

OPIS

A DOW JONES COMPANY

OPIS APAC Solar Weekly Modules Forward Curve Methodology

Methodology and specifications
Effective January 2023

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Introduction

This statement of methodology reflects fundamental principles that form the foundation of **OPIS Solar Module Forward Curve Report**. It includes detailed information on process, data collection, terms and conditions of price acceptance and product specifications.

The overarching goal of the report's assessments is to provide market participants with a **trusted and independent benchmark**. OPIS has no stake in any commodity transactions, is not funded by energy industry initiatives, and strictly adheres to antitrust guidelines determined by independent legal counsel.

As part of the price assessment process, OPIS editors are required to exercise best judgment and **adherence to the methodology** so as to ensure the reliability of the data and market compilation process.

The methodology is continually evolving to reflect changing market realities and OPIS takes full responsibility for keeping this statement current.

The **OPIS Solar Module Forward Curve Report** service lists:

- **FOB China**
- **FOB Southeast Asia (SEA)**
- **DDP U.S.**

All price assessments are subject to compliance with standard trading conditions with regard to **technology used and output wattage**, as determined by standard market conventions.

For OPIS standard trading conditions and criteria please refer to the *Methodology Product table*.

Product	Publication Frequency	Currency	Contract Type	Rollover Date	Module Technology	Output Wattage	Type	Calculation Assessment
FOB China	Weekly	USD	Spot	On 1st of current month (M1)	MONO PERC	≥540Wp	Bifacial	Outlined in Asia Solar Module Forward Curve Pricing Methodology Document
FOB Southeast Asia SEA	Weekly	USD	Spot	On 1st of current month (M1)	MONO PERC	≥540Wp	Bifacial	Outlined in Asia Solar Module Forward Curve Pricing Methodology Document
DDP U.S.	Weekly	USD	Spot	On 1st of current month (M1)	MONO PERC	≥540Wp	Bifacial	Outlined in Asia Solar Module Forward Curve Pricing Methodology Document

Definitions

The OPIS Asia Solar Modules Forward Curve reflect assessments of modules that are to load at a specified month in the future, The forward values are distinct from OPIS solar spot assessments that represent prices of modules that are to load within 30 days of report publication. The Forward Curve reflect assessments of modules that are to load more than 30 days forward.

Rollover/Timing: The OPIS Forward Curve will start from the second month after the report publication month. e.g. on Jul. 31, the Forward Curve will start at September and ends at August the following year. Spot assessments published on Jul. 31 will represent values of modules to load in the following month of August.

OPIS assesses the Asia Solar Modules Forward Curve to 12 months out.

Weekly Price Discovery Process

The OPIS Asia Solar Modules Forward Curve is calculated using contributions from market participants of their forward traded prices, bids and offers for solar photovoltaic (PV) modules via email, telephone, social media, or face-to-face conversations.

The editors always attempt to collect data from a broad cross section of the sector, including producers, developers, wholesalers and brokers so that OPIS is not reliant on one source for data.

Contributors can submit data through the trading week ending 2.00 pm Singapore time Tuesday

OPIS reserves the right not to include transactions received 2.00 pm Singapore time Tuesday for consideration in the week's final price assessment process or the revision process. Information received beyond this time will be used at the editor's discretion only.

OPIS reserves the right to **re-publish** the market information collected, and closely track the evolution of indicative values throughout the week.

All data collected is **time-stamped** and **archived** for review.

Price Assessment Criteria

OPIS forward prices are derived from the arithmetic mean of price inputs collected for each forward month from contributors.

OPIS editors have the discretion to exclude collected price points that represent extraordinary circumstances or are far outside the range of other values reported on a given day.

In cases of low liquidity, OPIS may consider notional values provided by contributors. OPIS may also take reference from more liquid pricing periods or price spreads in related markets to derive the forward curve.

Judgment guidelines

As part of the price reporting process, editors are required to use their professional judgment, to ensure the reliability of the data and price assessment compilation process. OPIS has set forth guidelines throughout this Methodology to ensure that the use of judgment is consistent and fair. These guidelines can be found in the following sections of this Methodology:

- Anomalous or suspicious transactions
- Additional checks and analysis
- Comparative markets
- Transactions and survey weightings

OPIS has developed Editorial Standards that details the process for compiling each specific price assessment. In addition, OPIS has developed a programme of training and oversight of market reporters that helps ensure uniformity in the application of judgment. The key elements of this programme include:

1. An initial course of training that explains and defines the parameters for the exercise of judgment
2. Suitably sourced staffing to ensure proper backup for sick days, vacations, etc.
3. Oversight of reporting teams by experienced market editors that are involved in daily mentoring and assisting in the application of judgment
4. A requirement that market editors sign-off on all price assessments

correction or adjustment of a price assessment as well as any suggested changes to spot price methodology and complete confidentiality.

In the event of an **assessment dispute**, the disputing party should inform OPIS of their complaint by the following business day via telephone call, email or instant messaging platforms and all complaints will be acknowledged in writing within one business day. The party should, within one business day, supply OPIS with **evidence** of mishandling and/or misinformation of material data that had directly resulted in the distortion of the price assessment.

The appropriate OPIS personnel will reply to complaints with two (2) spot trading days via email. This reply may or may not be a resolution of the complaint but it will acknowledge receipt of the complaint and assure the complainant that he or she can expect an answer in a timely manner. Upon review and verification of the data, and OPIS may then publish a price revision. OPIS guarantees complete confidentiality of the data provider in the price dispute.

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Compliance and ethics

OPIS has implemented extensive compliance policies and procedures in accordance with the best practices of the price reporting industry. These include a comprehensive ethics policy that applies to all the Editorial Price Reporting staff. The Editorial Standards is an expression of OPIS' intent to set out ideals for the ethical conduct of OPIS Price Reporting personnel in the performance of their product price assessment activities. This Editorial Standards Code of Conduct is supported by the Conflicts of Interest Statement.

Price Assessment Disputes

Every price editor at OPIS understands that his or her top priority is calling market assessments fairly. Our methodologies are crafted after careful consultation with our customers and applied by our editors to ensure maximum transparency and accuracy.

Still, we understand there may be times when spot price customers wish to question, dispute or comment on a price assessment and/or our methodologies. As a valued OPIS spot price customer, you have the right to:

- a prompt reply to any inquiry regarding price assessments and/or methodology within two trading days
- a full consideration by senior OPIS spot market personnel of any request for a

Price Assessment Revisions

Corrections to Price Assessments

If warranted by the circumstances, OPIS may publish corrections to price assessments after the publication date. OPIS will typically correct material errors that arise from the improper entry of information, the erroneous calculation of market data, misreported information or the incorrect application of the stated methodology. However, OPIS will not retroactively assess markets based solely

on new information learned after the publication date of the relevant price assessment. Corrections to price assessments will be conducted in accordance with the Price Assessments Correction policy.

Price postings are open to revision if additional information becomes available after the close of the business day or outside standard working hours, provided the new information meets the assessment/confirmation criteria.

Corrections or changes to prices may be initiated if the prices were reported incorrectly due to clerical error or if the price and/or terms were misrepresented or misunderstood. In some circumstances the report will be re-issued.

Methodology Review

Review of methodology

OPIS price assessment methodology is constantly scrutinized internally for clarity, relevance and comprehensiveness by market analysts and senior analysts across the OPIS group. Methodology changes involve a robust polling of the marketplace to ensure all points of view are considered prior to any changes being considered or made.

Internally, all methodologies are reviewed on a quarterly basis, within the OPIS group and records of any proposed methodology change are stated in a central electronic file.

OPIS also encourages industry participants to propose improvements or revisions to price assessment methodology via e-mail, telephone and instant messaging. Based on the input received, OPIS will decide whether to accept or reject suggestions made by stakeholders for methodology changes.

Once a spot methodology change is contemplated, OPIS will reach out to stakeholders in the form of a formal note delivered via email soliciting feedback on the change.

Feedback may be given via post, email or telephone and the opportunity to comment on any contemplated spot methodology change is open for no less than four (4) weeks and generally not more than six (6) weeks.

In the case of methodology additions, a draft notice is sent out to customers with a deadline for comments set at a maximum of two (2) weeks.

OPIS will publish stakeholder comments received with our responses regarding proposed methodology changes on our website and will respect commenter confidentiality when requested.

To ensure that they are representative of the market being assessed, OPIS conducts reviews of its methodologies on both an internal and external basis. OPIS conducts a formal review of all of its methodologies and attendant documents on at least an annual basis. Externally, OPIS is in regular contact with market participants as such market participants are not only well-situated to know the particulars of the market, but have a vested interest in the implementation of accurate and relevant methodologies. When conducting its reviews, OPIS will consider a myriad of factors, including, but not limited to, activity in the market, visibility of market data and current and anticipated industry usage of the price assessment.

If the review process recommends a material change to the methodology, or termination of an existing benchmark, the markets editor will submit a proposal to OPIS Editorial management for review.

Changes to methodology

If either an internal or external review of a methodology results in a potential material change to the methodology or cessation of a benchmark, OPIS will begin formal procedures for external consultation. Materiality is subject to professional judgment and takes into account the impact of the proposed change on the decision making of stakeholders. The Methodology Changes and Cessation Policy.

Contacts

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