

CRU Prices

Bare Optical Fibre

Methodology and Definitions Guide

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Methodology and Definitions Guide – Bare Optical Fibre

1 Scope

This guide covers bare optical fibre prices in all geographical markets and should be read in conjunction with the *CRU Group Compliance Framework and Methodology Guide*. It details specific methodology which have precedence, with all other aspects covered by the Group methodology guide.

2 Methodology

Bare Optical Fibre

The CRU bare optical fibre prices are a bi-monthly (once every two months) assessment of prices representing physical spot transactions and/or prices widely quoted in the spot market.

Data are gathered from Data Providers by email (a submission template may be used), telephone, private one-to-one instant messenger services or other private means of communication.

The methodology prioritises transaction prices and other methodological rules with limited but necessary application of expert judgement, detailed below, in order to produce a price that benefits from rigour, and analyst expertise and discretion in equal measure.

Data providers

CRU bare optical fibre price assessments are based on regular contact with a wide network of market participants including producers and consumers. This network is frequently reviewed to ensure a balance of buyers and sellers. A Non-Disclosure Agreement may be supplied as required.

Above and beyond the criteria stipulated in Section 3.4 of the CRU Group Compliance Framework and Methodology Guide, each data provider must exist on a list of approved data providers before their data can be considered for admission into published prices.

Data submitted and submission process

Transaction data is prioritised as an input and to that extent the hierarchy of acceptable price types follows that described in Section 3.1 of the Group Compliance Framework and Methodology Guide.

In the absence of actual transaction data, the following types of price data may be submitted in the same period: a firm/indicative offer or bid; opinion of the prevailing market price.

Data Providers must supply spot price data relating to spot business conducted in the two weeks prior to the deadline, which is deemed as 10:00 GMT/BST on the second Friday of every other month for their data to be considered. The months in which CRU assess prices are January, March, May, July, September and November.

Data Providers should provide accurate spot price data to CRU detailing date, type of price data and quantity, normalised for delivery basis, pricing period and payment terms to CRU's bare optical fibre definitions below.

Final Price Assessment

Normalisation

The final price is assessed based on all data received by all permissible means. Data which meet the precise definitions below are eligible for admission without any transformation. Data which do not will be subject to a normalisation process in order to adjust for delivery basis etc.

Exclusion of outliers

An analyst may use expert judgement in the exclusion of a data point as an input to the calculation of the final price. In doing so they would consider: the range and distribution of data collected in the same timeframe from other data providers; previous data received from the same data provider; non-price information received from the data provider; market state and direction information from any other source. Inclusion or exclusion of input data in the final price is explicit and recorded.

Price data will be weighted as follows:

Transaction data (sales or purchase): the midpoint of the average of sales and the average of purchase data to be given a 50% weighting, subject to any analyst expert judgment.

Firm and indicative bid/offer data: the midpoint of the average of bids and the average of offers to be given a 25% weighting.

Opinion to be given a 25% weighting.

If CRU receives only one of the above price data types, that will be given a 100% weight.

If CRU receives two of the above price data types, a weighting of 75% will be given to transaction prices and 25% to the other; if no transaction prices are received, bid/offer prices will receive a 75% weighting and 25% to opinion.

Price determination with no qualifying data points, zero submissions or in an illiquid market

In the case of no qualifying data points, an illiquid market or zero submissions, where submissions, if any, were deemed inadmissible or otherwise where received data is judged insufficient, expert judgement would be used to determine the final benchmark value.

This choice would be based on: observation of the previous price; short term historical price trends; other quantitative market data including prices in other related active markets, producer price change announcements; qualitative information such as that received from interactions with market participants or other CRU analysts, and; other sources of information relevant to the spot market. The price assessor will use their judgement to evaluate the volume, quality and coherence of any such market information they may possess. If one or more of these factors in combination does not provide a sufficiently clear indication of the direction and extent of market movement to allow the price assessor to confidently change the benchmark from the previous value, the prior value would be rolled over to form the current period value.

Expert judgement

Expert judgement may apply to decisions on whether price data submitted relate to actual deals concluded, if normalisation of price data submitted is required and the means of any normalisation, and the inclusion of a data point in calculation of the final price.

An analyst will consult with one or more colleagues before any application of expert judgement if in any doubt or where collective input would improve the quality of a judgement.

Consistency in the application of expert judgement is achieved through a combination of selection, formal and informal training and review, supervision and control processes as detailed in section 2.5 of *the Group Compliance Framework and Methodology Guide*.

Verification

Input data points, calculations and the final price for publication are checked and verified by a second analyst at each critical stage (i.e. where there is scope for error) in the process from data collection to final publication, and this verification is documented including the identity of the verifier.

Final publication

CRU bare optical fibre prices are published bi-monthly at 14:00 GMT/BST on the second Friday of the month. If the deadline falls on a UK public holiday, prices will be published at 14:00 GMT/BST the preceding working day.

Deactivated prices and changes

A price assessment will remain active as long as there are sufficient buyers, sellers and/or traders for the analyst to make an accurate assessment. If the quotation suffers from limited transparency or if business dynamics change, it may be deactivated following market consultation. Its history will still be available, but no further information will be collected for that assessment from the time it is deactivated.

If you have comments or questions about the methodology used by CRU to assess prices, or questions about particular prices, please email michael.finch@crugroup.com or customer.services@crugroup.com.

To find out more about CRU's pricing products and services go to www.crugroup.com.

3 Definitions – bare optical fibre

Details

Any price data provided to CRU must meet the relevant product definitions. Data Providers will provide CRU with a single price figure relating to all spot sales or purchases concluded in the week/s prior to publication. In the absence of actual transaction data, bids/offers in the same period can be submitted. The type of price data submitted (actual, transaction, firm bid/offer) must be indicated to CRU.

Europe G652.D Bare Fibre

Material:	G652.D 250µm bare fibre (uncoloured with a typical MFD of 9.2µm @1310nm)
Price basis:	Ex-works
Delivery charges:	Excluded
Type:	Spot price within domestic European market
Currency:	EUR
Unit:	Fibre-km
Minimum Order Quantity:	5,000km
Frequency:	Bi-monthly (once every two months)
Duties/tariffs:	VAT excluded
Delivery:	Prompt to 1 month

China G652.D Bare Fibre

Material:	G652.D 250µm bare fibre (uncoloured with a typical MFD of 9.2µm @1310nm)
Price basis:	Ex-works
Delivery charges:	Excluded
Type:	Spot price within domestic Chinese market
Currency:	RMB
Unit:	Fibre-km
Minimum Order Quantity:	5,000km
Frequency:	Bi-monthly (once every two months)
Duties/tariffs:	VAT included at the prevailing rate
Delivery:	Prompt to 1 month

India G652.D Bare Fibre

Material:	G652.D 250µm bare fibre (uncoloured with a typical MFD of 9.2µm @1310nm)
Price basis:	Ex-works
Delivery charges:	Excluded
Type:	Spot price within domestic Indian market
Currency:	INR
Unit:	Fibre-km
Minimum Order Quantity:	5,000km
Frequency:	Bi-monthly (once every two months)
Duties/tariffs:	GST excluded
Delivery:	Prompt to 1 month