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Government of India

Report of the Task Force Measures for Attracting Private Investment in Transmission of Electricity





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Foreword

Transmission is a critical element of the electricity value chain. A well-developed transmission network helps in efficient evacuation of electricity from generating stations for transmission to the demand centres. Until recently, transmission of electricity was confined to public sector utilities alone. As a result, investment in capacity addition was funded mainly from budgetary allocations, internal accruals of public sector undertakings and borrowings. A beginning was made in attracting private sector participation in the transmission segment in 2000 when Guidelines were issued by the Central Government envisaging private participation through Joint Venture and Independent Private Transmission Company routes. However, the actual private participation remained negligible.

Recognizing the importance of private participation in the transmission segment, the Electricity Act 2003 provided for grant of transmission licences by the Central and State Electricity Regulatory Commissions and for determination of tariff under sections 61 and 62 of the Act and for adoption of tariff determined through competitive bidding in accordance with section 63 of the Act. In line with these provisions, the Ministry of Power issued Guidelines in 2006 for selection of transmission developers through tariff based competitive bidding. Following these Guidelines, private sector participation in inter-state transmission gradually increased but intra-state transmission projects were not offered by the state utilities for private sector participation.

Recognising the need for increasing private investment in the transmission segment, especially in the intra-state network, the Empowered Sub-Committee of the Committee on Infrastructure (ESCOI), in its meeting held on 25 January 2008, set-up an inter-ministerial task force under the chairmanship of Shri B.K.Chaturvedi, Member, Planning Commission with representation from Ministry of Finance, Planning Commission, Central Electricity Authority and Power Grid Corporation of India to examine the policy and regulatory framework for private participation in transmission of electricity, and to make recommendations for enabling and accelerating private investment in the transmission segment.

After consultations with various State Governments, Electricity Regulatory Commissions, transmission utilities and other stake holders, the Task Force noted that the absence of a model framework for private investment was a major bottleneck in attracting private investment in the transmission segment. The Task Force recommended that considering the usefulness of model documents in other sectors, model documents may also be evolved and adopted for streamlining and expediting PPP projects in power transmission.

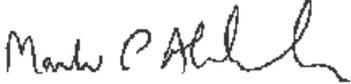
The Task Force constituted a Sub-Group headed by Shri Gajendra Haldea, Adviser to Deputy Chairman Planning Commission to come up with a Model Transmission Agreement which would not only attract

investors but also address user concerns and gain public acceptability. The Sub-Group evolved a Model Transmission Agreement (MTA) which incorporated international best practices and provided a framework to address issues which are typically important for limited recourse financing of infrastructure projects. The MTA also provides for Viability Gap Funding (VGF) under the extant scheme of the Central Government.

The MTA was finalized and published in October 2010. It was notified by Ministry of Power in May 2012 under the “Guidelines for Encouraging Competition in Development of Transmission Projects” issued by Central Government under section 63 of the Electricity Act. Based on the MTA, the Government of Haryana has commissioned a transmission system for evacuation of 1,320 MW of power at a capital cost of Rs 382 crore with VGF support of Rs 94 crore. This was the first PPP project in intra state transmission. Government of Madhya Pradesh has also awarded a 246 km, 400 KV transmission line project. In times to come, it is expected that more State Governments would award transmission projects under the MTA.

I commend the effort put in by the Task Force in recommending and formulating a policy framework for enabling and accelerating private investment in the transmission segment of electricity.

April 22, 2014


(Montek Singh Ahluwalia)

List of Abbreviations

ARR	Annual Revenue Requirement
BOO	Build Own Operate
BOOM	Build Own Operate Maintain
BOOT	Build Own Operate Transfer
BPC	Bid Process Coordinator
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CII	Confederation Of Indian Industry
CPSU (s)	Central Public Sector Unit (s)
CSEB	Chattisgarh State Electricity Board
CTU	Central Transmission Utility
DBFOT	Design Build Finance Operate Transfer
DEA	Department of Economic Affairs
ESCOI	Empowered Sub-Committee on Infrastructure
EHV	Extremely High Voltage
HVPNL	Haryana Vidyut Prasaran Nigam Limited
IPP	Independent Power Producer
IPTC	Independent Private Transmission Company
MOP	Ministry of Power
MTA	Model Transmission Agreement
NHPC	National Hydro Power Corporation
NTPC	National Thermal Power Corporation
PPP	Public Private Partnership
PLF	Plant Load Factor
ROFR	Right of First Refusal
RRVPNL	Rajasthan Rajya Vidyut Prasaran Nigam Limited
SBD	Standard Bidding Document
SEB (s)	State Electricity Board (s)
SERC	State Electricity Regulatory Authority
STU	State Transmission Utility
TSA	Transmission Service Agreement
VGF	Viability Gap Funding

Report of the Task Force on Measures for Attracting Private Investment in Transmission of Electricity

1. Introduction

1.1 The Eleventh Five Year Plan envisaged a significant increase in investment in the Power Sector. It is estimated that additional power generation capacity of about 55,000 MW has been installed during the Eleventh Plan period. However, this augmentation in generation capacity requires commensurate augmentation of transmission and distribution capacity. The resources required for this purpose are very significant and it is recognised that private investment is necessary for meeting the investment requirements.

1.2 Until recently, transmission of electricity was confined to public sector utilities alone. As a result, investment in capacity addition was funded mainly from budgetary allocations, internal accruals of public sector undertakings and external borrowings. To attract private sector participation in the transmission sector, the Electricity (Amendment) Act of 1998 recognised transmission as a distinct activity and made way for private investment in transmission by Transmission Licensees. In order to mobilize resources from the private sector, Government of India issued guidelines for private sector participation in transmission sector in January 2000. These guidelines envisaged two distinct routes for private sector participation in transmission: Joint Venture (JV) route, wherein the CTU/ STU shall own at least 26% equity and the balance shall be contributed by the JV partner; and Independent Private Transmission Company (IPTC) route, wherein 100 percent equity shall be owned by the private entity. The Central/ State Transmission Utilities were to identify approved

transmission systems or segments thereof for implementation by the private sector. However, private participation under this framework remained negligible.

1.3 The Electricity Act, 2003 envisages private participation in the transmission sector and provides for grant of transmission licenses by the Central Electricity Regulatory Commission (CERC) as well as State Electricity Regulatory Commissions (SERCs). Section 61 and 62 of the Act provide for tariff regulation and determination of tariff of generation, transmission, wheeling, and retail sale of electricity by the Appropriate Commission. Section 63 of the Electricity Act, 2003 provides that the appropriate Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding in accordance with guidelines issued by the Central Government. Accordingly, guidelines for selection of transmission developer through a process of tariff-based competitive bidding were issued in 2006 by the Ministry of Power (MoP). Standard Bidding Documents (including Standard Transmission Services Agreement) were also published by MoP.

1.4 Private sector participation is gradually increasing in the inter-State transmission sector. The government had identified 14 mega transmission projects to be developed with private participation on the lines of, and in some cases to evacuate, the ultra-mega power project series of new power plants. The plan involved development of independent transmission lines on Build-Own-Operate-

Maintain (BOOM) basis where the bidder would be selected through tariff-based competitive bidding. Out of the 14 projects, six inter-state transmission projects have already been bid out on the basis of tariff-based competitive bidding guidelines issued by the Ministry of Power in 2006. However, progress in attracting private investment in intra-State transmission sector has not been significant. Only Haryana has awarded and commissioned a project for evacuation of power from Jhajjar Power Plant through PPP mode at a capital cost of Rs. 382 crore in 2010. Some other projects are in pipeline in Rajasthan and Madhya Pradesh.

1.5 The Eleventh Plan had projected an investment of Rs. 1,40,000 crore (at 2006-07 prices) for building transmission networks for evacuating the additional power, which also included intra-state transmission systems. However, the likely investment is far less at Rs. 97,094 crore (at 2006-07 prices). One of the major problems in this sector has been the inadequacy of financial resources especially in respect of transmission and distribution segments at the state level. While the CPSUs such as NTPC, NHPC, PGCIL, etc., have adequate internal resources of their own, the State utilities generally lack investible resources and also face a severe financial crunch. Recognising the fiscal crunch, especially at the state level, the Empowered Sub-Committee of the Committee on Infrastructure (ESCOI), in its meeting held on 25 January, 2008 under the chairmanship of Deputy Chairman, Planning Commission decided to set up an Inter-Ministerial Task

Force under the chairmanship of Member, Planning Commission to recommend measures for attracting private participation in transmission.

Accordingly, an Inter-Ministerial Task Force was constituted on February 1, 2008 under the chairmanship of Shri B K Chaturvedi, Member, Planning Commission with representation from Ministry of Power, Department of Economic Affairs, Department of Expenditure, Planning Commission, Central Electricity Authority and Power Grid Corporation of India to examine the policy and regulatory framework for private participation in transmission of electricity, and to make recommendations for enabling and accelerating private investment in the transmission segment. The constitution of the Task Force and its Terms of Reference are at **Annex-I**.

2. Deliberations of the Task Force

2.1 The Task Force held consultations with various State governments, stakeholders and experts and noted that the absence of a model framework for private investment, especially at the level of States, was a major bottleneck for attracting private investment in transmission systems. After extensive deliberations, the Task Force recommended that considering the usefulness of model documents in other sectors, model documents may also be evolved and adopted for streamlining and expediting the PPP projects in power transmission.

2.2 In its first meeting held on April 7, 2008 (minutes at **Annex-II**), PGCIL made a presentation on the status of private investment in transmission and the key issues in attracting private investment. PGCIL highlighted that in case private investments in transmission were to be facilitated by another agency, it would not be able to ensure the smooth discharge of its statutory functions of planning and coordination of the inter-State transmission grid, especially when private projects are delayed or do not materialize and therefore, emphasized the need for central assistance to enable private investment in States. CEA emphasised that in order to attract investment in intra-State transmission lines, the two main issues were the need to finalise model documents to facilitate the bidding process, and to ensure that State Governments prepare plans for the development of transmission lines. Further, the Task Force also felt the need to discuss the issues with other stakeholders like State

governments and the private sector. It was, therefore, decided that a Group headed by Adviser to Deputy Chairman, Planning Commission, with membership of Ministry of Power, Department of Expenditure, CEA and PGCIL should be set up for suggesting a set of model bidding documents for the states. The Group held eight meetings to consider the following:

- (i) Modifying the existing Request for Qualification (RFQ) and Request for Proposal (RFP) for PPPs to suit transmission projects;
- (ii) RFP for Appointment of Technical Consultants for Preparation of a Feasibility Report for Transmission Projects;
- (iii) Manual of Specifications and Standards; and
- (iv) Transmission Service Agreement (TSA)

2.3 The Task Force, in its second meeting held on May 7, 2008 (minutes at **Annex-III**), considered the experience of the States of Chhattisgarh, Gujarat, Uttar Pradesh and Maharashtra in attracting private investment in transmission systems. These States expressed their willingness to consider the PPP mode for attracting private investment for development of transmission systems and also suggested that standard bid documents should be firmed up for implementation of the PPP mode. The States also expressed concern over the issue of payment security mechanism which was taken up in the third meeting of the Task Force.

2.4 The third Meeting of the Task Force was held on September 26, 2008 (minutes at **Annex-IV**). It was recommended that the standard RFQ and RFP model documents issued by the Ministry of Finance, which have the approval of the Committee on Infrastructure chaired by the Prime Minister, and were formulated after a detailed inter-ministerial consultative process, may be adopted for award of transmission projects also. The Task Force advised the Ministry of Power to place these documents on their website with the advisory that the States could use these documents if they so wish. The Task Force recommended that a sector-specific document may be prepared for preparation of feasibility reports by technical consultants. The Task Force also decided that a Group chaired by Chairman, CEA and including representatives of MoP, DEA, and Planning Commission may work on the Transmission Service Agreement prepared by MoP for use by the States.

2.5 After several months of consultations with the concerned ministries, CEA and selected State Governments, a draft RFP for Appointment of Technical Consultants for Preparation of a Feasibility Report for Transmission Projects was evolved. This document was approved by the ESCOI in its meeting held on April 13, 2009. The model RFP document was commended for use by the respective project authorities seeking private investment in transmission. It is generic in nature and aims at lending transparency and efficiency to the process of selection of experienced firms for preparing feasibility

reports for PPP projects. It affords adequate flexibility for introducing project-specific modifications, as may be necessary. The model RFP for Transmission Projects is based on the standard RFP issued by the Department of Expenditure for appointment of technical consultants with sector-specific changes relevant to transmission projects. The Model RFP for Appointment of Transmission Consultants for Transmission Projects was approved by the Finance Minister in June 2009 and it has since been published.

2.6 On September 30, 2008, a Group was constituted under the chairmanship of Chairman, CEA and including representatives of MoP, DEA and Planning Commission, to work further on the draft Transmission Service Agreement (TSA) prepared by MoP, and submit a Model TSA for use by the States within two months. In the absence of any further work on a Model TSA for the next six months, the Planning Commission, following the due process of inter-ministerial and stakeholder consultations, began developing the draft Model TSA at the request of a few States.

2.7 The draft Model Transmission Agreement (MTA) was widely circulated and discussed in several meetings with stakeholders and experts including Ministry of Power, CEA, PGCIL, State Governments, Electricity Regulatory Commissions, Central PSUs, transmission utilities/SEBs/Discoms, prospective investors, lenders, international agencies, law firms, consultants and chambers of industry. Detailed discussions were also held in the course of

three consultative meetings (October 13, 2009, November 20, 2009 and July 23, 2010). A Technical Group was also constituted under the chairmanship of Adviser to Deputy Chairman (Planning Commission) with representatives from CEA, PGCIL, HVPNL, RRVPNL, Luthra and Luthra Law Offices, CII, Reliance, Adani Power, L&T Transco, and Scott Wilson. This Technical Group held six meetings (October 15, 2009, October 19, 2009, October 22, 2009, October 24, 2009, October 27, 2009, October 30, 2009) to discuss the various modalities contemplated in the MTA. The draft MTA was subjected to detailed legal scrutiny and the inputs received from various quarters were taken on board in the revised drafts. The objective of this comprehensive exercise was to put together a clear enunciation of best practices in the MTA that would not only attract investors but also address user concerns and gain public acceptability.

2.8 The MTA was finalized and published in October 2010. It was released by the Minister of Power and Deputy Chairman, Planning Commission in the Conference on PPP in the Transmission of Electricity held on November 2, 2010. The document is advisory in nature and aims at promoting transparency, efficiency, fairness and competition in awarding PPP projects. There is a provision of Viability Gap Funding (VGF) in the MTA, which also addresses the financing issues in intra-state transmission projects.

2.9 Based on the MTA, the Government of Haryana has awarded a project for the

development of transmission system for evacuation of power from 1,320 MW (660 MW X 2) Jhajjar Power Plant in PPP mode at a capital cost of Rs.382 crore in the year 2010. The project comprises of two 400 KV sub-stations and associated 400 KV transmission lines totaling 100 km. The project received Central Government approval for grant of Viability Gap Funding based on competitive bidding, subject to a ceiling of 20% of project costs. Accordingly, the selected bidder sought a VGF of Rs.93.90 crore, out of which Rs.76.40 crore was provided by the Central Government. The project has since been commissioned. This is the first PPP project in intra-state transmission and its replication has the potential of attracting large volume of private investment in state level transmission projects.

2.10 Under section 63 of the Electricity Act, 2003, a formal approval of the Central Government for adoption of the MTA by the SERCs was required to preclude case-by-case approval from SERCs. In this context, the fourth meeting of the Task Force was held on August 19, 2011 (minutes at **Annex-V**). During the meeting, the Department of Economic Affairs emphasised that since transmission is a profitable business, there may not be a need for VGF. It was clarified that a large investment gap exists largely in the State sector transmission services particularly in the intra-State transmission systems which are often unable to support market based tariffs. Most of the investments in the transmission systems being undertaken by PGCIL and the private sector were in the

inter-state transmission. Intra-state transmission systems, which are under the purview of the State Transmission Utilities (STUs), lack the resources for adequate investment and may not be able to bear market determined tariffs. The Model Transmission Agreement may, therefore, incentivise the flow of such funds through PPP transmission projects.

2.11 In order to make the transmission projects financially viable, it was felt that VGF of up to 20% should be provided in order to reduce the capital investment and provide an acceptable rate of return to the bidder. Further, the VGF from the government would provide credibility to the project for lenders and other financial institutions. This entire exercise has a clear precedent in the provision of VGF for PPP projects in State highways.

2.12 Considering the need for private investment in the intra-state transmission sector, it was decided that the Ministry of Power may consider the MTA and the States may be given an option to opt either for the standard bidding documents issued by MoP or the MTA published by the Planning Commission. It was also agreed that MoP may consider amending the Tariff Policy (2006) so as to enable VGF based bidding for projects based on the MTA.

2.13 It was noted that in the meanwhile, states like Madhya Pradesh have requested for a duly approved model document that could promote private investment in intra-state

power transmission projects while also attracting Viability Gap Funding (VGF). It was also pointed out that the statutory support to the MTA remains a concern with the SERCs.

2.14 The last meeting of the Task Force was held on March 13, 2012 (minutes at **Annex-VI**). In this meeting, it was observed that the Ministry of Power had issued Standard Bidding Documents (SBDs) under which PPP in inter-state power transmission is being promoted. However, very few states have used these SBDs for intra-state projects. It was observed that the MTA developed by the Planning Commission provides for Viability Gap Funding, which may be needed for promoting private investment in intra-state transmission. The MTA will also be applicable for promoting inter-state transmission and PGCIL may also participate and bid on the basis of VGF. After detailed deliberations, the Task Force recommended that an option should be given to states to adopt either the SBD of MoP or the MTA published by the Planning Commission for their respective PPP projects in transmission of electricity. The guidelines for determination of Base Unitary Charge as provided in the MTA may, if necessary, be revised by MoP from time to time, in consultation with the Ministry of Finance and the Planning Commission. It was also decided that the experience on PPP in transmission may be reviewed after 3 years and improvements may be carried out based on the experience gained.

2.15 Subsequent to the last meeting of the Task Force, the Ministry of Power vide their letter no. 15/1/2008-Trans dated May 2, 2012 (**Annex-VII**) have notified that since VGF based MTA document developed by the Planning Commission on transmission also inter-alia determines the tariff through a transparent process of bidding, this document has been considered by Ministry of Power for inclusion under the “Guidelines for Encouraging Competition in Development of Transmission Projects” issued by the Central Government for the purpose of Section 63 of the Electricity Act 2003. Accordingly, States have the option to use either the VGF based MTA document of Planning Commission or the Standard Bidding Document prepared by Ministry of Power for procurement of Intra-State transmission services. For the VGF-based bidding, the unitary charges will have to be approved by the respective State Electricity Regulatory Commission prior to bidding. The experience of VGF based MTA is to be reviewed after three years.

2.16 Further, Ministry of Power has stated that for enabling the MTA document to be used by States, Para 24 of the Guidelines for Encouraging Competition in Development of “Transmission Projects” issued by Ministry of Power stands modified as under:

“As far as intra-state projects are concerned, the State Governments may adopt these guidelines and may constitute similar committees for facilitation of transmission projects within the State. The States also have the option to use Viability Gap Funding (VGF)

based Model Transmission Agreement (MTA) document of Planning Commission for development of transmission system in their States under Public Private Partnership (PPP) mode”.

3. Salient features of the Model Transmission Agreement

3.1 A precise policy and regulatory framework has been spelt out in the Model Transmission Agreement (MTA) for building and operating transmission system through PPP. The framework addresses the issues which are typically important for limited recourse financing of infrastructure projects, such as mitigation and unbundling of risks; allocation of risks and rewards; symmetry of obligations between the principal parties; precision and predictability of costs and obligations; reduction of transaction costs; force majeure; and termination. It also addresses other important concerns such as user protection, independent monitoring, dispute resolution and financial support from the Government.

3.2 The MTA provides the basis for optimal utilisation of resources on the one hand and adoption of international best practices on the other. The objective is to secure value for public money while providing efficient and cost-effective services to the users. Salient features of the MTA are briefly explained below.

3.3 *Elements of financial viability:* The three critical elements that determine the financial viability of transmission projects are the concession period, unitary charge and capital costs. The concession period for a transmission system is required to be fixed in accordance with the provisions of the Electricity Act 2003 which stipulates a maximum period of 25 years for a transmission licence. However, given the life of a typical transmission system, a provision

has been kept for a further period of 10 years, subject to regulatory approvals. This timeframe should enable a robust project structure. The MTA also provides for determining the unitary charge broadly in line with the prevailing transmission tariffs. The capital cost would be addressed through competitive bidding where bidders may seek a VGF grant or offer a premium, as the case may be.

3.4 *Scope of the Project:* The scope of the Project includes the construction, operation and maintenance of intra-state Transmission system through PPP on DBFOT mode for a period of 25 years (extendable by 10 years) commencing from the date of grant of the Transmission License.

3.5 *Viability Gap Funding:* Projects based on the MTA qualify for Viability Gap Funding (VGF) under the Scheme for Financial Support to PPPs in Infrastructure which provides for a Central grant of up to 20 per cent of the capital cost of the project. VGF is to be determined by competitive bidding. In case where bidders do not seek any grant and are instead willing to make a financial offer to the Authority, they will be free to quote a premium in the form of a reduction in the specified unitary charge.

3.6 *Unitary Charge:* The MTA provides for payment of annual unitary charge which would be stated upfront by the authority. The unitary charge is determined on the basis of extant transmission tariffs, proposed capacity of the transmission system, total project cost

and the estimated cost of the associated upstream and downstream transmission capacity. The MTA suggests that the unitary charge should not be fixed at a level lower than 75 per cent of the amount likely to be required for servicing the project costs.

3.7 The MTA provides for an annual reduction in the unitary charge to account for the depreciated value of the project assets. It has been stipulated that the unitary charge subsequent to the first year of operation may be determined by reducing the same to the extent of a pre-determined percentage in the band of 1 to 2 per cent per annum.

3.8 The MTA provides for indexation of the unitary charge to the extent of 30 per cent thereof linked to WPI. Since repayment of debt would be substantially neutral to inflation and the O&M expenses for the transmission assets would be comparatively low, the said indexation of 30 per cent is considered adequate. A higher level of indexation is not favoured, as that would require the users to pay more when they should be receiving the benefit of a depreciated asset. A higher indexation would also add to uncertainties in the projections relating to returns on investment.

3.9 *Creation of additional capacity:* As an added incentive, the MTA allows the Concessionaire to create additional capacity and appropriate the transmission tariff from the users of such capacity. It also allows the Concessionaire to treat the unutilized capacity of the Authority as the additional capacity.

The revenues from additional capacity are to be shared between the Concessionaire and the Authority in the specified proportion.

3.10 *Performance Standards:* The Concessionaire would not only procure the construction of the transmission system, it would also provide a service in the form of transmission of electricity. The efficiency of the Concessionaire would normally reflect in the quality of service provided to the users. The MTA identifies the key performance indicators relating to operation of the transmission system and stipulates penalties for failure to achieve the requisite levels of performance. In particular, the Concessionaire is required to ensure the availability of system capacity at the pre-determined normative levels. The number of forced outages in a year has been capped in order to ensure system reliability. Transmission losses of the transformers forming part of the transmission system must also remain within the specified normative levels. The MTA requires the Concessionaire to declare the availability of the transmission system. Normally, the transmission system will be deemed as available to the extent of the specified system capacity. In the event of any defect or deficiency, the Concessionaire must declare the actual availability so that its unitary charge is computed accordingly. The MTA stipulates stiff penalties in case of misdeclaration by the Concessionaire. For monitoring the key performance indicators, monthly status reports and inspections of the Independent Engineer have been prescribed. The concessionaire is also required to maintain the requisite ISO

certifications for the transmission system.

3.11 *Selection of Concessionaire:* Selection of the Concessionaire will be based on open competitive bidding. All project parameters such as the concession period, unitary charge, technical parameters and performance standards are to be clearly stated upfront. Based on these terms, the short-listed bidders will be required to specify their financial offer without any conditions. The bidder who seeks the lowest grant or offers the highest premium, as the case may be, should win the contract.

3.12 *Real Estate Development:* Capital subsidies alone may not suffice in meeting the likely gap in the viability of a transmission project. The MTA, therefore, provides development rights over real estate for generating additional revenue streams in order to make the project viable. This would enable the Concessionaire to grant licenses for use of the real estate with a view to ensuring optimal utilisation of project assets. 25 per cent of the revenue from real estate development and other businesses like advertisement would be shared with the Authority.

3.13 *Technical parameters:* Unlike the normal practice of focusing on construction specifications, the technical parameters proposed in the MTA are based mainly on output specifications, as these have a direct bearing on the level of service for users. Only the core requirements of design, construction, operation and maintenance of the transmission

system have been specified, leaving enough room for the Concessionaire to innovate and add value. This would provide the requisite flexibility to the Concessionaire in evolving and adopting cost-effective designs without compromising on the quality of service for users. Cost efficiencies would occur because the shift to output-based specifications would provide the private sector with a greater opportunity to innovate and optimise on designs in a way normally denied to it under conventional input-based procurement specifications.

3.14 *Risk allocation:* As an underlying principle, risks have been allocated to the parties that are best suited to manage them. Project risks have, therefore, been assigned to the private sector to the extent it is capable of managing them. The transfer of these risks and responsibilities to the private sector would increase the scope of innovation leading to efficiencies in costs and services. The commercial and technical risks relating to construction, operation and maintenance are being allocated to the Concessionaire, as it would be best suited to manage them. On the other hand, all direct and indirect political risks are being assigned to the Authority. The MTA provides for extension of the concession period in order to compensate the Concessionaire for specified events. In case the stipulated extension of concession period cannot be granted, the MTA provides for a pre-determined monetary compensation to be paid to the Concessionaire.

3.15 *Financial close:* The MTA stipulates a time limit of 180 days for achieving financial close (extendable by another 120 days on payment of a penalty), failing which the bid security shall be forfeited. The MTA represents the comprehensive framework necessary for enabling financial close within the stipulated period. Adherence to such time schedules will usher in a significant reduction in costs besides ensuring timely provision of the needed infrastructure. This approach would also address the typical problem of infrastructure projects not achieving financial close for long periods.

3.16 *Construction of the transmission system:* Handing over possession of the land required for construction of sub-stations and obtaining of environmental clearances are being proposed as conditions precedent to be satisfied by the Authority before financial close. Procurement of a transmission license and other applicable permits has been proposed as a conditions precedent to be satisfied by the Concessionaire. In order to facilitate the process, the Authority would provide reasonable support and assistance to the Concessionaire in procuring the aforesaid licence and permits. For constructing and operating a transmission system, the right of way for the transmission lines is of critical importance. The MTA requires the Concessionaire to procure and maintain such right of way in accordance with the provisions of the Electricity Act. The costs of procuring and maintaining the right of way shall be borne by the Concessionaire as the same have been included in the total project cost.

3.17 The MTA defines the scope of the project with precision in order to enable the Concessionaire to determine its costs and obligations. Additional works may be undertaken within a specified limit, but only if the entire cost thereof is borne by the Authority. Before commencing the commercial operation of the transmission system, the Concessionaire will be required to subject it to specified tests for ensuring compliance with the specifications relating to safety and quality of service for the users.

3.18 *Operation and maintenance:* Operation and maintenance of the transmission system is proposed to be governed by strict standards with a view to ensuring a high level of service for the users. Any violation of these standards would attract stiff penalties. The MTA provides for an elaborate and dynamic mechanism to evaluate and upgrade the safety requirements on a continuing basis including safety certification by the designated Electrical Inspector prior to COD and reviews at regular intervals by qualified experts.

3.19 *Termination:* In the event of termination, the MTA provides for a compulsory buy-out by the Authority, as neither the Concessionaire nor the lenders can use the transmission system in any other manner for recovering their investments. Termination payments have been quantified precisely as compared to the complex formulations in most concession agreements relating to infrastructure projects. Political force majeure and defaults by the Authority would qualify for adequate compensatory

payments to the Concessionaire and will thus guard against any discriminatory or arbitrary action by the Authority. Further, the project debt would be fully protected by the Authority in the event of termination, except for two situations, namely, (a) when termination occurs as a result of default by the Concessionaire, 90 per cent of the debt will be protected, and (b) in the event of non-political force majeure such as Act of God (normally covered by insurance), 90 per cent of the debt not covered by insurance will be protected.

3.20 Upon expiry of the specified concession period of 25 years, the Concessionaire would be entitled to a termination payment equal to 40 times the monthly unitary charge. However, the Concessionaire would have the right to seek an extension of 10 years in the concession period and in such an event, no termination payment shall be due and payable after expiry of the extended period.

3.21 *Monitoring and supervision:* Checks and balances have been provided for ensuring full accountability of the Concessionaire. Monitoring and supervision of construction, operation and maintenance is proposed to be undertaken through an Independent Engineer (a qualified firm) that will be selected by the Authority through a transparent process. The MTA provides for a transparent procedure to ensure selection of well-reputed statutory auditors, as they would play a critical role in ensuring financial discipline. To provide enhanced security to the lenders and greater stability to the project operations, all financial

inflows and outflows of the project are proposed to be routed through an escrow account.

3.22 *Manual of Specifications & Standards:* The accountability for providing a safe and reliable transmission system ultimately rests with the Authority and the MTA therefore refers to a Manual of Specification and Standards that the Concessionaire must conform to. The Manual, by reference, forms an integral part of the concession agreement for the specific project and shall be binding on the Concessionaire. The MTA stipulates that only the basic requirements of design and construction shall be laid down in the Manual with reference to the Grid Code and applicable laws, and greater emphasis shall be placed on specifying the output specifications that have a direct bearing on the level and quality of service for users of the transmission system.

3.23 *Right of substitution:* The project assets may not constitute adequate security for lenders. It is the project revenue streams that constitute the mainstay of their security. Lenders would, therefore, require assignment and substitution rights so that the concession can be transferred to another company in the event of failure of the Concessionaire to operate the project successfully. The MTA accordingly provides for such substitution rights.

3.24 *Force majeure:* The MTA contains the requisite provisions for dealing with force majeure events. In particular, it affords

protection to the Concessionaire against political actions that may have a material adverse effect on the project.

3.25 *Revenue shortfall loan:* By way of comfort to the lenders, loan assistance from the Authority has been stipulated for supporting debt service obligations in the event of a revenue shortfall resulting from political force majeure or default by the Authority.

3.26 *Miscellaneous:* The MTA addresses other important issues such as dispute resolution, suspension of rights, change in law, insurance, defects liability, indemnity, redressal of public grievances and disclosure of project documents. It incorporates the best practices that would enable a fair and transparent framework for private participation.

4. Conclusion

4.1 The Framework Documents evolved and/or approved by the Task Force and the Ministry of Power provide a comprehensive policy and regulatory framework necessary for addressing the complexities of PPP and for balancing the interests of users and investors in attracting private investment in the transmission sector. The following model documents are now available for undertaking transmission project through PPP:

- (i) *Model RFP for Selection of Transmission Consultants:* The project authorities require the assistance of professional consultants for structuring transmission projects on PPP basis. The model RFP for selection of transmission consultants incorporates best practices for engaging qualified and experienced firms for preparing the Feasibility Report for a transmission project to be taken up through PPP. This Model RFP was issued by the Planning Commission vide O.M. No. N-14026/3/2008-Infra dated July 24, 2009. In addition, project authorities can also use the RFP for Selection of Financial Consultants and Transaction Advisers issued by the Department of Expenditure vide O.M. No. 24(32)/PF-II/09 dated March 29, 2010 to help conduct the bid process.
- (ii) *Model Request for Qualification (RFQ) for PPP projects:* The RFQ aims at identifying credible bidders who have the requisite technical and financial capacity for undertaking the transmission projects on PPP basis. The model RFQ largely relies on the track record of applicants in relation to project implementation so as to ensure that only proven applicants are short listed for the final round of bidding. This Model RFQ was issued by the Department of Expenditure vide O.M. No. 24(1)/PF.II/07 dated December 5, 2007.
- (iii) *Model Request for Proposal (RFP) for PPP projects:* The RFP process is aimed at obtaining financial offers from the bidders pre-qualified at the RFQ stage. The model RFP specifies a single bidding parameter while freezing all other terms in a pre-determined project agreement, thus enabling a fair and transparent selection among competing bidders. This Model RFQ was issued by the Department of Expenditure vide O.M. No. 24(1)/PF.II/07 dated November 30, 2007.
- (iv) *Model Transmission Agreement:* The Model Transmission Agreement relies on international best practices and creates a matrix of risks and rewards that would optimize outcomes, both for the government as well as for the private sector. It, inter alia, provides for a long-term concession with a clear enunciation of rights and obligations and key performance indicators aimed at providing a high quality of service at competitive costs. This document was published by the Planning Commission in

October 2010. It has since been notified by the Ministry of Power as a Standard Bidding Document for bidding under section 62 of the Electricity Act, 2003.

4.2 It is expected that the above Model Documents would go a long way in accelerating private investment in the transmission sector on a fair, transparent and competitive basis. The Task Force recommends that the States may adopt these Model Documents and accelerate the roll out of PPP projects in the transmission segment. These documents may also be considered for adoption in inter-state transmission projects.

Government of India
Planning Commission
(Secretariat for the Committee on Infrastructure)

Yojana Bhavan, Sansad Marg,
New Delhi-110 001

No. N-14026/3/2008- Infra

Dated: 1st February 2008

OFFICE MEMORANDUM

Subject: Task Force on Measures for Attracting Private Investment in Transmission of Electricity.

Pursuant to the decision taken in the fifteenth meeting of the Empowered Sub-Committee on Infrastructure held on 25 January 2008, an inter-Ministerial Task Force on Measures for Attracting Private Investment in Transmission of Electricity is hereby constituted as below:

- | | | |
|------|---|----------|
| i) | Shri B.K. Chaturvedi, Member, Planning Commission | Chairman |
| ii) | Shri Anil Razdan, Secretary, Ministry of Power | Member |
| iii) | Dr. D. Subba Rao, Finance Secretary, Ministry of Finance | Member |
| iv) | Dr. Sanjiv Misra, Secretary, Department of Expenditure,
Ministry of Finance | Member |
| v) | Shri Gajendra Haldea, Principal Adviser to Deputy Chairman,
Planning Commission | Member |
| vi) | Shri Rakesh Nath, Chairman and Ex-Officio Secretary,
Central Electricity Authority | Member |
| vii) | Dr. R.P. Singh, Chairman and Managing Director,
Power Grid Corporation of India Ltd. | Member |

The Task Force will examine the policies and regulatory aspects for attracting private investment in transmission of electricity and make recommendations for enabling private investment in transmission of electricity.

The Task Force will submit its report by 31 March 2008.

-sd-
(Vandana Aggarwal)
Director (Infrastructure)
Tele: 2309 6507
Fax No. 2309 6587

1. Shri B.K. Chaturvedi, Member (Power), Planning Commission, Yojana Bhawan, New Delhi
2. Shri Anil Razdan, Secretary, Ministry of Power, Shram Shakti Bhawan, New Delhi
3. Dr. D. Subba Rao, Finance Secretary, Ministry of Finance, North Block, New Delhi
4. Dr. Sanjiv Misra, Secretary, Department of Expenditure, Ministry of Finance, North Block, New Delhi
5. Shri Gajendra Haldea, Principal Adviser to Deputy Chairman, Planning Commission, Yojana Bhawan, New Delhi
6. Shri Rakesh Nath, Chairman and Ex-Officio Secretary, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi - 110 066
7. Shri R.P. Singh, Chairman, Power Grid Corporation of India Ltd., B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi - 110 016

Copy to:

1. PPS to Deputy Chairman, Planning Commission
2. PPS to Secretary, Planning Commission

Planning Commission
(Secretariat for the Committee on Infrastructure)

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**Minutes of the First Meeting of the
Task Force on Measures for Attracting Private Investment in Transmission of Electricity
held on 7 April 2008**

1. The list of participants in this meeting is **annexed**.
2. The discussions drew upon a presentation by Chairman, Powergrid Corporation of India Ltd. (PGCIL), on the status of private investment in transmission and the key issues in attracting private investment. PGCIL highlighted that at present private investors invariably seek the assistance of PGCIL on project design, arranging funds, bidding, etc. and that right of way issues were a major concern of private investors. PGCIL also highlighted that in case private investment in transmission were to be facilitated by an agency other than themselves, PGCIL would not be able to ensure the smooth discharge of its statutory functions of planning and coordination of the inter-State transmission grid especially when private projects are delayed or do not materialize. Finally, PGCIL also emphasized the need for central assistance to enable private investment in States.
3. Shri G.B. Pradhan, Additional Secretary, Ministry of Power, stated that an Empowered Committee headed by Member, CERC, constituted on 14 June 2006, for selecting transmission lines to be developed through tariff-based bidding. Shri V. Ramakrishna, Member, Central Electricity Authority (CEA), stated that since the 2-stage bidding process would take about 2 to 3 years, the Empowered Committee had initially earmarked 4 to 5 projects for implementation by PGCIL to prevent delays in grid development, and further projects have been identified for the private sector. Noting that the Empowered Committee has been without a Chairman for the last 6 to 8 months, Member (Power) desired that urgent action to be taken by Ministry of Power to make it operative again.
4. Shri Rakesh Nath, Chairman, CEA, emphasised that to attract investment in intra-State transmission lines the two main issues were the need to finalise model documents to facilitate the bidding process, and to ensure that State Governments prepare plans for the development of transmission lines, which include a shelf of bankable projects, for periods extending beyond the 1-2 year framework as was being done presently. It was further elaborated that these plans should include systems strengthening and not just projects linked to evacuation of power.
5. Shri Gajendra Haldea, Adviser to Deputy Chairman, stated that the absence of a model for private investment at the level of States was a major bottleneck, and agreed with the Chairman, CEA, that a full complement of model bid documents duly supported by CERC and the Central Government would be necessary. He also stated that the Task Force should also hear the views of private investors at a

subsequent meeting. Smt. Sushma Nath, Expenditure Secretary, was also of the view that other stakeholders, including States and private investors, should be invited to present their views and concerns.

6. Discussing the situation in the NE region, Additional Secretary, Ministry of Power, stated that the funds for conducting the DPR (Rs. 50 crore) still needed to be budgeted. It has been estimated that Rs. 13,000 crore would need to be invested in transmission lines by 2017. Although, PGCIL considered that viability gap funding or central grant of around 70% would be needed, CEA's view was that with the allocation of some thermal power to the NE region, such grants may be upto 50% of the required investments.

7. Concluding the discussions at this meeting, Member (Power) desired a strategic note on the development of transmission lines in the NE region from CEA. He further stated that in the next meeting, the States of Chhattisgarh, Gujarat, Maharashtra, Rajasthan and Uttar Pradesh should be invited. Based on the lists of private sector bidders with the Ministry of Power, at a subsequent meeting, the views of the private sector would be elicited. Finally, he stated that a small group chaired by Adviser to Deputy Chairman, with membership of Ministry of Power, Department of Expenditure, CEA, and PGCIL should suggest a model set of bidding documents for the States to the Task Force.

8. The meeting concluded with a vote of thanks to the Chairman.

List of Participants

1. Shri B.K. Chaturvedi ...in Chair
Member (Power), Planning Commission
2. Shri Gajendra Haldea
Adviser to Deputy Chairman, Planning Commission
3. Smt. Sushma Nath
Secretary, Department of Expenditure, Ministry of Finance
4. Shri Rakesh Nath
Chairman and Ex-Officio Secretary, Central Electricity Authority
5. Dr. R.P. Singh
Chairman and Managing Director, Powergrid Corporation of India Ltd. (PGCIL)
6. Shri G.B. Pradhan
Additional Secretary, Ministry of Power
7. Shri Anil Kumar
Additional Secretary, Ministry of Power
8. Shri V. Ramakrishna
Member, Central Electricity Authority
9. Shri V.M. Kaul
Executive Director (BDD&PI), PGCIL
10. Shri S. Majumdar
Director (Proj.), PGCIL
11. Ms. Vandana Aggarwal
Director (Infrastructure), Planning Commission

Planning Commission
(Secretariat for the Committee on Infrastructure)

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**Minutes of the Second Meeting of the
Task Force on Measures for Attracting Private Investment in Transmission of Electricity
held on 7 May 2008**

1. The list of participants is **annexed**. The discussions drew upon the experiences of the States of Chhattisgarh, Gujarat, Uttar Pradesh and Maharashtra on their attracting private investment in transmission systems. Copies of audio-visual presentations by the States of Chhattisgarh, Gujarat, and Maharashtra were circulated in the meeting.

Chhattisgarh

2. Chief Engineer, CSEB, stated that inter-State transmission lines of 33kV and above are maintained by Powergrid Corporation of India Ltd. (PGCIL) in Chhattisgarh. As on 31 March 2008, installed capacity was 1,924 MW and PLF was 82.7%, with 7,150 km of EHV lines. Although, peak power demand currently equals peak availability of 2,450 MW, by the end of the Eleventh Plan, Chhattisgarh expects a deficit with estimated peak demand of 3,750 MW. Between 2008-09 and 2012-13, additional generation of 9,520 MW from IPPs and CSEB's own projects is in the pipeline. Under the 52 MoUs for 40,000 MW of additional capacity signed by the State, 5% of the power evacuation would necessarily be to the State Government or its nominated agency at variable costs and, on an additional 30%, CSEB would have ROFR, with the balance available for trade. The fact that this measure amounts to an inter-State barrier to trade was discussed. Of the 40,000 MW, one agreement has been signed and tariff-based bidding for the 2x660 MW Bhaiyathan project has started. Details of the joint venture for the 2x500 MW Korba South project are also being worked out. Power evacuation would be done either through transmission lines laid by CSEB through normal tendering using its own resources under the normal development plan, or would be arranged by the IPPs from their plant to the point to connectivity under the power evacuation scheme. Applications to the CTU from IPPs for 6,000 MW have been received so far. In case required private investment in evacuation was not forthcoming, CSEB would step in. Overall, private investment in transmission was still in the very initial stages in Chhattisgarh, with earmarking of transmission lines for private participation not having been done. The issue of risk of early payments to any private developer of transmission lines was also discussed, especially in the context of delays in generation capacity. Adviser to Deputy Chairman, Planning Commission, requested Chhattisgarh to furnish a broad assessment of the annual consumption of power within the State (to supplement the planned generation over the next five years) so that an assessment of intra-State transmission systems as well as inter-State trade could be made.

Gujarat

3. Principal Secretary (Energy), Government of Gujarat, and the Managing Director, GETCO, presented that the tariff-based competitive guidelines issued by Ministry of Power (MOP) have been followed in Gujarat. An Empowered Committee at State level has been constituted, which selected two 400 KV transmission lines for private investment with an estimated cost of Rs. 800 cr. – one to evacuate power from 2,000 MW Adani project through Mundra-Zerda line and the second from the 1,000 MW Essar Power project through Vadinar-Hadala line. Both these lines are intra-State. The State TRANSCO (Gujarat Energy Transmission Corporation (GETCO)) has been nominated as the Bid Process Coordinator (BPC). The RFQ documents has been finalized, based on the standard bid documents issued by the Central Ministry of Power, and were ready for submission to the Regulator. The RFP document would also be based on the MOP document once it was finalized. The Evaluation Committee is in the process of being appointed. Gujarat emphasized on two points to take private investments forward:

- a. BOOT model is proposed for adoption instead of BOO and reasons were explained. Opinion of Chairman, PGCIL, was sought who also favoured the BOOT model.
- b. Ministry of Power should issue the standard RFP and the Transmission Service Agreement (TSA) documents.

4. Adviser to Deputy Chairman, Planning Commission, stated that the bidding parameters were important, questioning whether the capacity or energy output was considered along with the lowest wheeling charge. Gujarat explained that the cost-plus norm suggested by PGCIL was followed, and the tariff was arrived at after factoring in the return on equity. Capacity utilization was not considered. On the issue of allocation of risks, the revenues were distributed pro-rata to the DISCOMs. For the private transmission line developer, the risk on returns is in the construction period and in the maintenance of the line, while the residual risk rests with the distributors. The situation was the same as with development of transmission lines by the public sector. Chairman, Uttar Pradesh Power Corporation Ltd. (UPPCL) cited the example of the PPA signed with Reliance for the 8,500 MW generation plant when the construction of the transmission line was stopped due to a dispute between the original promoters of the generation plant. This transmission line was to evacuate power from two other generators also, but if the transmission line had been constructed, the payments' costs would have had to be borne by the SEB. Since liquidated damages' clauses are inadequate, the issue of a deemed generation clause was being specifically considered. The balance of interests would need to be weighed.

5. On the issue of BOO versus BOOT, with transfer after 25 years, raised by Gujarat, the advantage of the State getting a functional line was noted by Adviser to Deputy Chairman, Planning Commission, although he stated that due to indifferent maintenance in the last few years of the contract, public

investment may be required on the asset received. Member, Central Electricity Authority (CEA), stated that revised working of the tariff upon any licensing of the line to GERC after 25 years could also be done. Chairman, PGCIL, stated that since transmission is a natural monopoly, BOOT mode is preferable. With 98.5% availability as a norm, basically only the insulators were vulnerable.

6. On the issue of standard bid documents, Adviser to Deputy Chairman, Planning Commission, informed that the Group set up by the Task Force had begun its work on the TSA, the manual on specifications and standards, as well as on the RFP for appointment of consultant for the feasibility report. Ministry of Finance has already issued the guidelines as well as the standard documents for both the RFQ and RFP for PPP projects, and these were available for use by Gujarat. It was also considered that experts from Gujarat could be invited to the further meetings of the Group as special invitees.

Maharashtra

7. Managing Director, MSEB Holding Co. and Transmission Co., presented that an MoU has been signed in the State with the JV between JSW and MSETCL (74:26 equity holding) for evacuation of 1,200 MW from the JSW (Ratnagiri) Power Project. Under it, 50% of the power generation would be sold to the State of Maharashtra. The evacuation arrangement, at an estimated cost of Rs. 416 cr., envisages two 400 kV lines (of 125 kms between Jaigad and Karad, and of 70 kms between Jaigar and New Koyne). The joint venture is envisaged to operate under costs plus regime with an assured return of 14% on equity. The generation company would indemnify all transmission charges for the non-contracted transmission capacity in the absence of any identified buyer. It was added that although the PPA has not been signed, equipment purchase has begun. Adviser to Deputy Chairman, Planning Commission stated that unless these transmission lines were dedicated ones for evacuating power to the grid, under the Electricity Act, 2003, grid transmission lines could not be developed by a generator. Member, CEA, also stated that in such cases a bidding process would also need to be followed to select the joint venture partner. Chairman, PGCIL, stated that full transparency had been maintained with the bids opened in PGCIL office in the presence of MSETCL. Member (Power), Planning Commission, expressed concern that the generator was selected as the partner in the transmission JV without the bidding process having been followed, albeit with the approval of the MERC. Details of the Tata Evacuation project (JV between Tata Power and PGCIL (51:49)), and SUGEN Evacuation project (JV between Torrent and PGCIL (74:26)) were also provided.

Uttar Pradesh

8. Chairman, UPPCL, drew attention to nine projects with capacity addition of 9,980 MW having been signed. The plan approved by the CEA envisages investment of Rs. 18,188 cr. in transmission including new lines as well as upgradation and augmentation of existing lines. The Eleventh Plan outlay of Rs. 10,100 cr. would entail Rs. 5,500 cr. of private investment. Since generation points in UP were localized, dedicated lines in private hands could not work, and UP would consider the PPP mode for

development of transmission lines. Once the standard bid documents were finalized by the Centre, UP would firm up its policy and its implementation with private participation. It was discussed that the issues related to payments security would be taken up in the drafting of the TSA.

9. Concluding the discussions at this meeting, Member (Power) desired a presentation by Ministry of Power on its assessment of the total investments in transmission systems, including a possible approach to attract private investment in transmission systems in States. Chairman, CEA, was requested to provide a list of potential private investors, who could then be invited to the next meeting of the Task Force. The next meeting would also take up issues relating to the payment security mechanism. He also desired that the bid documents are finalized early by the Group, and agreed with the suggestion that experts from Gujarat could be invited to participate in the deliberations of the Group.

The meeting concluded with a vote of thanks to the Chairman.

List of Participants

1. Shri B.K. Chaturvedi ...in Chair
Member (Power), Planning Commission
2. Shri Gajendra Haldea
Adviser to Deputy Chairman, Planning Commission
3. Shri Rakesh Nath
Chairman and Ex-Officio Secretary, Central Electricity Authority
4. Dr. R.P. Singh
Chairman and Managing Director, Powergrid Corporation of India Ltd.
5. Shri V. Ramakrishna
Member, Central Electricity Authority
6. Shri Sunil Verma
Member (E&C), Central Electricity Authority
7. Smt. Sangeeta Verma
Economic Adviser, Central Electricity Authority
8. Shri Govind Mohan
Director, Department of Economic Affairs, Ministry of Finance
9. Shri V.M. Kaul
Executive Director (BDD&PI), Powergrid Corporation of India Ltd.
10. Shri M.M. Srivastava
Principal Secretary (Energy), Government of Gujarat
11. Shri S.K. Negi
Managing Director, Gujarat Energy Transmission Corporation Ltd.
12. Shri G. Singh
Managing Director, Gujarat State Electricity Corporation Ltd.

13. Shri Pradeep Shukla
Chairman, Uttar Pradesh Power Corporation Ltd.
14. Shri Arun
Director (Trans/DBT), Uttar Pradesh Power Corporation Ltd.
15. Shri K.G. Puri
Superintending Engineer, Uttar Pradesh Power Corporation Ltd.
16. Shri R.P. Singh
CEC (Trans. West), Uttar Pradesh Power Transmission Corporation Ltd.
17. Shri Ashoutosh Kumar
Executive Engineer (Trans), Uttar Pradesh Power Corporation Ltd., Ghaziabad
18. Shri Subroto Ratho
Managing Director, MSEB Holding Co. and Transmission Co.
19. Shri D.P. Sharma
Chief Engineer (Trans), Chhattisgarh State Electricity Board
20. Ms. Vandana Aggarwal
Director (Infrastructure), Planning Commission

Planning Commission
(Secretariat for the Committee on Infrastructure)

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**Minutes of the Third Meeting of the
Task Force on Measures for Attracting Private Investment in Transmission of Electricity
held on 26 September 2008**

1. The list of participants is **annexed**.
2. Adviser to Deputy Chairman, Planning Commission, stated that the Group constituted by the Task Force held eight meetings, and concluded that the Request for Qualification (RFQ) and Request for Proposal (RFP) for bidders have already been issued by the Ministry of Finance and should be followed for transmission projects. Accordingly, the Group focused on two model documents, namely, RFP for Appointment of Technical Consultant for a Feasibility Report for Transmission Systems and the Transmission Service Agreement (TSA), which would also include model specifications and standards. The former, as finalized after detailed discussions notably on the Terms of Reference (TOR) with Chairman, Central Electricity Authority (CEA), was placed before the Task Force for its consideration. The drafting of the TSA has benefited from the presentations by Pricewaterhouse Coopers (PWC), the consultants to Power Finance Corporation, and for the further work on it, a technical Group was proposed to be set up consisting of Planning Commission, CEA, Department of Economic Affairs (DEA) and Ministry of Power (MOP).

Request for Qualification (RFQ) and Request for Proposal (RFP) for bidders

3. Additional Secretary, MOP, stated that these two documents have been finalized in September 2008 by MOP in consultation with the States for the use by State Governments. These documents, posted on MOP's website, have also been sent to the Planning Commission the day previous to this meeting. He clarified to Member (Power) that these two documents were different from the RFQ and RFP finalized by Ministry of Finance (MOF). The differences lay in issues such as the definition of associates, restrictions on the number of bidders, etc.
4. Joint Secretary, DEA, stated that DEA had several concerns. For example, the MOP documents did not specify thresholds/criteria for evaluating bidders. He also drew attention to the directions of Cabinet Secretariat on the inter-Ministerial process to be followed in the preparation of model bidding documents.
5. Adviser to Deputy Chairman, Planning Commission, stated that Secretary, MOP, was a member of the IMG that had finalized the documents issued by MOF. As such there was no need for a separate set of RFQ/RFP documents for transmission projects. Moreover, the issues raised by MOP had been taken on board while finalizing the standard documents.

RFP for Appointment of Technical Consultant for a Feasibility Report:

6. Additional Secretary, MOP, stated that there were a few issues relating to the TOR in this document where some further discussion over the next few days with Adviser to Deputy Chairman was still required, and suggested that a final document would be submitted shortly.
7. Joint Secretary, DEA, drew attention to the work being done in parallel by a Committee chaired by Secretary, Department of Expenditure, which was constituted by the Empowered Committee of the COI. He stated that after the general principles were established for such RFPs, sectoral issues such as for transmission systems could be taken up only thereafter.
8. Adviser to Deputy Chairman, Planning Commission, stated that the States could commence their work based on the RFP prepared by the Group, and that after the aforesaid Committee finalizes its model RFP, the Group's RFP could be fine-tuned accordingly and re-issued.
9. MD, Gujarat Energy Transmission Corporation Ltd, reiterated the stand taken earlier that the systems' study should be included in the TOR. Nevertheless the document was useful and needed by many States to commence their work, although he expressed reservations on the inclusion of costing by the consultant favouring instead estimations upto BOQ without going into financials. He also felt that the environmental and social impact assessment could be reduced in the case of transmission systems.
10. Adviser to Deputy Chairman, Planning Commission, clarified that States could add or subtract from the model RFP in accordance with their requirements. However, the model recommended by the Centre would include costing as it would be required for any project availing of the VGF. Joint Secretary, DEA, also felt that costing by the consultant would provide a useful public sector comparator. Chairman, CEA, also favoured the inclusion of costing by the consultant. However, MOP also had reservations noting that in BOO based transmission systems would not qualify technically a PPP, since there was no contingent liability on GOI. It was agreed that Ministry of Finance would seek the guidance of the PPPAC on this matter.

Transmission Service Agreement (TSA)

11. Additional Secretary, MOP, stated that a model TSA has been prepared by MOP, as envisaged in the guidelines for tariff-based competitive bidding for transmission systems, in consultation with State Governments, CEA, DEA, etc., which could be used by the State Governments. This document, also posted on MOP's website, has been sent to the Planning Commission on 25 September 2008. However, if a separate document was needed for the States, this document could serve as the base.
12. Adviser to Deputy Chairman, Planning Commission, noted that an inter-Ministerial process of consultation had not been followed, and that the concerns expressed during the presentations by PWC had neither been discussed nor taken on board by the consultants. An inter-Ministerial document would also help the States to access VGF for State transmission projects. The MOP document could, however,

serve as a base for further work by the proposed technical Group. This would also entail hiring a legal consultant, which could be done by the Planning Commission, if necessary. In the meanwhile, the States could continue to use the existing MOP document.

13. Joint Secretary, DEA, stated that they continue to have reservations on MOP's TSA, especially on the underlying risk allocation and mitigation, and that this document needed further work. He suggested that PWC could continue to provide legal advice.

14. Concluding the discussions, Member (Power) noted that a base should be created early to enable private investment in transmission systems in States. He added that these documents were advisory in nature with a view to promoting transparency and competition in contracting. The States would be free to use them depending on their own requirements. Member (Power) summarised the decisions as follows:

a. The RFQ and RFP finalized by MOF have the approval of the Committee on Infrastructure and were formulated after a detailed inter-Ministerial process. MOP should also place the MOF documents on their website, with the advisory that the States could use these documents if they so wish.

b. The Task Force would take a view on the MOP's RFQ and RFP documents after consideration of the differences between the MOF and MOP's RFQ/RFP documents. To enable this, MOP should forward the differences in a tabular form to DEA and Planning Commission.

c. Representatives of Planning Commission, CEA and MOP should meet and finalized the RFP for Feasibility Report during the next three weeks. This document could be used by the States for projects till March 2009, whereafter the document would be fine-tuned, as necessary, in light of the general RFP document finalized by the Committee chaired by Secretary, Expenditure.

d. A Group chaired by Chairman, CEA, and including representatives of MOP, DEA, and Planning Commission, would further work on the TSA prepared by MOP for use by the States, and submit it to the Task Force within two months.

In the meanwhile, States may use the TSA with such changes as they decide to make.

15. The meeting concluded with a vote of thanks to the Chairman.

List of Participants

1. Shri B.K. Chaturvedi ...in Chair
Member (Power), Planning Commission
2. Shri Gajendra Haldea
Adviser to Deputy Chairman, Planning Commission
3. Shri Rakesh Nath
Chairman and Ex-Officio Secretary, Central Electricity Authority
4. Shri G.B. Pradhan
Additional Secretary, Ministry of Power
5. Shri Arvind Mayaram
Joint Secretary (ADB & Infra), Department of Economic Affairs, Ministry of Finance
6. Shri Govind Mohan
Director, Department of Economic Affairs, Ministry of Finance
7. Shri Lokesh Chandra
Director (Trans.), Ministry of Power
8. Shri S. Majumdar
Director (Projects), Powergrid Corporation of India Ltd.
9. Shri V.M. Kaul
Executive Director (BDD&PI), Powergrid Corporation of India Ltd.
10. Shri A.K. Asthana
Chief Engineer (SP&PA), Central Electricity Authority
11. Shri M.P. Singh
Director (Economic Cell), Central Electricity Authority
12. Shri A.K. Rampal
Director (FS & A Division), Central Electricity Authority

13. Shri Shreemat Pandey
Secretary (Energy), Government of Rajasthan
14. Shri S.K. Negi
Managing Director, Gujarat Energy Transmission Corporation Ltd.
15. Shri A.P. Singh
Superintending Engineer (Trans), Chhattisgarh State Electricity Board, Raipur
16. Shri R.K. Shankar
Resident Engineer, Chhattisgarh State Electricity Board, Delhi
17. Ms. Vandana Aggarwal
Director (Infrastructure), Planning Commission

Planning Commission
(Secretariat for Infrastructure)

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Minutes of the Fourth Meeting of the Task Force on Measures for Attracting Private Investment in Transmission of Electricity held on 19 August 2011

A meeting of the Task Force on Measures for Attracting Private Investment in Transmission of Electricity was held under the Chairmanship of Shri B.K. Chaturvedi, Member, Planning Commission on August 19, 2011 in the Planning Commission. The list of participants is **annexed**.

2. Adviser to Deputy Chairman, while introducing the subject, stated that Planning Commission has prepared a Model Transmission Agreement (MTA) for PPP in transmission of electricity. This document has already been used successfully by the Government of Haryana in a project after approval of the Central Government for grant of Viability Gap Funding (VGF). It is proposed that this document may be formally approved for adoption by states under Section 63 of the Electricity Act.

3. Secretary, DEA stated that the Tariff Policy provides for tariff-based competitive bidding while the Planning Commission document provides for bidding on the basis of Viability Gap Funding (VGF) sought. He also emphasized that since transmission is a profitable business, there may not be a need for VGF. It was suggested that detailed justification may be provided for provision of VGF in this sector. He added that the criteria for extension of license period by 10 years is not clear.

4. Joint Secretary, Ministry of Power (MoP) stated that they have issued guidelines for selection of transmission service provider through tariff-based competitive bidding in 2006 and six inter-state transmission projects have already been bid out. He also stated that VGF is not necessary in this sector and the unitary charge can be set at a higher level to obviate the need for VGF. The VGF scheme incentivizes states to set a lower unitary charge. It was stated that projects in the North East and difficult areas need some financial support. There is a shortage of resource with state governments in the intra-state transmission sector.

5. Adviser to Deputy Chairman stated that the Model Transmission Agreement was prepared on the direction of the Task Force for attracting private investment in transmission of electricity. Government of Haryana has already used the MTA to bid out an intra-state transmission project and DEA has sanctioned VGF for the project. The provision for VGF will address the fund crunch issue in intra-state transmission and in difficult areas like North East and Jammu & Kashmir. Financial Institutions also find the document more bankable. He also clarified that a transmission project's life is 35 years while the Electricity Act provides for a license period of 25 years. Therefore, the MTA has provided for an extension of 10 years. He also said that the MoP may consider approving the MTA so that there are 2 documents like the Case-I and Case-II bidding documents for power generation projects. He also stated that the MTA would encourage transparency in bidding out transmission projects. He further clarified

that the states are entitled to present PPP projects in transmission of electricity on the analogy of state highways. As long as they meet the requirements of the VGF scheme, we should have no objection.

6. After discussion, Member (BKC) summarized the decisions taken at the meeting:
 - i) There is need for investment in the intra-state transmission projects and the MTA may incentivize the flow of such funds through PPP transmission projects.
 - ii) MoP may consider the MTA and States may be given an option to opt either for the MoP documents or the MTA to attract private investment in transmission projects.
 - iii) MoP may consider amending the Tariff Policy (2006) so as to remove the inconsistency and enable VGF based bidding.
 - iv) Considering that transmission sector normally does not need VGF support, unless transmission costs are unbearable, there is a need to develop guidelines for cases where VGF may be permitted. MoP may conduct this exercise in consultation with the Planning Commission/ DEA and suggest in a month. The Twelfth Plan Working Group may also consider this and make suggestions.
7. The above may be considered and the Report of the Task Force could be finalized in the next meeting.
8. The meeting concluded with a Vote of Thanks to the Chair.

List of Participants

1. Shri B.K. Chaturvedi ...in Chair
Member, Planning Commission
2. Shri R. Gopalan
Secretary, Department of Economic Affairs
3. Shri Gajendra Haldea
Adviser to Deputy Chairman
4. Shri Ravi Mital
Adviser (Infrastructure), Planning Commission
5. Shri Sudhir Kumar
Joint Secretary, Ministry of Power
6. Shri R.K. Khullar
Joint Secretary, Department of Economic Affairs
7. Shri S K Chaturvedi
CMD, POWERGRID
8. Shri Ravinder
Chief Engineer, CEA
9. Dr. Kumar V Pratap
Director, Planning Commission
10. Shri Mahender Singh
ED, POWERGRID

Planning Commission
(Secretariat for Infrastructure)

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Minutes of the Fifth Meeting of the Task Force on Measures for attracting Private Investment in Transmission of Electricity held on 13 March 2012

1. A meeting of the Task Force on Measures for Attracting Private Investment in Transmission of Electricity was held on 13 March 2012 under the Chairmanship of Shri B K Chaturvedi, Member, Planning Commission at Yojana Bhawan, New Delhi. The list of participants is **annexed**.
2. Giving the background, Adviser to Deputy Chairman stated that the Task Force was set up 4 years ago to examine and recommend the policy and regulatory framework for attracting private investment in transmission of electricity. Ministry of Power (MoP) had issued Standard Bidding Documents (SBDs) under which PPP in inter-state power transmission is being promoted. However, very few states have used these SBDs for intra-state projects. A committee was set up under the Chairman, Central Electricity Authority (CEA) to draft a document that could be used by states for promoting private investment in intra-state transmission. However, not much progress in drafting the document could be made.
3. In the meanwhile, states like Haryana, Rajasthan and Gujarat requested for a model document that could promote private investment in intra-state power transmission while also attracting VGF. Therefore, Planning Commission drafted the Model Transmission Agreement (MTA) after wide ranging consultations with experts and stakeholders. The MTA was released by the Power Minister in an inter-state conference on PPP in transmission. Haryana has used the MTA for developing the Jhajjar Power Transmission line on PPP basis and the project has since been commissioned.
4. Adviser to Deputy Chairman stated that the load carried by the transmission lines may be low initially, which may make these lines unviable to that extent. Therefore, the provision of VGF would incentivize construction of more transmission lines. He suggested that the MTA may be endorsed by the Task Force with the recommendation that MoP may notify the MTA under Section 63 of the Electricity Act for the purposes of competitive bidding. Following such an order, no separate approvals would be required from the SERCs in case the States were to adopt the MTA as the basis for competitive bidding for PPP in transmission of electricity.
5. On a query from Member (BKC) about the basis of determination of the transmission charges, it was clarified that the regulator has to fix the Base Unitary Charge and then bids could be invited based on Viability Gap Funding (VGF). The principles governing the determination of Base Unitary Charge have been specified in the MTA as follows:

“The Authority shall first compute its extant transmission charge which shall be equal to the total projected revenue of the State Transmission Company (the “Annual Revenue Requirement” or “ARR”) divided by the number of estimated units to be transmitted in accordance with the latest

tariff order of the Commission. The Base Unitary Charge hereunder shall be the product of (a) the extant transmission charge, (b) the number of units that are equivalent to 50% (fifty per cent) of the Normative Availability of the System Capacity, and (c) the number derived from dividing the Project Cost by the sum of the Total Project Cost and the estimated cost of the associated upstream and/or downstream transmission capacity. Provided, however, that the Base Unitary Charge shall in no case be fixed at a level lower than 0.75% of the Total Project Cost. The Authority may, in its discretion, increase the amount determined hereunder by upto 10% thereof in order to provide for a higher Unitary Charge. For the avoidance of doubt and by way of illustration, if the extant transmission charge works out to 20 paise per unit, the number of units that are equivalent to 50% of the Normative Availability of the System Capacity is 12,500 MU per year, the Total Project Cost is Rs.580 crore, and the estimated cost of the associated upstream and/or downstream transmission capacity is Rs.1,485 crore, then the Base Unitary Charge would be Rs.5.85 crore per month.”

It was also clarified that while the MTA is amenable for promoting intra-state transmission projects, it could also be used for inter-state transmission projects.

6. Additional Secretary, MoP stated that as per the Electricity Act 2003 and the Tariff Policy thereunder, MoP has decided that all transmission projects have to be bid out on the basis of tariff-based competitive bidding. While adopting the aforesaid MTA for inviting bids, the Base Unitary Charge would have to be approved by the SERC. He also clarified that MoP's view is that both the documents (SBDs of MoP and MTA of Planning Commission) are available for adoption by the states. On a query about why the SBDs of MoP are not eligible for VGF, it was clarified that since the bidding parameter is the transmission charge, the project would not be eligible under the VGF guidelines which require VGF to be the bidding parameter.

7. Director, DEA stated that by setting the Base Unitary Charge at a low level, the need for VGF would become high. So, the cost burden on account of transmission lines would be shifted from the States to the Centre. He also raised an apprehension that the SERCs may not be revising transmission tariffs on a regular basis and therefore it is likely that the transmission tariffs would be low. However, it was clarified that the transmission charges are being regularly revised by the SERCs and the Base Unitary Charge will be fixed as per principles stated above. On the apprehension about the development of the real estate associated with the transmission network, it was clarified that EA 2003 encourages transmission companies to earn non-electricity revenues. It was also clarified that safeguards have been put in place to guard against the misuse of the VGF facility. It was pointed out that at the point of approving the project by the PPPAC, misuse can be identified and checked. It was also pointed out that the VGF Guidelines issued by the Ministry of Finance provide for the requisite safeguards.

8. Member (BKC) summarized the decisions taken at the meeting:

- (i) The Task Force considered the SBDs of MoP and the MTA of Planning Commission and felt that the option should be given to states to adopt whichever document is more useful to them for attracting private investment in transmission of electricity.
- (ii) The MTA developed by the Planning Commission provides for Viability Gap Funding. This may be needed for promoting private investment in intra-state transmission. The MTA will also be applicable for promoting inter-state transmission. PGCIL may also participate and bid on the basis of VGF.
- (iii) The guidelines for determination of Base Unitary Charge as provided in the MTA may, if necessary, be revised by MoP from time to time, in consultation with the Ministry of Finance and the Planning Commission.
- (iv) The experience on PPP in transmission will be reviewed after 3 years and improvements may be carried out based on the experience gained.

9. The meeting concluded with a Vote of Thanks to the Chair.

List of Participants

1. Shri B K Chaturvedi ...in Chair
Member, Planning Commission
2. Shri Gajendra Haldea
Adviser to Deputy Chairman, Planning Commission
3. Shri A Lavasa
Additional Secretary, Ministry of Power
4. Shri R N Nayak
CMD, PGCIL
5. Shri Ravinder
Chief Engineer, CEA
6. Dr. Kumar V Pratap
Director, Planning Commission
7. Shri P K Mishra
Director, Department of Economic Affairs
8. Shri Pradeep Jindal
Director, CEA
9. Shri I S Jha
PGCIL
10. Ms Payal Dey
Young Professional, Planning Commission

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Government of India
Ministry of Power

Shram Shakti Bhavan, Rafi Marg,
New Delhi, the 2nd May 2012

To
The Chief Secretaries of
All States/UTs.

Subject: Draft Guidelines for allowing Viability Gap Funding (VGF) in Transmission project.

Sir,

1. I am directed to say that the Planning Commission has developed Model Transmission Agreement (MTA) for Public Private Partnership (PPP) in Transmission, which has the provision of Viability Gap Funding (VGF) and evaluation of bids on the basis of minimum grant quoted by the bidders.
2. Since VGF based MTA document developed by the Planning Commission also inter-alia determines the tariff through a transparent process of bidding, this document has been considered by Ministry of Power for inclusion under the 'Guidelines for Encouraging Competition in Development of Transmission Projects' issued by the Central Government for the purpose of Section 63 of the Electricity Act 2003. Accordingly, States have the option to use either the VGF based MTA document of Planning Commission or the Standard Bidding Documents prepared by the Ministry of Power for procurement of Intra-State transmission services. For the VGF based bidding, the unitary charges will require to be approved by the respective State Electricity Regulatory Commission prior to bidding. The experience of VGF based MTA is to be reviewed after three years.
3. To enable the VGF based MTA document to be used by States, Para 24 of the "Guidelines for Encouraging Competition in Development of Transmission Projects" issued by Ministry of Power stands modified as under :-

"As far as intra-State projects are concerned, the State Governments may adopt these guidelines and may constitute similar committees for facilitation of transmission projects within the State. The States also have the option to use Viability Gap Funding (VGF) based Model Transmission Agreement (MTA) document of Planning Commission for development of transmission system in their States under Public Private Partnership (PPP) mode".

4. Necessary amendment to the guidelines is being issued separately.
5. This issues with the approval of competent authority.

(K.V. Gopala Rao)
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