

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)



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संदर्भ संख्या / Ref. No. C/CTU/W/06/18-OA/Agenda

9 July, 2013

To,

As per Distribution List

Sub: 18th meeting of Western Region constituents regarding Connectivity & Long term Access Applications of Western Region as per CERC Regulations, 2009 – Agenda.

Dear Sir,

Please find enclosed the Agenda Note for 18th meeting of Western Region Constituents regarding Connectivity & Long Term Access Applications of IPPs in Western Region as per CERC regulations, 2009.

The agenda is also available at our website www.powergridindia.com>>Quick links>>LTOA>>Western Region. The date and venue for the meeting shall be intimated separately.

In the meantime, it is requested that the IPP generation developer may update progress so far made in respect of generation project in the attached format, along with necessary supporting documents at the earliest.

It is requested to attend or depute your representative for the meeting. The status of the generation project and the confirmation of participation may be mailed to manju@pwergridindia.com or mg.manju@gmail.com.

Thanking You,

Yours faithfully,

(Y K Sehgal)

Chief Operating Officer
Central Transmission Utility

Encl.: As above

1.	Shri Ravinder Member (PS) Central Electricity Authority Sewa Bhawan, R.K.Puram New Delhi-110 066	2.	Chairman & Managing Director MPPTCL, Block No. 3 Shakti Bhawan, Rampur, Jabalpur-482 008
3.	The Member Secretary Western Regional Power Committee MIDC area, Marol, Andheri (E) Mumbai 400 093	4.	Executive Engineer Electricity Department UT of Dadra & Nagar Havelli, Post Naroli-396 235 Silvassa
5.	Shri K. K. Arya Chief Engineer(SP & PA) Central Electricity Authority Sewa Bhawan, R.K.Puram New Delhi-110 066	6.	The Chief Engineer Electricity Department The Government of Goa Panaji
7.	Managing Director Gujarat Energy Transmission Corp. Ltd, Sardar Patel Vidyut Bhawan, Race Course, Vadodra -390 007	8.	Shri R.K. Oke Chief Engineer(Transmission) Nuclear Power Corpn. of India Ltd. 12 th Floor, North wing, VS Bhawan Anushaktinagar, Mumbai-400 094
9.	Executive Engineer UT of Daman & Diu Administration, OIDC Corporate Office, Plot No. 35 Somnath, Daman Pin 396210	10.	Director (Operation) MSETCL. 4 th Floor, "Prakashganga" Plot No. C-19, E-Block Bandra – Kurla Complex, Bandra(East), Mumbai- 400051
11.	Managing Director Chhattisgarh State Transmission Co. Ltd. Dangania Raipur- 492 013	12.	Executive Director (Engg.) NTPC Ltd, EOC, Plot no. A-8A, Sector-24, Post Box. 13, Noida 201 301 (U.P)
13.	CEO POSOCO B-9, Qutab Institutional Area Katwaria Sarai, New Delhi-110 016	14.	GM, WRLDC F-3, M.I.D.C. Area Marol, Andheri (E) Mumbai-400 093

1.	Sh. S. S. Mishra AGM (PE-Elect), NTPC Ltd. Engineering Office Complex, A-8A, Sector-24, NOIDA-201301 (UP)	2.	Sh. S.K. Sharma Additional General Manager, NTPC Ltd. NTPC Bhawan, Core-7, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003
3	Sh. Akhil Agarwal Director Nana Layja Power Company Limited, C/O- IL&FS Energy Development Company Limited, First Floor, Corporate Office Tower, Ambience Mall Complex, Ambience Island, NH-8, Gurgaon-122001, Haryana	4	Sh. Ashish Swarup Director Srijan Energy Systems Pvt. Ltd. 102, "El Tara Building", Orchard Avenue, Hiranandani, Powei, Mumbai - 400 076
5	Sh. Bhaskar Jawale Site Head Wardha Power Company Limited, 8-2-293/82/A/431/A, Road No. 22, Jubilee Hills, Hyderabad – 500033, Andhra Pradesh, India.	6	Sh. Satish Shrikhande Sr. General Manager M/s Abhijeet MADC Nagpur Energy Pvt. Ltd., 6 th Floor, Landmark Building, Ramdaspath, Wardha Road, Nagpur - 440004
7	Sh. B. J. Amritkar General Manager EMCO Energy Ltd. Plot no., F-5, Road No. 28 Wagle Industrial Area, Thane Maharashtra-400604	8	Sh. R.D. Kakkar President Today Energy (MP) Pvt Ltd Statesman House 8 th Floor Barakhamba Road New Delhi 110001
9	Sh. Goutam Ghosal Dy.General Manager DHARIWAL INFRASTRUCTURE LIMITED Barik Bhawan, 5th Floor, 8 C.R.Avenue, Kolkata 700072	10	Sh. Rakesh Agarwal President (Power) Spectrum Coal and Power Ltd. 7th Floor, Ambience Office Block, Ambience Mall, Ambience Island, NH-8, Gurgaon, Haryana
11	Chief Electrical Engineer South East Central Railway New GM Office , 1 st Floor, C Block, Bilaspur, Chhattisgarh Pin-495-004		

Agenda for 18th Meeting of WR Constituents regarding Connectivity & Long-Term Access applications in ISTS for Generation Projects in WR

1.0 Corrigendum to MoM of 17th Meeting of WR Constituents regarding Connectivity & Long-Term Access applications in ISTS for Generation Projects in WR.

The MOM of 17th Meeting of WR Constituents regarding Connectivity & Long-Term Access applications in ISTS for Generation Projects in WR were issued vide POWERGRID letter dated 01.02.2013 and the 3rd paragraph of Item H (Modification of LTA quantum of M/s Jayswal Neco Urja Limited) may read as below:

“It was agreed in the meeting to reduce the quantum of LTA with respect to Auxiliary Consumption i.e. 51 MW. Thus LTA granted is modified to 549 MW (WR-356.85 MW, NR-192.15 MW). LTA quantum with respect to Chattisgarh share shall be reduced subject to signing of TSA by CSPTCL for this quantum.”

2.0 POWERGRID has received applications as per CERC Regulation 2009 from the following applicants:

Application for Grant of Connectivity & Long term Access (LTA)

a) NTPC Limited – Gadawara STPP (2x800MW)

Application for Grant of Connectivity

- a) Nana Layja Power Company Ltd (6x660 MW)
- b) Nana Layja Power Company Ltd (5x400)
- c) Srijan Energy Systems Pvt Ltd. (5x60MW)
- d) Wardha Power Company Ltd (4x135 MW)
- e) Abhijeet MADC Nagpur Energy Pvt Ltd. (4x63MW)

3.0 Details of Connectivity & LTA applications

(a) NTPC Ltd. Gadawara STPP (2x800MW)

Connectivity and Long term Access has been sought by M/s NTPC Ltd. for their proposed 2x800MW Gadawara STPP generation project at Gadawara in Madhya Pradesh. The general conditions for Connectivity & LTA as per CERC, Regulations, 2009 is enclosed at **Annexure-I**. A brief on the above application is as under:

(i) Details of the application is as under:

S.No.	Particulars	Status
1.	Installed Capacity (MW)	1600MW (2x800MW)
2.	Capacity for which Connectivity is required (MW)	1600 MW
3	Capacity for which LTA is required (MW)	1586.51MW
4	Date from which Connectivity is Required	November, 2015
5	Date from which LTA is required	Unit 1: 30.11.2016, Unit 2: 31.05.2017
6	Location of Generating Station	Village- Gangai & Umariya Mojas, Distt.-Narsinghpur, State-Madhya Pradesh
7	Commissioning schedule (Unit Wise)	Unit 1 : July'16 Unit 2 : Jan'17
8	Step up voltage of Generating station (kV)	765kV

ii) Status of Generation project

As per the application, the status of generation project is as follows:

S. No.	Particular	Status
1.	Land	Complete Land requirement of 1798 Acres (Govt. – 318 & Pvt. 1480) under possession.
2.	Environmental clearance	Environment clearance accorded by MOEF vide letter dt.22.03.13
3.	Forest Clearance (if applicable) for the land for the power station	NA

4.	Fuel Arrangement	Board approved substitution of coal linkage of Gajmara project (2x800 MW) with Gadawara (Talaipalli NTPC mine: Mand-Raigarh Coalfields) on 26.11.12
5.	Water arrangement	Commitment available from WRD GoMP. Water source is Narmada River.
6.	Equity Infusion	The investment approval accorded by NTPC Board on 26.02.13 and Main Plant Package awarded to M/s BHEL on 22.03.2013.

iii) Proposal for connectivity

In view of the project capacity, unit size, project progress (Award of Main Plant Package) as well as the proximity of the generation project to the existing Seoni-Bina 765 kV S/c line routing, following connectivity for this project is proposed:

- LILO of Seoni - Bina 765 kV S/c line at Gadawara STPP

Above transmission connectivity shall be developed by the transmission licensee selected through tariff based competitive bidding route.

Considering above proposed connectivity arrangement, provision of following at generation switchyard, implementation of which shall be under the scope of M/s NTPC Ltd. is proposed:

- 765kV line bays: 2 nos. (Additional 2 nos. 765 kV bays required for Transmission system with LTA)
- 765kV bus reactor : 3x110 MVAR
- 765kV bus reactor bay: 1 no.

iv) Proposal for Long Term Access (LTA)

Keeping above in view and considering the capacity and progress of the project following transmission system strengthening is proposed as part of the Long term Access (LTA):

LTA to M/s NTPC for transfer of total 1586.51 MW [CSPDCL: 63.46MW, MP Tradeco: 793.25MW, GUVNL: 209.86MW, MSEDCL: 261.49MW, GOA:

10.47MW, DNH: 6.03MW, DD: 3.96MW, Unallocated: 237.99MW] from its 1600MW generation may be provided with following system strengthening:

- i) Gadarwara STPS – Warora Pool 765 kV D/c line
- ii) Warora Pool – Parli Pool 765 kV D/c line
- iii) Parli Pool – Solapur 765 kV D/c line
- iv) Establishment of 2x1500 MVA, 765/400 Substations at Warora Pool & Parli Pool
- v) Parli (new) – Parli Pool 400 kV D/c (Quad) line
- vi) LILO of both circuits of Wardha-Parli (POWERGRID) 400 kV D/c quad line at Warora Pool.

A brief report on the system studies is enclosed.

Allocation from M/s NTPC Ltd. Gadarwara STPP (Stage-I) to WR beneficiaries shall be transferred on the basis of displacement.

- a. The identified transmission system strengthening shall be available after about 3 years and 9 months from the date of signing of TSA by the applicant. LTA shall be effective from the date of availability of above transmission strengthening. However as per the application of NTPC, NTPC has requested LTA from July, 2016 which is less than above time.
- b. M/s NTPC Ltd/Beneficiaries shall sign LTAA and TSA with POWERGRID for sharing of transmission charges corresponding to 1586.51MW
- c. The sharing of charges shall be as per CERC Regulations as amended from time to time.

Members may discuss

4.0 Details of Connectivity applications

In view of the provisions in CERC Regulation 2009, and considering the location & unit sizes of generation projects etc., following connectivity of the generation projects is proposed based on technical examination as per CEA (Technical Standards for connectivity to the Grid) regulations, 2007:

(a) Nana Layja Power Company Ltd (6x660 MW)

M/s Nana Layja Power Company Limited (6x660MW) (NLPCL-Coal), a subsidiary of IL&FS Ltd., is establishing an imported coal based thermal power plant of 6x660 MW at Godhra, Kutch in Gujarat.

i) Details of the application is as under:

S.No.	Particulars	Status
1	Installed Capacity (MW)	3960MW (6x660MW)
2	Capacity for which Connectivity is required (MW)	2990 MW
3	Date from which Connectivity is Required	Jun' 2017
4	Location of Generating Station	Village- Mota Layja, Godhra Distt.-Kutchh, State-Gujarat
5	Commissioning schedule (Unit Wise)	Unit 1 : Jun'17, Unit 2 : Oct'17 Unit 3 : Feb'18, Unit 4 : Jun'18 Unit 5 : Oct'18, Unit 6 : Feb'19
6	Step up voltage of Generating station (kV)	765kV

ii) Status of Generation project:

S. No.	Particular	Status
1.	Land	Approx. 1350 acres of land including green belt is required. Most of the land has been acquired by the SEZ company and NLPCL has entered into an MoU with SEZ company for transfer of the land on 45 years lease basis.
2.	Environmental clearance	MoEF has prescribed ToR for carrying out EIA studies and issued ToR clearance letter dated Dec 28, 2011. EIA studies are underway. It is expected to complete public hearing by April 2013 and final Environment Clearance (EC) by August 2013.
3.	Forest Clearance (if applicable) for the land for the power station	Principal Chief Conservator of Forest (PCCF)/Chief Wild Life Warden (CWLW) of Gurarat state has granted NOC for setting up of the project.

4.	Fuel Arrangement	The power plant will be based on blended coal constituting 70% of domestic coal and 30% of imported coal. Linkage application for domestic coal supply submitted to MoC and is under consideration. Finalization of the imported coal source is underway.
5.	Water arrangement	The project is based on sea water and GMB has granted permission for drawl of sea water and also issued NOC for construction of sea water intake and outfall structures

In view of the project capacity, unit size, project progress as well as the proximity of the generation project, following connectivity of project is proposed:

- Nana Layja Power Company Limited (6x660) – Bhuj Pool 765kV 2xS/c line

Above transmission system for connectivity shall be developed by the transmission licensee selected through tariff based competitive bidding route.

The transmission system for connectivity shall be implemented based on the progress of the generation project in terms of, LOA for fuel linkage, environment and forest clearance as per CERC Regulations, 2009 and its amendments thereof. As per CERC Regulations, 2009, the construction of such augmentation of the transmission system shall be taken up by the CTU or the transmission licensee in phases corresponding to the capacity which is likely to be commissioned in a given time frame after ensuring that the generating company has released the advance for the main plant packages i.e. Turbine island and steam generator island or the EPC contract in case of thermal generating station for the corresponding capacity of the phase or the phases to be commissioned, subject to a minimum of 10% of the sum of such contract values.

Considering above proposed connectivity arrangement, provision of following at generation switchyard, implementation of which shall be under the scope of M/s NLPCL-Coal is proposed:

- 765kV line bays: 2 nos.
- 765kV bus reactor : 1x330 MVAR
- 765kV bus reactor bay: 1 no.

For transmission system strengthening, provision of 765kV, 4 nos. additional bays may be kept at switchyard.

However, transmission system strengthening to facilitate power transfer from Bhuj Pool onwards shall be identified once M/s NLPCL applies for Long-term Access as per CERC Regulations, 2009.

Members may discuss.

(b) Nana Layja Power Company Limited (NLPCL) (5x400 MW):

M/s Nana Layja Power Company Limited (NLPCL-Gas), a subsidiary of IL&FS Ltd., is establishing a gas based power plant of 5x400 MW at Godhra, Kutch in Gujarat.

i) Details of the application is as under:

S.No.	Particulars	Status
1	Installed Capacity (MW)	2000MW (5x400MW)
2	Capacity for which Connectivity is required (MW)	1515 MW
3	Date from which Connectivity is Required	Aug' 2017
4	Location of Generating Station	Village- Godhra, Distt.-Kutchh, State-Gujarat
5	Commissioning schedule (Unit Wise)	Unit 1 : Aug'17, Unit 2 : Nov'17 Unit 3 : Feb'18, Unit 4 : May'18 Unit 5 : Aug'18
6	Step up voltage of Generating station (kV)	400kV

ii) Status of Generation project:

S. No.	Particular	Status
1.	Land	Approx. 85 acres of land including green belt is required. Entire land has been acquired by the SEZ company and NLPCL has entered into an MoU with SEZ company for transfer of the land

		on 45 years lease basis.
2.	Environmental clearance	MoEF has prescribed ToR for carrying out EIA studies and issued ToR clearance letter dated Sep 24, 2012. EIA studies are underway. It is expected to complete public hearing by April 2013 and final Environment Clearance (EC) by August 2013.
3.	Forest Clearance (if applicable) for the land for the power station	The application for clearance from Principal Chief Conservator of Forest (PCCF)/Chief Wild Life Warden (CWLW) of Gurarat state has been submitted and NOC for setting up of the project is awaited.
4.	Fuel Arrangement	The power plant will be based on Natural gas. LNG will be imported and regassified at the proposed LNG terminal for further utilization in the power plant. Finalization of the LNG sources is underway.
5.	Water arrangement	The project is based on sea water and GMB has granted permission for drawl of sea water and also issued NOC for construction of sea water intake and outfall structures

In view of the project capacity, unit size, project progress as well as the proximity of the generation project, following connectivity of project is proposed:

- Nana Layja Power Company Limited (5x400) – Bhuj Pool 400kV D/c (Quad) line

Above transmission connectivity shall be developed by the transmission licensee selected through tariff based competitive bidding route.

The transmission system for connectivity shall be implemented based on the progress of the generation project in terms of, LOA for fuel linkage, environment and forest clearance as per CERC Regulations, 2009 and its amendments thereof. As per CERC Regulations, 2009, the construction of such augmentation of the transmission system shall be taken up by the CTU or the transmission licensee in phases corresponding to the capacity which is likely to be commissioned in a given time frame after ensuring that the

generating company has released the advance for the main plant packages i.e. Turbine island and steam generator island or the EPC contract in case of thermal generating station for the corresponding capacity of the phase or the phases to be commissioned, subject to a minimum of 10% of the sum of such contract values.

Considering above proposed connectivity arrangement, provision of following at generation switchyard, implementation of which shall be under the scope of M/s NLPCL-GasLtd. is proposed:

- 400kV line bays: 2 nos.
- 400kV bus reactor : 1x125 MVAR
- 400kV bus reactor bay: 1 no.

For transmission system strengthening provision of 400kV 4 nos. additional bays may be kept at generation switchyard.

However, transmission system strengthening to facilitate power transfer from Bhuj Pool onwards on long-term basis shall be identified once M/s NLPCL applies for Long-term Access as per CERC Regulations, 2009.

Members may discuss.

(c) Srijan Energy Systems Pvt Ltd (Wind Farm: 5x60 MW):

M/s Srijan Energy Systems Pvt Ltd (SESPL), a subsidiary of Surajbari Windfarm Developments Pvt. Ltd., is establishing a Wind based generation farm of 5x60 MW at Bhuj, Gujarat.

i) Details of the application is as under:

S.No.	Particulars	Status
1	Installed Capacity (MW)	300MW (5x60MW) (Wind Farm)
2	Capacity for which Connectivity is required (MW)	300 MW
3	Date from which Connectivity is Required	March' 2016 Onwards
4	Location of Generating Station	Village- Bhuj, Distt.-Bhuj & Nakathrana, State-Gujarat
5	Commissioning schedule (Unit	Unit 1 : Mar'16, Unit 2 : Jun'16

	Wise)	Unit 3 : Dec'16, Unit 4 : Mar'17 Unit 5 : Jun'17
6	Step up voltage of Generating station (kV)	400 kV

In view of the project capacity, unit size, project progress as well as the proximity of the generation project, following connectivity of project is proposed:

- Srijan Energy Systems Pvt Ltd (5x60) – Bhuj Pool 400 kV D/c

Above transmission connectivity shall be developed by the generation developer as the installed capacity is less than 500 MW.

Considering above proposed connectivity arrangement, provision of following at generation switchyard, implementation of which shall be under the scope of M/s Srijan Energy Systems Pvt Ltd. is proposed:

- 400kV line bays: 2 nos.
- Additional 400kV line bay – 2 nos. for reactive/dynamic compensation.

However, transmission system strengthening to facilitate power transfer from Bhuj Pool onwards on long-term basis shall be identified once M/s Srijan Energy Systems Pvt. Ltd; applies for Long-term Access as per CERC Regulations, 2009.

Members may discuss.

(d) Wardha Power Company Limited (WPCL) (4x135 MW):

M/s Wardha Power Company Limited (WPCL) has commissioned 4x135 MW generating plant from April 2010 to April 2011 located in MIDC Industrial area, Warora, District Chandrapur, Maharashtra. Out of 540 MW, for evacuation of 270MW power, permanent connectivity is granted through D/c 220kV line at 220kV Warora MSETCL substation. Presently, power from remaining 2 Units is also temporarily evacuated at 220kV Warora MSETCL substation.

i) Details of the application is as under:

S.No.	Particulars	Status
1	Installed Capacity (MW)	540MW (4x135MW)
2	Capacity for which Connectivity is required (MW)	270 MW (U# 3 & 4)
3	Date from which Connectivity is Required	April' 2014
4	Location of Generating Station	Village- Warora, Distt.-Chandrapur, State-Maharashtra
5	Commissioning schedule (Unit Wise)	Unit 1 : Commissioned in Apr'10, Unit 2 : Commissioned in Oct'10 Unit 3 : Commissioned in Jan'11 Unit 4 : Commissioned in Apr'11
6	Step up voltage of Generating station (kV)	220kV

In view of the project capacity, unit size, project progress as well as the proximity of the generation project, following connectivity of project is proposed:

- Wardha Power Company Limited (WPCL) – Warora Pool 400kV D/c

Above transmission connectivity shall be developed by the generation developer as the installed capacity is less than 500 MW.

For effecting above proposed connectivity, M/s WPCL shall ensure to disconnect 2x135MW units physically from STU Grid before being connected to CTU. It will be ensured that at no point of time, parallel operation with STU and CTU system shall take place. Since the units are already connected to STU systems, NOC from MSETCL is required before grant of Connectivity to ISTS.

Considering above proposed connectivity arrangement, provision of following at generation switchyard, implementation of which shall be under the scope of MIs WPCL Ltd. is proposed:

- 400kV line bays: 2 nos.
- 400/220kV, 1x315MVA ICT
- 400kV ICT Bay: 1no

- 220kV ICT Bay: 1 no
- 420kV Bus reactor: 80MVAR
- 1 no. 400kV Bus Reactor bay

However, transmission system strengthening to facilitate power transfer from Warora Pool onwards on long-term basis shall be identified once M/s WPCL Ltd; applies for Long-term Access as per CERC Regulations, 2009.

Members may discuss.

(e) Abhijeet MADC Nagpur Energy Private Ltd (AMNEPL) (4x63 MW):

Presently, AMNEPL (4x63MW) is connected to the STU (MSETCL) at 220kV level and has been operational since Jan 2011. AMNEPL has indicated that looking into the present power scenario in Maharashtra, they feel that they would have to sale most of the power outside the state, in the times to come. Under the circumstances, AMNEPL has applied for connectivity to the CTU grid for evacuation of power.

i) Details of the application is as under:

S.No.	Particulars	Status
1	Installed Capacity (MW)	252MW (4x63MW)
2	Capacity for which Connectivity is required (MW)	252 MW
3	Date from which Connectivity is Required	Apr' 2014
4	Location of Generating Station	Village- Khairi Khurd, Tahsil Hingna, Distt.-Nagpur, State – Maharashtra
5	Commissioning schedule (Unit Wise)	Unit 1 : commissioned on 6 th Jan'11, Unit 2 : Commissioned on 7 th May'11 Unit 3 : Commissioned on 21 st Apr'11, Unit 4 : Commissioned on 1 st Aug'11
6	Step up voltage of Generating station (kV)	220kV

Looking at the project capacity, unit size, project progress as well as the proximity of the generation project, following connectivity of project is proposed:

- Abhijeet MADC Nagpur Energy Private Ltd (AMNEPL) – Warora Pool 400kV D/c

Above transmission connectivity shall be developed by the generation developer as the installed capacity is less than 500 MW.

For effecting above proposed connectivity, M/s AMNEPL shall ensure that these units are physically disconnected from STU Grid before being connected to CTU. It will be ensured that at no point of time, parallel operation with STU and CTU system shall take place.

Considering above proposed connectivity arrangement, provision of following at generation switchyard, implementation of which shall be under the scope of MIs AMNEPL Ltd. is proposed:

- 400kV line bays: 2 nos.
- 400/220kV, 1x315MVA ICT
- 220kV ICT Bay: 1no
- 400kV ICT Bay: 1 no
- 420kV Bus Reactor: 1x80MVAR
- 400kV Bus Reactor Bay

However, transmission system strengthening to facilitate power transfer from Warora Pool onwards on long-term basis shall be identified once M/s AMNEPL applies for Long-term Access as per CERC Regulations, 2009.

Members may discuss.

5.0 Other Issues

5.1 Modification in LTA beneficiaries on account of firm PPA by GMR EMCO and Phasing of LTA as per unit synchronization

GMR EMCO Energy Limited (GMR EMCO) vide its letter dated 12th March, 2013 has informed that they have signed PPA with Dadra & Nagar Haveli (DNH) for 200 MW. In view of this, they have requested to change the LTA beneficiaries as below:

Sl. No.	Target beneficiary (Region)	LTA Quantum (As per BPTA)	Modification requested
1	MPPTCL (WR)	200 MW	100 MW
2	MSEDCL (WR)	200 MW	200 MW
3	GUVNL (WR)	100 MW	DNH (WR) – 200 MW
4	WR Constituents	20 MW	20 MW

UT DNH has been drawing its share through interconnections with

- (a) ISTS system at 220kV Vapi S/s
- (b) GETCO system at 220kV and 66kV level.

Recently, due to overloading of GETCO network, the interconnections between UT DNH and GETCO are being opened in a phased manner. This has limited the transfer capacity to DNH. However, a 400/220kV substation at Kala in UT DNH is under implementation by POWERGRID. **It is proposed to modify the beneficiaries of GMR EMCO as per their request after availability of 400/220kV Kala substation.**

Further, GMR EMCO (540 MW) has implemented its 400 kV D/c dedicated line from its power plant to Bhadrawati (POWERGRID) substation and first line was charged on 19th October, 2012. Unit#1 of the plant was synchronized on 10.12.2012. As per BPTA provisions, POC charges fare being levied to GMR EMCO for full 520 MW LTA from 19th October, 2012.

GMR EMCO have also requested vide their letter dated 16th March 2013 the following:

Quote

- i. Bifurcate unit wise LTA quantum on pro-rata basis i.e. 260 MW each and levy POC charges as and when unit achieves synchronization.*
- ii. Accordingly, for Unit-1 the effective date for payment of POC charges may be considered as the day of its synchronizations i.e. 10th December 2012 and adjust already paid amount in the subsequent bills.*

Unquote

Members may discuss.

5.2 Cancellation of grant of LTA to M/s Today Energy (MP) Private Limited

Today Energy (MP) Private Limited (TODAY ENERGY) was granted LTOA, as per CERC regulations, 2004, for quantum of 800 MW from their 1320 MW power plant in M.P.. TODAY ENERGY has signed BPTA in January 2011. As per the provisions of BPTA, TODAY ENERGY was required to submit Construction Bank Guarantee @ Rs. 5.0 Lakhs/MW which they have failed to submit despite regular follow-up.

Now, TODAY ENERGY vide its letter dated 27th June, 2013 has requested to defer the signing of Transmission Service Agreement till they get coal linkage & environment clearance.

In view of the above, it is proposed that the LTOA granted to Today Energy (MP) Private Limited from their 1320 MW power plant in M.P. is withdrawn and application may be closed. M/s TODAY Energy (MP) Private is advised to apply afresh when they obtain Coal linkage & Environment Clearance.

Members may discuss.

5.3 Reduction of LTA quantum by M/s Dhariwal Infrastructure Limited

M/s Dhariwal Infrastructure Limited (DIL) has been granted LTA for 300 MW (WR-150MW & NR-150MW) from its 2x300MW power plant located at Chandrapur in Maharashtra. M/s DIL vide its letter April 8, 2013 has requested for reduction of LTA quantum from 300 MW to 270 MW due to auxiliary supply consumption. M/s DIL vide above letter further has also requested to consider the target regions as 150 MW (NR) & 120 MW (WR).

Since no transmission system system has been done for LTA to M/s Dhariwal Infrastructure Limited, it is proposed to modify the LTA quantum and beneficiaries as requested.

Members may discuss.

5.4 Alternate standby arrangement of South East Central Railway at Raigarh substation of POWERGRID.

South East Central Railway (SECR) was granted Connectivity to ISTS in May, 2012 as a bulk consumer of 100 MW from existing Raipur (POWERGRID) substation through 220kV D/c line from Bhilai(SECR).

Now, M/s SECR vide letter dated 01.07.2013 has requested for alternate standby arrangement from Raigarh (POWERGRID) only for emergency.

Members may discuss.

5.5 Revision of LTOA of 2x50MW Spectrum Coal & Power Ltd.

M/s Spectrum Coal & Power Ltd. (SCPL) had applied for LTOA for 60MW as per CERC Regulations, 2004. However, they were granted LTOA for full capacity i.e. 100MW and BPTA was also signed accordingly. In the 17th meeting of LTA/Connectivity the LTOA quantum was reduced to 88MW considering auxiliary consumption by the plant.

Now, M/s SCPL have requested that since they had applied for LTOA for only 60MW, their LTOA quantum may be reduced to 60MW. Further, they have stated that Unit-II of their plant is not coming due to non-availability of Environmental Clearance. Keeping above in view, it is proposed that LTA from M/s SCPL may be scheduled as per unit commissioning i.e. 44MW with Unit # I and 44MW with Unit-II.

Members may discuss.

5.6 Revision of Interim-Arrangement agreed earlier:

5.6.1 M/s MB Power (M.P.) Ltd.

In the 12th Open Access Meeting of Western Region Constituents, M/s M B Power (MP) Ltd. was provided following interim arrangement:

- Till the availability of the dedicated transmission system Interconnection through 400kV D/c Jabalpur Pooling substation – Jabalpur Existing transmission line.

However, as the generation project got delayed and Jabalpur Pooling Station shall be available by that time frame, hence, the interim arrangement is no longer needed.

Members may note

5.6.2 M/s Essar Power Gujarat Ltd.

In the 12th Open Access Meeting of Western Region Constituents, M/s Essar Power Gujarat Ltd. was provided following interim arrangement:

- Till the availability of the dedicated transmission system Interconnection LILO of one circuit of Mundra – Jetpur transmission line with Essar TPS – Bachau Transmission line.

Recently, M/s Essar Power Gujarat Ltd. informed that the generation project is delayed. The dedicated line shall be in place by then. Hence, the interim arrangement is not needed.

Members may note.

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General Conditions for Connectivity and LTA

(i) For all the generation projects who have applied for Connectivity under CERC regulation, 2009, in addition to other applicable provisions in CERC regulations 2009 on Grant of connectivity, Long Term Access and Medium-term Open Access in inter-state transmission and related matters, following are to be noted:

- The grant of connectivity shall not entitle above applicants to interchange any power with the grid unless they obtains long-term access, medium term open access or short term open access. However, the above IPP shall be allowed to inject infirm power in to the grid during full load testing for a period not exceeding six months from the date of first synchronization, before availing any type of open access, after obtaining permission of the concerned regional load dispatch centre, which shall keep grid security in view while granting such permission.
- Applicants are required to inform/confirm likely date of synchronization, likely quantum and period of injection of infirm power before being put into commercial operation to the SLDC and RLDC concerned at least one month in advance.
- In case the dedicated transmission system upto point of connection is to be undertaken by Inter-State Transmission Licensee, the applicants need to sign transmission agreement with CTU within one month of grant of connectivity, furnish requisite Bank Guarantee and fulfill other terms & conditions as stipulated in the CERC Regulations/Detailed Procedure, 2009 in this regard.
- The applicants shall abide by all provisions of the Electricity Act, 2003, CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.

- The connectivity shall be as per the Detailed Procedures of CTU for Grant of Connectivity, Long-term Access and Medium-term Open Access to Inter-state transmission.
- All the applicants shall have to apply for “Connection Offer” to CTU at least more than 2 years prior to physical interconnection as well as have to sign “Connection Agreement” with CTU prior to physical interconnection as per CERC Regulations, 2009.
- The scope of works at generation switchyard like line terminal bays, bus/line reactors, associated bays etc. shall be under the scope of respective generation/developer.
- Transmission system strengthening to facilitate power transfer on long-term basis shall be identified once above applicants apply for Long-term Access as per CERC Regulations, 2009.

(ii) For all the generation projects who have applied for LTA under CERC regulation, 2009, in addition to other applicable provisions in CERC regulations 2009 on Grant of connectivity, Long Term Access and Medium-term Open Access in inter-state transmission and related matters, following are to be noted:

- LTA is being granted subject to the condition that applicant shall bear all the transmission charges as per applicable CERC norms for transfer of power.
- Payment of such transmission charges for the capacity for which exact source on long term basis is not known, shall not entitle the applicant any right over the transmission system up to the target region and CTU may release this balance transmission capacity up to target region for short-term open access or the medium term open access till the applicant firms up source/destination on long-term basis and its operationalization.
- The applicant shall enter into long term access agreement and TSA with POWERGRID within 30 days of issue of intimation. In case transmission system of Inter-state transmission licensee other than CTU is used, an agreement shall be signed between the applicant and such inter-State

transmission licensee, in line with the provisions of the CERC regulations 2009.

- The nodal agency may change system strengthening requirements identified for a particular applicant project on the basis of any subsequent study carried out on its own motion or on another application for LTA, with the purpose of optimum utilization of the transmission system or to conserve limited right-of-way, and in such event, the changes carried out by the nodal agency shall be intimated to the applicant, or any other person associated with the LTA.
- The applicant shall abide by all provisions of the Electricity Act, 2003, CERC(Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State transmission and related matters) Regulations, 2009, CEA (Technical Standards for connectivity to the Grid) and Indian Electricity Grid Code as amended from time to time.

STUDY REPORT FOR NTPC GADARWARA STPP (2X800 MW)

1.0 Introduction

NTPC Limited (NTPC) is establishing a 2x800 MW coal based thermal power project at Gadarwara, Narsinghpur District in Madhya Pradesh. NTPC has applied for Connectivity & Long-term Access as per CERC (Grant of Connectivity, Long-term Access Regulations), 2009. As per the application, NTPC has requested Connectivity of this power plant by November, 2015 and commissioning schedule of unit #1 by November, 2016 and unit #2 by May, 2017. The beneficiaries from this project are constituents of Western Region. Load Flow Studies for the end of 12th Plan i.e. March, 2017 was carried out and the details are given in subsequent paragraphs.

2.0 Load Generation Balance by end of 12th Plan (March, 2017)

The Load Generation Balance considered for the studies is as given below:

X-- AREA --X	FROM GENE- RATION	-----AT FROM IND GENERATN	AREA BUSES----- TO IND MOTORS	TO LOAD	TO BUS SHUNT	TO GNE BUS DEVICES	AREA TOTALS IN MW/MVAR			-NET INTERCHANGE-	
							TO LINE SHUNT	FROM CHARGING	TO LOSSES	TO TIE LINES	TO TIES + LOADS
1 NORTH	42022.8 -7669.5	0.0 0.0	0.0 0.0	59648.0 5847.3	0.0 4637.9	0.0 0.0	-7.4 22909.8	0.0 70479.4	1580.3 24439.3	-19198.0 4975.5	-19485.8 4877.4
2 NRTHEAST	3834.4 -222.0	0.0 0.0	0.0 0.0	2865.7 911.2	0.0 1281.6	0.0 0.0	0.0 705.4	0.0 3556.4	111.9 731.6	856.8 -295.4	856.8 -295.4
3 WEST	78519.6 -932.1	0.0 0.0	0.0 0.0	60488.5 20020.3	0.0 -876.3	0.0 0.0	0.0 40343.0	0.0 93664.0	1990.1 33908.2	16041.1 -663.3	16041.1 -663.3
4 EAST	38906.7 -1069.6	0.0 0.0	0.0 0.0	24012.3 5469.4	0.0 2933.8	0.0 0.0	0.0 4123.4	0.0 24138.8	1024.8 13819.9	13869.6 -3277.4	14157.4 -3179.3
5 SOUTH	46098.0 -4718.3	0.0 0.0	0.0 0.0	56030.2 7979.9	0.0 -803.6	0.0 0.0	0.0 11484.7	0.0 43832.5	1637.2 21192.7	-11569.5 -739.4	-11569.5 -739.4
COLUMN TOTALS	209381.5 -14611.4	0.0 0.0	0.0 0.0	203044.6 40228.1	0.0 7173.4	0.0 0.0	-7.4 79566.3	0.0 235671.1	6344.3 94091.7	0.0 0.0	0.0 0.0

The Inter-area power flows summary is as given below:

FROM AREA	TO AREA:	1	2	3	4	5
1 NORTH	*					
	*		-10093	-9105		
	*		2651	2324		
2 NRTHEAST	*				857	
	*				-295	
3 WEST	*	10093			-706	6655
	*	-2651			1181	806
4 EAST	*	9105	-857	706		4915
	*	-2324	295	-1181		-67
5 SOUTH	*				-6655	-4915
	*				-806	67

3.0 Load Flow Study Results

3.1 Case – 0 : Without Gadarwara generation & associated transmission system

Study was carried for 2016-17 condition without Gadarwara generation & its associated transmission system. Load Flow Study results are enclosed at **Exhibit-0**. From the results it may be observed that power flow on all the 400 & 765 kV transmission lines are well within their limits.

3.2 Case – 1 : With Gadarwara generation & system strengthening

NTPC has indicated that the existing Bina – Seoni 765 kV S/c line is passing through the power plant vicinity. Therefore, it is proposed to provide connectivity to the power plant through LILO of Bina – Seoni 765 kV S/c line thus the step up voltage of power plant shall be at 765 kV. Accordingly study was carried out considering generation stepped up at 765 kV.

As per the Load Generation scenario emerging out during 2016-17, it is estimated that Western Region (WR) shall be surplus in the order of 10,000 – 15,000 MW and similarly Southern Region (SR) is likely to be in deficit. Due to this, power has tendency to flow from eastern part of WR which has major generation complexes to western part of Maharashtra which have major load centres as well as interconnections to SR.

Thus, besides above LILO for reliable evacuation of power from Gadarwara STPP, a 765 kV D/c corridor has been considered from Gadarwara to lower part of Maharashtra. A new 765/400 kV substation between Wardha & Bhadrawati has been proposed as the existing substations do not have adequate space for further connections. Also few generation projects in this area have applied for Connectivity. It is proposed to interconnect this new substation at Warora Pool to Solapur via a new 765/400 substation at Parli. The 400 kV interconnection to Warora Pool shall be provided through LILO of both circuits of Wardha-Parli 400 kV D/c quad line at this

substation. Further, new substation at Parli shall be interconnected with existing Parli (POWERGRID) substation through 400 kV D/c (quad) line.

The Load Flow results are enclosed at

Exhibit-I	: Base Case
Exhibit-IA	: Gadarwara – Bina 765 kV S/c outage
Exhibit-IB	: Gadarwara – Seoni 765 kV S/c outage
Exhibit-IC	: Gadarwara – Warora Pool 765 kV S/c outage
Exhibit-ID	: Warora Pool – Parli Pool 765 kV S/c outage
Exhibit-IE	: Parli Pool – Solapur 765 kV S/c outage

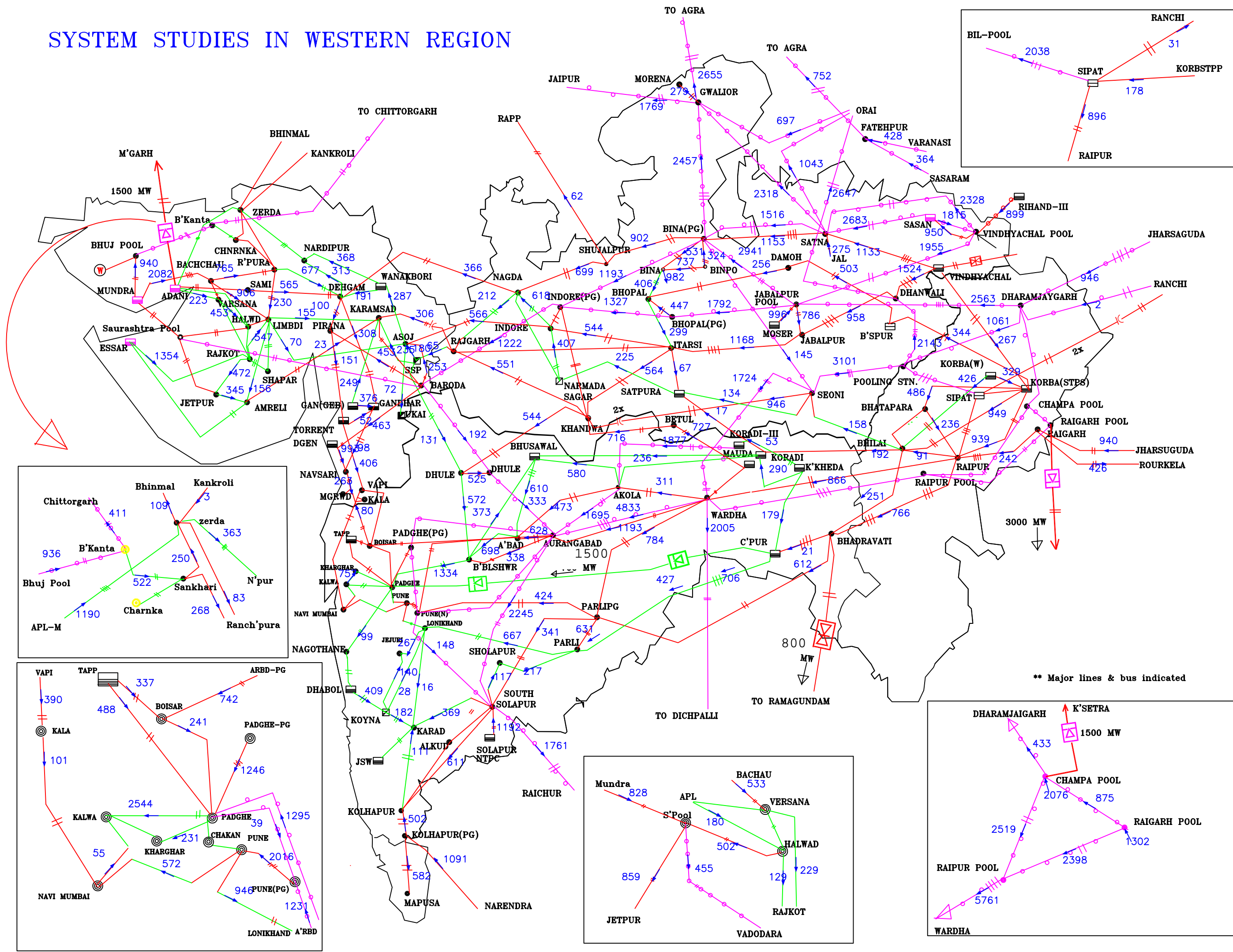
From the results it may be observed that with proposed system power flow on all the 400 & 765 kV transmission lines are well within their limits.

4.0 Conclusion

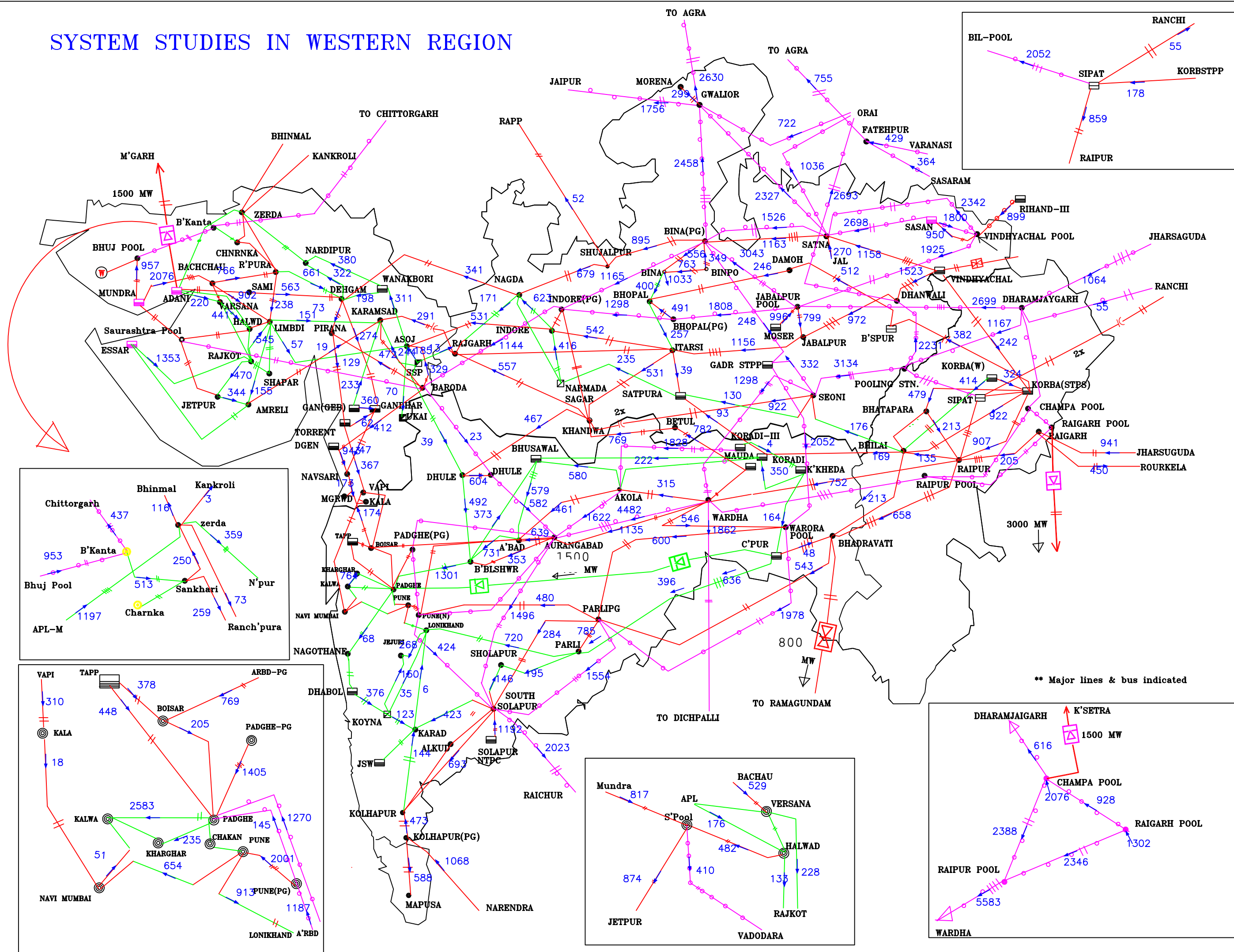
From the Load Flow Study studies and for reliable evacuation of power from Gadarwara STPP the following transmission system is proposed:

- LILO of Bina – Seoni 765 kv S/c line at Gadarwara STPP
- Gadarwara STPP – Warora Pool 765 kV D/c line
- Warora Pool – Parli Pool 765 kV D/c line
- Parli Pool – Solapur 765 kV D/c line
- Establishment of new 765/400 kV substation at Warora Pool & Parli Pool with 2x1500 MVA, 765/400 kV transformers each.
- LILO of both circuits of Wardha-Parli (POWERGRID) 400 kV D/c quad line at Warora Pool
- Parli Pool – Parli (POWERGRID) 400 kv D/c (quad) line.

SYSTEM STUDIES IN WESTERN REGION

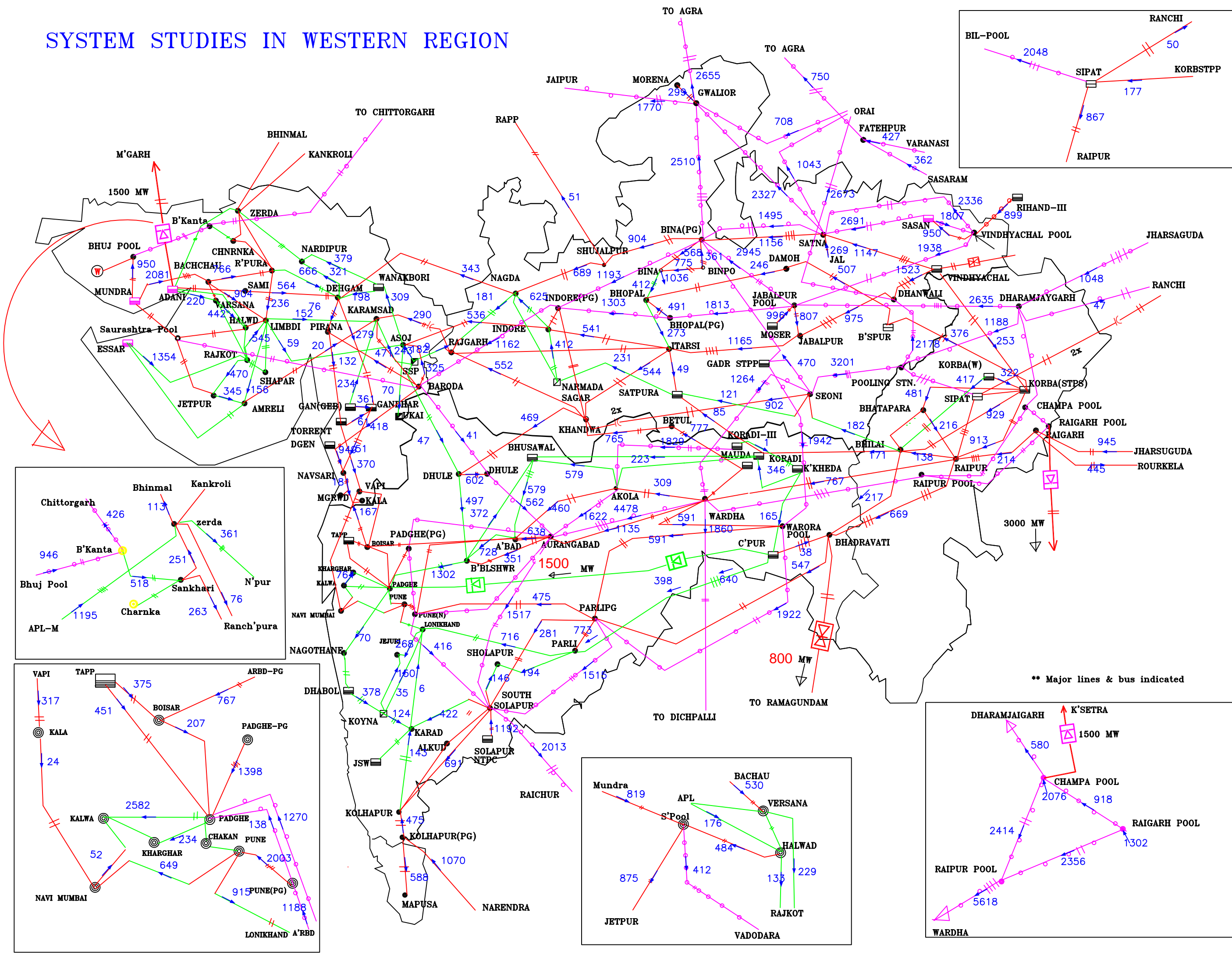


SYSTEM STUDIES IN WESTERN REGION

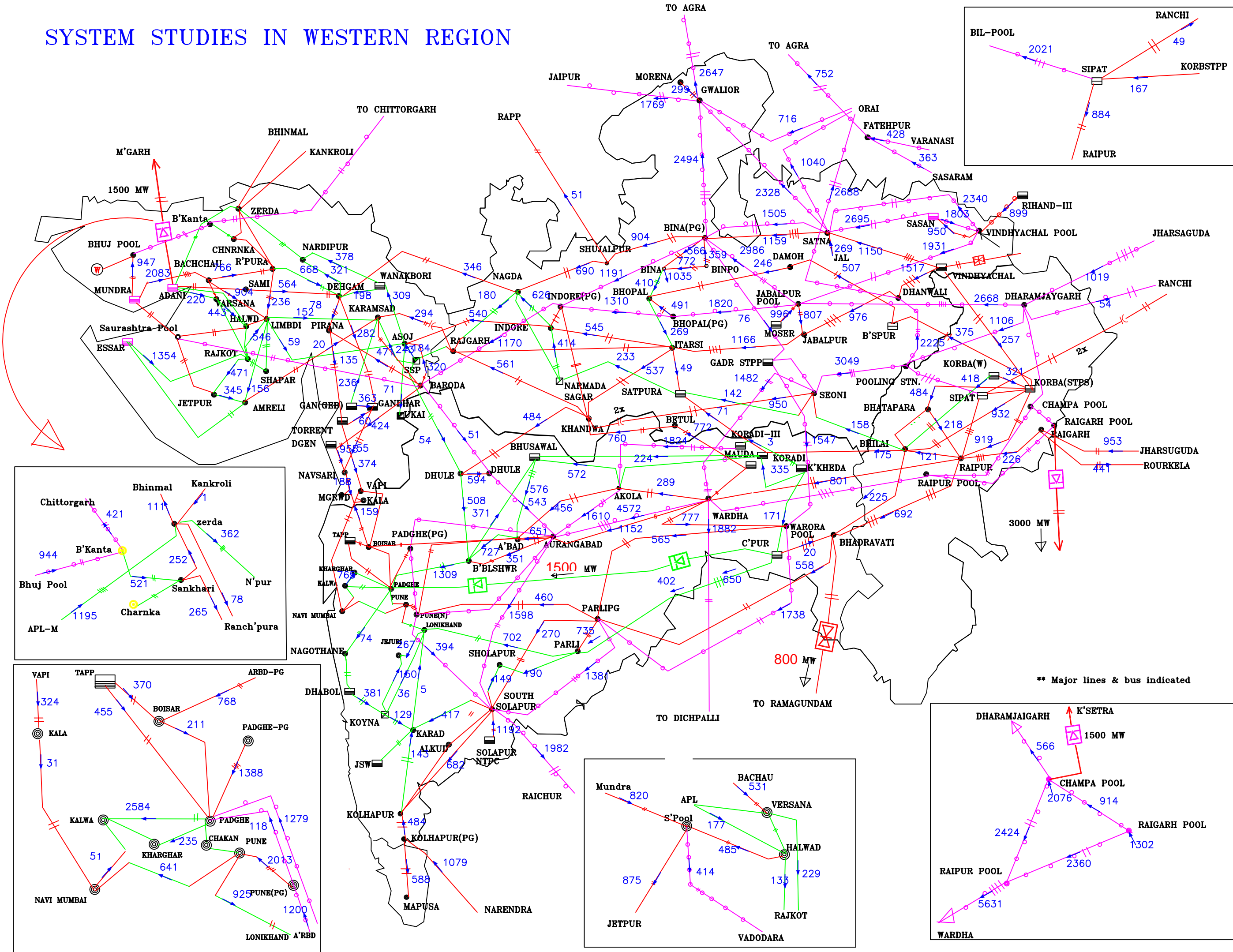


** Major lines & bus indicated

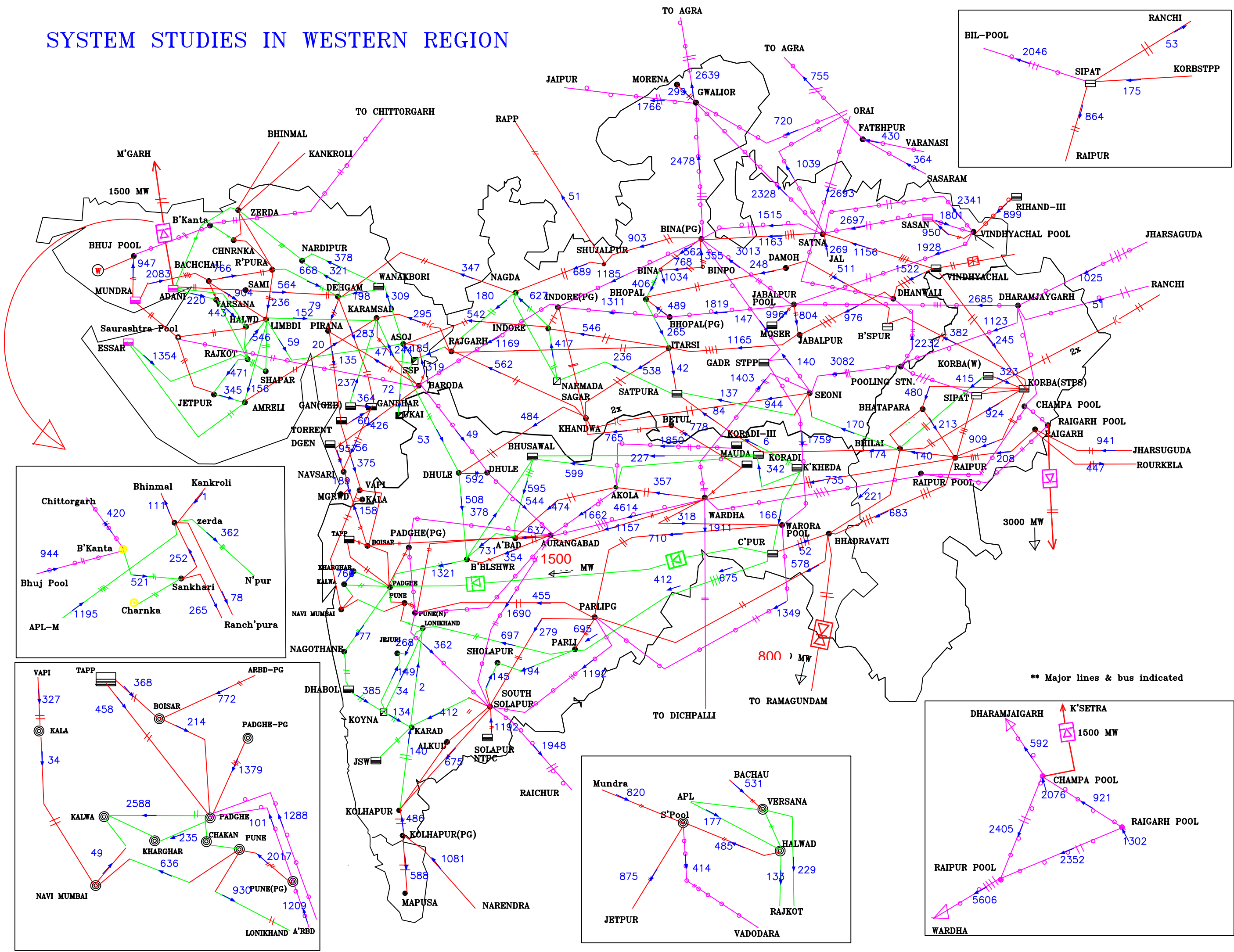
SYSTEM STUDIES IN WESTERN REGION



SYSTEM STUDIES IN WESTERN REGION

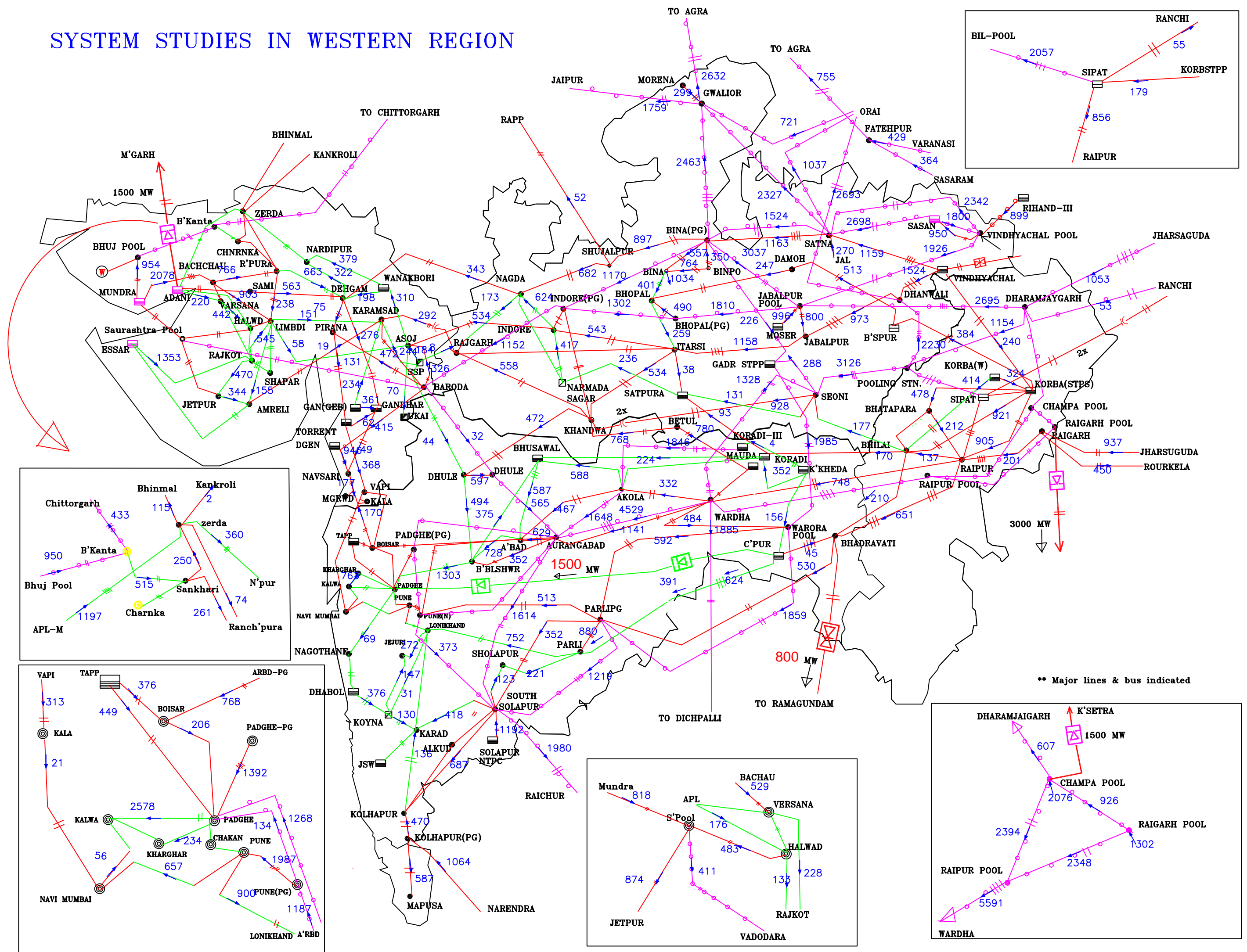


SYSTEM STUDIES IN WESTERN REGION



** Major lines & bus indicated

SYSTEM STUDIES IN WESTERN REGION



STATUS OF GENERATION PROJECTS

Name of Applicant:

Project Capacity (MW) :

Date of Status Submission :

S. No.	Item	Status / Information			
1.	Generation location				
	Location of power project (name of village/town, district/State)				
	Detail vicinity map of the project site on topo sheets to gather relative locations of other generation projects in the vicinity				
	Latitude & Longitude of the Project site				
2	Land				
S.No.		Govt Land	Pvt. Land	Forest Land	Total Land
1	Total Land required				
2	Acquired				
3	Possessed				
	Status of land to be acquired like date of notification for and date of acquisition etc (Attach a copy of “ deed of sale ” agreement for Private land & “ Agreement to sale ” for Govt. Land)				
3	Fuel				
	Type of Fuel (Gas/domestic coal/imported coal/Hydro)	Domestic Coal			
	Status of fuel tie-up for the total quantity of fuel required to generate full power at normative availability. Indicate status of mine allocation or fuel linkage (Status of Fuel Supply Agreement) [In Case of coal mine allotted mention its development status]				
4	Water				
	Status of in-principal approval from concerned State irrigation department (Attach a copy of water supply agreement with state/ central water commission and Ministry of water Resources)				
5	Environmental Clearance				
	Status of in-principle approval from concerned administrative authority responsible for according final approval in the central/State govt as the case may be. (Attach a copy of Environment clearance from MoEF)				
5a.	Consent to Establish				
6	MoEF CRZ Clearance (If Applicable- Attach a separate copy from MoEF)				
7	Equity Infusion				
	Board resolution of promoting company/companies to infuse equity (Attach a copy)				

STATUS OF GENERATION PROJECTS

S. No.	Item	Status / Information
8.	Forest Clearance	
	Status of in-principle approval from concerned administrative authority responsible for according final approval in the central/State govt as the case may be. (Attach a copy of Clearance from MoEF)	
9.	Pollution Clearance	
	CFE (Consent for establishment from State Pollution control board). (Attach a copy)	
10	Clearance from Ministry of Defence. (Attach a copy)	
11.	Clearance from Archaeological Depts. (Attach a copy)	
12.	Civil Aviation Clearance for Chimney Height. (Attach a copy)	
13.	EPC Contract Status	
	Source/ manufacturer of Main Plant(BTG)	
	Date of placement of contract for main plant (Attach Acknowledge copy of LOA)	
	Date of placement of contract for BoP. (Attach Acknowledge copy)	
	Advance release Amount (Rs Cr)	
14.	Status of PPA with beneficiaries including case-1 bids if applied for	
15.	Date of financial closure & Lead banker - Amount of Disbursement of Loan(Rs Cr) -	
16.	Expected Unit wise proposed commissioning schedule a) Unit – I : b) Unit – II : c) Unit – III : d) Unit – IV :	
17	Physical works Progress at site: a) Boundary/Fencing: b) Drum Lifting: c) BoP Status: d) Foundation & Erection of Chimney: e) Turbine related activities: f) Hydraulic test: g) Any other progress:	