

2023

Offsetting in the Korea Emission Trading Scheme

MARKET ANALYSIS

Presentation for: ICAP & PMI Asia and Pacific ETS Training Course

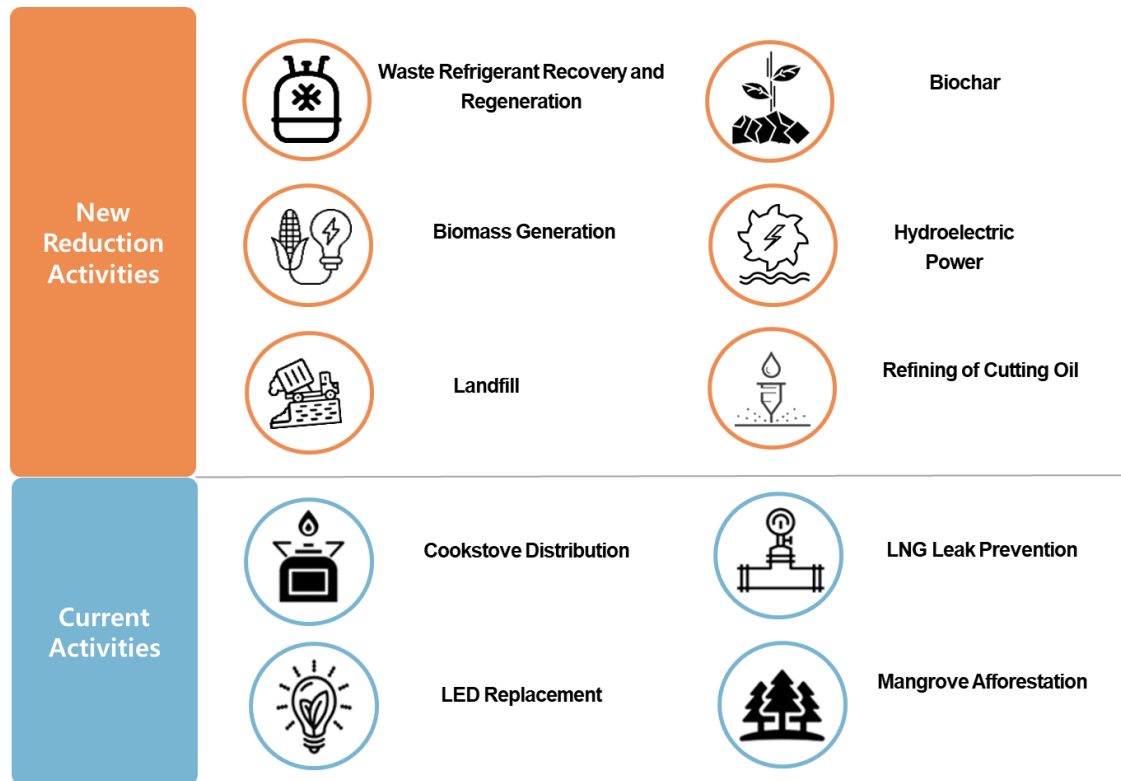
2023/10

ECDEYE

Ecoeye in the K-ETS



Ecoeye in the K-ETS



✓ 220 offset projects were developed and promoted, including domestic carbon development, CDM/PoAs, KETS offset projects, Korea voluntary emissions reduction (KVER)

✓ \$100 million carbon finance

South Korea: Domestic Condition (1)

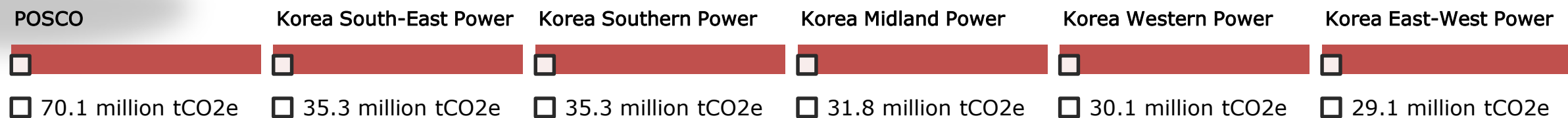
Total GHG Emission (2021, estimate)

616 million tons (591mt)



■ Domestic Condition

- Export-oriented economic structure (36% of GDP)
- Manufacturing sector accounts for more than 40% of energy-intensive industry
- 80-85% of national emissions come from the energy sector
- Primary energy mix is composed of 42% oil, 24% coal, 18% gas
- Electricity comes from coal (36%), gas (28%), and nuclear (26%)
- Lack of natural resources



* Based on August 2022 emissions statements

South Korea: Domestic Condition (2)

2030 NDC Target

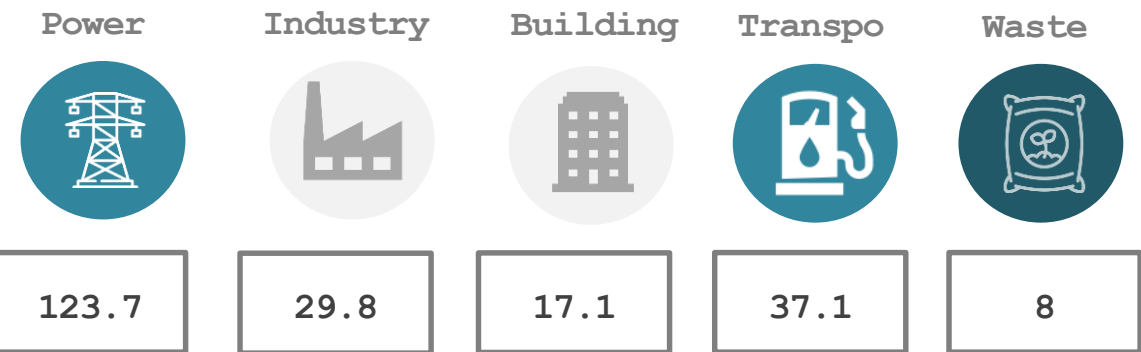
	2018 (in mt)	2030 (in mt)
Total Emissions	727.6	436.6
Reduction	-	-291
	Sector reductions	-215.6
	International Offsets	-37.5
	Carbon Absorption/CCUS	-37.9

Ref: National Emission Allocation Plan

ETS as the main reduction tool

Sectoral Reduction Targets

(in mt)



Ref: 2050 Carbon Neutrality and Green Growth Basic Plan

20 million tons from Article 6.4ERs
(incl. CDM-transitioned projects)

Article 6.2 ITMOs
Article 6.4ERs

Offsets in the K-ETS (1)

➤ Article Flexibility Measures:

Allowance banking, allowance borrowing, international offset credits (2016)

➤ Article K-ETS products:

Korean Allowance Unit (KAU)



Allowances allocated to compliance companies

Korean Credit Unit (KCU)



Credits converted from overseas reduction projects

Korean Offset Credit (KOC)



Offset credits from reduction projects certified and acknowledged by the Korean government

Offsets in the K-ETS (2)

Offset Credit Rules

	Phase 1 (2015-2017)	Phase 2 (2018-2020)	Phase 3 (2021-2025)
Limit	10%	10% (5% domestic, 5% international)	5%, regardless of type
Vintage	2010 (April~)	2016 (June~)	Pre-2023 CERs can be issued as i-KOCs
Mechanism	Domestic offset credits only	CDM	Post-2020 6.4ER can be issued as i-KOCs
Product		i-KOC issuance based on CER submission	Article 6.2 ITMOs also possible to be issued as i-KOCs
Registry		Korea Offset Registry	
Special Condition		Direct implementation by a Korean entity from the point of project registration	
Validity		Unlimited	Unlimited

Offsets in the K-ETS (3)

Eligible Methodologies

Domestic Offsets

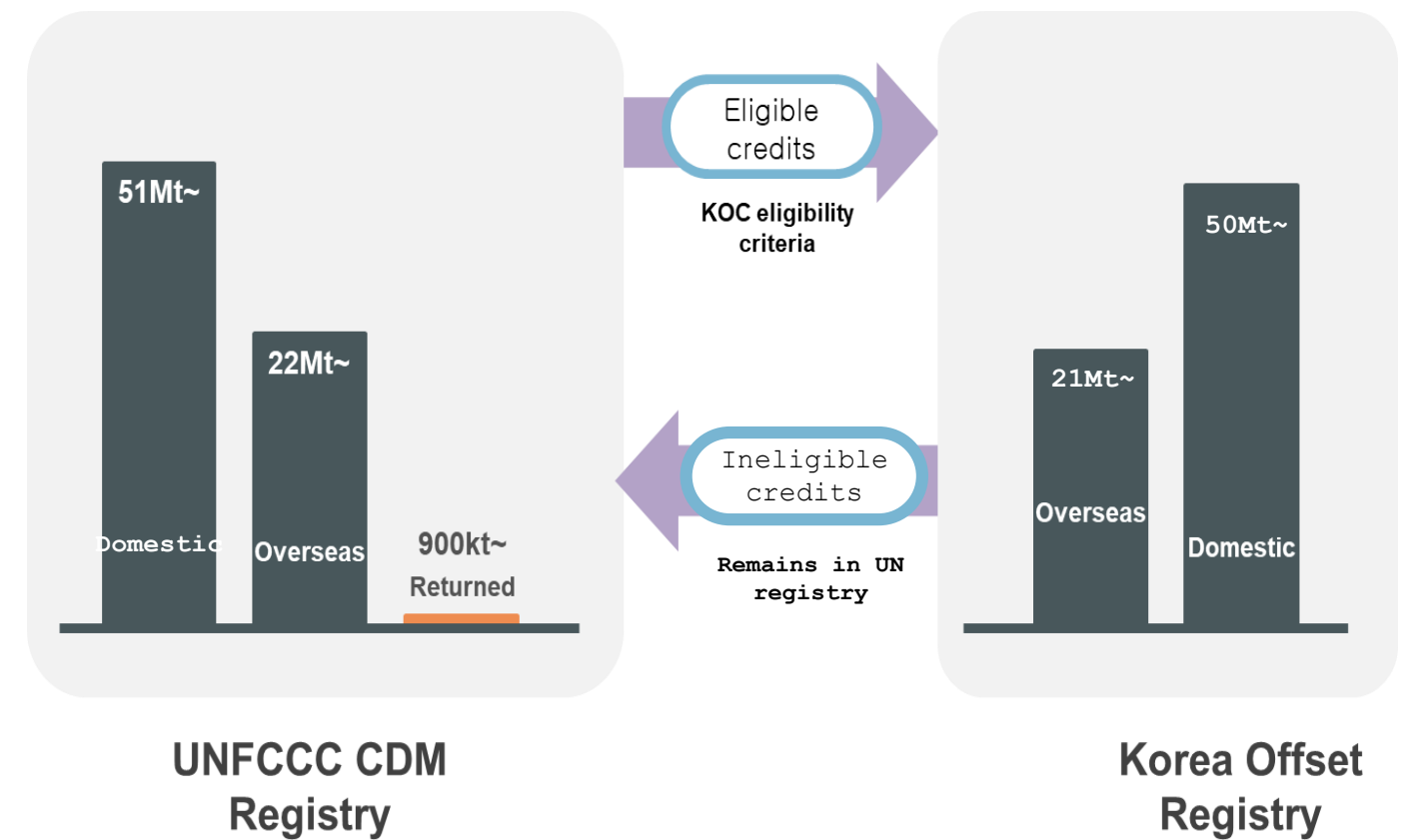
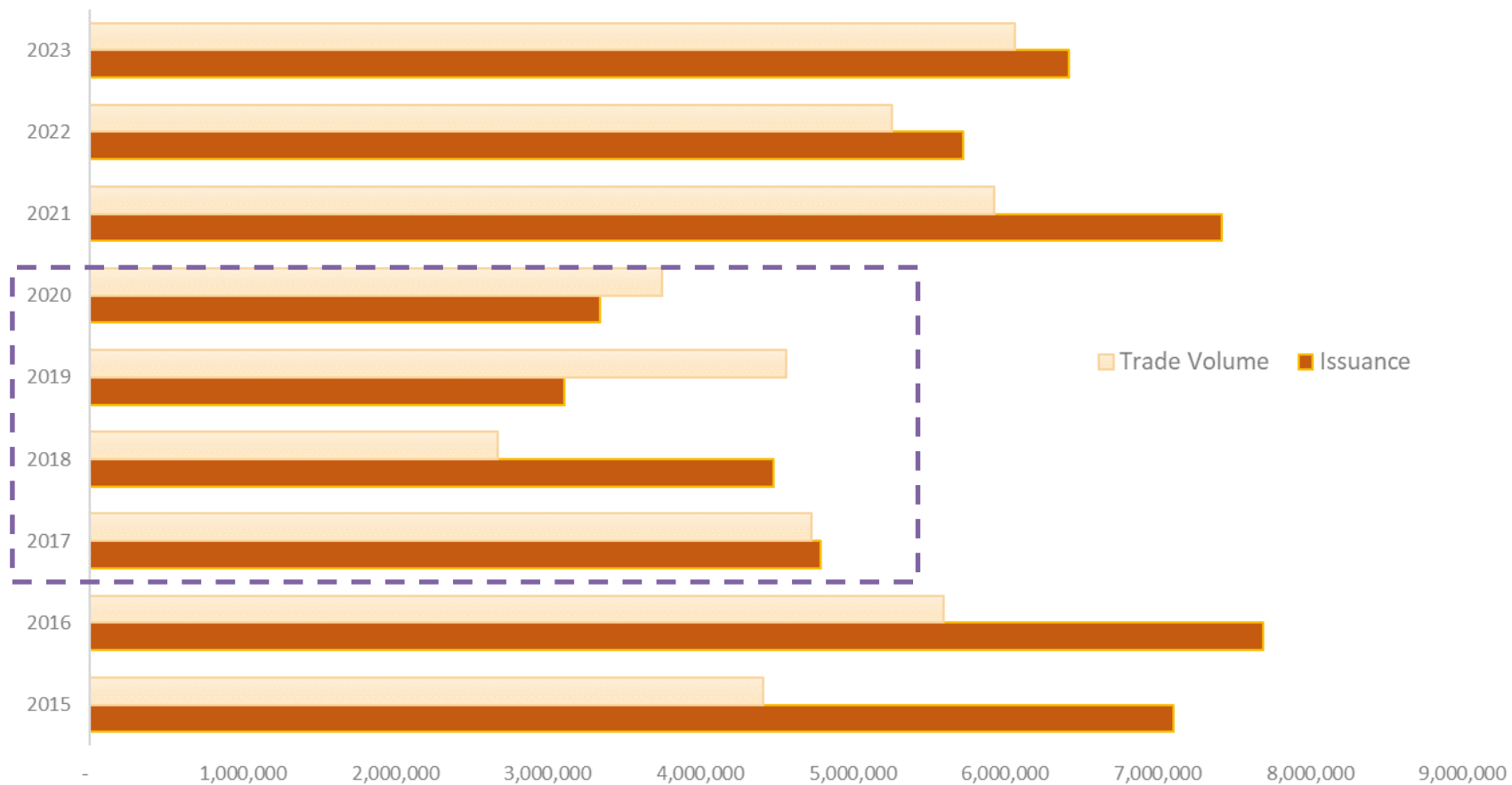
- 81 domestic methodologies
- 769 projects
- Issued date: mid-2010
- Project types: equipment replacement, fuel conversion, solar, heat pump, HFC recovery & recycling, geothermal, LED lighting, biogas generation

International Offsets

- 211 CDM methodologies
- 269 projects
- Issued date: mid-2016
- Project types: PV bundle, solar, cook stoves, clean energy equipment, gas leakage prevention, clean water supply, hydro

Offsets Supply

Yearly KOC Issuance and Trade Volume

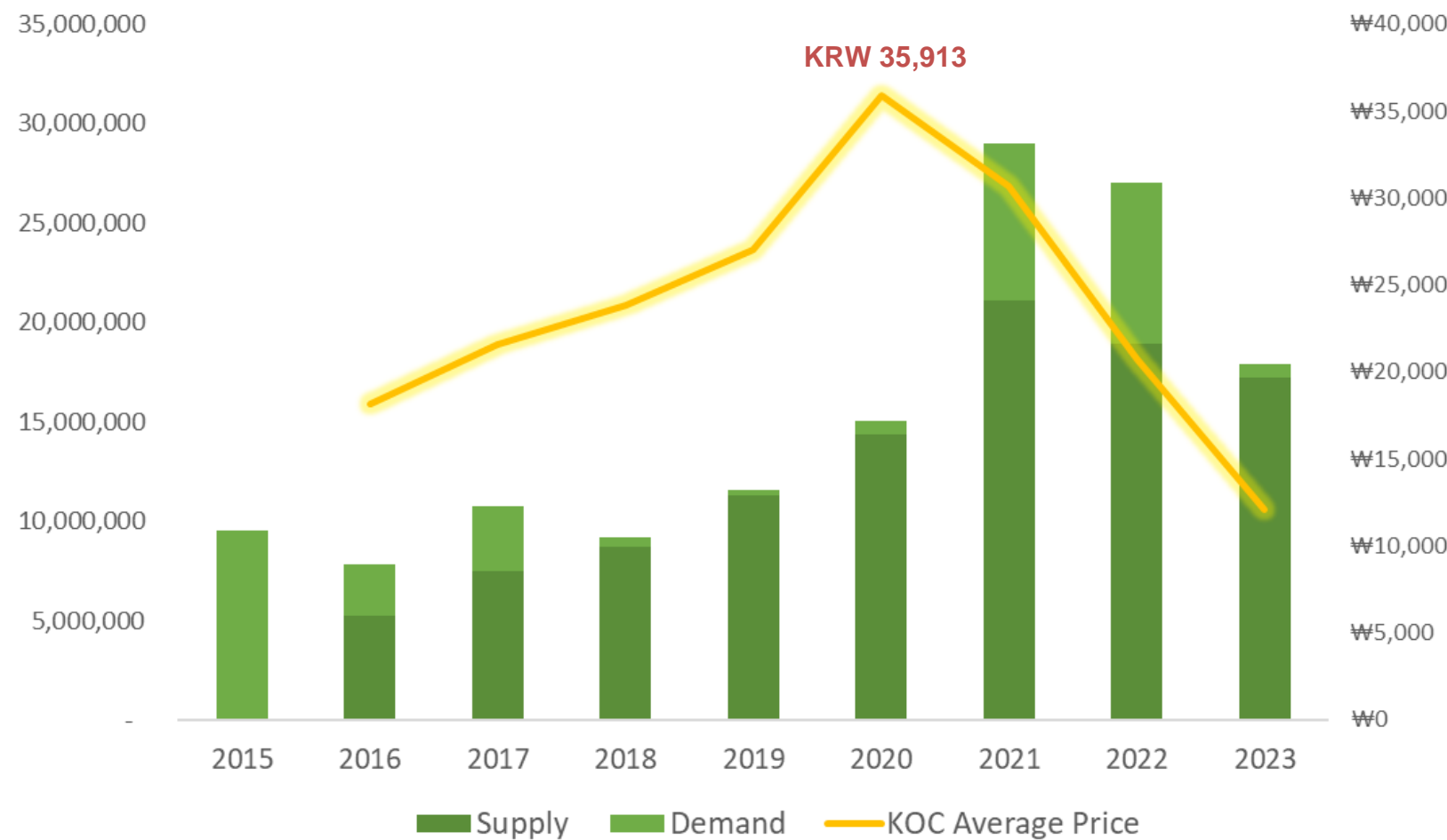


Major demand comes from the power sector: 5% maximum offsets equivalent to 10 million tons annually, industry demand also reaches around 10 million tons (half from the steel sector)

Offsets Demand

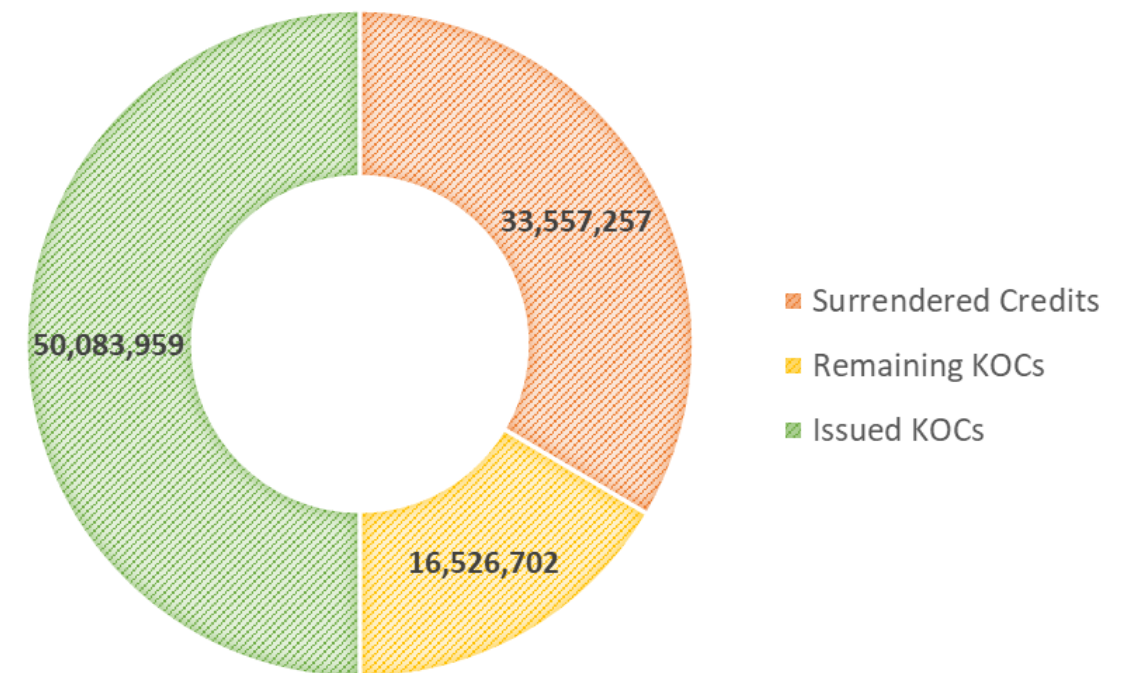


Yearly Supply and Demand



✓ Piling supply in Phase 3

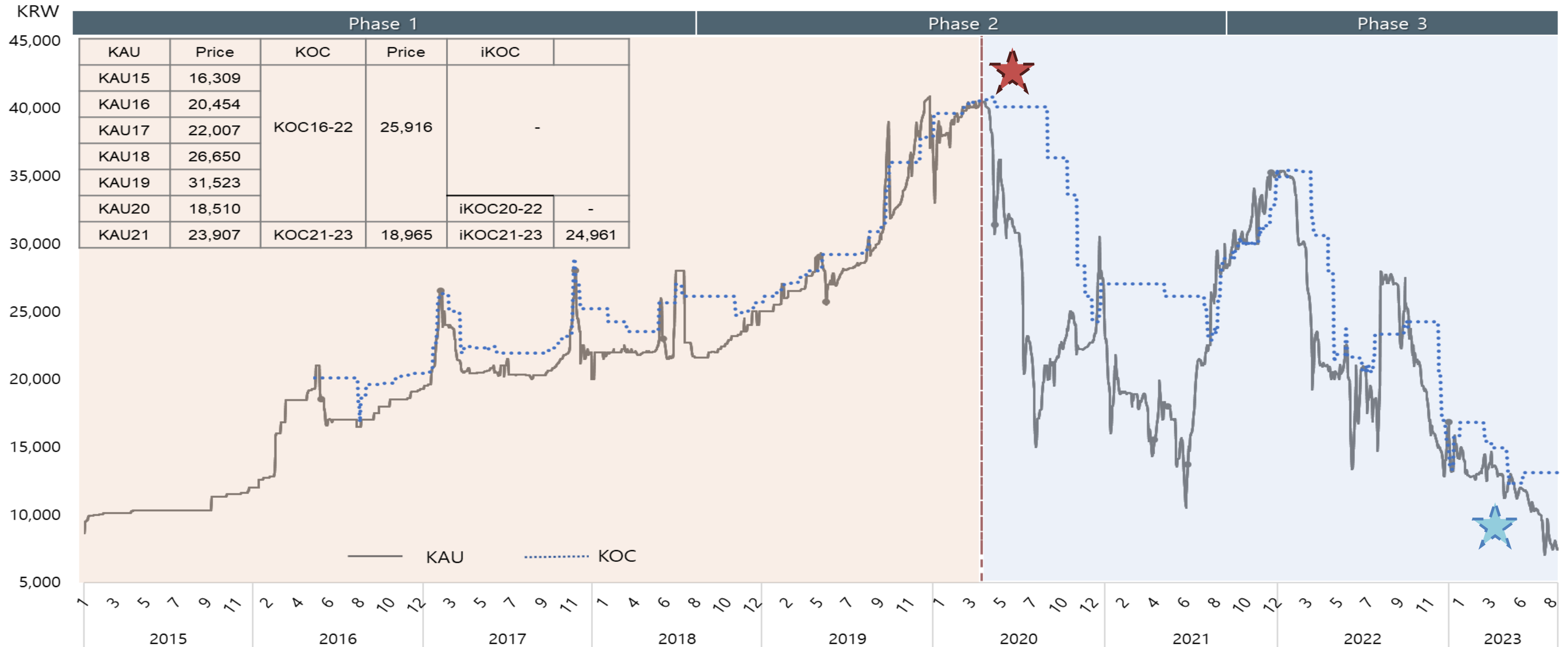
KOC Data (2015-2023)



✓ More than half of issued offsets in the K-ETS have been used for compliance

✓ 16.5 million tons available as of 2023

KAU and KOC Price Trend 2015.01~2023.08



✓ Article Reached a peak of KRW 40,800 in early 2020, crashed to KRW 10,000 in 2023



THANK YOU FOR LISTENING!