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Pricing Mechanisms For E-fuels

Uhde Innovate
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Agenda



15 mins

E-fuels pricing mechanisms

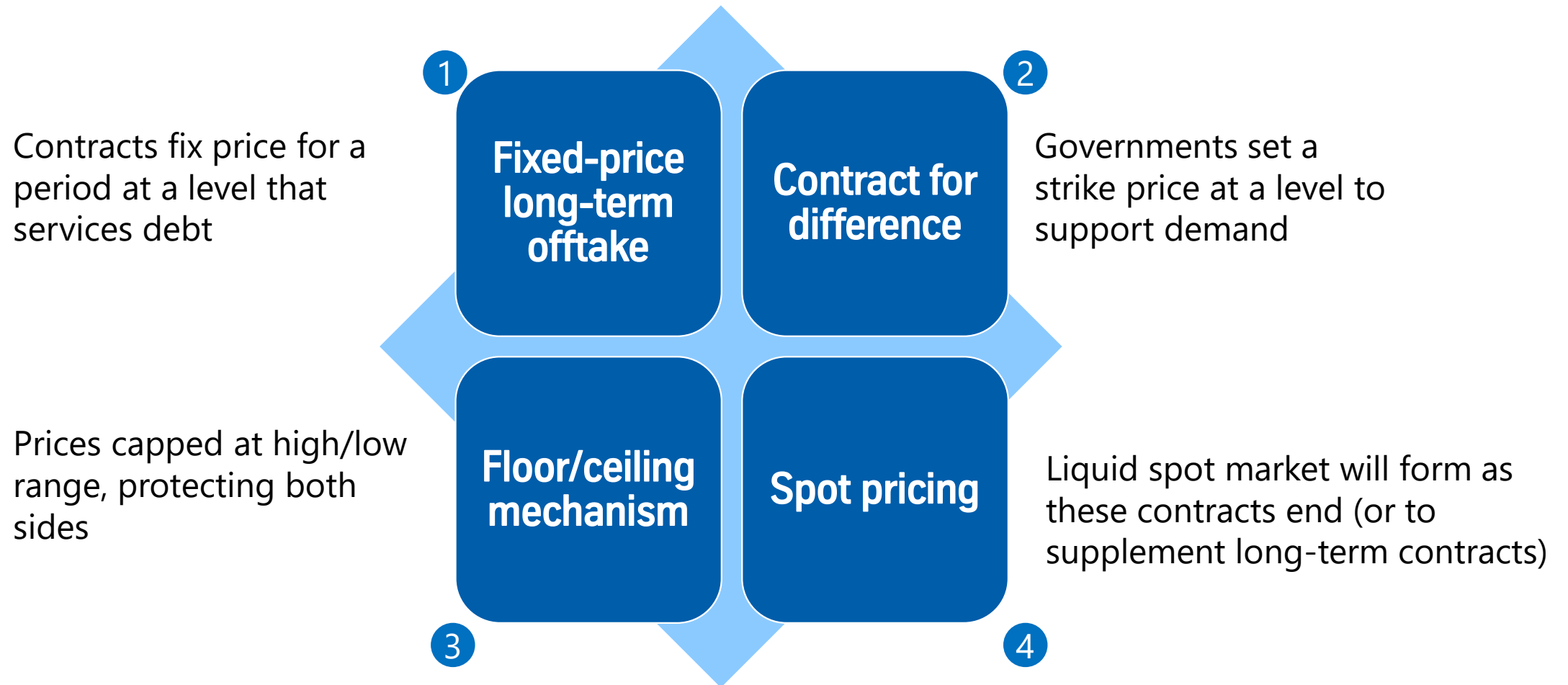
Willingness to pay snapshot – clean ammonia



Key issues for pricing molecules

- ✗ Different project economics
- ✗ Different end uses
- ✗ Different appetites for green premium
- ✗ Different carbon intensities in substitutable blue products
- ✗ Lack of cohesive certification approaches
- ✗ Different approaches to supply and demand stimulation

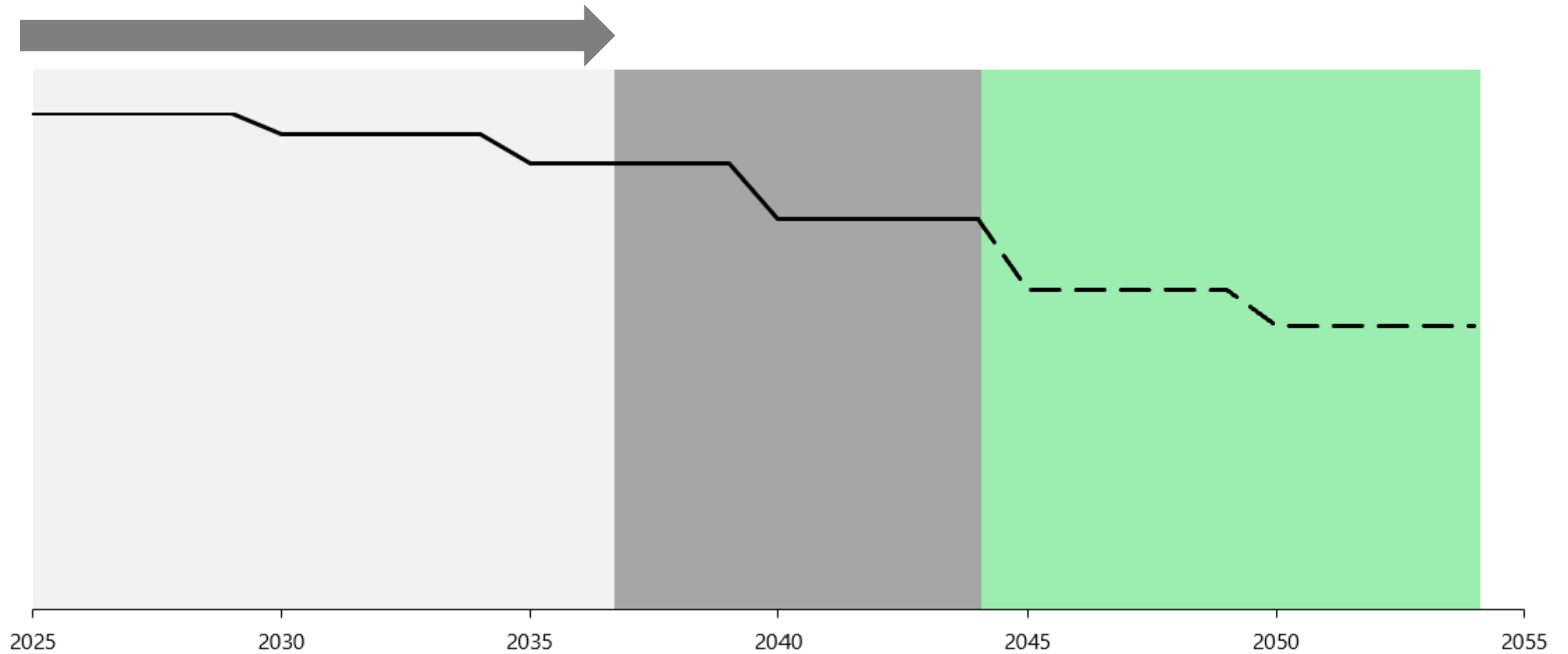
Ways to mitigate price risk



Source: Argus Consulting

1

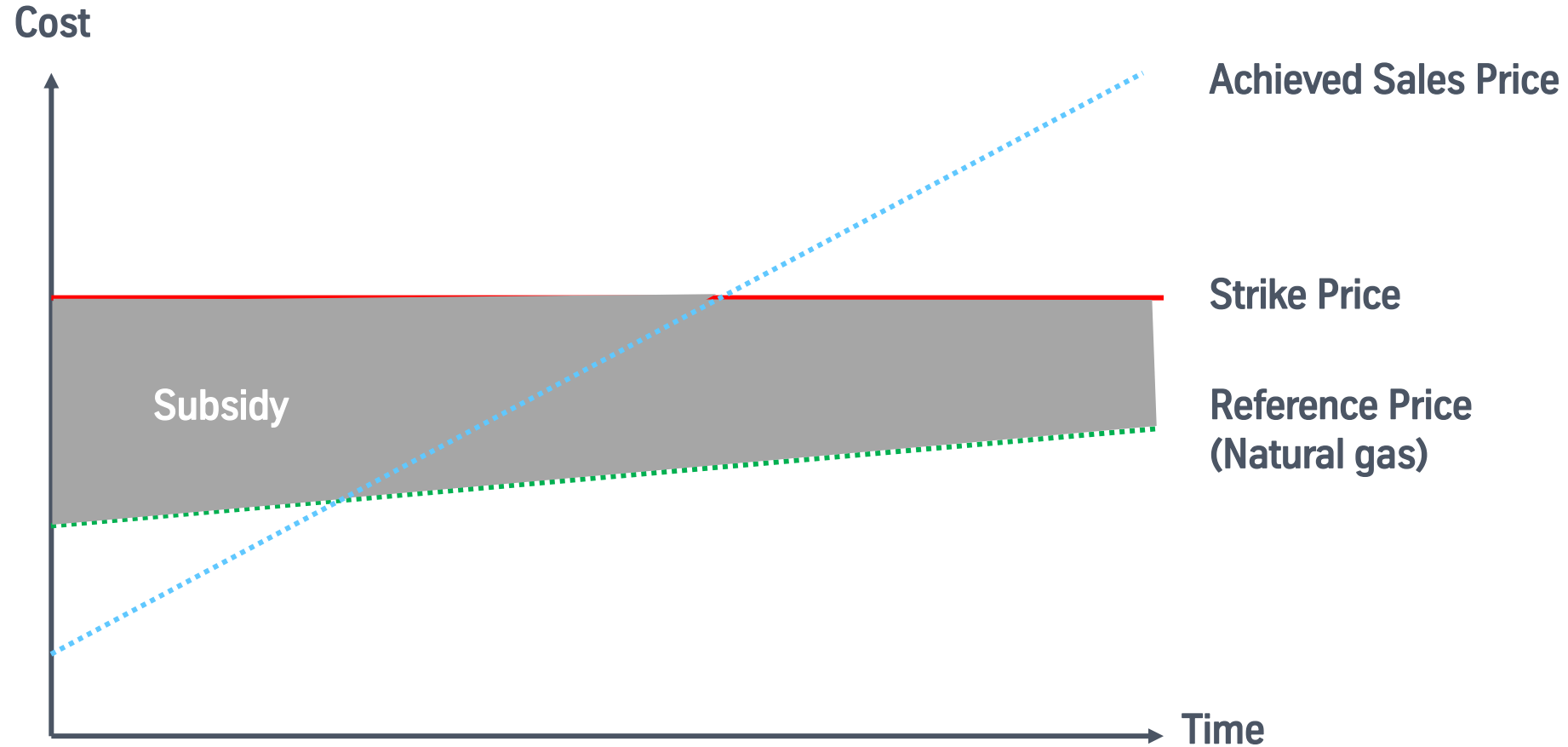
Hydrogen projects require fixed offtake price for up to 20 years



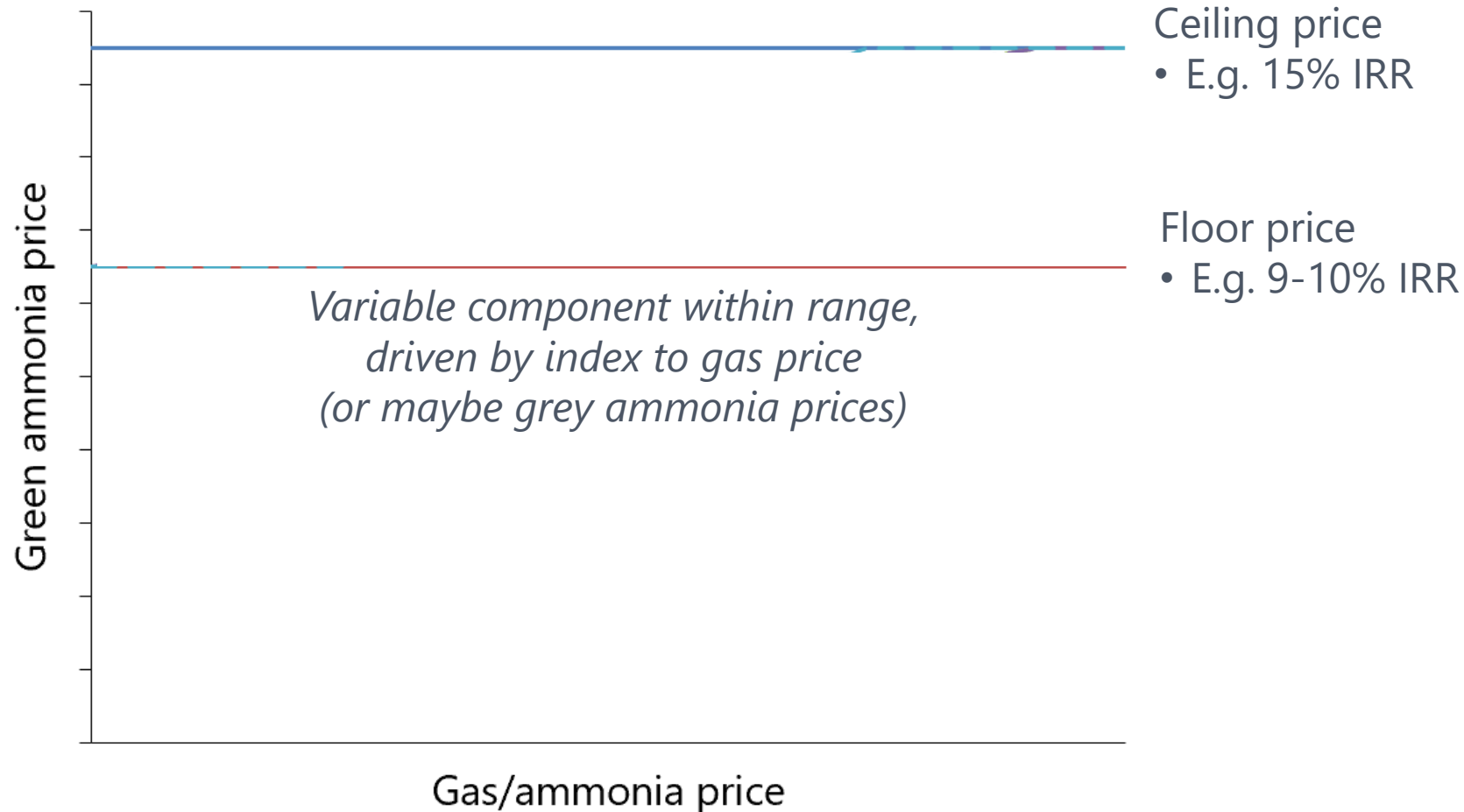
Source: Argus Consulting

2

CFD covers differential between “strike price” and “reference price”



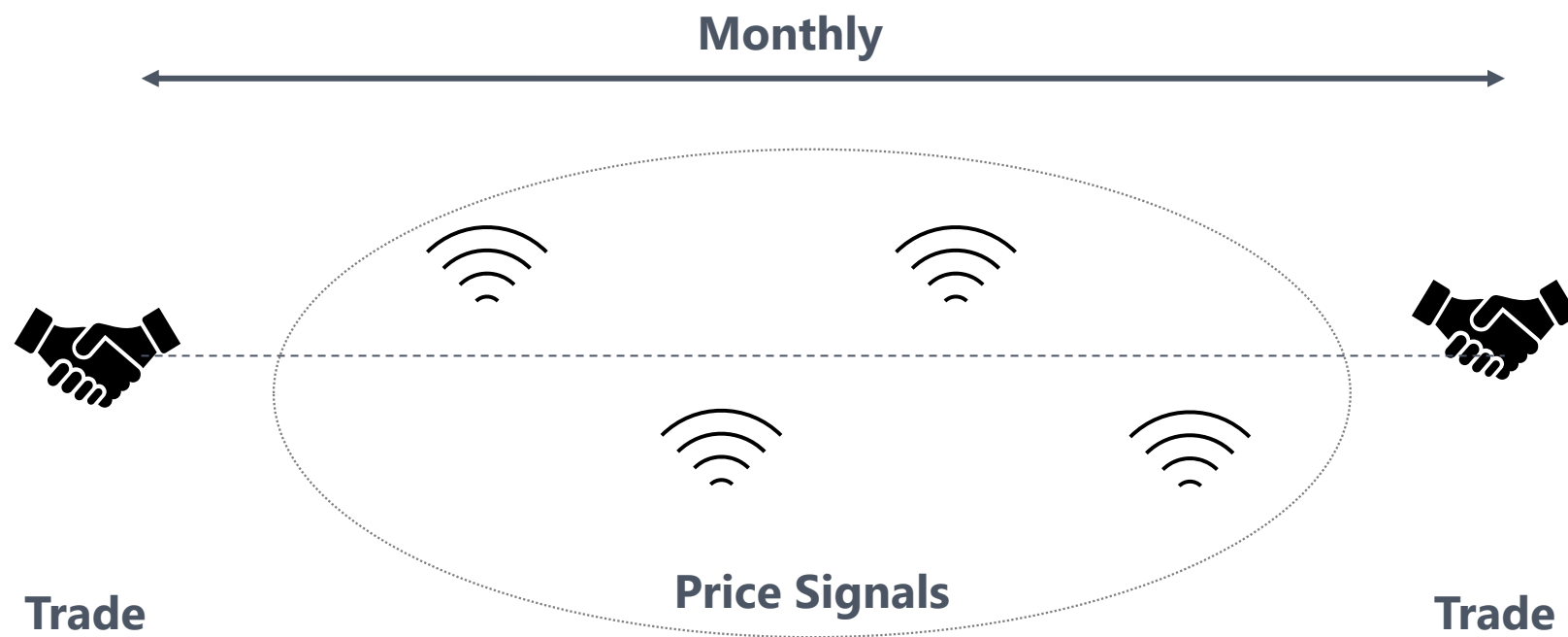
Floor/ceiling mechanism protects both parties from extreme prices



In the short-term, market participants could negotiate a floor/ceiling contract to navigate price uncertainty based on mutually acceptable IRR range

- It is common for contracts to operate on a floor or ceiling basis, even in well established commodities
- The price would vary based on gas price as buyer concern is primarily exposure to gas market volatility

Price index anchored by occasional trades + regular price signals



Index Requirements

- ✓ Buying Spot
- ✓ ~1 trade per month
- ✓ Bid + offer ideas

Drivers

- ✓ Spot volumes
- ✓ Sophisticated market
- ✓ Risk management

Agenda



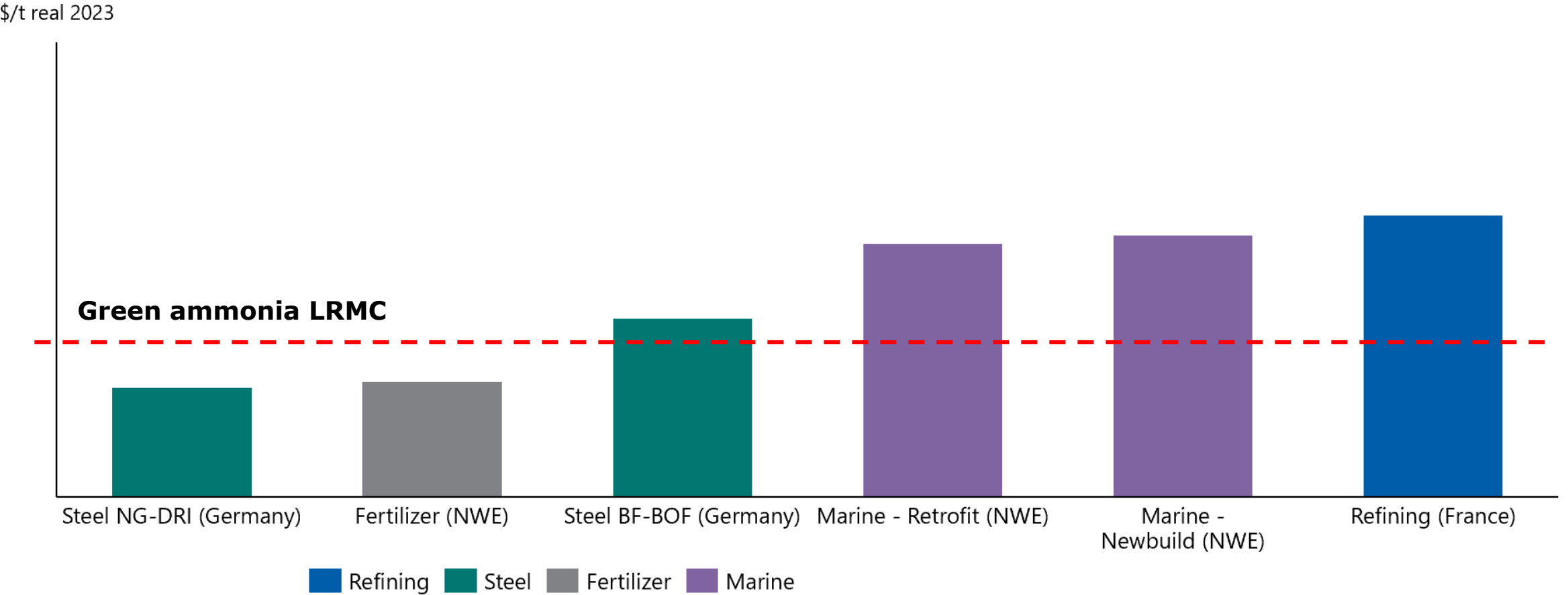
15 mins

Grey and clean ammonia – pricing mechanisms

Willingness to pay snapshot

Cost not expected to be major barrier to offtake in Europe

2030 breakeven price (BEP) of green ammonia



Source: Argus Consulting

Other factors mitigate against offtake decisions

Factors affecting willingness to pay by end use

Sector	ETS	Mandate		Offtakes	Technology readiness	Hydrogen/ Ammonia Alternatives	Price Sensitivity To Cost Of Hydrogen	Demand Fundamentals
		Target	Incentive/Penalty					
Refining								
Marine								
Steel								
Fertilizer								

Source: Argus Consulting

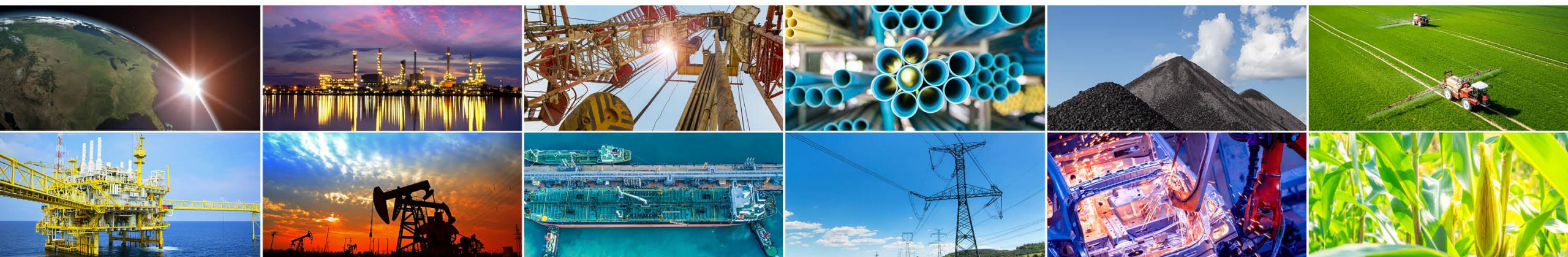


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Thank You!

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