



APRIL 2021

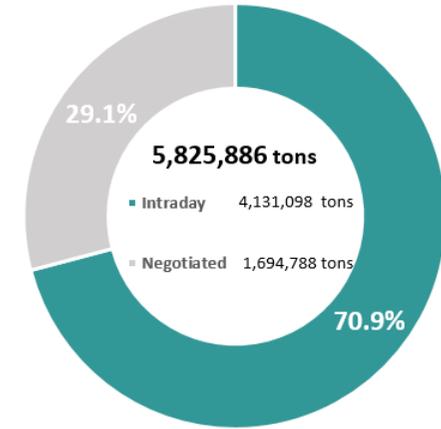
 **IMPACT CARBON**

Ecoeye International
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Comprehensive Market Information (January 2020 – March 2021)



KAU20 Intramarket Trade



	KAU20					KAU21				KOC			
	Closing Price	Intramarket	OTC	Auction	Volume	Closing Price	Intramarket	OTC	Volume	Closing Price	Intramarket	OTC	Volume
Prev.	39,000	33,139	1,250,000	-	1,283,139					39,500	2,845,779	19,126,358	21,972,137
2020													
Jan	38,000	13,300	790,000	-	803,300					39,500	15,304	-	15,304
Feb	39,000	156,050	-	-	156,050					39,500	-	-	-
Mar	40,250	32,149	500,000	-	532,149					40,400	83,033	356,621	439,654
Apr	40,500	78,554	-	-	78,554					40,800	64,692	-	64,692
May	33,500	58,650	20,000	-	78,650					40,000	-	500,000	500,000
Jun	33,000	38,652	1,519,000	-	1,557,652					40,000	-	113,089	113,089
Jul	21,250	162,047	1,569,502	-	1,731,549					40,000	-	109,159	109,159
Aug	21,400	395,218	203,007	487,700	1,085,925					36,000	-	430,500	430,500
Sep	22,300	1,190,143	813,293	595,800	2,599,236					36,000	-	15,572	15,572
Oct	24,050	637,932	400,000	616,100	1,654,032					27,500	-	253,000	253,000
Nov	22,700	676,875	1,240,000	362,500	2,279,375					23,000	45,000	546,651	591,651
Dec	23,000	639,473	1,495,000	858,900	2,993,373					26,000	12,000	1,204,151	1,216,151
2021													
Jan	19,400	500,506	1,664,800	271,000	2,436,306	20,100	114,000	1,188,000	1,302,000	26,000	-	-	-
Feb	18,950	420,353	550,000	-	970,353	18,900	1,000	550,000	551,000	26,000	-	3,021	3,021
Mar	18,100	792,845	(undisclosed)	-	792,845	20,150	2,500	(undisclosed)	2,500	26,000	-	(undisclosed)	-
Total	-	5,825,886	12,014,602	3,192,000	21,032,488	-	117,500	1,738,000	1,855,500	-	3,065,808	22,658,122	25,723,930

KAU20/KAU21/KOC Market Trend

Intramarket Trade Information	KAU20	KAU21	KOC
Closing Price (March)	₩18,100	₩20,150	₩26,000
All-time High	₩42,500	₩23,000	₩40,800
All-time Low	₩15,500	₩17,150	₩15,000
1 Month Average	₩18,609	₩20,030	-
3 Month Average	₩18,839	₩18,733	-
Overall Average	₩22,638	₩18,733	₩24,188
Total Trade Volume (Overall)	5,825,886 tons	117,500 tons	3,065,808 tons
Trade Volume (March)	792,845 tons	2,500 tons	-
- Intraday	783,345 tons	2,500 tons	-
- Negotiated	9,500 tons	-	-
Total Trade Value (Overall, in KRW)	131.89 Billion	2.2 Billion	74.16 Billion
Trade Value (March, in KRW)	14.75 Billion	50.75 Million	-

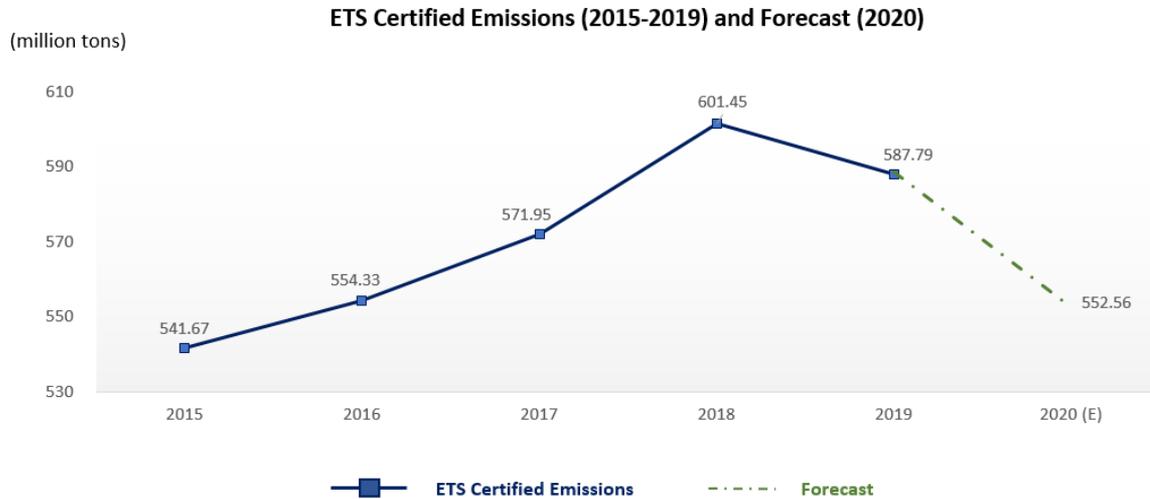
Date	KAU20		KAU21		KOC	
	Closing Price	Fluctuation Gap	Closing Price	Fluctuation Gap	Closing Price	Fluctuation Gap
2-Mar-2021	18,000	▼950	18,900	-	26,000	-
3-Mar-2021	18,400	▲400	18,900	-	26,000	-
4-Mar-2021	18,400	-	18,900	-	26,000	-
5-Mar-2021	18,900	▲500	18,900	-	26,000	-
8-Mar-2021	18,900	-	18,900	-	26,000	-
9-Mar-2021	18,900	-	18,900	-	26,000	-
10-Mar-2021	18,900	-	18,900	-	26,000	-
11-Mar-2021	18,900	-	18,900	-	26,000	-
12-Mar-2021	18,500	▼400	18,900	-	26,000	-
15-Mar-2021	18,000	▼500	18,900	-	26,000	-
16-Mar-2021	17,800	▼200	19,000	▲100	26,000	-
17-Mar-2021	18,000	▲200	20,000	▲1000	26,000	-
18-Mar-2021	18,400	▲400	20,000	-	26,000	-
19-Mar-2021	18,300	▼100	20,000	-	26,000	-
22-Mar-2021	18,500	▲200	20,000	-	26,000	-
23-Mar-2021	18,700	▲200	20,000	-	26,000	-
24-Mar-2021	18,900	▲200	20,000	-	26,000	-
25-Mar-2021	18,900	-	20,000	-	26,000	-
26-Mar-2021	18,950	▼50	20,000	-	26,000	-
29-Mar-2021	18,900	▼50	20,200	▲200	26,000	-
30-Mar-2021	18,350	▼550	20,200	-	26,000	-
31-Mar-2021	18,100	▼250	20,150	▼50	26,000	-

Korea Allowance Unit (KAU) Performance (January 2015 – January 2021)



MARKET ANALYSIS

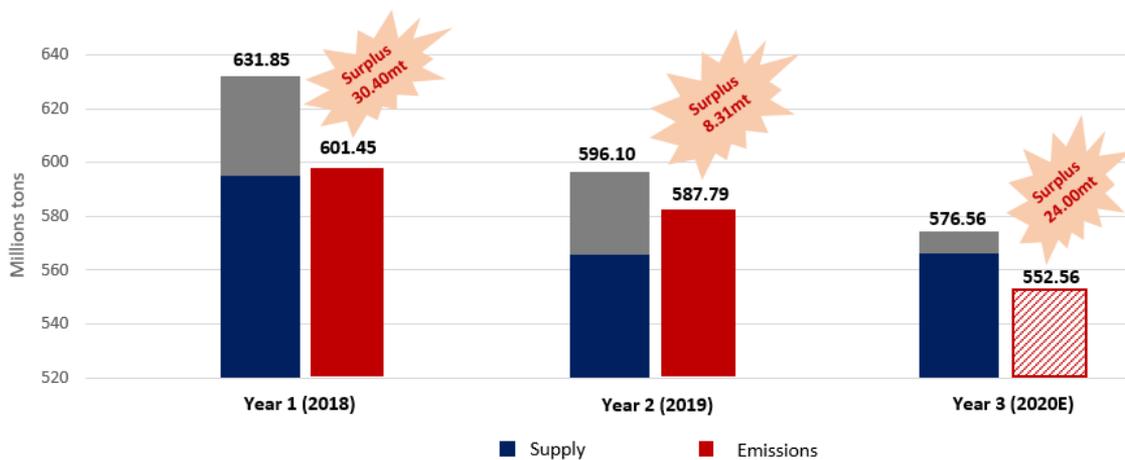
❖ Surplus and Deficit Forecast (2020)



The updated emissions forecast by Ecoeye shows that the emissions in 2020 is expected to decrease by almost 6% from 587.79 million tons in 2019 to 552.56 million tons. Emitters are estimated to hold around 45.14 million tons of excess allowances while a shortage of 21.15 million allowances is expected, leaving a net surplus of 24 million tons in the market.

From these figures, it appears that about 3.99 million tons of KAU20 allowances cannot be carried over to the next compliance year and will be automatically retired.

The Ministry of Environment is expected to release a supply and demand report covering the 2020 compliance period by mid-April or May 2021.

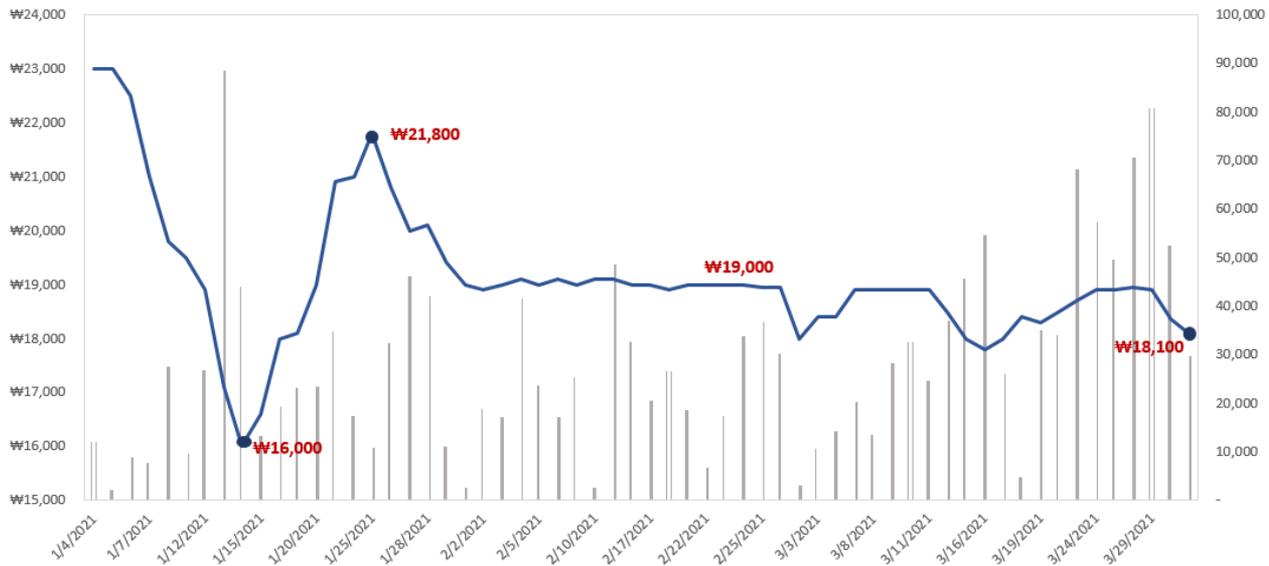


❖ Price Trend

KAU20s have maintained a flat rate between KRW 18,000 – KRW 19,000 since the end of January. The average monthly prices showed a continuous decline from KRW 19,050 in January to KRW 19,021 in February to KRW 18,609 in March. Prices are expected to fall further once the amount of expiring allowances are confirmed.

After the submission of emissions statements, trading is expected to begin in earnest. Looking at past trading patterns, 64.2% of the total trade volume was concentrated in the quarter prior to the compliance deadline. Price volatility is expected to intensify around this period. In addition, the environment ministry’s supply and demand report will likely determine the price direction from thereon.

The environment ministry is also preparing to implement market stabilization measures and a temporary minimum trading price in the possibility of price crash due to the expiring allowances.



❖ Trading Trend

From September 2019 until February 2021, the power generation and energy sector dominated the buy and sell volume in the market, followed by the market makers and the petrochemical industry. Companies from the industrial complex and steel sectors were also included in the top sellers.

K-ETS UPDATES

Emissions Trading Act Amendments

The following items have been amended with immediate effectivity:

- An entity that is registered and licensed as an investment trading business and investment brokerage business is eligible to participate as market makers
- The domestic and international classification concerning the limit submission of offset credits has been deleted
- Companies receiving free allocations, including the collective energy sector, have been expanded until 2023

Designation of Additional Market Makers

The Ministry of Environment will appoint three additional market makers in addition to the current market makers, Korea Development Bank (KDB) and Industrial Bank of Korea (IBK), in order to revitalize the market and increase liquidity. Applications ran until March 31st and notifications are expected in April.

Once designated, the market makers will perform their functions from May 2021 to December 2021.

Carbon Neutral Technology Innovation Promotion Strategy

The “Carbon Neutral Technology Innovation Promotion Strategy”, a strategy that was agreed on a cross-ministerial meeting, that contains ten core technology goals and strategies for realizing carbon neutrality in 2050 has been announced. This plan contains the overall support measures towards the development and commercialization of carbon-neutral innovative technologies and the creation of an advanced carbon-neutral ecosystem.

10 Core Technology Areas for Carbon Neutrality

Solar Energy / Wind Power		Hydrogen	Bioenergy
<p>Plan Expansion of highly efficient applications</p> <p>Target Efficiency: (2020) 27% →(2030) 35% →(2050) 40%</p>	<p>Plan Localization of large-scale land and offshore wind power</p> <p>Target Capacity: 5.5MW→(2030)15MW →(2040)20MW</p>	<p>Plan Reduction of unit cost and secure stable supply technology</p> <p>Target Charging unit 7,000 won → (2030) 4,000 won/kg → (2040) 3,000</p>	<p>Plan Secure economic feasibility of various fuel technologies</p> <p>Target 50% of the price compared to fossil fuel → (2030) 100% → (2040) 85%</p>
Steel and Cement Industry		Petrochemical	Industrial Processes
<p>Plan (short-term) Secure low-carbon fuel and raw material replacement technology (long-term) Hydrogen reduction steelmaking technology</p> <p>Target (Steel) 0% hydrogen → (2040) 100% used (Cement) fuel 24% → (2040) 65% replaced</p>		<p>Plan Secure low-carbon raw material, process electrification technology</p> <p>Target Compared to existing products, the price is 150% → (2040) 100%</p>	<p>Plan Advanced emission control, securing alternative gas</p> <p>Target Reduction efficiency 80%→(2040)95%</p>
Transport	Building	Digitalization	CCUS
<p>Plan Secure high-performance and fast charging technology</p> <p>Target Driving distance 406 → (2045) 975km</p>	<p>Plan Secure unit facilities and operate optimization technology</p> <p>Target (2030) Gain 30% efficiency technology</p>	<p>Plan Higher ICT efficiency, secure next-generation power grid</p> <p>Target (2030) Data center power 20% ↓</p>	<p>Plan Large-scale development and demonstration of innovative materials</p> <p>Target Price competitiveness : 60\$/ton→(2030) 30\$/ton→(2050) 20\$/ton</p>

The measures are based on Korea’s Low-Emission Development Strategy (LEDS) and is targeting the urgent demand of industries concerning carbon neutrality. Based on this plan, the relevant ministries will promote low-carbon research and development to quickly replace high-carbon processes and products in each industrial sector.

The core technology areas selected are as follows: ① solar power generation and wind, ② hydrogen full-cycle technology, ③ bioenergy technology, ④ low-carbon transition for steel and cement industries, ⑤ next-generation low-carbon petrochemical, ⑥ industrial process efficiency, ⑦ non-carbon transport technology, ⑧ carbon-neutral building-based technology, ⑨ digital-based efficiency optimization, and ⑩ carbon capture, utilization, and storage (CCUS) commercialization technology.

Meanwhile, the innovative low-carbon ecosystem will be supported and promoted from start-up to commercialization, and will be strengthened by the creation of standards and certification systems, human resources training, and through international cooperation to sustain technological innovation.

KOREA ETS 2021 SCHEDULE

(as of 02 April 2021)

January		July	
Revised guidelines on reporting and certification	(01/01)	KAU Auction (KAU21, 2,150,000 tons)	(07/14)
New listing of KAU21-KAU25	(01/04)	Notification of Results (Objections/Appeals)	(07/30)
2021 designation of market makers	(01/06)	Designation of New Entrants (2022)	
KAU Auction (KAU20, 400,000 tons)	(01/13)		
Amended market maker designation and operation	(01/15)		
Revised external business guidelines	(01/22)		
Draft green finance promotion plan	(01/25)		
Application for P3 Allocation Appeals	(-01/25)		
Carbon Neutral Support Council meeting	(01/29)		
February		August	
KAU Auction postponed to April		Surrender of Allowances and Banking Application (w/ appeals)	(-08/10)
Opening of the NGMS System	(02/01)	KAU Auction (KAU21, 2,150,000 tons)	(08/11)
37th Emission Certification Committee (Q1)	(02/22-23)		
MoE-Industry Environmental Policy Meeting	(02/26)		
March		September	
KAU Auction postponed to April		KAU Auction (KAU21, 2,150,000 tons)	(09/08)
Announcement of 2021 Carbon Neutral Implementation Plan	(03/02)	40th Emission Certification Committee (Q3)	(09/27-28)
Promulgation of Partial Amendments to the ETS Act	(03/23)		
Application Additional Market Makers	(03/22-31)		
2020 Emissions Statement Submission and Application for Additional Allocation /Cancellation	(-03/31)		
April		October	
KAU Auction (KAU20, 200,000 tons)	(04/21)	KAU Auction (KAU21, 2,150,000 tons)	(10/13)
May		November	
KAU Auction (KAU20, 1,000,000 tons)	(05/12)	KAU Auction (KAU21, 2,150,000 tons)	(11/10)
Notification of Statements, Additional Allocation/Cancellation	(05/31)	Announcement of 2022 Auction Plan	(11/30)
		COP26	(11/1-12)
June		December	
18th KAU Auction (KAU20, 3,871,500 tons)	(06/09)	KAU Auction (KAU21, 2,150,000 tons)	(12/08)
KAU20 Banking Application	(-06/10)	41st Emission Certification Committee (Q4)	(12/27-28)
39th Emission Certification Committee (Q2)	(06/21-22)		
Surrender of Allowances	(-06/30)		

Ecoeye, Your Carbon Desk



(source: MT Korea)

The first batch of the International Korean Offset Credits (i-KOCs) have been certified and approved by the 37th emission accreditation committee, marking the introduction of the first i-KOCs in the Korean carbon market.

One of the projects that was certified was the Bangladesh cook stove program, a project that supplies clean cook stoves to Bangladeshi households to replace conventional cooking facilities. This CDM project is jointly operated by Korea Midland Power (KOMIPO), SK Securities, and Ecoeye.

Offset credits certified and issued in 2021 will be listed in the Korea Exchange as KOC21 and i-KOC21, and can be converted to Korean Credit Units (KCU) until 2023.



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Ecoeye is a carbon specialist firm with a strong track record on emission reduction project development and a leading offset provider in Korea. We provide carbon trading services, ETS advisory and domestic market analysis and forecasting

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