



Chhattisgarh State Electricity Regulatory Commission
Irrigation Colony, Shanti Nagar, Raipur - 492 001 (C.G.)
Ph.0771-4048788, Fax: 4073553
www.cserc.gov.in, e-mail: cserc.sec.cg@nic.in



Petition No. 39 of 2017 (M)

In the matter of-

"Petition for approval of Long Term Power Purchase Agreement between CSPDCL & M/s I.A. Hydro Energy Pvt. Ltd. from 3x12 MW Hydro Power Projects".

M/s Chhattisgarh State Power Distribution Company Ltd., Daganiya, Raipur	...	Petitioner
M/s I.A. Hydro energy Pvt. Ltd.	...	Respondent

Present: Narayan Singh, Chairman
Arun Kumar Sharma, Member

ORDER
(March 06, 2018)

The petitioner Chhattisgarh State Power Distribution Co. Ltd. (CSPDCL) has filed this petition for approval of 36MW hydel power purchase between the petitioner CSPDCL and respondent M/s I. A. Hydro Energy Pvt. Ltd.

- 2.** The respondent, M/s I. A. Hydro Energy Pvt. Ltd., is a registered company under Companies Act and has developed the Hydro power projects on the right bank of Chanju Nalla, Distt. Chamba Himachal Pradesh. The project capacity is 36 MW. The project is a run of river hydel project with pondage storage. The source of water is rainwater and snow/glacier belt.
- 3.** CSPDCL filed the petition on 19.07.17, which was registered as P No. 39 of 2017, dated 22.08.17 for approval of PPA with M/s I A Hydro Energy Pvt. Limited for supply of power from above power plant.
- 4.** CSPDCL submitted that
 - I.** in pursuance to long term power purchase agreement for supply of 1000 MW power from Marwa Thermal Power Project to Telangana State, the dispatch of power to Telangana has begun w.e.f. 06.05.2017 under terms & conditions of back to back supply agreement between the parties. Resultantly there is a deficit to a tune

of 500 MW during peak hours and 250 MW during off peak and this deficit need to explore alternate arrangements to tie up with sources so that availability during peak as well as off peak can be effectively met.

- II. in pursuance to RPO solar obligation petitioner has entered into long term power purchase agreement for procurement of 260 MW solar power from various project developers from which 167 MW is available at present while the rest could be expected during next year.
- III. by nature solar power is available in the grid during day time only while load management during peak hours would essentially and sensibly require an alternate source of almost similar capacity. Hydel power would be a best option to optimize solar power for the purpose of balancing the demand. Bundling of solar with procurement of hydel power from 3x12 MW from project developer would be good option for optimum demand management.
- IV. in the format of Power purchase agreement little changes have been made which are mentioned below:-

Particulars	Clause No.	Provision in PPA
Delivery Point	Article-1 Definition	" Delivery Point " shall be the Chhattisgarh state boundary periphery on the CSPTCL's intra-state transmission network. "
Term of Agreement	Clause 3.2.1	This Agreement, shall be valid for a term from the Effective Date till the date thirty-five (35) years from the Commissioning Date of the Project
Performance Bank Guarantee	Clause 4.3.1	Rs.Three crore
Commencement of supply	Clause 6.13.1	The Company will commence supply of the Contracted Energy from a date mutually agreed by both Parties in writing, after grant of approval of this Agreement by the CSERC.
Synchronization and Interconnection facilities	Article-7	Deleted as units of project already commissioned
RLDC/ SLDC Charges, open access, transmission charges & losses	Clause 9	RLDC/ SLDC, open access, transmission charges & losses up to Delivery Point i.e. STU of Chhattisgarh shall be borne by Company.
Tariff	Clause 10	"Tariff" for supply of Contracted Energy in any Contract Year shall be lowest from the following : (a) tariff of power generated from the project at generator bus, as determined by the Chhattisgarh State Electricity Regularity Commission (CSERC) for its year of operation.

Particulars	Clause No.	Provision in PPA
		(b) tariff of the 330MW Kishanganga Hydroelectric Power Project ("Kishanganga HEP") being setup by the National Hydro Power Corporation Limited ("NHPC") in the Jhelum river basin in the state of Jammu & Kashmir, for the corresponding year of operation of the Kishanganga HEP; (c) tariff for the corresponding year of operation as determined by CSERC for small hydro-electric power projects established in the State of Chhattisgarh which achieve COD in same year as M/s I.A Hydro Energy Pvt. Ltd.
Billing, Due Date	Clause 11.2.2	60 days from receipt of monthly Invoice
Late Payment Surcharge	Clause 11.3.1	At a rate as may be specified by CSERC from time to time for the actual period of delay
Letter of Credit	Clause 11.4	CSPDCL shall provide to the company a monthly unconditional, revolving and irrevocable Letter of Credit equal to one point one times (1.1) the estimated average monthly billing computed based on a load factor of 30%.
Company Event of default and termination payment	Clause 15.3.5	Upon early termination of the Agreement on account of Company Event of Default, the Company shall be liable to pay Termination Payment as per the directions of CSERC. Upon approach by either Party, CSERC shall assess the termination payment.

CSPDCL submitted that in light of the compelling reasons stated above they have filed this petition to seek approval of purchase and power procurement of 36 MW hydel power and executed power purchase agreement with M/s I.A. Hydro Energy Pvt. Ltd. at a tariff specified in clause 10 of Power Purchase Agreement.

5. This petition was uploaded on the Commission's website for inviting comments/suggestion/objections from the stakeholders. The Commission, vide public notice dated September 23, 2017 in local news paper "Navbharat" and "Desbandhu", also invited comments from the various stakeholders. A copy of order was also served to the State Government, CSPTCL, SLDC and members of State Advisory Committee. List of person, industries, association those who submitted written comments are annexed with this order. Hearing was held on October 17, 2017 at 3:30 PM at the Commission's office.

- 6.** Meanwhile, an application was filed by M/s I A Hydro Energy Pvt Limited on 14.09.17 requesting to grant an interim tariff due to following facts:
- I. that it had started injection of Power from 8th July, 2017 onwards.
 - II. That as approval of PPA is still under process, M/s I.A. Hydro Energy Pvt Limited shall not be able to raise power supply bills in absence of Commission approved tariff due to which it would face huge financial crunch.
 - III. Further as per payment terms, raised bill shall be paid after 60 days from the date of submission of bill as per clause of PPA.
 - IV. Commission will start the tariff determination process only after approval of PPA which will further delay the time of billing which will lead to financial crunch situation.
 - V. In light of above, M/s I.A. Hydro Energy Pvt Limited had requested the Commission to grant an interim tariff and given an undertaking that it will accept the Interim Tariff as approved by the Commission.
 - VI. M/s I.A. Hydro Energy Pvt Limited shall raise power supply bill at interim tariff and after the approval of PPA and after determination of final tariff; difference amount, if any shall be adjusted / paid accordingly.
- 7.** In this regard, comment of the CSPDCL was sought which was received vide letter no.2058 dated 13.10.2017, is furnished below:-
- I. Interim tariff would be subjected to adjustment of power bills after the tariff under Article-10 is given effect.
 - II. Determination of an interim tariff to the applicant would be subject to condition of filing a separate petition by M/s I A Hydro Energy for determination of tariff as such the limited scope of petition No. 39 of 2017 is to seek approval of Commission on power purchase agreement. As such, M/s IA Hydro Energy is impeded as respondent in the matter the claim of interim tariff would not be relevant in the context.
- 8.** Considering the facts and circumstances that the power developer has already started supplying power, the Commission decided to adopt maximum ceiling rate fixed in petition no. 14 of 2015 as the interim tariff for M/s I.A. Hydro Energy Ltd. This interim rate was subjected to adjustment, if any, as approved in the order passed by approval of

PPA. The interim tariff in respect of M/s I.A. Hydro Energy Ltd was passed on 15.11.17.

Summary of views/comments/suggestions of the stakeholders are given in the subsequent paragraphs.

Submissions of DANS Energy Pvt. Ltd, Shiga Energy Pvt. Ltd, HydreqPte Ltd.

9. DANS Energy Pvt. Ltd, Shiga Energy Pvt. Ltd. & HydreqPte Ltd. have submitted that by going through this petition submitted by CSPDCL they have learnt that there is a power deficit of 500 MW during peak hours and 250 MW during off peak in the state of Chhattisgarh. They have also learnt from this petition that for fulfillment of RPO obligation, CSPDCL has entered into long-term agreement for procurement of 260 MW solar power from various project developers from which 167 MW is currently available and the balance power is expected in next year. Since solar power is available in the grid during daytime and for the load management, alternate source of similar capacity is required and hydro power is the best available option for balancing the demand. Therefore agreement for procurement of 36 MW hydro power from M/s IA Hydro Energy is carried out.

i. DANS Energy Pvt. Ltd. submitted that they would like to offer power from their operational project Joerthang Loop HEP (JLHEP) of design capacity of 105.6 MW located in Sikkim, developed through an SPV, DANS Energy Pvt. Ltd. The project is commissioned in Sept. 2015 and can commence power supply immediately.

The project features are as follows:

Project	Design Capacity	Free Power from COD	Annual generation (P50)	Annual generation (P90)
Joerthang Loop HEP	105.6 MW	12% for 1 st 15 years and 15% thereafter	539.5 MU	459.2 MU

ii. Shiga Energy Pvt. Ltd. submitted that they would like to offer power from their operational project Tashiding HEP (THEP) of design capacity of 106.7 MW located in Sikkim, developed through an SPV, Shiga

Energy Pvt. Ltd. The project is completed and dry-commissioned and is expected to achieve commissioning in Oct 2017 itself

Project	Design Capacity	Free Power from COD	Annual generation (P50)	Annual generation (P90)
Tashiding HEP	106.7 MW	13% for 1 st 15 years and 16% thereafter	457.44 MU	425.05 MU

iii. HydreqPte Ltd. have submitted that they had approached CSPDCL and submitted the detail proposal for sale of power to 212 MW hydro power to the State of Chhattisgarh from their operational/nearly operation plants:

- a) Joerthang Loop HEP (JLHEP) of design capacity of 105.6 MW located in Sikkim, commissioned in Sep 2015 and can commence power supply immediately (developed through an SPV, DANS Energy Pvt. Ltd.)
- b) Tashiding HEP (THEP) of design capacity of 106.7 MW located in Sikkim, to be commissioned in the end of Oct 2017 and can commence power supply after commissioning (developed through an SPV, Shiga Energy Pvt. Ltd.)

Project	Design Capacity	Free Power from COD	Annual generation (P50)	Annual generation (P90)
Joerthang Loop HEP	105.6 MW	12% for 1 st 15 years and 15% thereafter	539.5 MU	459.2 MU
Tashiding HEP	106.7 MW	13% for 1 st 15 years and 16% thereafter	457.44 MU	425.05 MU

10. DANS Energy Pvt. Ltd, Shiga Energy Pvt. Ltd &HydreqPte Ltd have submitted the following facts;

- I. That in the tariff order for 2017-18 dated 31.03.17 approved by CSERC, provisions were made for power purchase of 1000 MUs from IEX/PXIL/Traders at the tariff of Rs. 2.60/Kwh, however in the past few months the prices in the spot market has skyrocketed with peak power touching to the figure of Rs.9.91/Kwh.

- II.** That industry expert believes this scenario has arrived due to lack of hydropower and states rampantly backing down wind, solar power.
- III.** That demand has continued to rise but base-load power generation capacity addition has reduced to a trickle. Also, some power plants facing insolvency proceedings are unable to act on fuel-side issues for now.
- IV.** That no state, has come forth to sign for long term agreement for power purchase in past four years, and relied on short term market for bringing down their cost. States started backing out renewable and diverted their demand to spot market to get cheaper power. With hydropower scarcity, an imbalance has bit the market exposing the distortion in the power market.
- V.** That according to industry experts spike in prices of spot power may also signal the beginning of the end of the low spot market price era, unless large distressed power generation assets become viable and become able to firm up long term fuel supply arrangements.
- VI.** That the current situation indicates existing spot market prices will prevail in near future in the absence of upcoming infrastructure in power generation, some power plants facing insolvency proceedings are unable to act on fuel-side issues, discoms not signing up long term PPAs, growth in demand due to industrialization, urbanization and demand from rural sector will keep the spot market prices ticking.
- VII.** that long term power prices offered in their proposal are uniform throughout 25 years unlike the premium pricing in short term governed by peak and off peak hours.

In the light of the above facts they have submitted the application to the Commission in accordance with paragraph 5.6 of National tariff Policy, 2016 read as:

“.....the developers of hydroelectric projects of more than 100MW design capacity for which sites have been awarded earlier by following a transparent process and on the basis of pre-determined set of criteria would have the option of getting the tariff determined by the Appropriate Commission for the power to be sold through long term PPA on the basis of cost plus under section 62 of the Act.”

With the above submissions DANS Energy Pvt. Ltd, Shiga Energy Pvt. Ltd & HydreqPte Ltd prayed that their proposal for power supply to CSPDCL should also be examined along with the instant petition filed by CSPDCL.

CSPDCL's Submission

- 11.** CSPDCL vide letter no. 2135 dated 26.10.17 has responded to DANS Energy Pvt. Ltd, Shiga Energy Pvt. Ltd & HydreqPte Ltd that objector are not at all interested to comment on the subject matter of the petition yet contrary they have offered 212 MW hydro power form operational / nearly operational plants at Sikkim. It is submitted that the issue raised by the objectors is altogether a different issue and need not to be given consideration under scope of present petition.

Hence in light of the above submissions, it would be worth to mention that since the contents of the letter submitted by DANS Energy Pvt. Ltd, Shiga Energy Pvt. Ltd & HydreqPte Ltd altogether stands out of context of object and scope of the public notice, hence Commission may kindly like to consider to dismiss the aforesaid public objections as they lack merits. It is further submitted that issues raise under the aforesaid public objections are similar hence a common reply from petitioner may kindly be considered.

Commission's View

- 12.** The Commission agrees to the CSPDCL submission that objectors should limit their submission to proposal in the instant petition.

Submission of Shri Renu Joshi, Shankar Nagar, Raipur

- 13.** It is submitted that according to the rules and policies of the Government of India, electricity has to be purchased by the distribution company only through bidding process only. In the instant purchase, consumers of the State will have bear the burden of costly power Electricity purchased through bidding would be cheaper hence, permission to purchase this expensive electricity and the contract should not be accepted.

CSPDCL's Submission

- 14.** The objection in this petition by the objector is based on the determination process of the rates of hydro power and has mentioned about the need to purchase of electricity through bidding process by CSPDCL. Regulations 62 & 63 of Act 2003 in which provision of

purchase of electricity through Generation Company by distribution licensee has been provided. The above provisions are applicable for different circumstances.

In the case of lack of supply, the provision for determining the rates under Section 62 of the Act is clearly mentioned. It is also important to mention Tariff Policy-2016 notified by the Central Government where the instructions for appropriate Commission for formulating the infrastructure have been provisioned with the intention to encourage the development of the hydropower projects. Along with this, in the tariff policy there is a provision of determination of electricity rate by cost plus method for the hydro projects exceeding 100 megawatts.

In the light of facts and rules in the provisions mentioned above, the provision to purchase electricity through competitive bidding is not currently applicable to hydel projects which have not been defined in the Regulation 63 of Act. Therefore, the objection raised by the objector lacks quality, and hence it is not valid.

Commissions View

- 15.** The Commission agrees to the concern raised by objector with regard to higher tariff in the instant petition. Same has been discussed in detail in the Commission's analysis paragraph.

Submission of Shri Mahesh Sharma, Handi Para, Raipur

- 16.** It is submitted that for many years, the generation companies benefits the private generators by messing up with the contract of power purchase.

The distribution company changes the supply point of power company again and again: -

- Sometimes in the generator's bus bar
- Sometimes in the bus bar of the transmission company
- And sometimes in own company's bus bar

By changing the place of power supply, private generators are benefited at a rate of about 40 paise per unit in transmission charges and licenses. Even now, electricity is still being purchased from IA Energy and the point of supply is the transmission company's bus, by which this company is benefited in millions unnecessarily.

CSPDCL's Submission

- 17.** Demand for fair investigation in the cases related to purchase of power has been placed before the Commission by the objector. In the current context, provision of power purchase from IA Hydro Energy by the CSPDCL is based on the point of Inter-state Transmission System which is in accordance with the terms and conditions applicable to central generating plants. It is to be noted that tariffs related to charges collected by consumers include fixed transmission charges for the use of transmission system by Chhattisgarh State Power Transmission Company Limited, which is payable by the Chhattisgarh State Power Distribution Company per month.

Hence in the PPA, decision for inter-state purchase of electricity is in the favor of consumers as because of this decision there will be maximum utilization of capacity by transmission system without any extra cost. This decision will also keep non-tariff income of the transmission company inaccessible. Based on the above facts, the statement of the objector where IA Hydro will be benefited in millions from this decision is imaginary and contrary to facts.

Commissions View

- 18.** This issue has been dealt properly in the Order.

CSPTCL Submission

- 19.** CSPTCL vide letter no.1351 dated 13.10.17 has submitted the followings:

- i. In the PPA between M/s IA Hydro and CSPDCL, delivery point is specified as CG State boundary and responsibility of supplier is limited to take Open Access upto delivery point and responsibility beyond the delivery point is not defined in the PPA.
- ii. CSPDCL has earlier applied (on dated 17.08.17) for NOC for long term open access but later, CSPDCL has intimated (on dated 04.10.17) regarding execution of PPA with M/s I.A. Hydro Energy Ltd. and submission for approval of CSERC therefore withdrawn the NOC for long term Open Access application for 36 MW power (from Chanju-1 HEP of M/s IA Hydro Energy) quoting Article 6 of the TSA executed between CSPDCL and CSPTCL.

"Article 6 Intra-State Transmission Capacity Rights

6.1 Transmission Capacity Rights of CSPDCL an intra-state Transmission System shall be equivalent to the generation capacity (in MW ex bus) allocated to CSPDCL or contracted from

generating stations located within State or outside and all additional power arranged from generators/traders, including bilateral and open access trades as on date of signing of this Agreement and as amended from time to time.

6.2 Any updation of the Transmission Capacity Rights on account of additional generation capacity contracted or otherwise arranged by CSPDCL shall be with the prior approval of the Commission and with intimation to CSPTCL.

6.3 CSPTCL's Transmission System, to the extent of Transmission Capacity Rights of CSPDCL, shall be utilised by CSPDCL without any reference to specific lines or sub-stations, except the dedicated transmission network created for the exclusive use of other Transmission Service Users.

6.4 The rights for usage of Transmission Capacity of CSPTCL shall be in accordance with the applicable CSERC (Open Access Regulations, and its amendments or subsequent enactments from time to time."

With the above submission CSPTCL requested to resolve the issue that the quantum of power 36 MW from M/s I.A. Hydro Energy Ltd. which is proposed by CSPDCL for procurement can be accommodated within the Transmission capacity right of CSPDCL as per existing TSA executed on dated **23.02.17** between CSPTCL & CSPDCL or CSPDCL has to avail a separate LTOA for the said quantum beyond delivery point for the use of Intra-State transmission network of CSPTCL as per CSERC (Connectivity & Intra-State Open Access) Regulation 2011.

SLDC Submission

20. SLDC in its submission vide letter no.1437 dated 12.10.2017, has submitted the followings:

- i. CSPDCL should have an Open Access for the drawal of the power from the interface point of the State grid as per the regulations 10.(4) of the CSERC (Connectivity and Intra State Open Access) Regulations, 2011.

"The grant of connectivity shall not entitle an intra-state requester to interchange any power with the grid unless it obtains long-term open access, medium-term open access or short-term open access".

- ii. CSPDCL should give fifteen minutes time block scheduling as per Regulations 3(1)(ee) & Regulations 29(1) & 38 of the CSERC OA Regulations 2011.

"time block" means 15 minutes time period specified in the Grid Code for the purposes of scheduling and dispatch; and

"29. Day ahead transactions: (1) Day ahead transactions shall be permitted, in case there is availability of surplus capacity in the licensee system, which has been expressly surrendered whole or part thereof, or not in use for more than three days in past. An application for grant of such open access may be submitted to SLDC within three days prior to the date of scheduling but not later 1300 hrs of the day immediately preceding the day of scheduling for day ahead transaction".

- iii. Petitioner/applicant has to bear the Open Access charges as per the Regulations 33(3) of OA Regulations 2011.

"An open access customers shall pay to the SLDC, the scheduling and system operating charges as determined by the Commission in accordance with the regulation as may be framed for levy and collection of fees and charges of SLDC".

- 21.** SLDC further submitted that CSPDCL has understanding that after signing of TSA it does not require to apply for any type of open access to SLDC/CSPTCL, for all its present/future short term/ long term power purchase where as CSPTCL understands that as per the provisions of CSERC (Connectivity and Intra State Open Access Regulations 2011, CSPDCL has to avail open access for all such transactions which require usage of STU grid in terms of Article-2 of the TSA which is reproduced below;

"The terms of this agreement shall stand modified as per the applicable relevant Regulations and the orders issued by the Commission in relation to the agreement if, any.

- 22.** SLDC also submitted that CSPDCL while making application under Long Term Access or even under Medium Term Open Access seeks Open Access from the Nodal Agency from the CTU, which is PGCIL, for the transfer of their power, share allocated through the Central Grid where in they share the CTU network charges as per their allocations while in the case of utilizing the State Grid they refrain from making any such application.

SLDC pointed that PPAs of the CSPDCL with the CSPGCL has the provision that CSPDCL shall initiate suitable action for connectivity with CSPTCL so that timely and expeditious development of the required transmission system for evacuations of power from the project could be initiated.

CSPDCL's submission

- 23.** Submissions by CSPTCL and SLDC were served to the petitioner CSPDCL. CSPDCL vide letter no. 2135 dated 26.10.17 has responded to CSPTCL concern citing the para "Transmission Capacity rights of CSPDCL" in the TSA dated 23.02.17. It is submitted that by virtue of TSA, an agreement to carry a capacity equivalent to total generation capacity contracted that also include such other additional generation capacity contracted or otherwise arranged time to time, is made between CSPDCL and CSPTCL. It is submitted that power procured by CSPDCL from sources within or outside the State are required to be transmitted for distribution and supply to its consumers within its area of supply and CSPTCL agrees to transmit such power through its intra-state transmission network, subject to observance of application regulations. As per the terms of the agreement, CSPTCL raises monthly bills for transmission charges to CSPDCL for "Access" and "Use" of entire State transmission network on the basis of transmission capacity rights of CSPDCL as approved by the Commission. Similarly SLDC charges are also payable by CSPDCL as approved by the Commission.
- 24.** CSPDCL submitted that carrying power from State interface point (at which M/s IA Hydro is delivering) to consumers is protected as per the terms of TSA therefore no separate LTOA to wheel power from M/s IA Hydro is required.
- 25.** In response to SLDC concern, CSPDCL vide letter no. 2137 dated 26.10.17 has responded that commercial obligations regarding wheeling or agreed power from generation bus to point at State periphery of intra state transmission network of CSPTCL is upon M/s IA Hydro. From delivery point onwards CSPDCL carries rights to wheel this power into CSPTCL's network from Transmission Service Agreement dated 25.02.17 to supply to its consumers. Contentions raised by SLDC that wheeling of this power may require a separate Open Access permission would not be given considerations due to legal and commercial reasons that are listed below:-

- I. Open Access is a statutory permission/requirement under the Electricity Act 2003 which is mandatory for a person to wheel its power into the network/wires owned by a licensee. Such person can be generator/ CPP or distribution licensee or end user of electricity. Accordingly permission to use intrastate transmission network for this matter can be obtained by either CSPDCL or I.A. Hydro Pvt.Ltd.
- II. "TSA" between CSPDCL & CSPTCL is a commercial agreement which creates right upon CSPDCL to wheel all its power available through generation capacities as per PPA for supply to consumers in the State. Effectively Intra State transmission network of CSPTCL is leased out to CSPDCL under the terms and conditions of TSA to wheel its tied up power as a "Open Access Customer" on payment of necessary charges as determined by the Commission.

Commission's View

26. After scrutiny of the petition and after going through the submissions by SLDC & CSPTCL, it is observed that there are certain contradictory views on implementation aspect of procedure of open access when CSPDCL is using the State grid. During the hearing on 30.11.2017, the Commission ordered to conduct a Technical Validation Session (TVS) among the officers of power companies, M/s IA Hydro and CSERC in order to understand the viewpoints of parties. TVS was held on 05/12/2017 at the Commission's office. Outcome of the brief note on TVS submitted by Officers of the Commission is reproduced below;
"It is discussed that there are contradictory provisions in the approved TSA which caused confusion among power companies regarding power from M/s I A Hydro Energy. It was concluded that all the PPA to be served to SLDC so that accumulated capacity can be calculated and additional capacity of power from M/s IA Hydro energy should be added. TSA should be annexed with the existing PPAs and any further approval of PPA should be added to this annexure."
27. It is observed that STU i.e. CSPTCL is not required to create additional capacity in the transmission system to allow this power to transmit through its system .The power transaction for this power is feasible though the existing network only. It may be worthy to mention that the CSPDCL keeps record of sanctioned load of its retail consumers. The retail consumers use and consume power according to their requirement. Load factor of consumers varies based on their

consumption and contracted/sanctioned load. Likewise the transmission company is also required and authorized to know how much power has been contracted by the users of its system. It is observed that in the transmission service agreement there is no information about the power contracted by CSPDCL. During TVS,CSPDCL agreed that list of approved PPA shall be provided to SLDC. CSPDCL is directed to submit copies of all the existing approved PPA's to CSPTCL and SLDC. This is mandatory for safe and proper grid operation .Also in future, all the approved PPAs should be provided to SLDC and CSPTCL. Such list of approved PPA should be annexed with TSA.

Commission's Analysis and Order:

- 28.** The power mix of CSPDCL is comprising of more than 90% thermal power. After going through the submission of parties, it appears that hydro power is needed for better peak power management.
- 29.** CSPDCL has mentioned in its submission that instant PPA is in the format of approved "standard document" with minor changes. In this regard it is to note that the "standard document" referred by CSPDCL is the standard draft power purchase agreement approved by the Commission on dated 09/02/2017 in P No 25 of 2016 (M) which is for small hydro power plants (<25 MW). The Commission has not approved any standard draft PPA for conventional hydro power plants. The capacity of the M/s IA Hydro Power Project is 36 MW which is greater than 25MW and it does not qualifies as small hydel project (renewable power plant). However, the standard draft PPA for small hydro can be permitted in this specific case.
- 30.** The Commission has analyzed clause 10 of the PPA which pertains to tariff details for this power purchase. In the PPA, it is mentioned that tariff for supply of contracted energy in any contract year shall be lowest amongst the following:
 - (a) tariff of power generated from the project at generator bus, as determined by the Chhattisgarh State Electricity Regularity Commission (CSERC) for its year of operation.
 - (b) tariff of the 330MW Kishanganga Hydroelectric Power Project ("Kishanganga HEP") being setup by the National Hydro Power Corporation Limited ("NHPC") in the Jhelum river basin in the

state of Jammu & Kashmir, for the corresponding year of operation of the Kishanganga HEP;

- (c) tariff for the corresponding year of operation as determined by CSERC for small hydro-electric power projects established in the State of Chhattisgarh which achieve COD in same year as M/s I.A Hydro Energy Pvt. Ltd.

- 31.** The first and important criteria for approving a PPA is the cost of this power purchase for the licensee. It may be purposeful to quote Rule 8 of the Electricity Rules,2005:

"8. Tariffs of generating companies under section 79.- The tariff determined by the Central Commission for generating companies under clause (a) or (b) of sub-section (1) of section 79 of the Act shall not be subject to re-determination by the State Commission in exercise of functions under clauses (a) or (b) of sub-section (1) of section 86 of the Act and subject to the above the State Commission may determine whether a Distribution Licensee in the State should enter into Power Purchase Agreement or procurement process with such generating companies based on the tariff determined by the Central Commission."

The above Rule clearly shows that even for Central power generating stations, the State Commission has to decide whether a Distribution Licensee in the State should enter into Power Purchase Agreement or procurement process with such generating companies based on the tariff determined by the Central Commission."

- 32.** It may be relevant to reproduce observations of Hon'ble Supreme Court in CA NOS. 3510 - 3511 OF 2008,theHon'ble Court observed as under:

*"For the aforementioned purpose it cannot be given a general or popular meaning denoting supplier and receiver. Once it is held that by reason thereof the Parliament aimed at ensuring the supply, the purported object it sought to achieve by enacting Section 7 would lose its purpose. It, however, does not mean that Section 23 itself becomes unworkable as it would not be possible to secure equitable distribution and supply. **The agreement of distribution (PPA) being subject to approval, indisputably the Commission would have the public interest in mind. It has power to approve a MOU which subserves the public interest. It, while granting such approval***

may also take into consideration the question as to whether the terms to be agreed are fair and just."

- 33.** Honorable Apex Court has observed that while approving a PPA the public interest have to be kept in mind. Also, it has to be seen that the terms and conditions agreed by parties are fair and just. The pre requisite for approving a PPA is the tariff of power purchase. The PPA submitted by CSPDCL does not indicate about exact tariff. There is conditional tariff. Before signing the PPA, the petitioner should have analyzed and assessed the project cost of projects and its impact in the power purchase cost. Such varying conditions of cost of power purchase by distribution licensee is inappropriate and cannot be accepted. Since some of the stakeholders has raised this concern, for detail examination, the Commission has collected copy of MOU between hydro project developer & Govt. of Himachal Pradesh and copy of Detailed Project Report (DPR) for Hydro project.
- 34.** While examining the MOU, it is noted that the project shall supply certain quantum of power to Himachal Govt. This means that the entire capacity of this project is not tied up with the CSPDCL. In the terms and conditions of tariff of power purchase, the lowest of three below mentioned options has to be ascertained for procuring power.
- (1) Tariff to be determined based on the project cost submitted by M/s IA Hydro Energy. As per the submission of the supplier, the cost of the project as on 31/03/2017 is Rs. 631.19 Crore i.e. Rs. 17.53 Crore/MW.
 - (2) As per the gathered data, capital cost of the Kishanganga Hydro Electric project is Rs.3642.04 crore (Sep-07 Price level) for 330 MW i.e. Rs. 11.03Crore/MW. The project was estimated to be COD by November 2016, however till date same has not been commissioned.
 - (3) According to the information submitted, M/s IA Hydro has achieved COD in year 2017-18. So as per third option of tariff, tariff will be preferential tariff determined by the Commission for the year 2017-18 for small hydro plants installed in the State. It is to note that, generic tariff for small hydro plants shall be determined as per the norms and parameters specified applicable terms and conditions for determination of generation tariff and related matters for electricity generated by plants based renewable energy sources, Regulations,. It is to note that

we are in the process of framing of Regulations for the plants achieving CoD during the year 2017-18. In the draft of the Regulations for terms and conditions of tariff for renewable plants, the capital cost of small hydro project is proposed as 7.79crores/MW for plants below 5 MW and 7.07 crore /MW for plants between 5 to 25 MW.

- 35.** On comparison of capital cost for above mentioned three options, the capital cost of small hydro power is lowest as compared to other two options. Kishanganga Hydroelectric Power Project (“Kishanganga HEP”)is yet to be commissioned and its tariff cannot be assessed properly at this stage of approving PPA. But even taking capital cost at Sept 07 level, its capital cost of this project is more than as compared to small hydro plants. A number of hydro projects has been installed in the country. It is not known why the parties preferred and agreed to include the tariff of Kishanganaga project for comparison purpose. The capital cost of IA hydro power project is highest amongst the three mention options. So prima facie, amongst the three mentioned options of PPA, the generic tariff determined for small hydro shall definitely be lowest amongst three options. While signing PPA, the parties have already agreed to adopt lowest tariff of the mentioned three options but, it is pertinent to note that the power plant of IA Hydro does not qualify as renewable energy based generating plants. So applying conditions of terms and conditions of determination of tariff for renewable plant (small hydro plant) for this conventional hydro project does not appear appropriate. The operating norms and financial norms for renewable plants are different from that of conventional plants and preferential tariff is given to small hydro power plants.
- 36.** Therefore we are of opinion that capital cost applicable for plant achieving COD in the year 2017-18 (for small hydro projects ranging between 5 to 25 MW) in accordance with applicable RE Tariff Regulations should be considered for the determination of tariff. Other norms and parameters for hydro plants (conventional plants) as specified in the applicable MYT regulations shall be adopted for determination of tariff. Capacity utilization factor shall be considered from detail project report (DPR) which is design energy generation at 95% machine availability. Tariff determined shall be levellised tariff for the entire useful life of the project. Parameters for tariff determination are summarized as follows;

S No	Parameters	Sub-head-1	Sub-head-2	Unit	Value
			Capacity Utilisation Factor	design energy generation at 95% machine availability as per DPR	
			Auxiliary consumption	%	1.5%
			Useful Life	Years	35
2	Project cost	Capital cost/MW		As per RE Tariff Regulations applicable for the year 2017-18	
3	Financial parameters	Debt/equity	Tariff period	Year	55
			Debt	%	70%
			Equity	%	30%
			Repayment Period	Year	12
			Interest rate	As specified in CSERC MYT Regulations 2015	
			RoE	As specified in CSERC MYT Regulations 2015	
			Discount Rate	As specified in CSERC MYT Regulations 2015	
		Fiscal assumptions	Income Tax		
			MAT Rate (first 10 years)		
		Depreciation	Depreciation rate for first 12 years	As specified in CSERC MYT Regulations 2015	
Depreciation rate 13 year onwards	As specified in CSERC MYT Regulations 2015				
4	Operation and maintenance	O & M expenses	O & M expenses	As specified in CSERC MYT Regulations 2015	
			Escalation factor	As specified in CSERC MYT Regulations 2015	
5	Working Capital	For fixed charges	O & M expenses	As specified in CSERC MYT Regulations 2015	
			Maintenance Spare @ % of O & M expenses	As specified in CSERC MYT Regulations 2015	
			Receivable	As specified in CSERC MYT Regulations 2015	
			Interest on WC	As specified in CSERC MYT Regulations 2015	

37. The lowest tariff amongst the mentioned three options is of small hydro plants. The parties have agreed to adopt lowest tariff amongst the mentioned options. The generic tariff determined for small hydro projects is not trued up according the applicable Regulations. Also it is to note that entire capacity of this project is not allocated to the petitioner CSPDCL. Accordingly tariff determined for this power project shall not be trued up and share of gain and losses shall not be applicable as there is other beneficiary also.

38. The interface point of this power purchase shall be as mentioned in the PPA i.e. Chhattisgarh periphery (CTU-CSPTCL interface point of Chhattisgarh State). The cost of power transmission upto Chhattisgarh state shall be borne by supplier. The cost of transmission of power

beyond interface point (Chhattisgarh periphery) shall be borne by CSPDCL.

Considering the above deliberations, PPA submitted for approval has been approved subject to modification to the extent of above discussion.

PPA is thus approved subject to the directions given above.

We Order accordingly.

Sd/-
(Arun Kumar Sharma)
Member

Sd/-
(Narayan Singh)
Chairman

Objections/Suggestions received from following persons/organizations

No.	Organisation/ Designation
1.	CE (SLDC), CSPTCL, Raipur (CG)
2.	ED (C&P), CSPTCL, Raipur (CG)
3.	Hydreq, Pte Ltd, One George Street, Singapore 049145
4.	Shiga Energy Pvt. Ltd, DLF Cyber City, Gurgaon (Haryana)
5.	DANS Energy Pvt. Ltd, DLF Cyber City, Gurgaon (Haryana)
6.	SmtRenu Joshi, MIG-7, Sector-2, Shankar Nagar, Raipur (CG)
7.	Shri Mahesh Sharma , Handi Para, Raipur (CG)