



IRPC'S NEW ERA

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President and Chief Executive Officer

1 September 2022

Megatrend Driver



Technological Innovation

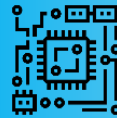


Health and wellness

Material Utilization



Smart Mobility



Electronics

Energy Transition



Future of Energy



Climate change and Circular

Leading Integrated
Petrochemical Complex
in Asia

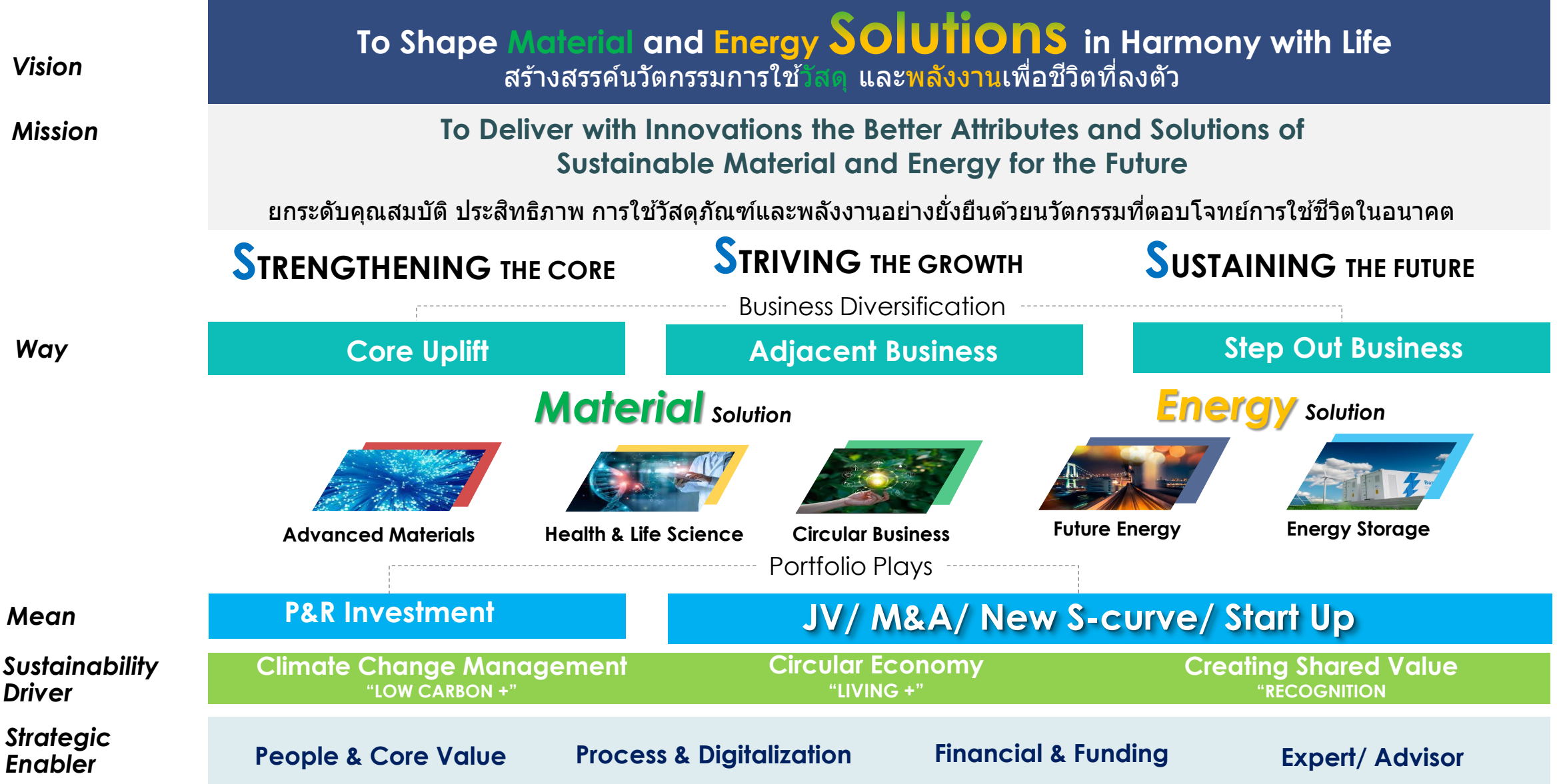
บริษัทปิโตรเคมีครบวงจรชั้นนำของเอเชีย

To Shape
Material and Energy Solutions
in Harmony with Life

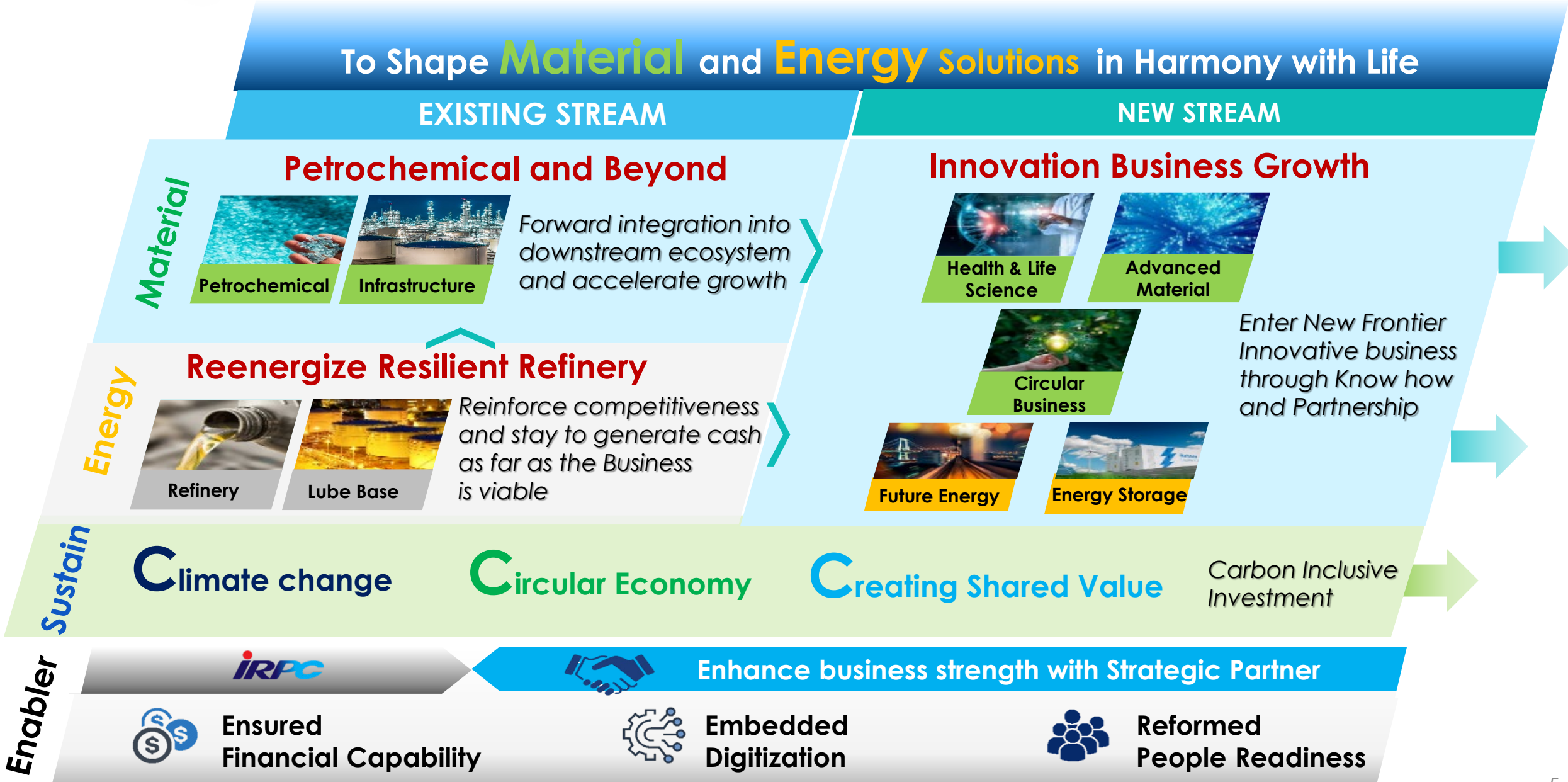
สร้างสรรค์นวัตกรรมการใช้
วัสดุ และ **พลังงาน** เพื่อชีวิตที่ลงตัว



Strategic Framework



Strategic Move to the New ERA



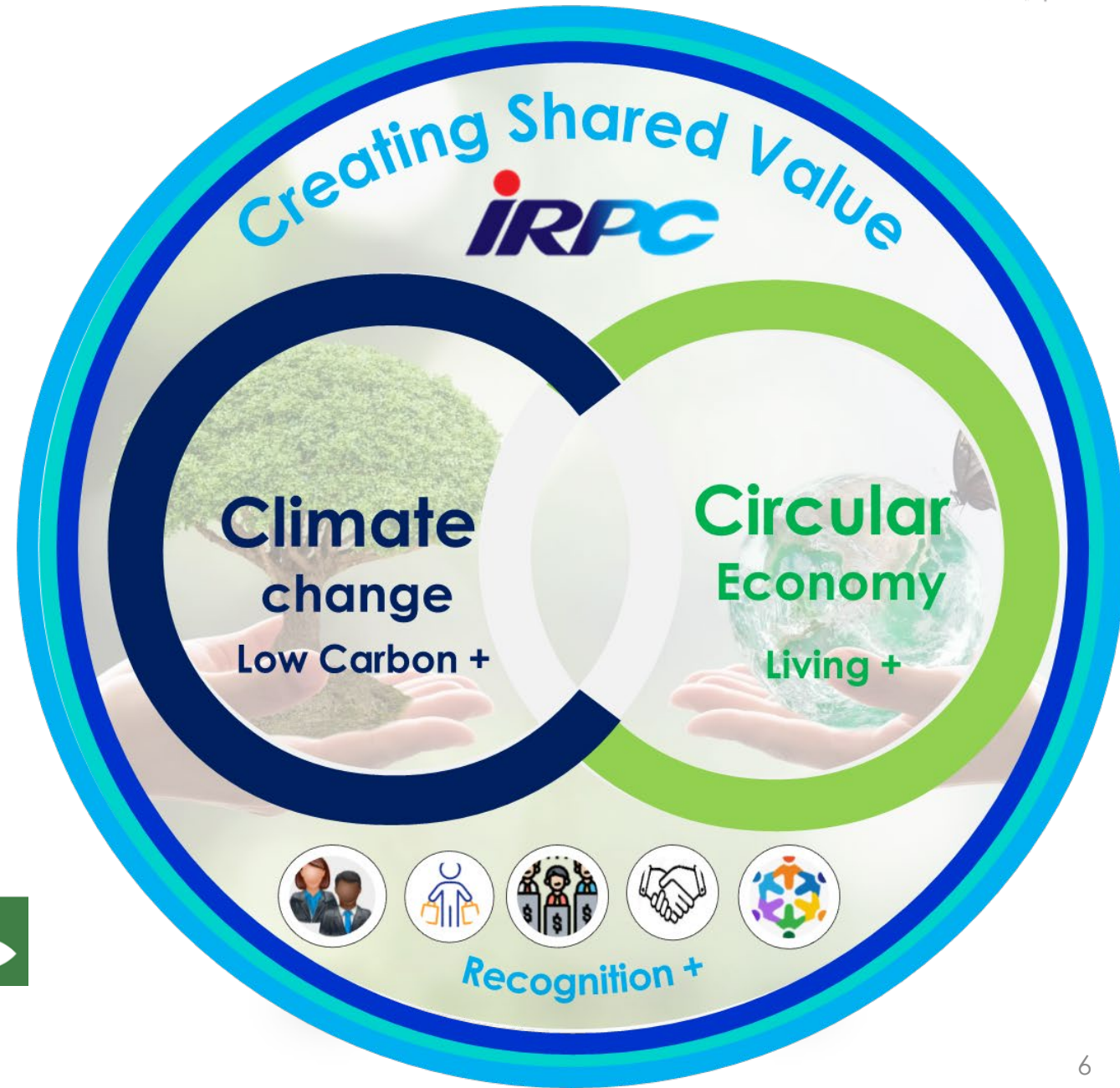
Sustainability Driver



Sustainable in actions

“3C”

Deliver human-centric solutions
for a sustainable future



Climat change

Support **low carbon society** and sustainable roadmap to net zero



Low Carbon +

IRPC aims to...



Commit to reduce emissions by

20% by 2030*

Carbon Neutrality 2050

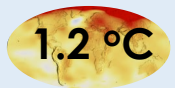
Net Zero by 2060

* Base year 2018

Impact of GHG & Climate Change Thailand Commitment

COP26 Glasgow Climate Pact

Focusing on real actions and urgency



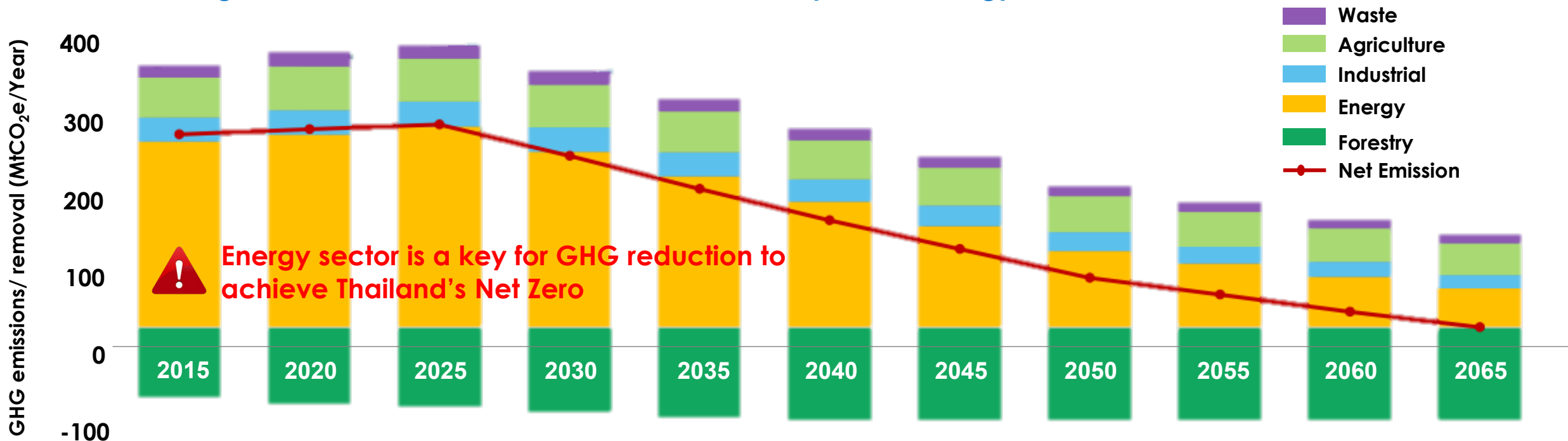
Emission cut by 40% in 2030*
Carbon Neutral in 2050
and **Net-Zero in 2065**

Key Actions

- 100% EV sales by 2035
- Expand carbon sink in the forestry
- Expand renewable energy generation

Note: * Base on projected Business-as-usual (BAU) level by 2030

Thailand's Long-Term Low Greenhouse Gas Emission Development Strategy





NET ZERO

Commit to reduce emissions by

20% by 2030*

Carbon Neutrality 2050

Net Zero by 2060

* Base year 2018

3 Core Pillars to Drive Net Zero Commitments.

1 Eco-operation & technology

Eco-Operation

- Energy Intensity Index (EII)

Greener Power

- Solar Power & Divest Coal

2 Reshape portfolio

Low Carbon Business

- Renewable Business
- Decarbonized Product

Clean Technology

- H2 Ecosystem
- Decarbonized Startup

3 Absorption and offset

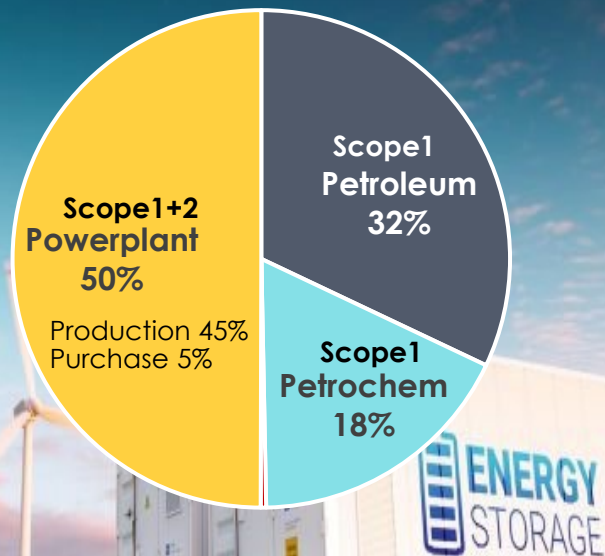
CCUS

- CCS with in PTT group

Forestation

- PTT Collaboration

IRPC existing emission portfolio by Source



Switching operations to renewable energy and alternative fuels, and achieving energy savings project by innovation

Eco-Operation

Utilize every means to increase energy efficiency and reduce GHG emission.

- **EI** Top Quartile
- Zero routine flaring

Greener Energy

Switching operations to renewable energy and alternative fuels.

- **Solar** (Floating, Rooftop, Solar Farm)
- **Divest Coal Powerplant** to NG

Eco-operation in all assets and Greener Energy

2 Reshape portfolio



Portfolio adjustment to low carbon and clean technology project



Low Carbon Business

Renewable Business

- **Solar-Wind-Battery**
- **Innovative Solutions** Provider for renewable energy

Decarbonized Product

- **Bio energy:** Bio jet study
- Explore business opportunities of **CCU**



Clean Technology

- Seeking new opportunities in **H₂ ecosystem**
- Scouting potential **startup via Decarbonize Thailand** Startup Sandbox program

3 Absorption and offset



Capture & offset carbon using CCS technologies and Nature

Capture & offset carbon using CCS technologies and nature



CCS technology through collaboration within PTT group



Forestation

- The creation of stakeholder engagement and social impact through community forest development
- Taking credits from forestation projects to offset CO₂ emission from operations
- PTT Collaboration

WHAT

Three Core Pillars to Drive Net Zero Commitments.

Eco-operation & technology

Shift the operation from fossil based power to renewable energy and increase energy efficiency

Reshape portfolio

Adjust portfolio by investing in non-oil with Eco-Solutions

Absorption and offset

Seek all means to absorb and offset carbon

WHEN

Commit to reduce emissions by **20% by 2030***

Carbon Neutrality 2050
Net Zero by 2060

* Base year 2018

WAY FORWARD

Start to execute Net Zero



Governance and Organization



Investing and Financing



Carbon inclusive investment

ESG Financing



Processes



Accounting and Reporting



People

Circular Economy

Create Living + for all stakeholders through **waste minimization and Eco solution** business and services



Living +

Aspiration

IRPC aims to ...

Build the ECO-Solutions and Turning Waste to Value

Policy: Maintain Zero waste to landfill

- A** Waste utilization with 3R principle > 95% in 2040
- B** Waste to value (IRPC Circular Concept)

Creating Shared Value

Honors and awards from **positively impact** the health and wellbeing of people through our products and business



Recognition +

Aspiration

IRPC aims to...

Uplifts the sustainable value to stakeholder by

Increase 20% of True Value in 2030

Economy — Ecology — Social

Note: IRPC True Value Assessment 2021 at 10%

Creating Shared Value

Integrated CSR with business based on innovation & expertise

Target

Increase Social Value created through Community development Investment

- Increase value creation through communities with focus on **health & well being, education and environment**
- Expansion of good **networking & partnership** internally & externally
- **Social investment value creation** with business link

Focus area



Health & Well Being



Education



Environment Friendly



Success Case : IRPC Smart Farming Initiative



Economic Impact

Social Impact

Environmental Impact



Nano ZnO micronutrient
To be 1st choice of farmer for fertilizer by nanotechnology




Target > 200 MB/year
Net Profit (~ 1.8 M Liters/year)


- ✓ Create sustainable community trust and long-term value



- ✓ Generate incomes for agriculturists total 1,300,000 THB/year
- ✓ Harmless to user product
- ✓ Improve quality of life for agriculturist and promote agriculture tourism



- ✓ Prevent plant diseases
- ✓ No soil contamination
- ✓ Low carbon and environmentally friendly initiative (solar floating and Nano ZnO product)



Success Case : Prosthetics Legs Initiative



Prosthetic legs



Innovated translucent, more flexible, lighter prosthetic legs



Innovated prosthetic legs and Ankle Foot Orthosis (AFO) from PIR Recycle



Innovated Prosthetic hands and fingers by 3D printing for carpenters and others (Carpenter Project)



Economic Impact

- ✓ Create partnership collaboration with customers
- ✓ Recognized by National Innovation Award “the first runner-up award for society and environment”



Social Impact

- ✓ Since 2011, IRPC donated PP to produced totally 32,632 legs
- ✓ Create opportunities and improve quality of life for disabilities



Environmental Impact

- ✓ Adapt circularity concept by recycling PIR waste



Success Case : Vajira Lab; Healthcare Security for Society



Economic Impact

- ✓ Reduce dependence on medical imports from abroad
- ✓ Recognized by Asia Responsible Awards 2022 in Health Promotion



Social Impact

- ✓ Become a strong partner network in medical innovation to meet the new lifestyle and create stability in the public health of the country





Climate Change

- **Commit to reduce emissions**
 1. 20% by 2030
 2. Carbon Neutrality 2050
 3. Net Zero by 2060



มุ่งมั่นเพื่อขับเคลื่อนการปรับตัวและลดผลกระทบจากการเปลี่ยนแปลงสภาพภูมิอากาศโลก



Circular Economy

- **Build ECO-Solutions by**
 1. Maintain Zero waste to landfill
 2. Waste utilization > 95% in 2040
 3. Waste to value



มุ่งมั่นเพื่อลดผลกระทบจากของเสีย
มุ่งมั่นเพื่อขับเคลื่อนกระบวนการ 3R
มุ่งมั่นเพื่อขับเคลื่อนการสร้างมูลค่าร่วมกับลูกค้า-คู่ค้า



Creating Shared Value

- **Uplift sustainable values to stakeholder by Increase 20% of True Value in 2030**



มุ่งมั่นเพื่อขับเคลื่อนการเพิ่มคุณค่าให้ผู้มีส่วนได้ส่วนเสีย



TO SHAPE MATERIAL
AND ENERGY SOLUTIONS
IN HARMONY WITH LIFE

สร้างสรรค์นวัตกรรมการใช้วัสดุและพลังงาน เพื่อชีวิตที่ลงตัว

Thank you

Appendix



TO SHAPE
MATERIAL
AND **ENERGY**
SOLUTIONS
IN HARMONY
WITH LIFE



IRPC Businesses

Integrated Petrochemical Complex & Product Diversification

- Refinery Capacity : 215 KBD (crude distillation unit)
- Petrochemical Capacity : 3,137 KTA (Olefins, Aromatics, Styrenics, Polyolefins, Polystyrenics)

Remarkable Position in ASEAN Polymer Market

- PP's leading producer in South-East Asia: 775 KTA
- HDPE pipe grade 140 KTA
- ABS 179 KTA: The Largest producer in Thailand

The largest lube base oil capacity in Thailand

- Lube base oil : 320 KTA
- Asphalt : 600 KTA

Sustained earnings from facility and utility businesses

- Provides electricity, steam, infrastructure, public utilities
- Stable income from Port and Tank business

Specialty Petrochemical to capture higher margin

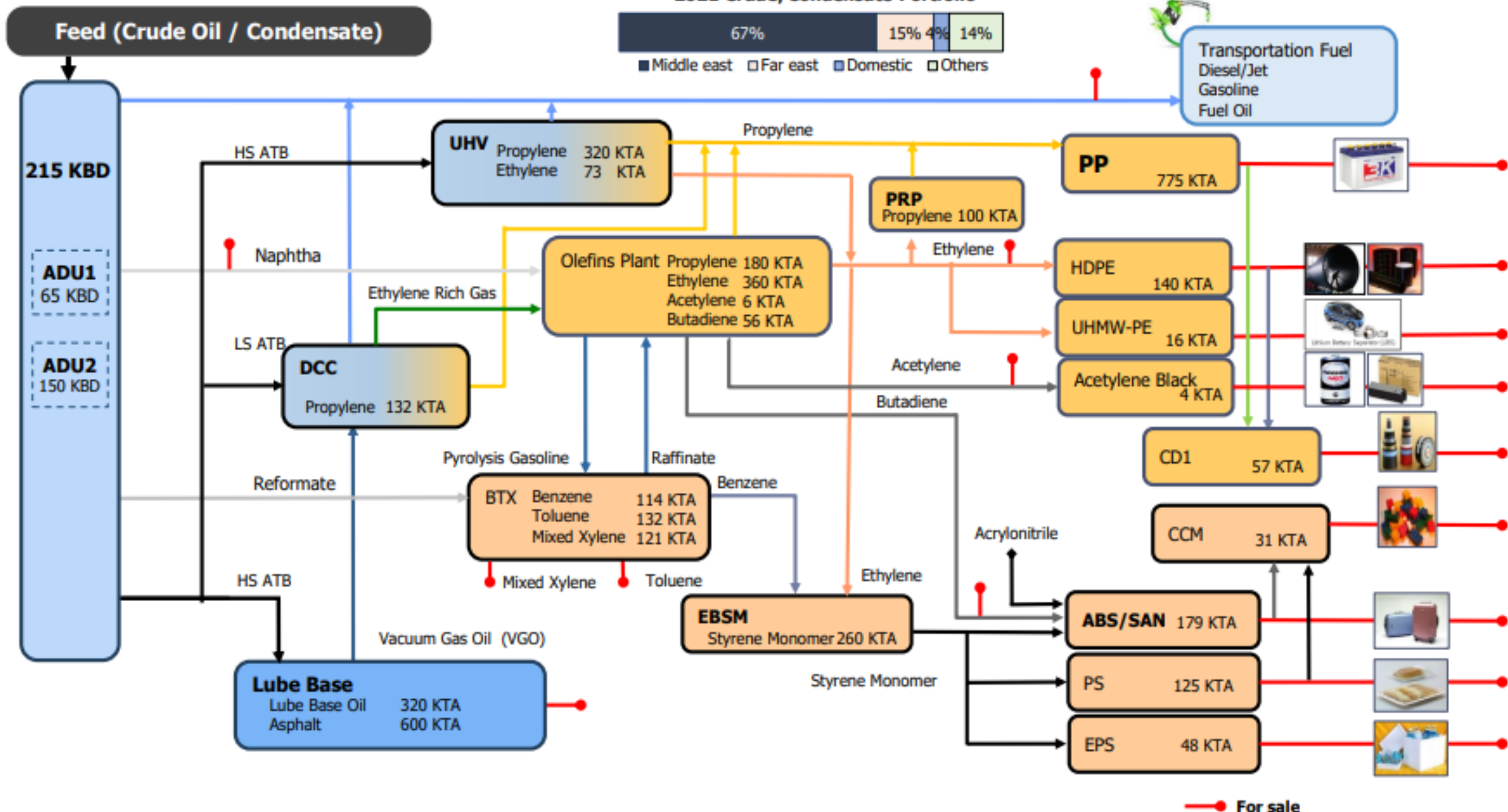
- 20% of specialty products in 2021
- PPC to add more specialty Petrochemical Products



Petroleum and Petrochemical Value Chain

Optimized Configuration & Product Diversification

2021 Crude/Condensate Portfolio



IRPC's Strategic Framework

Vision

To Shape **Material** and **Energy Solutions** in Harmony with Life
 สร้างสรรค์นวัตกรรมการใช้วัสดุ และพลังงานเพื่อชีวิตที่ลงตัว

Mission

To Deliver with Innovations the Better Attributes and Solutions of Sustainable Material and Energy for the Future
 ยกระดับคุณสมบัติ ประสิทธิภาพ การใช้วัสดุภัณฑ์และพลังงานอย่างยั่งยืนด้วยนวัตกรรมที่ตอบโจทย์การใช้ชีวิตในอนาคต

Way



Mean

P&R Investment **JV/ M&A/ New S-curve/ Start Up**

Sustainability Driver

Climate Change Management **Circular Economy** **Creating Shared Value**
 "LOW CARBON +" "LIVING +" "RECOGNITION"

Strategic Enabler

People & Core Value **Process & Digitalization** **Financial & Funding** **Expert/ Advisor**

Climate change

Commit to reduce emissions

Low Carbon +



IRPC 
NET ZERO

20% by 2030*

Carbon Neutrality 2050

Net Zero by 2060

* From Base year 2018

Circular Economy

Build ECO-Solutions

Living +



1. Maintain Zero waste to landfill
2. Waste utilization > 95% in 2040
3. Waste to value

Creating Shared Value

Uplift sustainable values to stakeholder

Recognition +



Increase 20% of True Value in 2030

Our Aspiration



Commit to reduce emissions by

20% by 2030*

Carbon Neutrality 2050

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