

**Ref No:** Greenko/Regulatory/CERC/10032021

Date: 10<sup>th</sup> March 2021

To,  
Shri Sanoj Kumar Jha, Secretary,  
Central Electricity Regulatory Commission,  
New Delhi

Dear Sir,

**Sub:** Submission of our Comments on the CERC Staff Paper

**Ref:** CERC Staff paper on the “Methodology for computing the Escalation Factors and other parameters for the purpose of Bid Evaluation and Payment for Procurement of Power from Renewable Energy Complement with Firm Power from any other source through Competitive Bidding” dated February 23<sup>rd</sup>, 2021.

We, Greenko Group, hereby submit our comments and requests for your consideration.

**1. Request for Public Hearing:**

Honourable Commission has come up with this staff paper on computation methodology after a gap of ~8 years and it is advisable to conduct a Public Hearing which will be beneficial to all the stakeholders.

**2. Request to publish similar study for all the Evaluating parameters:**

Hon'ble Commission in its Staff Paper has computed Escalation Rate for Domestic Coal while there are seven (7) other parameters for which similar study is required. We request that computed Escalation Rates for other parameters (Domestic Gas, Inland Transportation Charges of Coal & Gas, Imported Coal, Imported Gas, Transportation of Imported Coal & Gas) also to be released.

A draft notification providing the methodology and computation of escalation rates for all the components should be made public for comments before final notification. **We request Hon'ble Commission to issue the Draft Escalation Rate Notification before finalizing the same.**

### 3. Request to consider a higher time series horizon:

CERC staff has proposed 12-year time series as it was the methodology followed by the Commission earlier. However, this is too short for the purpose of evaluating a bid due to the following reasons:

- a) As DISCOM has to absorb the risk of escalation for the PPA term, which is not less than 25 years, the time series length should align with the PPA term for a fair estimation of levelized tariff for benefit of both the DISCOMs and the developers
- b) Ministry of Power's 2005 Principal Competitive Bidding Guidelines has clearly specified the timeseries should be of 30 years for coal and 15 years for gas/LNG. Relevant extract below:

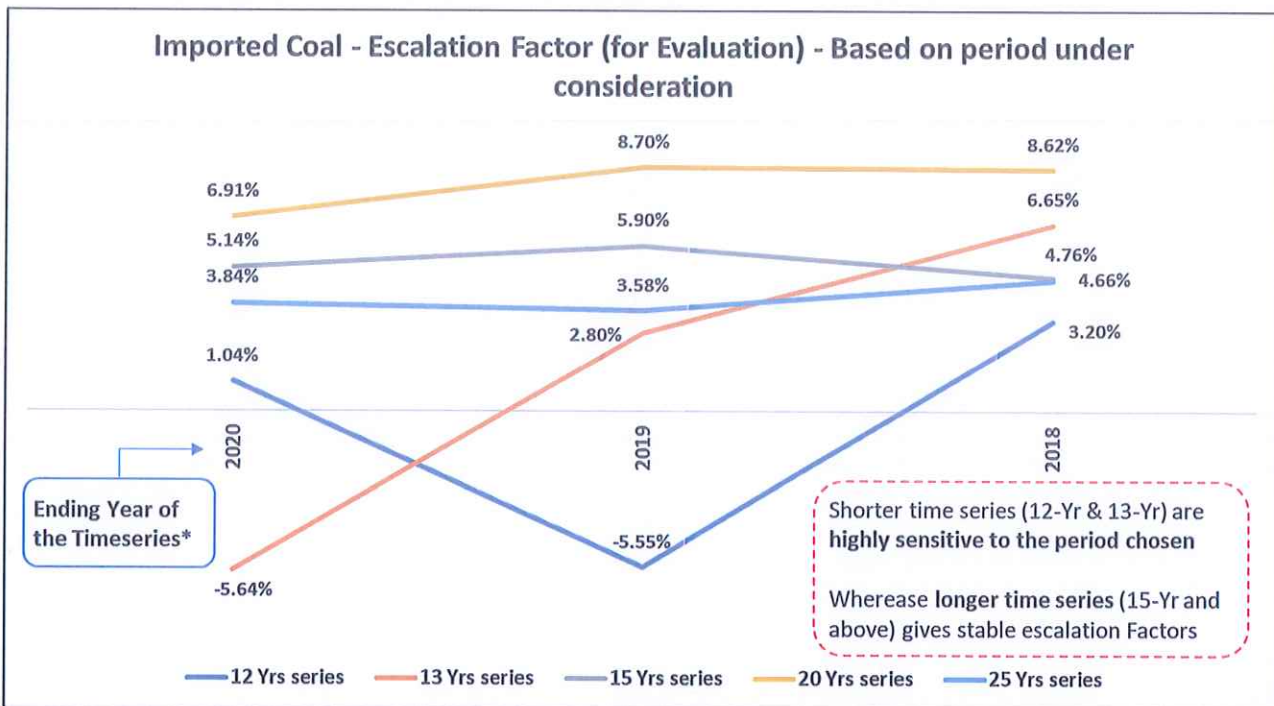
"5.6 (iv)

.....

*For the purpose of bid evaluation in cases other than where a captive fuel source is offered, median escalation rate of the relevant fuel index (as identified in the RFP) in the international market or domestic market for the last **30 years for coal and 15 years for gas/LNG** (as per CERC's notification in (vi) below) shall be used for escalating the energy charge (or the derived energy charge in cases referred to in para 4.2) quoted by the bidder. if data of 30/15 years are not available, the same shall be taken for maximum number of available years. The provisions of para 4.11 (iii) would also apply to evaluation of bids in cases where procurer mandates use of imported fuel for coastal power stations. However, in cases where the bidder quotes firm energy charges for each of the years of proposed supply, the energy charges proposed by the bidder shall be adopted for bid evaluation."*

- c) Hon'ble Commission has started calculating escalation rates in 2005 based on 12-yr time series and by now has sufficient historic data to consider time series of extended period. CERC will have at least 27 Yrs (12+15) of data for all the indices.
- d) Longer the time series considered, lesser the sensitivity due to 1 or 2 years with high fluctuations in that time period. For example, escalation rates calculated for Imported coal price (Australian coal – Series in Annexure 1) for different time series lengths for different periods, based on the **historically practiced Minimum mean square error method** is presented below (Chart 1)

Chart 1: Escalation rate for Imported Coal evaluation – Timeseries period-wise and length-wise



\*Ending year of the Timeseries **2020** means 2009 - **2020** period for 12-year series, 2008 - **2020** period for 13-year series, 2006 - **2020** period for 15-year series & so on and similarly for Ending year of the Timeseries **2019** and **2018**.

The 12-year timeseries has wild swings in escalation rate (for 2009-2020: 1.04%, 2008-2019: -5.55% and 2007-2018: 3.20%), so is the 13-year timeseries. Whereas 15-year, 20-year and 30-year timeseries are stable w.r.to the period and therefore lets the DISCOMs know the risk upfront with fair degree of accuracy and gives them confidence in purchasing the power.

Also, **Floor Escalation Rates should be restricted to 'zero'** for evaluation purpose in case the value arrived at is negative as long-term commodity prices always have increasing trend.

Therefore, we request the Hon'ble Commission to use timeseries of 15-years or more for evaluation escalation rate.

Alternatively, Hon'ble Commission may remove abnormal periods in the timeseries, to eliminate any aberrations in the commodity prices due to events like Pandemic in 2020, where of imported coal prices have fallen drastically and 2008

where the global coal prices have skyrocketed (to USD 180/Metric Tonne – Annexure 1) due to flooding in Australia's Queensland<sup>1</sup>.

**4. Request to issue an advisory that usage of Evaluation rates appropriate, only if sources compared are similar in nature**

**Existing Provision:** Bids shall be evaluated based on the Weighted Average Levelized Tariff [Fixed (RE, Non-RE) + variable (Non-RE Fuel, Non-RE Transport)]. While the Fixed component shall be quoted as a 25-year tariff stream, the variable component (Non-RE Fuel + Transportation) shall be quoted as on SCOD. In order to get the 25-year tariff stream of the variable component (for levelization purpose) CERC notified escalation rates for evaluation shall be used.

For actual payments, the Variable component shall be adjusted as per the index notified by CERC for payment purpose from time to time.

**Comments:** Since the evaluation and the actual payments are based on two different escalation rates, there is every probability that pay-out tariff of DISCOM vary significantly from the evaluated tariff.

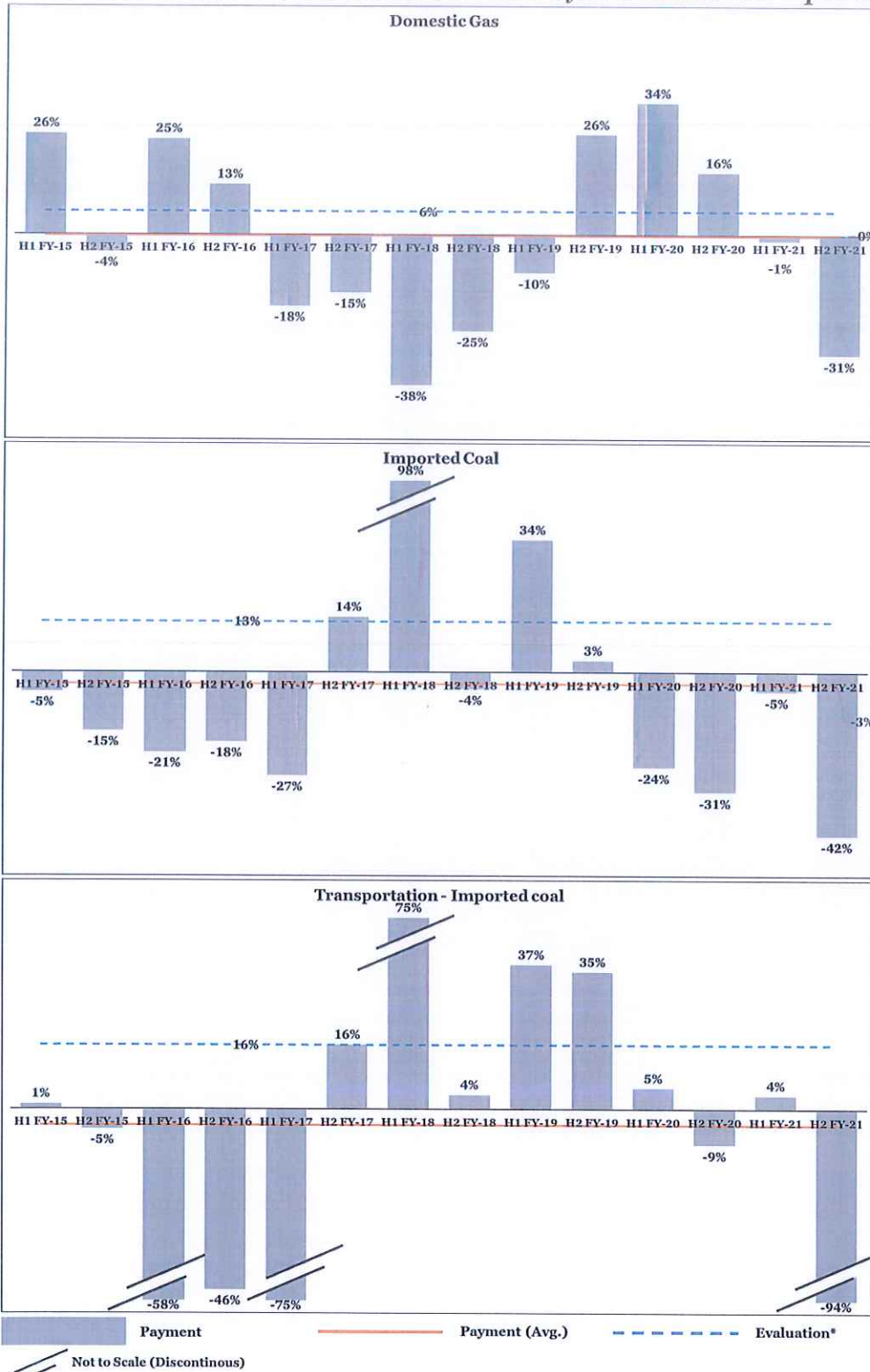
To know the impact, Evaluation Escalation rates determined by Hon'ble Commission vide No. Eco-2/2013-CERC dt. 7 Oct 2013 (Last such order) and the actual payments escalation rates for the period FY-15 to FY-21 are compared (**Chart-2**). There is a huge variation between the two rates and therefore the evaluated tariff does not truly reflect the actual tariff.

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<sup>1</sup> Reuters article 'Coal price seen rising 3 fold, to hit record – Merrill' dt. 7<sup>th</sup> March 2008 (<https://www.reuters.com/article/idINIndia-32348920080307>)



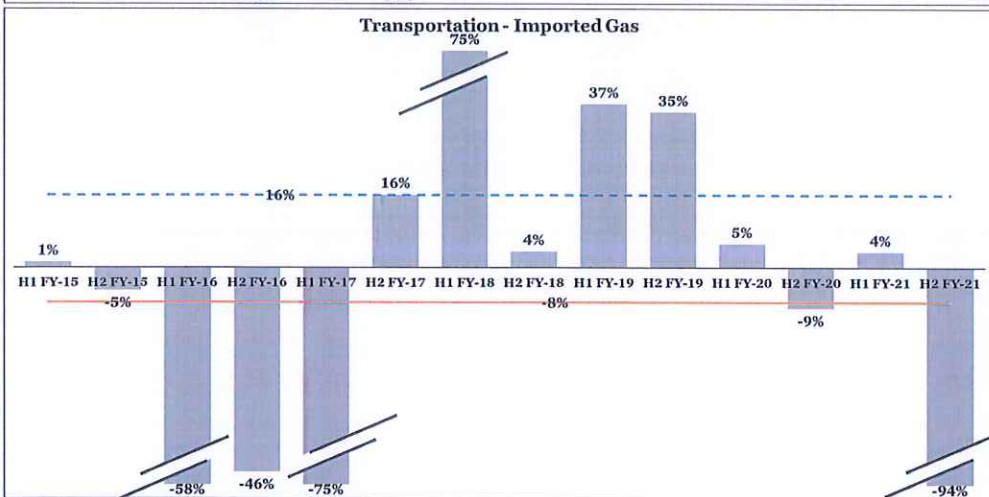
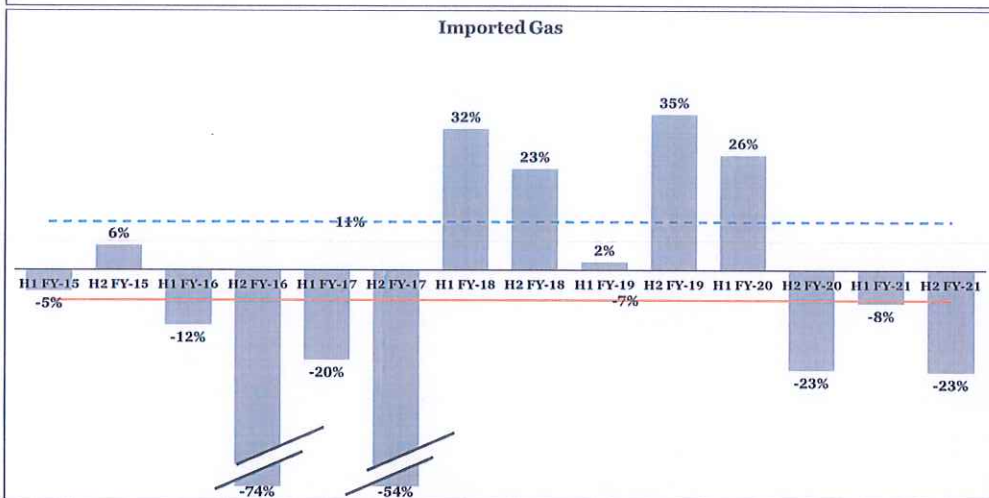
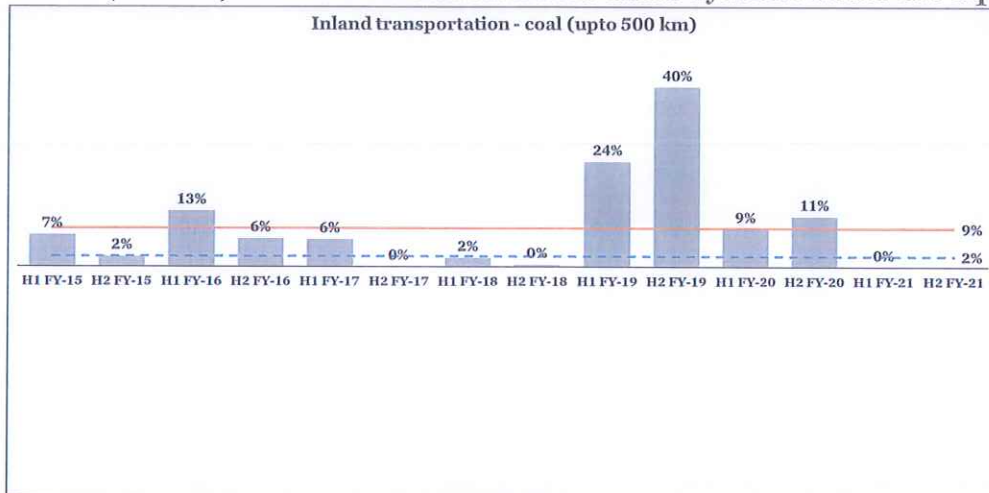
Chart-2: CERC Evaluation Rates and Payment Rates for equivalent period



Actual Payments of all the components have deviated from the Evaluation Rates

\*Evaluation Rate notified vide No. Eco-2/2013-CERC dt. 7 Oct, 2013

Chart-2 (contd.): CERC Evaluation Rates and Payment Rates for equivalent period



Payment  
 Payment (Avg.)  
 Evaluation\*  
 Not to Scale (Discontinuous)

Actual Payments of all the components have deviated from the Evaluation Rates

\*Evaluation Rate notified vide No. Eco-2/2013-CERC dt. 7 Oct, 2013

Therefore, the current method of evaluation does not suit the purpose. This is especially true for the current RE + Non-RE bundling method as the sources competing against each other are contrast in nature and are impacted differently due to the current method. A comparison between RE and a Non-RE based bidder, highlighting the inherent problem with the current method, is provided below

| <b>Bidding</b>           |             |                | <b>Operation</b>          |             |                   |
|--------------------------|-------------|----------------|---------------------------|-------------|-------------------|
|                          | <b>RE</b>   | <b>Thermal</b> |                           | <b>RE</b>   | <b>Thermal</b>    |
| <b>First year tariff</b> | 3.70        | 4.00           | <b>First year tariff</b>  | 3.70        | 4.00              |
| <b>Esc (Eval)</b>        | 3% (quoted) | 2% (CERC eval) | <b>Esc (Actual)</b>       | 3% (quoted) | 4% (CERC payment) |
| <b>Levelized (Eval)</b>  | 4.76        | 4.72           | <b>Levelized (Actual)</b> | 4.76        | 5.64              |

In above scenario, RE bidder lost out to Thermal Bidder due to lower evaluation rate of Thermal. However, in actual operation RE is cheaper due to Thermal’s higher payment escalation rate. It could also be other way round where Thermal could have lost due to higher evaluation rate, but in actual might have lower payment rate

**Proposal:**

**We request Hon’ble Commission to provide an advisory that the Escalation rates for evaluation should be used for comparing bids from similar sources viz., Thermal vs Thermal, but cannot be used to compare different sources like Thermal Vs RE.**

**Alternatively,**

**We request Hon’ble Commission to propose different a methodology as below:  
For Non-RE component, Bidder to provide year-wise variable cost (Rs/ kWh) for first 7-8 years and for remaining years CERC based escalation index should be used for bid evaluation. The bidder shall be paid based on CERC specified payment escalation index from period beyond 7-8 years.**

This methodology can mitigate the risks of variation between Escalation Rates for evaluation and payments to some degree.

Also, generators absorbing the risks for the 7-8 years is an existing practice, as in the current Conventional Medium Term (FOO) tenders [Lumpsum Option], where the payments are not

linked to individual coal indices. Many such tenders are successful and contracts are being in operation.

**We look forward to your consideration on the above, which will help in fair evaluation of the tender and seamless operation of the Contracts.**

Yours, sincerely

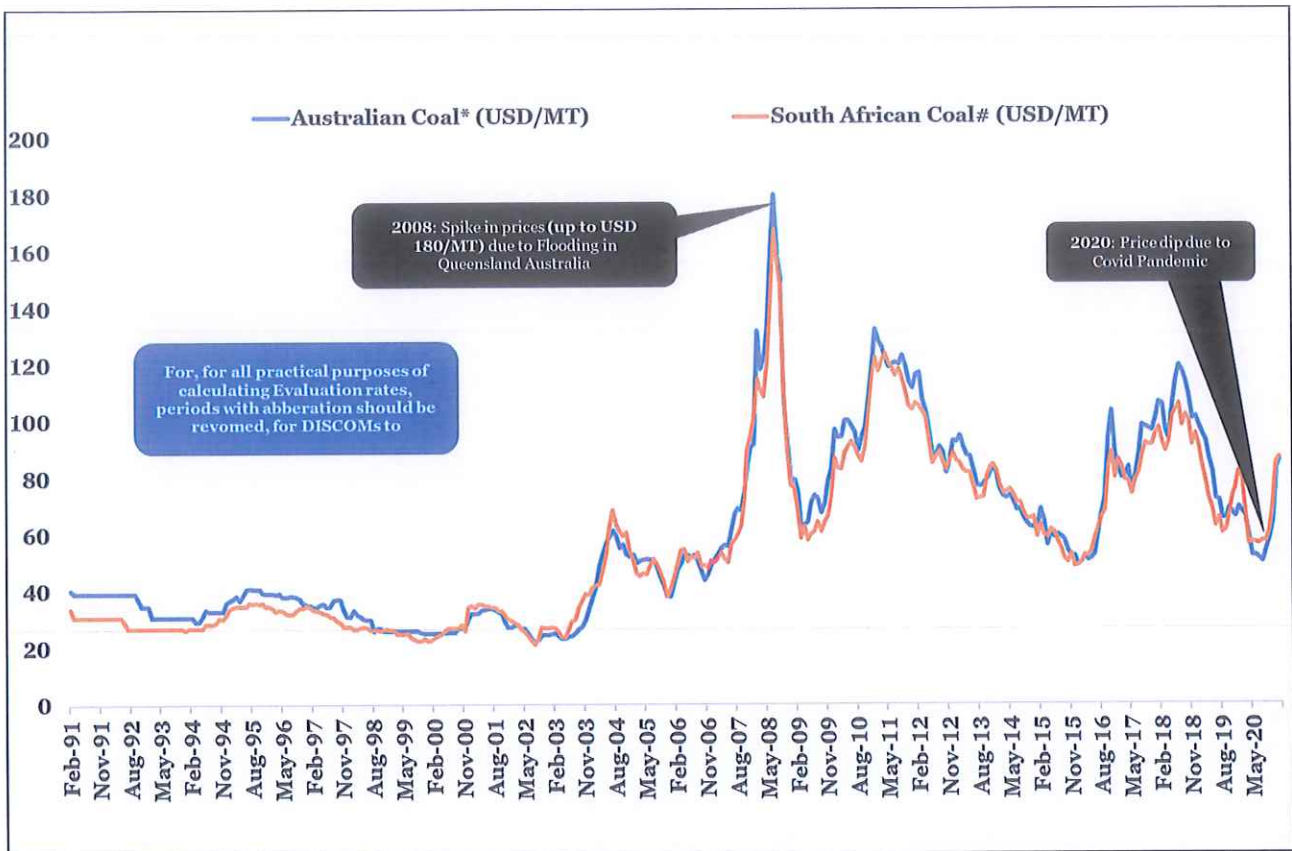
for, Greenko Energies Private Limited

  
Authorized Signatory





Imported Coal Prices (USD/Metric Tonne.) – Historic Trend<sup>2</sup>



\*Australian Coal: FOB, Newcastle/Port Kembla, ~6000 kCal/kg

#South African Coal: FOB, Richards Bay, ~6000 kCal/kg

<sup>2</sup> Source of Data series for Australian Coal (Newcastle):  
<https://www.indexmundi.com/commodities/?commodity=coal-australian&months=360&commodity=coal-south-african>