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## ***ARGUS AIR DAILY***

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The most up-to-date Argus Air Daily methodology is available on [www.argusmedia.com](http://www.argusmedia.com)

## Introduction

Argus Air Daily is a daily market report that publishes price assessments and indexes for SO<sub>2</sub>, NO<sub>x</sub>, US renewable energy certificate and US greenhouse gas markets. It also publishes daily and weekly analyses of the environmental markets.

Argus holds as a guiding principle that our assessments should be the product of intelligence, skill and diligent investigation. Environmental markets need a measure of cross-validation and editorial scrutiny in order to support accurate and consistent price discovery suitable for use in contracts.

## Assessment process

To produce these assessments, Argus relies on information from multiple sources, including brokers, traders, generators, utilities and industrials. Argus will accept information by phone, instant messenger, email or by other means. Argus verifies all deal prices and volumes it publishes. Argus assesses an intelligent range of trade and reserves the right to exclude deals. Should a deal fall well outside the channel of trade or raise other concerns, Argus will consult with market sources about whether to include that transaction.

The Argus daily prices are intelligent assessments of the bid/ask range at the timestamp of 5:00pm Eastern Time. The assessed price takes into account deals done, bids, offers, spreads between current and future vintages/compliance years, and other assessments of the market gathered through a wide survey of participants. The assessment represents the range within which deals traded or could have traded at the close of the trading day for that particular vintage. In its publication and some data products, Argus provides the calculated midpoint or "price" for bid/ask ranges for the convenience of subscribers. This is the arithmetic mean of the bid and ask data, displayed and rounded to two decimal places. Reporters make diligent surveys of market participants every day with a distinct focus in the afternoon in order to obtain a consensus from the market as to the value of the bid/ask range at the timestamp.

## Corrections policy

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation error, misreported trade information from sources, or a misapplication of our stated methodology. Argus reviews corrections for material effect on price data and the amount of time that has elapsed from the date of published price data before deciding whether to issue a correction. After 30 days, Argus is unlikely to make a correction to published data. Argus will not retroactively assess markets based on information learned after the assessments are published.

## Argus US environmental markets coverage

### SO<sub>2</sub> and NO<sub>x</sub>

Argus produces a daily price assessment for current vintage SO<sub>2</sub> allowances created under the Clean Air Act Title IV Acid Rain Program. Each allowance represents half of a ton of SO<sub>2</sub> emitted for generators in 28 eastern states covered by the Clean Air Interstate Rule (CAIR) and a full ton of SO<sub>2</sub> for generators operating in states not covered by CAIR.

Argus produces a daily assessment for pre-CAIR SO<sub>2</sub> allowances which are Acid Rain Program allowances issued in 2009 or earlier. These represent a full ton of SO<sub>2</sub> emitted regardless of where a generator is operating.

On Fridays or the last business day of the week, Argus publishes a seven-year Acid Rain Program SO<sub>2</sub> forward curve beginning with the current vintage.

Argus also assesses the price of annual and ozone season NO<sub>x</sub> allowances created by CAIR. Each allowance is worth one short ton of NO<sub>x</sub> emissions. The ozone season CAIR NO<sub>x</sub> program runs from May-September.

Argus publishes prices for current vintage Cross-State Air Pollution Rule (CSAPR) allowances and one year forward.

Argus assesses daily prices for group 1 and group 2 SO<sub>2</sub> allowances. The groups' allowances are not fungible.

SO<sub>2</sub> group 1 states are: Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and Wisconsin.

SO<sub>2</sub> group 2 states are: Alabama, Georgia, Kansas, Minnesota, Nebraska, South Carolina and Texas.

Argus also publishes daily prices for annual and ozone season NO<sub>x</sub> CSAPR allowances. The ozone season CSAPR NO<sub>x</sub> program runs from May-September.

For each SO<sub>2</sub> and NO<sub>x</sub> assessment, Argus publishes monthly indexes. These indexes represent the arithmetic average of the daily "price" published for current vintage allowances for each day on which prices were published. Monthly indexes are published on the final trading day of each calendar month and a table of the most recent monthly index values is published each Friday.

For Acid Rain Program SO<sub>2</sub> and CAIR annual NO<sub>x</sub>, Argus publishes weekly indexes on the last business day of each week. These indexes represent the arithmetic average of the daily "price" published for current vintage allowances for each day on which prices were published during that week.

Argus CSAPR allowance assessments						
Instrument	Description	Administering agency	Roll date	Delivery timing	Quotation	Publishing schedule
Cross-State Air Pollution Rule Group 1 SO <sub>2</sub> allowances for years 1-2	SO <sub>2</sub> allowances for Group 1 states as established under 40 CFR 51, 52, 72, 78 and 97	US Environmental Protection Agency	2-Mar	1-Mar	\$/short ton	Daily
Cross-State Air Pollution Rule Group 2 SO <sub>2</sub> allowances for years 1-2	SO <sub>2</sub> allowances for Group 2 states as established under 40 CFR 51, 52, 72, 78 and 97					
Cross-State Air Pollution Rule Annual NO <sub>x</sub> allowances for years 1-2	Annual NO <sub>x</sub> allowances as established under 40 CFR 51, 52, 72, 78 and 97					
Cross-State Air Pollution Rule Seasonal NO <sub>x</sub> allowances for years 1-2	Seasonal NO <sub>x</sub> allowances as established under 40 CFR 51, 52, 72, 78 and 97		1-Dec	30-Nov		

Argus Clean Air Interstate Rule allowance assessments						
Instrument	Description	Administering agency	Roll date	Delivery timing	Quotation	Publishing schedule
SO <sub>2</sub> US pre-CAIR allowances	Title IV Acid Rain allowances as defined by US EPA at 40 CFR 72.2 and elsewhere for Vintage 2009 and prior (1 allowance = 1 ton)	US Environmental Protection Agency	N/A	Transaction-specific delivery of 2009 or prior vintage allowances	\$/allowance	Daily
SO <sub>2</sub> US allowances for years 1-8	Title IV Acid Rain allowances as defined by US EPA at 40 CFR 72.2 and elsewhere		2-Mar	1-Mar		
NO <sub>x</sub> US annual allowances for years 0-1	Annual NO <sub>x</sub> allowances as defined by US EPA at 70 CFR 25, 71 CFR 25 and elsewhere				2-Dec	
NO <sub>x</sub> US seasonal allowances for year	Ozone season NO <sub>x</sub> allowances as defined by US EPA at 70 CFR 25, 71 CFR 25 and elsewhere					

Argus RECs markets assessments						
Instrument	Description	Administering agency	Roll date	Delivery timing	Quotation	Publishing Schedule
Massachusetts Class I REC for years 1-2	Primarily solar, wind, tidal or other sustainable energy as defined by Massachusetts General Law ch. 225 CMR Section 14	Massachusetts Energy and Environmental Affairs	16-Jun	15-Jun	\$/MWh	Daily
Massachusetts Solar REC for year 1	In-state solar facilities as defined by Massachusetts General Law ch. 240 CMR Section 63					
Connecticut Class I REC for years 1-2	Primarily solar, wind, biomass or hydro as defined at Conn. Gen. Stat. §16-245 (a)	Connecticut Department of Public Utility Control	16-Sep	15-Sep		
Connecticut Class II REC for years 1-2	Primarily Biomass or trash-to-waste as defined at Conn. Gen. Stat. §16-245 (a)					
Connecticut Class III REC for year 1-2	Primarily waste heat recovery as defined at Conn. Gen. Stat. §16-243(q)					
New Jersey Class I REC for years 1-2	Primarily solar, wind or other sustainable energy as defined at NJ State Code §14:8-1.2, §14:8-2.2 & §14:8-2.5 §14:8-2.9 & §48:3-50 et seq.	NJ Board of Public Utilities Clean Energy Program	2-Oct	1-Oct		
New Jersey Class II REC for years 1-2	Primarily solar, wind or other sustainable energy as defined at NJ State Code §14:8-1.2, §14:8-2.2 & §14:8-2.5 §14:8-2.9 & §48:3-50 et seq.					
New Jersey Solar REC for years 1-2	Solar carve-out as defined at NJ State Code §14:8-1.2 §14:8-2.2 §14:8-2.3 & §48:3-50 et seq.					
Pennsylvania Solar REC for year 1	Solar photovoltaic generation as defined at 73 Pennsylvania Commonwealth Statutes § 1648.1 et seq.	Pennsylvania Public Utilities Commission	2-Sep	1-Sep		
Pennsylvania Tier I REC for year 1	Tier I Pennsylvania Commonwealth Statutes 73 § 1648.1 et seq. and 66 § 2814	Pennsylvania Public Utilities Commission	2-Sep	1-Sep		
Texas compliance REC for year 1	Primarily solar, wind, biomass or hydro as defined at Texas Utilities Code § 39.904	Texas Public Utilities Commission	1-Apr	31-Mar		
Green-e voluntary wind REC: front-half, back-half	Center for Resource Solutions' Green-e Energy Protocols	Center for Resource Solutions' Green-e Program	1-Jul; 1-Jan	Contract-specific		

### Renewable energy certificates (RECs)

Argus publishes daily markets for compliance and voluntary RECs.

Argus assesses the compliance markets in Massachusetts, Connecticut, New Jersey, Pennsylvania and Texas.

Argus also assesses the market for voluntary RECs registered under the National Green-e standard.

Each REC represents 1MWh of renewable power.

For the current vintage of each REC assessment, Argus publishes monthly indexes. These indexes represent the arithmetic average of the daily "price" published for current vintage allowances for each day on which prices were published. Monthly indexes are published on the final trading day of each calendar month and a table of the most recent monthly index values is published each Friday.

Argus California Carbon Allowance assessments						
Instrument	Description	Administering agency	Roll date	Delivery timing	Quotation	Publishing Schedule
California Carbon Allowances for years 1-2	Greenhouse gas emissions allowances as defined under California Code of Regulations sections 95820 and 95821	California Air Resources Board	1-Jan	31-Dec	\$/metric tonne	Daily

Argus RGGI CO <sub>2</sub> allowance assessments						
Instrument	Description	Administering agency	Roll date	Delivery timing	Quotation	Publishing Schedule
RGGI CO <sub>2</sub> US allowance prompt	Spot delivery RGGI CO <sub>2</sub> , a limited authorization under the CO <sub>2</sub> Budget Trading Program to emit up to one ton of CO <sub>2</sub>	RGGI Inc.	2-Mar in the year following the end of a compliance period	1-Mar in the year following the end of a compliance period	\$/short ton	Daily
RGGI CO <sub>2</sub> US allowance year	December delivery RGGI CO <sub>2</sub>		1-Jan	31-Dec		

Argus RGGI CO <sub>2</sub> volume weighted averages		
Instrument	Description	Publishing Schedule
RGGI CO <sub>2</sub> US allowance VWA year	VWA of RGGI CO <sub>2</sub> December delivery trades in daily trading session	Daily
RGGI US allowance MTD VWA year	VWA of RGGI US December delivery trades in the month	

Argus Alberta Carbon Offset assessments							
Instrument	Description	Administering agency	Roll date	Delivery timing	Quotation	Publishing Schedule	
Alberta agricultural tillage offset credits for year 1	Greenhouse gas emissions offsets as defined under Alberta's tillage system management quantification protocol	Alberta Environment	1-Apr	31-Mar	Canadian \$/metric tonne	Weekly	
Alberta renewable energy offset credits for year 1	Greenhouse gas emissions offsets as defined under Alberta's renewable energy use and quantification protocols						

Argus Climate Reserve Tonne offset assessments						
Instrument	Description	Administering agency	Delivery timing	Quotation	Publishing Schedule	
California-compliant CRT offset	Prompt-delivery California-compliant greenhouse gas offsets vintage 2006 or later	Climate Action Reserve	Transaction-specific	\$/metric tonne	Weekly	
Non-California compliant CRT offset	Prompt-delivery non-California-compliant greenhouse gas offsets vintage 2006 or later					

## California Carbon Allowances

Argus publishes daily price assessments for forward trade agreements for vintage 2013 California Carbon Allowances (CCA) to be delivered in December 2012 and December 2013. Each CCA is worth one metric tonne of CO<sub>2</sub> equivalent.

For the December 2012-delivery CCA assessment, Argus publishes monthly indexes. These indexes represent the arithmetic average of the daily "price" published for current vintage allowances for each day on which prices were published. Monthly indexes are published on the final trading day of each calendar month and a table of the most recent monthly index values is published each Friday.

## RGGI CO<sub>2</sub>

Argus assesses prices for CO<sub>2</sub> allowances traded in the Regional Greenhouse Gas Initiative (RGGI), a nine-state CO<sub>2</sub> trading program in the northeast. The states covered under this program are: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont. Argus assesses spot and first year forward RGGI CO<sub>2</sub> prices for the current compliance period. The first year forward CO<sub>2</sub> price is

an assessment of the value of an allowance to be delivered on 31 December of the prompt year.

Argus also calculates a daily and monthly volume-weighted average price of transactions of the December-delivery contract reported during the trading session. When no trades are reported during a trading session, Argus publishes the daily price as the daily VWA. When there has been no trading activity reported during the current month, Argus publishes a null value for the monthly VWA.

For the December-delivery RGGI CO<sub>2</sub> assessment, Argus publishes weekly and monthly indexes. These indexes represent the arithmetic average of the daily "price" published for current vintage allowances for each day on which prices were published during that week.

Monthly indexes are published on the final trading day of each calendar month and a table of the most recent monthly index values is published each Friday.

## Alberta Carbon Offsets

Argus publishes a weekly price for Alberta Carbon Offsets issued to projects developed in the province under government-approved protocols. Each Alberta offset credit is worth 1 metric tonne.

Argus assesses prices for offsets issued under the agricultural tillage protocols and renewable energy protocols, which are currently attracting the most market interest. An alternative compliance payment at C\$15/mt effectively serves as a price cap for Alberta offsets.

## Climate Action Reserve Climate Reserve Tonnes

Argus publishes a weekly price for Climate Reserve Tonnes (CRTs) issued by the non-profit Climate Action Reserve. Each CRT is worth 1 metric tonne.

California has said CRTs issued to projects developed under the reserve's US urban forest protocol; the US forest protocol; the US ozone depleting substances protocol; and the US livestock manure digester protocol may be converted into compliance offsets for use in its mandatory program. Argus assesses the price for California-compliant CRTs issued to these types of projects.

Argus also assesses the price for non California-compliant CRTs issued to projects developed under the other Climate Action Reserve protocols that have not been approved for use in the mandatory California program. These offsets are largely traded on the voluntary market.

## International CO<sub>2</sub>

Argus assesses prices for Certified Emission Reductions (CERs) generated under the Kyoto Protocol's Clean Development Mechanism (CDM).

The assessments in Argus Air Daily reflect the secondary trading market for the December delivery date for the current year. Prices are quoted in euros/metric tonne of CO<sub>2</sub> equivalent (€/t CO<sub>2</sub>e).

Argus also publishes the spread between CERs and EU Emissions Trading Scheme Allowances (EUA) as defined in the European commission directive 2003/87/EC of 13 October 2003 which established the EU's greenhouse gas emission trading program. The spread represents the current value of the price differential between CERs and EUAs for December of the current year in €/t CO<sub>2</sub>e.

## Transactions and allowance transfers

Argus collects details on transactions completed in the over-the-counter market for RGGI CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>, RECs and CCA allowances. The deals are collected from brokers and traders in the

Argus Air Daily weekly indexes		
Index	Quotation	Publication Schedule
SO <sub>2</sub> US weekly index	\$/allowance	Last business day of each week
NO <sub>x</sub> US annual weekly index	\$/short ton	
RGGI CO <sub>2</sub> US allowance year weekly index	\$/short ton	

Argus Air Daily monthly indexes		
Index	Quotation	Publication Schedule
Cross-State Air Pollution Rule Group 1 SO <sub>2</sub> monthly index	\$/short ton	Last business day of each month
Cross-State Air Pollution Rule Group 2 SO <sub>2</sub> monthly index	\$/short ton	
Cross-State Air Pollution Rule annual NO <sub>x</sub> monthly index	\$/short ton	
Cross-State Air Pollution Rule seasonal NO <sub>x</sub> monthly index	\$/short ton	
SO <sub>2</sub> US pre-CAIR monthly index	\$/allowance	
SO <sub>2</sub> US monthly index	\$/allowance	
CAIR NO <sub>x</sub> US annual monthly index	\$/short ton	
CAIR NO <sub>x</sub> US seasonal monthly index	\$/short ton	
Massachusetts Class I monthly index	\$/MWh	
Massachusetts Solar monthly index	\$/MWh	
Connecticut Class I monthly index	\$/MWh	
Connecticut Class II monthly index	\$/MWh	
Connecticut Class III monthly index	\$/MWh	
New Jersey Class I monthly index	\$/MWh	
New Jersey Class II monthly index	\$/MWh	
New Jersey Solar monthly index	\$/MWh	
Pennsylvania Solar monthly index	\$/MWh	
Pennsylvania Tier I monthly index	\$/MWh	
Texas Compliance REC monthly index	\$/MWh	
Green-e voluntary half-year 1 monthly index	\$/MWh	
Green-e voluntary half-year 2 monthly index	\$/MWh	
California Carbon Allowance monthly index	\$/metric tonne	
RGGI CO <sub>2</sub> US allowance year monthly index	\$/short ton	

emissions market, and they are published in the "deals done" table in Argus Air Daily each publishing day. These deals will include OTC trades cleared through an exchange. The REC deals also include transactions through the Intercontinental Exchange from the day-prior trading session.

Separately, EPA publishes transfers of SO<sub>2</sub> and NO<sub>x</sub> allowances that are registered in its tracking system each business day. Argus publishes the transfers that occurred between non-affiliated companies or organizations the day prior to the publication date, including the vintage of the allowances and the number that were transferred.