Annex 2C

Equivalence Matrix: Forests

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
Objectives	The Constitution of India in its Directive Principles of State	Among its key objectives with respect to the Environment, the ESPP	Full Equivalence	None
To realize the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development, and protect the vital local and global environmental services and values of forests.	Policy states in Article 48-A - "The State shall endeavour to protect and improve the environment and to safe guard the forest and wildlife of the country" Article 51-a (g) of the Constitution also imposes a duty on every citizen " to protect and improve the natural environment including forest and wildlife".	seeks to "[A]void operations in environmentally sensitive areas such as forests" (ESPP 1.0)	The ESPP is equivalent to the Objectives with the exception of realizing the potential of forests to reduce poverty in a sustainable manner, integrate forests effectively into sustainable economic development.	

Objectives and Operational Principles on	Legal and Policy Framework-GoI	POWERGRID Environmental and Social	Gap Analysis POWERGRID	Recommended Gap Filling
Forests per OP 4.00 Table A1		Policy and Procedures (ESPP)	ESPP	Measures for POWERGRID ESPP
	The applicable Indian legislation includes: The Indian Forest Act 1927¹ (IFA). The IFA seeks to consolidate laws relating to forests, transit of forest produce and duty on timber and other forest produce. It also provides the State Governments the authority and defines the procedure for declaring an area to be a Reserve Forest, a Protected Forest or a Village Forest and authorizes certain activities within each category of forest. (Note that forest is a		Promoting the use of forests for these purposes is not within POWERGRID's corporate mandate and is therefore not relevant to the equivalence of the ESPP.	

¹ The IFA is one of the laws cited by POWERGRID as one of "[o]ther relevant laws having bearing on the working of POWERGRID." (ESPP 2.3.1 (B)). According to the Guidance and Clarifications issued by the Ministry of Environment and Forests with respect to the Forest Conservation Act and the Forest Conservation Rules, the first step in any Compensatory Afforestation proposal is an agreement "in principle in which...the conditions relating to transfer, mutation and dereservation as [Reserved Forest/Protected Forest] under the Indian Forest Act of 1927 of equivalent non-forest land for [CA] and funds for raising [CA] are stipulated....." (GC 4.2.i and 5.1.iv)

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	concurrent subject (i.e., both the Central and state Governments are competent to legislate on the subject. The IFA provides an umbrella framework where either the states follow by adapting it in their respective states or there are state specific forest Acts which are framed as per the umbrella IFA.)			
	• The Forest Conservation Act, ² 1980 as amended in 1988 (FCA) requires prior approval of the Central Government for dereservation of Reserved Forests or use of "any forest land			

² According to POWERGRID, the FCA is applicable to POWERGRID "whenever a transmission line traverses a forest area. Prior approval from [the] Ministry of Environment and Forests (MOEF), Government of India has to be obtained before construction of lien in forest areas." (ESPP Table 2.4)

Objectives and	Legal and Policy	POWERGRID	Gap Analysis	Recommended
Operational Principles on Forests per OP 4.00 Table A1	Framework-GoI	Environmental and Social Policy and Procedures (ESPP)	POWERGRID ESPP	Gap Filling Measures for POWERGRID ESPP
	or portion thereof for			2011
	any non-forest			
	purpose;" ³ clear			
	felling of forests,			
	leasing of forests to			
	any individual or			
	authority, agency or			
	corporations not			
	owned, managed or			
	controlled by the			
	government (Section			
	2); establishes an			
	Advisory Committee			
	to advise the			
	Government with			
	respect to such			
	approvals and other			
	forest conservation			
	matters; and sets			
	offences and penalties			
	for violations of the			
	Act (Section 3).			
	• The <u>Forest</u>			
	Conservation Rules,			
	2003 as amended in			
	2004 (FCR). ⁴ The			

³ Several designated activities are excluded from the definition of "non-forest purpose;" however the construction of electrical transmission lines is not listed among the excluded activities. (Section 2 "Explanation")

⁴ The Rules, 2004 have been stayed vide Supreme Court Order dated 23.2.2004 in the Godavarman Case.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	FCR sets forth the			
	requirements for			
	proposals for non- forest uses of forest			
	lands and specifies the			
	respective roles of			
	State and Central			
	Government as well as			
	the Advisory			
	Committee (Sections 6			
	and 7)			
	In addition to the general requirements applicable to all projects seeking FC obtain FC, for transmission lines (TLs) applicants are required to "[c]omplete details of			
	alternative			
	alignments to be			
	shown on map with details of area of forest			
	land involved in each			
	alternative to be given			
	- Col. 1 (iii)."			
	(Appendix to the			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Rules/ Instructions for Form A).			
	rom Aj.			
	• Comprehensive Handbook of [FCA, FCR] Guidelines & Clarifications, October 20 th , 2003 (GC) issued by the MoEF, includes excerpts from Supreme Court Orders and other Government circulars.			
	Guidelines having direct application to TLs: Exemption from FCA of investigations and surveys carried out in connection with transmission line (1.3.i) Full application of FCA to			
	actual construction of TLs (1.3.iv)			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Exemption from prior			
	endorsement of			
	proposal on the part of the local			
	community ("Gram			
	Sabha" of Gram			
	Panchayat/Local			
	Body of the Area")			
	where "linear diversion of forest			
	land in several			
	villages are			
	involved."			
	(2.1.vii.4.b) (Note that there is no term			
	as "aam Sabha"			
	which is legally			
	recognized. The legal			
	term is Gram Sabha			
	which is understood in separate contexts			
	under Panchayat			
	laws, in scheduled			
	areas and most			
	recently under the			
	FRA.)			
	 Simplified 			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Procedure for Certain Categories of Proposals (2.4) Conditions stipulated in FC as applicable to Transmission line proposals (5.2.iv.)			
	• Compensatory afforestation (CA) Per Supreme Court Order of 30 Oct 2002 in respect of compensatory Afforestation Fund (I.A. NO.566 IN WP(C) NO.202/1995), para. 8: "user agencies, especially the large public sector undertakings such as 'Power Grid Corporation' that frequently require forest land for their projects should be involved in			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	undertaking." Are required to support compensatory afforestation by establishing Special Purpose Vehicles. Implementing Procedures are to be established by MoEF with the concurrence of the Central Empowered Committee. GC provides detailed guidance on CA requirements. (Chapter 3)			
	• Guidelines For Laying Transmission Lines Through Forest Areas, detail technical data necessary for transmission lines through forest areas. (Annexure -V) • Category of			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Proposals for Which cost-benefit analysis is applicable to determine when diverting the forest land to non-forest use is in the overall public interests. (Annexure VI(a))			
	• Parameters for evaluation of loss of Forests (Annexure- VI(b))			
	The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006 (FRA) seeks "to recognize and vest the forest rights and			
	occupation in forest land [of] forest dwelling Scheduled Tribes and other traditional forest			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	dwellers" (Preamble)			
	Further certain reserve forests can directly be upgraded into sanctuaries under Wildlife Protection Act, 1972 (Section 26-A)			
	Similarly in coastal areas Mangrove Forests may also be converted into CRZ I areas under the CRZ Notification under the EPA as well as reserved forests under IFA.			
	Further there are other categories such as, unclassified forests, undemarcated protected forests, other revenue forests such as bade jaha ke jungle, chote jhad ke jungle,			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	jungle khurd, sarana, jhudupi jungle, unsettled tracts, deemed forests, and similar categorizations under different nomenclatures which are now considered as recorded forests and deemed forests respectively and are subject to the provisions of the FCA per the December 12, 1996 order of the Supreme Court in the T.N. Godavarman case (C.W.P. No 202 of 1995)			
Operational Principles 1. Screen as early as possible for potential impacts on forest health and quality and on the rights and welfare of the people who depend on them. As appropriate, evaluate the	The EIA Notification requires the application for Environmental Clearance (EC) to identify specified impacts of proposed projects including	"In conducting preliminary route selection for transmission lines, POWERGRID uses tools such as the Forest Atlas and Survey of India Maps. Modern tools, like GIS/GPS are used for finalization of	Full Equivalence. The ESPP is fully equivalent to this Operational Principle to the	None.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
prospects for new markets and marketing arrangements.	"permanent or temporary changes in land use, land coverclearance of existing land, vegetationchanges in living conditions [thereby] affecting the welfare of people [including] vulnerable groups of peopleintroduction of alien species, loss of native species or genetic diversity, use of natural resources [including] undeveloped landforests and timberareas protected under international conventions, national or local legislation for their ecologicalareas which are important or sensitive for ecological	route " "When any transmission project falls within a forest area prior clearance is required from relevant authorities under the FCA After finalization of route alignment and Right of Way width, POWERGRID submits details to the respective State Forest Department official for formulation of a Forest Clearance (FC) proposal to the Department of Forests." (MoEF). (ESPP 2.1.2) With respect to the rights and welfare of forest-dependent people, POWERGRID does not acquire land in it uses for the construction of TLs and does not acquire forest land for construction of substations. Therefore, no physical displacement of project-affected	extent that it requires that POWERGRID comply fully with the complies with the requirements of the FCA and FCR and avoids activities that would affect the rights and welfare of forest-dependent peoples.	

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	reasonsforestsare as containing important, high quality or scarce resources (forestry)extensive clearing or modification of vegetation" (Appendices I and II) However, the EIA Notification is not applicable to the electrical transmission sector. The FCR stipulates the information to be provided by the user agency seeking FC. It requires, among other things, a map of the forest area,	takes place in the context of POWERGRID projects (ESPP 2.5.3.) In general, POWERGRID's use of Social Assessment and its Social Entitlement Program takes full account of the impacts of proposed projects on all categories of people, with particular attention to "marginalized and vulnerable groups" and "secure(s) their inclusion in overall public participation." POWERGRID also "[g]uarantee[s] entitlements and compensation to affected people per its [Resettlement and		ESPP
	justification for locating the project in a forest area a cost-benefit analysis; and details of any displacement of people resulting from	Rehabilitation] Policy. " (ESPP 1.0)		

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	the project including			
	the number of			
	families, including			
	families belonging to			
	Scheduled Castes and			
	Scheduled Tribes the			
	proposed Rehabilitation Plan;			
	and an agreement to			
	bear the cost of			
	implementing			
	compensatory			
	afforestation per			
	government			
	requirements (Rule 6			
	Appendix Form A,			
	Part I). In addition,			
	the Deputy			
	Conservator of Forests			
	is required to consider			
	the following factors			
	in granting or			
	withholding approval			
	and in specifying			
	conditions for			
	approval: area of			
	forest proposed for			
	diversion; legal status			
	of forest; density of			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	vegetation; species census; distance from forest boundary; inclusion of affected area within Protected Area: (e.g. National Park); presence of endangered or unique species of flora and fauna and details on implementation of compensatory			
	afforestation (Rule 6 Appendix Form A, Part II). Additional details are provided in the GC on the requirements for FC if projects involving "displacement of people," including "a detailed Rehabilitation Plan and separate consideration[of] the Scheduled Tribe			
	and Scheduled Caste population[s], and a			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	plan for their			
	rehabilitationin consonance with their			
	socio-economic-			
	cultural and emotional			
	lifestyle." (GC 2.7.i)			
	The Supreme Court			
	orders specially			
	relating top			
	transmission lines as			
	well as Power Grid is			
	important. See for			
	example Order dated 08.09.2006 in IA 1632			
	where the Supreme			
	Court has granted			
	permission to Power			
	Grid Corporation Ltd.			
	for use of forest land			
	falling in the Ratapani			
	Wildlife Sanctuary for			
	laying of Optical Fiber			
	Cable (OFC) subject			
	to adherence to the			
	conditions recommended in the			
	CEC report dated			
	31.8.2006.			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Order dated 28.1.2005 regarding laying 220KV transmission line from Pykara Ultimate stage Hydro Electric Project Switchyard to Arasur 220 KV Sub Station in Tamil Nadu. See also an Order dated 30.03.2007 in I.A.No.1655-1657 related to diversion of forest for Rajasthan Atomic Power Plant through Jawahar Sagar Wildlife Sanctuary for Power Grid.			
	See also Judgment dated 16.9 .2005 and Order dated 26.9.2005; 27.4.07, 23.11.2007 which determines principles of diversion including the charge of net present value and compensatory			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	afforestation among others.			
	Under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (FRA), such rights as are recognized under the Act "shall be conferred free of all encumbrances and procedural requirements, including clearance under the [FCA] requirement of paying the 'net present value' and 'compensatory afforestation' for diversion of forest land, with specified exceptions (as specified under FRA) (FRA 4(7).			

Objectives and Operational Principles on Forests per OP 4.00 Table	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for
A1		(ESPP)		POWERGRID ESPP
2. Do not finance projects that would involve significant conversion or degradation of critical forest areas or related critical natural habitats, or that would contravene applicable international environmental agreements.	The IFA establishes three categories of forests: Reserve Forest, Protected Forest and Village Forest of which "Reserved Forest" is the most restrictive category. Chapter V of the GC and Annexure V provide for technical details for FC in transmission line projects. They require an avoidance strategy when planning the TL routes and that only a minimum amount of trees to be removed. Simplified FC procedures are prescribed for laying of TLs and certain other categories of projects located in forests but which do	"POWERGRID is fully conscious of the need to conserve the natural resources and avoid ecologically sensitive areas as far as possible. In case traversing forestland is unavoidable, clearance from forest authorities is obtained under the Forest Conservation Act of 1980." (ESPP 2.3.1B). POWERGRID also ensures that the National Forest Policy, 1988 "[is] adhered to and maintains monitoring procedures that comply with environmental legislationin the country." (ESPP 2.3.2). "During route alignment all possible efforts are made to avoidforest areaor to keep it to the barest minimum. Whenever it becomes unavoidable due to the geography or terrain or heaving cost involved in avoiding it, different	Full Equivalence. The ESPP is fully equivalent to the requirements of this Operational Principle.	None.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	not involve any felling or cutting of trees. Information required from forest users includes: (a) map of the area required along with geographical location of the project; (b) purpose for which forest land is required to be used; (c) extent of forest area to be diverted; (d) legal status of forest land; (e) whether forest land forms part of a national park, wildlife sanctuary, biosphere reserve or part of the habitat of any endangered species of flora or fauna; (f) whether no alternative alignment is possible to avoid or minimize use of forest land; and whether the required forest area is the minimum needed for	alternative options are considered to minimize the requirement of forest area. To achieve this, route selection of transmission line is undertaken in close consultation with representatives of the State Forest DepartmentMinor alterations are made to avoid environmentally sensitive areas." (ESPP 2.1.2)		

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	the purpose; (g)			
	compensatory			
	afforestation scheme (
	It is currently			
	irrespective of trees on			
	the land. The material			
	thing is the extent of			
	the land. The CA is on			
	twice the land); and (h) a certificate stating			
	specifically that no			
	cutting or felling of			
	trees is involved." (GC			
	2.4)			
	The GOI has ratified			
	the following			
	international			
	environmental			
	agreements with			
	respect to project			
	impacts on forests and			
	related natural			
	habitats:			
	Convention on			
	International Trade in			
	Endangered Species			
	(CITES), 1975			
	Convention on			
	Biodiversity, 1992,			

Forests per OP 4.00 Table A1	ramework-GoI	Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	amsar Convention, 971, 1975			
forest harvesting or plantation development that would involve any conversion or degradation of critical forest areas or related critical natural habitats. Cloud approximately processed approximately according to the second according to	the requirements of the FCA and FCR ong with GC issued by MoEF for Forest dearance (FC) are oplicable to OWERGRID's extivities to the extent that these activities of the term is defined by the applicable gislation. With respect to all FCs are of the extent that the extent is defined by the applicable gislation. With respect to all FCs are GC requires that the extent is defined by the applicable gislation.	"POWERGRID follows the principle of avoidance during route alignment and avoids routing through forestland unless it is unavoidable and obtains appropriate clearances from forest authorities. It follows all relevant guidelines including the directions from the Supreme Court" (ESPP 2.1.2 (D) POWERGRID "seeks to avoid environmentally sensitive areas such as forests, wildlife reserves and biosphere reserves." (ESPP 1.0) "For selection of the optimum route the following criteria are taken	Full Equivalence. Although the ESPP relies on the GOI legal framework to identify critical forest areas or related critical natural habitats and shares the weaknesses of that framework in distinguishing critical forest from noncritical forest areas and natural habitats, the ESPP provides for additional measures that provide	None.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	The GC sets forth specific "Guidelines for Laying Transmission Lines Through Forest Areas." The	route does not pass through any sanctuary, national park, biosphere reserve or eco-sensitive zone" (ESPP2.1.2.A)	this Operational Principle regardless of where a TL is located.	
	Guidelines contain several imperative statements, while others are stated as recommendations. The imperative statements involve the maximum width of the right of way for TLs	"Maximum permissible with of ROW and for transmission lines on forestland and minimum clearances between conductors and trees are given" (ESPP 4.1 and Table 2.1)		
	on forest land, depending on the KV capacity of the TL (ranging from 7 meters for 11 KV to 85 meters for 800 KV); the minimum clearance between	"A width clearance of 3 m is presently allowed[After] trees on such strips are felled natural regeneration is encouraged." (ESPP 4.1.1)		
	conductors and trees (for purposes of preventing electrical hazards); and requirements for	"Lopping and felling of trees can open up forest canopy allowing more sun light into the under storey where it can lead to an edge effect and allow for		

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	natural regeneration	proliferation of socio-phytic		
	following stringing;	weeds. This can add		
	and a prohibition	repercussions within a semi-		
	against cutting of trees	evergreen biotope (fragile		
	in hilly areas where	ecosystems restricted to		
	adequate clearance	North East India and the		
	between conductors	Western Ghats." (ESPP		
	and trees is already	4.1.1 A)		
	available. (Annexure	To minimize damage to the		
	V)	environment POWERGRID		
	I agal muovisiana	uses manual stringing in		
	Legal provisions	thick forests and on slopes		
	relating to plantation development are	whenever possible." (ESPP Box. 4.1)		
	relevant to the extent	POWERGRID, wherever		
	that POWERGRID is	possible, usesexisting		
	required to participate	pathaccess roads for the		
	in compensatory	movement and man and		
	afforestation (CA) to	machinery [to avoid]		
	compensate for	temporary disturbance to		
	clearing of trees for	the forest." (ESPP 4.1.1 B)		
	TLs.	"[A] Compensatory		
	1 120.	Afforestation (CA) Scheme		
	The GC, Chapter 3	is prepared to compensate		
	sets forth the	loss of vegetation and an		
	requirements for	important part of the		
	Compensatory	proposal [for Forest		
	Afforestation (CA) in	Clearance]. For CA, the		
	consequence of	forest authorities identified		

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	diversion of forest	degraded forestland of twice		
	land to non-forest	the area of affected land.		
	uses, including the	POWERGRID provides		
	construction of TLs.	[an] undertaking/certificate		
	It specifies that all	to meet the cost of		
	proposals for CA be	compensatory afforestation		
	approved by the	and the Net Present Value		
	Central Government based on a	[NPV] of forestland diverted. The NPV are		
	"comprehensive	diverted. The NPV are varies from Rs. 5.8 to Rs		
	scheme' including	9.2 lakh per hectare as per		
	"the details of the non-	MoEF Notification of		
	forest/degraded area	23.04.04 and is payable to		
	identified for [CA],	the "Compensatory		
	maps of areas to be	Afforestation Fund		
	taken up for [CA],	Management and Planning		
	year-wise phased	Authority (CAMPA) (ESPP		
	forestry operations,	2.1.2.c) . POWERGRID		
	details of species to be	includes its CA undertaking		
	planted and a	as part of its application for		
	suitability certificate	FC (ESPP, Appendix IV)		
	from			
	afforestation/managem	Note that the values put for		
	ent point of view."	NPV etc is interim in nature		
	(3.1)	and this is being finalised		
		including which agencies or		
	The GC provides that	corporations are outside the		
	CA "shall be done	purview of such		
	over [an] equivalent	compensations in the		

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	area of non-forest land" ⁵ and that "as far as possible, the non-forest landshould becontiguous to or in proximity of Reserved Forest or Protected Forest to enable the Forest Department to effectively manage the newly planted area. [If the] non-forest land is not available in the same district [it] may be identified anywhere else in the State/UT as near as possible to the site of diversion, so as to minimize adverse impact on the microecology of the area." (GC3.1.i-iii).	Supreme Court at present. (Kanchan Chopra Committee Report along with observations of the Centrally Empowered Committee as well as order dated 26.9.2005.		

The GC alternatively provides that "[w]here non-forest lands are not available...in extent to the forest area being diverted, [CA] may be carried out over degraded forest twice in extent to the area being diverted or to the difference between forest land being diverted and available non-forest land, as the case may be." This option is also made available for several specified activities regardless of the availability of non-forest land, including the construction of laying of TLs up to 220 KV. (3.2.iv and vi.)

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Based on the Format for formulation of Forest Proposal appended to the FCR it would appear that the details of the CA scheme are to be provided by the Deputy Conservator of Forests, rather than the user agency. (FCR, Section 6, Appendix, Part II)			
	The Supreme Court has issued several orders regarding nonforestry activities in the National Parks/Sanctuaries; accordingly, the State Governments are required to seek prior approval of the National Board of Wildlife for any proposal for diversion of forest land in			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	National Parks and			
	Sanctuaries (GC			
	Chapter 1,			
	Clarification to			
	Section 1.3; and			
	Annexure IIA).			
	Under the FCA			
	"investigation and			
	exploration [carried			
	out in connection with			
	development projects			
	such as transmission			
	lines] shall not be			
	carried out in wildlife			
	sanctuaries, national			
	parks and sample plots			
	demarcated by the			
	Forest Department			
	without obtaining			
	prior approval of the			
	Central Government,			
	whether or not felling			
	of trees is involved."			
	(Section 1.3.iii) ⁶			

⁶ Notwithstanding the general provision that "[i]nvestigation and surveys carried out in connection with development projects such as transmission line....will not attract the provisions of the Act so long as these surveys do not involve any clearing of forest or cutting of trees and operational are restricted to clearing of bushes and lopping of tree branches for purposes of sighting." (FCA 1.3.i)

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Further leasing of forest land to any individual, authority, agency or corporation not owned, ,managed or controlled by the Government is put to strict scrutiny by the FCA as well as Supreme Court Orders.			
4. Support projects that adversely impact non-critical natural forests or related natural habitats only if viable alternatives to the project are not available and only if appropriate conservation and mitigation measures are in place.	Under the Guidelines on the Forest (Conservation) "while considering proposals for dereservation or diversion of forest land for non-forest use, it is essential that ecological and environmental losses and socio-economic distress caused to the people who are displaced are weighed against economic and	Whenever it becomes unavoidable due to the geography or terrain or heavy cost involved in avoiding it, different alternative options are considered to minimize the requirement of forest area. To achieve this, route selection of transmission line is undertaken in close consultation with representatives of the State Forest DepartmentMinor alterations are made to	Full Equivalence. The ESPP includes provisions for analysis of alternatives and as well as costbenefit analyses that are equivalent to the requirements of this Operational Principle.	None.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	social gains" (2.6) The Guidelines specify "the types of projects for cost- benefit analysis cost will be required" including transmission lines (Annexure VI(b) and "the parameters for assessing the benefits accruing." (Annexure VI (c) Under the FCR the cost-benefit analysis is required too be included in the Form submitted by the user agency. (FCR, Rule 6, Appendix Form A, Part I)	avoid environmentally sensitive areas." (ESPP 2.1.2) "After the finalization of route, POWERGRID carries out the environmental assessment with the help of authorized agencies (Forest Officials) and formulates an Environmental Assessment and Management Plan (EAMP) which include[s] the forest proposal. Local forest authorities certify that the final route selected involves the barest minimum of forests." (ESPP 3.2) As part of its process of "Environmental Screening and Scoping for Transmission Lines" as well as for "Environmental Screening and Scoping for Substation[s]" POWERGRID "suggests alternative transmission line routes, if necessary" and		

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
		"examine[s] various route options" using "Survey of India topographic sheets and the Forest Atlas[to] identify environmental sensitive areas such as evergreen, semi evergreen, and deciduous and scrub forests[and] critical wildlife habitatsField unitsconduct spot verifications to confirm the informationand identify possibilities of circumventing environmentally sensitive areas [and] consult state forest departments for transmission lines passing through forest areas." (ESPP 5.1.2, 5.2.1 The Proforma for POWERGRID's alternatives assessment for Transmission Line and		ESPP
		Substations is provided in Appendices XXV and XXVI of the ESPP. Case studies of such alternative		

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
		assessments are provided in Appendix XXIX of the ESPP. POWERGRID also conducts as cost-benefit analysis which it includes as part of its application for FC. (ESPP 5.2.3.a.i and Appendix IV). The Parameters for the costs benefit analysis are included in Appendix V of the ESPP and include separate parameters for "Loss of Forest" and "Social"		
5. Support commercial, industrial-scale forest harvesting only when the operation is certified, under an independent forest certification system, as meeting, or having a time-bound action plan to meet, internationally recognized standards of responsible forest management and use.	N/A. POWERGRID does not engage in commercial, industrial-scale forest harvesting	Assessment". NA. POWERGRID does not engage in commercial, industrial-scale forest harvesting	N/A POWERGRID does not engage in commercial, industrial-scale forest harvesting	N/A POWERGRID does not engage in commercial, industrial-scale forest harvesting

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
6. Ensure that forest restoration projects maintain or enhance biodiversity and ecosystem functionality and that all plantation projects are environmentally appropriate, socially beneficial and economically viable.	The FCA prohibits clearing of naturally grown trees in forest land for purpose of using its for reforestation. (2. iv as cited in GC 1.8.i) The GC includes a "Proforma for Site Inspection Reports by Regional Officers." For CA activities, the site inspection is required to determine whether land proposed for CA is "suitable [for] plantation and managementimport ant from a Religious/Archeologic al point of viewinvolves rehabilitation of displaced persons" (Annexure XI) The Supreme Court has ruled that	"Massive plantation in all of its installations not only improves aesthetics but also contributes greatly to maintaining the desired ecological balance." (ESPP Box. 4.1)	Full Equivalence. It would appear from the ESPP that POWERGRID relies on the Forest Department to identify sites for species to be used for CA. The legal provisions used by the Forest Department are equivalent to the requirements of this Operational Principle	None.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	"[p]lantations must use local indigenous species since exotics have long term negative impacts on the environment" (Order dated October 10, 2002 in respect of Compensatory Afforestation Fund in I.A. No. 566 in EP(C) No. 202/1995 cited in GC Annexure II-B). The concept of NPV introduced through the Godavarman case is also towards an ecological restoration cost.			
	Apart from the above the precautionary principle as well as polluter pays principle also are now part of the fundamental right regime of the country.			

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
7. Give preference to small-scale community-level management approaches where they best reduce poverty in a sustainable manner.	Under the IFA a State government may assign to any village community the rights of Government ["village forest"} to or over any land which has been constituted a reserved forest. The State government may make rules for regulating the management of village forests." Otherwise, "[a]ll of the provisions of [the IFA] relating to reserved forestsapply to village forests." (Section 28). In some states such as U.P. the scope for creating village forests are not limited to reserve forests but include any forest. Thus village forests may be created out of any forest within the state.	This Operational Principle has limited application to POWERGRID's operations, The ESPP provides that where project affected peoples who are unable to benefit from land compensation, POWERGRID, as part of its Social Entitlement Framework offers a variety of income generating schemes including "fruit orchards" and "social forestry." (Appendix XVI)	Full Equivalence. The ESPP provides POWERGRID with the means to comply with this Operational Principle as one of its income- generating schemes	None.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
	Further in many states, under Section 28, participatory forest management or joint forest management has been formalized which seeks to elicit people's participation for forestry management. According to the GC among the standard conditions stipulated for Forest Clearance for TL proposals are that "dwarf species are to be planted in the right of way under the transmission lines." (5.2.iv).			
8. Support commercial harvesting by small-scale landholders, local communities or entities under joint forest management where	N/A. POWERGRID does not engage in commercial, industrial-scale forest harvesting, nor is it authorized to support	N/A. POWERGRID does not engage in commercial, industrial-scale forest harvesting, nor is it authorized to support commercial harvesting by	N/A POWERGRID does not engage in commercial, industrial-scale forest	None.

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
monitoring with the meaningful participation of local communities demonstrates that these operations achieve a standard of forest management consistent with internationally recognized standards of responsible forest use or that they are adhering to an approved time-bound plan to meet these standards.	commercial harvesting by small-scale landholders.	small-scale landholders.	harvesting, nor is it authorized to support commercial harvesting by small-scale landholders.	
9. Use forest certification systems that require: (a) compliance with relevant laws; (b) recognition of, and respect for, legal or customary land tenure and use rights as well as the rights of Indigenous Peoples and workers; (c) measures to enhance sound community relations; (d) conservation of biological diversity and ecological functions; (e) measures to maintain or enhance	N/A. POWERGRID does not engage in commercial, industrial-scale forest harvesting	N/A. POWERGRID does not engage in commercial, industrial-scale forest harvesting	N/A POWERGRID does not engage in commercial, industrial-scale forest harvesting	N/A. POWERGRID does not engage in commercial, industrial-scale forest harvesting

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
environmentally sound				
multiple benefits from the				
forest; (f) prevention or				
minimization of				
environmental impacts; (g)				
effective forest				
management planning; (h)				
active monitoring and				
assessment of relevant				
forest management areas;				
and (i) independent, cost				
effective, third-party				
assessment of forest				
management performance				
against measurable				
performance standards				
defined at the national level				
and compatible with				
internationally accepted				
principles and criteria of				
sustainable forest				
management through				
decision making procedures				
that are fair, transparent,				
independent, designed to				
avoid conflict of interest				
and involve the meaningful				
participation of key				
stakeholders, including the				

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID ESPP
private sector, Indigenous Peoples, and local communities.				
10. Disclose any time-bound action plans in a timely manner, before appraisal formally begins, in an accessible place and in a form and language that are understandable to key stakeholders.	Neither the FCA, the FCR nor GCs provide any mechanism for public disclosure of FC applications or approvals. However, as a result of Supreme Court decisions, Forest Clearance Plans are publicly disclosed. With respect to EA generally, which may include time-bound action plans to mitigate the impacts of forest clearance,, the regulatory authority, under the Environmental Notification is	The ESPP states that "[a]l relevant information about the project and details of socio-economic survey, Rehabilitation Action Plan (RAP), IEAR ⁸ etc. shall be available at the designated place (Public information Centre/library) of each substations and will be shared with the public or any interested persons whenever asked/required. (ESPP, Appendix XVIII ⁹)	Partial Equivalence. The ESPP is partially equivalent to the requirements of this Operational Principle in that it requires public disclosure of the RAP and IEAR in an accessible place (i.e. the substation). However, neither the RAP nor the IEAR normally contain time-	The ESPP should be revised to reference the Forest Clearance disclosure that is done as part of the FEAR and or other mechanisms.

⁸ Initial Environmental Assessment Report.
9 This statement can be found in the electronic version of the ESSP posted on POWERGRID's website at 4-ESPPVol-II_120405[1][.pdf However, it is not replicated in the hard copy of the ESPP.

		POWERGRID F	Gap Analysis	Recommended
Forests per OP 4.00 Table A1	ramework-GoI	Environmental and Social Policy and Procedures (ESPP)	POWERGRID ESPP	Gap Filling Measures for POWERGRID ESPP
dra avviins no no pri da he Ap No .	equired to make the raft EIA report vailable for aspection and a otified place during ormal business hours rior to and up to the ate of the public earing and prior to appraisal. (EIA fotification 7(i)III(vi.) The RTI Application may also be used to ssist disclosure.		bound action plans to mitigate the impacts of projects on forests. Such a plan would normally be included as part of POWERGRID's application for FC or in the FC itself. It could also be contained in the Environmental Action Management Plan prepared by POWERGRID prior to project implementation. However, there are no provisions in the	

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⁷ Under the EIA Notification, Appraisal is defined as "the detailed scrutiny by the EAC/SEAC of the application and other documents, including the Final EIA report, outcome of public consultations, including public hearing proceedings submitted by the applicant to the regulatory authority concerned for rant of environmental clearance."

Objectives and Operational Principles on Forests per OP 4.00 Table A1	Legal and Policy Framework-GoI	POWERGRID Environmental and Social Policy and Procedures (ESPP)	Gap Analysis POWERGRID ESPP	Recommended Gap Filling Measures for POWERGRID
			EGDD C 11	ESPP
			ESPP for public	
			disclosure of the	
			FC application	
			the FC or the	
			EAMP.	
			POWERGRID	
			discloses Forest	
			Clearances as	
			part of the Final	
			Environmental	
			Assessment	
			Report (FEAR)	
			but the FEAR is	
			not referenced in	
			the ESPP.	