

**ODISHA POWER GENERATION CORPORATION LTD.**

( A Government Company of the State of Odisha)

CIN : U40104OR1984SGC001429



**Regd. Off :** Zone - A, 7th Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar - 751 023, Odisha.

**Ph. :** 0674-2303765 - 66, **Fax :** 0674 - 2303755 / 56

**Web :** www.opgc.co.in

Ref: OPGC/Units 1 & 2/Tariff /2022-23/ 1956

November 29, 2022

To,

**The Secretary,**

Odisha Electricity Regulatory Commission,

Plot No.4, Chunokoli, Sailashree Vihar

Bhubaneswar- 751 021

**Sub: Authorisation of Mr. Haresh Kumar Satapathy, AGM (C&RA) for filing of tariff petition for FY 2023-24**

Sir,

This is to certify that Mr. Haresh Kumar Satapathy, functioning as Additional General Manager (C&RA), Odisha Power Generation Corporation Ltd., posted at the corporate office at Zone-A, 7<sup>th</sup> Floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023, Odisha, India (Petitioner), is hereby authorised to file the petition for determination of Generation Tariff of OPGC Unit 1&2 for FY 2023-24 and appear on behalf of the petitioner for the tariff hearing and other procedure before OERC.

Thanking you  
Yours faithfully

**(P. K. Mohapatra)**  
**Managing Director**

29 NOV 2022

AFFIDAVIT

BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION,  
BHUBANESHWAR

FILE NO.

CASE NO. \_\_\_\_\_ OF 2022

**IN THE MATTER OF:** Application for determination of Generation Tariff for FY 2023-24 for Odisha Power Generation Corporation Ltd. under Sections 62 & 86 of the Electricity Act, 2003 read with Approved Bulk Supply Agreement along with Supplemental Agreement (together referred to as the 'Amended PPA'), related provisions of OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 and OERC (Conduct of Business) Regulations, 2004, and Hon'ble Supreme Court Order dated April 19, 2018 in Case No. 9485 of 2017.

AND

**IN THE MATTER OF:**

Odisha Power Generation Corporation Ltd. (OPGC)  
Zone-A, 7<sup>th</sup> Floor, Fortune Towers,  
Chandrasekharapur, Bhubaneswar – 751 023

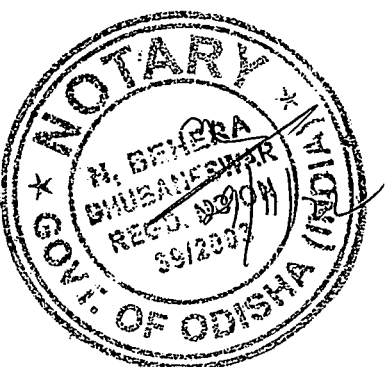
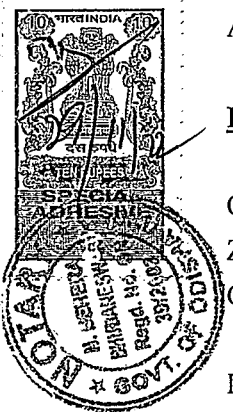
..... Petitioner

I, Haresh Kumar Satapathy, son of Shri Kailash Chandra Satapathy, aged about 54 years, do solemnly affirm and say as follows:

- (a) That I am the Additional General Manager (C&RA) of Odisha Power Generation Corporation Limited, the Petitioner in the above matter and am duly authorised by the said Petitioner to make this affidavit on its behalf.
- (b) The statements made in paragraphs 1 to 6 of the Petition herein now shown to me are true to my knowledge and statements made in paragraphs 1 to 6 are based on information made available to me and I believe them to be true.

*Haresh Kumar Satapathy*  
Deponent

Addl. General Manager (C & RA)  
Odisha Power Generation Corporation Ltd.  
Bhubaneswar



29 NOV 2022

Verification

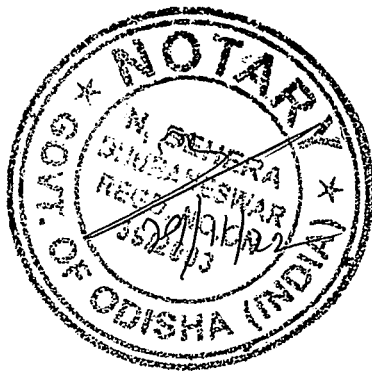
I, the deponent above named do hereby verify that the contents of my above affidavit are true to my knowledge; no part of it is false and nothing material has been concealed there from.

Verified at Bhubaneswar on the 29<sup>th</sup> day of November, 2022.

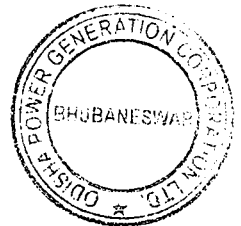
*Harish Kumar Satapathy*

Deponent

Addl. General Manager (C & RA)  
Odisha Power Generation Corporation Ltd.  
Bhubaneswar

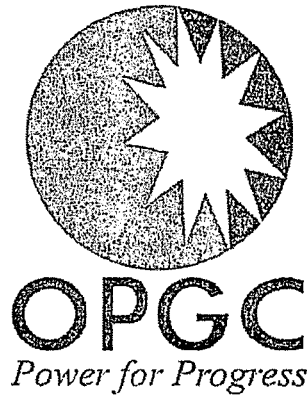


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29/11/22  
NILAMANI BEHRA  
NOTARY BHUBANESWAR  
GOVT. OF ODISHA (INDIA)  
REGD. NO.ON- 39/2001



**ODISHA POWER GENERATION CORPORATION LIMITED**

**BHUBANESWAR**



**PETITION FOR DETERMINATION OF TARIFF FOR  
IB TPS UNITS 1&2 FOR FY 2023-24**

NOVEMBER 29, 2022



**BEFORE THE ODISHA ELECTRICITY REGULATORY COMMISSION,  
BHUBANESHWAR**

CASE No. \_\_\_\_ of 2022

**IN THE MATTER OF** Petition for determination of Tariff for IB TPS Units 1&2 for  
FY 2023-24

**AND**

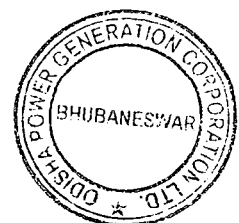
**IN THE MATTER OF** Odisha Power Generation Corporation Ltd. (OPGC Ltd.),  
**THE APPLICANT** Zone-A, 7<sup>th</sup> Floor, Fortune Towers, Chandrasekharpur,  
Bhubaneswar - 751 023, Odisha, India (Petitioner)

**ODISHA POWER GENERATION CORPORATION LIMITED ("The Petitioner")  
RESPECTFULLY SUBMITS AS FOLLOWS:**

Odisha Power Generation Corporation Limited (hereinafter referred as "OPGC" or "the Petitioner") is a company incorporated under the Companies Act, 1956 and having its registered office at Zone-A, 7<sup>th</sup> floor, Fortune Towers, Chandrasekharpur, Bhubaneswar, Odisha-751023.

GRIDCO Limited ("GRIDCO") had entered into Bulk Power Supply Agreement ("PPA") with OPGC dated August 13, 1996, for purchase of power from its Generating Units 1 & 2, having capacity of 420 MW (210 MW x 2) of IB Thermal Power Station. The said PPA came into force from January 1, 1995 and was approved by Government of Odisha ("GoO") in exercise of its power under Section 43A of the Electricity (Supply) Act, 1948.

OPGC, GRIDCO and GoO signed a Tripartite Agreement dated October 18, 1998 ("Tripartite Agreement") providing certain further amendments to the existing PPA and other provisions including those concerning the establishment of Units 3&4 of IB Thermal Power Station by OPGC. Further an Escrow and Securitization Agreement dated November 30, 1998 was entered between OPGC, GRIDCO and Union Bank of India. In 2001, disputes arose between the parties in respect of the enforcement of the said Escrow and Securitization Agreement.



*Chander Kumar Sathapathy*

After resolving the disputes between the parties, OPGC and GRIDCO agreed to amend the existing PPA and Tripartite Agreement based on GoO Notification dated June 21, 2008 (“**2008 Notification**”). The relevant extract of the GoO’s Notification dated June 21, 2008 is as follows:

*“3. After careful consideration of the recommendations of the task force, Government have been pleased to decide as under;*

*(a) In order to avoid any ambiguity with regard to tariff norms and parameters for Units 1 & 2, the provisions for calculation of incentive in the existing PPA shall stand amended to enhance the Plant Load Factor (PLF) from 68.49% to 80%. All other terms and parameters for determination of tariff for Units 1 & 2 shall be as per the existing PPA. Suitable amendments will be made in the PPA accordingly including deletion of all reference to change in tariff parameters in future. In other words, all tariff parameters will stand frozen till validity of amended PPA notwithstanding modification in tariff norms by CERC from time to time.*

*(b) The amended PPA shall be filed before the OERC for consent/approval.*

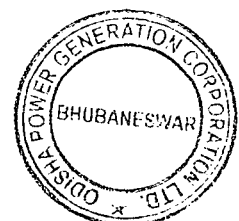
*(c) The amended PPA shall be effective with effect from 01.04.2007.”*

Accordingly, an agreement was signed on September 6, 2012 as Supplemental to the Tripartite Agreement executed on October 18, 1998 (together called “**Amended Tripartite Agreement**”). The Amended Tripartite Agreement has been made effective from October 12, 2009.

Subsequently, OPGC and GRIDCO signed an amendment to existing PPA on December 19, 2012 by amending certain clauses (together called the “**Amended PPA**”).

Hon’ble OERC vide its Order dated April 27, 2015 approved the Amended PPA as under (with emphasis added by underlining):

*“9. The above stipulation in PPA provides for settlement of issues if any arise due to implementation of this PPA in a future date the same shall be*



attested & signed

*resolved basing on mutual discussion keeping intent and objects of the PPA intact. Therefore, the Commission has no objection to approve the PPA including its amendment between GRIDCO and OPGC for purchase of power from Unit 1 & 2 of Ib Thermal Power Station as it stands now.*

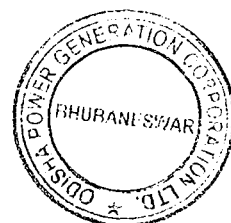
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11. *Since the power purchase by GRIDCO from Unit 1 & 2 of Ib Thermal Power Station has been continuing as per mutual agreement without approved PPA and the Commission has approved the same in the ARR of GRIDCO for the concerned year there is no need to reopen the same as per the above Regulation. The parties should, therefore, settle the power purchase process for the period prior to implementation of the above Regulation taking into account the original PPA and its supplemental one as approved by us now.*"

Further, Hon'ble OERC in the said Order dated April 27, 2015 (Case No. 13/2002) directed OPGC to file an application for determination of Generation Tariff, as per approved Amended PPA, for rest of the control period starting from FY 2016-17 onwards since tariff for FY 2014-15 and FY 2015-16 has already been approved by Hon'ble OERC in GRIDCO's ARR. The relevant extract of the Order of the Hon'ble OERC is reproduced below:

*"13. Due to the above provision in the Regulation read with Regulation 7.13 of the same Regulations, OPGC shall make an application before the Commission as per the above approved PPA each year for determination of tariff for the rest of the control period starting from FY 2016-17 onwards since the tariff for the FY 2014-15 and 2015-16 has already been approved by the Commission in the ARR of GRIDCO for the said year basing on the submission of GRIDCO."*

In compliance with the above directions of the Hon'ble OERC, OPGC filed a Petition for Approval of Generation Tariff for FY 2016-17 under Section 62 and 86 of the Electricity Act, 2003 ("the Act"), approved Amended PPA and related provisions of the OERC (Terms and Conditions of Generation Tariff) Regulations, 2014 ("**2014 Tariff Regulations**") and OERC (Conduct of Business) Regulations, 2004, as amended from time to time. The Hon'ble OERC



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vide its Order dated March 21, 2016 disposed of the above Petition (Case No. 53/2015) approving the Generation Tariff of Units 1&2 of IB Thermal Power Station for FY 2016-17, exclusively in accordance with the terms and conditions of the 2014 Tariff Regulations, and not the 2008 Notification or the Amended PPA.

OPGC filed an Appeal (Appeal No. 126 of 2016) before the Hon'ble Appellate Tribunal for Electricity ("APTEL") against the said Tariff Order for FY 2016-17 in Case No. 53/2015. During the pendency of the stated Appeal before the Hon'ble APTEL, OPGC filed the Petition for Approval of Generation Tariff for FY 2017-18 and the Hon'ble OERC disposed of the said Petition (Case No. 62/2016) vide its Order dated March 23, 2017 determining the Generation Tariff for FY 2017-18 in line with its approach adopted in the tariff determination for FY 2016-17. Hon'ble APTEL vide its Judgment dated April 6, 2017 in the stated Appeal upheld this Hon'ble Commission's Tariff Order for FY 2016-17.

Aggrieved by the Judgment of the Hon'ble APTEL, OPGC filed Civil Appeal No. 9485 of 2017 before the Hon'ble Supreme Court ("SC"). During the pendency of the stated Civil Appeal before the Hon'ble SC, OPGC filed the Petition for Approval of Generation Tariff for FY 2018-19 and the Hon'ble OERC disposed of the said Petition (Case No. 75/2017) vide its Order dated March 22, 2018, determining the Generation Tariff for FY 2018-19 in line with its approach adopted in the tariff determination for FY 2016-17. The Hon'ble Supreme Court vide its Judgment dated April 19, 2018 in the stated Appeal set aside the Tariff Order for FY 2016-17 and remanded the matter to the Hon'ble OERC for a fresh decision. In effect, the Hon'ble Supreme Court has held that primarily the tariff norms under the PPA are to be followed in determining OPGC's tariff. Further, to the extent there are tariff norms not covered by the PPA, the Tariff Regulations may be relied upon by the OERC to determine OPGC's tariff. It is submitted that the effect of the SC's Judgment is that this arrangement would apply for the entire term of the subsistence of the PPA viz. till 30.06.2026. The relevant extract of the Judgment of the Hon'ble SC is reproduced below:

*"6. We are of the view that the Commission vide Order dated 27.04.2015 on the joint application of the parties dated 26.02.2014 rightly fixed the tariff but the view taken in subsequent order dated 21.03.2016 which has been upheld on appeal is unsustainable.*



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7. *Accordingly, we set aside the impugned order and remand the matter to the State Commission for fresh decision. The State Commission may take into account the Notification dated 21.06.2008 for the fixed costs, the PPA for the variable costs specified therein and for other costs not reflected in the PPA, statutory Regulations may be applied.*

8. *The appeal shall stand disposed of as indicated above.*

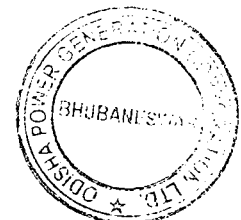
9. *The parties may appear before the State Commission for further proceedings on 2.07.2018."*

Further, Hon'ble OERC vide its Order dated May 5, 2018 in Case No. 43 of 2017 ruled as under:

*"4. Heard the parties at length. As the Hon'ble Supreme Court vide their order dated 19.04.2018 in Civil Appeal No. 9485/2017 has set aside the order dated 21.03.2016 passed by the Commission and remanded the matter for fresh decision, OPGC Ltd. is required to file fresh application for determination of Generation Tariff of its Unit-I & II within 15 days from date of this order. Basing on the said application of OPGC Ltd., a public notice shall be issued inviting suggestions /objections from the general public for re-determination of generation tariff for FY 2016-17 & FY 2017-18 which would be completed within one month fixing the date of hearing on 02.07.2018."*

In accordance with the above, OPGC filed the Petitions for Re-determination of Tariff for FY 2016-17, FY 2017-18 and FY 2018-19 before the Hon'ble OERC on May 25, 2018 considering the original project cost as per the approved Amended PPA. The said Petition was numbered as Case No. 33 of 2018 and the final Order was issued by the Hon'ble Commission on March 28, 2019.

OPGC also filed a separate Petition, numbered as Case No. 54 of 2018, for approval of additional capitalisation for FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19 in compliance to the Commission's directive in the Tariff Order for FY 2018-19 dated March 22,



Chavara Kumar Setepang

2018 and Hon'ble Supreme Court Order in Civil Appeal No. 9485 of 2017 dated April 19, 2018.

In line with the approach adopted in Petitions in Case No. 33 of 2018 and Case No. 54 of 2018, OPGC had filed Petition for approval of Generation Tariff for FY 2019-20 and FY 2020-21. The petitions were numbered as Case No. 70 of 2018 and Case no. 69 of 2019 and the final Orders in these petitions were issued by the Hon'ble Commission on March 29, 2019 and April 22, 2020 respectively. .

The Hon'ble OERC notified the Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 ("**OERC Generation Tariff Regulations, 2020**") on August 26, 2020 in exercise of the powers conferred by Section 61 and Section 62 read with Section 181 of the Act for the control period of FY 2020-21 to FY 2023-24.

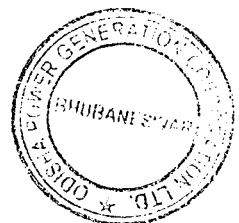
Regulation 7(6) of OERC Generation Tariff Regulations, 2020 stipulates as follows:

"7. ...

(6) *"Notwithstanding anything contained above the existing generation plants of OHPC and OPGC (UNIT-I & II) may make an application as per the Format prescribed by the Commission for determination of tariff as per annual schedule, by November 30<sup>th</sup> of every year for determination of tariff in respect of the units of the generating station.*

*Provided that the OHPC and OPGC (Unit - I & II) shall make an application as per the prescribed Format with necessary information and explanations, for determination of tariff based on capital expenditure incurred duly certified by the auditors or projected to be incurred up to the date of commercial operation and additional capital expenditure incurred duly certified by the auditors or projected to be incurred during the period for which application for determination of tariff is filed of the generating station:*

*Provided further that application shall contain details of underlying*



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*assumptions for projected capital cost and additional capital expenditure, wherever applicable."*

The Hon'ble Commission vide its Order dated October 28, 2020 in Case No. 43 of 2017 on the Petition filed by OPGC has opined that for computation of Energy Charges, the Gross Calorific Value of coal is to be considered on "as delivered basis". OPGC has filed Appeal No. 189 of 2020 before the Hon'ble APTEL against this Hon'ble Commission's Order dated October 28, 2020 in Case No. 43 of 2017 on the GCV to be considered for tariff computation. Both OPGC and GRIDCO have completed pleadings in OPGC's I.A. No. 1632 of 2020 (for Interim Relief) as well as Main Appeal No 189 of 2020. In the hearing dated November 26, 2020 before the Hon'ble APTEL, GRIDCO undertook not to initiate any coercive action against OPGC till next hearing pursuant to this Hon'ble Commission's Order dated 28.10.2020 in Case No. 43 of 2017. Subsequently, the APTEL vide its various daily order in the above matter has directed to continue the interim relief. The matter was last heard by the Registrar on November 14, 2022. As of date, both parties have completed pleadings in the matter. The matter is listed for hearing on December 23, 2022.

In accordance with the provisions of OERC Generation Tariff Regulations, 2020 and in line with the approach adopted in Petitions in Case No. 33 of 2018, Case No. 54 of 2018, Case No. 70 of 2018 and Case No. 69 of 2019, OPGC had filed Petition for approval of Generation Tariff for FY 2021-22. The said Petition was numbered as Case no. 71 of 2020 and the final Order was issued by the Hon'ble Commission on March 26, 2021.

Further, Hon'ble Commission vide order dated May 21, 2021 in Petition No. 54 of 2018 disallowed claimed actual additional capitalisation for FY 2015-16 to FY 2017-18 and proposed additional capital expenditure for FY 2018-19. OPGC has filed an Appeal before Hon'ble Appellate Tribunal for Electricity (APTEL) on November 15, 2021, as Appeal No. 335/2021 against this Hon'ble Commission's Order dated May 21, 2021 in Case No. 54 of 2018. The matter was last heard by the Registrar on November 23, 2022. The matter is listed for hearing on January 27, 2023.

In accordance with the provisions of OERC Generation Tariff Regulations, 2020 and in line with the approach adopted in Petitions in Case No. 33 of 2018, Case No. 70 of 2018, Case No.



*Officer cum Secretary*

69 of 2019, and Case No. 71 of 2020, OPGC had filed Petition for approval of Generation Tariff for FY 2022-23. The said Petition was numbered as Case no. 104 of 2021 and the final Order was issued by the Hon'ble Commission on March 24, 2022.

### **Prayers to the Hon'ble OERC**

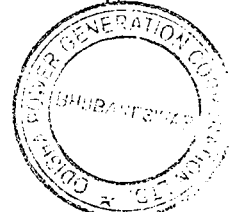
OPGC respectfully prays that the Hon'ble OERC may:

- i) Admit the instant Petition.
- ii) Approve the tariff, including annual fixed cost and base variable charges, for FY 2023-24 as claimed in the Petition.
- iii) Approve the other charges for FY 2023-24 as claimed in the Petition and recovery of other charges on actual basis during FY 2023-24.
- iv) Approve the recovery of FPA in accordance with the approved PPA during FY 2023-24.
- v) Allow OPGC to file a separate Petition regarding additional capitalisation from FY 2015-16 to FY 2023-24 after the APTEL Judgment is issued in Appeal No 335/2021 filed by OPGC on Hon'ble Commission's Order dated May 21, 2021 in Case No. 54 of 2018.
- vi) Condone any inadvertent omissions, errors, short comings and permit OPGC to add/change/ modify/ alter this filing and make further submissions as may be required at a future date; and
- vii) Pass such other and further Orders as deemed fit and proper in the facts and circumstances of the case.

*Harish Kumar Satapathy*  
Petitioner

Bhubaneswar  
November 29, 2022

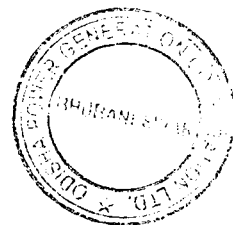
Addl. General Manager (C & RA)  
Odisha Power Generation Corporation Ltd.  
Bhubaneswar



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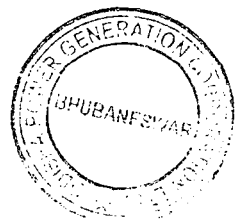
Haren Kumar Satapathy



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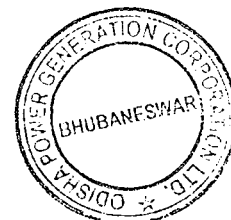
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Hanesh Kumar Satapathy



## 1 Introduction

- 1.1 Odisha Power Generation Corporation Limited (herein after referred as “OPGC” or “the **Petitioner**”) is a company incorporated under the Companies Act, 1956 and having its registered office at Zone-A, 7<sup>th</sup> floor, Fortune Towers, Chandrasekharpur, Bhubaneswar, Odisha - 751 023.
- 1.2 GRIDCO Limited (“**GRIDCO**”) had entered into Bulk Power Supply Agreement (“**PPA**”) with OPGC dated August 13, 1996, for purchase of power from its Generating Units 1&2, having capacity of 420 MW (210 MW x 2) of IB Thermal Power Station. The said PPA came into force from January 1, 1995 and was approved by Government of Odisha (“**GoO**”) in exercise of its power under Section 43A of the Electricity (Supply) Act, 1948.
- 1.3 OPGC, GRIDCO and GoO signed a Tripartite Agreement dated October 18, 1998 (“**Tripartite Agreement**”) providing certain further amendments to existing PPA and other provisions including those concerning the establishment of Units 3&4 of IB Thermal Power Station by OPGC. Further, Escrow and Security Agreement dated November 30, 1998 was entered between OPGC, GRIDCO and Union Bank of India.
- 1.4 Pursuant to above, OPGC and GRIDCO agreed to amend existing PPA and Tripartite agreement based on GoO’s 2008 Notification. Accordingly, an agreement was signed on September 6, 2012 as Supplemental to the Tripartite agreement executed on October 18, 1998 (together called as “**Amended Tripartite Agreement**”). The Amended Tripartite Agreement has been made effective from October 12, 2009.
- 1.5 Subsequently, OPGC and GRIDCO signed an amendment to existing PPA on December 19, 2012 by amending certain clauses (together called the “**Amended PPA**”), which was retrospectively brought to effect from April 1, 2007.
- 1.6 The Hon’ble OERC notified the Odisha Electricity Regulatory Commission (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 (“**OERC Generation Tariff Regulations, 2020**”) on August 26, 2020 in exercise of the powers conferred by Section 61 and Section 62 read with Section 181 of the Act for the control

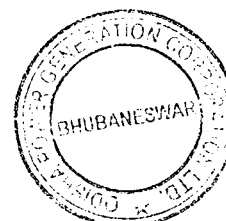


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period of FY 2020-21 to FY 2023-24.

- 1.7 In accordance with the provisions of OERC Generation Tariff Regulations, 2020 and in line with the approach adopted in Petitions in Case No. 33 of 2018, Case No. 70 of 2018, Case No. 69 of 2019, and Case No. 71 of 2020, OPGC had filed Petition for approval of Generation Tariff for FY 2022-23. The said Petition was numbered as Case no. 104 of 2021 and the final Order was issued by the Hon'ble Commission on March 24, 2022.
- 1.8 In the instant Petition, OPGC has claimed approval for Generation Tariff for FY 2023-24 based on the provision of the approved Amended PPA against the original project cost. With regard to the claim of additional components of Annual Fixed Charges towards additional capitalisation for FY 2015-16 to FY 2021-22 and projected additional capitalisation for FY 2022-23 and FY 2023-24, the same shall be claimed by OPGC through a separate petition based on the outcome of the Appeal registered as Appeal No. 335/2021 against this Hon'ble Commission's Order dated May 21, 2021 in Case No. 54 of 2018.
- 1.9 The Petition is structured in the following manner:
- Section 1 (This Section): Introduction
  - Section 2: Overall Approach for Filing Petition
  - Section 3: Generation Tariff for FY 2023-24 considering original project cost
  - Section 4: Summary of Tariff Proposal for FY 2023-24
  - Section 5: Prayers

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Kumar  
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## 2 Overall Approach for Filing Petition

2.1 The instant Petition has been filed for determination of Generation Tariff for FY 2023-24 for IB Thermal Power Station of OPGC Ltd., having installed capacity of 420 MW (2 x 210 MW - Units 1&2), located at Banharpalli in District Jharsuguda.

2.2 Section 86(1) of the Electricity Act, 2003 stipulates as under:

*“(1) The State Commission shall discharge the following functions:-*

*(a) determine the tariff for generation, supply, transmission and wheeling of electricity wholesale, bulk or retail, as the case may be, within the State:*

*.....”*

2.3 The OERC Conduct of Business Regulations, 2004 stipulates as under:

*“61. Generation Tariff:-*

*.....*

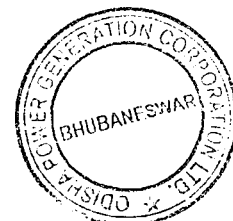
*(2) ..... the Generating Company may file an application by 30<sup>th</sup> November of each year to the Commission for determination of tariff for any of the generating station for the sale of energy in the State of Orissa giving the details of the fixed and variable costs associated with the generation and sale of energy from the generating station.*

*.....*

*(4) The Commission may determine the tariff for the sale of energy from the Generating Station of a Generating Company...”*

2.4 Regulation 19(2) of OERC Generation Tariff Regulations, 2020 stipulates as follows:

*“The Annual Fixed Cost for OHPC and OPGC (Unit-I & II) will be determined by the Commission by taking into account the notification(s) issued by the Government of Odisha from time to time and their PPAs.”*



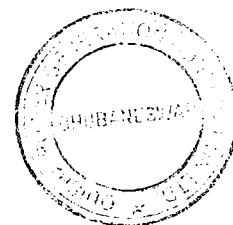
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2.5 Considering aforesaid provisions, along with the provisions and judgements as mentioned in Chapter 1 (Introduction) of the instant Petition, i.e., Regulation 7(6) of OERC Generation Tariff Regulations, 2020, the Hon'ble Supreme Court Judgement dated April 19, 2018, the instant petition has been filed based on the following agreements entered between the parties:

- (a) Bulk Power Supply Agreement between OPGC and GRIDCO, dated August 13, 1996 ("PPA") and an agreement as Supplemental to Bulk Power Supply Agreement dated December 19, 2012 ("Amended PPA"). Both agreements were approved by the Hon'ble OERC vide its Order dated April 27, 2015.
- (b) Tripartite Agreement between OPGC, GRIDCO and Government of Odisha dated October 18, 1998 ("Tripartite Agreement")
- (c) Govt. of Orissa ("GoO") Notification No. 7216/E dated June 21, 2008.
- (d) Agreement as Supplemental to Tripartite Agreement dated September 6, 2012 ("Amended Tripartite Agreement") which was approved by Hon'ble OERC vide its Order dated April 27, 2015.
- (e) Escrow and Securitization Arrangement dated November 30, 1998 entered between OPGC, GRIDCO and Union Bank of India, which was approved by Hon'ble OERC vide its Order dated April 27, 2015.

2.6 In line with the approach adopted in Case No. 104 of 2021, OPGC is filing the instant Petition for approval of Generation Tariff for FY 2023-24 as under:

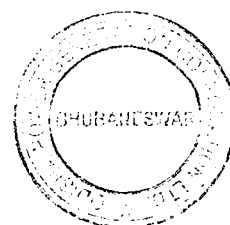
Tariff components	Considering original project cost as per the Approved Amended PPA
O&M expenses	✓
Depreciation	×
Interest on loans	×
Interest on working capital	✓
Return on Equity	✓
Variable Charges	✓
Other Charges	✓



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- 2.7 It is submitted that the claim of additional components of Annual Fixed Charges towards additional capitalisation for FY 2015-16 to FY 2021-22 and projected additional capitalisation for FY 2022-23 and FY 2023-24 will be claimed by OPGC through a separate petition based on the outcome of the Appeal registered as Appeal No. 335/2021 before Hon'ble APTEL.

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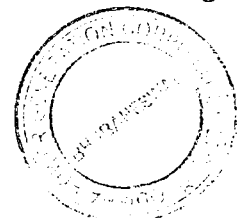
### **3 Generation Tariff for FY 2023-24 considering the original project cost**

#### **Computation of Annual Fixed Cost**

- 3.1 As discussed earlier, the Hon'ble Supreme Court vide its Judgment dated April 19, 2018 has held that primarily the tariff parameters under the PPA and Government Notification dated June 21, 2008 are to be followed in determining OPGC's tariff. Accordingly, OPGC has considered the tariff parameters as per the provisions of PPA.
- 3.2 As per Clause 3.0 of Schedule II of the Amended PPA, the Annual Fixed Cost of OPGC shall consist of the following components:
- (a) Depreciation;
  - (b) Return on Equity;
  - (c) Interest on Loan;
  - (d) Operation and Maintenance Expenses;
  - (e) Interest on Working Capital.
- 3.3 The computation of each of the above components of the Annual Fixed Cost is detailed in the subsequent paragraphs.

#### **Capital Cost**

- 3.4 The Amended PPA signed between OPGC and GRIDCO has considered the Capital Cost of the Project as Rs. 1060 Crore. It is submitted that while approving the Amended PPA vide Order dated April 27, 2015, Hon'ble OERC has approved the capital cost of the project. Further, the Hon'ble Commission in its Tariff Order for FY 2022-23 had considered the original capital cost of the project as Rs. 1060 Crore. In view of this, OPGC has considered the capital cost of Rs. 1060 Crore for the purpose of computation of tariff for FY 2023-24.

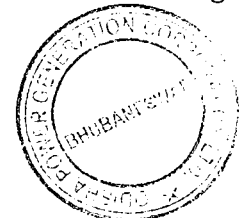


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**Additional Capitalisation**

- 3.5 OPGC had claimed the additional capitalisation of Rs. 13.32 Crore, Rs. 20.94 Crore and Rs. 44.11 Crore for FY 2015-16, FY 2016-17 and FY 2017-18 respectively vide Case No. 54 of 2018 respectively.
- 3.6 Vide Case No. 69 of 2019, OPGC had claimed the actual additional capitalization of Rs. 43.78 Crore for FY 2018-19, The Case No. 69 of 2019 was disposed of without considering additional capitalisation for FY 2018-19, as it were linked to the Case No 54 of 2018 which was under active consideration of the Commission.
- 3.7 Vide Case No. 71 of 2020, OPGC had claimed the actual additional capitalisation of Rs. 6.41 Crore for FY 2019-20, revised additional capitalisation for FY 2020-21 and projected additional capitalisation for FY 2021-22. However, Hon'ble Commission disposed of the said Petition without considering the additional capitalisation, as Order in Case No 54 of 2018 was reserved by the Commission.
- 3.8 Hon'ble Commission vide order dated May 21, 2021 in Petition No. 54 of 2018 disallowed actual additional capital expenditure for FY 2015-16 to FY 2017-18 and ruled as under:

*"32. The Commission heard the parties. As per judgement of Hon'ble Supreme Court dated 19.04.2018 the norms for variable cost shall be as per PPA and the notification of the State Government dated 21.06.2008 shall be used for fixed cost. For other costs not reflected in the PPA, the statutory Regulation may be applied. The two power generating units have been in operation since 1994 and 1996 respectively. They will complete their useful life by the year 2026 unless it is extended as per PPA. The Petitioner has also not submitted the Residual Life Assessment study. Therefore, a few years are left for life of the power plant to come to an end. If FGD is not installed then power station shall be phased out much earlier as per the MOEF guideline. As per the judgement of Hon'ble Supreme Court from the point of view of fixed cost the Government notification dated 21.06.2008 is only to be considered. However, Hon'ble Court has given relaxation in the variable cost by mentioning that if anything is not reflected in the PPA then statutory Regulation shall apply. Proposal for additional capitalisation as submitted by the Petitioner shall have impact on the fixed cost of the power station. However, this has been frozen by Government notification which has been concurred by Hon'ble Supreme Court. Therefore, it is not possible on our part to consider expenditure incurred by the Petitioner in different areas as additional capitalisation rather they would come under*



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relaxed O&M norms of PPA. After incurring the expenditure of Rs. 122.15 crore the PLF of the plant has not improved substantially which can be seen from the following table.

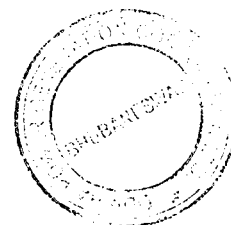
Year	PLF
2016-17	86.01%
2017-18	74.18%
2018-19	82.42%
2019-20	69.73%

Therefore, expenditure is of the nature of Operation and Maintenance or some sort of renovation and modernization. The petitioner has also not sought the prior approval of the Commission for incurring expenditure which is required for Additional Capitalisation similar to that they have sought for FGD installation in unit III and IV. Moreover, original project report is also not available to justify that the present work is additional in nature particularly the extension of height of Ash pond etc. However, if the life of the plant is extended further, this expenditure can be capitalized under the head of Renovation and Modernization. The petitioner, however, has not given any proposal for life extension. RLA study is yet to be carried out. The petitioner is at liberty to do so and come up with such proposal. Therefore, Additional capital expenditure for a plant which is going to be phased out soon should not be allowed. Hence, the expenditure proposed by the petitioner may be met from Operation and Maintenance Expenditure. The O&M norm as per PPA for Unit-1 and 2 is highly relaxed with escalation of 8% every year from the base value in the year 1996 as per PPA which is higher than norms of OERC Regulation. Therefore, any additional expenditure can be accommodated there."

3.9 OPGC has filed an Appeal on November 15, 2021, registered as Appeal No. 335/2021 against this Hon'ble Commission's Order dated May 21, 2021 in Case No. 54 of 2018.

3.10 It is further submitted that after detailed discussions/deliberations with GRIDCO towards Renovation & Modernisation for enhancement of plant life and implementation of FGD and FGC for complying the revised Emission Standards as prescribed by MoEF&CC, OPGC filed a Petition registered as Case No 66 of 2021 for in-principle approval of the Hon'ble OERC. The Hon'ble Commission has been pleased to dispose off the Case vide its Order dated November 03, 2021 wherein the Hon'ble Commission ruled as under:

"40. ... In view of the above, the Commission accords in-principle approval for the R&M works and installation of FGD and FGC in respect of generating Units-1 & 2 of OPGC thermal power station, based on the submission of GRIDCO. However, the Commission is not inclined to approve the proposed



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*capital expenditure of Rs.140 Cr. towards construction of a new ash pond. OPGC should use the existing ash pond and follow the mandate of Govt. of India for 100% ash utilization..."*

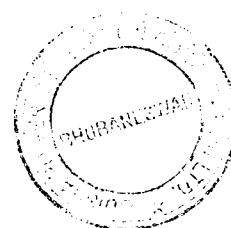
- 3.11 OPGC filed a review petition before Hon'ble Commission for reconsidering construction of a new ash pond commensurate with proposed extended life of the plant registered as Case No 96 of 2021, considering the practical difficulties being faced for 100% utilisation of Ash by OPGC. The Hon'ble Commission was pleased to approve in-principle to construct a new ash pond. Implementation of the Renovation & Modernisation and FGD and FGC shall be taken up after receiving concurrence from the Board of Directors of OPGC.
- 3.12 In the instant Petition, OPGC has not claimed actual additional capitalisation for FY 2020-21, FY 2021-22 and projected additional capitalisation for FY 2022-23 and FY 2023-24. Based on the outcome of the Appeal filed against the Hon'ble Commission's order in Case No. 54 of 2018, OPGC will approach the Hon'ble Commission for approval of actual additional capitalisation for FY 2015-16 to FY 2021-22 and projected additional capitalisation for FY 2022-23 and FY 2023-24 through a separate petition.

#### **Debt : Equity Ratio**

- 3.13 OPGC submits that project cost of Rs. 1060 Crore as approved in Amended PPA included equity of Rs. 450 Crore and Loan of Rs. 610 Crore. It is submitted that while approving the Amended PPA vide Order dated April 27, 2015, Hon'ble OERC has approved the equity of Rs. 450 Crore and loan of Rs. 610 Crore. Further, the Hon'ble Commission in its Tariff Order for FY 2022-23 has approved the equity of Rs. 450 Crore and loan of Rs. 610 Crore. Hence, OPGC has considered actual debt : equity ratio, as approved in Amended PPA, for the purpose of determination of tariff for FY 2023-24.

#### **Depreciation**

- 3.14 OPGC submits that Clause 3.0 (a) of Schedule II of the Amended PPA provides that depreciation charges shall be equal to 7.5% of the Capital Cost during the year. Considering the depreciation charges computed as per the provisions of the Amended



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PPA, the assets corresponding to Original Capital Cost of Generating Station are fully depreciated by the financial year ending March 31, 2009.

3.15 In view of the above, OPGC does not submit any claim towards the depreciation for FY 2023-24.

**Return on Equity**

3.16 OPGC has considered the actual amount of equity of Rs. 450 Crore for computation of Return on Equity. The Clause 8.0 (10) of Schedule II of PPA provides for Return on Equity at the rate of 16%. Further, the Hon'ble Commission in its Tariff Order for FY 2022-23 and also for previous years had approved the RoE considering the original equity base of Rs. 450 Crore and rate of RoE of 16%. Accordingly, OPGC submits the Return on Equity for FY 2023-24 as under:

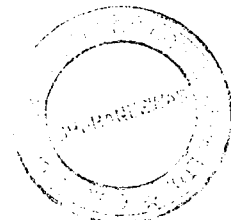
**Table 3-1: Return on Equity corresponding to original project cost (Rs. Crore)**

Sr. No.	Particulars	FY 2023-24
1	Actual Equity for Station	450.00
2	Rate of Return on Equity	16.00%
3	Return on Equity	72.00

3.17 OPGC humbly request the Hon'ble OERC to approve the Return on Equity of Rs. 72.00 Crore for FY 2023-24.

**Interest on Loan Capital**

3.18 OPGC submits that Clause 8.0 (7) and (11) of Schedule II of the Amended PPA provides the loan amount of Rs. 610 Crore and interest on loan as per actuals. Considering the actual repayment made against the outstanding loan, OPGC submits that loan amount of Rs. 610 Crore has been fully repaid by financial year ending March 31, 2012. In view of the above, OPGC does not submit any claim towards the Interest on Loan Capital for FY 2023-24.



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### O&M Expenses

3.19 OPGC submits that Clause 3.0 (d) and (e) of Schedule II of the Amended PPA provides that O&M expenses for first year of operation at the rate of 2.5% of the capital cost which shall be escalated by 8% each year from April 1, 1996. The Hon'ble Commission in its Tariff Order for FY 2022-23 and also for previous years approved the O&M expenses in line with the above stated provision of the approved Amended PPA.

3.20 Accordingly, OPGC submits the O&M Expenses for FY 2023-24 considering the escalation factor of 8% as per the methodology prescribed in Amended PPA as under:

**Table 3-2: O&M Expenses for FY 2023-24 (Rs. Crore)**

Sr. No.	Particulars	Legend	FY 2023-24
1	Capital Cost of Project considered for O&M Expenses as per Amended PPA	A	1030.00
2	O&M Expenses for first year @ 2.5% of Capital Cost	$B=A*2.5\%$	25.75
3	Escalation rate	C	8.00%
4	O&M Expenses	$D=Bx((1+C)^{27})$	205.69

3.21 OPGC humbly requests the Hon'ble OERC to approve O&M Expenses of Rs. 205.69 Crore for FY 2023-24.

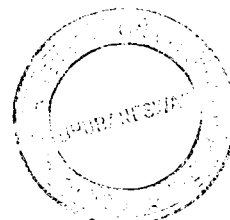
### Interest on Working Capital

3.22 The Clause 3.0 (f) of Schedule II of the Amended PPA provides the Interest on working Capital as under:

“f) Interest on Working Capital will be worked out on the following basis on normative level of generation calculated at the rate of interest applicable to OPGC for its Working capital facility as on the fixed charge computation date

i) Coal cost for 1.5 months

ii) Oil cost for 2 months



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iii) O&M expenses for 1 month

iv) Receivables for 2 months”

3.23 As regards the rate of interest, the above said clause stipulates the interest rate applicable to OPGC for its Working Capital facility. As OPGC has started availing working capital from external sources, the actual interest rate for the Working Capital facility availed by OPGC in FY 2022-23 as on September 2022 is 7.95%. Accordingly, the same has been considered for FY 2023-24.

3.24 Considering the Fuel Price and GCV as claimed in the below paragraphs of this section, OPGC submits the Interest on Working Capital for FY 2023-24 as under:

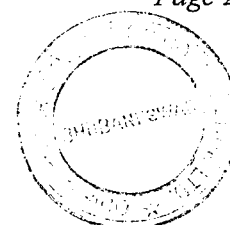
**Table 3–3: Interest on Working Capital corresponding to original project cost (Rs. Crore)**

Sr. No.	Particulars	FY 2023-24
1	Cost of Coal for one and half months	43.96
2	Cost of Secondary Fuel Oil for two months	9.37
3	O&M Expenses for one month	17.14
4	Receivables equivalent to two months	116.74
5	<b>Total Working Capital Requirement</b>	<b>187.21</b>
6	Interest Rate (%)	7.95%
7	<b>Interest on Working Capital</b>	<b>14.88</b>

3.25 OPGC humbly request the Hon’ble OERC to approve the Interest on Working Capital of Rs. 14.88 Crore for FY 2023-24.

**Summary of Annual Fixed Cost**

3.26 The Annual Fixed Cost proposed by OPGC for FY 2023-24 corresponding to the original project cost is summarised as under:



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**Table 3-4: Annual Fixed Cost corresponding to original project cost (Rs. Crore)**

Particulars	FY 2023-24
Depreciation	0.00
Return on Equity	72.00
Interest on Loan Capital	0.00
O&M Expenses	205.69
Interest on Working Capital	14.88
<b>Total Annual Fixed Cost</b>	<b>292.58</b>

3.27 OPGC humbly requests the Hon'ble OERC to approve Annual Fixed Cost of Rs. 292.58 Crore corresponding to original project cost for FY 2023-24.

**Operational Performance Parameters**

3.28 As discussed earlier, the Hon'ble SC vide its Judgment dated April 19, 2018 has held that primarily the tariff norms under the PPA are to be followed in determining OPGC's tariff. Accordingly, OPGC has considered the operational performance parameters as per the provisions of PPA.

3.29 OPGC in Amended PPA signed with GRIDCO has agreed upon operational performance parameters. For computation of variable charges for FY 2023-24, the operational performance parameters as per Clause 8 of Schedule II of the approved Amended PPA has been considered. OPGC has considered the following Operational Performance parameters as under:

- (a) Normative Availability
- (b) Plant Load Factor (PLF)
- (c) Gross Station Heat Rate
- (d) Specific Oil Consumption
- (e) Auxiliary Energy Consumption

**Normative Availability**

3.30 As per Clause 3.0 (g) of Schedule II of the Amended PPA, Full Fixed Charges will be paid on achievement of Normative Availability of 68.49%.



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**Plant Load Factor (PLF)**

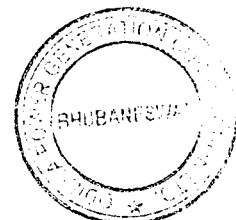
- 3.31 As per Clause 3.0 (g) of Schedule II of the Amended PPA, the interest on working capital will be worked out considering normative level of generation. Accordingly, OPGC has considered the PLF of 68.49%, equal to the Normative Availability for computing the coal cost, oil cost and receivables in the computation of interest on working capital.
- 3.32 As per Clause 3.0 (g) of Schedule II of the Amended PPA, the PLF applicable for computation of incentive shall be 80%. As per the generation plan submitted to GRIDCO, the ex-bus generation projected for FY 2023-24 is 2731.657 MU which corresponds to PLF of 81.8%. Incentive for higher PLF for FY 2023-24 shall be claimed in accordance with the provisions of the Amended PPA.
- 3.33 **Gross Station Heat Rate:** Gross Station Heat Rate of 2500 kCal/kWh has been considered as per Clause 8 of Schedule II of the approved Amended PPA.
- 3.34 **Specific Oil Consumption:** Specific Oil Consumption of 3.5 ml/kWh has been considered as per Clause 8 of Schedule II of the approved Amended PPA.
- 3.35 **Auxiliary Consumption:** Auxiliary Consumption of 9.5% has been considered as per Clause 8 of Schedule II of the approved Amended PPA.
- 3.36 The Operational Performance parameters considered by OPGC are summarised as under:

**Table 3-5: Operational Performance Parameters for FY 2023-24**

Sr. No.	Particulars	Unit	FY 2023-24
1	Normative Availability	%	68.49%
2	Target PLF for incentive	%	80.00%
3	Auxiliary Consumption	%	9.50%
4	Station Heat Rate	kcal/kWh	2500
5	Specific Oil Consumption	ml/ kWh	3.50

**Fuel Prices and GCV**

- 3.37 During FY 2023-24, the entire coal requirement for OPGC Units 1&2 is proposed to be met from coal supply under existing FSA with Mahanadi Coal Fields Limited ("MCL") from lakhanpur mines.



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3.38 Clause 7.0 of Schedule II of the existing PPA provides the computation of Fuel Cost. For computation of the fuel cost, OPGC has relied on the provisions of the Amended PPA which provides that the Price and Gross Calorific Value of coal and oil shall be considered as delivered to the Power Station. Further, Clause 9 of Schedule II of the PPA stipulates that,

*"The above monthly fuel price adjustment shall be consolidated at the end of the financial year and certified by the Statutory Auditor. These prices and GCV for oil and coal for one year shall be weighted averages (base) for the next year."*

3.39 Hon'ble Commission vide its Order dated October 28, 2020 in Case No. 43 of 2017 on the Petition filed by OPGC regarding the dispute on Gross Calorific Value to be considered for tariff has ruled as under:

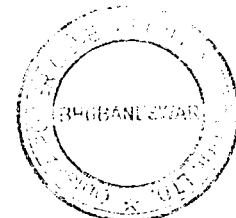
*"13. We carefully heard the arguments and rival arguments of all the parties including opinions of experts. The bone of contention in this case is related to the calculation of Energy Charge Rate (ECR) of the power procured by GRIDCO from OPGC. After longstanding dispute in this matter, the Commission had finally redetermined the tariff for Unit-I and II of the petitioner vide case No.33 of 2018 dt.28.03.2019 for FY 2016-17, FY 2017-18 and FY 2018-19 pursuant to the judgment of the Hon'ble Supreme court of India dated 19.04.2018 in Civil Appeal No. 9485 of 2017. The Commission in the said order had directed as follows:*

*Directives of the Commission:*

*"40. The recovery of monthly Capacity Charges as approved by the Commission here shall be made as per the methodology stipulated in the PPA and GRIDCO Ltd. shall make payment after prudence check.*

*41. The operational norms like Auxiliary Consumption, Gross Station Heat Rate, and Consumption of Oil as indicated in Clause 8 of Schedule-II of the PPA and Price and GCV of Oil and Coal actually delivered to the power station as per Clause 7 of Schedule-II of the PPA shall be considered. Accordingly claims of monthly Energy Charges shall be made by OPGC and GRIDCO Ltd. shall make payment after prudence check of all parameters of energy charges like GCV and price of Coal & Oil etc."*

*The capacity charge and energy charge are to be computed as per the above order of the Commission.*



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14. Heat energy contents of the coal and oil are converted to electrical energy in the power station. Heat energy content of the coal per kilogram varies at different points starting from the time of its mining till its firing in the furnace due to addition and release of moisture and other impurities during its handling. PPA between the parties at clause-7 of Schedule-II specifies that Gross Calorific Value of the coal and oil shall be determined "as delivered to the power station". It is understood from the submission of the experts and parties that the GCV of coal is measured at mines end by a third party agency named CIMFR on "equilibrated method". This is done to arrive at a standardized pricing of coal of a particular grade. But the heat energy available in the power station from the coal depends upon moisture content and other impurities. Therefore, GCV of coal measured at equilibrated method requires moisture correction for determination of heat content available for energy conversion. Therefore, if we apply a moisture correction formula on "as billed" GCV which is determined on equilibrated method, we can arrive at GCV on total moisture basis. CERC in petition No.279/GT/2014 dated 30.07.2016 has also adopted this method. This is because the measurement of GCV on total moisture basis at power station end is the practice generally followed by the industry and it determines the volume of coal the power station requires to generate a particular quantity of energy.

$$\begin{aligned} & \text{GCV of coal as delivered to the power station (total moisture basis)} \\ &= \text{GCV} \times \frac{(1 - \text{TM})}{(1 - \text{IM})} \end{aligned}$$

Where:

GCV= Gross Calorific value of coal as billed by coal supplier

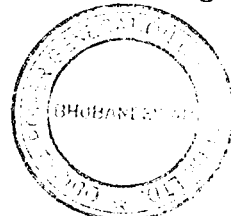
TM= Total moisture as per CIMFR report

IM= Inherent moisture as per CIMFR report

The above formula should form the basis of calculation of GCV of coal on "as delivered basis" for computation of energy charge. The above formula shall take care of total moisture in calculation of GCV which is the prevalent industry practice.

15. The old bill of OPGC should be modified accordingly from April, 2017 onwards for the entire tariff period. The value of IM and TM should be adopted from the third party CIMFR report."

3.40 OPGC has filed Appeal No. 189 of 2020 before the Hon'ble APTEL against this Hon'ble Commission's Order dated October 28, 2020 in Case No. 43 of 2017 on the GCV to be considered for tariff computation. Both OPGC and GRIDCO have completed pleadings in OPGC's I.A. No. 1632 of 2020 (for Interim Relief) as well as Main Appeal No 189 of 2020. In the hearing dated 26.11.2020 before the Hon'ble APTEL, GRIDCO undertook



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not to initiate any coercive action against OPGC till next hearing pursuant to this Hon'ble Commission's Order dated 28.10.2020 in Case No. 43 of 2017. Subsequently, the APTEL vide its various daily order in the above matter has directed to continue the interim relief. As of date, both parties have completed pleadings in the matter. The matter is listed for hearing on December 23, 2022.

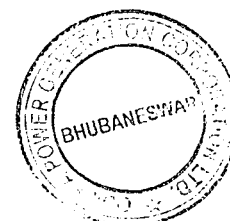
3.41 In line with the Judgement of the Hon'ble Supreme Court of India dated April 18, 2018 in Civil Appeal No. 9485 of 2017, variable costs for OPGC are to be determined as per the PPA. As per the provision of PPA, the GCV of Oil and Coal is to be considered as actually delivered to the power station.

3.42 Further, the Hon'ble Commission in Order dated March 24, 2022 in Case No. 104 of 2021 had ruled as follows:

***"Price & GCV of Coal and Secondary fuel oil***

*The Commission vide its Order dated 28.10.2020 in Case No. 43/2017 has provided the basis for calculation of GCV of coal as delivered to the power station (total moisture basis). This has been challenged by OPGC in APTEL which is pending there. As per Clause 7 of Schedule-II of the PPA, Gross Calorific Value (GCV) of Secondary Oil and Coal is to be considered "as delivered" basis to the power station. During the present proceeding, the details of GCV of Coal "as delivered" (at the delivery point) was sought from OPGC in line with the PPA and the Order of Hon'ble Supreme Court. OPGC has not submitted the details of the coal at the delivery point (basing on as billed GCV with moisture correction) and has rather submitted GCV of coal on "as fired" basis (based on total moisture method) which does not appear even in their PPA. As per Commission's Order dated 28.10.2020, sampling report by CIMFR at mine's end with moisture correction would be considered for determining GCV of 'as delivered' Coal on total moisture basis. This is in line with PPA and order of Hon'ble Supreme Court. However, OPGC has taken a plea at para 3.40 of their tariff application that the order of the Commission in this regard in Case No. 43/2017 dated 28.10.2020 has been challenged before Hon'ble APTEL in Appeal No. 189/2020. Therefore, in the absence of above details, the Commission has decided to consider the base GCV of Grade-14 (G-14), i.e. 3101 kcal/kg similar to last year order. On the query of the Commission, OPGC has submitted that the price of G-14 coal has also been revised to Rs. 1614.52/ MT including all charges w.e.f. 01.08.2021."*

3.43 However, as the matter is sub judice before Hon'ble APTEL, OPGC has considered the GCV of coal and oil as actually delivered to the power station for the computation of energy charges.



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3.44 As the instant Petition for tariff determination for FY 2023-24 is being filed before the end of the current year FY 2022-23, it is not possible to provide the auditor certified value of delivered price and GCV of oil and coal as part of the tariff submissions for the whole year. However, the actual delivered fuel prices and GCV of oil and coal for the period from April to September 2022, is available with OPGC, which has been considered for purpose of computation of tariff in the instant petition based on the auditor certified Half Yearly Fuel Price Adjustment Bill raised by OPGC on October 18, 2022. The copy of the Half Yearly Fuel Price Adjustment Bill for the period April to September 2022 is enclosed at **Annexure 1**. Further, the weighted average price of Secondary Fuel Oil has been considered in the ratio of 90:10 for HFO and LDO as per the provisions of the Amended PPA.

3.45 Accordingly, GCV and Price of Coal and Oil considered for tariff computation is summarised below:

**Table 3-6: Price and Gross Calorific Value of Coal and Oil**

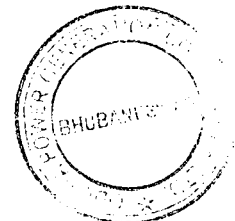
Sr. No.	Source of Coal	Base for FY 2023-24
1	Price of Coal (Rs. /MT)	1622.39
2	Price of LDO (Rs./kL)	80561.66
3	Price of HFO (Rs./kL)	61885.46
4	Gross Calorific Value of Coal (kCal/kg)	2865.76
5	Gross Calorific value of LDO (kCal/ltr.)	10000
6	Gross Calorific value of HFO (kCal/ltr.)	10000

**Energy Charge**

3.46 OPGC has computed base Variable Charges for FY 2023-24 as per Clause 7.0 of Schedule II of the Amended PPA. The computation of base Variable Charges for FY 2023-24 is given in the Table below:

**Table 3-7: Variable Charges for 2023-24**

Particulars	Unit	FY 2023-24
Auxiliary Consumption	%	9.50%
Gross Station Heat Rate	kCal/kWh	2500
GCV of Coal	kCal/kg	2865.76



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Particulars	Unit	FY 2023-24
GCV of Oil (LDO)	kCal/ltr	10000.00
GCV of Oil (HFO)	kCal/ltr	10000.00
Specific Coal Consumption	kg/kWh	0.86
Specific Oil Consumption-LDO	ml/kWh	0.35
Specific Oil Consumption-HFO	ml/kWh	3.15
Price of Coal	Rs./MT	1622.39
Price of Secondary Oil-LDO	Rs./ kL	80561.66
Price of Secondary Oil-HFO	Rs./ kL	61885.46
<b>Variable Charges per kWh (base value)</b>	<b>Paisa/kWh</b>	<b>178.86</b>

3.47 OPGC humbly requests the Hon'ble OERC to approve Base Variable Charges of 178.86 Paisa/kWh for FY 2023-24. Any variation in actual energy charges during the year on account of fuel prices and calorific value will be claimed through Fuel Price Adjustment in supplementary bills on half yearly basis as per the provisions of PPA.

**Reimbursement of other charges**

3.48 Clause 10.0 of the approved Amended PPA stipulates as under:

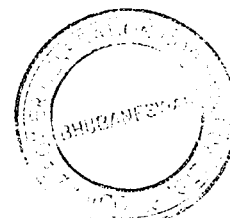
*"10.0 LEVIES, TAXES, DUTIES, CESS ETC. :*

*The above tariff is exclusive of any statutory taxes, levies, duties, cess or any other kind of imposition(s) whatsoever imposed/charged by any Government (Central/State) and/or any other local bodies/authorities on generation of electricity including auxiliary consumption or any other type of consumption, transmission, sale or on supply of power/energy and/or in respect of any of its installations associated with Generating Stations and/or on Transmission System, Environmental Protection, Water etc. However electricity duty payable on energy drawn by OPGC if any shall be payable by OPGC and reimbursed by GRIDCO."*

3.49 Clause 11.0 (vii) of the approved Amended PPA stipulates as under:

*"vii) Supplementary bills will be raised for the following.*

- a) Fuel price adjustment on half yearly basis*
- b) Incentive/disincentive at the end of year*



Haren Kumar Satapathy

- c) *Income Tax as per actual to be reimbursed as detailed in Para-6.0 of schedule – II*
- d) *Any other charges/taxes etc.*”

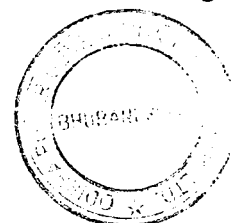
3.50 Accordingly, OPGC has claimed the following other charges for FY 2023-24 considering the actual figures of FY 2021-22 and rationale detailed in subsequent section:

- Electricity Duty
- Water Cess and Water Charges
- Energy Compensation Charges
- Tax and Cess on Land
- System Operation Charges (SOC) & Market Operation Charges (MOC) for SLDC
- ERPC Charges
- Annual inspection fees
- Income Tax
- Recovery of ARR & Tariff Petition Fee and Publication Expenses
- Contribution to Water Conservation Fund, Odisha

3.51 The Audited Accounts of OPGC for FY 2021-22 is enclosed as **Annexure-2**.

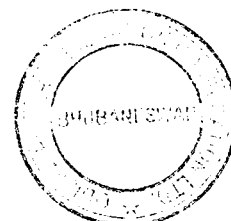
3.52 **Electricity Duty:** Electricity Duty is payable on the actual auxiliary consumption of the generating station at the prevailing rates, which is currently Rs. 0.55/kWh. OPGC has furnished the generation plan for FY 2023-24 to GRIDCO wherein the gross generation has been projected as 3018.41 MU. Accordingly, considering the projected generation and the auxiliary consumption of 9% (for the purpose of re-imbursement of Electricity Duty), the Electricity Duty for FY 2023-24 has been projected as Rs. 14.94 Crore. OPGC requests the Hon'ble Commission to consider the same amount of Rs. 14.94 Crore provisionally while determining the tariff for FY 2023-24. The actual Electricity Duty payable shall be billed in accordance with the provisions of the approved Amended PPA.

3.53 **Water Cess and Water Charges:** OPGC claims the Water Cess and Water Charges of Rs. 9.22 Crore which is the same as actually incurred in FY 2021-22.



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- 3.54 **Energy Compensation Charge:** In addition to the regular Water Cess and Water Charges being paid to WRD, Govt. of Odisha, as per the Government of Odisha letter No. 6140 dated July 31, 2012 (Copy of letter attached as **Annexure-3**), OPGC is required to pay additional charges to OHPC for drawl of water in the form of Energy Compensation Charge (ECC). Based on the proposal of OPGC, Hon'ble OERC was kind enough to approve Rs 0.71 Crore towards reimbursement of Energy Compensation Charge (ECC) vide its tariff order for FY 2022-23. Accordingly, in similar lines, OPGC requests the Hon'ble Commission to approve Rs 0.78 Crore towards reimbursement of ECC payable to OHPC for FY 2023-24.
- 3.55 Further, OHPC has raised invoice dated April 12, 2022 for Rs. 18,68,03,198/- from FY 2005-06 till March 2022 out of which Rs. 10,96,85,992/- is towards delay payment surcharge and balance towards Energy Compensation Charge, which has not been paid since levy of the charge by OHPC. (Copy of OHPC Invoice is attached at **Annexure-4**). OPGC is continuously pursuing the matter with the Water Resources Department, Government of Odisha to waive the penalty along with interest, which is under its active consideration and till date the matter has not been resolved. In view of the above, OPGC requests the Hon'ble Commission to provisionally approve for reimbursement of the amount payable for the period and pass appropriate Order for reimbursement of such amount if paid by OPGC.
- 3.56 **Tax and Cess on land:** OPGC claims the tax and cess on land of Rs. 0.25 Crore, which is the same as actually incurred and reimbursed by GRIDCO in FY 2021-22.
- 3.57 **System Operation Charges (SOC) & Market Operation Charges (MOC) for SLDC:** OPGC claims the amount of Rs. 0.36 Crore towards charges to be paid to SLDC for SOC and MOC, the same as per the SLDC Tariff Order for FY 2022-23.
- 3.58 **ERPC Charges:** OPGC claims the ERPC Charges of Rs. 0.16 Crore, as actually incurred and reimbursed by GRIDCO during FY 2021-22.
- 3.59 **Annual inspection fees:** OPGC claims the inspection fees of Rs. 0.16 Crore, as actually incurred and reimbursed by GRIDCO during FY 2021-22.

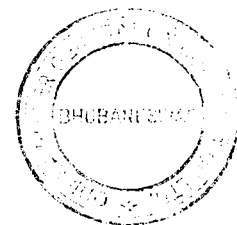


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- 3.60 **Income Tax:** OPGC claims the income tax of Rs. 38.67 Crore considering the Return on Equity of Rs. 72 Crore corresponding to the original capital cost and the applicable tax rate of 34.94% on estimated basis for FY 2023-24. However, the actual income tax payable by OPGC for FY 2023-24 will depend upon several factors and OPGC will bill the actual income tax paid to GRIDCO for reimbursement.
- 3.61 **Recovery of ARR & Tariff Petition Fee and Publication Expenses:** OPGC claims the provisional amount of Rs. 0.30 Crore towards recovery of ARR & Tariff Petition Fee and Publication Expenses.
- 3.62 **Reimbursement of contribution towards Water Conservation Fund:** As per the Resolution of Department of Water Resources, Government of Odisha, dated May 18, 2015 (Copy attached as **Annexure-5**), OPGC is required to contribute an amount of Rs 30.65 Crore (12.26 Cusec X 2.5 Crore/Cusec) towards creation of Water Conservation Fund. Further, as per the Resolution of Department of Water Resources, Government of Odisha, dated November 3, 2015 (Copy attached as **Annexure-6**), the Government has provided the facility to industries to deposit their contribution to the Water Conservation Fund in five equal annual instalments. As the facility of making this payment is available in five equal annual instalments, OPGC claimed for reimbursement of an amount of Rs 6.13 Crore in FY 2022-23 towards contribution to Water Conservation Fund so as to make payment in five annual instalments to reduce the burden to be passed on in tariff.
- 3.63 Considering OPGC request for reimbursement of the charges of Rs. 6.13 Crore towards water conservation fund, the Hon'ble Commission in its Tariff Order for FY 2022-23 in Case No 104 of 2021 ruled as under:

*"As per the resolution of Department of Water Resources, Govt. of Odisha, dated 18.05.2015, OPGC has proposed approval of Rs. 6.13 Crore towards reimbursement of contribution to WCF during FY 2022-23. Accordingly, the Commission provisionally allows Rs 6.13 Crore for reimbursement of contribution towards WCF during 2022-23. It is further directed that the above amount shall be reimbursed by GRIDCO subject to verification of supporting documents of actual payment vis-à-vis the Govt. order in this regard."*

- 3.64 In similar lines, OPGC claims for reimbursement of an amount of Rs 6.13 Crore in FY 2023-24 towards contribution to Water Conservation Fund as third instalment out of the



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proposed five annual instalments to reduce the burden to be passed on in tariff and humbly requests the Hon'ble OERC to approve the same.

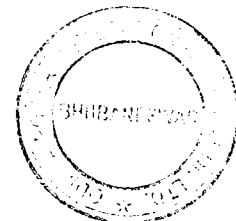
3.65 Accordingly, the other charges claimed by OPGC for FY 2023-24 is as shown in the Table given below:

**Table 3-8: Other Charges corresponding to the original project cost (Rs. Crore)**

Sr. No.	Particulars	FY 2023-24
1	Electricity Duty	14.94
2	Water Cess and Water Charges	9.22
3	Energy Compensation Charges	0.78
5	Tax and Cess on land	0.25
6	SOC and MOC for SLDC	0.36
7	ERPC Charges	0.16
8	Annual inspection fees	0.16
9	Income Tax	38.67
10	Recovery of ARR & Tariff Petition Fee	0.30
11	Contribution towards Water Conservation Fund	6.13
	<b>Total</b>	<b>70.97</b>

3.66 OPGC requests the Hon'ble Commission to provisionally approve the other charges of Rs. 70.97 Crore. OPGC further requests the Hon'ble Commission to direct GRIDCO Ltd. to reimburse the other charges on actual basis incurred during the year.

Attested by Satephang  
Hareem Kaur



#### 4 Summary of Tariff Proposal for FY 2023-24

4.1 Based on the above, the summary of Tariff Proposal for FY 2023-24 is as shown in the Table below:

**Table 4-1: Summary of Tariff Proposal for FY 2023-24**

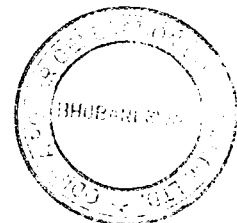
Particulars	Units	FY 2023-24
Depreciation	Rs. Crore	-
Return on Equity	Rs. Crore	72.00
Interest on loan	Rs. Crore	-
O&M expenses	Rs. Crore	205.69
Interest on working capital	Rs. Crore	14.88
<b>Total Annual Fixed Cost</b>	<b>Rs. Crore</b>	<b>292.58</b>
<b>Variable Charges per kWh</b>	<b>Paisa/kWh</b>	<b>178.86</b>

4.2 The summary of other charges for FY 2023-24 is as shown in the Table below:

**Table 4-2: Other Charges for FY 2023-24**

Particulars	Units	FY 2023-24
Other Charges	Rs. Crore	70.97

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## 5 Compliance to directives

5.1 Hon'ble Commission, in the Tariff Order for FY 2022-23 directed OPGC as under:

*"60. Directives of the Commission*

...

*(d) ... OPGC is directed to provide the following details to this Commission:*

*i. Efforts being made for ash disposal/ utilization in line with MOEF&CC Notification dated 31.12.2021 and MoP Notification No.9/7/2011-ST.TH (Vol. IV) dated 22.02.2022.*

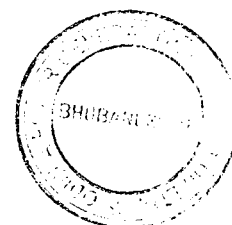
*ii. Measures relating to safety being taken in line with CEA (Safety Requirements for Construction, Operation and maintenance of Electrical Plants and Electric Lines) Regulation as amended from time to time.*

*iii. The feasibility for development of solar power plant within the existing power plant area and other steps being taken in this regard.*

*iv. Steps being taken to improve performance and availability of IB TPS. "*

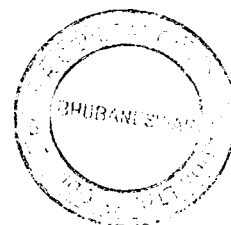
5.2 The efforts being made for ash disposal/utilisation in line with MOEF&CC Notification dated 31.12.2021 and MoP Notification No.9/7/2011-ST.TH (Vol. IV) dated 22.02.2022 are as under:

- i) OPGC at present has identified many low lying areas in periphery of ITPS and has also applied for NOC from OSPCB to reclaim the low lying areas with ash.
- ii) Around 100 m of green concrete road made up of fly ash has been constructed by OPGC as trial in consultation with Dr. Swapnil & Prof. P Wanjari of Visvesvaraya National Institute of Technology (VNIT), Nagpur. The mentioned road is under observation and if it becomes successful in terms of strength, the same technology will be adopted throughout the plant.
- iii) OPGC is at present supplying ash to 6 nos. of ash Brick Plants and also has developed a captive ash brick plant of 10000 bricks per day capacity. It is pertinent to mention that no red bricks are used inside OPGC for any construction activity.
- iv) OPGC is also regularly supplying ash to asbestos plant for manufacture of fly ash based asbestos sheets.



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- v) OPGC has entered into an agreement with VNIT, Nagpur to devise technological advancements for enhancing ash percentage up to 90% in production of bricks and for geopolymeric use of ash in road construction.
- vi) OPGC has awarded a consultancy order to Centre For Fly Ash Research & Management (C-FARM) headed by Dr. Vimal Kumar (Former Mission Director & Head, Fly-Ash Unit, Department of Science and Technology, Government of India) for scientific and technical advice for obtaining "Consent for mine void filling with fly ash". C-FARM is continuously deliberating with MCL, as well as with Central Mine Planning and Design Institute (CMPDI), on behalf of OPGC for allotment of mine void for stowing ash.
- vii) A task force has been created by committee comprising representatives from CEA, MoEF&CC, Ministry of Mines, CIL, CIMFR, CMPDIL, CPCB & NTPC. The task force has listed Rampur Colliery as one of the abandoned mines for backfilling of ash nearest to OPGC. In response to the letter of CEA for a feasibility report on mine void filling, OPGC has made a preliminary survey and has found that the Rampur underground mine is at a distance of around 25 Km from the plant and can accommodate ash generated from OPGC for a period of 5 years and it is also feasible for OPGC to dispose ash in the mentioned mine void. OPGC has also proposed the name of BOCM to Central Electricity Authority which can meet the ash utilization requirement of OPGC for atleast a period of 10 years. Once the mine void is made available, OPGC shall take rapid measures to start backfilling of the mentioned mines at the earliest.
- viii) OPGC is also in constant follow up with MCL for allotment of mine voids.
- ix) OPGC is in process of discussion with IIT Chennai for manufacture of fly ash based polymers at industrial scale which can be used in agriculture sector to increase water holding capacity of soil as well as to hold up the nutrients by reducing leaching. The polymers can also be used in reduction of fugitive emissions from dry ash ponds.
- 5.3 The measures relating to safety being taken in line with CEA (Safety Requirements for Construction, Operation and maintenance of Electrical Plants and Electric Lines) Regulation as amended from time to time are as under:

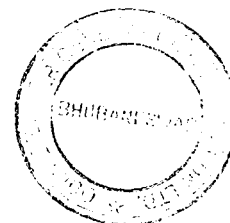


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**(A) General Safety and Fire Safety:**

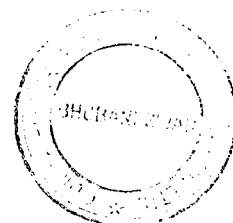
Sr. No.	Compliance requirement	Compliance status
1	<p>Implement the requisite provisions of</p> <p>(1) Central Electricity Authority (Safety Requirements for Construction, Operation and Maintenance of Electrical Plants and Electric Lines) Regulations, 2011</p> <p>(2) Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010</p> <p>(3) Statutory requirement under Factories Act and other related Acts such as Manufacture, Storage, and Import of Hazardous Chemicals (MSIHC) Rules, 1989 – entrusted functions and Response Rules (4) IS:1646 - Code of Practice for Fire safety of buildings (general): Electrical installations (5) IS:3034 - Fire safety of industrial buildings: Electrical generating and Distributing stations - Code of Practice.</p>	<p>Implemented and in practice</p> <p>Implemented and in practice</p> <p>Implemented and in practice</p>
2	<p>Internal Safety Audits must be carried out once a year through cross functional teams/ internal trained staff and records must be maintained. Further, External Safety Audit must be carried out through registered Agencies at a regular periodicity of 2 years and Action Taken Report (ATR) must be prepared &amp; monitored to ensure early closing of pending recommendations.</p>	<p>Internal safety audits are being conducted once in a year and external audit is being conducted once in every two years.</p>
3	<p>Ensure a separate budget head in its overall budget provisions to adequately fund safety related activities. Detailed safety manual complying with the statutory requirements and manufacturers' recommendations must be available with power plant.</p>	<p>Separate budget has been provisioned for every year for safety activities and procurement of safety gears etc.</p>



Signature of Mr. Satish Kumar

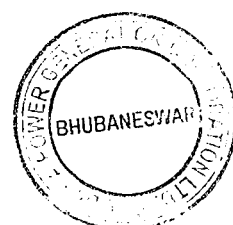
Sr. No.	Compliance requirement	Compliance status
4	Safety awareness drives must be conducted amongst plant personnel as well as the employees deployed by the Contractors, periodically for the compliance of provisions of safety manuals and to imbibe the safety culture.	OPGC conducts National Safety Week, Fire safety week, World Environment Day and National Electrical Safety Week
5	The safety officer shall be appointed and safety committee shall be constituted by thermal power plant as per the statutory requirement. Plants shall hold Safety Committee meetings regularly and Head of Plant shall chair these meetings. The output of these Safety Committee meetings should be implemented.	Approved Safety officers are available as per the statutory requirement. One Apex safety committee is formed and meeting is being held once in every month which is chaired by Director (Operations).
6	Ensure that 'Safety Performance' KPA (Key Performance Area) for employees is linked with Annual Performance Assessment for officers at various levels to instil a safety-compliant behaviour.	Implemented.
7	Keep an updated inventory of safety related PPEs and also provide the tasks specific PPE kits to all the workers/ staff.	Minimum stock controls of safety items are being maintained. Job specific PPE kits are being used.
8	All major/ minor accidents must be properly investigated and analysed to find the Root Cause of incident/accident.	All incidents are being investigated to find out the root causes.
9	Implement procedures for reporting of accidents by the concerned Power Station to CEA in line with the provisions of the CEA safety regulations.	Implemented
10	Emergency Response Disaster Management Plan (ERDMP) both On-site & Off-site shall be prepared by all power plants.	On site Emergency plan is prepared and approved by Statutory authority
11	Ensure that a functional proper Public Address system	Adequate nos. of walkie/Talkie

Approved by Mr. Satish Kumar



Sr. No.	Compliance requirement	Compliance status
	is in place and also 'Walkie/ Talkie' should be mandatorily adopted in the power plants.	are available to communicate and portable public address systems are also available.
12	Plants must be compliant/ certified as per ISO: 45001 'Occupational Health & Safety Management System'.	OPGC is certified as per ISO 45001:2018 and ISO 14001:2015
13	Emergency exit path marking should be made available for safe evacuation of working personnel during emergency conditions. Emergency telephone numbers must be prominently displayed at prominent locations in the plant, such as at TG floor, Unit Control Room & emergency exit points etc. Display of DO's & DON'Ts should be done in large fonts for better visibility. All such Display Boards should have a DC backlit display.	Emergency exit paths have been marked with LED lights at different floors of TG building which can be also visible during black out.
14	Lock Out & Tag Out (LOTO) system for maintenance management should be fully implemented for safe operation of the power plants and a proper Permit to Work (PTW) system must be followed and there should be seamless integration between LOTO & PTW System (and also to ERP system, if available). Proper Job Safety Analysis (JSA) should be carried out before issuance of each PTW.	LOTO System in place and being followed properly in SAP System. JSA being reviewed before issuance of permit and conducted before executing the job
15	Accumulated and unwanted scrap/ dismantled machinery etc. should be removed from working areas such as boiler structure, TG floor etc. and stored at designated places. Measures should be taken to remove wild vegetation growth in switchyard.	In Practice
16	Excessive accumulation of coal/ lignite dust in some of the vulnerable areas like Crusher house, transfer	Steps are taken to avoid accumulation of ash and

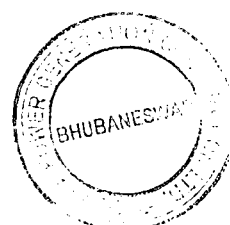
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 2023-24



Sr. No.	Compliance requirement	Compliance status
	points, coal/ lignite Bunker house, etc. must be avoided.	cleaning at regular intervals.
17	Preventive measures such as anti-corrosion painting and regular maintenance be done for support structures and various equipment.	Carried out in regular intervals
18	Rotating parts of various equipment should be covered with proper guards.	Implemented
19	SOPs for various plant equipment to be prepared and made available to working personnel.	SOPs available and being reviewed frequently

**(B) Fire Safety Procedures:** Ensure that all fire safety procedures are followed and fire-fighting system, its operation, installations are well maintained and upkeep of various sub-components is reviewed at regular intervals to make sure their proper response during emergencies. These shall include but not be limited to the following:

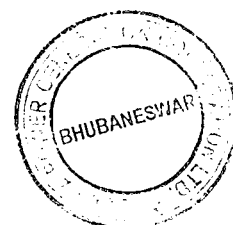
Sr. No.	Compliance requirement	Compliance status
1	Fire Water pump house must be maintained in proper healthy condition. There should be no obstructions in the pathways and approaches to equipment should be hindrance free.	Maintained in Healthy Condition
2	All fire hydrant pumps and jockey pumps must be maintained in healthy condition. The Fire Hydrant pumps need to be operated in 'AUTO MODE' & Sequential starting system should be in place. The reliability & availability of the Pumps are to be checked at frequent intervals and recorded.	All hydrant & jockey pumps are being maintained and Hydrant pump auto operation is also available.
3	Fire-fighting crew along with some identified regular employees must go through hands-on firefighting training including rescue and	Dedicated fire officer on regular role is available to monitor & supervise the fire fighting system.



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Sr. No.	Compliance requirement	Compliance status
	disaster handling to enhance effectiveness of firefighting & safety crew.	<p>Dedicated fire crew available.</p> <p>Agreement in place with Odisha Fire Service for manning plant Fire station.</p> <p>Odisha Fire Service staffs are well trained in firefighting and disaster management.</p> <p>Apart from the above, OPGC has its own Onsite disaster management plan</p>
4	Manual call points (MCPs) must be provided at all the strategic locations of the power stations and must be integrated with the Fire Control Room for effective monitoring and to ensure timely & quick response from fire- fighting crew.	Manual Call Points available at strategic location & are integrated with Fire Detection System with monitoring station at operation control room.
5	Mock drills should be conducted at regular intervals and also at odd hours for various emergencies scenarios & debriefing session should be conducted after each mock drill. The gaps observed are to be analysed and mitigation measures need to be taken. These details should be recorded in a register.	<p>Mock Drills conducted as per the Onsite emergency plan identified scenario once in 6 months in presence of statutory authorities.</p> <p>Gaps identified recorded and mitigate measures taken.</p> <p>All record available.</p>
6	Fire Marshalls/ firefighting crew should be trained for actual emergencies scenarios.	Trained through Fire drill conducted at different plant areas through preplanned scenario.

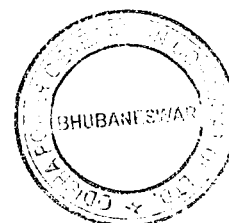
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Sr. No.	Compliance requirement	Compliance status
		Firefighting crews are trained fire fighters of Odisha Fire Service.
7	Each Power Station shall have a Fire Emergency Plan formulated so as to facilitate organized actions (in case of fire) by employees at various levels, during day as well as night and shall also contain the instructions on fire prevention measures and the firefighting organization.	Fire Emergency plan is incorporated in "On Site Emergency plan". Apart from the OSEP, OPGC has also one Fire prevention program (EM-4/83) which covers all fire prevention & protection action plans.
8	Fireboxes with hose reels at fire hydrant points must be available.	Fire Boxes with Hose reel available. Hose stations available inside plant
9	Non-sparking tools and flame-proof electric fittings should be mandatorily used at all places where flammable materials like oils and gases are stored/ are in use. Also, static electric charge dissipater should be provided at the entry gate of such systems which are prone to catchfire easily.	Non sparking tools are being used. Flame proof electric fitting available where flammable material handled like Fuel oil Pump house.

**(C) Boiler, Turbine and Generator (BTG) Safety:**

Sr. No.	Compliance requirement	Compliance status
1	As per IBR Regulations, periodic Remnant Life Assessment (RLA) should be carried out.	RLA is being followed at regular interval
2	Annual overhauling, Capital overhauling and Renovation & Modernization works must be done on time as these prevent equipment failures. Overhauling work should be monitored comprehensively.	Followed



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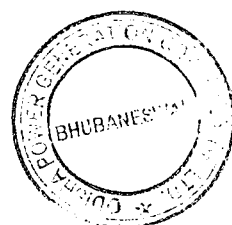
Sr. No.	Compliance requirement	Compliance status
3	The boilers must be operated by Boiler Operating Engineers (BOEs) in compliance with the provisions of IBR. Utilities with shortage of BOEs are advised to take immediate and urgent steps to ensure that sufficient number of engineers should be qualified BOEs.	BOEs are there for boiler operation.
4	Boilers having box type column-beam structure are prone to accumulation of coal/ash dust if there are openings in the boiler structure. Coal dust accumulated in such confined structure may lead to fire/explosion. All such openings in such kind of structure must be closed. Also, cleaning must be ensured before closure.	Regular Checking & housekeeping is being done.
5	Thermal insulation of Boiler, Turbine, associated sub-systems and all other critical equipment & lines must be ensured and maintained in good health. Regular thermal survey for surface temperature should be done. It is recommended to do insulation of.	Thermal Insulation of Boiler Turbine and other critical equipment are being checked regularly and maintained.
6	Pulverized fuel leakage in mills, pipes, joints etc., if any, should be arrested on immediate basis	Arrested as and when found.
7	The closeness of steam lines with other components/structure of Boiler or adjacent civil structure must be avoided.	Followed
8	All Boiler expansion indicators must be fitted properly to measure vertical movement as well as horizontal movement.	Expansion indicators area available and reading monitored regularly
9	Mandatorily carry-out tool tagging to have effective inventory management and thus ensure timely	Followed

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Sr. No.	Compliance requirement	Compliance status
	availability of all tools & tackles. Tagging and marking date of last load testing of all O&M tools & tackles must be ensured.	
10	Illumination measurement should be carried out as per IS:6665 and it needs to be improved in the plants wherever necessary.	Illumination survey carried out on regular interval and rectification done.
11	Take measures to ensure that ambient noise levels around equipment like Turbine-Generator, Boiler etc. auxiliaries are in desired limits.	Ensured
12	Regular ash level monitoring in ESP hoppers must be done by providing Ash Level Indicators (ALI). Timely steps must be taken for regular evacuation of ash. Also, ensure that ash hopper heaters are in healthy condition so that fluidity of ash is not hampered.	Complied
13	Safety Valves and Electromatic Relief Valves (ERVs) must be maintained in healthy condition and operative.	Maintained.
14	Vibration levels of machines such as TG set, fans, pumps, etc. must be monitored on regular basis and machines should not run beyond the recommended vibration limits prescribed by OEM.	Monitored and maintained
15	Compulsorily carry out turbine over speeding test as per OEM recommendations.	Done after AOH
16	Regularly perform checks for functionality of all the Protection & Interlocks (P&I) for various equipment and system.	Interlocks and protections are being checked regularly.

Haren Kumar Satapathy

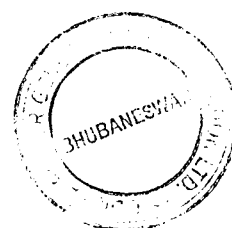




**(D) Balance of Plant (BOP) Safety:**

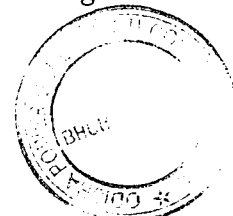
Sr. No.	Compliance requirement	Compliance status
1	Chlorine leak sensor probes must be provided for all chlorine cylinder bays at proper locations. Water sprinkler system need to be installed in chlorination plant to neutralize chlorine leak in addition to the extant system.	<p>Online Chlorine leak detector Instrument Installed: 7 nos, Make Uniphos (5 nos in tonner room and 2 nos in chlorinator room)</p> <p>Portable Chlorine leak detector: 2nos, Make: Watch Gas detection, Netherland (1 no. with chlorine operator and 1 no. with DM plant)</p> <p>Chlorine auto absorption system available with us and remains in auto mode. The automation availability being checked every month.</p> <p>Manual Neutralization pit also available. Auto absorption system and Neutralization Pit each having capacity to dissolve one full tonner gas.</p>
2	Dust suppression system must be in operating condition to prevent coal/ lignite dust accumulation in areas such as coal/ lignite yard, Crusher house, transfer junctions/ points, coal/ lignite conveyor, coal/ lignite Bunker etc.	Dust suppression system available and healthy condition.

Harish Kumar Satapathy



3	Battery Room is to be properly lined with 'Acid resistance tiles' up to the height of 'Battery Bank'. It is suggested to provide Flame-proof lighting in the Battery room. It is also to be ensured that the Eye-wash system is located at a place nearby to the Battery Room.	Followed
4	Cable gallery/ racks must be maintained in healthy conditions with proper illumination levels, exhaust system and the cable dressing in the racks should be done properly. All entry & exit of cables must be sealed properly for preventing progression of fire and toxic gases to adjacent rooms.	Ensured
5	Insulating floor or mat conforming to IS:15652 of appropriate voltage level shall be provided in front of the panels for the safety of operating personnel.	Appropriate insulated floor mats are Provided in front of panels
6	Regularly measure and maintain proper records of Resistance value of Earth pits and monitor Tan-Delta value of current transformers (CT) and all other oil- filled electrical equipment.	Resistance value monitoring and Records Available
7	Oil soak pits of transformers should be kept free of waste material.	Followed
8	Manuals and Standard Operating Procedures (SOPs) for Ash Bund/ Dyke Maintenance should be prepared by Power Plant. Emergency Plan should be prepared to deal situations of Ash Dyke breach and should be made available to the Site engineers.	Approved SOPs are available

अपारंख नुन सतपान



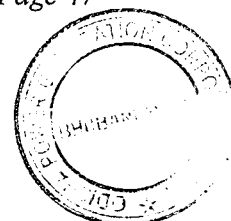
5.4 The feasibility for development of solar power plant within the existing power plant area and other steps being taken in this regard are as under:

- i) 39 kW of Rooftop Solar PV installed and operational in plant premises;
- ii) Proposal for setting up of 50 MW SPV plant on top of exhausted and capped ash pond-B is under consideration.

5.5 The steps being taken to improve the performance and availability of Ib TPS are as under:

- i) Regular Performance monitoring is in place;
- ii) RCA & trip analysis is in place;
- iii) Capital overhaul of Unit-2 completed in September 2022;
- iv) Loss minimization by operational control is in practice;
- v) Capital expenditure projects focused on performance improvement are in progress;
- vi) Renovation & Modernisation of Stage I under pipeline.

Attested by Mr. Satish



## 6 Prayers

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OPGC respectfully prays that the Hon'ble OERC may:

- i) Admit the instant Petition.
- ii) Approve the tariff, including annual fixed cost and base variable charges for FY 2023-24 as claimed in the Petition.
- iii) Approve the other charges for FY 2023-24 as claimed in the Petition and recovery of other charges on actual basis during FY 2023-24.
- iv) Approve the recovery of FPA in accordance with the approved PPA during FY 2023-24.
- v) Allow OPGC to file a separate Petition regarding additional capitalisation from FY 2015-16 to FY 2023-24 after the APTEL Judgment is issued in Appeal No 335/2021 filed by OPGC on Hon'ble Commission's Order dated May 21, 2021 in Case No. 54 of 2018.
- vi) Condone any inadvertent omissions, errors, short comings and permit OPGC to add/change/ modify/ alter this filing and make further submissions as may be required at a future date; and
- vii) Pass such other and further Orders as deemed fit and proper in the facts and circumstances of the case.

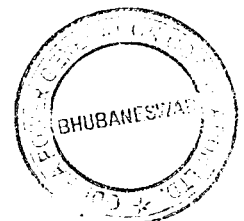
*Apurvesh Kumar Satapathy*

Petitioner

Addl. General Manager (C & RA)  
Odisha Power Generation Corporation Ltd.  
Bhubaneswar

Bhubaneswar

November 29, 2022

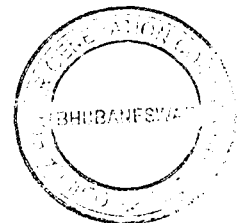


## Annexure-I

Checklist of Main Tariff Forms and other information for tariff filing for

Form No.	Title of Tariff Filing Forms (Thermal)	Tick
FORM- 1	Summary of Tariff	✓
FORM -1 (I)	Statement showing claimed capital cost	NA
FORM -1 (II)	Statement showing Return on Equity	✓
FORM-2	Plant Characteristics	NA
FORM-3	Normative parameters considered for tariff computations	✓
FORM- 4	Details of Foreign loans	NA
FORM- 4A	Details of Foreign Equity	NA
FORM-5	Abstract of Admitted Capital Cost for the existing Projects	NA
FORM- 6	Financial Package upto COD	NA
FORM- 7	Details of Project Specific Loans	NA
FORM- 8	Details of Allocation of corporate loans to various projects	NA
FORM-9	Statement of Additional Capitalisation after COD	NA
FORM- 10	Financing of Additional Capitalisation	NA
FORM- 11	Calculation of Depreciation on original project cost	NA
FORM- 12	Statement of Depreciation	NA
FORM- 13	Calculation of Weighted Average Rate of Interest on Actual Loans	NA
FORM- 14	Draw Down Schedule for Calculation of IDC & Financing Charges	NA
FORM- 15	Details of Fuel for Computation of Energy Charges	NA
FORM- 16	Details of Limestone for Computation of Energy Charge Rate	NA
FORM-17	Details of Capital Spares	NA
FORM- 18	Non-Tariff Income	NA
FORM-19	Details of Water Charges	NA
FORM-20	Details of Statutory Charges	✓
FORM O	Calculation of Interest on Working Capital	✓

Harish Kumar Satapathy  
(petitioner)



Summary of TariffPART-I  
FORM- 1

Name of the Petitioner: Odisha Power Generation Corporation Limited

Name of the Generating Station: Ib TPS Units 1&amp;2

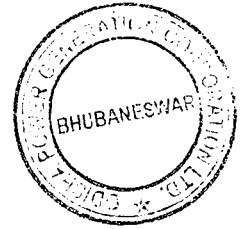
Place (Region/District/State): Jharsuguda, Odisha

(Rs. Crore)

S. No.	Particulars	Unit	FY 2023-24
1	2	3	4
1.1	Depreciation	Rs Crore	0.00
1.2	Interest on Loan	Rs Crore	0.00
1.3	Return on Equity	Rs Crore	72.00
1.4	Interest on Working Capital	Rs Crore	14.88
1.5	O&M Expenses	Rs Crore	205.69
	<b>Total</b>	Rs Crore	<b>292.58</b>
2	Energy Charge Rate ex-bus	Paise/kWh	178.86
3	Statutory Charges	Rs Crore	70.97

*Dr. Anur Kumar Sahoo*

(Petitioner)



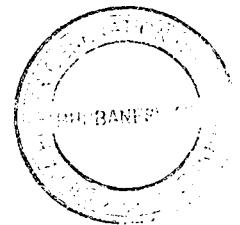
## PART 1

Name of the Petitioner: Odisha Power Generation Corporation Limited

Name of the Generating Station: Ib TPS Units 1&amp;2

<u>Return on Equity</u>		(Rs. Crore)
S. No.	Particulars	FY 2023-24
1	2	3
	<b>Return on Equity</b>	
1	Gross Opening Equity (Normal)	450.00
2	Less: Adjustment in Opening Equity	0.00
3	Adjustment during the year	0.00
4	Net Opening Equity (Normal)	450.00
5	Add: Increase in equity due to addition during the year / period	0.00
7	Less: Decrease due to De-capitalisation during the year / period	0.00
8	Less: Decrease due to reversal during the year / period	0.00
9	Add: Increase due to discharges during the year / period	0.00
10	Net closing Equity (Normal)	450.00
11	Average Equity (Normal)	450.00
12	Rate of ROE	16.00%
12	Total ROE	72.00

*Spencer Kumar Satapathy*  
(Petitioner)



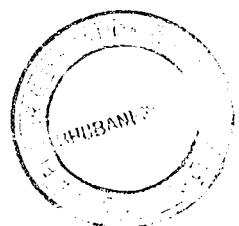
**PART 1**  
**FORM-3**

**Name of the Petitioner: Odisha Power Generation Corporation Limited**

**Name of the Generating Station: Ib TPS Units 1&2**

Particulars	Unit	FY 2023-24
1	2	3
Base Rate of Return on Equity	%	16.00%
Base Rate of Return on Equity on Add. Capitalization	%	0.00%
Effective Tax Rate	%	NA
Target Availability	%	68.49%
In High Demand Season	%	NA
Peak Hours	%	NA
Off-Peak Hours	%	NA
In Low Demand Season(Off-Peak)	%	NA
Peak Hours	%	NA
Off-Peak Hours	%	NA
Auxiliary Energy Consumption	%	9.50%
Gross Station Heat Rate	kCal/kWh	2500
Specific Fuel Oil Consumption	ml/kWh	3.50
Cost of Coal for WC	in Months	1.5
Cost of Secondary Fuel Oil for WC	in Months	2.0
Fuel Cost for WC	in Months	NA
Liquid Fuel Stock for WC	in Months	NA
O&M Expenses	Rs lakh / MW	NA
Maintenance Spares for WC	% of O&M	NA
Receivables for WC	in Months	2.0
Storage capacity of Primary fuel	MT	NA
Rate of interest on working capital	%	7.95%
Blending ratio of domestic coal/imported coal		NA

*Atanem Kumar Satapathy*  
(Petitioner)





Details of Statutory ChargesPART 1  
FORM- 20

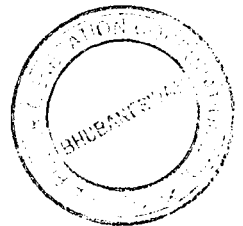
Name of the Petitioner: Odisha Power Generation Corporation Limited

Name of the Generating Station: Ib TPS Units 1&amp;2

(Rs. Crore)

Particulars	Amount Claimed	Basis of claim
Electricity Duty	14.94	Computed based on generation plan for FY 2023-24 as furnished to GRIDCO
Water Cess and Water Charges	9.22	Actual incurred for FY 2021-22
Energy Compensation Charge	0.78	Actual incurred for FY 2021-22
Tax and Cess on Land	0.25	Actual incurred and reimbursed by GRIDCO for FY 2021-22
SOC & MOC for SLDC	0.36	Approved for FY 2022-23
ERPC Charges	0.16	Actual incurred and reimbursed by GRIDCO for FY 2021-22
Annual inspection fees	0.16	Actual incurred and reimbursed by GRIDCO for FY 2021-22
Income Tax	38.67	Claimed RoE and Tax rate of 34.94%
Recovery of ARR & Tariff Petition Fee and Publication Expenses	0.30	Provisional amount
Contribution towards WCF	6.13	3rd Instalment
<b>Total</b>	<b>70.97</b>	

*Aparna Kumar Satapathy*  
(Petitioner)



## O&amp;M expenses

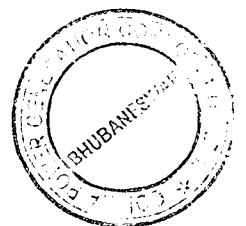
Name of the Petitioner: Odisha Power Generation Corporation Limited

Name of the Generating Station: Ib TPS Units 1&amp;2

(Rs. Crore)

Sl. No.	Particulars	Legend	FY 2023-24
1	Capital Cost of Project considered for O&M expenses as per Amended PPA	A	1030.00
2	O&M expenses for first year @ 2.5% of Capital Cost	$B = A \times 2.5\%$	25.75
3	Escalation rate	C	8.00%
4	O&M expenses	$D = B \times (1 + C)^{27}$	205.69

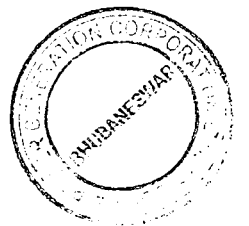
*Atanesh Kumar Satapathy*  
(Petitioner)



**Calculation of Interest on Working Capital****PART 1****FORM- O****Name of the Petitioner: Odisha Power Generation Corporation Limited****Name of the Generating Station: Ib TPS Units 1&2****(Rs. Crore)**

S. No.	Particulars	FY 2023-24
1	2	3
1	Cost of Coal for one and half months	43.96
2	Cost of Secondary Fuel Oil for two months	9.37
3	O & M Expenses for one month	17.14
4	Receivables equivalent to two months	116.74
5	Total Working Capital	187.21
6	Rate of Interest	7.95%
7	Interest on Working Capital	14.88

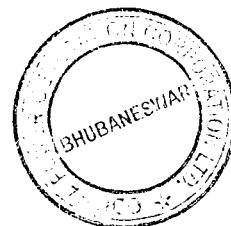
*Atanem Kumar Satapathy*  
(Petitioner)



**Electricity Duty for FY 2023-24**

Particulars	Unit	Value
Gross generation projected for FY 2023-24	MU	3018.41
Auxiliary consumption at 9%	MU	271.66
Rate of Electricity Duty	Rs./kWh	0.55
Electricity Duty for FY 2023-24	Rs. Crore	14.94

Pranesh Kumar Satapathy  
(petitioner)



**Energy Charges****Name of the Petitioner: Odisha Power Generation Corporation Limited****Name of the Generating Station: Ib TPS Units 1&2**

Particulars	Unit	FY 2023-24
Auxiliary Consumption	%	9.50%
Gross Station Heat Rate	kcal/kWh	2500
GCV of Coal	kcal/kg	2865.76
GCV of Oil (LDO)	kcal/ltr	10000.00
GCV of Oil (HFO)	kcal/ltr	10000.00
Specific Coal Consumption	kg/kWh	0.86
Specific Oil Consumption-LDO	ml/kWh	0.35
Specific Oil Consumption-HFO	ml/kWh	3.15
Price of Coal	Rs./MT	1622.39
Price of Oil-LDO	Rs./kL	80561.66
Price of Oil-HFO	Rs./kL	61885.46
Variable Charges per kWh (base value)	Paise/kWh	178.86

*Hanuman Kumar Satarpathy*  
(Petitioner)

