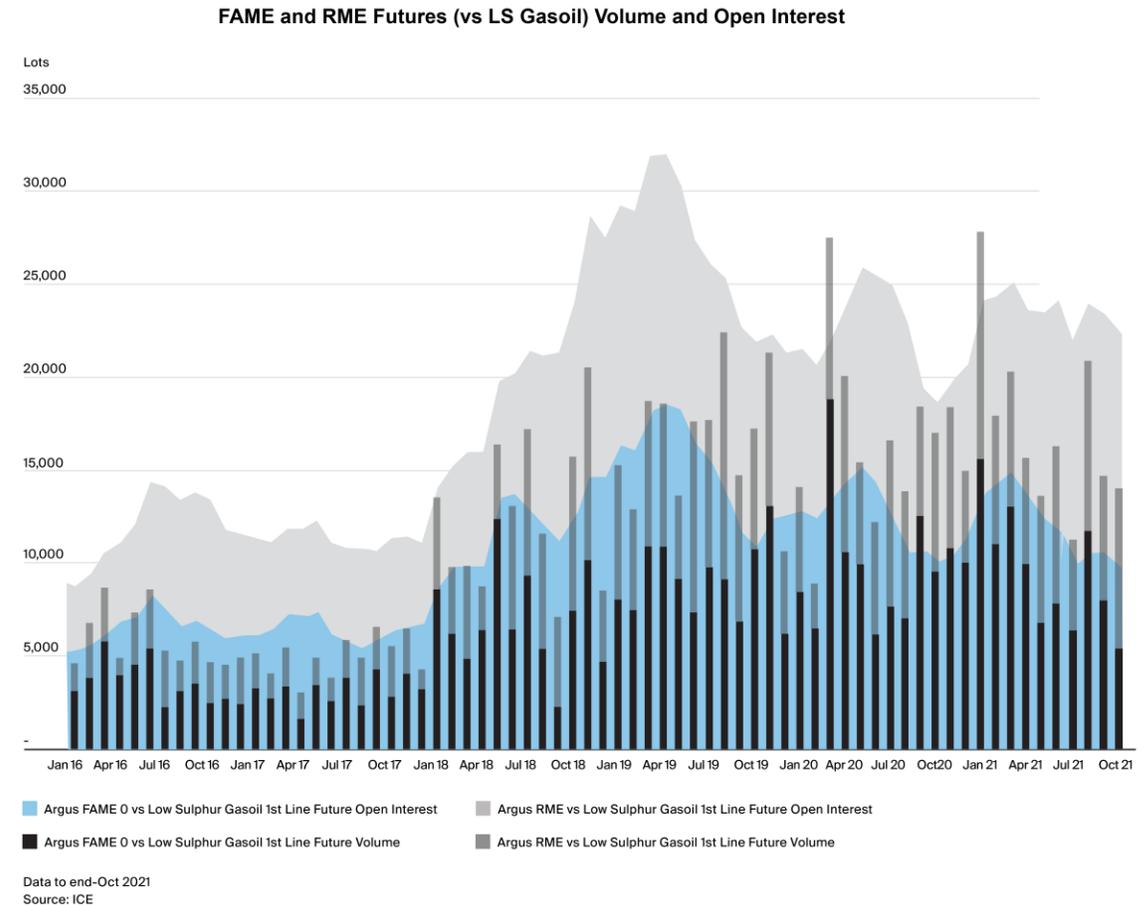
The global reach of Low Sulphur Gasoil

- A global benchmark linking the major trading and refining hubs
- LS Gasoil Futures is a price anchor for a varied group of differential grades
- Sixty ICE contracts reference the LS Gasoil Futures contract
- As a liquid underlier, it does the heavy lifting to hedge a percentage of differing regional and quality products



Biodiesel contracts – FAME and RME

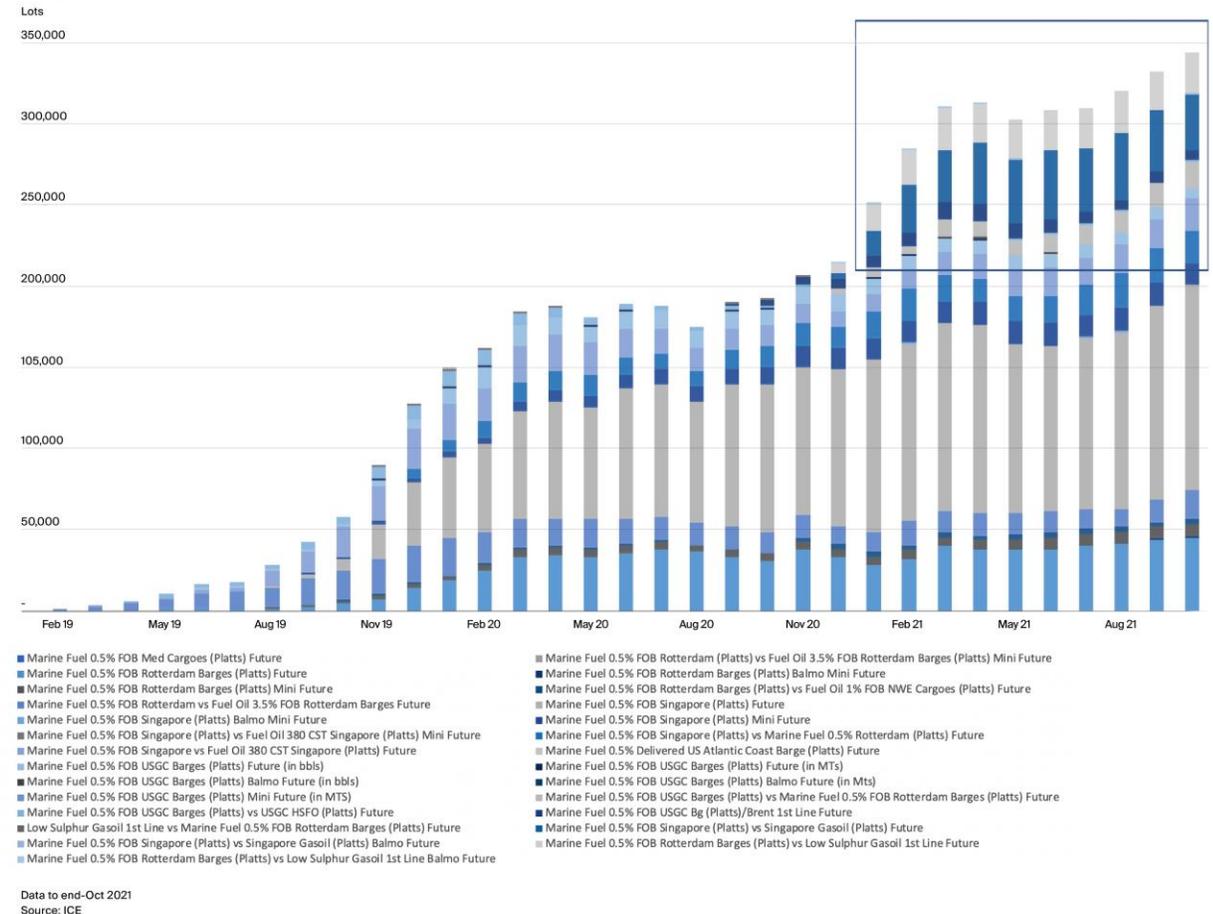
- ICE Futures Europe is the home for European Biodiesel risk management with 100% market share
- Market activity dependent on seasonality and EU directives
- First and second-generation biodiesel prices quoted as a differential to LS Gasoil Futures
- UCOME vs LS Gasoil 1st Line Futures traded volume and OI increasing as market shifts to second-generation biofuels



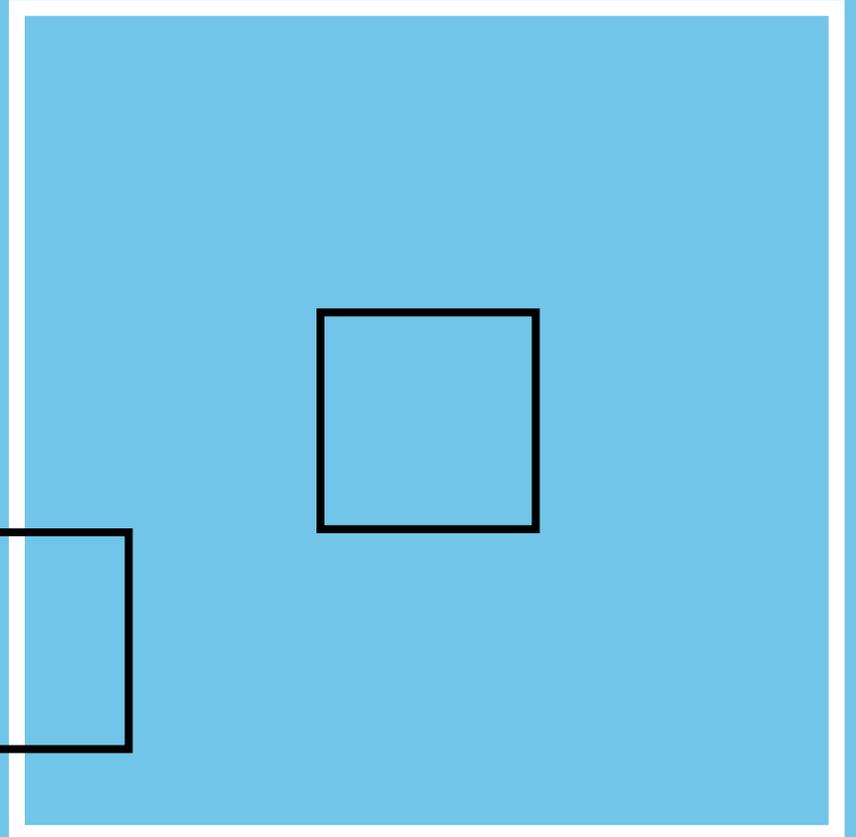
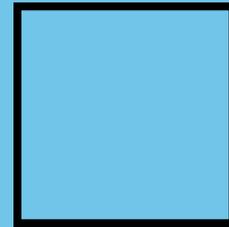
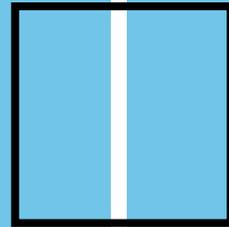
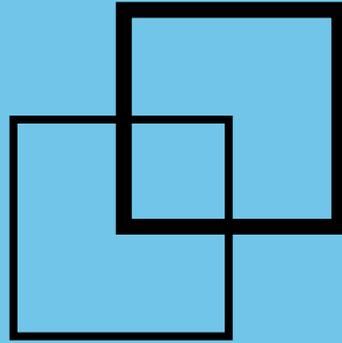
Marine Fuel 0.5% vs Low Sulphur Gasoil

- Jan 2020 – implementation of IMO mandated 0.5% sulphur cap for global shipping fuel
- LS Gasoil Futures provided a hedging tool as market gauged MF 0.5%'s place in the refined product spectrum
- MF 0.5% vs LS Gasoil differentials listed in Dec 2020 were quickly adopted by the market
- LS Gasoil Futures, once again, used as a trusted pricing mechanism during a period of transition

Marine Fuel 0.5%-related Derivatives Open Interest Growth

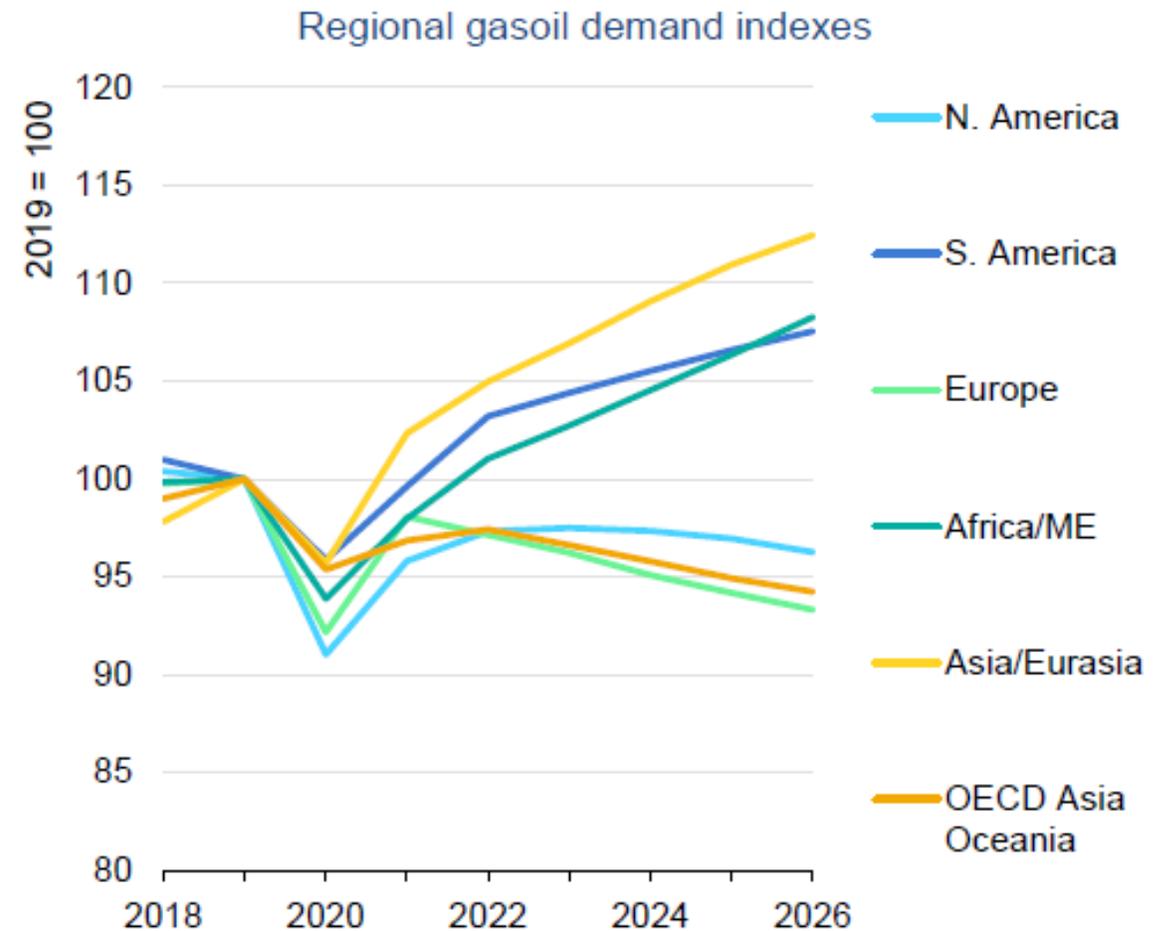


What lies ahead



What lies ahead

- LS Gasoil essentially represents a sulphur free diesel
- After desulphurisation, the focus is now on decarbonisation
- LS Gasoil will continue to provide a dual role going forward:
 - Supporting existing middle distillates as demand increases in non-OECD regions
 - Provide a price gauge for replacement renewable fuels now and in the future regarding emission reduction efforts



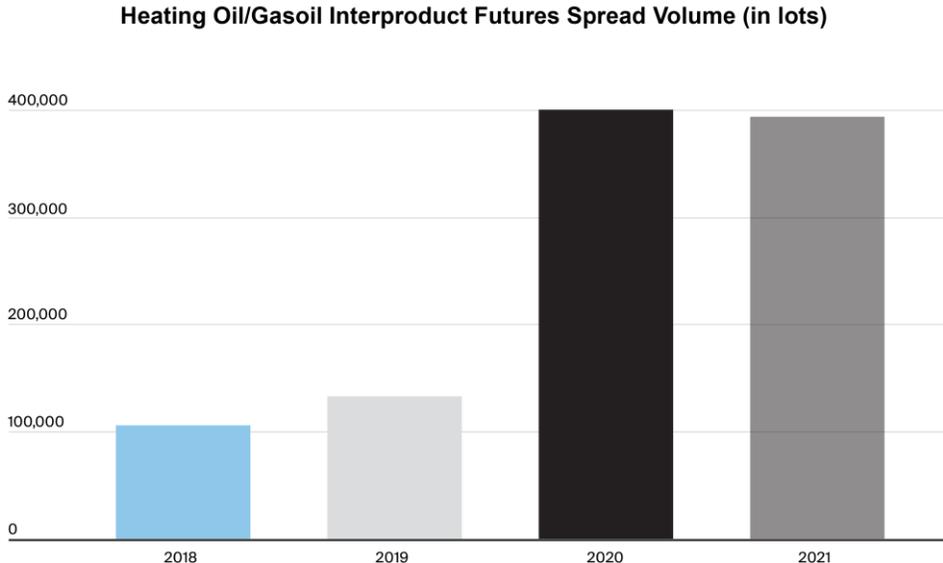
Source: IEA

EU Second-generation biofuels

- EU has targeted a 55% reduction in greenhouse gas emissions by 2030
- Focus on renewable and sustainable energy
- Improve energy efficiency in transportation, power generation and building infrastructure
- Key focus area to achieve this is the shift to second generation biofuels derived from biomass and waste
- Hydrotreated Vegetable Oil (“HVO”) and Sustainable Aviation Fuel (“SAF”) are potentially short-to-medium term solutions
- Quality standardisation is getting closer, improving effective price discovery processes
- Price Reporting Agencies launching spot assessments as a differential to LS Gasoil
- LS Gasoil aiding in price discovery process and providing liquidity in currently illiquid markets

US RINs and Heating Oil/Gasoil Futures Spread

- RVO compliance costs surged in 2021 impacting refining margin calculations
- USGC diesel exports are ~1 Mb/d
- ICE “HOGO” Spread volumes in 2020 and 2021 have surged as participants manage the ‘arb’



2021 volume to end-Oct
Source: ICE

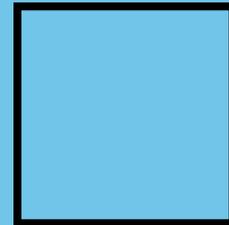
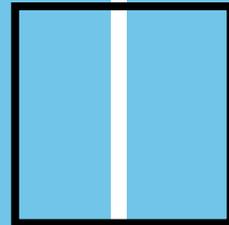
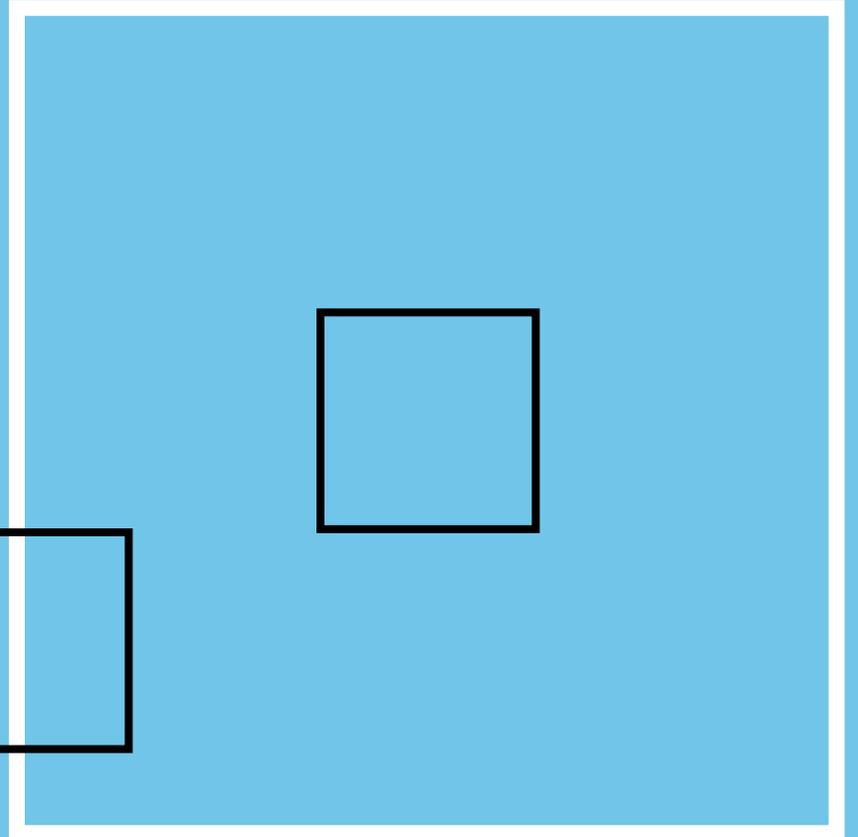
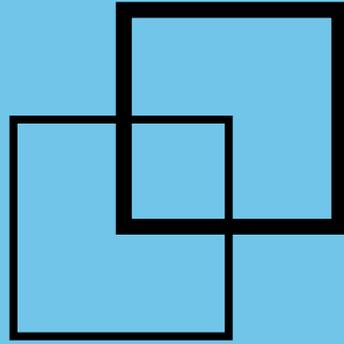


Data to end-Oct 2021
Source: S&P Global Platts

Code	Contract Name
RIK	Biodiesel Outright - D4 RINS (OPIS) Current Year Future
RIL	Biodiesel Outright - D4 RINS (OPIS) Previous Year Future
RIN	Gasoline Outright - D6 RINs (OPIS) Current Year Future
RIO	Gasoline Outright - D6 RINs (OPIS) Previous Year Future



Summary and Conclusions



Summary and Conclusions

- The Low Sulphur Gasoil Futures contract, hosted at ICE, has firmly established itself as the primary global refined product benchmark.
- Its assured liquidity and deep open interest make it a reliable and effective risk management and investment tool.
- Over time, the contract's reach has extended to cover many parts of the globe, becoming a reference for many middle distillate grades from the US to Asia.
- In the past 40 years the Low Sulphur Gasoil Futures contract has successfully adapted to change and ICE will proudly invest in its ongoing evolution.

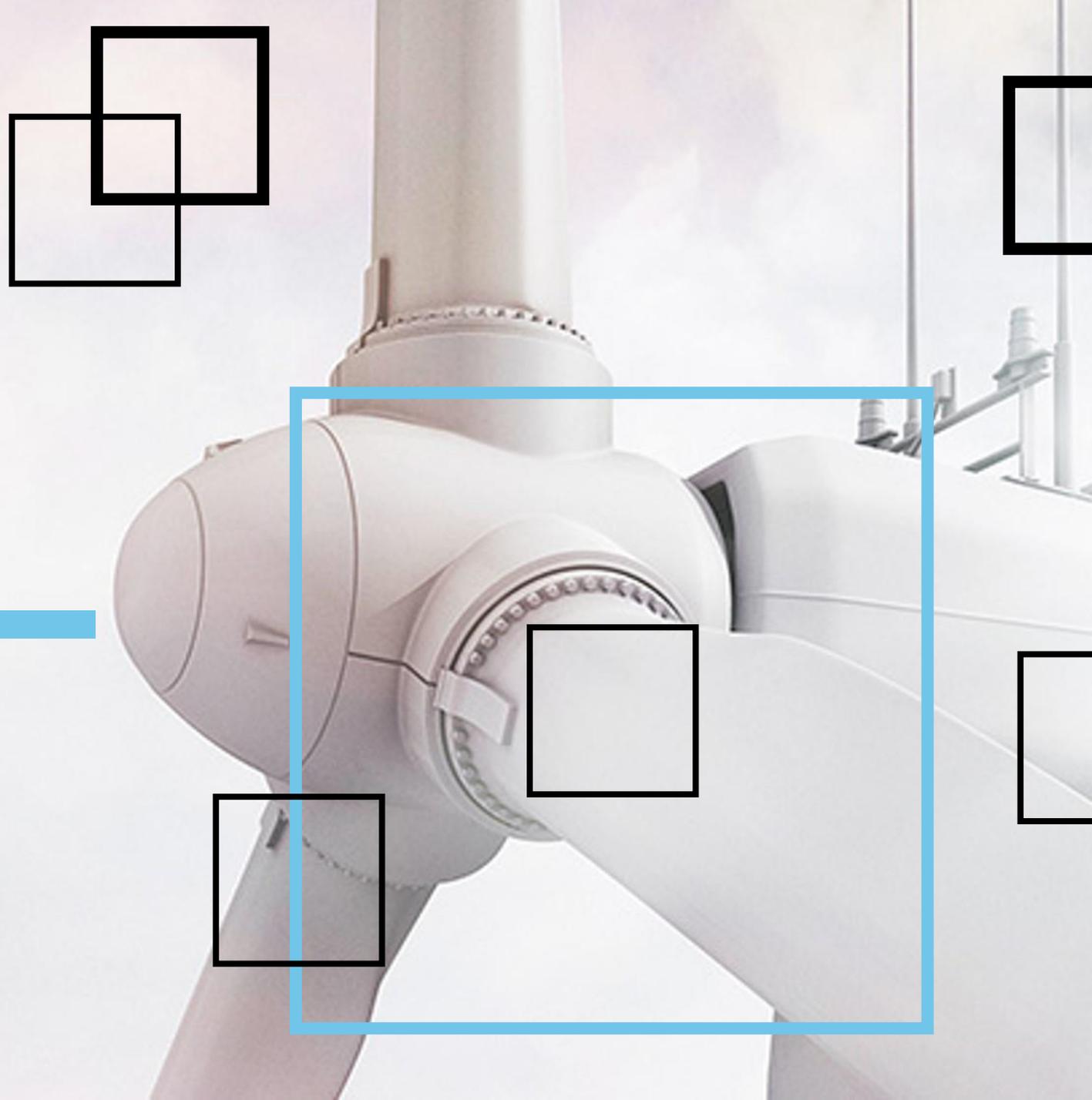
Thank you

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