

# SABIC INVESTOR DAY 2022

31 OCTOBER 2022

# CEO – STRATEGIC FOCUS

# OUR PURPOSE



### **OUR PURPOSE**

# WE ARE CREATING CHEMISTRY THAT MATTHERS™ FOR A SUSTAINABLE WORLD



#### TO BE THE PREFERRED WORLD LEADER IN CHEMICALS



#### **PEOPLE**

We engage, collaborate, and inspire our people and the communities in which we operate to create safe and shared sustainable impact

BE THE IMPACT



#### **PLANET**

We contribute to the global drive to safeguard the planet for present and future generations

PART OF THE SOLUTION



### **PROSPERITY**

We aim for sustainable profitability, resilient growth, and creation of competitive edge

POTENTIAL AND BEYOND

# SABIC INVESTOR DAY 2022

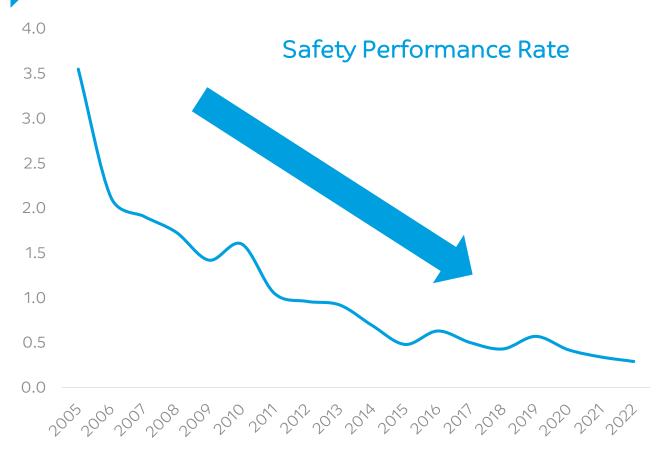
# EHSS



# ENVIRONMENT, HEALTH, SAFETY AND SECURITY



# SABIC IS COMMITTED TO SAFETY

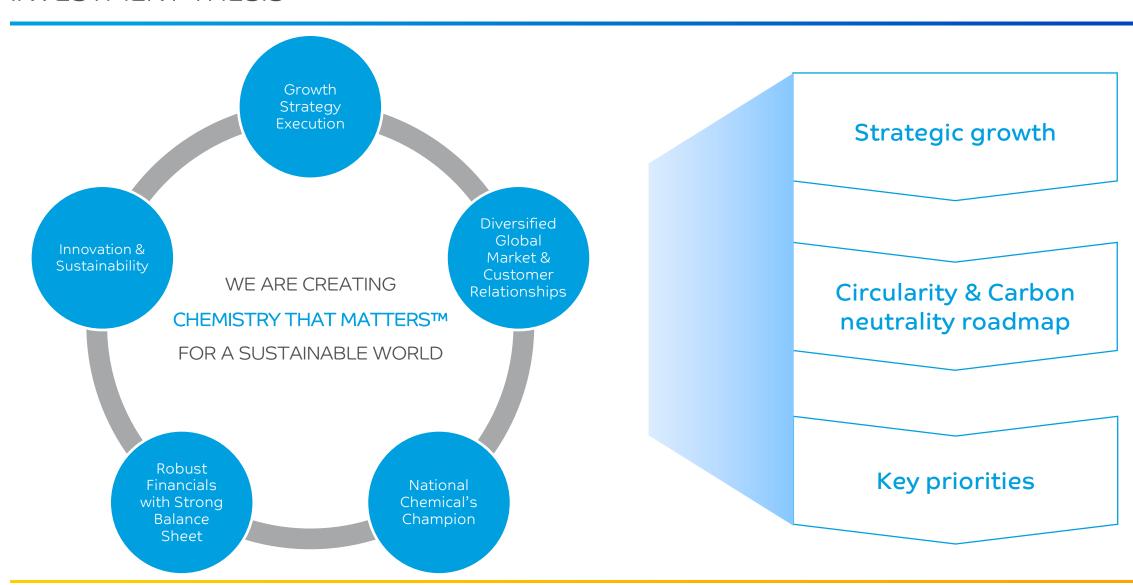




# INVESTMENT THESIS AND HOW DO WE DELIVER A RETURN



# INVESTMENT THESIS



# STRATEGIC GROWTH



# CHEMICAL INDUSTRY BUSINESS ENVIRONMENT

#### **SHORT-TERM CHALLENGES**

Inflation and monetary tightening

Economic growth slowdown

Volatile oil & gas prices

Lower demand and prices

Decreasing margins

#### **LONGER-TERM MEGATRENDS**

1

Shifting Globalization Impacting scale & scope of regions and markets 2

Intervening Policy Impacting the way of doing business 3

Disrupting Technologies
Impacting value chains via
a set of irresistible forces



**Re-Globalization** 

China Industry

**Transformation** 



Sustainability



Digitalization



**Energy Transition** 



**New Mobility** 

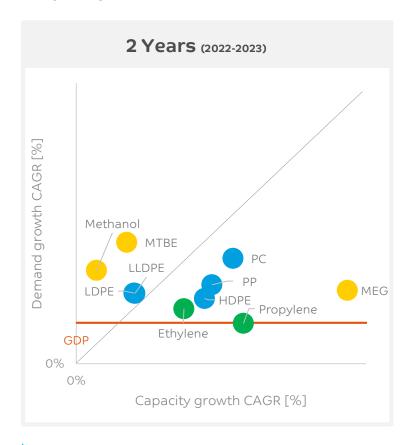
#### Implication

Shifts in Energy Value Chain + Shifts in Regions
Positioning including KSA

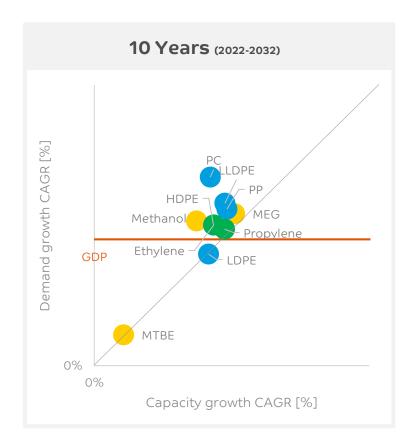


### SUPPLY DEMAND SUMMARY OF MAIN PETROCHEMICAL PRODUCTS

#### Capacity vs Demand









Capacity growth still exceeding demand in certain products in 2023, but more favourable supply / demand dynamics expected thereafter in view of announced capacity additions



### SABIC STRATEGY

#### To Be the Preferred World Leader in Chemicals

### **Focused Chemical Sector Strategic Plays**

#### **PETROCHEMICALS**



Fully Integrated Global Chemicals & Polymers Company and National Champion

#### **AGRINUTRIENTS**



Global Agri-Nutrients Company with Selective Downstream Plays and National Champion

#### **SPECIALTIES**



Leading Global Company for Multiple Specialty Chemical Spaces and National Champion

#### **METALS**

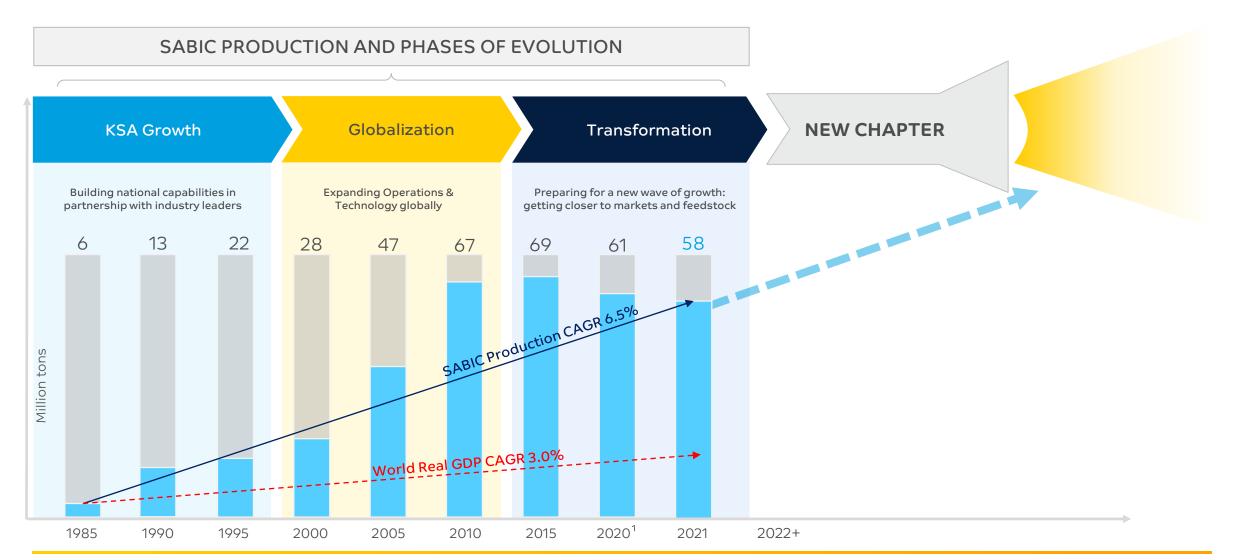


Local and Regional Leader in Steel Industry

#### SUSTAINABILITY



# OPENING A NEW CHAPTER IN OUR EVOLUTION



<sup>&</sup>lt;sup>1</sup> Restated figures due to change in accounting treatment as announced in Q2 2020.



# WHAT'S NEXT



2022

# CARBON NEUTRALITY ROADMAP



### SABIC'S CARBON NEUTRALITY ROADMAP OVERVIEW UNTIL 2050

# CARBON NEUTRALITY by 2050

in line with the Paris Agreement goals

# 20% REDUCTION by 2030

Interim Scope 1&2 GHG emissions target compared to 2018, including targeted growth

#### SCOPE 3

We aim to reduce our indirect SCOPE 3 GHG emissions along the value chain in strong collaboration with our partners

#### WHAT ARE WE CONSIDERING IN OUR 2050 CARBON NEUTRALITY ROADMAP?



#### RELIABILITY, ENERGY EFFICIENCY & IMPROVEMENTS

- Technology improvement
- Energy efficiency
- Asset improvement & reliability
- Asset rationalization



# RENEWABLE ENERGY

- Increase renewable energy share in imported energy mix
- Approved strategy of facilitating 4 GW by 2025 and 12 GW installed capacity by 2030



#### **ELECTRIFICATIONS**

- Using renewable energy
- Electrification of different steam driven rotating equipment
- Electric cracking furnaces for olefins and aromatic based products



#### **CARBON CAPTURE**

- High concentration streams potential for utilization
- CCUS collaborations



#### **GREEN/BLUE H2**

 Commercially available solutions and under early R&D

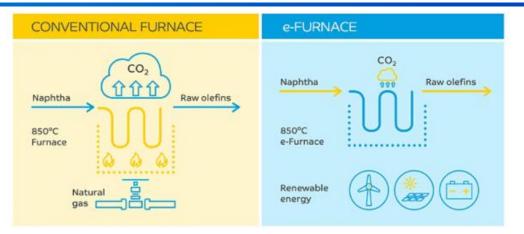
# ACTIVELY WORKING IN LONG TERM SOLUTIONS: ELECTRICALLY HEATED CRACKING FURNACE



- SABIC, BASF and Linde are jointly developing the e-furnace under a collaboration agreement established in 2021
- Enable reliable upscaling
- Ready for start-up in 2023



1 September 2022 - CEOs of collaboration partners opening the site for building the demonstration plant

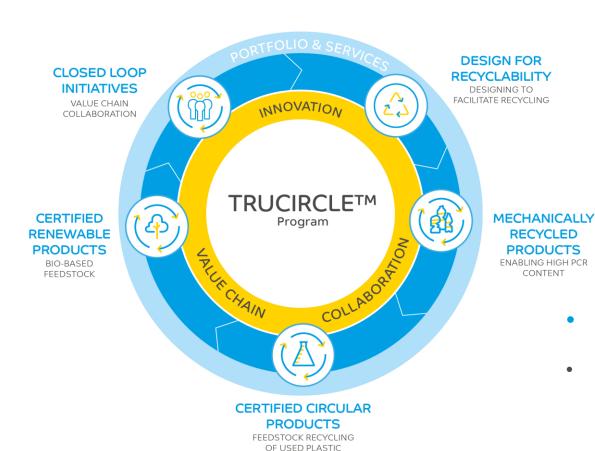




3D graphic of world's first demonstration plant for large scale electrically heated steam cracker furnaces in Ludwigshafen



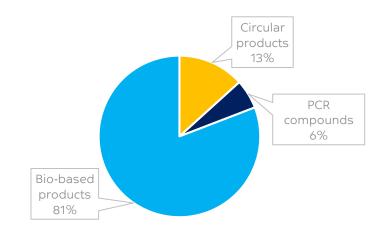
# OUR TRUCIRCLE<sup>TM</sup> PORTFOLIO



**OUR TARGET** 

200 KT circular and bio-based products in 2025

- 16 KT in 2021
- Realized 39 KT
   since the first sale



Overall positive impact on collateral sales and customer experience

PCR: Post consumer recycled content.

# KEY PRIORITIES



### 2022 KEY PRIORITIES



Strategy

Drive profitable growth Deliver on synergy benefits with Saudi Aramco



Accelerate
Sustainability &
Innovation

Carbon neutrality
Circular commitments
ESG reporting



Financial Excellence

Stable to growing dividends
Maintain strong standalone credit rating



Operational Resilience

Advance competitiveness Strengthen operating model



Future of Work

Employee well-being Winning & agile culture

# CFO – PERFORMANCE UPDATE

# FINANCIAL PERFORMANCE



# FINANCIAL PERFORMANCE



# HEALTHY FINANCIAL PERFORMANCE

(USD billion)	Q3 22	Q2 22	% Var	Q3 21	% Var	9M 22	9M 21	% Var
Revenue	12.50	14.93	-16%	11.65	7%	41.46	32.97	26%
EBITDA	1.81	3.54	-49%	2.99	-39%	8.76	9.39	-7%
Income from Operations	0.87	2.61	-67%	2.05	-57%	5.97	6.60	-9%
Net Income	0.49	2.11	-77%	1.49	-67%	4.33	4.83	-10%
Free Cash Flow <sup>1</sup>	1.82	1.62	13%	2.16	-16%	4.99	4.81	4%

#### SALES DRIVERS

	Volumes	Prices <sup>2</sup>
Q3 22 vs. Q2 22 (QOQ)	<b>↓</b> 1%	<b>↓</b> 15%
Q3 22 vs. Q3 21 (YOY)	<b>1</b> 1%	4%
9M 22 vs. 9M 21	<b>↑</b> 11%	<b>1</b> 5%

#### **KEY RATIOS**

	Q3 22	Q2 22	Q3 21	9M 22	9M 21
EBITDA Margin	14%	24%	26%	21%	28%
Net Debt / EBITDA	-0.50	-0.16	-0.09	-0.31	-0.08



# THIRD QUARTER OPERATING SEGMENT PERFORMANCE







# Petrochemicals & Specialties



#### **Agri-Nutrients**

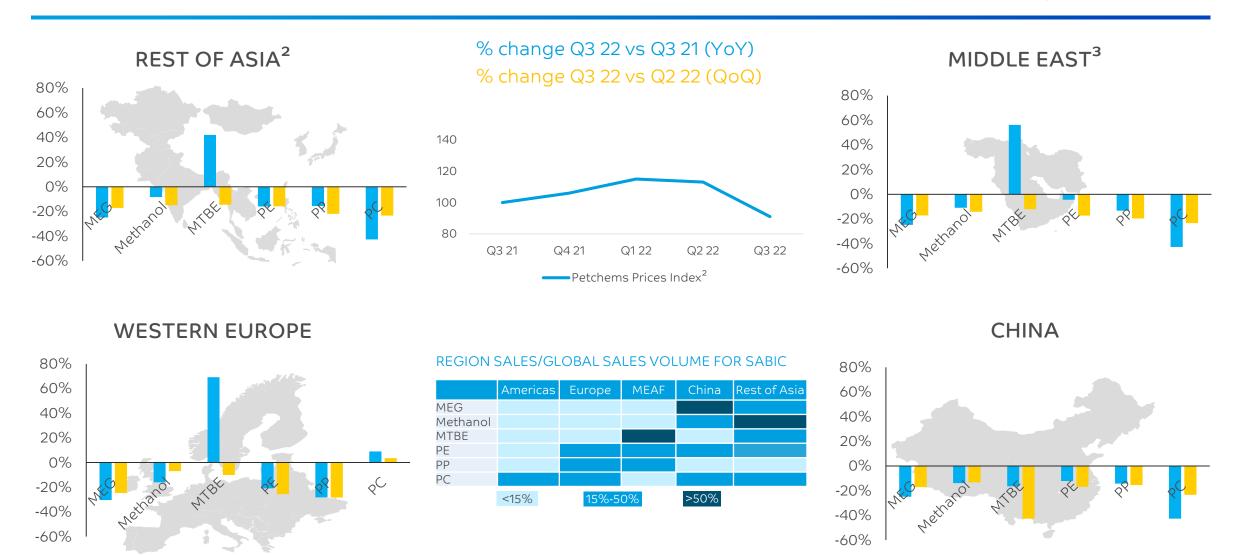


#### Hadeed





# MAJOR PETROCHEMICALS PRICES<sup>1</sup> CHANGES ACROSS THE KEY REGIONS IN Q3 22

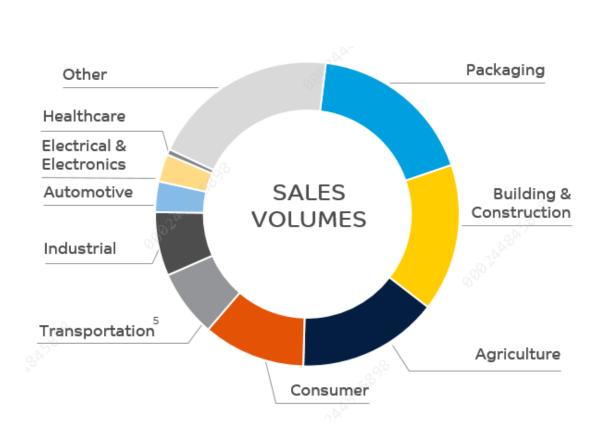


<sup>&</sup>lt;sup>1</sup>Prices Reference CFR/ FOB/CIF from ICIS, IHS and S&P Global Platts ©2022 by S&P Global Inc. and Wood Mackenzie. MEG: Mono Ethylene Glycol; MTBE: Methyl Tertiary Butyl Ether; PE: Polyethylene; PP: Polyethylen

# OUTLOOK



# SABIC: KEY END INDUSTRY<sup>1</sup> AND TRENDS



END INDUS	TRY	Q3 DEMAND TREND <sup>2</sup> (YOY)	Q3 DEMAND TREND <sup>3</sup> (QOQ)	Q4 DEMAND TREND <sup>4</sup> (QOQ)
Packaging				
Building & C	Construction			
Agriculture				
Consumer				
Transportat	tion <sup>5</sup>			
Industrial				
Automotive				
Electrical &	Electronics			
Healthcare				



# THIRD QUARTER SUMMARY AND OUTLOOK 2022

#### **SUMMARY**



0.16 Earnings per share



1.8 Free cash



A+/A1
Strong standalone
credit ratings<sup>2</sup>

#### FINANCIAL PERFORMANCE

12.5
Revenue

1.8 EBITDA 0.5 Net Income

(Amounts in USD billion)

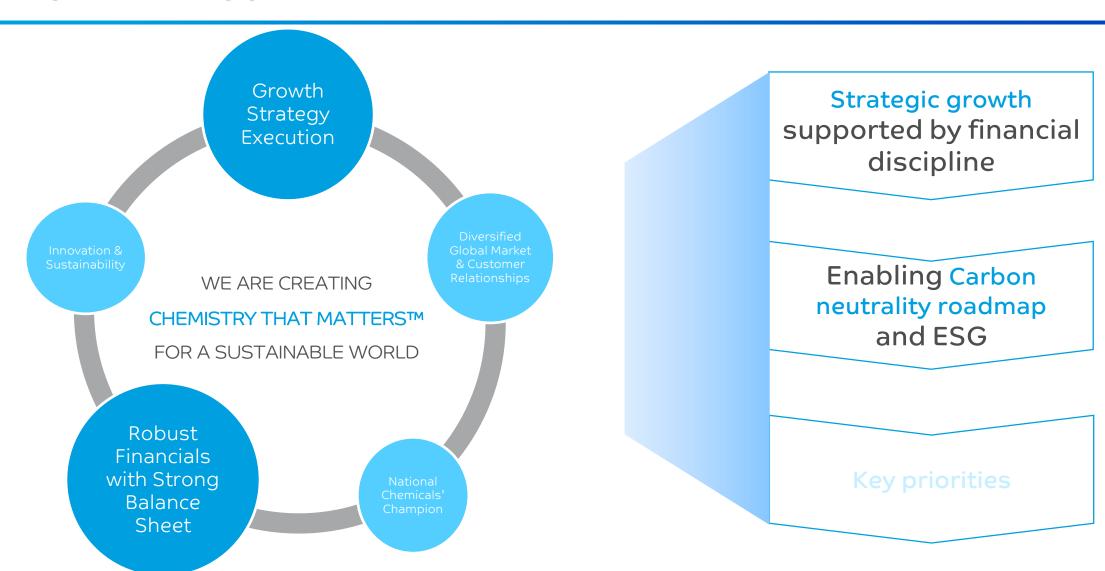
#### **OUTLOOK 2022**

	Current	Previous				
Global GDP Growth Rate <sup>3</sup>	2.5% - 2.8% (YoY)	2.5% - 2.8% (YoY)				
SABIC – FINANCIALS						
Sales Volume	Higher (YoY)	Higher (YoY)				
EBITDA	Lower (YoY)	Flat (YoY)				
CAPEX	Higher (YoY)	Higher (YoY)				

SABIC – NON FINANCIALS						
ESG <sup>4</sup>	Roadma	p to 2	2050 v	vith an int	Neutrality erim target eline 2018)	

### سابک وزداه

# INVESTMENT THESIS





### CAPITAL ALLOCATION FRAMEWORK

Investment Scenarios

**Business Continuity** 

Sustainability

Strategic Growth

Cash Flow Forecasts 10 Year Oil Price Scenario, Economic Growth

Historical Volatility

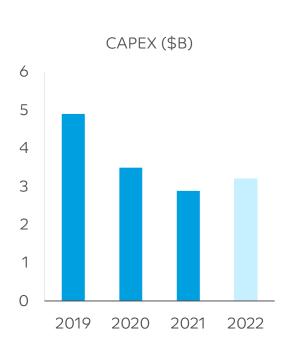
Corporate Programs and Initiatives

Affordability

Stable to Growing Dividend Payout

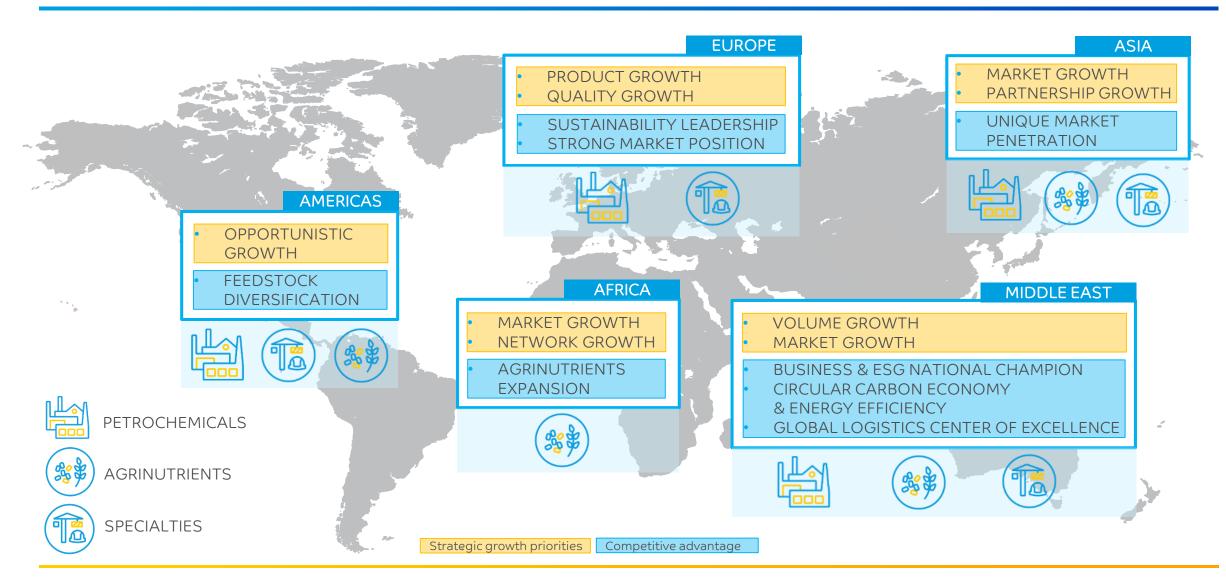
Priority to CAPEX on EHSS & R&M

Strong Balance Sheet and Credit Rating A+/A





### STRATEGIC GROWTH PRIORITIES & COMPETITIVE ADVANTAGES

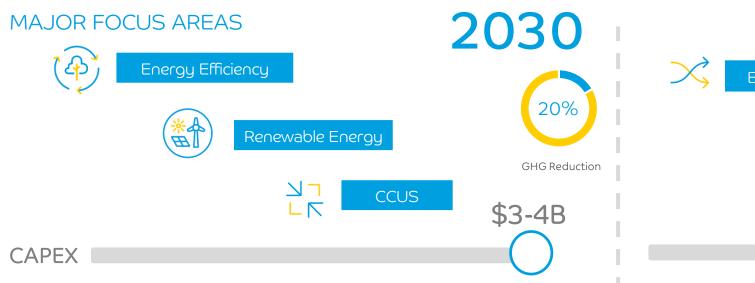


# CARBON NEUTRALITY & ESG



**NEUTRAL** 

### CARBON NEUTRALITY JOURNEY & PHASE STRATEGY



- Limited capex
- Mostly replacing fossil to renewables...
- ...mainly through power purchase agreements (PPA)
- Existing technologies or high readiness



- Large capex requirements
- Technologies currently being under demonstration
- Actively participating in opportunities on Electrification and Hydrogen
- Industry strategic partnership



Paradigm shift to transform our business and help address urgent global challenges through efficient carbon management and partnership across the industry.

Baseline 2018 33



# SABIC'S CARBON ROADMAP OVERVIEW UNTIL 2030

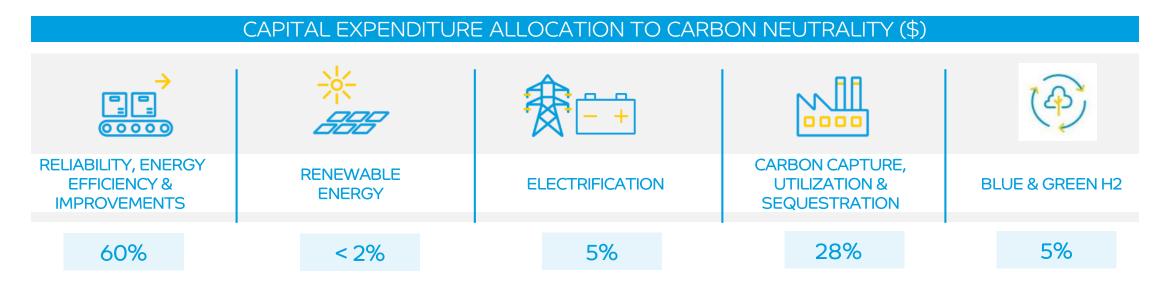
# 20% REDUCTION by 2030

Interim Scope 1&2 GHG emissions target compared to 2018, including targeted growth

(direct) Capex \$3-4B requirements 2030

#### MAIN STRATEGIC ACTIONS

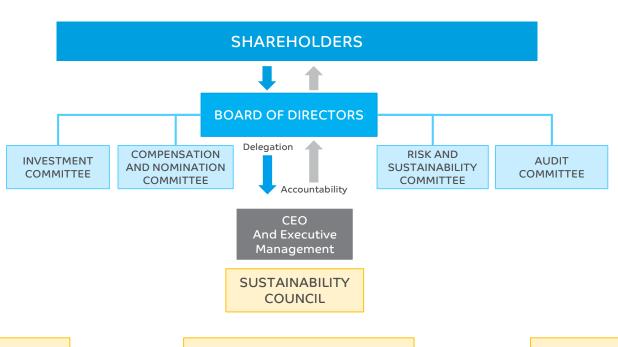
- Continuing energy efficiency journey to achieve SEEC\* second cycle target and beyond
- Capitalizing on KSA 2030 energy mix target and renewable energy projects (PPA)
- Capturing CO<sub>2</sub> through KSA CCUS hub





### OUR ESG AND SUSTAINABILITY GOVERNANCE

"We hear ESG all the time. But if you want to be effective at the "S" and the "E", you have to have the "G", the governance that structured that. Everything flows downstream from Governance."



ENERGY EFFICIENCY & CARBON MANAGEMENT (EECM)
STEERING COMMITTEE

Dedicated cross-functional team overseeing the carbon neutrality execution

ESG REPORTING STEERING COMMITTEE

Executive Committee overseeing ESG reporting roadmap implementation

SUSTAINABILITY ORGANIZATION

Cross-organization dedicated to implement sustainability strategy

Quote from Stephen Harper - FII 2021



### SABIC'S INTEGRATED ESG APPROACH



#### MOTIVATING FACTORS









Drive Sustainable Portfolio

#### **KEY ESG STAKEHOLDERS**





Regulatory Bodies



ที่ผู้ก็ก้ Investors



Customers and Suppliers

(Sustainability KPIs)



Reporting Frameworks and Rating Agencies

#### Internal



SABIC Board and **Executive Committee** 



**ESG** Executive Steering Committee



ESG Projects & Programs



**ESG Practitioners** 



# HOW ARE WE DEVELOPING OUR INTERNAL ESG ECOSYSTEM



## **ESG DRIVERS**

Integrate ESG into strategic and business planning

Embed sustainable investments discipline

Attract & retain employees (inclusion & diversity)

ESG disclosure compliance & transparency

Improve ESG disclosure efficiency

Stay competitive in the market (sustainable portfolio)

Achieve cost efficiencies



**ESG FRAMEWORK** 



### **ESG FOUNDATION PROJECTS**

Product Carbon Footprint

Product Sustainability Assessment

TCFD Assessment

Sustainable Investments

Risk Management

Monetization of ESG impacts

Bio Diversity Assessment

EU Taxonomy



#### **ESG ENABLEMENT**

ESG Frameworks and Definitions

ESG Data Automation

ESG Quality Assurance

ESG Governance & Controls

ESG Culture & Change Management



## OUR ESG EXTERNAL ACTION











RANKERS, RATERS & SCORES



**REPORTERS & FRAMEWORKS** 



CONSULTANTS







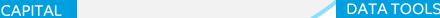
DATA **ASSURERS** 











based company



**ACADEMICS** 

& ANALYTICS











**GOVERNMENTS & REGULATIONS** 

















DIVERSITY
LEADERS

GS SUSTAIN | ESE Series



HARVARD NYU STERN Yale



top

SCIENCE International Energy Agency











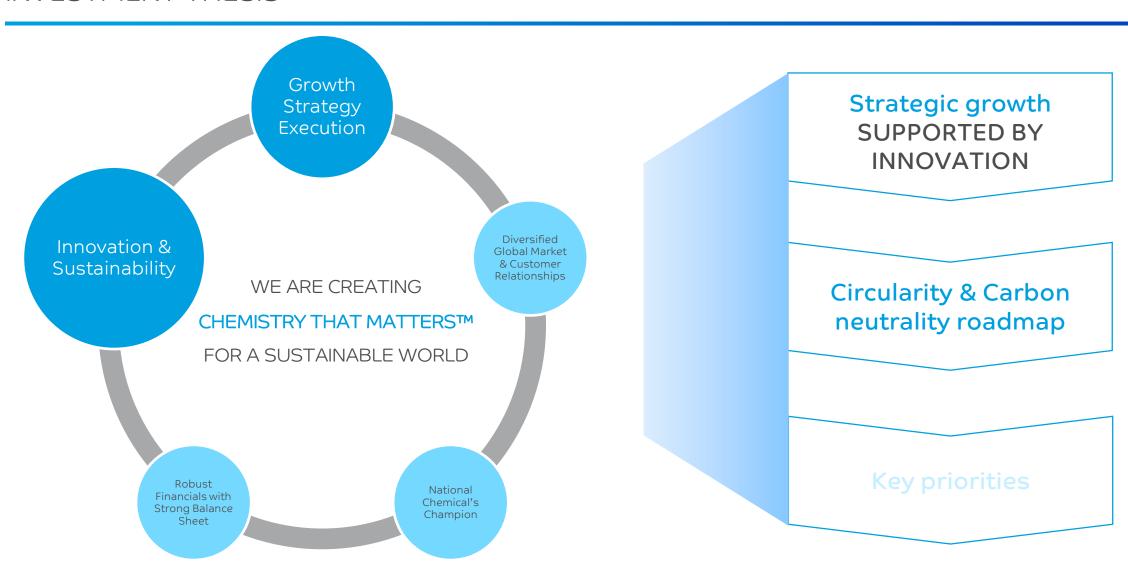




# CTO & CSO – INNOVATION & SUSTAINABILITY

# سابک خواعز

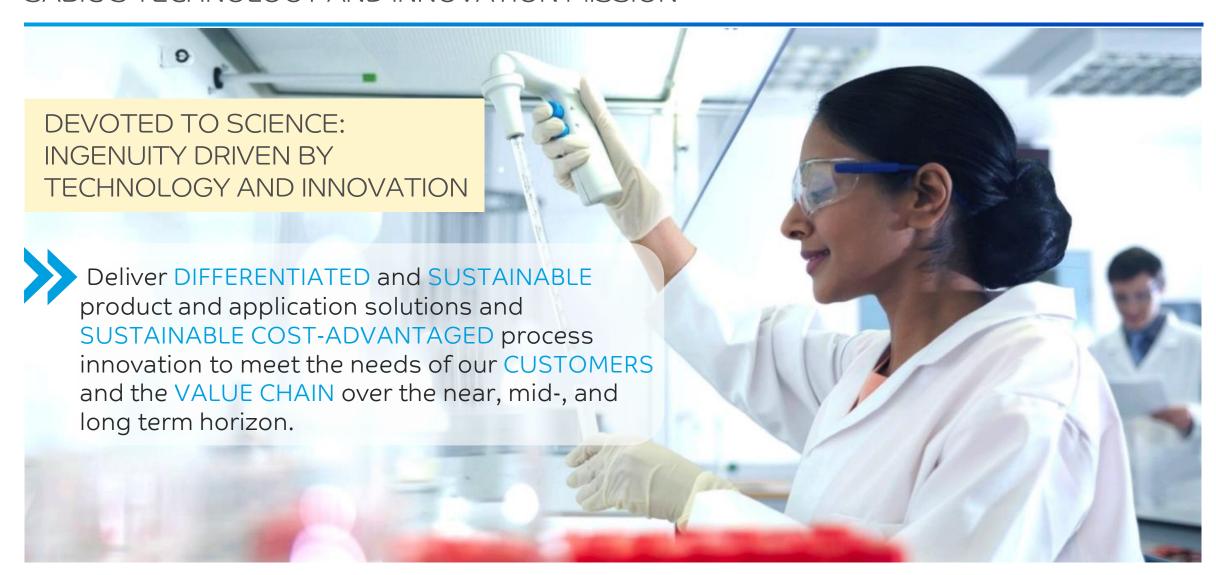
# INVESTMENT THESIS



# STRATEGIC GROWTH SUPPORTED BY INNOVATION

# سابک خواہزہ

# SABIC'S TECHNOLOGY AND INNOVATION MISSION





# SABIC'S GROWTH STRATEGY SUPPORTED BY INNOVATION

#### TO BE THE PREFERRED WORLD LEADER IN CHEMICALS

#### FOCUSED CHEMICAL SECTOR STRATEGIC PLAYS

**PETROCHEMICALS** 

**AGRINUTRIENTS** 

**SPECIALTIES** 

TECHNOLOGY



INCREASE FLEXIBILITY &

**COMPETITIVENESS** 

**FEEDSTOCK** 

SEGMENT-DRIVEN INNOVATION

PROCESS INNOVATION

CREATE A
COMPETITIVE EDGE

UNIQUE MARKET SOLUTIONS

MARKETS & APPLICTIONS
GROWTH / DIFFERENTIATION

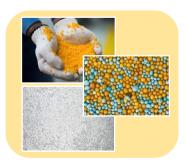
**PRODUCT**COST / DIFFERENTIATION

PROCESS IMPROVEMENT
COST / RELIABILITY

NEW PROCESS
COST / CAPABILITY

DIFFERENTIATION THROUGH UNIQUE CHEMISTRIES













SUSTAINABLE IMPACT



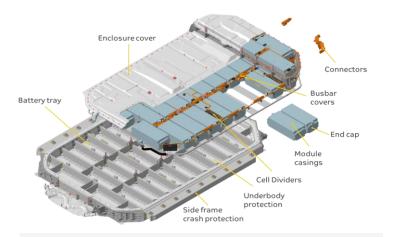
# SEGMENT DRIVEN PLATFORM EXAMPLE - BLUEHERO™ (VEHICLE ELECTRIFICATION)

# UNDERSTANDING MARKET DYNAMICS AND OPPORTUNITIES

>70% vehicles electrified by 2030

\$560 billion commitment by OEMs to date

Heaviest, largest and the most expensive vehicle module...



## ...industry needs:

Reduced weight and cost
Enhanced safety and performance
Reduced environmental impact



# POSITION SABIC AS A LEADER

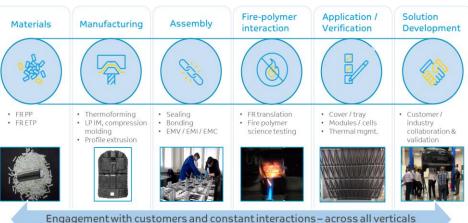


2030 ambition

>150 kT

Resin sales

# COMPREHENSIVE APPROACH TO DELIVER INDUSTRY SOLUTIONS...



OEM: Original Equipment Manufacturer 4



## PROCESS INNOVATION EXAMPLES - CHEMICALS & POLYMERS

# POLYMERS PROCESS INNOVATION

#### PROCESS IMPROVEMENT

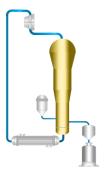
Dry Catalyst Feeder Technology for General Purpose PE



Achieving lower costs and enhanced reliability

#### **ENABLING GROWTH**

Integrated Multizone Technology for Differentiated PE



Introducing novel PE products in future assets

# CHEMICALS PROCESS INNOVATION

#### PROCESS IMPROVEMENT

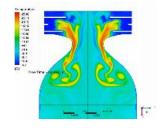
SABIC Butadiene Extraction Technology



Debottlenecking plants for higher productivity

#### **ENABLING GROWTH**

SABIC ANJEVOC Technology



Conversion of complex hydrocarbon feeds to chemicals

PE: Polyethylene 45

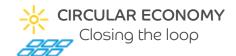


# SPECIALTIES UNIQUE - MARKET SOLUTIONS



#### **EXABYTE ECONOMY**

Hyperconnected devices, data & people







#### **INFRASTRUCTURE**

Transmitting larger data at faster speeds



5G Towers 5G Antennas Printed Circuit Boards Fiber Optic Connector

#### **ELECTRONICS**

Enabling connectivity in sustainable smart devices



Smart Phones Laptop & Tablets AR/VR Smart Appliances

#### **INDUSTRIAL**

Delivering Solutions for the next generation of Connected Devices(IOT)





Robotics Smart Manufacturing Connected Home Smart Water Meters

#### **MEDICAL DEVICES**

Convergence of connectivity and Medical Devices



Remote Diagnostics Distant Patient Monitoring Drug Delivery Remote Surgical Devices

#### MOBILITY

Powering EV and EV Batteries



Capacitor Films
EV Charging Stations
Sensors and Shielding
Battery Protection

OEM's

New technology breakthroughs in optoelectronics, dielectrics, light and thermal management will enable top OEMs to deliver on transformational megatrends



# SABIC TECHNOLOGY AND INNOVATION GLOBAL CENTERS



# سابک عادہ

## EXTERNAL INNOVATION ECO-SYSTEM

#### **FOCUS ON**



**PIPELINE** 



PERFORMANCE



#### Acquire

New & Unique Competencies

## **Support Projects**

**Expand Capabilities** 

#### Scout

New Opportunities

## **Extend Capacity**

Reduce TTM & Cost

#### Talent

Pipeline

#### Enable (KSA) Universities

Capabilities & Grow SABIC Brand









External partnerships are essential to accelerate technology delivery and advance disruptive innovation



## ENABLING THE TRANSFORMATIONAL ECONOMIES...AND DELIVERING IMPACT

By acting upon... | SEGMENT-DRIVEN INNOVATIONS | UNIQUE MARKET SOLUTIONS | PROCESS INNOVATION

~ 10k

Patents & Pending
Applications

450+

Active R&D Projects 70+

New Products / Year

19

R&D Centers Worldwide >50%

Sustainability-Driven Solutions 15+%

Improvement in % of Innovation EBITDA / Business EBITDA (2019-2022 YTD)

# The Net Zero economy US\$ 2.3 trillion



ELECTRICALLY
HEATED FURNACE

90% CO<sub>2</sub>



CAPACITOR FILM EV POWER BOOST



STORAGE UP TO 150°C

# The Circular economy US\$ 4.5 trillion



CHEMICAL RECYCLING

1ST SEMI-

COMMERCIAL PLANT OF MIXED PLASTIC WASTE

# The Bio-Growth economy US\$ 1 trillion



ENHANCED AGRI-NUTRIENTS



10% HIGHER
YIELD WITH
LOWER CO<sub>2</sub>

# The Exabyte economy US\$ 8 trillion



FIRE PROTECTION FOR EV BATTERY

SILVER

UPTO 40%
WEIGHT SAVING
& INCREASED
SAFETY



HIGH-PURITY SPECIALTIES



5G SIGNAL TRANSMISSION ENHANCEMENT



MICROSOFT
OCEAN PLASTIC
MOUSE 20%

SILVER

RECYCLED OCEAN PLASTIC in exterior shell

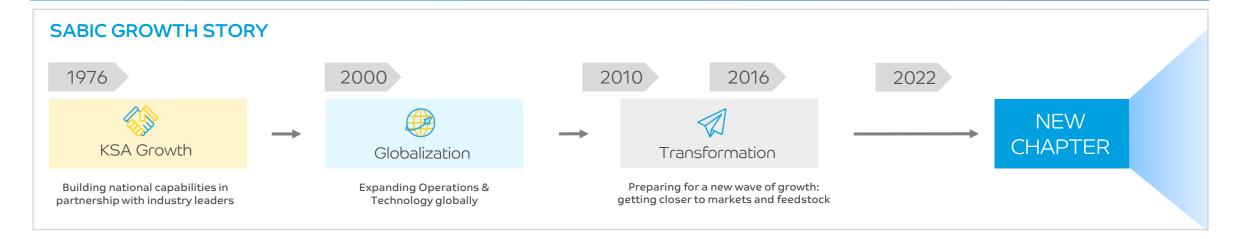


ENHANCED PIPE TECHNOLOGY

UP TO 30%
THICKNESS
REDUCTION &
ENHANCED LIFETIME



# SABIC SUSTAINABLE GROWTH JOURNEY



#### CIRCULAR CARBON ECONOMY JOURNEY



1976 – Begins under the vision to TURN NATURAL GAS INTO VALUABLE PETROCHEMICAL PRODUCTS

**1986** •Al-Jubail and Yanbu awarded United Nations environmental prize for work on environmental conservation.

2000 - Launched an Environmental Management System enabling all affiliate companies to benchmark environmental performance

**2001** - Research and Technology function awarded the Gulf Cooperation Council prize for "Best Environmental Research."

**2003 -** 12 SABIC affiliates achieve ISO 14001 certificates

2007 - SABIC Americas received Responsible Care® certificate

**2011** – Set our FIRST SUSTAINABILITY TARGETS

**2011** – Initiated SEEC program

**2012** – SABIC joins UN Global Compact.



2016 – Built WORLD LARGEST CO2 CAPTURE, PURIFICATION AND LIQUEFACTION PLANT

2018 – Second cycle of SEEC targets

2021 – Works begin on our WORLD'S FIRST ADVANCED RECYCLING UNIT



**2021** – Carbon neutrality commitment by 2050 with 2030 interim target

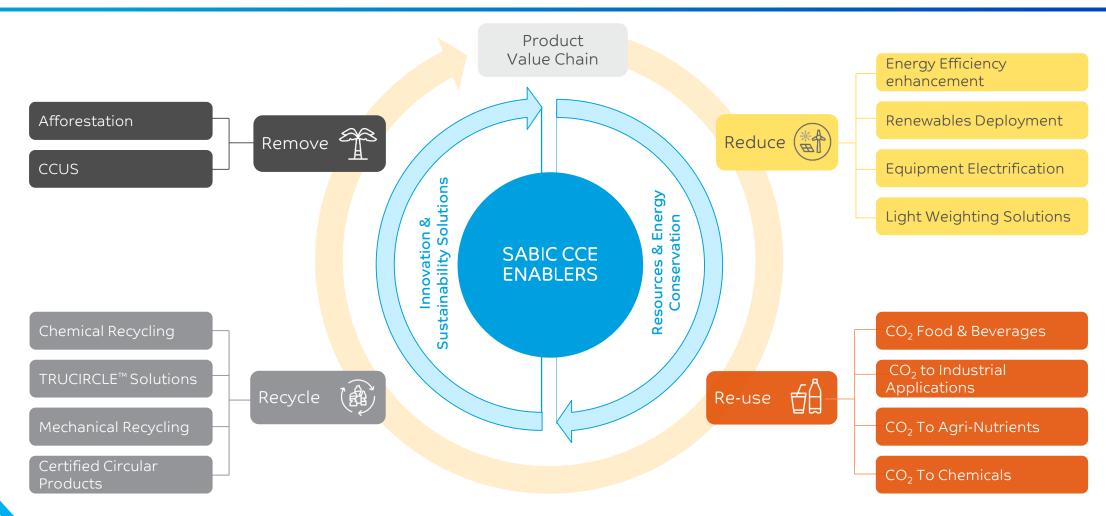


2022 - Construction begins to realize FIRST ELECTRICALLY HEATED STEAM CRACKER FURNACE

# CIRCULARITY & CARBON NEUTRALITY ROADMAP



# SABIC CIRCULAR CARBON ECONOMY (CCE) FOCUS



CCE, 4R's model that will enable achieving our Carbon neutrality ambitions

SABIC CCE-model 52



# OUR CIRCULAR JOURNEY SO FAR ... WITH PROVEN SOLUTIONS (1)























MASS BALANCE chain of custody for polymers

CERTIFIED
RENEWABLE PE & PP
from second generation bio-

based feedstock

**D4R WITH TF-BOPE**Mono-material solutions to overcome limits of conventional PE film

CERTIFIED
CIRCULAR PE & PP
from advanced recycled
feedstock

CERTIFIED RENEWABLE
CHEMICALS
supporting launch of new

**CLOSED** 

LOOP

**CIRCULAR** 

on OCEAN

**PRODUCTS** based

**BOUND PLASTIC** 



2022

# OUR CIRCULAR JOURNEY SO FAR ... WITH PROVEN SOLUTIONS (2)



PCR COMPOUNDS CIRCULAR

**PRODUCTS** 

**PLASTIC** 

based on OCEAN

up to 70% mechanically

recycled content



CERTIFIED
RENEWABLE
PRODUCTS
from 'Residues from vegetable oil processing'



# GOOD PROGRESS ON THE FIRST SEMI-COMMERCIAL ADVANCED RECYCLING UNIT



# Market foundation stage

- Direct processing of pyrolysis oil fraction via blending
- SABIC first and leader in certified circular products
- Start advocacy for material recycling



## Commercial unit phase 2022

- ~15-20 kta of raw pyrolysis oil into circular products
- Partners: Plastic Energy & Haldor Topsoe



### World scale phase ≥ 2025

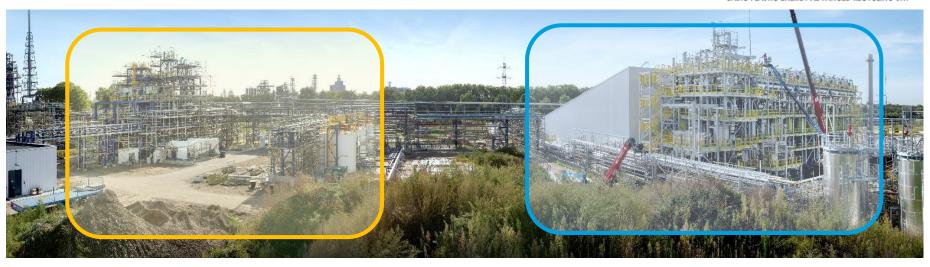
- >200 kta of circular products
- Legislative framework fully supporting chemical recycling

# HYDROTREATMENT PLANT











SABIC to grow circular products to maintain leading position in advanced recycling

# \_

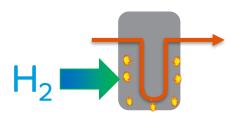
# CARBON NEUTRALITY STRATEGY: 2030 EXECUTION PLAN FOR SCOPE 1 & 2 GHG EMISSIONS

CO2	MAIN INITIATIVES	MAJOR MILESTONES / ENABLERS / APPROACH UP TO 2030
35-45%	Reliability, Energy Efficiency (EE) & Improvements	Developing Sites CN Roadmaps, Accounting for the combined impact of EE & CN  2022 Enhancing EE, via SEEC Project Portfolio & Decommissioning Energy Intensive Sites  Expected ~7.2 MMT CO <sub>2</sub> e reduction
35-45%	Renewable Energy	2021 عند المعالى المع
0.8%	Electrification	Kick-off construction of the world's first demonstration plant for large-scale electrically heated steam cracker furnaces.  E-Furnaces development collaboration with BASF  2021  2023  1st Commercial E-Furnace
8 - 10%	Carbon Capture, Utilization & Sequestration	Utilizing CO <sub>2</sub> for methanol  Target supply to KSA CO <sub>2</sub> hub  Increased CO <sub>2</sub> capacity exported to KSA CO <sub>2</sub> hub
0.5%	Blue/Green H2	2020 Launch blue ammonia product with Aramco  Collaboration with Aramco for first blue ammonia shipment  2030



# THE PATH TO 2050 - ENABLING TECHNOLOGIES & INFRASTRUCTURE

#### HYDROGEN COMBUSTION



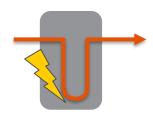
Key Principle: Fire furnaces with hydrogen instead of methane

#### Risk:

- NOx emissions & regulations
- Higher value for H<sub>2</sub> in chemical use
- Increased demand of total energy
- Infrastructure:
  - H<sub>2</sub> Supply
  - H<sub>2</sub> Grid



#### **ELECTRIFICATION**



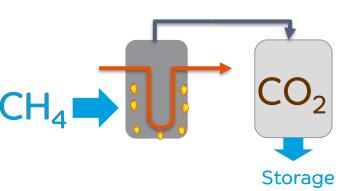
**Key Principle:** Fired burners replaced with electrical heating

#### Risk:

- Heating equipment longevity
- 24/7 availability of renewable power
- Infrastructure:
  - Grid capacity
  - Supply of renewable electricity



## CO<sub>2</sub> CAPTURE



Key Principle: Capture CO<sub>2</sub> from stack and store it underground

#### Risk:

- Increased demand of total energy
- Public acceptance
- Environmental
- Infrastructure:
  - CO<sub>2</sub> Pipeline
  - CO<sub>2</sub> Storage



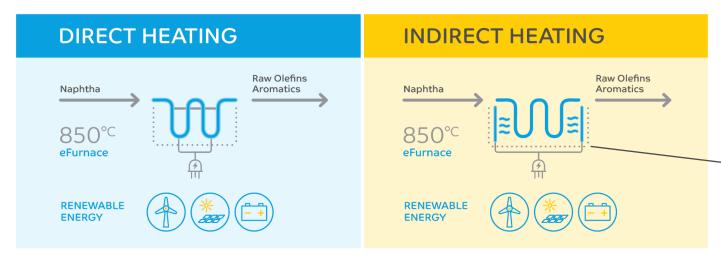
CO<sub>2</sub> Capture

# FROM COMBUSTION TO ELECTRIC IN HIGH TEMPERATURE HEATING: E-FURNACES FOR STEAM CRACKING



### SABIC JDA with BASF & Linde on Cracker Electrification

#### TWO RESISTIVE HEATING CONCEPTS



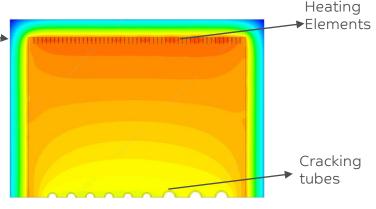
Both to be demonstrated at demonstration plant in Ludwigshafen, Germany Expected startup in 2023



> 90% CO<sub>2</sub>eq emission reduction potential is targeted



3D graphic of world's first demonstration plant for large scale electrically heated steam cracker furnaces integrated within existing facility



Simulation of the heat and temperature distribution within the e-furnace to derisk the demonstration plant

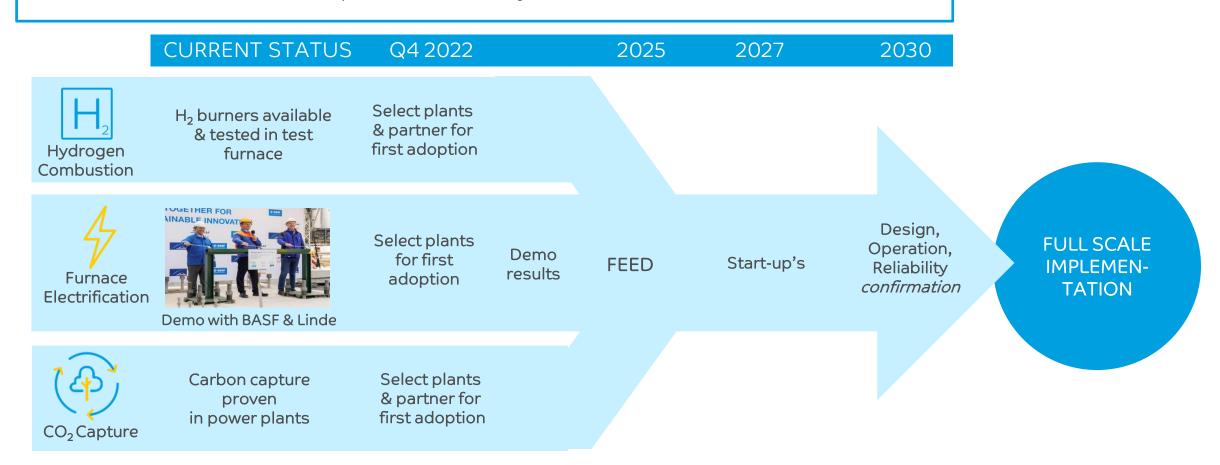
JDA – Joint Development Agreement



# FIRST ADOPTER AT COMMERCIAL SCALE FOR STEAM CRACKERS

#### **OBJECTIVES:**

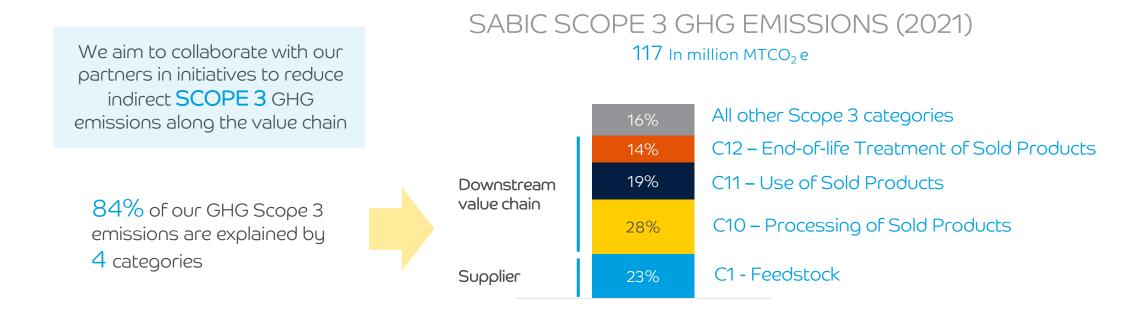
- Prove technology at commercial scale for steam cracker furnaces
- Gain engineering & operating experience
- Gain experience in reliability and mechanical robustness



FEED - Front End Engineering Design



### ADDRESSING SCOPE 3 GHG EMISSIONS



- Scope 3 is largely based on secondary data because of high complexity.
- Increasing attention on ESG practices & reporting in value chains drives urgency.
- Accurate and consistent industry measurements essential in order to set meaningful targets: We are actively engaged here to drive this.



# SABIC ESG FOCUS AND REPORTING

#### **ENVIRONMENTAL**

# Company's **commitment** as a steward of nature

- Climate Risks & Opportunities
- Portfolio Sustainable Solutions
- Environmental Reporting



#### SOCIAL

Company's relationship with employees, suppliers, customers, communities

- Diversity, Equity and Inclusiveness
- Human Rights Story
- Engage CSR and Local Content
- Talent Attraction,
  Development & Retention



#### GOVERNANCE

Company's management, controls, structures, compliance, leadership compensation, audits, shareholder rights.

- Enhance Corp. Gov. Standards
- Drive to ESG matters:
- Supplier Mgmt ESG-attributes
- Sustainable and Innovation Investments
- Ethical business conduct, IT security, Tax reporting,...



