IRPC Net Zero Transition 2023

JANUARY 17 , 2023

Report to Corporate Governance and Sustainability Committee

IRPC Route to Net Zero

ความมุ่งมั่นและตั้งใจของไอาร์พีซี
เพื่อความมุ่งสู่องค์กรก๊าซเรือนกระจกเป็นศูนย์ ภายในปี 2060

ECO-OPERATION & Tecnology

Energy efficiency
การปรับปรุงประสิทธิภาพการผลิต

Renewables
เชื้อเพลิงทดแทนและพลังงานหมุนเวียน

IRPC
FUTURE IS NET ZERO 2060

ABSORPTION AND OFFSET

กิจกรรมชดเชยการปล่อยก๊าซเรือนกระจก

Carbon Capture , Utilization and Storage (CCUS)
ศึกษาเทคโนโลยีการดักจับและการกักเก็บคาร์บอน

Community Engagement & Forestation
การมีส่วนร่วมกับสังคมและชุมชน

RESHAPE PORTFOLIO

ปรับโมเดลธุกิจเป็น Green Business

Circular economy
การนำหลักเศรษฐกิจหมุนเวียนมาประยุกต์ใช้

Green Product
ผลิตภัณฑ์ใหม่เพื่อสิ่งแวดล้อมและชีวิตที่ดีขึ้น

Waste Management
การบริหารจัดการของเสียจากการผลิตอย่างเป็นระบบ

O_2
CO_2

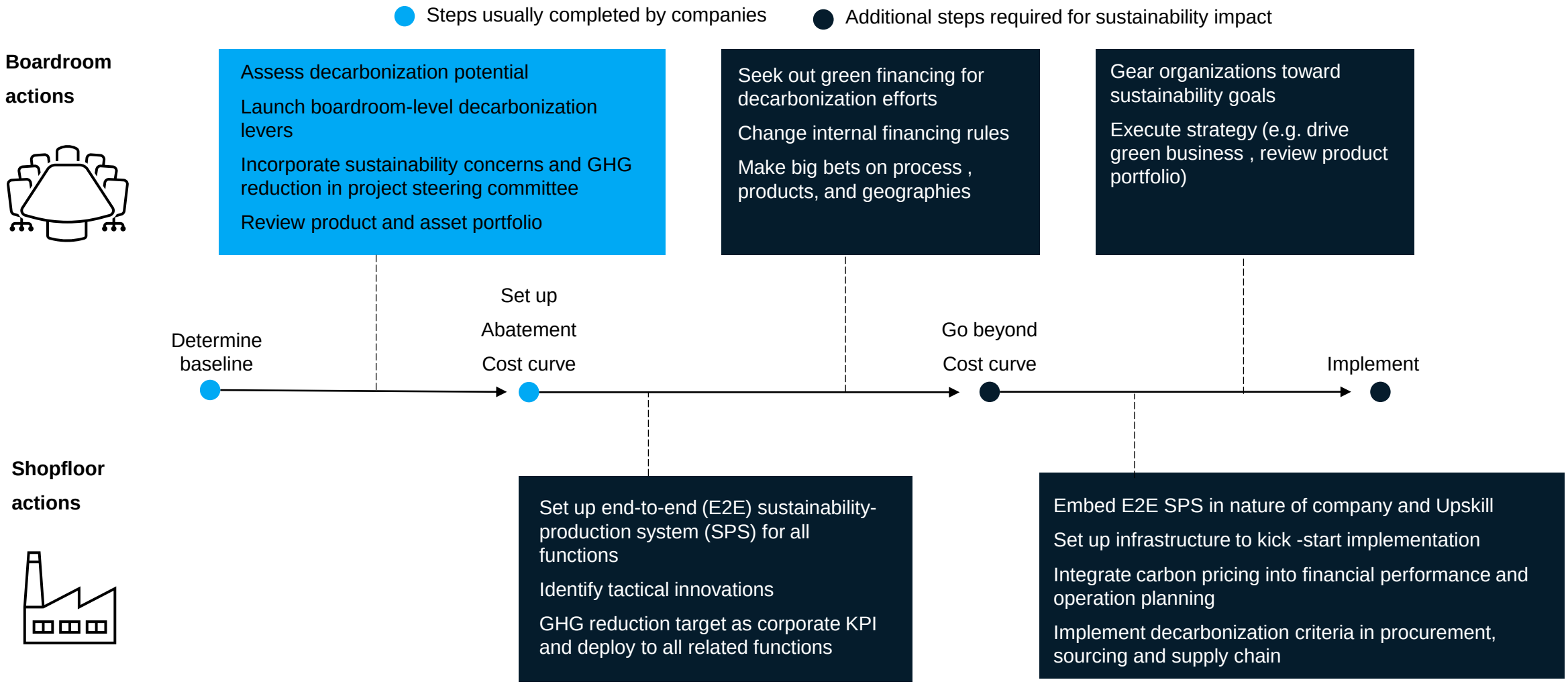
Given these major levers, and potential solutions

	Major levers	GHG reduction potential[1]	Potential solutions
Eco-Operation & Technology (Net Zero Lab)	Energy efficiency	~10%	• Advanced analytics (AA) to further optimize set points and APC • Extensive capability development and change management program to reach EII top quartile and zero routine flaring target
	Blue / Green H2	~20%	• Liaise with government to support low carbon initiatives • Partnership with PTTEP for CCU • Partnership with GPSC / EGAT for RES
	CCUS	~30%	• Partner with PTTEP to secure CCS capacity and gain economies of scale in capture technology acquisition
	Renewables	~20%	• Switching operations to renewable energy and alternative fuels: divest coal to NG, solar power, biofuels • Seek out opportunity in solar / wind business • Partnership with GPSC / EGAT,
Reshape portfolios	New stream product & Circular economy	~10%	• Portfolio adjustment : Increase new-stream 70% by 2030 including Hygiene & Life Science, Advanced Material, Sustainable Business • Circular economy target
Absorption and offset	Forestation	~10%	• The creation of stakeholder engagement and social impact through community forest development

1. Reduction potential against the baseline

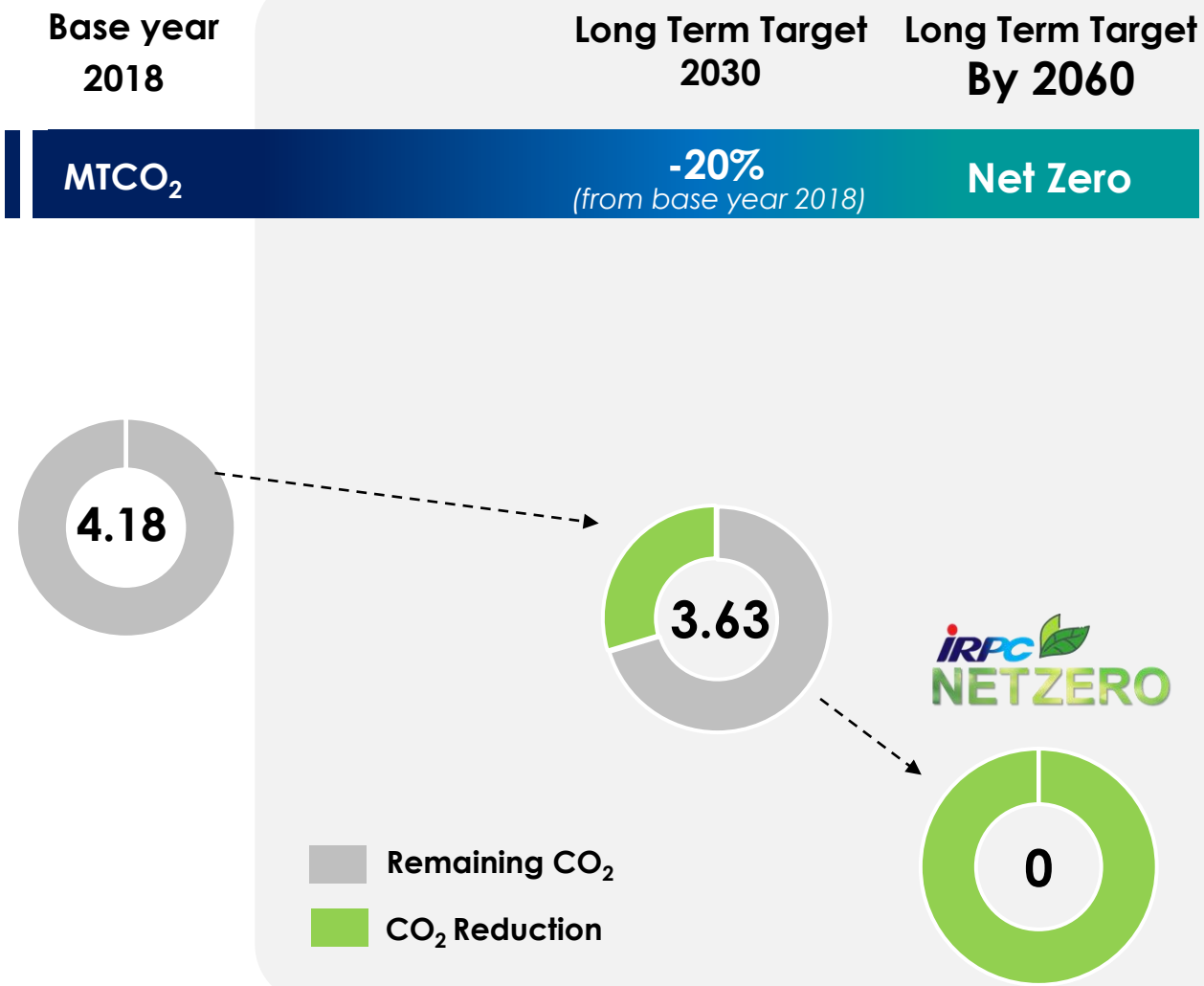
Source: Team Analysis

Reaching net-zero emissions requires work both in boardrooms and on shopfloors



Source : McKinsey Operation and Sustainability Practices

Our Journey ... To be NET ZERO by 2060 with ERA



Note: Base year 2018
- 5 years turn back from current
- Normal operation

Note: Number refer to Absolute Remaining CO2

3 Core Pillars to Drive Net Zero

1. Eco-operation & technology (E)

- Energy Intensity Index (EII)
- Solar Power & Divest Coal

2. Reshape portfolio (R)

- Renewable Business
- Decarbonized Product
- H2 Ecosystem
- Decarbonized Start-up

3. Absorption and offset (A)

- CCS within PTT group
- Forestation

Focus on 2023 : Set up policies and people engagement

Activities

Key enablers	Potential action	Action By
Policy and structure	• Launch **boardroom-level** decarbonization levers • Incorporate sustainability concerns and GHG reduction in project **steering committee** • Seek out **green financing** for decarbonization efforts and change **internal financing rules** • Gear organizations toward sustainability **goals and execute strategy**	• SD • Corporate planning • SD, Finance • Corporate planning
People	• Upskill and Training • Change management program • Communication programs • Leader and role model	• HR • SD, HR • COCA • Top management
Process	• **Set up infrastructure** to kick-start implementation, also **net-zero lab** • Integrate carbon pricing into **financial performance and operation planning** • Implement decarbonization criteria in **procurement, sourcing and supply chain**	• SD • BD, TE, Envi • Procurement, Supply chain
System and data tracking	• Set up end-to-end (E2E) **sustainability-production system (SPS)** for all functions • Set up **GHG reduction target as corporate KPI** and deploy to all related functions • Set up carbon **tracking and accounting system**	• SD, TE, OPS, Envi • Corporate planning • IT, AC, Envi

Source: Team Analysis

2023 Key Deliverables

- [ ] GHG emission reduction 0.04 $MtCO_2$
- [ ] Launch boardroom-level decarbonization levers
- [ ] GHG reduction in project steering committee
- [ ] Change internal financing rule
- [ ] Implement decarbonization criteria in procurement, sourcing and supply chain
- [ ] Set up end-to-end (E2E) sustainability-production system(SPS) for all functions
- [ ] Set up GHG reduction target as corporate KPI and deploy to all related functions
- [ ] Change management program
- [ ] EII initiatives in 2023 target to GHG reduction

Source : Team Analysis