ANNEXURE - 8



	Additional Capitalization Proposed for the FY 2018-19					
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate	
	Land .	(4)			5	
В	Building	-	•			
С	Major Civil Works	11 148			×	
D	Plant & Machinery	-	38	3		
1	Restoration works of Unit no. 4 of Chilla Power House	1.50	Chilla Power House came under forced outage after the incident on 13.07.2018.		Chilla Power House came under forced outage after the incident on 13.07.2018.	
2	Repairing and system of Chilla Power House.servicing of existing Voltas make AC system for restoration of the existing	0.18	Due to incident of flooding dated 13.07.2018, the AC system has been damaged , so to restore the system , the works are necessary	e e e e e e e e e e e e e e e e e e e	Due to incident of flooding dated 13.07.2018,the AC system has been damaged ,so to restore the system ,the works are necessary	
3	Design, Manufacturing, Supply, Erection and Commissioning of online vibration monitoring system for Unit No. 1, 2 & 3 of Chilla Power House	0.42	The online vibration monitoring system shall continuously measure and monitor vibration of rotor shaft at all guide bearings and axial vibration at thrust bearing. Moreover, the vibrations of structures at Top Cover, Lower Bracket, Upper Bracket and Stator Housing shall also be monitored.		The online vibration monitoring system shall continuously measure and monitor vibration of rotor shaft at all guide bearings and axial vibration at thrust bearing. Moreover, the vibrations of structures at Top Cover, Lower Bracket, Upper Bracket and Stator Housing shall also be monitored.	
4	220 Volt 400 AH Plant'e Battery set with Battery Charger	0.50	2		Tender yet to floated	
5	Procurement of Air Compressor for mulsifire System	0.01	- "	÷ •	Tender yet to floated	
_	Relay and control system	0.20	All the relay have become obselete and not spare parts are available		All the relay have become obselete and not spare parts are available	
7	Survelliance System	0.70	For security of the power house	8 4		
8	Illumination of barrage by LED lighting under DRIP programme.	0.16	These itemes are required for proper illumination at barrage, safety of barrage and personnel working in night shift at barrage. This work was suggested by DSRP under canal closure.	To avoide any accident, safety of Nigam's personnel and enhancement in effeciencyof personnel deputed at barrage due to proper illumination of barrage.	based on market survey.	



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9	Repair and maintenance of Barrage gates and head regulator gates of Virbhadra barrag under DRIP programme.		Since construction of barrage no major over hauling of barrage gates has been done due to which these gates create roblem in routine operation and there is leakage past these gates so far therfore repair of barrage gates has been covered under DRIP programme for proper operation of these gates.		As per PWD SOR and market rate.
10	Replacement of Hoisting Motors and brakes of Head Regulator and Barrage gates of Virbhadra Barrage under DRIP programme.	0.06	This work was suggested by DSRP under DRIP programme. Since construction of barrage in 1979-80 no major over hauling of barrage gates motor has been done due to which these motors effeciency has been decreased considerably due to which it create roblem in routine operation of gates therefore replacement of these motoris required.	By replacement of these motors Barrage	based on market survey.
	Painting On Steel Structure Of Virbhadra Barrage Pashulok, Rishikesh under DRIP programme.	0.22	This work was suggested by DSRP under DRIP programme to enhance the life of steel structure as steel structure is getting rusted as there is no painting works carried out on steel structure for last five year.	By application of painting on steel structureof barrage it will be prevented from corrosion and rusting thereby inhancement of life of steel structure.	based on PWD SOR & market survey.
12	Design, Manufacture, Supply, Erection, Testing and commissioning of a set of Stop log gates at Virbhadra Barrage, Pashulok, Rishikesh.	2.10	The barrage became operational in 1980 and 35 years have passed since then the wear and tear of these gates is more due to frequent operation of gates in monsoon period. In case of emergency the repair work of two or more gates is required to be carried during flushing for proper operation of gates which is a very short period. To increase the reliability of operation of gates through repair and maintenance of these gates in monsoon as well as pre and post monsoon periods. It is essential to procure a set of Stop log gate. The barrage became operational in 1980 and 36 years have passed since then the wear and tear of these gates is more due to frequent operation of gates in monsoon period. In case of emergency the repair work of two or more gates is required to be carried during flushing for proper operation of gates which is a very short period. To increase the reliability of operation of gates through repair and maintenance of these gates in monsoon as well as pre and post monsoon periods. It is essential to procure a set of Stop log gate.	In order to minimize generation loss at Chilla HEP due to repair and maintenance of barrage gates and to increase the reliability of operation of gates through repair and maintenance of these gates in monsoon as well as pre and post monsoon periods. It is essential to procure a set of Stop log gate.	Based on offer provided by Govt Irrigation work shop on single source basis under DRIP Csheme.



13	"Replacement of brake of hoisting arrangement of Under Sluice gate Other way gates and Head regulator gates of Virbhadra Barrage, Pashulok, Rishikesh".			harrage gates it is essentially required to replace	Based on offer provided by Govt Irrigation work shop on single source basis.
144	Fabrication, Transportati on and Erection of Under Sluice gate No.1 at Virbhadra Barrage, Pashulok, Rishikesh."	2.30	During routine inspection of barrage gates on dated 31-08-2016 it was found that the bottom tier of under sluice gate no.1 has been damaged due to due to impact of heavy logs and boulders in River Ganga, Joint inspection was carried with Uttarakhand Irrigation Workshop, Roorkee (the original manufacturer of these gates of barrage) team comprising of Executive Engineer, Assistant Engineer, Junior Engineer Erection Division and officers of UJVN Limited, Dy.General Manager, HGC Chilla, Executive Engineer (E&M), Assistant Engineer (E&M) and Junior Engineer (E&M), Virbhadra Barrage, Rishikesh on dated 01-09-16 and 02-09-16. The temporary work was suggested by Uttarakhand Irrigation Workshop, to avoid further damage to Under sluice gate no. 1 and generation loss at Chilla Power House till the replacement of gate. As per report of Erection Division (Govt. Irrigation Workshop), the repair of damaged Under sluice gate no.1 is not likely to be reliable. The reservoir shall have to be operated at lower level to prevent further damages due to ponding and impact of heavy logs and boulder on its bottom tier mainly in rainy season. Therefore, the works of "Fabrication, Transportation and Erection of Under Sluice Gate No.1 of Virbhadra Barrage, Pashulok, Rishikesh" is urgent to avoid generation loss at Chilla HEP. In order to minimize generation loss at Chilla HEP during replacement of this shutter of under sluice gate no.1, the work is proposed to be taken up in lean period.	s∞.	Based on offer provided by Govt Irrigation work shop on single source basis under DRIP Csheme.

			,		
15	Sewage Treatment Plant (STP)	0.29	comptroller and Auditor General of India has decided to conduct All India Performance Audit on "Rejuvenation of River Ganga". Further, as per the directions of Hon'ble High Court of Uttarakhand in the Writ Petition (PIL) No.140 of 2015, all of the 21 Hydroelectric projects located in the mainstream of	As per Comptroller and Auditor General of India has decided to conduct All India Performance Audit on "Rejuvenation of River Ganga". Further, as per the directions of Hon'ble High Court of Uttarakhand in the Writ Petition (PIL) No.140 of 2015, all of the 21 Hydroelectric projects located in the mainstream of River Ganga have to install Sewage Treatment Plants of appropriate capacity during construction phase and thereafter, at operational phase within a period of six months from the date of order viz.02.12.2016.	Based on market survey.
16	Manufacturing, Providing and Fixing of Rope Drum and Drum Gear of Head Regulator Gates of Virbhadra Barrage, Pashulok, Rishikesh.	0.40	The barrage comprises of fifteen barrage gates i.e. four under sluice, eleven other bay gates and five head regulator gates. Owing to regular operations of Head Regulator gates of barrage, it suffer heavy wear and tear, hence it is utmost important to repair and maintain these gates. By proper operation of these gates water is fed to Chilla power house and it needs frequently operation of head regulator gates for regulating for water especially during lean period. Moreover frequently operations of Head Regulator gates cause damage of rope drum of head regulator gates no. 1 & 4 and drum gear of head regulator gates no. 1 to 5. which may affect power generation & peaking at Chilla HEP. Therefore, to avoid any operation related problems during operation of Head Regulator gates, it is essentially required to replace rope drum of head regulator gates no. 1 & 4 and drum gear of head regulator gates no. 1 to with new one for smooth and safe operation of these gates.	to avoid any generation loss on account of failure of gate operation due to failure of gate drum and to avoid any mishap and damaged to barrage gates, it is essentially required to Manufacturing, Providing and Fixing of Rope Drum and Drum Gear of Head Regulator Gates of Virbhadra Barrage, Pashulok, Rishikesh.	Based on offer provided by Govt Irrigation work shop on single source basis.



17	Electrification of Barrage (Lamp Post)	0.21	Lamp posts installed at Virbhadra barrage have been damaged to a great extent and all the wiring has also detoriated. Therefore, replacement and rewiring of the same is required for proper illumination of the area.	In order to avoid any mishap due to darkness at barrage Electrification of Barrage (Lamp Post) is essentially required.	Based on CPWD SOR.
		12.00			
E	Vehicles	-		0	
F	Furniture & Fixtures				
1	Procurement of Furnitures.	0.20	and maintenance of three colonies i.e. Barrage colony, New		Market survey

	T				
2	Procurement of IT Equipments.	0.10	Since the date of handing over of barrage to Nigam in April 2010 to EE (Civil) was looking after the operation of barrage, Civil maintenance, repair of Hydro Mechanical & Electromechanical Electro Mechanical maintenance and Repair and maintenance of three colonies i.e. Barrage colony, New hydle colony & Maneribhali colony and offices. later on office of EE (E&M) was created on April 2015, Operation of barrage, repair of Hydro Mechanical & Electromechanical Electro Mechanical maintenance and Repair and maintenance of three colonies i.e. Barrage colony, New hydle colony & Maneribhali colony & offices has been handed over to office of EE (E&M). There is no IT equipment(Computer, Printers, Dongals) procured for this office as well as in the office of DGM HGC Chilla and GM(GV) Office since long there is scarcity of IT equipments in these offices to dispose off the daily routine work and DRIP works, these offices are utilizing the very old IT equipments by repairing and staff has been increased in these offices therefore provision has been made to procure IT equipments for these offices under DRIP. More over ERP is in its implemention phase in Ngam, therefore latest peripherals are required for this programme.	Now a days new IT equipments are required for disposing off daily routine work as well as DRIP works in efficient and effective manner.	Market survey
3	Procurement of Ceiling Fans	0.0019	Since the date of handing over of barrage to nigam in April 2010 to EE (Civil), electrical maintenance of three colonies i.e. Barrage colony, New hydle colony & Maneribhali colony and offices was being look after by EE (Civil). Since then no fan has been procured for various colonies and offices, later on office of EE (E&M) was created on April 2015. Electrical repair & maintenance of colonies & offices has been handed over to office of EE (E&M). Frequently complaints of that there is no fan in the various type of quarters has been received very often in the office of EE (E&M); therefore it is urgent to procure requisite quantity of ceiling fans. The Ceiling fan thus procured shall be utilized in the colonies and offices of UJVNL Pashulok Barrage.	As the Barrage colonies and office attached with the barrage are very old for efficient and effective working of personnel deputed at Barrage it is required to procure the ceiling fan for these offices and colonies.	Based on market survey.
		0.30		et a	



G	Office Equipment		4		
1	Procurement of IT Equipments.	0.10	over to office of FF (F&M).	Now a days new IT equipments are required for disposing off daily routine work as well as DRIP works in efficient and effective manner.	Market survey
F 5		0.10			
Н	Others			0	
	Total	12.40			

	Additional Capitalization Proposed for the FY 2018-19					
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate	
_	Land	# E				
В	Building					
С	Major Civil Works		3	*		
1	Repair of Right Afflux Bund Road of Pashulok Barrage at Rishikesh.	0.75	The road of the bank has gone weathered which require to be relaid.	The road of the bank has gone weathered which require to be relaid.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
2	Fencing of C-Type Residences in Barrage Colony at Pashulok, Rishikesh.	0.20	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
3	Fencing of B-Type Residences in Barrage Colony at Pashulok, Rishikesh.	0.20	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
4	Renovation work of Seepage Network of Chilla HEP Power Channel near Ganga Bhogpur (Talla).	0.99	The seepage netwwork build at the time of construction of the project has gone damaged. The stake holders facing lot of inconvenience on account of water logging. There is a threat to the power channel due to improper seepage network, therefore work is essential.	The stake holders facing lot of inconvenience on	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
5	Chain Link Fencing work of Central Store of Chilla Power House at Chilla.	0.56	Work is essential for the safety of the store from theft ans wild animals.	Work is essential for the safety of the store from theft ans wild animals.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
6	Work related to Fencing of Type-lind Residences at Chilla Colony Chilla.	0.96	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	



7	Work related to Fencing of Type-Illrd Residences at Chilla Colony, Chilla.		The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
8	Work related to Fencing of Type-IVth Residences at Chilla Colony, Chilla.	0.17	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
9	Renovation of Canteen building near Chilla Power House at Chilla.	0.19	Work is essential for providing a proper canteen building to the power house personnel.	Work is essential for providing a proper canteen building to the power house personnel.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
		4.50			-3
D	Plant & Machinery	-			
E	Vehicles	-			
F	Furniture & Fixtures	91			
G	Office Equipment	-			
Н	Others	-			
	Total	4.50			

E&M Expenses

			Additional Capitalization Prop	posed for the EV 2010-20	Edivi Experises
	· · · · · · · · · · · · · · · · · · ·	Amount	Additional Capitalization Fro	Josed for the F1 2019-20	A
Sr. No.	Description	(Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate
Α	Land			2	
В	Building	-			
С	Major Civil Works		16		
۵	Plant & Machinery		4		
1	Restoration works of Unit no. 4	14.50	Restoration works of unit through BHEL	Restoration works of unit through BHEL	Restoration of unit
2	Relay and control system (continuing from above)	1.80	All the relay have become obselete and not spare parts are available		All the relay have become obselete and not spare parts are available
3	Design, Manufacture, Supply, Erection, Testing and commissioning Automation System Along with SCADA Software House at Virbhadra Barrage, Pashulok, Rishikesh	8.16	This work was suggested by DSRP under DRIP programme.	By application of SCADA at barrage Data acquisition will be easy and operation of barrage will be done in efficient and smoothly.	based on market survey.
4	Design, Manufacture, Supply, Erection, Testing and commissioning of Trash Rack Cleaning Machine at Virbhadra Barrage of Virbhadra Barrage, Pashulok, Rishikesh. This includes cost of material labours, T&P etc. complete in all respect under DRIP programme.	1.76	This work was suggested by DSRP under DRIP programme.	By application of trash rack machine at barrage trash may removed in all codition and weather therby increased generation from Chilla HEP.	based on market survey.
		26.22			2
Έ	Vehicles	-			
F		120			
G	Office Equipment				
Н	Others				
	Total	26.22			



Civil Expenses

	Additional Capitalization Proposed for the FY 2019-20					
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate	
Α	Land	=				
В	Building	-				
С	Major Civil Works					
:1	Works Related to Chain Link Fencing along with Right Afflux Bund road of Pashulok Barrage at Rishikesh.	1.75	1 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Work is essential for the safety of the barrage and to check the entry of unwanted or anauthorized personals in side the barrage area.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
2	Fixing of Steel Almirah Shutters in Residences of Barrage and New Hydel Colony at Pashulok, Rishikesh.	0.19	The Huoses of the colony either have shutterless almirah or the shutters of almirah have rotten by the termite. Therefore, the proposed work is essentialy required.	The Huoses of the colony either have shutterless almirah or the shutters of almirah have rotten by the termite. Therefore, the proposed work is essentialy required.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
3	Renovation of bridges over Power Channel of Chilla HEP at Rishikesh.	0.25	Making connevtivity across the power channel repair of bridges oon power channel is essential.	Making connevtivity across the power channel repair of bridges oon power channel is essential.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
4	Roof Treatment of Residences of Barrage Colony at Pashulok- Rishikesh.	0.38	To check the leakage from the roof work is required.	To check the leakage from the roof work is required.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
5	Fencing of C-Type Residences in Barrage Colony at Pashulok, Rishikesh.	0.26	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
6	Fencing of B-Type Residences in Barrage Colony at Pashulok, Rishikesh.	0.11	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	The fencing of the residences was erected almost 30 years back. With the passage of time fence has gone damaged. A new and stron fencing is required to the residences in view of security threat.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	
7	Repair of Berms, Parapits and pitching of Power Channel of Chilla HEP.	0.57	The work is essential for the safety of the power channel. Work is essential so that watersupply for the generation be ensured.	The work is essential for the safety of the power channel. Work is essential so that watersupply for the generation be ensured.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders	



8	Protection work of Power Channel of Chilla HEP and Flood Control works of Bin River.	0.48	The work is essential for the safety of the power channel. Work is essential so that watersupply for the generation be ensured.	The work is essential for the safety of the power channel. Work is essential so that watersupply for the generation be ensured.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
9	Roof Treatment work of Type-Ist Residences at Chilla Colony, Chilla.	0.32	Work is essential to check the leakages from the roof of the residences.	Work is essential to check the leakages from the roof of the residences.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
10	Roof Treatment work of Type-IInd Residences at Chilla Colony, Chilla.	0.50	Work is essential to check the leakages from the roof of the residences.	Work is essential to check the leakages from the roof of the residences.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
11	Roof Treatment work of Type-IIIrd Residences at Chilla Colony, Chilla.	0.23	Work is essential to check the leakages from the roof of the residences.	Work is essential to check the leakages from the roof of the residences.	Rates are as per CPWD/PWD SOR, Work shall be awarded thouh open tenders
12	Roof Treatment work of Type-IVth Residences at Chilla Colony, Chilla.	0.21	Work is essential to check the leakages from the roof of the residences.	Work is essential to check the leakages from the roof of the residences.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
13	Renovation of Club building at Chilla Colony, Chilla.	0.70	The club of the colony is in very bad condition. To provide a proper venue on different occassions, the proposed work is essential	The club of the colony is in very bad condition. To provide a proper venue on different occassions, the proposed work is essential	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
14	Renovation of 02 Nos Parks at Chilla Colony, Chilla.	0.40	Providing a proper park to each of the colony the proposed works essentially required.	Providing a proper park to each of the colony the proposed workis essentially required.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
15	Repair of railings and other appurtenant structures at Fore bay of Chilla HEP.	0.29	Work is essential for the safety of the persnel working at forebay	Work is essential for the safety of the persnel working at forebay	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
16	Work related to arresting of Penstock Leakage of Chilla HEP at Chilla.	- 0.35	Work is essential to ceck the leakage of penstock.	Work is essential to ceck the leakage of penstock.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders

17	Renovation works of Power House Building and appurtinant structure of Chilla HEP.	2.00	There are so many defects have been obseves in side the	The power House building of Chilla HEP is very old. As such no major Civil Works have been done for power house building. Thereare so many defects have been obseves in side the building. Floor of the power house building has gone ruin. Roof of the power hose has leakage. Most of the railing have been gone damged, false celing and other extensive repair is neeeded for the building.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
18	River training Works of Ghasiram Gadhera at Chilla.		During extensive rains of monsoon 2018 lot of meandering had taken place in all the river of the project area. Heavy flash flood washed the shore of river and all the protection works for channelizing the river have gone washed away. The road of project had also got affected severely by flash flood. There are Nos of locations have been developed where from water in next monsoons will enter to road side and will be damage the entire road. The road is necessary for communication up to Chilla power House and colony for proper maintenance of the plant and its operation. Therefore, flood protection work of Ghasiram river are essential for the safety of the road and thus uninterrupted generation from power house.	the Statement of proceedings to the contract of the contract o	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders

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19	River training Works of Mundal Nalla at Chilla.	1.75	During extensive rains of monsoon 2018 lot of meandering had taken place in all the river of the project area. Heavy flash flood washed the banks of Mundal Nalla and all the protection works for training the river have gone washed away. The bridge on road near power house had also got affected by the flash flood. There are Nos. of locations have been developed where from water in next monsoons will enter in to Power House, central store and switchyard that will be damage the power house premises. Tail race channel of the project and colony has also come in to danger of the flood. Therefore, it is utmost need to undertake river training works of Mundal Nalla for the safety of aforesaid structure so that uninterrupted generation may be ensured.	During extensive rains of monsoon 2018 lot of meandering had taken place in all the river of the project area. Heavy flash flood washed the banks of Mundal Nalla and all the protection works for training the river have gone washed away. The bridge on road near power house had also got affected by the flash flood. There are Nos. of locations have been developed where from water in next monsoons will enter in to Power House, central store and switchyard that will be damage the power house premises. Tail race channel of the project and colony has also come in to danger of the flood. Therefore, it is utmost need to undertake river training works of Mundal Nalla for the safety of aforesaid structure so that uninterrupted generation may be ensured.	
20	River training Works of Bin River.	1.50	During extensive rains of monsoon 2018 lot of meandering had taken place in all the river of the project area. Heavy flash flood washed the banks of Bin River. A large Nos. of protection works for training the river and safety of power channel have gone washed away. Safety of Bin super passage and power channel at this section is on stake, as the flood in Bin River can damage these structures in future. If power channel gets damaged generation of the project will be stopped. Therefore river training works of Bin River are essential to be carried out.	During extensive rains of monsoon 2018 lot of meandering had taken place in all the river of the project area. Heavy flash flood washed the banks of Bin River. A large Nos. of protection works for training the river and safety of power channel have gone washed away. Safety of Bin super passage and power channel at this section is on stake, as the flood in Bin River can damage these structures in future. If power channel gets damaged generation of the project will be stopped. Therefore river training works of Bin River are essential to be carried out.	
		13.64			
	Plant & Machinery	-	- 1	8	
E	Vehicles	-			
F	Furniture & Fixtures	*			Libe
G	Office Equipment	-		0	
Н	Others			<u> </u>	
-	Tatal	42.55			
	Total	13.64			



RMU Expenses

			Vertical includes the latter of the contract o	NOTE THE PROPERTY OF THE PROPE	RIVIO Expenses				
	Additional Capitalization Proposed for the FY 2019-20								
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate				
Α	Land	(#)							
В	Building			at					
С	Major Civil Works	29	11 9						
D	Plant & Machinery								
		30.00		High Reliability, Enhanced Output, Improved Generation, Safety of man & machinery, Life enhancement	15% Advance payment against BG as per terms and condition, if contractor demands.				
		30.00							
Ε	Vehicles	18 42							
F	Furniture & Fixtures	-							
G	Office Equipment	10	C		/-				
Н	Others	-							
	Total	30.00							

(Purushottam Singh)
Director (Operation)
UJVN Ltd.
Dehradun

E&M Expenses

	Additional Capitalization Proposed for the FY 2020-21					
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate	
	Land	(
-	Building	-				
	Major Civil Works					
D	Plant & Machinery					
1	Providing and fixing of chequered plates at Barrage gates, HR Gate and Gantry crane Platform at Virbhadra barrage structure.	2.06	As the Barrage is 36 year old and the chequred plate installed at various plateform of Barrage structure i.e.(HR gates , Barrage gate and gantry crane platform) has been damaged badly due to rusting and ageing therefore for safety of personnel dputed at barrage this work is essentilly required. As the chequered plates of working platform of Virbhadra barrage are damaged and eroded very badly and may result in any mishap during operation barrage therefore, this work is required to be taken up in DRIP -2.	This will enhance the capacity of pesonnel to work on Barrage structure in efficient, effective manner and barrage operation may be done in safe and smooth manner.	Tentative	
2	Supply & Fixing of Motors of Under Sluice and Other bay gates	0.75	For operation of barrage gates motors are installed at the structures. These motors have suffered heavy wear and tear due to regular operations of spill way (other bay) as well as HR gates over a long period of time and now-a-days these motors are creating problems frequently during operation, therefore, it needs replacement for proper and safe operation of barrage gates. This work is being taken in DRIP -2.	This will enhance the operation of barrage gate in efficient and effective manner, more smoothly and safely.	Tentative	
3	Supply, Installation & Commissioning of Main LT Pannel including protection & incoming cable with provision of panel for TRCM etc.	0.30	LT pannel installed at Virbhadra Barrage is very old and the spare parts are not available in the market. Cable is under rated and wiring is scattered. Therefore, LT Distribution pannel needs to be replaced with new one for safety of personnel and smooth operation of the auxiliaries etc. it is proposed forinstallation of new LT pannel in DRIP -2	Due to problem in LT Pannel it may cause generation loss at Chilla Power Station due to problem in operation of gates and therefore to avoid any generation loss on account of this LT panne installed at Barrage should be in healthy and good condition.	Market rate	



4	Procurement of V.C.B of 11 kV Transformers at Pashulok Barrage.	0.30	l	Due to problem in VCB pannel may interrupt power supply for operation of gates, thus it may cause generation loss at Chilla Power Station therefore to avoid any generation loss on account of this Installation of VCB is essentially required.	Tentative
5	Installation of all weather station at Virbhadra Barrage	0.06	It is suggested by world Bank consultant Teams that In order to measure various parameter like wise Humidity,Rain fall etc.installation of all weather is essentially required at Pashulok Barrage	Instrumentation of Barrage is essential as per World Bank Consultant for Know how of whether so that parameter of barrage could be managed in effective and effecient manner accodingly.	Tentative
6	Repair and strengthening of epoxy painting of Boulder excluder tunnel of Under sluice gate at Virbhadra Barrage .	2.00	During canal closure w.e.f. 25.01.18 to 14.02.18 when inspection was carried of boulder excluder tunnel.it was found that the steel lining of boulder excluder tunnel is heavly rusted and pitting on its surface, it thickness of platehas been reduced considerable at various places, therefore its repair and strenghthening and epoxy painting is essentially required to be taken up at the earliest. This work is proposed under DRIP -2	To avoid any generation loss on account of fault occuring due to this deffect and for safety of barrage and smooth operation of Barrage a this work is proposed under DRIP-2.	Tentative
7	"Alignment and Overhauling of hoist system of head regulator gates No. 01 to 05 of Virbhadra Barrage, Pashulok, Rishikesh".	1.59	during canal closure w.e.f. 25.01.18 to 14.02.18 when inspection was carried of all Barrage gates, it was suggeted by World Bank Consultants during their visit during this period that alignment of the Barrage gates must be got done for proper and trouble free operation of these gate and therefore this work is proposed under DRIP -2	To avoid generation loss on account of misalignment of barrage gates and problem in operation of barrage gates, it is essentially required to align all the barrage gates for safe and smooth operation of barrage and safety of barrage personnel.	Tentative
8	Replacement of steel plate of All barrage gate.	1.01	The steel plate of gate groove of barrage gate has been deterioted badly therefore replacement of steel plate is essentially required, therefore this work is proposed under DRIP -2	To avoid generation loss on account of operation failure due to plate of barrage gate, it is essentially required to align all the barrage gates.	Tentative
		8.06			



E	Vehicles				
1	Procurement of vehicle (M&M Bolero) for EE (E&M), Virbhadra Barrage and DGM, HGC Chilla.	0.16	A dedicated vehicle is required for newly created office of Executive Engineer (E&M),Pashulok Barrage vide O&M no.No.2323-UJVNL/03/HR/MOC/R! dated 26-03-2015. for making site visit and attending meeting, now a days hired vehicle is being used by him.The vehicle of Dy. General Manager (E&M), HGC Chilla creats problem frequently therefore needs to be replacement, therefore this work is proposed under DRIP -2	For efficient and effective working vehicles are required for newly created office of, EE (E&M), Virbhadra Barrage and DGM Office.	Tentative
		0.16			
F	Furniture & Fixtures				
G	Office Equipment				
Н	Others				
	Total	8.22			*

(Purushottam Singh)
Director (Operation)
UJVN Ltd.
Dehradun

	Additional Capitalization Proposed for the FY 2020-21						
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate		
А	Land	-					
В	Building	823					
С	Major Civil Works	-					
1	Repiar & Maintenance of Stone Pitched Side Slopes of Afflux Bund towards Hydel Colony at Pashulok-Rishikesh.	0.45	The proposed work is required for the strengthening of bund that holds the reservoir water of barrage.	The proposed work is required for the strengthening of bund that holds the reservoir water of barrage.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders		
2	Maintenance & repair of stone pitched side slopes and drainage drains of both the banks of Power Channel of Chilla HEP at Rishikesh.	0.45	To avoide the possibility of water logging of nearby area and structures repair of stone pitched draind is required so that proper drainage of the water be ensured.	To avoide the possibility of water logging of nearby area and structures repair of stone pitched draind is required so that proper drainage of the water be ensured.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders		
3	Boring of tube well and construction of pump station at Chilla.	0.23	Work is essential to meet drinking water requirement of the colony	Work is essential to meet drinking water requirement of the colony	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders		
4	Work related to Providing and Fixing of Steel section for Type- Ilnd, Type-Illrd & Type- IVth Residences at Chilla Colony, Chilla.	0.22	Work is required to cover the open veramdah which is a threr to the residents from wild animals.	Work is required to cover the open veramdah which is a threr to the residents from wild animals.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders		



5	Rennovation of Cement Concrete Floor Work of Type-Ist & Type-IInd Residences at Chilla Colony Chilla.	0.23	The work is required to provide proper floors in courtyards of the residences.	The work is required to provide proper floors in courtyards of the residences.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
6	Chilla Colony Drainage System Renovation Work at Chilla.		The drains of the colony has been been abandoned. For proper drainage of the colony the renovation of damaged drais was essential.	The drains of the colony has been been abandoned. For proper drainage of the colony the renovation of damaged drais was essential.	Rate are as per tendered rate on the basis of SOR of CPWD/PWD estimate.
7	Renovation works of Power House Building and appurtinant structure of Chilla HEP.	2.00	The power House building of Chilla HEP is very old. As such no major Civil Works have been done for power house building. Thereare so many defects have been obseves in side the building. Floor of the power house building has gone ruin. Roof of the power hose has leakage. Most of the railing have been gone damged, false celing and other extensive repair is neeeded for the building.	The power House building of Chilla HEP is very old. As such no major Civil Works have been done for power house building. Thereare so many defects have been obseves in side the building. Floor of the power house building has gone ruin. Roof of the power hose has leakage. Most of the railing have been gone damged, false celing and other extensive repair is neeeded for the building.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
8	River training Works of Bin River.		During extensive rains of monsoon 2018 lot of meandering had taken place in all the river of the project area. Heavy flash flood washed the banks of Bin River. A large Nos. of protection works for training the river and safety of power channel have gone washed away. Safety of Bin super passage and power channel at this section is on stake, as the flood in Bin River can damage these structures in future. If power channel gets damaged generation of the project will be stopped. Therefore river training works of Bin River are essential to be carried out.	During extensive rains of monsoon 2018 lot of meandering had taken place in all the river of the project area. Heavy flash flood washed the banks of Bin River. A large Nos. of protection works for training the river and safety of power channel have gone washed away. Safety of Bin super passage and power channel at this section is on stake, as the flood in Bin River can damage these structures in future. If power channel gets damaged generation of the project will be stopped. Therefore river training works of Bin River are essential to be carried out.	



9	Repair and refurbishment of Civil structure of Pashulok Barrage.	2.00	requires to be renovated. There would be damage on pierce and spilway of the barrage which will hye to be attaced in pear		Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
		7.58			
D	Plant & Machinery	=			
E	Vehicles	±€			
F	Furniture & Fixtures	-	.0	7	
G	Office Equipment	2			
Н	Others				
	Total	7.58			

RMU Expenses

	Additional Capitalization Proposed for the FY 2020-21							
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate			
Α	Land	25						
В	Building	12						
С	Major Civil Works			•	· ·			
D	Plant & Machinery							
		30.00		High Reliability, Enhanced Output, Improved Generation, Safety of man & machinery, Life enhancement	10% fo Supply portion against bills			
		30.00						
Ε	Vehicles	-	E					
F	Furniture & Fixtures							
G	Office Equipment	-		*				
Н	Others							
	Total	30.00	5					

(Purushottam Singh)
Director (Operation)
UJVN Ltd.
Dehradun

	Additional Capitalization Proposed for the FY 2021-22						
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate		
Α	Land						
В	Building	-					
С	Major Civil Works	-					
D	Plant & Machinery						
1	Replacement of HR Gate of Virbhadra Barrage.	10.00	There is heavy scaling on HR gate of Barrage due to which plate thickness of gate has been reduced considerable and it was suggested by the expert of World Bank/ Irrigation for replacement of HR gates as expenditure incurred in metallic coating on Barrage gate is more expensive than procurement of new gate.	To avoid generation loss on account of Gate failure this work is required.	To avoid generation loss on account of Gate failure this work is required.		
2	Painting of Barrage Gate of Virbhadra Barrage.	1.50	Painting on barrage gate is essentilly required for enhance of its life as it prevent it from rusting therefore painting of barrage gates is essentially required.	To prevent dammage of gate from rusting it is essentially required proper up keep of gate and painting after certain interval time of four or five year.	To prevent dammage of gate from rusting it is essentially required proper up keep of gate and painting after certain interval time of four or five year.		
3	Replacement of Sill Beam	3.50	barrage gates has been damaged at several places causing leakage past the gates. The work of "Replacement of Sill beam of Barrage gates of Pashulok Barrage at Rishikesh." is urgent for smooth and safe operation, to avoid generation loss at Chilla HEP.	During last closure it was found that the sill beam of all barrage gates has been damaged at several places causing leakage past the gates. To avoid generation loss on accoun leakage past the gates this work is essentially required.	During last closure it was found that the sill beam of all barrage gates has been damaged at several places causing leakage past the gates. To avoid generation loss on accoun leakage past the gates this work is essentially required.		
		15.00					
E	Vehicles	*					
F	Furniture & Fixtures		100				
G	Office Equipment	-					
Н	Others	-					
	Total	15.00	,	=			
	iotai	15.00					



Civil Expenses

			Additional Capitalization Prop	oosed for the FY 2021-22	Civil Expenses
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate
Α	Land	·			
В	Building		X	8.	
С	Major Civil Works				39
1	Chilla Colony Drainage System Renovation Work at Chilla.	0.50	The drains of the colony has been been abandoned. For proper drainage of the colony the renovation of damaged drais was essential.	The drains of the colony has been been abandoned. For proper drainage of the colony the renovation of damaged drais was essential.	Rate are as per tendered rate on the basis of SOR of CPWD/PWD estimate.
2	Repair and Refurbishment of Power Channel of Chilla HEP at Rishikesh.	12.00	Work is essential for the safety of the power channel and to avoide possibility of its breaching.	Work is essential for the safety of the power channel and to avoide possibility of its breaching.	Rate are as per tendered rate on the basis of SOR of CPWD/PWD estimate.
3	Renovation works of Power House Building and appurtinant structure of Chilla HEP.	2.45	The power House building of Chilla HEP is very old. As such no major Civil Works have been done for power house building. Thereare so many defects have been obseves in side the building. Floor of the power house building has gone ruin. Roof of the power hose has leakage. Most of the railing have been gone damged, false celing and other extensive repair is neeeded for the building.	The power House building of Chilla HEP is very old. As such no major Civil Works have been done for power house building. Thereare so many defects have been obseves in side the building. Floor of the power house building has gone ruin. Roof of the power hose has leakage. Most of the railing have been gone damged, false celing and other extensive repair is neeeded for the building.	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
4	Repair and refurbishment of Civil structure of Pashulok Barrage.	6.00	The work is essential for renovation of Civil structure of barrage. Most of the parapet walls have been damaged which requires to be renovated. There would be damage on pierce and spilway of the barrage which will hve to be attaned in near futute	The work is essential for renovation of Civil structure of barrage. Most of the parapet walls have been damaged which requires to be renovated. There would be damage on pierce and spilway of the barrage which will hve to be attaned in near futute	Rates are as per CPWD/PWD SOR. Work shall be awarded thouh open tenders
		20.95			(a)
D	Plant & Machinery	-			
E	Vehicles				
F	Furniture & Fixtures				
G	Office Equipment	-		2 2	
Н	Others	-			4
	-				
	Total	20.95			



RMU Expenses

			Additional Capitaliza	tion Proposed for the FY 2021-22	.1
Sr. No.	Description	Amount (Rs. In Crores)	Need/Urgency of CAPEX	How the Capex will have improvement in performance of plant/life enhancement	Justification of cost/rate
Α	Land	12	11		
В	Building	·			
С	Major Civil Works	(2)			
D,	Plant & Machinery		•		
		60.00	B	High Reliability, Enhanced Output, Improved Generation, Safety of man & machinery, Life enhancement	Payments against supply and works.
		60.00			
Ε	Vehicles	Ψ.			
F	Furniture & Fixtures				*
G	Office Equipment				
H	Others	-			
	Total	60.00			