

Methodology and Specifications Guide

US Renewable Energy Certificates

Latest update: November 2022

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Introduction

Platts, part of S&P Global Commodity Insights, methodologies are designed to produce price assessments that are representative of market value, and of the particular markets to which they relate. Methodology documents describe the specifications for various products reflected by Platts' assessments, the processes and standards Platts adheres to in collecting data, and the methods by which Platts arrives at final assessment values for publication. These guides are freely available on Platts' website for public review.

Platts discloses publicly the days of publication for its price assessments, and the times during each trading day in which Platts considers transactions in determining its assessments. This schedule of publication is available on Platts' website, at the following link: <https://www.spglobal.com/platts/en/our-methodology/holiday>.

The dates of publication and the assessment periods are subject to change in the event of outside circumstances that affect Platts' ability to adhere to its normal publication schedule. Such circumstances include network outages, power failures, acts of terrorism and other situations that result in an interruption in Platts' operations at one or more of its worldwide offices. In the event that any such circumstance occurs, Platts will endeavor, whenever feasible, to communicate publicly any changes to its publication schedule and assessment periods, with as much advance notice as possible.

All Platts methodologies reflect Platts' commitment to maintaining best practices in price reporting. Platts' methodologies have evolved to reflect changing market conditions through time and will continue to evolve as markets change. A revision history, a cumulative summary of changes to this and future updates, is included at the end of the methodology.

How this methodology statement is organized

This description of methodology for assessments is divided into seven major parts (I-VII) that parallel the entire process of producing price values for the specified market period (weekly).

- Part I describes what goes into Platts' assessments, what data market participants are expected to submit, the process for submitting data, and criteria for timeliness of market data submissions.
- Part II describes any security and confidentiality practices that Platts uses in handling and treating data.
- Part III details the price assessment principles Platts uses in deriving assessments.
- Part IV explains the process for verifying that published prices comply with Platts' standards.
- Part V lays out the verification and correction process for revising published prices.
- Part VI explains how users of Platts' assessments can contact Platts for clarification of data that has been published, or to register a complaint. It also describes how to find out more about Platts' complaint policies.
- Part VII is a list of detailed specifications for the trading locations for which Platts publishes assessments in this commodity.

Part I: Data quality and data submission

Platts' objective is to ensure that the submission of transactional information and other data inputs that editors use as the basis for their price assessments is of the highest quality. Ensuring that data used in Platts' assessments is of high

quality is crucial to maintaining the integrity of Platts' various price assessment processes. Platts regularly surveys market participants, including brokers, traders, owners of renewable energy facilities, and utilities active in the markets. Publicly available information from auctions and exchanges is also considered.

In addition, Platts accepts information on the Renewable Energy Certificates (REC) market from non-commercial departments (back offices) of companies.

Transactional information from company back offices and direct from individual market participants includes deals, bids and offers.

Platts strongly encourages companies that report transactional data from their back offices on daily electricity deals to also report REC deals. Companies that report REC deals should clearly state key attributes, including trade date, vintage, quantity and product name. Platts provides sample reporting formats to companies that are initiating transaction reporting. The sample reporting formats are available upon request to electricityprice@spglobal.com.

Part II: Security and confidentiality

Price data that is e-mailed to specific Platts e-mail addresses is entered into a secure network where it is accessible only by market editors and designated administrators. Encryption is available upon request by the reporting company. Data is stored in a secure network, in accordance with Platts' policies and procedures. Transaction-level price data is used only for constructing assessments. Platts does not use price data from an individual source for news reporting purposes, and Platts news reporters do not have access to individual entities' transaction reports. Data aggregated from all reporting sources – e.g., changes in prices and trading volumes over time – may be used as the basis for news stories.

Part III: Calculating assessments

Platts places independence and impartiality at the heart of its price assessments. Platts has no financial interest in the price of the products or commodities on which it reports. Platts' overall objective is to reflect the transactable value of the commodity assessed.

To ensure the assessments are as robust as possible, Platts editorial systems are backed by a strong corporate structure that includes managerial and compliance oversight. To ensure editors follow Platts methodology guidelines in a consistent manner, Platts' staff are trained and regularly assessed in their own and each other's markets. Platts prices are reviewed prior to publication and exercise of editorial judgment is further discussed and verified during this process.

REC assessments are published on a weekly basis and reflect market values as of Thursday at 2:30 p.m. Eastern prevailing time. Prices are assessed on Thursday and published in the Friday issue of Megawatt Daily. When Thursday falls on a holiday, prices are assessed on the last business day preceding Thursday and published in Megawatt Daily on the first business day following Thursday.

Bids and offers and other market information are compared and analyzed during the week. Bids and offers made and transactions done nearer the close receive greater weight in the assessment process.

When there is no trading activity, editors assess prices using current relationships between related markets.

Part IV: Platts editorial standards

All Platts employees must adhere to the S&P Global Code of Business Ethics (COBE), which has to be signed annually. The COBE reflects S&P Global's commitment to integrity, honesty and acting in good faith in all its dealings.

In addition, Platts requires that all employees attest annually that they do not have any personal relationships or personal financial interests that may influence or be perceived to influence or interfere with their ability to perform their jobs in an objective, impartial and effective manner.

Editors are required to ensure adherence to published methodologies as well as internal standards that require accurate records are kept in order to document their work.

Platts has a compliance function that is independent of the editorial group. Compliance is responsible for ensuring the quality and adherence to Platts' policies, standards, processes and procedures. The Compliance team conducts regular assessments of editorial operations, including checks for adherence to published methodologies.

S&P Global's internal auditor, an independent group that reports directly to the parent company's board of directors, reviews the Platts risk assessment programs.

Part V: Corrections

Platts is committed to promptly correcting any material errors. When corrections are made, they are limited to corrections to

data that was available when the assessment was calculated.

Errors that data providers should report to Platts are limited to inaccuracies in the attributes (price, volume, location, etc.) at the time the transaction was done and reported to Platts, and do not include operationally driven, after-the-fact changes in the nature of the transaction.

If Platts is notified of an error in a submission after a price is calculated and published, it will assess the impact of the error.

Part VI: Requests for clarifications of data and complaints

Platts strives to provide critical information of the highest standards, to facilitate greater transparency and efficiency in physical commodity markets.

Market participants raise questions about its methodologies and the approach taken in price assessments, proposed methodology changes and other editorial decisions in relation to Platts' price assessments. Platts strongly values these interactions and encourages dialogue concerning any questions a customer or market stakeholder may have.

However, Platts recognizes that occasionally customers may not be satisfied with responses received or the services provided by Platts and wish to escalate matters. Full information about how to contact Platts to request clarification around an assessment, or make a complaint, is available on the Platts website, at: <https://www.spglobal.com/platts/en/contact/complaints>.

Part VII: Definitions of the trading locations for which Platts publishes Weekly assessments

Renewable Energy Certificates (REC), Regional Greenhouse Gas Initiative (RGGI), California Carbon Allowances (CCA), and California Carbon Offsets (CCO) are instruments used to comply with state mandates regarding renewable energy and carbon emissions, as well as to achieve voluntary environmental goals. These four certificates are tradable, market-based instruments that represent the legal property rights tied to the “renewability” of renewable energy or to carbon offsets/allowances for non-power attributes.

The REC market consists of two broad segments, one for complying with state renewable portfolio standards, and the other for purchasing RECs to voluntarily support renewable energy projects. Within each of these categories lie a number of REC products conforming to specific eligibility guidelines.

The trading of RECs can be done on a spot or forward basis. The spot market involves the buying and selling of RECs generated during the current time period in question, while the forward market entails future delivery. The forward market refers to longer term contracts obliging one party to sell the RECs it generates to another party.

Platts assesses the spot market value of REC and emission certificates once a week. Three vintages, the prior year, current year and next year vintages are assessed per product at a given time. The roll date is the day when the prior, current and next year vintages roll into the next calendar year. It follows the last day in which parties can transfer a REC that can still be used for the most recent compliance period. The roll date, in most markets, corresponds with the deadline for REC holders to demonstrate they hold the required number of RECs. The roll date is later than the end of the compliance period because REC holders are provided a true-up period at the end of the compliance period during which they can continue to buy and sell RECs to meet the requirements of the then-concluded compliance period. Another reason for the delay is the lag between the moment renewable energy is generated and the associated REC is created in a tracking system.

Below is a list of assessments by type of REC and emissions product and market, including the compliance periods and roll dates. Platts publishes assessments for 108 Renewable Energy Certificates and 42 solar renewable energy certificates, as well as 3 RGGI, 3 CCA and 3 CCO certificates.

I. Renewable Energy Certificate markets

A REC sells separately from the actual electricity (megawatt-hour, or MWh). The REC owner retains exclusive rights to claim “using” or “being powered by” the renewable electricity associated with that REC. A REC is issued for every megawatt-hour (MWh) of electricity generated, and delivered to the electric grid, from a renewable energy resource.

Eligible fuel sources for the generation of RECs and SRECs include anaerobic digestion, certain combined heat and power systems, fuel cells using renewable fuels, biomass, geothermal, landfill gas, methane gas, municipal solid waste, waste-to-energy, hydroelectric, wind, solar photovoltaic and solar thermal, as established by each state’s Renewable Portfolio Standard.

NEPOOL Renewable Compliance Markets

Location	Certificate	Symbol	Roll date	Compliance Period
CT	Class 1 Prior Year Vintage	AREAM00	June 16	January-December
	Class 1 Current Year Vintage	RECCTC1		
	Class 1 Next Year Vintage	AREAN00		
	Class 2 Current Year Vintage	AREAO00		
MA	Class 3 Current Year Vintage	AREAP00	June 16	January-December
	Class 1 Prior Year Vintage	AREAA00		
	Class 1 Current Year Vintage	RECMAC1		
	Class 1 Next Year Vintage	AREAB00		
	Class 2 (non-WTE) Current Year Vintage	AREAC00		
	Class 2 WTE Current Year Vintage	AREAD00		
	AEC Current Year Vintage	AREAE00		
	CES Current Year Vintage	AREAF00		
	SREC 1 Prior Year Vintage	ARHAU00		
	SREC 1 Current Year Vintage	RECMAS0		
	SREC 1 Next Year Vintage	ARHAV00		
	SREC 2 Current Year Vintage	ARHAW00		
	ME	Class 1 Prior Year Vintage		
Class 1 Current Year Vintage		ARFAQ00		
Class 1 Next Year Vintage		ARFAR00		
Class 1A Current Year Vintage		ARFAS00		
Class 2 Current Year Vintage		ARFAT00		
NH	Class 1 Prior Year Vintage	ARFAU00	July 1	January-December
	Class 1 Current Year Vintage	ARFAV00		
	Class 1 Next Year Vintage	ARFAW00		
	Class 1 Thermal Current Year Vintage	ARFAX00		
	Class 2 Current Year Vintage	ARFAY00		
	Class 3 Current Year Vintage	ARFAZ00		
	Class 4 Current Year Vintage	ARGAA00		
RI	Existing Current Year Vintage	ARGAB00	July 15	January-December
	New Current Year Vintage	ARGAC00		
VT	Tier 1 Prior Year Vintage	ARGAF00	August 31	January-December
	Tier 1 Current Year Vintage	ARGAG00		
	Tier 1 Next Year Vintage	ARGAH00		
	Tier 2 Current Year Vintage	ARGAI00		
NEPOOL Dual-Qualified	Class 1 Prior Year Vintage	ARGAZ00	June 16	January-December
	Class 1 Current Year Vintage	ARHAA00		
	Class 1 Next Year Vintage	ARHAB00		

PJM Renewable Compliance Markets

Location	Certificate	Symbol	Roll date	Compliance Period			
MD	Tier 1 Prior Year Vintage	AREAQ00	April 1	January-December			
	Tier 1 Current Year Vintage	RECMTD1					
	Tier 1 Next Year Vintage	AREAR00					
	Tier 2 Current Year Vintage	AREAS00					
	Tier 1 Non Black Liquor Current Year Vintage	AREAT00					
	SREC Prior Year Vintage	ARHAX00					
	SREC Current Year Vintage	RECMSD0					
	SREC Next Year Vintage	ARHAY00					
	NJ	Class 1 Prior Year Vintage			AREAU00	October 2	June-May
		Class 1 Current Year Vintage			RECNTJ1		
Class 1 Next Year Vintage		AREAV00					
Class 2 Current Year Vintage		AREAW00					
SREC Prior Year Vintage		ARIAG00					
SREC Current Year Vintage		RECJUS0					
SREC Next Year Vintage		ARIAH00					
PA	Class 1 Prior Year Vintage	AREAX00	October 2	June-May			
	Class 1 Current Year Vintage	RECPAT1					
	Class 1 Next Year Vintage	AREAY00					
	Tier 2 Current Year Vintage	AREAZ00					
	SAEC Prior Year Vintage	ARHAZ00					
	SAEC Current Year Vintage	RECPAS0					
	SAEC Next Year Vintage	ARIAA00					
	In-State SAEC Current Year Vintage	ARIAB00					
In-State SAEC Tier 2 Current Year Vintage	ARIAC00						
OH	non-Solar Prior Year Vintage	ARGAD00	April 15	January-December			
	non-Solar Current Year Vintage	RECOHI0					
	non-Solar Next Year Vintage	ARGAE00					
	SREC Prior Year Vintage	ARIAI00					
	SREC Current Year Vintage	RECOHSI					
SREC Next Year Vintage	ARIAJ00						
DC	Tier 1 Prior Year Vintage	ARGAN00	April 1	January-December			
	Tier 1 Current Year Vintage	ARGAO00					
	Tier 1 Next Year Vintage	ARGAP00					
	Class 2 Current Year Vintage	ARGAQ00					
	SREC Prior Year Vintage	ARIAK00					

PJM Renewable Compliance Markets

Location	Certificate	Symbol	Roll date	Compliance Period
	SREC Current Year Vintage	ARIAL00		
	SREC Next Year Vintage	ARIAM00		
DE	Tier 1 Prior Year Vintage	ARGAR00	October 1	June-May
	Tier 1 Current Year Vintage	ARGAS00		
	Tier 1 Next Year Vintage	ARGAT00		
	Class 2 Current Year Vintage	ARGAU00		
	SREC Class 1 Prior Year Vintage	ARIAN00		
	SREC Class 1 Current Year Vintage	ARIAO00		
	SREC Class 1 Next Year Vintage	ARIAP00		
VA	non-Solar Prior Year Vintage	ARGAV00	April 30	January-December
	non-Solar Current Year Vintage	ARGAW00		
	non-Solar Next Year Vintage	ARGAX00		
	In-State non-Solar Current Year Vintage	ARGAY00		
	In-State SREC <1MW Prior Year Vintage	ARIAW00		
	In-State SREC <1MW Current Year Vintage	ARIAX00		
	In-State SREC <1MW Next Year Vintage	ARIAY00		
PJM Tri-Qualified	Tier 1 Prior Year Vintage	ARHAC00	Depending on location	Depending on location
	Tier 1 Current Year Vintage	ARHAD00		
	Tier 1 Next Year Vintage	ARHAE00		

California Renewable Compliance Markets

Location	Certificate	Symbol	Roll date	Compliance Period
Bucket 3	Prior Year Vintage	AREAK00	August 1	Multi-year beginning in 2017
	Current Year Vintage	RECCAB3		
	Next Year Vintage	AREAL00		
Bucket 1	Prior Year Vintage	AREAG00	December 31	Multi-year beginning in 2017
	Current Year Vintage	RECCAB1		
	Next Year Vintage	AREAH00		
Bucket 2	Prior Year Vintage	AREAI00	December 31	Multi-year beginning in 2017
	Current Year Vintage	RECCAB2		
	Next Year Vintage	AREAJ00		

National Green-e Voluntary REC markets

Location	Certificate	Symbol	Roll date	Compliance Period
Any Technology	Prior Year Vintage	ARHAQ00	January 1, July 1	N/A
	Current Year Vintage	RECUSAV		
	Next Year Vintage	ARHAR00		
Wind	Prior Year Vintage	ARHAS00	January 1, July 1	N/A
	Current Year Vintage	RECUSWV		
	Next Year Vintage	ARHAT00		

Other REC markets

Location	Certificate	Symbol	Roll date	Compliance Period
TX	non-Solar Compliance REC Prior Year Vintage	ARFAA00	April 1	January-December
	non-Solar Compliance REC Prior Year Vintage FH	ARFAB00		
	non-Solar Compliance REC Prior Year Vintage BH	ARFAC00		
	non-Solar Compliance REC Current Year Vintage	RECTX00		
	non-Solar Compliance REC Current Year Vintage FH	ARFAD00		
	non-Solar Compliance REC Current Year Vintage BH	ARFAE00		
	non-Solar Compliance REC Next Year Vintage	ARFAF00		
	Green-e Eligible Wind REC Current Year Vintage	ARFAI00		
	Green-e Eligible Wind REC Current Year Vintage FH	ARFAJ00		
	Green-e Eligible Wind REC Current Year Vintage BH	ARFAK00		
	SREC Prior Year Vintage	ARIAQ00		
	SREC Current Year Vintage	ARIAR00		
	SREC Next Year Vintage	ARIAS00		
	Compliance SREC from CRS Listed Facilities Current Year Vintage	ARIAT00		
	Compliance SREC from CRS Listed Facilities Current Year Vintage FH	ARIAU00		
	Compliance SREC from CRS Listed Facilities Current Year Vintage BH	ARIAV00		
MI	non-Solar REC Prior Year Vintage	ARFAL00	June 30	January-December
	non-Solar REC Current Year Vintage	ARFAM00		
	non-Solar REC Next Year Vintage	ARFAN00		

Other REC markets

Location	Certificate	Symbol	Roll date	Compliance Period
NY	iREC Current Year Vintage	ARFAO00		
	Tier 1 Prior Year Vintage	ARGAJ00	June 30	January-December
	Tier 1 Current Year Vintage	ARGAK00		
	Tier 1 Next Year Vintage	ARGAL00		
	Wind REC Current Year Vintage	ARGAM00		
	SREC Prior Year Vintage	ARIAD00		
	SREC Current Year Vintage	ARIAE00		
	SREC Next Year Vintage	ARIAF00		
	Compliance REC from CRS Listed Facilities Current Year Vintage FH	ARHAF00	Depending on location	Depending on location
	Compliance REC from CRS Listed Facilities Current Year Vintage BH	ARHAG00		
NAR	Any REC Prior Year Vintage	ARHAH00	Depending on location	Depending on location
	Any REC Current Year Vintage	ARHAI00		
	Any REC Next Year Vintage	ARHAJ00		
	Any Green-e Eligible REC Current Vintage	ARHAK00		
	Any Green-e Eligible REC Current Vintage FH	ARHAL00		
	Any Green-e Eligible REC Current Vintage BH	ARHAM00		
	Green-e Eligible Wind REC Current Year Vintage	ARHAN00		
	Green-e Eligible Wind REC Current Year Vintage FH	ARHAO00		
	Green-e Eligible Wind REC Current Year Vintage BH	ARHAP00		
	SREC Prior Year Vintage	ARIAZ00		
	SREC Current Year Vintage	ARJAA00		
	SREC Next Year Vintage	ARJAB00		
	SREC CRS Listed Current Year Vintage	ARJAC00		
	SREC CRS Listed Current Year Vintage FH	ARJAD00		
SREC CRS Listed Current Year Vintage BH	ARJAE00			

II. Carbon markets

California Carbon Allowances (CCA) is a Cap-and-Trade Program established by the California Air Resources Board that allows physically delivered greenhouse gas emissions allowances to be traded. The goal of this program is to reduce greenhouse gas emissions to 40% below 1990 levels by 2030. Another assessment is California Offsets, which are physically delivered greenhouse gas emissions offset credits representing one metric ton equivalent of greenhouse gas emission reduction or removal. These are limited to emissions-reduction projects in the US and

specifically five areas: forestry, urban forestry, destruction of ozone-depleting substances, and mine methane capture.

RGGI is a cooperative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and Virginia to cap and reduce CO2 emissions from the power sector. Following a comprehensive 2012 Program Review, the RGGI states implemented a new 2014 RGGI cap of 91 million short tons. The current RGGI CO2 cap reduces emissions 30 percent below 2020 levels by 2030.

Carbon Markets

	Certificate	Symbol	Roll date	Compliance Period
RGGI	Current Month Strip Current Year Vintage	ARJAF00	December 31	Multiyear beginning 2020 and forwards for up to 10 years
	Next Month Strip Current Year Vintage	ARJAG00		
	Next December Strip Current Year Vintage	ARECA04		
CCA	Current Month Strip Current Year Vintage	ARJAH00	December 31	Multiyear beginning in 2020
	Next Month Strip Current Year Vintage	ARJAI00		
	Next December Strip Current Year Vintage	ARECB04		
CCO	Current Month Strip Current Year Vintage	ARJAJ00	December 31	Multiyear beginning in 2020
	Next Month Strip Current Year Vintage	ARJAK00		
	Next December Strip Current Year Vintage	ARECC04		

Revision history

November 2022: Platts completed an annual review of the US Renewable Energy Certificates Methodology Guide. Platts reviewed all content and made minor edits to language.

May 2022: S&P Global Commodity Insights started publishing weekly assessments for additional Renewable Energy Certificate, Solar Renewable Energy Certificate and Carbon Certificate vintages, classes, tiers and locations effective April 7.

November 2021: Platts completed an annual review of the US Renewable Energy Certificates Methodology Guide. Platts reviewed all content and made minor edits to language. Platts amended the description of the Regional Greenhouse Gas Initiative by adding Virginia, which joined the RGGI on January

1, 2021. Platts updated the California Carbon Allowance description to reflect current targets. Platts updated the RGGI CO2 cap to reflect current targets.

November 2020: Platts completed an annual review of the US Renewable Energy Certificates Methodology Guide. Platts reviewed all content and made minor edits to language.

April 2020: Platts started publishing weekly California Carbon Allowance, Carbon Offset, and Regional Greenhouse Gas Initiative assessments sections effective April 16, with historical assessments available in the database.

October 2019: Platts completed an annual update to the US Renewable Energy Certificates Methodology Guide. In this update, Platts reviewed all content.

August 2018: Platts removed outdated reference to the in-state requirement for Ohio non-solar Renewable Energy Certificate assessments.

May 2018: Platts completed an annual update to the US Renewable Energy Certificates Methodology Guide in May 2018. In this update, Platts reviewed all content.

March 2017: Platts completed an annual update to the US Renewable Energy Certificates Methodology Guide in March 2017. In this update, Platts reviewed all content.

December 2014: Document modified according to Platts approved format.

February 2013: Creation of document.