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ಕರ್ನಾಟಕ ಸರ್ಕಾರ

GOVERNMENT OF KARNATAKA

ಪ್ರಧಾನಮುಖ್ಯ ಅರಣ್ಯ ಸಂರಕ್ಷಣಾಧಿಕಾರಿ
(ಅರಣ್ಯ ಪಡೆ ಮುಖ್ಯಸ್ಥರು) ರವರ ಕಛೇರಿOffice of
Principal Chief Conservator of Forests
(Head of Forest Force)ಅರಣ್ಯ ಭವನ, 18 ನೇ ಅಡ್ಡರಸ್ತೆ
ಮಲ್ಲೇಶ್ವರಂ ಬೆಂಗಳೂರು-560003
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E-office File No. KFD/HOFF/A52K(GFL)/15/2018-FC

E-63729

Encl: 3 sets of proposal hard copies

Date 22-01-2024

To,

The Additional Chief Secretary to Government
Forest, Ecology and Environment Department
M.S. Building, Bengaluru – 560 001

Sir,

Sub: Diversion of 174.652 hectare (*revised from 177.091*) of forest land in Dharwad, Haliyal, Dandeli Wildlife and Belagavi Divisions for laying of Goa-Tamnar 400 KV D/C Quad Transmission line (LILO Project) in favour of the Manager, Goa-Tamnar Transmission Project Limited, F1 Mira Corporate Suite, Main Mathura Road, Ishwar Nagar, New Delhi.

Proposal No. FP/KA/TRANS/37754/2018**Ref:**

1. Online proposal [FORM-A PART-I] dated 19-12-2018 of M/s Goa Tamnar Transmission Project Limited, F1 Mira Corporate Suite, Main Mathura Road, Ishwar Nagar, New Delhir/w uploading of acknowledgement on 17-01-2019 for having delivered the hard copies of proposal to jurisdictional Deputy Conservators of Forests and Deputy Commissioner.
2. This office letter of even number dated 12-01-2021[*Stage-I proposal*], 06-01-2023 [*letter to GoK seeking clarification on CEC report wrt Karnataka portion*]
3. Government of Karnataka letter No. FEE 08 FLL 2021(e) dated 16-02-2021[*GoK EDS Query*], 04-03-2023 [*letter to Central Empowered Committee seeking clarification on CEC report wrt Karnataka portion*]
4. Central Empowered Committee Report No. 6 of 2021 dated 23-04-2021 submitted to Hon'ble Supreme Court of India.
5. Meeting chaired by Member Secretary, CEC on 13-04-2023 regarding clarification sought by Government of Karnataka.
6. M/s Goa- Tamnar Transmission Project Limited Letter No. GTTPL/NXTL/ Wildlife/KA/22-23/389 dated 28-11-2022 addressed to Nodal Officer, FCA, Karnataka [*Requisition to consider the modified route for the project*]
7. M/s Goa- Tamnar Transmission Project Limited representation dated 25-08-2023 to field officers
8. Online submission of revised PART-II on 21-11-2023 by Deputy Conservator of Forests, Belagavi Division [*Letter No. D1/LND/Goa Tamnr/ 2023-24 dated 05-12-2023*]
9. Online submission of revised PART-II on 02-12-2023 by Deputy Conservator of Forests, Dharwad Division [*Letter No. C3/Goa*]

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Tamnar/Transmission/CR-32/2020-21/1371 dated 09-10-2023]

10. Online submission of revised PART-II 07-12-2023 by Deputy Conservator of Forests, Haliyal Division [*Letter No. D1/Goa Tamnar/CR-46/2022-23/2506 dated 08-11-2023*]
11. Online submission of revised PART-II 14-12-2023 by Deputy Conservator of Forests, Dandeli Wildlife Division (Kali Tiger Reserve) [*Letter No. B4/Land/Goa Tamnar/CR- /2023-24 dated 09-11-2023*]
12. Online submission of revised PART-III on 18-12-2023 by Chief Conservator of Forests, Belagavi Circle, Belagavi [*Letter No.A7/LND/FC/TransLine/GBM/CR-11/19-20/23-24/3318 dated 18-12-2023*]
13. Online submission of revised PART-III on 16-12-2023 by Chief Conservator of Forests, Dharwad Circle [*Letter No. A1/Goa Tamnar/Transmission/CR- /2023-24/1124 dated 13-10-2023*]
14. Online submission of revised PART-III on 14-12-2023 by Conservator of Forests, Kanara Circle [*Letter No. B2/GFL/Goa-Tamnar 400 KV TL/CR-29/2019-20 dated 09-11-2023*]
15. Online receipt of consolidated PART-III on 18-12-2023 by Nodal Officer from all Circles
16. M/s Goa- Tamnar Transmission Project Limited Letter No. STL/GTTPL/FDP/NXTL/23-24 addressed to Nodal Officer, FCA, Karnataka received through E-mail on 10-01-2024 [*Submission of Detailed Project Report along with justification and assessment of three alternative route*]
17. M/s Goa- Tamnar Transmission Project Limited Letter No. STL/GTTPL/FDP/NXTL/23-24/149 addressed to Nodal Officer, FCA, Karnataka dated 18-01-2024 [*Submission of Undertakings*]

Introduction (Provided by the User Agency)

1. The Goa-Tamnar Transmission Project is part of National Grid Development and is getting implemented through the Special Purpose Vehicle Goa-Tamnar Transmission Project Limited (GTTPL). The Project involves the laying of Additional 400 kv feed to Goa to meet the projected power requirement of the state with reliability.

The 400 kV D/C Narendra (Karnataka) – Xeldem (Goa) Transmission Line (NXTL) is starting from Narendra village in Dharwad District of Karnataka by tapping the existing 400 kV Narendra line of PGCIL by LILO and terminating at 400/220 kV substation at Dharbandora in Goa. The line will be passing through Dharwad, Belgaum and Uttar Kannada Districts in Karnataka and South Goa District of Goa.

GTTPL has been granted approval under section 68 (1) of the Electricity Act, 2003 for the Transmission Project. The Central Electricity Regulatory Commission has granted the transmission license for the Project on Build, Own, Operate and Maintain (BOOM) basis. Thereafter on 28.11.2018, GTTPL was granted authorization by the

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Central Electricity Authority (CEA) under section 164 of the Electricity Act, 2003 for laying of electric lines under the Project.

Enable power exchange between western and southern grids

- The Southern Region Power Committee of Central Electricity Authority has proposed Koppal-Narendra (New) transmission line for evacuation of RE power from Koppal Renewable Energy Zone (REZ).
- GTTPL's Xeldem-Narendra transmission line will further establish inter-state connectivity, in turn potentially enabling RE power exchange between Western and Southern grids.
- The proposed GTTPL project will help in strengthening the inter-state transmission system and in turn in the development of Green Energy Corridor.

Long-term power supply stability for Goa

The GTTPL project is envisioned to strengthen and provide long-term power supply stability in Goa. It will create transmission infrastructure that will take care of Goa's power demand for the next 15-20 years. By providing residents and industries with highly reliable power feed, the project will help in reducing the dependence of the state on expensive and polluting diesel-based power. Further, the proposed NXTL line would potentially connect Goa with upcoming solar energy project in Karnataka and will enable ~1,200+ MW of power exchange between Goa and Karnataka grids. Thus, the strengthened transmission network through NXTL will be instrumental in bringing clean and green renewable power to Goa.

Critical for achieving the goal of 'One Nation One Grid'

While the project is very important for Goa for securing its long-term power security, it is also of national interest as it will help develop green energy corridor and will contribute in achieving the goal of 'One Nation One Grid'. Further, the transmission lines are like national highways and are considered to be "shared assets." It would be uneconomical and technically infeasible to build dedicated transmission systems for individual states. The NXTL line will connect both western and southern grids. It would help in transmission of electricity from the western grid to Karnataka, when the state is witnessing power scarcity.

Play vital role in the growth of Karnataka's renewable energy sector

The project will also benefit Karnataka in the long term as the state is one of the top five states in the renewable energy (RE) sector in the country. The Karnataka's Renewable Energy Policy 2021-26 aims to export RE power outside Karnataka.

Chronology of Forest and Wildlife Clearance Process in Goa Portion

As this transmission line was earlier proposed to pass through the Bhagwan Mahavir Wildlife Sanctuary in the state of Goa, a Forest and wildlife clearance proposal for diversion of 48.3 ha vide proposal No. FP/GA/TRANS/35354/2018 was submitted in the state of Goa on 24th Aug 2018.

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The forest diversion proposal for this project was recommended by the Goa State Board for Wildlife and was sent to the National Board for Wildlife (NBWL), New Delhi for approval. The proposal was discussed in the 57th Standing Committee of NBWL held on April 7, 2020 and was approved by the Board for further issuance of Stage-1 clearance w.r.t the forest proposal. Subsequently, on 26th June 2020, a case was filed by the Goa Foundation on wildlife approval provided for Goa portion by NBWL, which was referred to the Central Empowered Committee of the Hon'ble Supreme Court.

On 23 April 2021, Central Empowered Committee (CEC) of the Supreme Court submitted its report 6 of 2021 on case filed by Goa Foundation. ***“CEC recommended that instead of clearing canopy of virgin forest cover along 10.50 km long corridor with 46m ROW in Goa State the proposed 400 kV line should be drawn along the existing 220 kV corridor line in Goa State after establishing 400 kV corridor connectivity between Mapusa and Sangod and 220 kV line between Sangod and Xeldem. CEC further recommended that the project proposal in respect of Karnataka part should also be suitably amended to make use of 110/220 kV line corridor.”***

Key Findings of the CEC regarding the project are as below:

- The report acknowledged that the significant number of trees will need to be trimmed and not felled.
- The transmission line when constructed will not affect the movement of wildlife and long span between towers will ensure natural regeneration of trees.
- Transmission lines do not bifurcate the forest into different parts except for arboreal animals.
- The transmission line projects are environmentally friendly and are excluded from environment impact assessment studies.
- The project will have temporary and minor impact on the wildlife and biodiversity. Further, changes, if any, in the land use during the construction period will be localised and recoverable.
- The present route was ultimately agreed upon and finalised after assessment of the three possible routes by the state forest department and after ensuring minimal impact on environment.
- GTTPL will incur costs for compensatory afforestation.

On 7 April 2022, Hon'ble Supreme Court gave its final order on the CEC report accepting the recommendations of CEC report. Subsequently, on 16 May 2022, GTTPL received approval from Goa Electricity Department on utilization of 110 & 220 kV corridor as per the Hon'ble Supreme Court's order.

GTTPL submitted revised forest & wildlife proposals in the state of Goa, and the forest proposal was accepted by the Project Screening Committee, Goa Forest Department on 22 November 2022.

Justification and alternatives examined by the User Agency

The 400 kV D/C Narendra (Karnataka) – Xeldem (Goa) Transmission Line is starting from Narendra village in Dharwad District of Karnataka state by tapping the

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existing 400 kV Narendra line of PGCIL by LILO and terminating at 400/220 kV substation at Dharbandora in Goa. The line will be passing through Dharwad, Belgaum and Uttar Kannada District in Karnataka and North and South Goa District of Goa.

Three alternative route corridors were identified largely by maximizing linear sighting opportunities, such as following existing roadways and power line corridors, negotiation with rivers, railway, road electric power line crossings. All efforts have been made to provide minimum number of angle points. Power line crossings have been fixed as close as possible to right angle but not less than 60° crossings. Every effort has been made to avoid forest and wildlife, but it is not possible to completely avoid the forest and wildlife. The alignment with minimum crossings of the forest has been selected as the final proposed alignment.

As per the recommendation of CEC regarding suitable realignment in NXTL route in Karnataka state and suggestion from the Karnataka Forest Department for further realignment of the route by utilizing the existing corridor of 110/220 kV corridor, the modified proposal has been finalized.

After detailed analysis based on the recommendation made by DCF, Dandeli Wildlife sanctuary, GTTPL explored the proposed route by utilizing existing 220 kV corridor to the maximum extent in Dandeli and Haliyal division. After survey, *it is observed that in the proposed route alignment, 45.071 ha is being used from the existing corridors of 110/220 kV lines in the state of Karnataka.* Hence after detailed examination, it is found that the alternative – I is the best route. Keeping the above points in consideration, we propose Alternative – I to be taken as final proposed route alignment.

Detailed Comparative statement along with alignments are shown below:

Comparative Statement of alternative routes			
Description	Alternate Route 1 (As per suggested by Forest Dept. Karnataka)	Alternate Route 2 (Old Route Alignment)	Alternate Route 3
Bee Line Length	76.212 Km	75.642 Km	75.642 Km
Line Length	85.724 Km	77.64 Km	79.102 Km
Forest Length	31.006 Km	31.887 Km	43.400 Km.
Wildlife Length	6.962 Km	6.61 Km	8.100 Km.
Total Forest & WL Length	37.968 Km	38.497 Km	51.500 Km.
Forest Area (Ha)	142.626 Ha	146.679 Ha	199.641 Ha.
Wildlife	32.026 Ha	30.412 Ha	37.260 Ha.
Total Forest & WL Area	174.652 Ha	177.091 Ha	236.901Ha.
Existing 220 /110 kV Corridor Used	9.798 Km.	2.340 Km.	Nil
Area already used	45.0708 Ha.	10.764 Ha.	Nil

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220/110 kV existing Corridor			
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2. Chronology of Forest and Wildlife Clearance Process in Karnataka Portion

User Agency (Goa Tamnar Transmission Project Limited) applied for forest clearance for 177.091 Ha of forest land Vide Ref (1) for the above project. After Field verification and communication with the User Agency, DCF's, Haliyal, Dharwad, Belgaum and Dandeli Wildlife sent the proposal (Part-II) to the concerned CCF on 24-11-2019, 19-12-2019, 21-12-2019 and 31-12-2019 respectively. CCF, Belgaum, Kanara & Dharwad after field verification, sent the proposal (Part-III) to the Nodal Officer on 08-06-2020. Nodal Officer raised the EDS query to CCF's to sort out some technical data in the proposal on 30-07-2020. After getting replies from the field officers, Nodal Officer vide Ref (2) letter dated 12-01-2021 sent the proposal (Part-IV) to Government of Karnataka for not recommending the proposal for clearance.

State Government raised the EDS query to Nodal Officer vide Ref (3) letter dated 16-02-2021 to communicate to the User Agency to use the already existing 200 KV defunct line of KPTCL for the above project. Nodal Officer communicated the same to the field officers on 15-03-2021 to act accordingly. DCF, Kali Tiger Reserve replied that the existing defunct line of 200 KV have a RoW of 22 meters, but to implement the 400 KV, the required RoW is 46 meters. All the replies from the field officers were forwarded to the Government of Karnataka by the Nodal Officer on 14-06-2021.

Meanwhile, Goa Foundation filed an application No. 1440 on 26-06-2020 before the Central Empowered Committee alleging violations of the Hon'ble Supreme Court Order (Matters relating to the National Parks/Wildlife Sanctuaries) and contravention of the Wildlife (Protection) Act, 1972 in granting clearance by the Standing Committee of NBWL, in respect of three linear infrastructure projects (GTTPL is one of the project).

Central Empowered Committee vide Ref (4) Submitted the report No. 6 of 2021 to Hon'ble Supreme Court of India opined that the project proposed by the GTTPL would be detrimental to the fragile ecosystem of the western Ghats and recommended for realignment of the proposed transmission line in Goa portion and that the proposal should be suitably amended for Karnataka Portion also. Further, based on the recommendation of CEC, Hon'ble Supreme Court on 07-04-2022 directed to take necessary steps in accordance with the CEC report no. 6 of 2021 and recommendations of NBWL dated 07-04-2020 was set aside.

Additional Chief Secretary, F&E Department, Government of Karnataka, vide Ref (3) letter dated 04-03-2023 has requested the CEC seeking clarification regarding the Karnataka Portion on usage of the existing KPTCL corridor. CEC called for a meeting on 13-04-2023 and clarified as follows:

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“It was clarified that the CEC has not examined any of these proposed alignments in the State of Karnataka. In fact, examination by the CEC was limited to the State of Goa only. A decision as to the most appropriate alignment for the proposed 400 KV transmission line in Karnataka will require to be taken by the State Government after considering the technical feasibility of drawing 400 KV line up to Narendra, the extent of forests involved and the number of trees to be cut in each of the three alignments and the impact of each of these options on the wildlife and ecology of the area.

Keeping in view the above, the State Government may accordingly take a decision in this regard and thereafter recommend the proposal for diversion of the forest land under the Forest (Conservation) Act, 1980 to the Ministry of Environment, Forest & Climate Change”.

Accordingly, Additional Chief Secretary, FEE Department held a meeting on 19-04-2023 with the field officers and PCCF (FC) and asked the User Agency to examine the alternatives and submit the proposal. Accordingly, the User Agency submitted the representation (realignment of proposal) to field officers vide Ref (6) and the proposal have been scrutinized by CCF's of Kanara, Dharwad and Belgaum Circles and DCF's of Dandeli Wildlife, Haliyal, Dharwad and Belgaum Divisions. Accordingly, CCF, Dharwad Circle, CCF, Belgaum and CF, Kanara Circle have submitted their proposal in hard copies to the Nodal Officer.

Based on the report from field officers, Nodal Officer has changed the revised extent in Parivesh Web portal from 177.091 Ha to 174.652 on 21-11-2023 and sent the link to the concerned CCF's on 22-11-2023 and from DCF to UA on 22-11-2023. User Agency modified the proposal and submitted to DCFs on 25-11-2023.

3. Location details and Component wise break up: Location details of the forest land proposed for diversion are given below.

District	Division	Village		Sy No.	Forest extent proposed for diversion (ha)
Belagavi	Belagavi	1	Manjarapai	12	0.936
				13/B	0.136
				11	0.475
		2	Londa	20	0.417
		3	Satnali	13	1.625
				17	1.548
		4	Machali	9	1.184
				13	0.76
				28	1.266
		5	Potoli	35	0.215
				XX-(33)	0.01
				16	0.751

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				13	0.786
		6	ShindholiBudaruka	33	0.691
				45	0.312
		7	KapoliKunjakheda	93B	7.454
		8	BatewadiTilewadi	2	0.479
		9	Malawad	35	7.178
				77	4.826
		10	Halga	147	0.35
				152	3.105
				138	0.938
				137	0.466
				116	1.684
		11	Kirhalasi	64	5.282
		12	Sonenhatti	112	2.784
				132	0.065
		13	Gastholi	32	1.046
				34	0.076
				35	0.766
				31	2.202
		14	Dehgaon	346	0.733
				345	0.798
				344	1.222
				338	0.433
				337	0.639
				336	0.629
				259	0.558
				260	0.954
				261	0.915
				264	0.766
				266	0.613
				267	0.728
				271	0.924
				272	0.467
				273	0.294
				274	0.899
				276	1.798
		15	Kulavalli	344	0.972
				346	1.348
				348	0.187
				28	0.035
				33	2.06
				32	1.184
				39	1.054
		Belagavi Division Area			70.023
Dharwad	Dharwad	16	Guladkoppa	130	2.297
		17	GuledhakoppaMadhiko ppa	188	1.322
				129	1.189
		18	Kotur	696	2.45

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		19	Niralkatti	257	0.5
		Dharwad Division Area			7.758
Uttara Kannada	Haliyal	20	Konasheta	7/A1	19.739
				42	0.81
		21	Chandevadi	26	6.725
				59	0.929
				58	1.149
				8	2.176
				22	Kamare
		24	14.113		
		136	0.202		
		127	0.175		
		135	0.542		
		23	Boregali	27	0.054
				3	3.443
		24	Chapeli	xx	4.929
				42	5.84
				21	0.255
		Haliyal Division Total			
	Dandeli Wildlife	25	Atle	2	5.733
				12	0.41
		26	Anmod	87A1A	12.031
				26	3.746
				89	1.188
				90	1.241
				91	1.18
				92	1.222
				93	1.214
				83A	0.539
		27	Kalambuli	4	1.002
				13	0.243
				55	0.097
				6	0.724
				66	0.068
				14	0.194
				51	1.194
		Dandeli Wildlife Division Total			
Grand Total				174.652	

The component wise breakup of the forest land proposed for diversion is given below.

Project Component		Forest Land requirement (ha)
1	Transmission Line Corridor	174.652
Total		174.652

- 4. DCF, Belagavi Report:** The Deputy Conservator of Forests, Belagavi Division has inspected the project site on 18-11-2023 & 02-12-2023 and vide Ref (8) has submitted the Site Inspection Report along with other details in PART-II of the proposal. **The**

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Deputy Conservator of Forests, Belgaum Division has opined for rejection of the proposal, as the forest land falls in the Western Ghats with rare and endangered species and is evergreen forest having rich bio-diversity, birds and medicinal plants. The Deputy Conservator of Forests Belgaum has stated that, if permission is given to this project, there will be more damage to the bio- diversity of this area. It affects the total eco-system and Western Ghats and bifurcates the entire landscape. Main features of the forest land proposed for diversion as per the DCF, Belagavi Division report r/w reports of CCF, Belagavi Circle and that of ICT Centre of Forest Department are as follows.

- a. As the forest land proposed for diversion is for construction of Transmission Line, the soil erosion will be negligible.
- b. The forest land proposed for diversion is in general landscape of Eco-class I (Tropical Wet Evergreen Forests, Tropical Semi Evergreen Forests and Topical Moist Deciduous Forests) with 0.4 canopy density.
- c. As per Item 4(ii) of PART-II (Belagavi Division), there are 23,996 trees of various species on the forest land proposed for diversion in Belagavi Division. Major tree species include *Terminalia paniculata*, *Terminalia tomentosa*, *Xylia xylocarpa*, *Tectona grandis*, *Boswellia serrata*, *Syzigium cumini*, *Couroupitaguianensis*, *Terminalia bellerica*, *Dalbergia latifolia*, *Terminalia chebula*, *Wrightia tinctoria*, *Butea monosperma*, *Grewia tiliaefolia*, *Albizia procera*, *Albizia lebbek*, *Terminalia arjuna*, *Pterocarpus marsupium*, *Mangifera indica*, *Pongamia pinnata*, *Adina cordifolia*, *Garcinia indica*, *Ficus bengalensis*, Bamboo species, among others.
- d. Major wild animals found in and around the project area include Wild Elephant, Panther, Sloth bear, Snakes, Peafowl among others.
- e. There are no other rare / endangered / unique species of flora and fauna reported in the forest area proposed for diversion.
- f. As per Item 8 (ii) of PART-II pertaining to Belagavi Division, the forest land proposed for diversion does not form part of any National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve.
- g. As per Item 8 (iv) of PART-II pertaining to Belagavi Division, there are no National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve within one kilometre from the boundary of the forest land proposed for diversion.
- h. There are no Protected/ Archaeological/ Heritage Sites/ Defence establishments located in the proposed area.
- i. The forest area proposed for diversion is the bare minimum and unavoidable.
- j. There is no violation reported under the Forest (Conservation) Act, 1980.

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5. **DCF, Dharwad Report:** The Deputy Conservator of Forests, Dharwad Division has inspected the project site on 01-10-2023 and vide Ref (9) has submitted the Site Inspection Report along with other details in PART-II of the proposal **and his recommendation** to the Chief Conservator of Forests, Dharwad Circle. Main features of the forest land proposed for diversion as per the DCF, Dharwad Division report r/w reports of CCF, Dharwad Circle are as follows.
- The forest land proposed for diversion is not prone to soil erosion.
 - The forest land proposed for diversion is in general landscape of Eco-class III (Tropical Dry Deciduous Forests) with 0.4 canopy density.
 - As per Item 4(ii) of PART-II of the proposal (Dharwad Division), there are 2301 trees on the forest land proposed for diversion. Major tree species include Bamboo sps, *Acacia auriculiformis*, *Tectona grandis*, *Butea monosperma*, *Eucalyptus* sps, *Azadirachta indica*, *Santalum album*, *Acacia nilotica* among others.
 - Major wild animals found in and around the project area include Spotted deer, Wild Boar, Jackal, Peafowl, etc.
 - There are no other rare / endangered / unique species of flora and fauna reported in the forest area proposed for diversion.
 - As per Item 8 (ii) of PART-II (Dharwad Division), the forest land proposed for diversion does not form part of any National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve.
 - As per Item 8 (iv) of PART-II (Dharwad Division), there are no National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve within one kilometre from the boundary of the forest land proposed for diversion.
 - There are no Protected/ Archaeological/ Heritage Sites/ Defense establishments located in the proposed area.
 - The forest area proposed for diversion is the bare minimum and unavoidable.
 - There is no violation reported under the Forest (Conservation) Act, 1980.
6. **DCF, Haliyal Report:** The Deputy Conservator of Forests, Haliyal Division has inspected the project site on 18-10-2023 and vide Ref (10) has submitted the Site Inspection Report along with details of the site in PART-II of the proposal **and his recommendation** to the Conservator of Forests, Kanara Circle. Main features of the forest land proposed for diversion as per the Deputy Conservator of Forests, Haliyal Division report r/w reports of CF, Kanara Circle are as follows.
- The forest land proposed for diversion is in general landscape of Eco-class I (Tropical Moist Deciduous Forests) with very dense forest (canopy density>0.6).

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- b. As per Item 4(ii) of PART-II (Haliyal Division), there are 35,445 trees on the forest land proposed for diversion in Haliyal Division. Major tree species include *Terminalia tomentosa*, *Terminalia paniculata*, *Acacia auriculiformis*, *Lagerstroemia lanceolata*, *Grewia tiliifolia*, *Dalbergia latifolia* and various other jungle wood species.
 - c. Major wild animals found in and around the project area include Tiger, Panther, Indian gaur, Spotted deer, Sloth bear, Hare, Bonnet macaque, King cobra among others.
 - d. There are no other rare / endangered / unique species of flora and fauna reported in the forest area proposed for diversion.
 - e. As per Item 8 (ii) of PART-II, the forest land proposed for diversion does not form part of any National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve.
 - f. As per Item 8 (iv) of PART-II, there are no National Park/ Wildlife Sanctuary/ Biosphere Reserve/ Tiger Reserve within one kilometre from the boundary of the forest land proposed for diversion.
 - g. There are no Protected/ Archaeological/ Heritage Sites/Defense establishments located in the proposed area.
 - h. The forest area proposed for diversion is the bare minimum and unavoidable.
 - i. There is no violation reported under the Forest (Conservation) Act, 1980.
7. **DCF, Dandeli Wildlife Division Report:** The Deputy Conservator of Forests, Dandeli Wildlife Division (Kali Tiger Reserve) has inspected the project site on 27-09-2023 and vide Ref (11) has submitted the Site Inspection Report along with details of the site in PART-II of the proposal **and his recommendation** to the Conservator of Forests, Kanara Circle. Main features of the forest land proposed for diversion as per the Deputy Conservator of Forests, Dandeli Wildlife Division report r/w reports of CF, Kanara Circle are as follows.
- a. The forest land proposed for diversion is in general landscape of Eco-class I (Tropical Wet Evergreen Forests, Tropical Semi Evergreen Forests and Topical Moist Deciduous Forests) with 0.4 canopy density.
 - b. As per Item 4(ii) of PART-II (Dandeli Wildlife), there are 10,810 trees on the forest land proposed for diversion in Dandeli Wildlife Division. Major tree species include *Terminalia tomentosa*, *Syzigiumcumini*, *Terminalia paniculata*, *Cinnamomum zeylanicum*, *Lagerstroemia lanceolata*, *Myristica magnifica*, *Mangifera indica*, *Terminalia bellerica*, *Mimusops elengi*, *Garcinia indica*, *Grewia tiliifolia*, *Calophyllum inophyllum*, *Emblica officinalis*, *Dalbergia latifolia*, among others.

I/544439/2024

- c. Major wild animals found in and around the project area include Tiger, Leopard (including black panther), Indian gaur, Sambar, Spotted deer, Hornbills, Sloth bear, etc.
 - d. There are no other rare / endangered / unique species of flora and fauna reported in the forest area proposed for diversion. The Castle rock night frog is endemic to this area.
 - e. As per Item 8 (ii) of PART-II (Dandeli Wildlife), the forest land proposed for diversion forms part of Anshi-Dandeli National Park (*which is also the Kali Tiger Reserve*).
 - f. There are no Protected/ Archaeological/ Heritage Sites/Defense establishments located in the proposed area.
 - g. The forest area proposed for diversion is the bare minimum and unavoidable.
 - h. There is no violation reported under the Forest (Conservation) Act, 1980.
8. **CCF, Belagavi Circle Report:** The Chief Conservator of Forests, Belagavi Circle, Belagavi vide Ref (12) has submitted the details in PART-III online. Agreeing with the opinion of the Deputy Conservator of Forests, Belagavi Division, the Chief Conservator of Forests, Belagavi Circle has also **opined to reject** the proposal.
9. **CCF, Dharwad Circle Report:** Agreeing with the recommendation made by the Deputy Conservator of Forests, Dharwad Division, the Chief Conservator of Forests, Dharwad Circle has also **recommended** the proposal.
10. **CF, Kanara Circle Report:** The Conservator of Forests, Kanara Circle, Sirsi has inspected the project site personally on 30-10-2023 and vide Ref (14) has submitted the Site Inspection Report in PART-III online. Agreeing with the recommendation made by the Deputy Conservator of Forests, Haliyal Division and Deputy Conservator of Forests, Dandeli Wildlife Division (Kali Tiger Reserve), the Conservator of Forests, Kanara Circle has also **recommended** the proposal.
11. **Tree estimation (Division wise) as below:**

Sl. No.	Division	No. of trees estimated
1	Belgaum	23,996
2	Dharwad	2,301
3	Haliyal	35,445
4	Dandeli WL	10,810
	Total	72,552

12. **Nodal Officers Remarks:** Nodal Officer has inspected the site of the project in Dandeli Wildlife Division, Haliyal Division & Belgaum Division on 16th & 17th of Jan 2024 and had detailed discussion with the Forest Officers and the Project Proponent.

I/544439/2024

The number of trees that have been estimated is 72,552 numbers. However, the Project Proponent have given an undertaking that not more than 35% of the trees will be required to be cut. This is because of the following reasons: -

- 1) Part of the transmission line passes through the elephant corridor, hence the height requirement of the tower will be around 14-15 meters. Further they require around 6 meters of clear space between the top canopy of the tree and the lowest conductor of the transmission line. Thus, trees having height of less than 8 meters may not be required to be cut. Only pruning may be necessary.
- 2) The width of the Right of Way has been taken as 46 meters. However, only those trees need to be cut which are falling where the bases are required to be constructed for the towers. The balance trees may need lopping & pruning. Approximately 25,000 trees out of 72,552 trees may be required to be cut. The user agency has given an undertaking dated 18-01-2024 to that effect (**enclosed as Annexure-B**).

Further, as regards DCF, Belgaum Division's & CCF, Belgaum Circle's remarks on the bifurcation of the Western Ghats is concerned, it is felt that it is inevitable, if the transmission line has to be laid from Karnataka to Goa because of their geographical locations.

However, mitigation measures such as increasing the height of the tower by an additional 6 meters in the elephant corridor will be carried out by the project proponent to allow for the free movement of the animals. Further, as per the guideline No.7-25/2012-FC dated 19-11-2014 issued by Ministry of Environment, Forests & Climate Change, wherever the transmission lines pass through the National Parks, Wildlife Sanctuaries and Wildlife Corridors, insulated conductors will be used to prevent electrocution of animals.

- 13. Net Present Value (NPV):** The User Agency is required to pay the Net Present Value (NPV) of forest land proposed for diversion as per Para 3.1 to 3.4 of the FC Guidelines communicated by Government of India, Ministry of Environment, Forests and Climate Change, New Delhi dated 29-12-2023. **The User Agency has submitted an Undertaking dated 25-08-2023 to pay the charges towards Net Present Value (NPV) of the forest land proposed for diversion.**
- 14. Compensatory Afforestation (CA):** In accordance with the provisions of Para 13 (4) (b) of the FC guidelines dated 29-12-2023 of Government of India, Ministry of Environment, Forests and Climate Change, New Delhi, the instant proposal being for laying a Transmission Line, the Compensatory Afforestation can be raised and maintained at the cost of the User Agency on degraded forest land twice in extent of the forest area proposed for diversion. Accordingly, the Deputy Conservator(s) of Forests, Belagavi, Dharwad & Haliyal have identified the following degraded forest land parcels in their jurisdictions.

I/544439/2024

District	Taluk	Village	Sy No.	Extent of Degraded Forest Land (ha)
Belgaum	Gokak	Gujnal	270(57)	50
	Belgaum	ChandurTummaraguddi	13 & 136	100
	Belagavi CA land Total (A)			150
Dharwad	Dharwad	Varav-Nagalavi	20, 24, 25, 26 ,37 & 39	16
	Dharwad CA land Total (B)			16
Uttara Kannada	Haliyal	Devalli	4A1A1A1A1A	42
		Kunigini	22A1	22.5
		Guledakoppa	18	51
		Tatwanagi	244 & 68	28
		BK Halli	244	3
		GuledakoppaBelavatgi	6 & 65 (95)	48
	Haliyal CA land Total (C)			194.5
Grand Total (A+B+C)				360.5

The CA land details in the form of KML files, Topo Maps, Geo-referenced Maps along with the GPS reading of all corners have already been uploaded in PART-II (Belagavi, Dharwad and Haliyal Divisions) of the proposal. Further, the Deputy Conservator(s) of Forests, Belagavi, Haliyal and Dharwad Division(s) have submitted the CA Land Suitability Certificates (in prescribed formats) and the CA Schemes. Further, **the User Agency has furnished an Undertaking dated 25-08-2023 to pay the applicable Compensatory Afforestation (CA) charges.**

15. Status of RoFR compliance: With regard to compliance of the provisions of Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forests Rights) Act 2006 and Rules 2008, the User Agency has not obtained and furnished the requisite **RoFRCertificate in FORM-I (for Linear projects)** issued by the jurisdictional Deputy Commissioner as per Annexure II of the FC Guidelines communicated by Government of India, Ministry of Environment, Forests and Climate Change, New Delhi vide F.No. 5-2/2017-FC dated 28-03-2019. The User Agency is being informed to obtain the required RoFR certificate and submit a copy.

16. Wildlife Clearance: As the proposal involves diversion of forest land inside a Protected Area (Kali Tiger Reserve), the User Agency will have to obtain the wildlife clearance for the proposal from the National Board for Wildlife. **The User Agency is being informed to obtain such wildlife clearance for the project.**

Under the above circumstances, it is submitted for consideration under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 174.652 hectare of

I/544439/2024

forest land in Dharwad, Haliyal, Dandeli Wildlife and Belagavi Divisions for laying of Goa-Tamnar 400 KV D/C Quad Transmission line (LILO Project) in favour of Manager, Goa-Tamnar Transmission Project Limited, F1 Mira Corporate Suite, Main Mathura Road, Ishwar Nagar, New Delhi for a period of Twenty (20) years subject to production of RoFR Certificate in FORM-I (for linear projects) and further subject to the conditions appended in Annexure 'A'.

The hard copy of the proposal along with the relevant documents in 3 sets is submitted herewith for further needful.

Yours Faithfully

(Brijesh Kumar Dikshit, IFS) 22/01/24

Principal Chief Conservator of Forests
(Head of Forest Force)

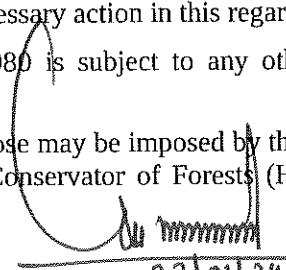
Copy to the:

1. Chief Conservator(s) of Forests, Belagavi / Dharwad/ Kanara Circle(s) for information.
2. Deputy Conservator(s) of Forests, Belagavi / Dharwad/ Dandeli Wildlife/ Haliyal Division for information.
3. Manager, M/S Goa Tamnar Transmission Project Limited, F1 Mira Corporate Suite, Main Mathura Road, Ishwar Nagar, New Delhi-110 065 for information and **with the request to obtain the RoFR certificate in FORM-I (for Linear projects) issued by the jurisdictional Deputy Commissioner as per Annexure II of the FC Guidelines communicated by Government of India, Ministry of Environment, Forests and Climate Change, New Delhi vide F. No. 5-2/2017-FC dated 28-03-2019.**

I/544439/2024

ANNEXURE- 'A'

1. The legal status of forest land shall remain unchanged and it shall continue to be the forest land.
2. The User Agency shall pay the applicable Net Present Value (NPV), Compensatory Afforestation (CA) charges, cost of extraction of trees (if required in future), land lease rent and any other levies as per the conditions of approval.
3. The User Agency shall demarcate the lease area in the manner specified at the time of approval at its own cost.
4. The User Agency shall provide the signages of appropriate size and kind all along the Transmission Line within forest limits for creating awareness about forest, Wildlife and Environment issues among general public at project cost in consultation with the jurisdictional Deputy Conservator of Forests/ Conservator of Forests/ Chief Conservator of Forests.
5. The lessee shall not sub-lease, mortgage and hypothecate the forest area.
6. The leased out area should be used for the purpose for which it is granted. In case, the land is not used for the stipulated purpose within two years or when it is no longer needed for the stipulated purpose, the area would stand resumed to the Forest Department.
7. The application for renewal of the lease in the prescribed form and manner shall be submitted at least six months prior to the expiry of forest lease. In case, no renewal is sought, the Lessee shall hand over the lease.
8. No residential or commercial buildings shall be permitted in the forest area proposed for diversion.
9. No crushing / breaking of stones or labour camp shall be allowed inside forest area and all waste / debris generated shall be scientifically disposed off outside the forest area.
10. Any damage to forest area because of implementation of the project shall be compensated by the Lessee. The extent of damage shall be assessed by the jurisdictional Deputy Conservator of Forests/ Conservator of Forests/ Chief Conservator of Forests.
11. The Lessee shall ensure that no avoidable harm is caused to the fauna and flora in and around the proposed area.
12. No change in Land Use Plan shall be done unless prior approval of Government of India under FC Act is obtained.
13. In case, any violation of the provisions of the Karnataka Forest Act, 1963 & Rules, 1969 or other relevant Acts/Rules is reported during the lease period, the lease will be liable for forfeiture under Section 82 of Karnataka Forest Act, 1963. The Chief Conservator of Forests and/or Deputy Conservator of Forests concerned are authorized to take necessary action in this regard.
14. The approval under the Forest (Conservation) Act, 1980 is subject to any other clearances necessary under the prevailing statutes.
15. The User Agency shall also abide by other conditions those may be imposed by the Government of India, Government of Karnataka and Principal Chief Conservator of Forests (Head of Forest Force) before or after the approval.


 (Brijesh Kumar Dikshit) FS
 Principal Chief Conservator of Forests
 (Head of Forest Force)

I/544439/2024

PART – IV

(To be filled in by the Nodal Officer or Principal Chief Conservator of Forests or Head of Forest Department)

<p>Detailed opinion & specific recommendation of the State Forest Department for acceptance or otherwise of the proposal with remarks.</p> <p>(While giving opinion, the adverse comments made by concerned Conservator of Forests or Deputy Conservator of Forests should be categorically reviewed and critically commented upon.)</p>	<p>The Nodal Officer has inspected the project site on 16th & 17th of Jan 2024 and has submitted for consideration under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 for diversion of 174.652 hectare of forest land in Dharwad, Haliyal, Dandeli Wildlife and Belagavi Divisions for laying of Goa-Tamnar 400 KV D/C Quad Transmission line (LILO Project) in favour of the Manager, Goa-Tamnar Transmission Project Limited, F1 Mira Corporate Suite, Main Mathura Road, Ishwar Nagar, New Delhi for a period of Twenty (20) years subject to production of RoFR Certificate in FORM-I (for linear projects) and further subject to the conditions appended in Annexure 'A'.</p> <p>Proposal No. FP/KA/TRANS/37754/2018 (FORM-A)</p>
--	---

Signature:



Name:

(Vijay Sharma, IFS)

Designation:

**Principal Chief Conservator of Forests
(Forest Conservation) and Nodal Officer (FCA)**

Signature:

Signed by

Brijesh Kumar Dikshit

Name:

Date: 22-01-2024 14:11:55
(Brijesh Kumar Dikshit, IFS)

Designation:

**Principal Chief Conservator of Forests
(Head of Forest Force)**

N.D.O. No. /2023-24

(Official Seal)

Dated: /01/2024

STL/GTTPL/FDP/NXTL/23-24/149

Dated: 18th Jan 2024

To,

The Principal Chief Conservator of Forests (FC) & Nodal Officer
3rd Floor, Aranya Bhavan, Malleshwaram,
18th cross, Bengaluru 560003.

Sub: Forest Diversion Proposal of 174.652 Ha for construction of LILO of Narendra(existing)-
Narendra (New) 400 kV D/C quad transmission line – **submission of undertakings.**

Ref: - Online Proposal No FP/KA/TRANS/37754/2018.

Dear Sir,

With reference to subject cited above, please find below the facts basis on which tree felling can be reduced during construction of above transmission line in forest area: -

1. Tree enumeration has been done for the entire 46-meter corridor of the transmission line. However, in case of transmission line projects, clear felling of trees is required only at tower foundation areas.
2. For stringing purposes, tree felling is required beneath the conductor (Cable) i.e., 7 meter either side of the under the conductors to maintain the necessary electrical clearance of 5.5 from the tree canopy. However, pruning and trimming of the trees shall be prioritized over clear felling wherever possible to maintain necessary electrical clearance.
3. The minimum ground clearance of 8.84 meters is to be maintained for 400 kV transmission lines, but in elephant corridor areas, a provision of providing additional 6 meters ground clearance shall be considered which further reduce the felling numbers due to sufficient electrical clearance.
4. In undulated and hilly terrains, transmission towers are planned to be fixed at elevated locations and hill tops which provides automatic ground clearance to the transmission conductors without felling of trees in valley areas.

Keeping in view of the above facts, tree felling shall not be required more than 35% of the total enumerated trees in the forest area. An undertaking for the same is enclosed.

You are requested to kindly process the Forest diversion proposal at the earliest to enable timely completion of the project, which will contribute to the economic growth of Goa and Karnataka.

Thanking you

For Goa Tamnar Transmission Project Limited,

Nitin Agrawal
(Nitin Agrawal)
Chief Manager Forest & Wildlife

Encl:- As above

UNDERTAKING

It is to certify that, we, “Goa-Tamnar Transmission Project Ltd” hereby undertake to adhere the guideline for felling of trees as prescribed in the Chapter 10 of the Handbook of Forest (Conservation) Act, 1980 published in 2019 by Ministry of Environment., Forests & Climate Change. Actual felling figures may be estimated during execution of the project at site in order to maintain sufficient electrical clearance and to avoid any electrical hazard. However, we hereby confirm that the total trees required to be felled *shall not exceed 35% of the total enumerated trees.*

Place: Panaji

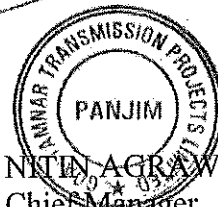
Signature

Name:

Designation:

Address of Agency:

Nitin Agrawal



NITIN AGRAWAL
Chief Manager

Goa- Tamnar Transmission
Project Limited, 1, Sea Breeze Apt,
Dr. D.B. Road, Miramar, Panaji
Goa- 403001

Goa- Tamnar Transmission Project Limited,

Building No 14089/0/3, 1st Floor, Saraswarpur, Kalaghatagi, Dharwad, Karnataka - 580002

UNDERTAKING FOR COMPLIANCE OF MoEFCC GUIDELINE FOR ELEPHANT CORRIDOR

We hereby undertake that, M/s Goa Tamnar Transmission Projects Limited shall comply with the guideline of MoEFCC vide no (F.No 7-25/2012-FC dated 19th Nov 2014) regarding transmission line passing through Elephant Corridor.

Date: 18-01-2024

Place: Panaji

Signature

Name in Block Letter: Nitin Agrawal

Designation :

Address of Agency: Goa Tamnar Transmission Project Limited,
Building No 14089/0/3, 1st Floor,
Saraswatpur, Kalaghatagi, Dharwad,
Karnataka – 580003



F. No. 7-25/2012-FC
Government of India
Ministry of Environment, Forests and Climate Change
(Forest Conservation Division)

Indira Paryavaran Bhawan
Aliganj, Jorbagh Road
New Delhi - 110 003
Dated: 19th November, 2014

To

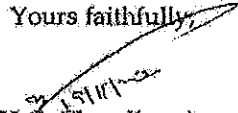
The Principal Secretary (Forests),
All State / Union Territory Governments

Sub: Guidelines for diversion of forest land for non-forest purposes under the Forest (Conservation) Act, 1980- Guidelines for laying transmission lines through forest areas
- reg.

Sir,

I am directed to refer to this Ministry's letter of even number dated 5th May 2014 on the above-mentioned subject, where-under this Ministry sent a copy of revised guidelines for laying transmission lines through forest areas, and to say that in partial modification of the said guidelines, clause 4 (ix) of the said guidelines which reads as "*In case of transmission lines passing through National Parks, Wildlife Sanctuaries and Wildlife Corridors, insulated conductors shall only be used to prevent electrocution of animals*" shall be read as "*In case of transmission lines passing through elephant reserves/corridors, additional clearances of at least 6 m shall be provided over and above minimum clearance (as stipulated under Central Electricity Authority (Measures relating to safety & Electricity Supply) Regulations, 2010) above the ground from the lowest conductor of the transmission lines*".

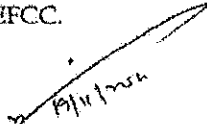
Yours faithfully,


(H.C. Chaudhary)
Director

Copy To:-

1. Prime Minister's Office (Kind attn.: Shri Santosh D. Vaidya, Director).
2. Secretary, Ministry of Power, Government of India, Shram Shakti Bhawan, New Delhi.
3. Chairman, Central Electricity Authority, Ministry of Power, Sewa Bhawan, R.K. Puram, New Delhi 110 066.
4. Principal Chief Conservator of Forests, all State/UT Governments.
5. Nodal Officer, the Forest (Conservation) Act, 1980, all State/UT Governments.
6. All Regional Offices, Ministry of Environment, Forests and Climate Change (MoEFCC).
7. Joint Secretary in-charge, Impact Assessment Division, MoEFCC.

8. All Assistant Inspector General of Forests/ Director in the Forest Conservation Division, MoEFCC.
9. Director, Regional Offices Headquarters (ROHQ) Division, MoEFCC.
10. Sr. Director (Technical), NIC, MoEFCC with a request to place a copy of the letter on website of this Ministry.
11. Sr. PPS to the Secretary, Ministry of Environment, Forests and Climate Change.
12. Sr. PPS to the Director General of Forests & Special Secretary, MoEFCC.
13. Sr. PPS to the Addl. Director General of Forests (Forest Conservation), MoEFCC.
14. PS to the Inspector General of Forests (Forest Conservation) MoEFCC.
15. Guard File.


(H.C. Chaudhary)
Director

STL/GTTPL/FDP/NXTL/23-24/

Dated:

To,

The Principal Chief Conservator of Forests (FC) & Nodal Officer
3rd Floor, Aranya Bhavan, Malleshwaram,
18th cross, Bengaluru 560003.

Sub: Forest Diversion Proposal of 174.652 Ha for construction of LILO of Narendra(existing)-
Narendra (New) 400 kV D/C quad transmission line – **Submission of Detailed project
report along with justification and assessment of three alternate route.**

Ref: - Online Proposal No FP/KA/TRANS/37754/2018.

Dear Sir,

With reference to subject cited above, we hereby submitting the detailed project report
alongwith the justification and assessment of three alternate route for the construction of LILO of
one ckt of Narendra (New) – Narendra (Existing) 400 kV D/C quad Transmission line in the state of
Karnataka.

You are requested to kindly process the Forest clearance proposal at the earliest to enable
timely completion of the project, which will contribute to the economic growth of Goa and
Karnataka.

For Goa Tamnar Transmission Project Limited,

Nitin Agrawal



(Nitin Agrawal)
Chief Manager-Forest & Wildlife

Encl:- As above

JUSTIFICATION AND ASSESSMENT OF THREE ALTERNATE ROUTES

The 400 kV D/C Narendra (Karnatka) – Xedem (Goa) Transmission Line is starting from Narendra village in Dharwad District of Karnatka state by tapping the existing 400 kV Narendra line of PGCIL by LILO and terminating at 400/220 kV substation at Dharbandora in Goa. The line will be passing through Dharwad, Belgaum and Uttar Kannada District in Karnatka and North and South Goa District of Goa.

Three alternative route corridors were identified largely by maximizing linear sighting opportunities, such as following existing roadways and power line corridors, negotiation with rivers, railway, road electric power line crossings. All efforts have been made to provide minimum no of angle points. Power line crossings have been fixed as close as possible to right angle but not less than 60° crossings. Every effort has been made to avoid forest and wildlife, but it is not possible to completely avoid the forest and wildlife. The alignment with minimum crossings of the forest has been selected as the proposed and the final proposed alternative alignment.

“As per the recommendation of CEC regarding suitable realignment in NXTL route in Karnataka state and suggestion from Forest Authority, Karnataka for further realignment of the route by utilizing the existing corridor of 110/220 kV line upto the maximum extent. Subsequently, GTTPL has revised the route alignment and submitted the modified proposal by utilising the existing KPTCL 220 kV alignment in the limits of Dandeli Wildlife”.

After detailed analysis based on the recommendation made by DCF, Dandeli Wildlife sanctuary, GTTPL explore the proposed route by utilizing existing 220 kV corridor to the maximum extent in Dandeli and Haliyal division. After walkover survey, *it is observed that in the proposed route alignment, 45.071 ha is being used from the existing corridors of 110/220 kV lines in the state of Karnataka.* Also the proposed route is having the least density of forest vegetation as compared to other 2 options. Hence after detailed examination, it is found that the alternative – I has the best route and having the minimum involvement of forest vegetation and area. Keeping the above points in consideration, we propose Alternative – I to be taken as final proposed route alignment.

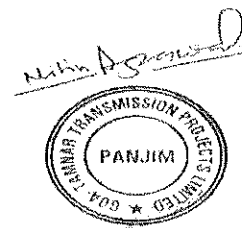
Nitin Agaswal


Detailed Comparative statement along with alignments are shown below:

Comparative Statement of alternative routes			
Description	Alternate Route 1 (As per suggested by Forest Dept. Karnataka)	Alternate Route 2 (Old Route Alignment)	Alternate Route 3
Bee Line Length	76.212 Km	75.642 Km	75.642 Km
Line Length	85.724 Km	77.64 Km	79.102 Km
Forest Length	31.006 Km	31.887 Km	43.400 Km.
Wildlife Length	6.962 Km	6.61 Km	8.100 Km.
Total Forest & WL Length	37.968 Km	38.497 Km	51.500 Km.
Forest Area (Ha)	142.626 Ha	146.679 Ha	199.641 Ha.
Wildlife	32.026 Ha	30.412 Ha	37.260 Ha.
Total Forest & WL Area	174.652 Ha	177.091 Ha	236.901Ha.
Existing 220 /110 kV Corridor Used	9.798 Km.	2.340 Km.	Nil
Area already used 220/110 kV existing Corridor	45.0708 Ha.	10.764 Ha.	Nil
Density of Forest Area	Moderate	Dense	Dense

Place: Goa

Date: 10.01.2024



(Authorized Signatory)

Name: Nitin Agrawal

Designation: Chief Manager

Address: 1, Sea Breeze Appt, DB Marg,
Miramar, Panjim, Goa 403001



Project Report - Goa Tamnar Transmission Project

For LILO of one ckt of Narendra (New)-Narendra(Existing) 400 kV D/C Quad Transmission Line - Karnataka

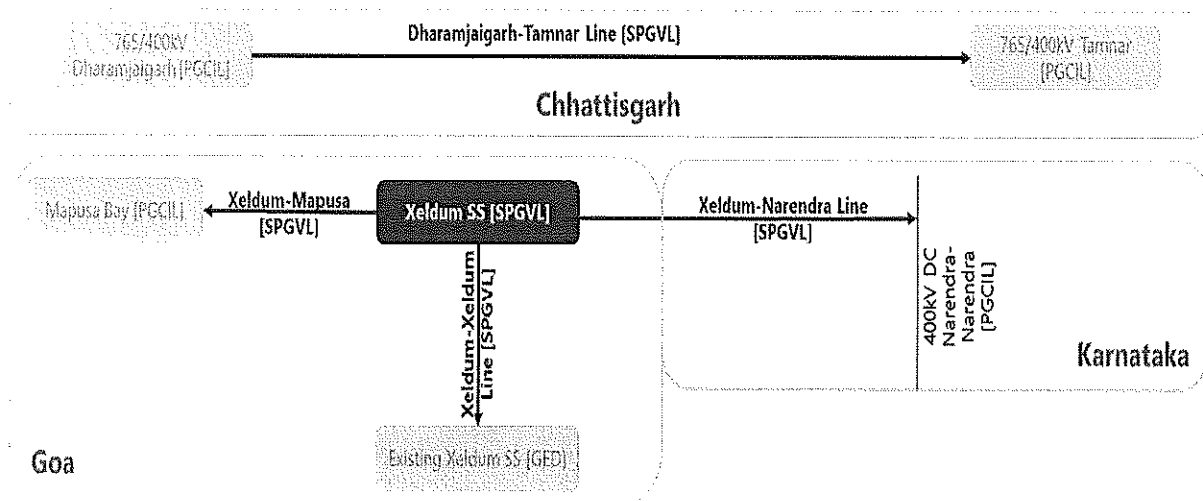
GTTPL Project Background

The Goa-Tamnar Transmission Project is part of National Grid Development and is getting implemented through the Special Purpose Vehicle Goa-Tamnar Transmission Project Limited (GTTPL). The Project involves the laying of Additional 400 kV feed to Goa to meet the projected power requirement of the state with reliability.

GTTPL - Project Scope

GTTPL has 4 related but functionally independent transmission line elements spread across the states of Goa, Karnataka, and Chhattisgarh, as below.

S. No.	Name of the Element	Target Commissioning
1	400 kV D/C Xeldem-Mapusa Transmission Line	30-Dec-2023
2	220 kV D/C Xeldem- Xeldem (Existing) Transmission Line	30-Dec-2023
3	LILO 400 kV D/C Xeldem-Narendra Transmission Line	30-Mar-2025
4	Dharamjaygarh pool section B- Raigarh (Tamnar) pool 765 kV D/C Line	Commissioned



The 400 kV D/C Narendra (Karnataka) – Xeldem (Goa) Transmission Line (NXTL) is starting from Narendra village in Dharwad District of Karnataka by tapping the existing 400 kV Narendra line of PGCIL by LILO and terminating at 400/220 kV substation at Dharbandora in Goa. The line will be passing through Dharwad, Belgaum and Uttar Kannada Districts in Karnataka and South Goa District of Goa.

GTTPL has been granted approval under section 68 (1) of the Electricity Act, 2003 for the Transmission Project. The Central Electricity Regulatory Commission has granted the transmission license for the Project on Build, Own, Operate and Maintain (BOOM) basis. Thereafter on 28.11.2018. GTTPL was granted authorization by the Central Electricity Authority (CEA) under section 164 of the Electricity Act, 2003 for laying of electric lines under the Project.

Project conceptualisation

The project was originally envisaged by the Ministry of Power, Government of India and has been discussed thoroughly in the regional standing committee meetings of Central Electricity Authority. It was discussed in the 38th meeting of Standing Committee on Power System Planning in Western Region, held on 17 July 2015 at New Delhi wherein the provision for a new 400kV substation in Goa at Xeldem along with its interconnections with the Inter State Transmission System was agreed. The transmission project was also discussed and approved in the 39th and 40th Standing Committee Meeting of the Western Region held on 30 November 2015 and 1 June 2016 respectively as well as 39th and 40th Standing Committee Meeting of the Southern Region held on 28-29 December 2015 and 19 November 2016 respectively.

The 39th western region standing committee discussed 8 alternatives for NXTL including drawing power from Kolhapur (PG) through western grid. However, this would have resulted into a single source for feeding Goa at 400kV level. Goa is already well connected with the western grid at 400kV and 220kV lines. Further, all the alternatives that were discussed in the meeting, were passing through Western Ghats. Hence, it was suggested that the alternative involving minimum forest clearance problems along with connectivity from the southern grid should be finalised.

After detailed deliberations on all the alternatives, Alternate 6: LILO of one ckt. of Narendra (existing) – Narendra (New) 400 kV D/C line at Xeldam was finalized and the transmission scheme was taken up for approval in 39th southern region standing committee meeting held on 28th-29 December 2015. Subsequently, post the approval from Southern Region, in the 40th western region standing committee meeting the final transmission scheme for Goa-Tamnar was technically agreed and approved.

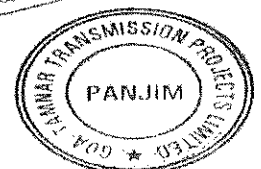
Significance of the GTTPL project to Goa and Karnataka:-

Enable power exchange between western and southern grids

- The Southern Region Power Committee of Central Electricity Authority has proposed Koppal-Narendra (New) transmission line for evacuation of RE power from Koppal Renewable Energy Zone (REZ).
- GTTPL's Xeldem-Narendra transmission line will further establish inter-state connectivity, in turn potentially enabling RE power exchange between Western and Southern grids.
- The proposed GTTPL project will help in strengthening the inter-state transmission system and in turn in the development of Green Energy Corridor.

Long-term power supply stability for Goa

The GTTPL project is envisioned to strengthen and provide long-term power supply stability in Goa. It will create transmission infrastructure that will take care of Goa's power demand for the next 15-20 years. By providing residents and industries with highly reliable power feed, the project will help in reducing the dependence of the state on expensive and polluting diesel-based power. Further, the proposed NXTL line would potentially connect Goa with upcoming solar energy project in Karnataka and will enable ~1,200+ MW of power exchange between Goa and



Karnataka grids. Thus, the strengthened transmission network through NXTL will be instrumental in bringing clean and green renewable power to Goa.

Critical for achieving the goal of ‘One Nation One Grid’

While the project is very important for Goa for securing its long-term power security, it is also of national interest as it will help develop green energy corridor and will contribute in achieving the goal of ‘One Nation One Grid’. Further, the transmission lines are like national highways and are considered to be “shared assets.” It would be uneconomical and technically infeasible to build dedicated transmission systems for individual states. The NXTL line will connect both western and southern grids. That implies transmission of electricity from western grid to Karnataka can be facilitated when the state is witnessing power scarcity.

Play vital role in the growth of Karnataka’s renewable energy sector

The project will also benefit Karnataka in the long term as the state is one of the top five states in the renewable energy (RE) sector in the country with potential to generate RE power of ~86,792 MW. Further, the Karnataka’s Renewable Energy Policy 2021-26 aims to export RE power outside Karnataka.

It is to be noted that Karnataka’s renewable energy sector (both wind and solar) is witnessing significant growth in terms of investment and output. If the increase in RE generation fails to keep pace with the transmission network, the glaring mismatch can put immense pressure on existing transmission infrastructure. The strengthening of inter-state connectivity through NXTL will enable evacuation of RE power from upcoming Koppal Renewable Energy Zone in Karnataka, thereby avoiding any potential pressure on existing transmission infrastructure in Karnataka.

Help follow the Indian Electricity Grid Code 2010

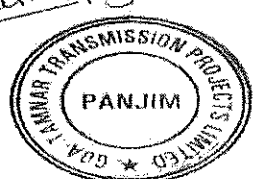
The Indian Electricity Grid Code 2010 mandates State Load Dispatch Centres (SLDCs) to prioritize scheduling of RE power (‘Must Run’ status) over other sources to incentivise RE projects, unless there are technical constraints. SLDCs are allowed to cut down RE power only after exhausting all options, including running thermal power plants at a technical minimum plant load factor (PLF) of 55%. Despite this, in periods when RE power generation exceeds demand significantly, the inability of intra-state grid to accommodate this extra power and lack of inter-state connectivity with the national grid, often leads to heavy restrictions on RE power generation.

Economic benefits to Karnataka

Given the sporadic nature of electricity from RE sources like solar and wind, there is an urgent need to ensure that the transmission infrastructure can handle the sudden surges in electricity during peak hours. If evacuation system is not augmented, there can be a situation where RE plants will be constrained to deliberately restrict generation, resulting in huge financial losses to developers. In the absence of a restitution mechanism for such losses, the viability of RE projects gets hampered, especially in case of projects operating on thin margins.

As per the National Renewable Energy Laboratory report¹, Karnataka experiences very high deliberately restricted generation of RE power as percentage of available capacity. This challenge can be overcome by strengthening the transmission network through projects like NXTL. This will enable Karnataka to optimally utilize the RE potential available within the state, thereby avoiding financial losses to RE projects. This will also provide significant boost to the RE power export from Karnataka, thereby stimulating the state GDP and employment.

MIA Agnew



Chronology of Forest and Wildlife Clearance Process

As this transmission line was earlier proposed to pass through the Bhagwan Mahavir Wildlife Sanctuary in the state of Goa, a Forest and wildlife clearance proposal for diversion of 48.3 ha vide proposal No. FP/GA/TRANS/35354/2018 was submitted in the state of Goa on 24th Aug 2018 for construction of project element mentioned in Sr. No. (3) on page 1 of this report i.e., LILO of one ckt of Narendra (existing) – Narendra (New) 400 Kv D/c (Quadline).

The forest diversion proposal for this project was recommended by the Goa State Board for Wildlife and sent to the National Board for Wildlife (NBWL), New Delhi for approval. The proposal was discussed in the 57th Standing Committee of NBWL held on April 7, 2020 and was approved by the Board for further issuance of Stage-1 clearance w.r.t forest proposal. Subsequently, on 26th June 2020, a case was filed by Goa Foundation on wildlife approval provided for Goa portion by NBWL, which was referred to the Central Empowered Committee of the Hon'ble Supreme Court.

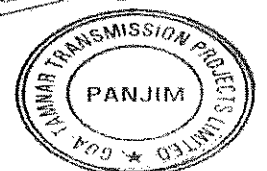
On 23 April 2021, Central Empowered Committee (CEC) of the Supreme Court submitted its report 6 of 2021 on case filed by Goa Foundation. *“CEC recommended that instead of clearing canopy of virgin forest cover along 10.50 km long corridor with 46m ROW in Goa State the proposed 400 kV line should be drawn along the existing 220 kV corridor line in Goa State after establishing 400 kV corridor connectivity between Mapusa and Sangod and 220 kV line between Sangod and Xeldem. CEC further recommended that the project proposal in respect of Karnataka part should also be suitably amended to make use of 110/220 kV line corridor.”*

Key Findings of the CEC regarding the project are as below:

- The report acknowledged that the significant number of trees will need to be trimmed and not felled.
- The transmission line when constructed will not affect the movement of wildlife and long span between towers will ensure natural regeneration of trees.
- Transmission lines do not bifurcate the forest into different parts except for arboreal animals.
- The transmission line projects are environmentally friendly and are excluded from environment impact assessment studies.
- The project will have temporary and minor impact on the wildlife and biodiversity. Further, changes, if any, in the land use during the construction period will be localised and recoverable.
- The present route was ultimately agreed upon and finalised after assessment of the three possible routes by the state forest department and after ensuring minimal impact on environment.
- GTTPL will incur costs for compensatory afforestation.

On 7 April 2022, Hon'ble Supreme Court gave its final order on the CEC report accepting the recommendations of CEC report. Subsequently, on 16 May 2022, GTTPL received approval from Goa Electricity Department on utilization of 110 & 220 kV corridor as per the Hon'ble SC order.

GTTPL submitted revised forest & wildlife proposals in the state of Goa, from which forest proposal was accepted by the Project Screening Committee, Goa Forest Department on 22 November 2022. Further, GTTPL submitted modified forest proposal in the state of Karnataka as per the CEC recommendation to DFO Dandeli on 20 July 2022.



The current status with respect to the FDP w.r.t Karnataka is as follows:

- Dharwad division FDP forwarded to Nodal Office, Bengaluru on 13 October 2023.
- Dandeli and Haliyal division FDP forwarded to Nodal Office, Bengaluru on 9 November 2023.
- Belagavi division FDP forwarded to Nodal Office, Bengaluru on 18 December 2023.

Further Re-alignment of NXTL route in Karnataka:

As per the recommendation of CEC, necessary modifications in the forest & wildlife proposals were made and proposals were re-submitted to the concerned forest authorities for further processing. While scrutinizing the modified proposals, DFO Dandeli raised a query on 05.09.2022 (Ref: Letter (No. B4/LAND/FC/Goa-Tamnar/CR-11/2022-23) and asked to utilize the existing corridor of 110/220 kV line in its entirety within Dandeli Wildlife Sanctuary.

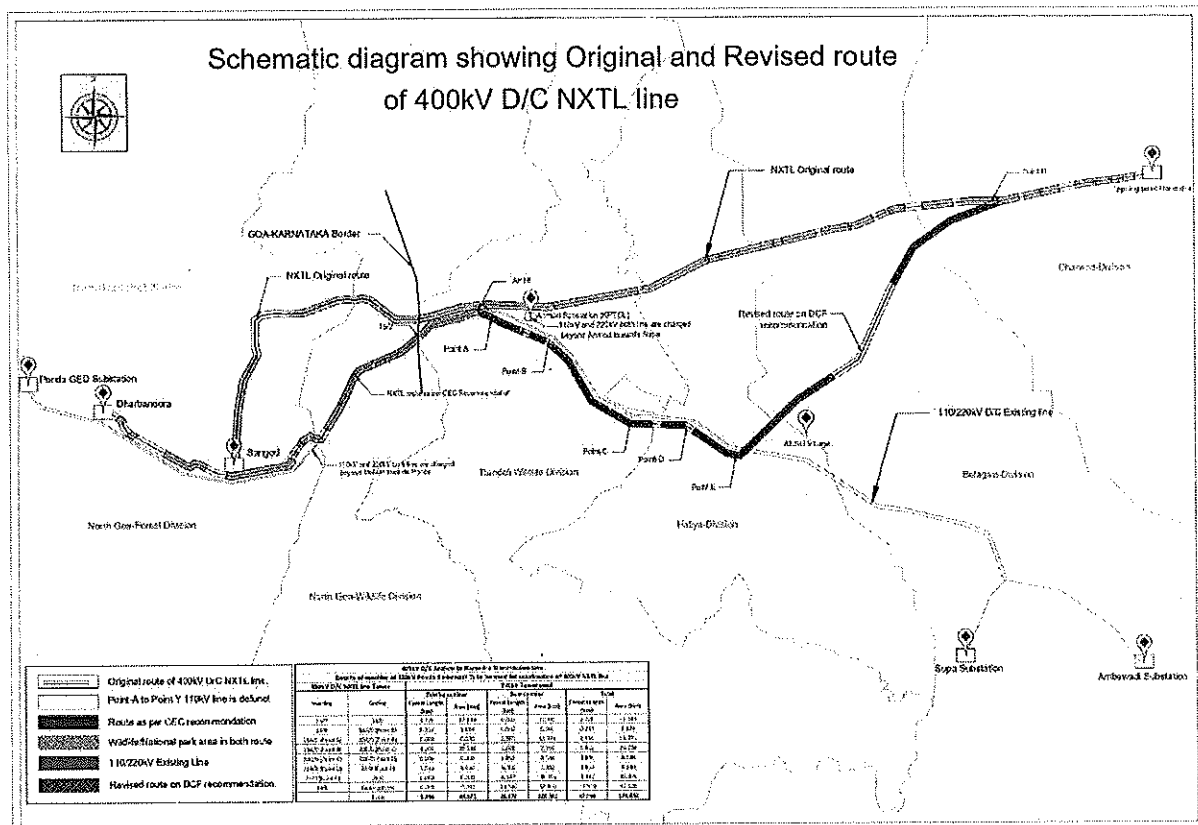
Based on the above changes, necessary modifications in the forest & wildlife proposals were made and proposals were submitted to the concerned forest authorities for further processing. While scrutinizing the modified proposals, DFO Dandeli raised a query and asked to utilize the existing corridor of 110/220 kV line in its entirety within Dandeli Wildlife Sanctuary.

In response to the above query, suitable justification for finalizing the proposed alignment as per CEC recommendation was submitted to the DFO Dandeli on 10.10.2022 but Karnataka Forest department opined to get clarification on the CEC recommendation of utilizing the existing corridor of 110/220 kV corridors w.r.t Karnataka and a letter was sent by the ACS (Forest), Govt of Karnataka to the CEC for clarification on its recommendation w.r.t Karnataka on dated 04th March 2023 and for the same a meeting was called by CEC on 13th April 2023 for discussion and clarification on their recommendation. In the meeting, it was clarified that *“CEC has not examined any of these proposed alignments in the State of Karnataka. In fact examination by the CEC was limited to the State of Goa only. A decision as to the most appropriate alignment for the proposed 400 kV transmission line in Karnataka will require to be taken by the State Govt. of Karnataka after considering the technical feasibility of drawing 400 KV line upto Narendra”*.

After the above CEC clarification, a meeting was called by the Additional Chief Secretary (Environment & Forest), Govt of Karnataka on 19th April 2023 with all concerned stakeholders in which an alternative route was suggested by utilizing existing corridor of 220 kV Ambewadi-Ponda line.

Subsequently, in a letter (No. B4/LAND/FC/Goa-Tamnar/CR-04/2023-24) dated 26 May 2023, Deputy Conservator of Forests and Director, Kali Tiger Reserve, Dandeli confirmed that the revised route submitted by GTTPL utilising the existing KPTCL 220 kV alignment in the limits of Dandeli Wildlife Sanctuary is largely in compliance with the directions of Hon'ble Supreme Court Order dated 7 April 2022. He also recommended GTTPL to proceed with the proposed alternative route and submit a revised proposal for further processing.





Note: Out of total 174.652 ha forest area proposed for diversion, 45.071 ha is being used from the existing corridors of 110/220 kV lines in the state of Karnataka.

Division-wise Comparison of Forest Area w.r.t old and revised proposal

S. No.	Name of Division	Old Proposal Area (Ha)	Revised Proposal Area (Ha)	Remark
1	Dandeli Wildlife	30.412	32.026	
2	Haliyal	40.146	64.845	
3	Belagavi	101.747	70.023	
4	Dharwad	4.786	7.758	
Total (Ha)		177.091	174.652	

Mitigation measures and compensatory afforestation in Karnataka

GTTPPL is committed to undertake sufficient mitigation measures to minimise the potential environmental impact of the project. The key mitigation measures are as below.

Mitigation Measures for Habitat Loss and Disturbance:

- Minimum habitat disturbances by using existing trails for transportation of man, material, and machinery.
- No movement of vehicles beyond the last motorable road point. Tower parts will be transported to the location by head loading
- No use of heavy machinery. Minimum disturbance to be made during tower erection
- No night stays in the sanctuary areas
- Use of drones for stringing of conductors.

- Nesting sites of avifaunal species to be avoided during vegetation clearance; if not then nesting translocation will be undertaken

Mitigation Measures to Minimise Impact on Biodiversity:

- Restriction guards for structures to climb transmission towers to avoid access to arboreal species
- Installation on canopy bridges in the canopy break areas for zero hinderance movement of arboreal mammals
- Installation of bird diverters on the conductor and perch rejecters on transmission tower along the transmission line corridor
- Artificial nesting platform for raptor species to be built along the transmission line at a distance of 200 m
- Pre nest search before commencing any pruning and lopping to be undertaken
- Artificial nest boxes along the transmission line route to mitigate the loss of nesting sites

Further, for the forest diversion proposal in Goa state, compensatory afforestation activity will be carried out in Karnataka. For this purpose, compensatory afforestation land of 276.10 Ha (122.122 for Xeldem-Mapusa & Xeldem-Xeldem transmission lines and 153.97 Ha for NXTL-Goa) has been identified and provided by Karwar Forest Division. Total financial outlay earmarked for compensatory afforestation is around Rs 50.70 crore.



3 ALTERNATIVE ROUTE OF LILO OF ONE CKT OF NARENDRA (EXISTING) NARENDRA (NEW) 400KV D/C QUAD LINE AT XELDEM

