



MAY 2019



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## MARKET SITUATION (April 1, 2019 – May 23, 2019)

### Near-term Outlook: Rising prices, volatility ahead

- Prices climbed to KRW 29,300 on May 9 after weeks of aggressive buying orders
- Market has been experiencing a squeeze in supply as long entities prefer to keep their allowances but a new regulation will oblige long companies to release their surpluses
- Ministry confirmed that 190 companies lack a total of 13 million tons
- Prices started dropping on May 13 in anticipation of tightened carry-over restrictions but bounced back after restrictions were eased from expectations

Type	Closing Price (KRW) *	Trade Volume (ton)**
KAU18	27,000	1,592,137
KAU19	27,900	322,000
KAU20	27,050	-
KCU18	21,800	-
KOC	28,300	717,146
Total	-	2,631,283

\* closing price as of 23 May 2019

\*\* trade period (Jan 2019 - May 2019)

KAU18 Spot Prices Trend (January 2019 - May 23, 2019)

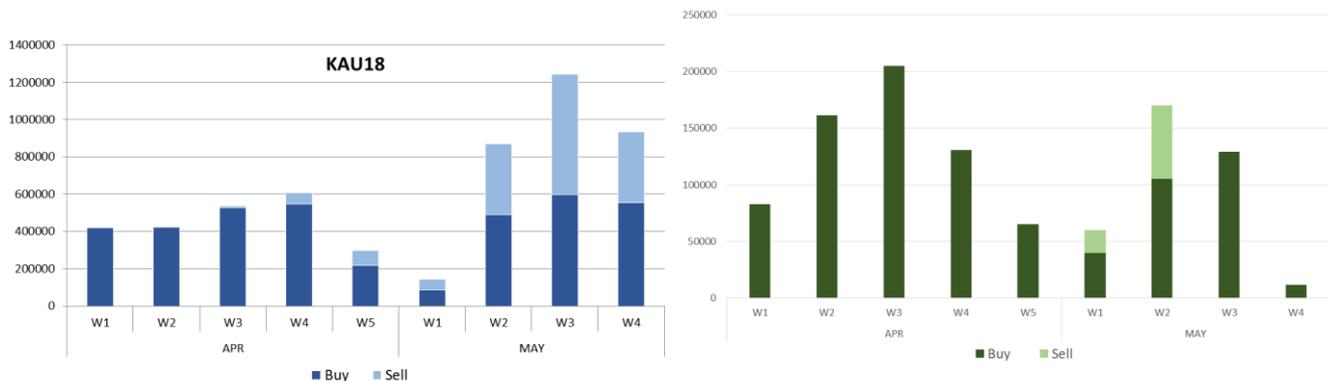


➤ Allowances prices had its first spike of the year after the second auction dragged prices up by 5.5% brought by the higher auction clearing price. The government amended the auction rules by introducing bidding limits and calculation changes to stabilize the prices.



- After the submission of emissions statements and companies confirming their short positions, buying orders doubled, driving prices upwards brought by aggressive buying orders. KAU18 prices broke the first phase’s peak price (KRW 28,000) in April 25 with prices closing at KRW 28,900 further climbing to KRW 29,000 and finally to a record high of KRW 29,300 on the 9<sup>th</sup> of May.
- According to the environment ministry, 190 out of 590 compliance entities are lacking permits and the amount is estimated at 13.57 million tons.
- Continuous decline in prices dropping to as low as KRW 25,500 was seen in anticipation of the government’s plan to set additional rules to tighten banking restrictions in accordance to the intended change of this phase’s allocation quota. However, the limitations did not include restrictions on the selling method (including SWAP transactions) influencing another increase in prices.
- The concentration of traded volume is evident in the months of April and May, and expectedly until the deadline. This is an observed trend since the first phase of the system as ETS entities turn to the market to purchase permits needed to meet compliance obligations.

Buy and Sell Orders (April 1 – May 23, 2019)



(KAU18) Buying orders have been increasing since March. The constant high volume of orders came after the submissions of emission statements and, between April 1 to May 23, buying orders ranged from 26,000 tons to 232,000 tons averaging to about 104,309 tons daily. Meanwhile, selling orders came into the market from the last week of April when prices were running high with 173,500 tons being offered on the day the prices peaked to KRW 29,300. After which, supply has been mainly driven by the government’s expected enforcement of tighter banking limits with 219,000 tons of selling orders recorded a few days before the scheduled public hearing.

(KOC) Buying orders are constant since late 2018 though volume amount is far lower than KAUs. Selling orders were rare from January to March 2019. For the month of May, four selling orders totaling to 85,000 tons were recorded.



**KAU18 Price Movement (17 April 2019 - 23 May 2019)**

Date	Closing Price (in KRW)	Difference	Fluctuation Rate	Trade Volume		
				Intraday	Negotiated	Total
17-Apr-19	27,600	-	-	-	-	-
18-Apr-19	27,650	▲ 50	▲ 0.18	-	-	-
19-Apr-19	27,900	▲ 250	▲ 0.90	10,000	-	10,000
22-Apr-19	27,900	-	-	10,000	-	10,000
23-Apr-19	27,900	-	-	15,000	32,000	47,000
24-Apr-19	28,000	▲ 100	▲ 0.36	10,000	-	10,000
25-Apr-19	28,900	▲ 900	▲ 3.21	18,000	-	18,000
26-Apr-19	29,000	▲ 100	▲ 0.35	4,000	-	4,000
29-Apr-19	28,100	▼ 900	▼ 3.10	20,000	-	20,000
30-Apr-19	28,300	▲ 200	▲ 0.71	26,200	-	26,200
2-May-19	29,000	▲ 700	▲ 2.47	16,252	-	16,252
3-May-19	29,000	-	-	6,129	100,000	106,129
7-May-19	29,000	-	-	5,119	-	5,119
8-May-19	29,200	▲ 200	▲ 0.69	14,990	-	14,990
9-May-19	29,300	▲ 100	▲ 0.34	56,881	10,000	66,881
10-May-19	29,000	▼ 300	▼ 1.02	91,500	3,000	94,500
13-May-19	28,500	▼ 500	▼ 1.72	25,600	-	25,600
14-May-19	28,200	▼ 300	▼ 1.05	43,100	-	43,100
15-May-19	28,000	▼ 200	▼ 0.71	3,590	-	3,590
16-May-19	27,950	▼ 50	▼ 0.18	39,978	-	39,978
17-May-19	27,000	▼ 950	▼ 3.40	123,191	-	123,191
20-May-19	25,500	▼ 1,500	▼ 5.56	40,700	1,099	41,799
21-May-19	25,700	▲ 200	▲ 0.78	34,576	80,000	114,576
22-May-19	26,550	▲ 850	▲ 3.31	-	16,000	16,000
23-May-19	27,000	▲ 450	▲ 1.69	37,500	-	37,500
<b>Total</b>	-	-	-	652,306	242,099	894,405

KAU18

**KOC Price Movement (1 April 2019 - 23 May 2019)**

2-Apr-19	26,500	-	-	-	-	-
3-Apr-19	26,550	▲ 50	▲ 0.19	-	-	-
5-Apr-19	27,000	▲ 450	▲ 1.69	-	-	-
29-Apr-19	27,000	-	-	-	-	-
30-Apr-19	27,100	▲ 100	▲ 0.37	-	-	-
10-May-19	28,300	▲ 1,200	▲ 4.43	-	-	-
23-May-19	28,300	-	-	-	25,000	25,000
<b>Total</b>	-	-	-	-	25,000	25,000

KOC

Reference: Korea Exchange (KRX)

**Over-the-Counter Transactions (April 2019)**

Unit: Ton

Korean Allowances (Vintage Year)	KAU18	112,500
	KAU19	-
	KAU20	-
Korean Credit Unit (KCU18)		-
Korean Offset Credit (KOC)		96,369
<b>Total</b>		<b>208,869</b>

Reference: Korea Offset Registry System (April 2019)



- Limited supply started coming into the market from the third week of April resuming active daily trading. This is initially influenced by rising prices and long companies taking advantage of the high selling prices. Some of the biggest deals for the semester were exchanged in the period when prices were at their peak.
- However, after words that the government is planning to impose additional regulations on limiting carry-overs, prices started dropping and more surpluses are being supplied into the market. The lowest spot price (KRW 25,500) was a drop of around 13% from the peak price of KRW 29,300.
- Between April 1 and May 23, spot prices range from KRW 25,500 – KRW 29,300 with daily averages between KRW 27,000 – KRW 29,207.
- April and May's total trade amounted to 898,905 tons with intraday deals accounting for 73%.
- From April 1 until May 23, KOC prices have risen four times from KRW 26,500 to KRW 28,300 due to momentum. In the same period, KOCs only made one trade clinching 25,000 tons under a negotiated deal. Prior to this, KOC traded in 21 March for 4,229 tons.

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## MARKET OUTLOOK

According to the environment ministry, 190 companies have a total deficiency of 13.57 million tons. Possible supply might come from the following: ① 5.91 million tons as a result of the banking limitations (43.6% lower than the total shortage amount), ② 200,000 tons of reserve for the market formation reserve (from June 10, 2019), and ③ 550,000 tons from the June auction. The remaining shortfall might be possibly supplied through offset credits and borrowing.

(Trading Prospects) The surpluses brought by the banking restrictions is expected to be fully supplied from the end of May and it is expected that large-scale transactions will likely be made through bilateral deals and OTC. In addition, if some SWAP transactions between KAU18 and KAU19 occur, the supply volume to the market will decrease. Borrowing is also expected to increase as companies would want to secure allowances in advance due to anticipated higher future prices.

(Price Outlook) ) KAU18 prices are likely to rise further for the time being as demand from short companies is expected to further increase. After May, when certified emissions, and quota addition and cancellation have been notified, the price will be determined by the market until end of July. Although

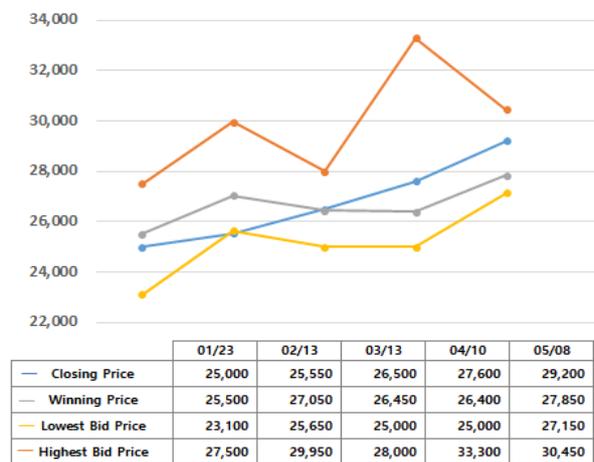
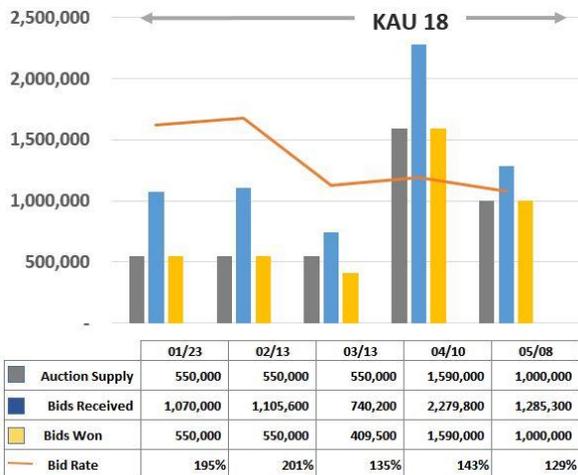


KAU18 price volatility is expected to increase from early to mid-June, prices are expected to gradually stabilize as carry-over volume increases.

(Quota Situation) In the second implementation year (2019), the pre-allocated quota is 538.64 million tons, a decrease of about 34 million tons from the first implementation year's (2018) 572.19 million tons. Since only 50% of the first year's borrowing rate is recognized, demand for allowances is likely to increase as severe shortage is expected in the second and third implementation years. There are also concerns that more companies will lack permits.

### MONTHLY AUCTION

The fifth auction was held on May 8, 2019 offering 1 million tons of allowances. Seven companies won securing all of the offered allowances at the winning price of KRW 27,850, still below KAU18's market price (4.6%) but comparably higher than previous auction winning prices. Around the time of the auction, KAUs in the secondary market have breached the KRW 29,000 level. The lowest submitted bid price was KRW 27,150 and the highest was KRW 30,450. The government is scheduled to offer 550,000 tons in the June auction where competition is expected to intensify among auction participants in their run-up to the compliance deadline.



### POLICY DEVELOPMENTS

#### ◆ Market Maker System

2019.05.10 - The market maker system is scheduled to start on June 10, 2019 and is designed to secure liquidity in the market by engaging the participation of financials in trading of allowances. The allocated



permits for the market formation reserve in Phase 2 totals to 5 million tons which the designated financial institutions can use to offer and trade.

On May 10, 2019, the government announced the official designation of two banks as market makers for the 2019 implementation cycle namely the Korea Development Bank (KDB) and the Industrial Bank of Korea (IBK).

The market makers are expected to add a maximum of 3,000 tons per day utilizing only a maximum of KRW 1,000 in the buy and sell spreads.

#### ◆ 3<sup>rd</sup> Five-Year Plan for Green Growth (2019-2023)

2019.05.21 – The government has finalized the 3<sup>rd</sup> Five-Year Plan for Green Growth. The plan includes three major initiatives, five major policy directions and 20 major tasks based on three strategies: responsible reduction of greenhouse gases and sustainable energy conversion, fostering innovative technology industries, and strengthening global green cooperation. On the part of GHG reduction, the government plans to boost the ETS market in accordance with the 2030 GHG Reduction Roadmap by focusing its support on energy decentralization, energy coordination, along with energy demand management and the expansion of new and renewable energy. The government will also prepare specific target emissions and implementation measures for each sector and make them available to the public.

In fostering innovative technologies, the government will expand R&D investment in green industries by providing 5 trillion won worth of funding with lower interest rates until 2021 to finance facility investments with new environmental technologies.

The government will also draw up a “2050 Low Carbon Development Strategy” that will be submitted to the UN next year. The plan includes carbon emissions reduction by 2050 and a carbon certification system.

#### ◆ Banking Restrictions

2019.05.21 – A public hearing was made to discuss the main contents of the proposed change in the allocation plan including carry-over restrictions between implementation years of Phase 2. According to the proposed plan, limitations will be made in proportion to the amount that an entity sells. However, major ETS sectors and industries have negotiated with the government to make exceptions for allowances that were purchased before the enforcement of the new allocation plan, regardless of current conditions.

For KAU18, it is possible to carry forward whichever has a bigger value from:

- ① three times the \*net selling amount, or



- ② 75,000 tons (for companies emitting 125,000 TCO<sub>2</sub>e) or 15,000 tons (for companies emitting 25,000 TCO<sub>2</sub>e).

\*net selling amount is calculated as “sold allowances – purchased allowances” done within the covered implementation year

※For KAU18 SWAP transactions between KAU18 and KAU19 is possible as this will not be regulated in the 2018 implementation year. However, SWAPs might be included in the regulations from the succeeding years.

For KAU19, whichever is bigger between: ① twice the net selling amount, or ② 50,000 tons (for companies emitting 125,000 TCO<sub>2</sub>e) or 10,000 tons (for companies emitting 25,000 TCO<sub>2</sub>e)

For KAU20, the larger amount between the annual net selling amount during Phase 2, or, 25,000 tons (for companies emitting 125,000 TCO<sub>2</sub>e) or 5,000 tons (for companies emitting 25,000 TCO<sub>2</sub>e).

The proposed changes are designed to address the difficulties of the current 190 permit-deficient companies for the 2018 implementation year.

The environment ministry plans to finalize the amended Phase 2 allocation plan within the month of May. The enforcement of the banking limitations will start from May 31.

In addition, the compliance deadline for the current implementation year is moved to August 31 instead of end-June to give way for ample trading time and the application for banking and borrowing of allowances (August 1 – August 10).

**Table 1. K-ETS Phase 2 (2018-2020) Schedule**

	1Q	2Q	3Q	4Q
2018 (1st Year)	Jan	2: KAU 18 Listing ~31: MP submitted by new entities of 2nd year	May	30: 2017 notification of certified emissions/additional quota
	Mar	~31: 2017 MP submission application for additional allocation	Jun	~11: 2017 banking application (borrowing X, 5/31~) 22: KCU 18 Listing ~29: notification/application for appeals
			Jul	~02: 2017 Emission certificate submission (5/31 ~) ~02: Application for ETS Voluntary Participation 31: designation and notification of new entrants
			Aug	~09: 2017 Submission of emission allowance 10: Delisting of KAU17/KCU17 31: Phase 2 Allocation
			Oct	31: Phase 2 Quota Notification
			Nov	8: KAU19/KAU20 Listing
			Dec	~31: 2018 request for MP review
2019 (2nd Year)	Jan	23: First auction of allowances	Apr	10 Fourth auction of allowances
	Feb	13: Second auction of allowances	May	8: Fifth auction of allowances
	Mar	13: Third auction of allowances ~31: 2018 emissions certification and MP submission (est) 2018 additional allocation application	Jun	31: 2018 notification of certified emissions/ allocation addition or cancellation 10: (est) Operation of market maker system 12: (est) Sixth auction of allowances ~30: (est) Appeals for certified emissions and additional quota
			Jul	10: (est) Seventh auction of allowances ~31: (est) notification of results (appeals application) ~31: (est) designation and notification of new entrants
			Aug	1-10: (est) application submission (banking/ borrowing) 14: (est) Eight auction of allowances ~31: (est) Surrender of allowances
			Sep	11: (est) Ninth auction of allowances
			Oct	8: (est) Tenth auction of allowances
			Nov	13: (est) Eleventh auction of allowances
			Dec	11: (est) Twelfth auction of allowances
2020 (3rd Year)	Jan	~15: (est) 2019 request for MP review	May	31: (est) 2019 notification of certified emissions/additional allocation
	Mar	~31: (est) 2019 emissions certification and MP submission (est) 2019 application for additional allocation	Jun	~10: (est) 2019 allowance banking and borrowing ~30: (est) 2019 surrender of allowances (est) 2019 notification/application for appeals
			Jul	31: (est) notification of results (complaints/objection) ~31: (est) Phase 3 Allocation Plan (est) Phase 3 Assignment of Compliance Entities (est) designation and notification of new entrants
			Aug	~10: (est) 2019 surrender of allowances (for companies with objection) ~31: (est) Phase 3 application for allowances allocation
			Oct	31: (est) notification of Phase 3 allocation quota
2021	Jan	~15: (est) 2020 request for MP review	May	31: (est) 2020 notification of certified emissions/additional allocation
	Mar	~31: (est) 2020 emissions certification and MP submission (est) application for additional allocation	Jun	~10: (est) 2020 banking of allowances (borrowing X) ~30: (est) surrender of allowances (est) 2020 notification of appeals
			July	31: (est) notification of results (complaints/objections)
			Aug	~9: (est) 2020 surrender of allowances (for companies with objections)



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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

#### **[Contact Us]**

##### **Carbon Market Research Team**

Hyunshin Park  
Team Leader  
phs0321@ecoeye.com

Maureen Lee  
Publisher/Market Analyst  
mlee@ecoeye.com

For offset project partnership, offset trading and other inquiries, you may reach us at [info@ecoeye.com](mailto:info@ecoeye.com)

