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Soda Ash & Bicar Webinar

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February 27, 2023



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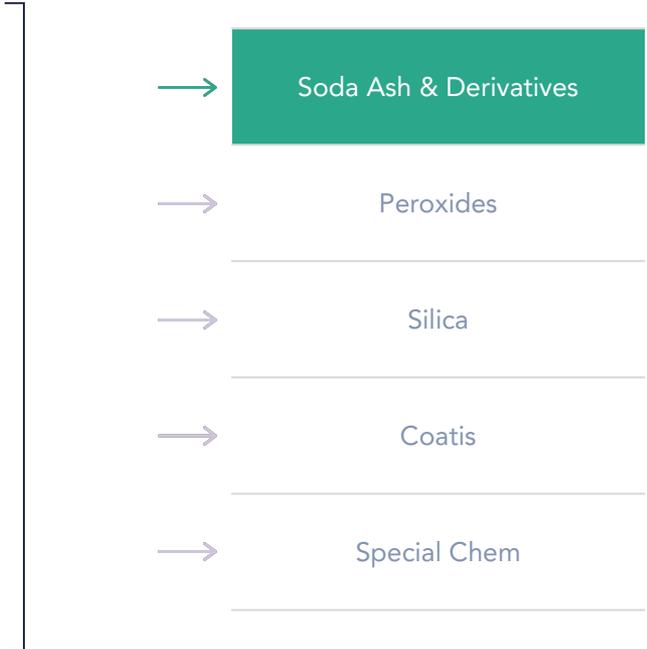


With
you today

Essential chemicals company with strong cost and cash leadership enabling further growth



EssentialCo
.....
€5.5 bn
2022 Net sales



Investments support the future company's growth and sustainability ambitions



Soda Ash & Derivatives business key takeaways



Track record of strong & resilient cash generation, margins and growth through the cycles



Strongly exposed to attractive and fast-growing Bicar business (growing 2x faster than Soda Ash)



Global Leader with world-class assets for natural and synthetic Soda Ash production



Accelerating the energy transition to be carbon neutral by 2050 at latest



Reinventing the synthetic Solvay Soda Ash production process via cutting-edge innovation



Presenter



Philippe Kehren

President, Soda Ash & Derivatives business

~€2.2bn business with strong fundamentals



SODA ASH

BICAR



~20%

Solvay sales '22E



~15%



~10%



~30%



~25%

Flat glass
(construction, solar panels, automotive)

Container glass
(food & beverages)

Water softener for detergents

Other applications
incl. sodium silicates,
lithium carbonate

Flue gas treatment,
pharma, feed, food

Soda Ash & Derivatives financials



Net Sales
2022
~€2.2bn

EBITDA CAGR
2013-2022

~5%

Cash conversion
(EBITDA-CAPEX) / EBITDA

~66%

Organic sales CAGR
2022-2027F

~2-3%
Soda Ash

~4-5%
Bicar

Strong tailwinds from sustainable megatrends



MEGATRENDS



Sustainable & Efficient Resources



Renewable Energy



Evolving Demographics

MARKET TRENDS

Construction



- Architectural and sustainability trends (e.g., increasingly glazed areas, double/ triple glazing)
- Energy efficient production of glass (soda ash enabling lower melting temperature)

Energy & electrification



- Demand for solar panels
- Lithium mining for EV batteries and storage

Food & beverages



- Demand for sustainable packaging (e.g., reusable, recycling)
- Growth in food applications, following population growth

Health & environment



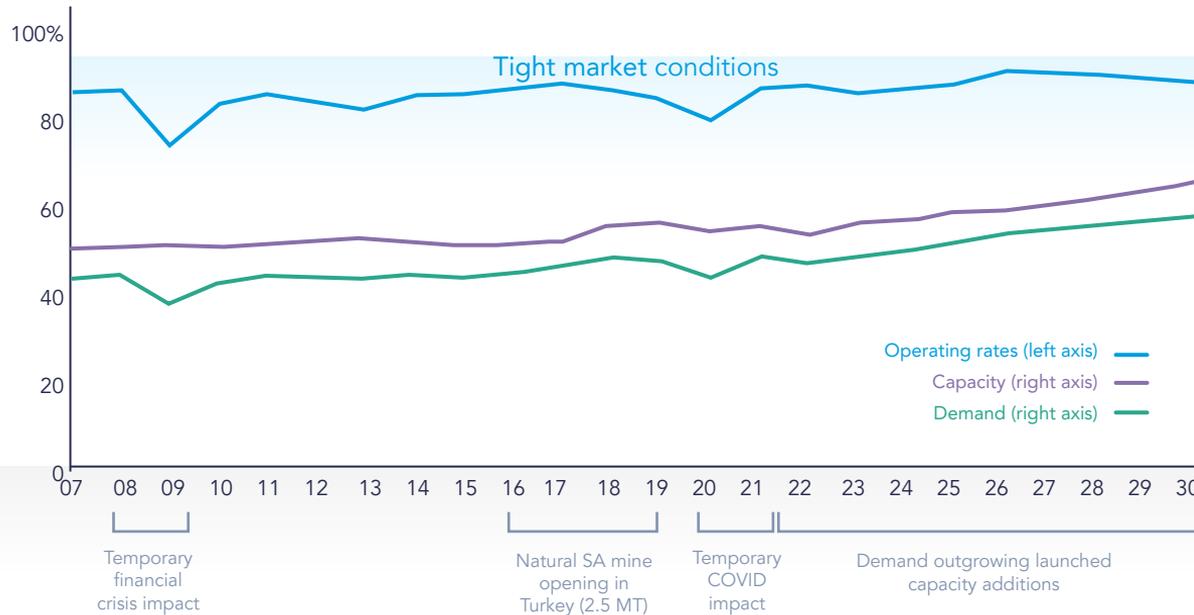
- Tighter control of air pollution
- Increasing global access to qualitative health services
- Increased focus on hygiene and product safety

Highly resilient operating rates with stable demand growth



Soda Ash global rate evolution excl. China (%)

Global Soda Ash capacity & demand excl China (Mt)



Key messages

- ✓ Resilient demand throughout cycles
- ✓ Long term stable operating rates and tight market conditions
- ✓ Forward looking market tightening as demand outgrows announced capacity additions

We are strongly exposed to the highest growing Bicar segments

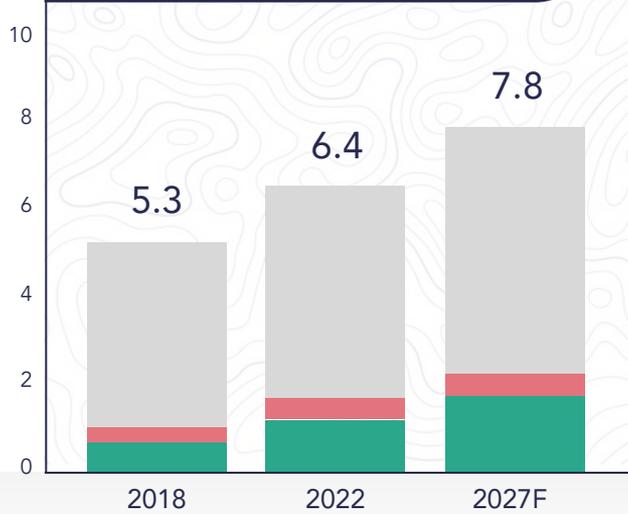
Market acceleration driven by flue gas treatment and healthcare



Flue gas treatment

Global leader, supplying one third of the flue gas treatment market

Bicar market size by end-market, incl. China (in Mt)



Healthcare

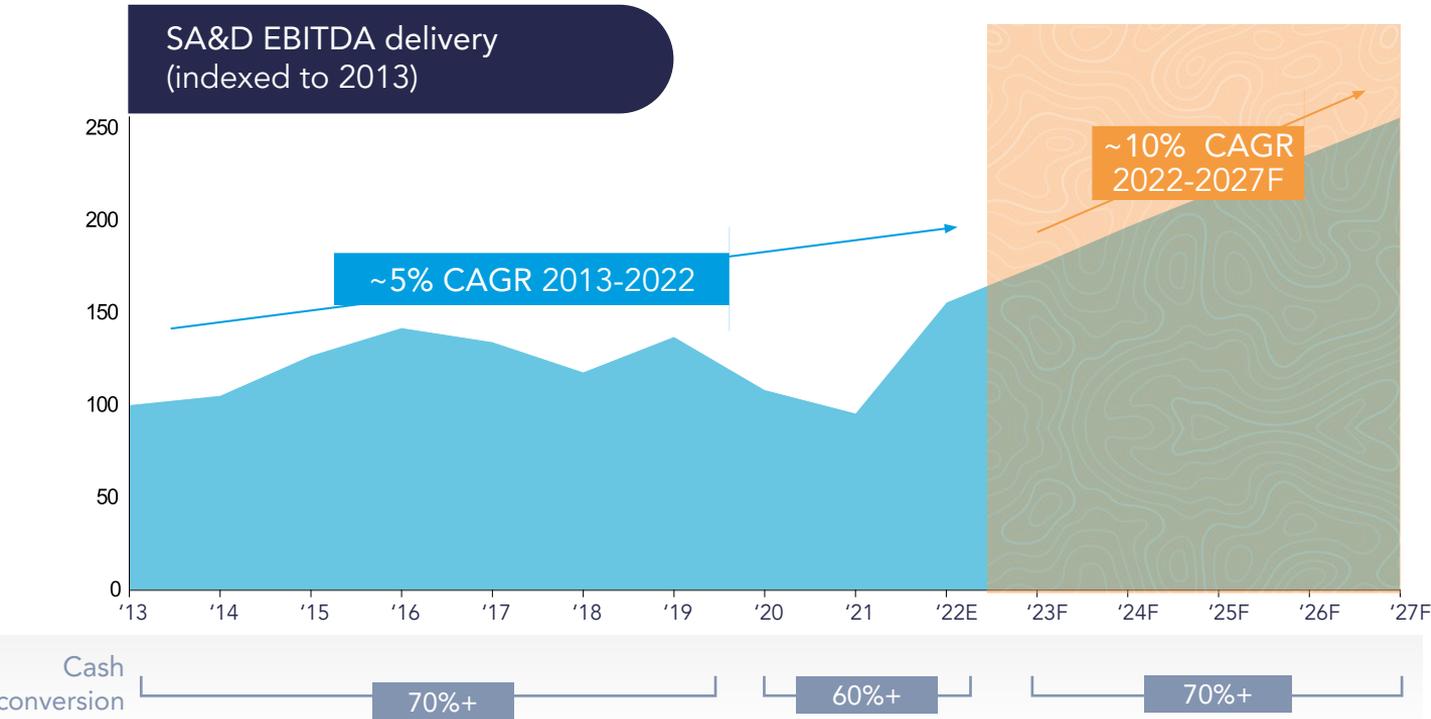
Largest supplier of pharma-grade Bicar, with 40% global market share

■ Flue gas treatment ■ Healthcare ■ Others

Source: Solvay internal data based on public information



EBITDA growth poised to double over the next five years



Key drivers of EBITDA growth

- ✓ Market tightening supporting pricing
- ✓ Additional capacity investments for natural Soda Ash in US and Bicar
- ✓ Continued excellence and cost reduction initiatives

Leadership position founded on scale, technology, cost, and unique position across the value chain



SCALE LEADERSHIP
with balanced portfolio and ability to supply everywhere in the world



COST LEADERSHIP
with combination of world-class assets and highly competitive regional assets



Down- and upstream
VALUE CHAIN INTEGRATION
into raw materials and highly attractive bicar

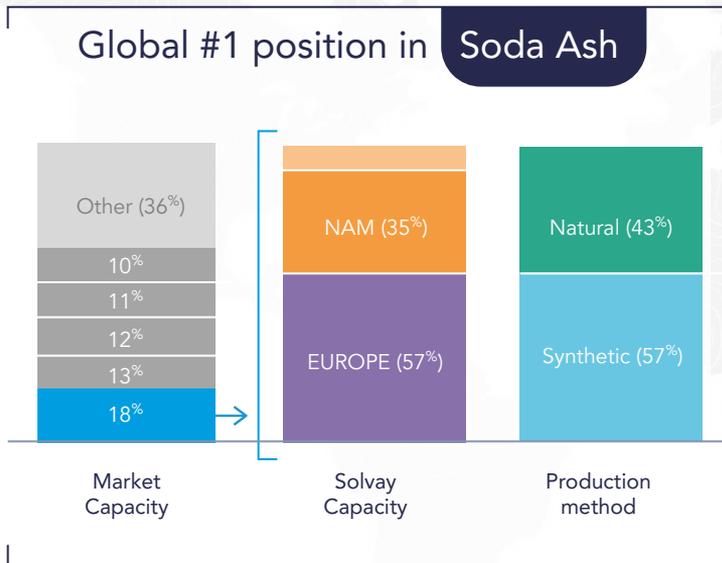


TECHNOLOGY LEADERSHIP with product and process innovation supported by 400+ active patents

We are global market leader in both Soda Ash and Bicar



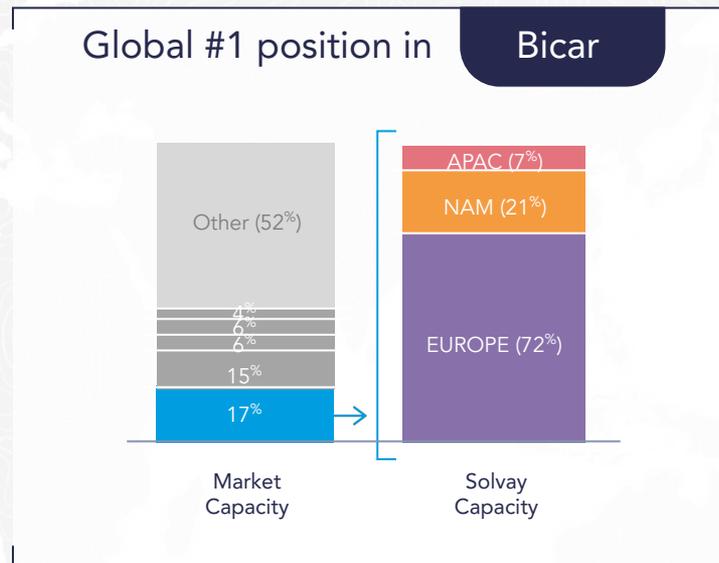
Global #1 position in Soda Ash



Soda Ash global capacity (excl. China) in kt (2022)

■ Solvay
 ■ Top 5 global competitors
 ■ Others
 ■ Incoming capacity additions in the U.S.

Global #1 position in Bicar



Bicar global capacity (incl. China) in kt (2022)

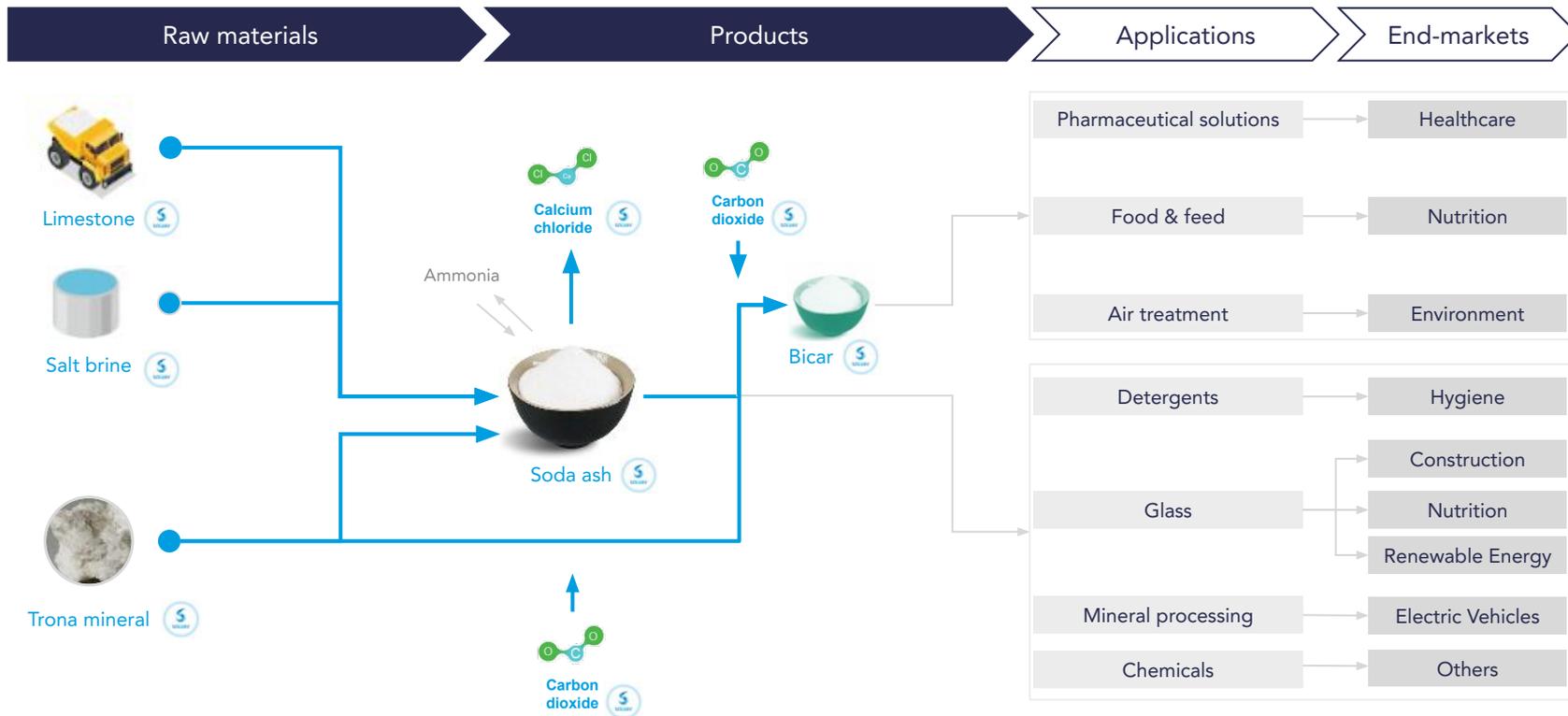
■ Solvay
 ■ Top 5 global competitors
 ■ Others

Down- and upstream integration into raw materials and bicar



Synthetic Soda Ash process (~55%)

Natural Soda Ash process (~45%)

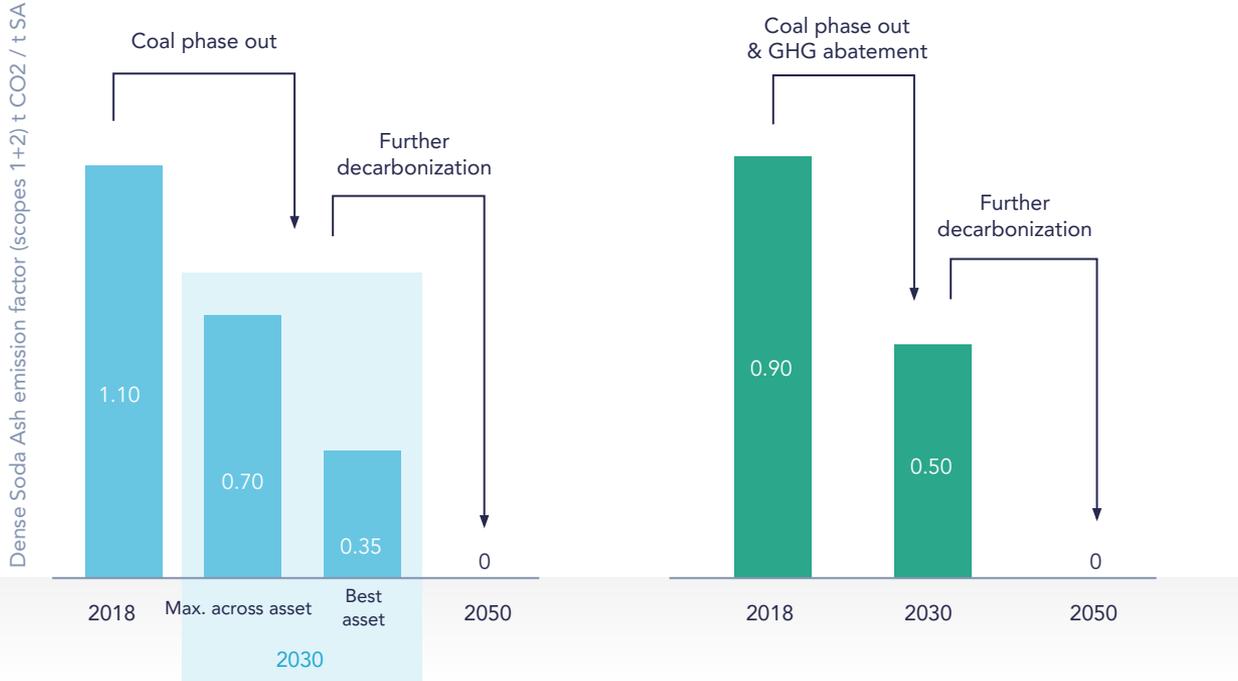


Clear path towards carbon neutrality by 2050



Synthetic

Natural



Key messages

✓ 30% emission reduction committed and planned by 2030 through full coal phase out

✓ Path to full carbon neutrality by 2050

- Elimination of process emissions (30% reduction)
- Full shift towards decarbonized energy (40% reduction)



We are delivering on our energy transition commitments

Key messages



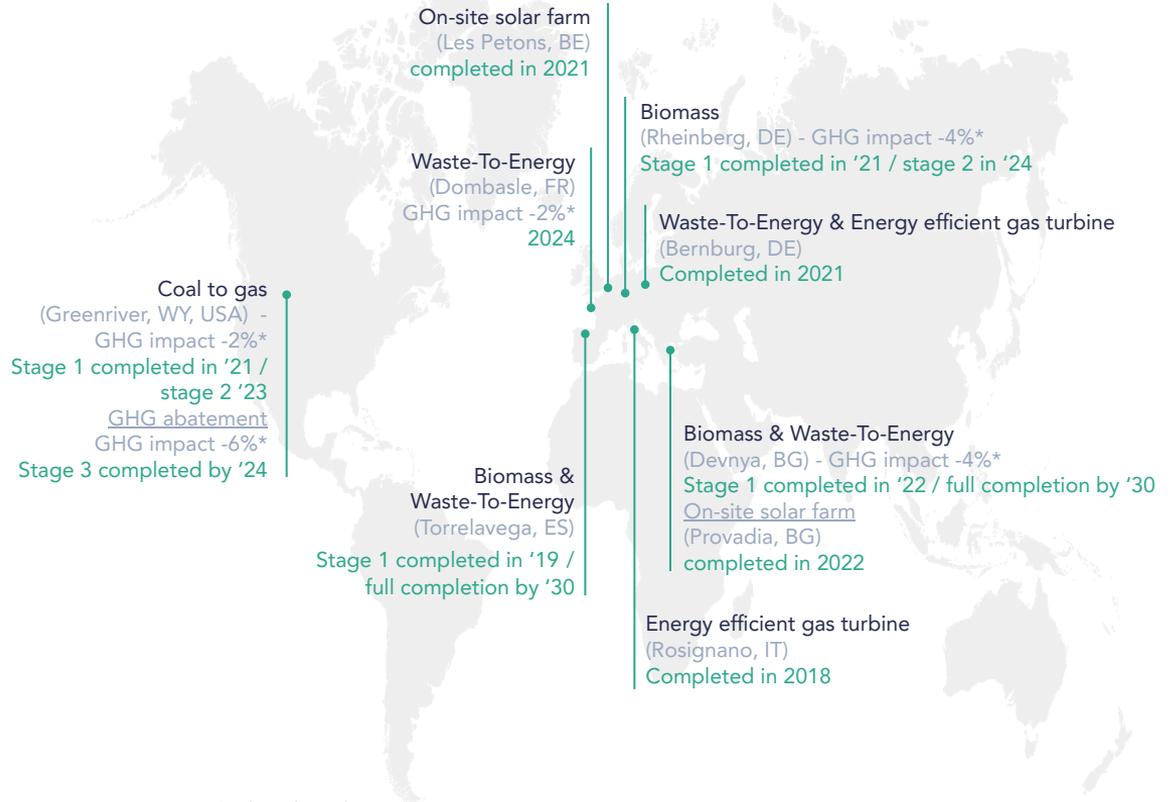
Achieved 5% emission reductions via initiatives in Rheinberg, Devnya and Green River



Clear plan to reduce emissions another 15% by 2025 and another 10% by 2030



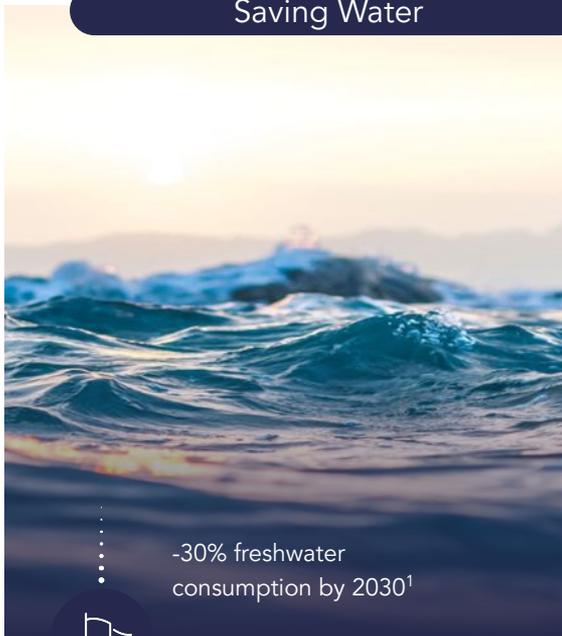
Reduction initiatives are selected, prioritized and structured so that returns always exceed WACC



Taking action to improve environmental impact beyond CO₂ emissions



Saving Water



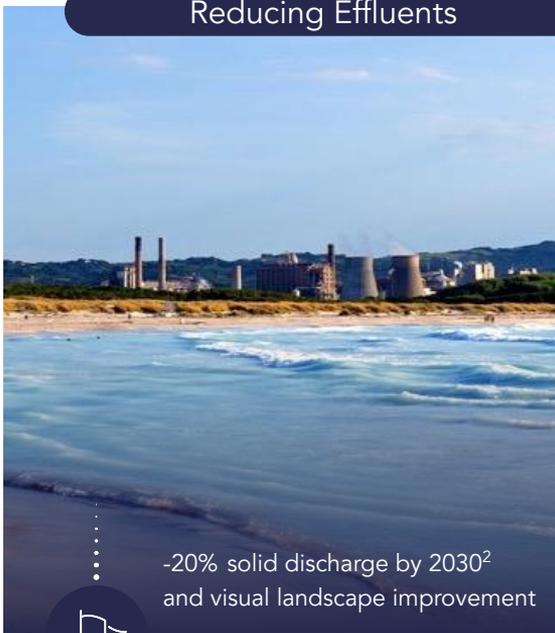
-30% freshwater consumption by 2030¹



Devnya, Bulgaria (-24%)
Dombasle, France (-28%)

¹ vs. 2018 baseline

Reducing Effluents



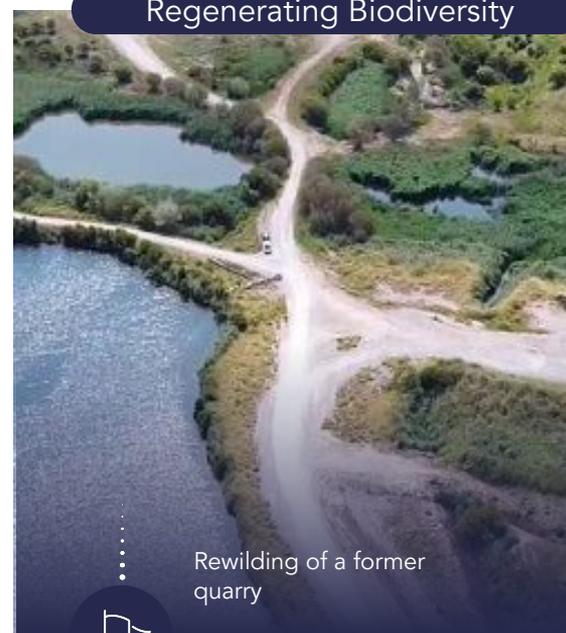
-20% solid discharge by 2030²
and visual landscape improvement



Rosignano, Italy

² -40% ambition in 2040 vs. Maximum volume set by IPPC permit

Regenerating Biodiversity

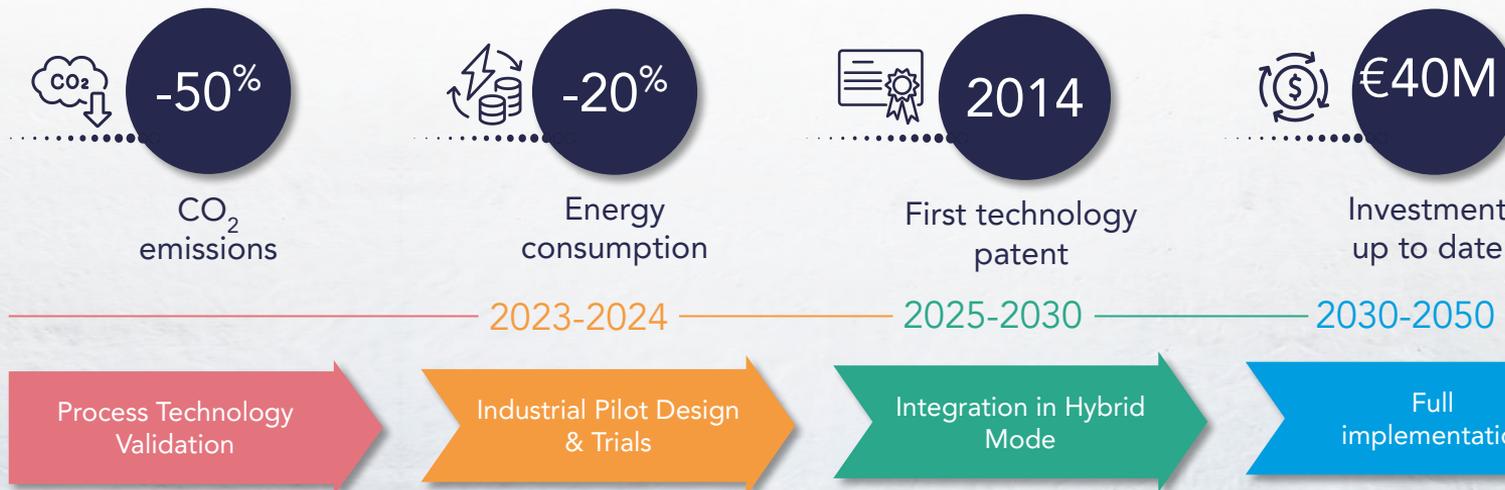


Rewilding of a former quarry



Quarry Cuchia, Spain
(Torrelavega)

Our breakthrough innovation for a more sustainable process

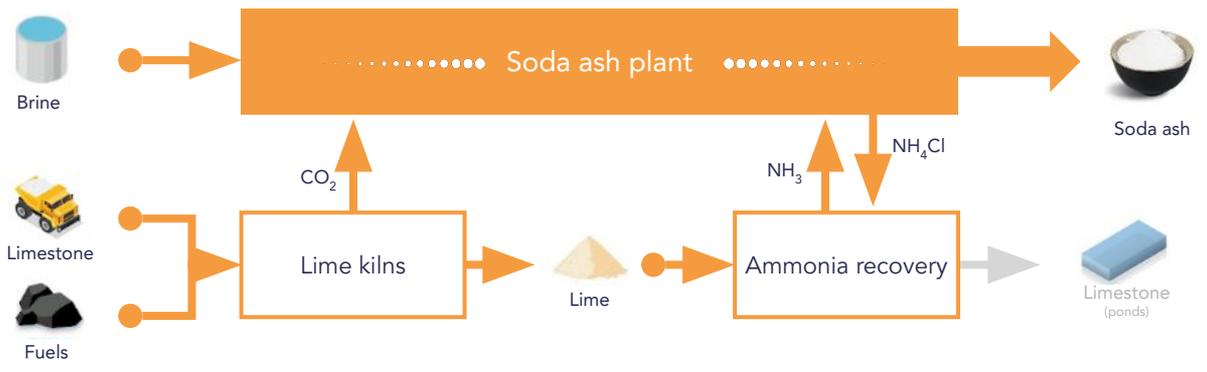


We are reinventing the Solvay process

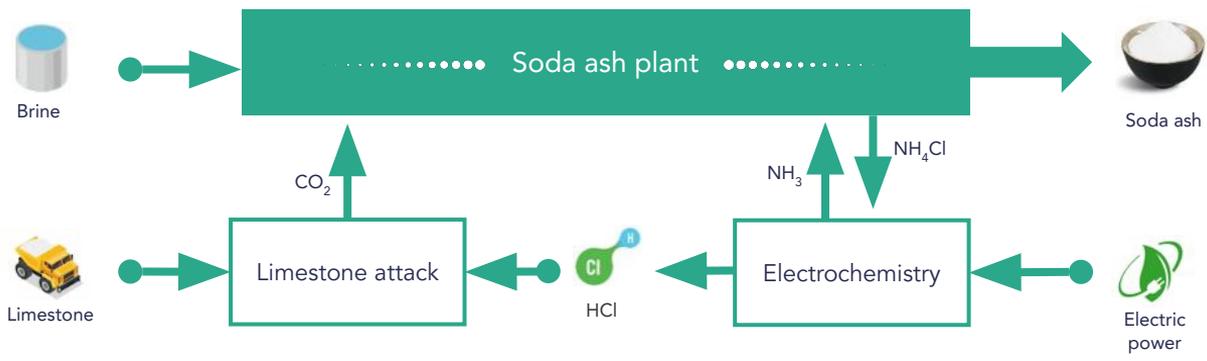


Yield improvement leading to

Current Solvay process



Electrified Soda Ash process



- Brine:** -20% brine required
- Limestone:** -30% limestone required
- Limestone (ponds):** Complete removal of limestone residues
- Process Fuels:** -100% process related CO_2 emissions
- Energy:** -20% energy consumption
- Emissions:** -50% CO_2 emissions

Soda Ash & Bicar key takeaways



Track record of strong & resilient cash generation, margins and growth through the cycles

- Resilient demand and operating rate across cycles
- Market further tightening going forward
- Track record of ~5% p.a. EBITDA growth since 2013
- EBITDA growth expected to double to ~10% p.a. over next 5 years



Strongly exposed to attractive and fast-growing Bicar business (growing 2x faster than Soda Ash)

- Leader in Bicar business
- Bicar growing 2x as fast as Soda Ash business
- Strongly exposed to high growth areas flue gas treatment and healthcare



Global Leader with world-class assets for natural and synthetic Soda Ash production

- Global leader with ~20% market share, and expanding
- Globally competitive world-class assets, combined with competitive regional assets
- Exposure to both natural (US) and synthetic (EU) production



Accelerating the energy transition to be carbon neutral by 2050 at latest

- Clear path towards carbon neutrality by 2050 with 30% reduction by 2030
- Well underway to phase out coal and shift to renewables, 5% emission reduction already achieved
- Value creating ROI on projects



Reinventing the synthetic Solvay Soda Ash production process via cutting-edge innovation

- Reinvention of Solvay process through electrification
- Technology change to emit 50% less carbon, enabling carbon neutrality in our production process
- Significant processing cost reduction



Q&A session



Ilham Kadri

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Alexandre Blum

Finance Director, Soda Ash & Derivatives

Safe harbor

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Progress beyond