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KSEB/TRAC/CERC/Staff paper on Transmission Planning/2014-15 -11-2014

To

The Secretary,
Central Electricity Regulatory Commission,
3rd & 4th Floor, Chanderlok Building, 36 Janpath Marg,
New Delhi 110 001.

Sir,

Sub: Staff Paper on Transmission Planning, Connectivity, Long Term Access, Medium Term Open Access and other related issues - Submitting of views - regarding.

Ref: Public notice No: Engg./DP-Transmission/2014-CERC dtd: 19.09.2014issued by Hon'ble CERC

KSEB's views/comments on the Staff Paper on Transmission Planning, Connectivity, Long Term Access, Medium Term Open Access and other related issues issued by Hon'ble CERC vide reference is submitted below for the kind consideration of the Hon. Commission.

Yours faithfully,

Chief Engineer (Commercial &Tariff)

Acc: as above

Comments on the staff paper on 'Transmission Planning, Connectivity, Long/Medium Term Open Access and other related issues'

1. Transmission system planning and development before the enactment of the Electricity Act-2003.

1.1 Before the enactment of the Electricity Act-2003, the electricity planning at the State level is being carried out by the State Electricity Boards (SEBs) and the overall electricity planning at the National level was co-ordinated by Central Electricity Authority (CEA).

1.2 The Inter-state transmission system was generally planned as part of the Central Generating Stations (CGS), developed by Power Grid Corporation of India (PGCIL) for evacuating the power allocation of the respective States from CGS. There was adequate redundancy in the inter-state transmission network for evacuating the unallocated power (15% of the total installed Capacity).

1.3 Further, the total transmission charges was being shared by the beneficiaries in proportion of the allocation from the CGS.

1.4 Accordingly, before the enactment of the Electricity Act-2003,

(i) The inter-state transmission network was planned as part of the Central Generating Stations.

(ii) The transmission charges were shared by the beneficiaries in proportion of the allocation from the CGS.

(iii) Overall electricity planning at the national level was co-ordinated by CEA and the State level was done by the SEBs.

(iv) Though the inter-state transmission planning was limited to the development of the CGS, there was no issue associated with the sharing of inter-state transmission charges.

2. Provisions in the Electricity Act-2003, National Electricity Policy and National Tariff policy on Transmission system development.

2.1 Provisions in the Electricity Act-2003

(i) Section-3(4) of the Electricity Act-2003, empowers the Central Electricity Authority to prepare a ' National Electricity Plan' once in every five years. The relevant section of the Electricity Act-2003 is extracted below.

> " (4) The Authority shall prepare a National Electricity Plan in accordance with the National Electricity Policy and notify such plan once in five years:

Provided that the Authority in preparing the National Electricity Plan shall publish the draft National Electricity Plan and invite suggestions and objections thereon from licensees, generating companies and the public within such time as may be prescribed:

Provided further that the Authority shall -
(a) notify the plan after obtaining the approval of the Central Government;
(b) revise the plan incorporating therein the directions, if any, given by the Central Government while granting approval under clause (a).

(5) The Authority may review or revise the National Electricity Plan in accordance with the National Electricity Policy.

(ii) As per the section-7 of the Electricity Act-2003, the 'Generation of electricity' become a de-licensed activity and accordingly many private developers has been developing power projects at resource rich areas.

(iii) Section-38 of the Electricity Act-2003.
As per the section-38 of the Electricity Act, the Central Transmission Utility is responsible for planning and development of inter-state transmission system. The relevant section is extracted below for ready reference.

"

38(2) The functions of the Central Transmission Utility shall be -

(a) to undertake transmission of electricity through inter-State transmission system;

(b) to discharge all functions of planning and co-ordination relating to inter-state transmission system with –

(i) State Transmission Utilities;
(ii) Central Government;
(iii) State Governments;
(iv) **generating companies**;
(v) Regional Power Committees;
(vi) Authority;
(vii) licensees;
(viii) any other person notified by the Central Government in this behalf;

(c) to ensure development of an efficient, co-ordinated and economical system of inter-State transmission lines for smooth flow of electricity from generating stations to the load centres;

(d) to provide non-discriminatory open access to its transmission system for use by-

(i) any licensee or generating company on payment of the transmission charges; or
(ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the

transmission charges and a surcharge thereon, as may be specified by the Central Commission…..

……

"

As extracted above, the PGCIL as the Central Transmission Utility is responsible for the planning and execution of the inter-state transmission system in the Country.

(iv) Similarly, as per the section-39 of the Electricity Act-2003, State Transmission Utility is responsible for the planning and execution of the inter-state transmission system in the State.

(v) Section-66 of the Electricity Act-2003, empowers the appropriate Commissions to take suitable measures for 'development of market' which is extracted below.

"66. The Appropriate Commission shall endeavour to promote the development of a market (including trading) in power in such manner as may be specified and shall be guided by the National Electricity Policy referred to in section 3 in this regard."

(vi) As per the section-79(1)(c) of the Electricity Act-2003, the CERC is entrusted with 'regulating inter-state transmission of electricity'.

(vii) Further, the Electricity Act-2003 mandates for providing non-discriminatory open access by the CTU to its transmission system for the use of 'any licensee or generating company or consumers.

As detailed above, the Electricity Act-2003, entrust the PGCIL as the CTU to plan and develop the inter-state transmission in line with the National Electricity Plan formulated by CEA and also in co-ordination with various stake holders including STU, Central and State Governments, generators etc.

2.2 Provisions in the National Electricity Policy

Paragraph 5.3 of the National Electricity Policy notified by the Central Government vide the notification No. 23/40/2004-R&R dated 12th February-2005 deals with transmission planning and related issues, which is extracted below for ready reference.

"5.3 TRANSMISSION

5.3.1 The Transmission System requires adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country.

5.3.2 Keeping in view the massive increase planned in generation and also for development of power market, there is need for adequately augmenting transmission capacity. While planning new generation capacities, requirement of associated transmission capacity would need to be worked out simultaneously in order to avoid mismatch between generation capacity and transmission facilities. The policy emphasizes the following to meet the above objective:

- The Central Government would facilitate the continued development of the National Grid for providing adequate infrastructure for inter-state transmission of power and to ensure that underutilized generation capacity is facilitated to generate electricity for its transmission from surplus regions to deficit regions.
- The Central Transmission Utility (CTU) and State Transmission Utility (STU) have the key responsibility of network planning and development based on the National Electricity Plan in coordination with all concerned agencies as provided in the Act. The CTU is responsible for the national and regional transmission system planning and development. The STU is responsible for planning and development of the intra-state transmission system. The CTU would need to coordinate with the STUs for achievement of the shared objective of eliminating transmission constraints in cost effective manner.
- Network expansion should be planned and implemented keeping in view the anticipated transmission needs that would be incident on the system in the open access regime. Prior agreement with the beneficiaries would not be a pre-condition for network expansion. CTU/STU should undertake network expansion after identifying the requirements in consultation with stakeholders and taking up the execution after due regulatory approvals.

….

As extracted above, the National Electricity Policy emphasize the importance of augmenting the transmission capacity in line with the capacity addition in generation and also for developing power market. Further, it also emphasize that, prior agreement with the beneficiaries would not be a pre-condition for network expansion.

2.3 Provisions in the National Tariff Policy

(i) In compliance with section-3 of the Electricity Act-2003, the Central Government vide the notification No. 23/2/2005-R&R dated 6th January-2006 has notified the National tariff policy.

(ii) Paragraph-7 of the Tariff policy dealt with Transmission and related issues. The relevant paragraphs of the Tariff policy is extracted below for ready reference.

" Paragraph-7. The tariff policy, insofar as transmission is concerned, seeks to achieve the following objectives:

1. Ensuring optimal development of the transmission network to promote efficient utilization of generation and transmission assets in the country;

2. Attracting the required investments in the transmission sector and providing adequate returns".

7.1 Transmission pricing

(1) A suitable transmission tariff framework for all inter-State transmission, including transmission of electricity across the territory of an intervening State as well as conveyance within the State which is incidental to such inter-state transmission, needs to be implemented with the objective of promoting effective utilization of all assets across the country and accelerated development of new transmission capacities that are required.

……

(4) In view of the approach laid down by the NEP, prior agreement with the beneficiaries would not be a pre-condition for network expansion. CTU/STU should undertake network expansion after identifying the requirements in consonance with the National Electricity Plan and in consultation with stakeholders, and taking up the execution after due regulatory approvals.

As detailed above, the Tariff policy notified by the Central Government also emphasize the need for ensuring optimal development of the transmission network to promote efficient utilization of transmission and transmission assets in the country.

2.4 Summary of the provisions in the Electricity Act and the Tariff Policy and Electricity Policy on inter-state transmission and related issues.

(i) Section 3(4) of the Electricity Act-2003 empowers the CEA to notify the National Electricity Plan once in every five years.

(ii) Section-38 of the Electricity empowers the PGCIL as the CTU to plan and implement the inter-state transmission system in co-ordination with various stake holders including STU, Central and State Governments, generators etc.

(iii) The transmission capacity shall be augmented in line with the capacity addition in generation and also for developing a competitive market for trading of electricity.

(iv) Prior agreement with the beneficiaries would not be a pre-condition for network expansion.

As detailed above, there is adequate provision in the Electricity Act-2003, National Electricity Policy and Tariff policy for the co-ordinated development of the inter-state transmission system in line with the capacity addition in generation . Further, the

transmission system should have adequate redundancy to ensure competitive market for electricity and also to facilitate open access.

3. Present issues faced/ raised by the Generators/ DICOMS and CTU

(i) Implementation of Generation projects is being concentrated at few locations where the fuel is abundantly available to reduce cost of transportation etc.

- The generation resources including the availability of coal and hydel potential is abundantly available at few regions of the country. The coal reserves is abundantly available at Eastern and Western regions, where as the hydel potential is concentrated at the North Eastern part of the State.
- Further, it is an established fact that, it is economical to produce the electricity at source of availability of fuel and transmit the same to the demand areas rather than transporting the fuel to the demand areas and to set up the power projects at demand location.
- The cost of transportation of electricity is comparatively low considering the cost of generation. The present cost of generation from coal based stations is not less than Rs 4.00 per unit, where as the cost of transportation of electricity is about Rs 0.25 to 0.35 per unit only.
- Considering the above and also after the de-licensing of the generation as per the Electricity Act-2003, new generation projects under IPP are coming up in the ER/WR/NER regions.
- Accordingly, the total availability of power including that from private generators are much higher than the total demand of the resource rich areas.
- In order to transmit power from the resource areas to demand zones across the country, adequate transmission facility need to be established.

(ii) Generators failed to identify the beneficiaries/ demand customers across the country and hence it is difficult for the CTU to plan and implement the transmission projects.

- It is seen from the demand and supply projections that, the Southern Region and Northern region has been experiencing power shortages.
- However, due to the acute inter-regional and intra-regional transmission constraints, the DICOMS are not able to procure power from the surplus regions.
- One of the reasons for the inadequate transmission system is that, since Generators are not able to identify the

beneficiaries and not entering into PPA with them, the CTU is not able to plan and implement the transmission projects based on the power need of the DISCOMS.

- This issue can be resolved, if the generators are able to identify the beneficiaries in advance and enter into PPA and also seek LTA based on the PPA, so that the CTU can plan, co-ordinate and implement transmission infrastructure for evacuating power from the generator terminal to the state periphery of the DICOMS.
- However, the main difficulty faced by the DICOMS is the mandatory provisions in the 'National Tariff Policy' that, all the future power procurement after 6th Januray-2011 shall be through competitive bidding route. The DISCOM has been taking much time to complete the bidding process and finalize the contract with the Generators.

(iii) Lack of co-ordination between the State DICOMS, STU, CTU and Generators for ascertaining the Demand- Supply position.

(a) Before the enactment of the Electricity Act-2003

- Before the unbundling of the SEBs, the SEBs have been projecting the demand, internal generation and intra-state transmission facility, the extent of demand to be met from outside the State.
- Further, the Central Electricity Authority is the co-ordinating agency for electricity planning at National Level including identifying generation projects, authority for giving investment approval and techno economical clearances for Generation and Transmission projects, in line with the 'demand projection' of each state to be met from Outside the State.
- Further, prior PPA agreement is being executed with the respective State Electricity Boards based on the allocation of power from the Generation Projects identified at National level/ regional level.
- Further, as and when a new Generation project is planned, associated transmission system also being identified along with the generation projects.
- The transmission charges is being shared among the beneficiary SEB's in proportion of the allocation from each Generating station.

(b) After the enactment of the Electricity Act-2003

- The SEB's are unbundled in to separate business entities of Generation, Transmission and Distribution Companies.

- Further, large number of Renewable generators including wind, solar, small hydro etc is setting up each State.
- Though the State Transmission Utilities are empowered for the planning and co-ordination of intra-state transmission system, there is a lack of co-ordination among the DISCOMS, STU and Generators with in the State regarding the demand and supply requirement, i.e.,
    - the State has failed to project the total demand requirement of each DISCOMS, the demand to be met internally, the balance demand.
    - The proposals for meeting the balance demand, including the target to be met from internal generation/ procuring power from generators located within the State.
    - The proposals to meet the balance demand- through competitive bidding route, MOU route etc.
- Considering the above, there shall be a co-ordinating agency in each State to ascertain the demand and supply position of each state, duly considering the load generation balance of the DISCOM, internal generation from the Generating Company, future capacity addition of the Generating Company, internal generation anticipated from the private developers etc. Hence the State Government shall designate the holding company/ STU or one of the DISCOMS or any other appropriate agency to do the same.
- Since the Generation is de-licenced, many generation projects are coming across the Country. However, lack of co-ordination among the Generators, DISCOMS and CTU, the transmission system for evacuating power from the Generators also not being planned or implemented.
- Though the CTU is responsible for planning and co-coordinating inter-state transmission system in co-ordination with STU, Central and State Government, Generating companies etc, there is no proper co-ordination between the Stake holders regarding the assessment on the inter-state transmission system.
- Whatever may be the reasons, though there is surplus power in ER/WR and NER and acute power shortage is being faced at the SR and NR regions, the surplus power could not be transmitted to the deficit regions due to the transmission constraints.
- Even the power tied by the DICOMS in the Southern Region with Generators in the ER/WR could not be evacuated due to the inter-regional transmission constraints.

(iv) <u>Lethargic attitude of the CTU to construct the transmission system in line with National Electricity Plan developed by CEA.</u>

- As submitted earlier, CTU is responsible for planning and co-coordinating the inter-state transmission system.
- The following legal mandates shall also be duly considered by the CTU while planning and co-ordinating inter-state transmission system.
  (a) As per the Electricity Act-2003, the CTU has to provide non-discriminatory open access to the Licensees, Generators and Consumers.
  (b) The section-66 of the Electricity Act-2003 also mandate the development of market including trading of electricity.
  (c) The National Electricity Policy and Tariff Policy mandates, prior agreement with the users of the transmission system is a pre-condition for net work expansion.
- However, the CTU is not willing to abide by the statutory responsibility to undertake network expansion after identifying the requirements in consultation with the Stake holders and taking up the execution after regulatory approval.
- It is the statutory responsibility of the CTU to develop a robust and economical inter-state transmission system and they may not be allowed to shy away from that.
- As per the provisions of the Electricity Act-2003 and National Electricity and Tariff Policy, the role of the CTU is that of a facilitator of the transmission infrastructure.

(v) Whether the network expansion without Long term agreement results in under recovery of transmission charges?

- The CTU raised the issue that, the net work expansion, just based on the load generation balance across the country, without having long term agreement with beneficiaries may result in under recovery of transmission charges.
- This attitude of the CTU is against the prevailing regulations, mandates in the Electricity Act-2003 and the National Electricity Policy and Tariff policy. In this matter, the following points may kindly be noted.

(a) The tariff of the each transmission element is being determined by CERC for the transmission system developed based on cost-plus tariff basis. Further, in the case of the transmission system developed through bidding route, the annual transmission charges derived through bidding process shall be the annual transmission charges to be recovered by the transmission licensee.

(b) At present, the transmission charges is being shared between the beneficiaries including the 'Generators and Distribution utilities' through the CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010.

(c) At present, the PoC charged as per the CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 is being determined by the validation committee on quarterly basis, conducting load flow studies by NLDC based on the anticipated demand and supply position.

(d) Since, the PoC charges is being determined based on the cost of the transmission assets and the anticipated load flow on quarterly basis by the validation committee, there will not be any issue on the recovery of the annual transmission charges from the beneficiaries.

(e) Considering the above, the concern raised by the CTU that, without signing BPTA agreement with the beneficiaries the transmission service provider could not recover the entire transmission charges is a baseless argument.

(f) If the CTU / transmission licesees face any difficulties in recovery of the transmission charges, they can very well approach the Hon'ble Commission with the relevant particulars.

4. **Summary of the reasons for inadequate development of the inter-state transmission system in the country**.

(i) The failure from the part of the State/ State DISCOMS to project their demand supply position and requirement to be met from outside the State.

(a) As discussed earlier, the State Government may designate the holding company/ STU/ one of the DISCOMS/ or any other appropriate agency to co-ordinate with the STU, DISCOMS, generators and other stakeholders with in the State to ' ascertain the demand and supply position of the State in the long term horizon for 10 to 15 years with a reasonable accuracy'. This includes:

- Reasonable estimate of the anticipated energy demand of the State.
- Estimate of the demand to be met from internal generation.
- Demand to be met by procuring power from outside etc.

(ii) The failure from the part of the CTU to plan a robust inter-state transmission system in line with the National Electricity Plan of the CEA and in line with the capacity addition planned by the Generators.

- As discussed earlier, section-38 of the Electricity Act-2003 mandates that, the CTU shall built a robust inter-state transmission system in co-ordination with STU, State and Central Government, Generators etc.
- The CTU shall also ensure that, there shall be adequate redundancy in the transmission system to facilitate non-discriminatory open access, creating an environment for market development including trading etc.
- The CTU shall also keep in mind that, as per the present legal environment, prior agreement with beneficiaries are not mandatory for network expansion.

(iii) Lethargic attitude of the CTU to develop the inter-state transmission system without having long-term agreement with the beneficiaries citing the reason that, developing inter-state transmission without having LTA may result in under recovery of transmission charges.

- As discussed earlier, at present the transmission charges is being shared between the beneficiaries based on the CERC(Sharing of inter-state transmission charges and losses) Regulation, 2010.
- Since the PoC charges as per the regulation is being determined based on the cost of the transmission asset and load flow studies by the NLDC considering the anticipated demand and supply position of the DISCOMS, the generation from the Generators etc on quarterly, there will not be any issue on the sharing of transmission charges among the beneficiaries.

(iv) Failure from the part of the Generators to identify the beneficiary DISCOMS.

- Though the generators are entering into connectivity agreement with CTU, they are reluctant into enter into LTA with the CTU for want of identifying the demand consumers.

(v) The natural resources of the Country including the Coal and hydel potential are concentrated at few locations of the country.

With the above background, Kerala State Electricity Board Limited (KSEBL) has duly appraised the CERC Staff paper on 'Transmission Planning, Connectivity, Long/ Medium Term Open Access and Other related issues

5. **KSEBL's comments on the specific issues raised in the Staff Staff paper on 'Transmission Planning, Connectivity, Long/ Medium Term Open Access and Other related issues**.

(1) KSEBL generally agree with the appraisal on the present issues faced by the power sector, which includes (not limited to) the following.

(i) Future procurement of power by DISCOMs through competitive bidding under case-1 and case-2 not happening as envisaged.

(ii) Generation capacity tie up by State DISCOMs not in line with demand projections.

(iii) Lack of transmission planning by CTU/STUs.

(iv) Generators are not able to tie up their full capacity under long term in the absence of adequate case-1 and case-2 bidding- firming up of beneficiary and drawal point not happening.

(v) Transmission system augmentation and strengthening based on LTA. However, about 15 to 20% of the power transaction in the State is happening through short-term basis including the energy transactions through energy exchanges, bi-lateral transactions.

(vi) At the planning stage, no transmission capacity is earmarked for the transactions through MTOA and STOA, though the National Electricity policy envisages that, 15% of the generation capacity shall be earmarked for sale through short-term transactions.

(vii) State drawal from ISTS is much larger than their allocations/LTA quantum for which no additional connectivity has been sought at the drawal end or LTA has not been applied for.

(viii) No co mmitment to pay transmission charges for connectivity. As Connectivity is not linked with the liability

to pay the transmission charges, generators are applying for Connectivity as it helps them in getting finance. Also in case of any change in plan like rescheduling, under scaling or abandoning the project, there is no impact on generators.

(2) Planning Philosophy(Paragraph 5.7 of the Staff Paper)

KSEBL generally agrees with the planning criterion that,

(i) The inter-state transmission planning approach of the CTU shall not be conflict with the Electricity Act-2003 and the National Electricity Policy and Tariff policy of the Central Government.

(ii) PPA should not be made a pre-condition for connectivity and long-term access. But at the same long-term PPA should be encouraged through the requirement of DISCOM's power procurement adequacy statement by SERC.

(iii) Redundancies should be created in the transmission system for facilitating open access and also for developing competitive market for electricity trading .

(iv) State transmission planning needs to be improved. The State Government shall designate a nodal agency for the same.

(v) There is a need for levy of charges for connectivity. It should not be free. There should be financial incentive/disincentive for Connectivity and LTA.

(3) <u>Methodology proposed for Transmission planning (Paragraph 6.5)</u>

KSEBL generally agrees with the planning methodology proposed in the Staff paper with following modifications.

(i) CEA may be entrusted with monitoring the progress of the transmission plan and development in line with capacity addition in generation, load demand of the State DISCOMS.

(ii) Central Commission shall through regulation may notify the time schedule for submitting the information for transmission plan to CEA and CTU.

(iii) It is seen that, the validation committee constituted under sharing regulations do not have adequate representation at State level. This has been creating difficulties in appraising State pertinent issues by STU/ DISCOMS before the validation committee. Hence, the validation committee may have at least one representative from each State.

(4) <u>Proposed formulation for connectivity and Long term Access (Pargraph-7)</u>

(i) KSEBL generally agree that, Long Term Access has to be promoted. However, it does not mean that, all the cost shall be recovered from the Long Term consumers in advance. In this matter the following shall be noted.

(a) Network expansion shall be based on the transmission methodology as detailed under paragraph 6.5 of the staff paper and not based on LTA.

(b) As submitted earlier, it is the responsibility of the CTU to build a robust transmission system in the country in line with the load-generation balance.

(c) Prior agreement for LTA is not mandatory. However, LTA may be encouraged and upto 85% of the transmission capacity shall only be allowed through LTA and balance 15% may be retained for facilitating short-term open access and collective transaction.

(d) LTA shall also have the highest priority. As part of encouraging LTA, it shall be granted only after three year from the date of application for LTA, even if there is redundancy in the transmission system. Till then open access may be allowed only through Short term access route only.

(e) Further, the MTOA/ STOA charges may be levied at a premium of 20 to 25% higher than the normal PoC charges arrived so that, the beneficiaries may get a built in incentive for opting for LTA.

(f) Since the sharing of transmission charges is based on POC methodology, the CTU/ Transmission

licensee may be ensured the full cost recovery. Further, any excess recovery through MTOA/STOA shall be reimbursed only to the LTA consumers.

(g) However, upfront charges shall not be collected from LTA consumers.

6. <u>General Network Access methodology.</u>

Considering the concern raised by the CTU and CEA regarding the transmission planning and transmission cost allocation and also duly considering the importance of the transmission planning methodology suggested under paragraph 6.5 of the staff paper, KSEBL also generally agree with the General Network Access suggested by CEA with modifications as submitted below.

(i) KSEBL agrees with the proposal of the CEA regarding 'processing for implementation and grant of GNA' as proposed by CEA with modification as detailed below may be adopted.

- Generators would need to specify the ex-bus installed capacity connected with the ISTS grid (in case of captive plants - maximum power they plan to inject into the grid) as requested GNA quantum for injection.
- States need to specify their maximum power drawal requirements as requested GNA quantum for drawal.
- The effective GNA would be as assessed by CTU through system studies and considering the transmission system planned through the coordinated planning process of CEA.
- The States, which are also planning to inject into ISTS, would need to specify the quantum of maximum power injection as requested GNA quantum for injection.
- For availing GNA, the injector (i.e. the generator or the surplus State) shall not be required to specify target customer.
- Similarly, the drawing entities (the deficit States or the bulk consumers) shall not be required to specify the source of supply of power.
- System strengthening for drawal by the States would be driven by GNA.
- States shall have to sign the GNA agreement with CTU to be treated as preferred customer.
- STUs of respective state to be nodal agency for above in line with Section-39 of the Act .
- Entities seeking GNA shall have to sign agreement, furnish BG etc. for enabling implementation of the transmission system.
- All existing LTA, or long-term allocations should be converted to GNA.

- The transmission service under 'Connectivity' and 'LTA with target regions' gets replaced by GNA.
- A validation committee may be formed with representative from CEA, CTU, Transmission licensees, Generators, at least one representative from each State representing STU/DISCOMS to review once in a year the progress of generation projects, inter-state transmission system, new proposals on generation and transmission sectors etc.

As extracted above, the transmission system planning based on the GNA concept may be adopted, considering the following.

- GNA mandates that, all the beneficiaries including generators/ DISCOMS may specify the quantum of injection/ drawal from the State grid for a time horizon for 4 to 5 years.
- Further, under the GNA, both generator/ drawing entities shall not be required to specify the target consumer.
- Hence, under the changed market environment, it may provide the way ahead for competitiveness in the Electricity Market.

(ii) However, KSEBL does not agree with the concept of sharing the transmission charges based on the GNA considering the following.

- Under the POC mechanism, the sharing of transmission charges is based on actual usage rather than prior agreement of LTA.
- Under the PoC, the validation is being done once in every quarter based on the demand and supply information provided by the DISCOMS, Generators and other users of the transmission system. The CTU/ Transmission licensees are ensured the full recovery of annual transmission charges approved by the CERC/ quoted through bid process.
- The proposal to levy the transmission charges based on GNA is against the provision in the National Electricity Policy and tariff policy which prescribes that *'the national tariff framework implemented should be sensitive to distance, direction and related to quantum of power flow'.*

(iii) However, there shall be penalty to the Generator and drawing entities provided the actual injection/ drawal less by 15% from the GNA sought for. The excess drawal/ injection may be charged at short-term PoC charges. As submitted earlier, the short-term PoC may be charged at a premium over the normal PoC charges.

(iv) The issues on exit or relinquishment charges may be continued as provided in the CERC(Grant of Connectivity, Long Term and Medium Term Open Access)Regulations, 2009.

7. Proposed Transmission capacity allocation Mechanism for Power Market-Collective transactions.

KSEBL does not agree with the proposal of earmarking some capacity for collective transactions considering the following:

(i) Power exchange collective transactions are day ahead transactions, and the possibility of clearing such transactions in the power exchange cannot be assured. Further the amount of transactions cleared between different regions depends on the price discovery mechanism in the power exchange. Hence booking ahead some transmission capacity for day ahead collective transactions will lead to unutilized transmission infrastructure if the collective transactions for which the capacity is booked do not materialize and the failure of the transactions is known only few hours before the scheduled date of transactions.

(ii) Hence it is suggested that instead of day ahead collective transactions, term ahead or month ahead double sided closed bid auctions can be implemented for collective transactions in power exchange, by availing the transmission capacity available for short-term.

8. Utilization of transmission charges collected through e-bidding and congestion revenue

It has been stated in the staff paper that using transmission charges collected through e-bidding and congestion revenue for development of new transmission system was not encouraging as transmission licensee did not want to dilute their return on equity by financing the transmission expansion through the charges collected through e-bidding and congestion revenue.

In this matter, KSEBL may further submit that:

(i) The congestion amount collected from the utilities may be segregated region wise and the amount collected from each region may preferably be utilized for developing the transmission system to relieve the congestion of that region. i.e. the congestion and e-bidding revenue collected from SR utilities may be used to create transmission infrastructure to relieve the congestion of SR .

(ii) Further, for developing the transmission system to relieve the congestion, the revenue earned as congestion revenue and e-bidding revenue may be granted to the ISTS developer as interest free loan for meeting the project cost, so that the Transmission licensee may ensure their RoE at the same time the beneficiaries may be benefited by way of interest and finance charges.

9. Reply to the questionnaire in the Staff paper

Question No.1: Yes.

Question No.2(a),(b):

Retaining connectivity as a separate product is beneficial for the generators as it will help them in getting finance for implementing the project. Connectivity is usually sought before financial closure. Hence finance for the project can be ensured only for the generator if the Connectivity is kept as a separate product.

The charges for connectivity shall be continued to be governed as per the prevailing regulations i.e. CERC(Grant of Connectivity, Long Term and Medium Term open access)Regulations,2009.

Question No.3: Not Applicable

Question No.4 & 5:

Bank guarantee required. The amount of bank guarantee may be fixed as the amount corresponding to the net present value of the expected transmission charges for 5 years from the date of COD of the transmission system for the construction period.

Question No.6: Date of LTA may be made almost firm. However, relaxation may be provided on certain special cases depending on the cause of delay as submitted below.

i. If the delay in commissioning of a generating station/transmission system is attributable to force majeure conditions, the generator/transmission developer may be granted some relaxation.

ii. If the delay in commissioning of a generating station is attributable to causes of the transmission licensee, the generator may be provided relaxation at the cost of the transmission licensee.

iii. For all other cases, no relaxation shall be allowed to a generator. Further, all cases of relaxation shall be referred to CEA for a final judgment.

Question No.7:

Shallow connection method which provides connectivity of a generator to the nearest grid point or pooling point, without augmenting transmission capacity.

In deep connection, network is being upgraded to enable power flow from pooling point to load utilities. GNA is one form of deep connection method which enables system strengthening based on load generation balance and resolve the present transmission system crisis.

Considering the importance of ensuring a healthy transmission system based on load generation balance of the Country, KSEBL strongly recommends the deep connection.

However, as provided in the National Electricity Policy, shallow connection method may be followed for renewables.

Question No.8:

KSEBL is the Generator, STU and the Distribution licensee of the State of Kerala. Hence, though KSEBL is generally a drawing entity, it may occasionally export power to the national grid too.

Question No.9:

a) GNA proposed by CEA may be adopted for transmission system planning.

b) GNA proposed by CEA with minor modifications submitted in paragraph 6 above may be adopted for transmission system access.

For sharing of transmission charges prevailing POC mechanism may be followed, i.e. the sharing of transmission charges based on actual usage rather GNA based transmission charges may be adopted. Levying the transmission charges based on GNA is against the provision in the National Electricity Policy and tariff policy which prescribes that *'the national tariff framework implemented should be sensitive to distance, direction and related to quantum of power flow'*.

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c) Bank Guarantee for GNA shall be fixed as the amount corresponding to the net present value of expected transmission charges for 5 years from COD. Subsequently when the PPA is executed and the recovery of transmission charges are started, the bank guarantee corresponding to the completed years of useful life may be released to the developer.

Exit charges prevailing under the CERC(Grant of Connectivity, Long Term and Medium Term open access)Regulations,2009 may be continued for GNA mechanism.

d) Yes. With GNA based transmission system planning it is possible to plan transmission system to give assured access in all directions.

Question No.10: Transmission Planning

a) KSEBL generally agrees with the planning methodology proposed in the paragraph 6.5 of the Staff paper with following modifications.

(i) CEA may be entrusted with monitoring the progress of the transmission plan and development in line with capacity addition in generation, load demand of the State DISCOMS.

(ii) Central Commission shall through regulation may notify the time schedule for submitting the information for transmission plan to CEA and CTU.

(iii) It is seen that, the validation committee constituted under sharing regulations do not have adequate representation at State level. This has been creating difficulties in appraising State pertinent issues by STU/ DISCOMS before the validation committee. Hence, the validation committee may have at least one representative from each State.

(iv) A validation committee may be formed with representative from CEA, CTU, Transmission licensees, Generators, at least one representative from each State representing STU/DISCOMS to review once in a year the progress of generation projects, inter-state transmission system, new proposals on generation and transmission sectors etc.

(b), (c), (d) KSEBL generally agrees. However, for transmission planning to be effective, Central Commission shall through regulation notify the time schedule for submitting the information by the licensees for transmission plan to CEA and CTU, the time frame for implementing the planning process, the penal actions to be implemented for non compliance, the action to be taken by Commission against the stakeholders for non compliance etc.

Question No.11: Utilization of congestion charges

(i) The congestion amount collected from the utilities may be segregated region wise and the amount collected from each region may preferably be utilized for developing the transmission system to relieve the congestion of that region. i.e. the congestion and e-bidding revenue collected from SR utilities may be used to create transmission infrastructure to relieve the congestion of SR .

(ii) Further, for developing the transmission system to relieve the congestion, the revenue earned as congestion revenue and e-bidding revenue may be granted to the ISTS developer as interest free loan for meeting the project cost, so that the Transmission licensee may ensure their RoE at the same time the beneficiaries may be benefited by way of interest and finance charges.

Question No.12: Transmission corridor allocation for Power Market

a. Yes

(i) Power exchange collective transactions are day ahead transactions, and the possibility of clearing such transactions in the power exchange cannot be assured. Further the amount of transactions cleared between different regions depends on the price discovery mechanism in the power exchange. Hence booking ahead some transmission capacity for day ahead collective transactions will lead to unutilized transmission infrastructure if the collective transactions for which the capacity is booked do not materialize

and the failure of the transactions is known only few hours before the scheduled date of transactions.

(ii) Hence it is suggested that instead of day ahead collective transactions, term ahead or month ahead double sided closed bid auctions can be implemented for collective transactions in power exchange, by availing the transmission capacity available for short-term.

Chief Engineer(Commercial & Tariff)