

ANNEXURE - 7


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

Name of Project : MB-I

E&M Expenses

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
A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1	SITC of 11 KV indoor VCB panels including all associated accessories along with dismantalling of existing 11 KV MOCB panels at 33/11 KV Heena substation, Uttarkashi	1.54	<p>Time has taken its toll on the 11 KV MOCBs at Heena sub-station and the same has been showing recurrent age related problems such as spurious operation resulting in abrupt failures, unexpected protection faults related tripping & flags, flashovers etc. Such incidents are dangerous for operational safety of the equipment & personnel at duty and result in low reliability of power supply being catered by the 33/11 kV sub-station. Further, the spares of these obsolete design MOCBs are not available easily in open market, hence reliably maintaining the critical power supplies especially for the Maneri Dam gate operations during monsoon period, Sirror pumping scheme near HRT adit etc. becomes a herculean task. All above facts indicate that the said MOCB assemblies are advancing towards permanent failure/ breakdown and if such an incident occurs, it may result in major catastrophe as far as the critical power supply for Maneri Dam gate operations during monsoon period and Sirror pumping scheme is concerned. Further, the District administration has been reminding now and then to consolidate the supply system pertaining to UJVN Limited's side in order to ensure un-interrupted power supply in the nearby areas. In order to avoid such a precarious situation, it is therefore proposed to carry out the works of dismantling the 15 nos. old MOCBs, supply, erection, testing and commissioning of new technology based VCBs with all accessories at 33/11 kV Heena substation, Uttarkashi.</p> <p>The criticality of the work is on account of obsolence of technology on which the working of existing 11KV circuit</p>	Work is necessary for trouble free & safe operation to avoid any accidents and to maintain uninterrupted power supply to Maneri dam, Sirror, near by areas as Heena-Maneri-Bhatwari etc	Competitive rates through open tender basis


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2	SITC of LT circuit breaker panels at Kuteti Colony sub-station.	0.30	Time has taken its toll on the LT circuit breaker panels at Kuteti Colony sub-station and the same has been showing recurrent age related problems such as spurious operation resulting in abrupt failures, unexpected protection faults related tripping & flags, flashovers etc. Such incidents are dangerous for operational safety of the equipment & personnel at duty and result in low reliability of power supply being catered by the sub-station. Further, the spares of these obsolete design circuit breaker are not available easily in open market, hence reliably maintaining the critical power supplies.	Work is necessary for trouble free & safe operation to avoid any accidents and to maintain uninterrupted power supply to colony & office	Competitive rates through open tender basis
3	SITC of 11/LT 500 kVA distribution transformers at Maneri Dam substation	0.40	Existing transformers catering to the critical power supply to Maneri Dam are in bad condition on account of repeated maintenance & repair work due to prolonged service life of more than 35 years. In order to consolidate the power supply at Maneri dam and increase the reliability of the system, the said transformers are required to be replaced with new ones.	Work is necessary for trouble free & safe operation to avoid any accidents and to maintain uninterrupted power supply to Maneri dam	Competitive rates through open tender basis
		2.24			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
	Total	2.24			


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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
1	Land	-			
2	Building				
1	Construction of sewer line and installation of STP in residential colony of Power House and Maneri dam (Kuteti Devi, Tiloth, Maneri Dam) and in Tiloth Power House area.	1.50	The project & its residential colony lies along the bank of Bhagirathi river. As per Hon'ble NGT Guideline sewerline & STP is necessary under clean Ganga Mission Project	As per Hon'ble NGT Guideline sewerline & STP is necessary under clean Ganga Mission Project	
		1.50			
3	Major Civil Works				
1	Repair work of Sirror Adit of MB-I Project	0.25	The gate of HRT Adit at Sirror has badly damaged. Erection of new gate is necessary to prevent the entry of anti-social elements and to ensure the safety of HRT. Also cleaning of accumulated mud inside adit is necessary to provide the way to flow the seepage water from HRT. This seepage water is utilised for drinking purpose to Sirror village, which is project affected village.	To ensure the safety of HRT, comprehensive repair, cleaning and erection of gate is necessary in this Adit.	Estimate as per PWD SOR Bhatwari Block & DSR .
2	Fencing of UJVNL land under MB-I Project	0.50	The total project land of MB-I project is approximately 10 hectare. These lands were acquired/purchased in 1980s. Maneri dam, Tiloth power house, switchyard, offices, stores, residential colony at Maneri dam, Kuteti Devi and Tiloth etc had constructed on these land. Remaining patches of land are kept free for use in future requirements. At the beginning the project area was thinly populated and no fencing was constructed around these land. Over the course of time, the nearby vicinity of power house, Maneri dam has been developed and become heavily populated. Due to unfenced open land at many locations, peoples are trying to enroach these lands, which are creating unnecessary land disputes. Therefore fencing work of all UJVNL land is essentially required.	The land belongs with MB-I project is valuable assets of power plant. Fencing of these lands are utmost important to prevent the encroachment and to avoid unnecessary litigation. To availing the loan for important project work, undisputed land is essentially required.	Estimate as per PWD SOR Bhatwari Block & DSR .
		0.75			


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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
4	Plant & Machinery				
5	Vehicles				
1	Procurement of vehicle for official & site work	0.10	For daily routine site work one vehicle is necessary.	The driver is available in this unit. So only vehicle will be required.	
		0.10			
6	Furniture & Fixtures				
1	Procurement of furniture	0.10	The existing furniture has become old and also damaged to some extent. Procurement is necessary as per requirement.	For smooth functioning of office, field hostel, OTC purchase of furniture is required	Quotation from authorised dealer.
		0.10			
7	Office Equipments				
	Total	2.45			


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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
A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1		40.73		High Reliability, Enhanced Output, Improved Generation, Safety of man & machinery, Life enhancement	10% Milestone payment against additional order. Payments against supply and works.
		40.73			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	40.73			


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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
A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1	SITC of 11 KV indoor VCB panels including all associated accessories along with dismantalling of existing 11 KV MOCB panels at 33/11 KV Tiloth DPH, Tiloth, Uttarkashi	1.54	Presently installed MOCBs have been showing recurrent age related problems such as spurious operation resulting in abrupt failures, unexpected protection faults related tripping & flags, flashover etc. Such incidents are dangerous for operational safety of the equipment & personnel at duty and result in low reliability of power supply being catered by the 33/11 KV substation. Further spare of these obsolete design MOCBs are not available easily in open market, hence reliably maintaining the critical power in colonies, Josiyara barrage, Uttarkashi town etc becomes a herculean task	Work is necessary for trouble free & safe operation to avoid any accidents and to maintain uninterrupted power supply to colonies, Josiyara barrage, Uttarkashi town etc	Competitive rates through open tender basis
2	SITC of LT circuit breaker panels at Tiloth Colony sub-station.	0.30	Time has taken its toll on the LT circuit breaker panels at Tiloth Colony sub-station and the same has been showing recurrent age related problems such as spurious operation resulting in abrupt failures, unexpected protection faults related tripping & flags, flashovers etc. Such incidents are dangerous for operational safety of the equipment & personnel at duty and result in low reliability of power supply being catered by the sub-station. Further, the spares of these obsolete design circuit breaker are not available easily in open market, hence reliably maintaining the critical power supplies.	Work is necessary for trouble free & safe operation to avoid any accidents and to maintain uninterrupted power supply to colony & office	Competitive rates through open tender basis


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3	SITC of LT circuit breaker panels at Maneri Colony sub-station.	0.30	Time has taken its toll on the LT circuit breaker panels at Maneri Colony sub-station and the same has been showing recurrent age related problems such as spurious operation resulting in abrupt failures, unexpected protection faults related tripping & flags, flashovers etc. Such incidents are dangerous for operational safety of the equipment & personnel at duty and result in low reliability of power supply being catered by the sub-station. Further, the spares of these obsolete design circuit breaker are not available easily in open market, hence reliably maintaining the critical power supplies.	Work is necessary for trouble free & safe operation to avoid any accidents and to maintain uninterrupted power supply to colony & office	Competitive rates through open tender basis
4	SITC of 7 Nos. 220kV SF6 Circuit Breakers	1.40	Work is necessary as existing 7 Nos. 220kV SF6 Circuit Breakers are creating frequent problems whenever starts- Stops of machines increases. AMC of 7 Nos. ABB Make Circuit breakers is being carried out through OEM for safe operation of these breakers so as to avoid generation loss on account of fault in breakers.	Work is necessary as existing 7 Nos. 220kV SF6 Circuit Breakers are creating frequent problems whenever starts- Stops of machines increases. AMC of 7 Nos. ABB Make Circuit breakers is being carried out through OEM for safe operation of these breakers so as to avoid generation loss on account of fault in breakers.	Through RMU Budget
5	SITC of 2 SABs & 3 UABs at Tiloth Power Plant	1.00	Work is necessary as existing distribution pockest i.e. L&T Make FA, FB Type has been outdated/ discontinued by OEM & spare parts of same are not available.	Work is necessary as existing distribution pockest i.e. L&T Make FA, FB Type has been outdated/ discontinued by OEM & spare parts of same are not available. which may lead to Generation Loss if not changed.	Through RMU Budget
6	SITC of 5 Sets of 33kV CTs & 2 Sets of 33kV PTs	0.10	33kV CTs on 33kV Feeders & 33kV Bus PTs are having inferior accuracy class which needs to be changed with 0.2 class accuracy.	Work is necessary as existing 33kV CT & PTs are having inferior accuracy class which needs to be changed with 0.2 class accuracy.	Competitive rates through open tender basis
		4.64			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
	Total	4.64			


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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
1	Land	-			
2	Building				
1	Construction of multipurpose hall.	2.00	The officers/staff unions are continuously demanding for the multipurpose hall which have the facility to indoor games, cultural; activities etc. The land for construction of this hall is available with UJVNL inside Tiloth power house colony.	This multipurpose hall will provide the space for indoor games, cultural activities, yoga etc, which will improve the physical fitness of employees posted in MB-I. These days such facility is necessary on fitness point of view. The improvement in physical fitness of employee will enhance thier performance in thier duty and indirectly performance of plant will also improve.	Estimate as per PWD SOR Bhatwari Block & DSR .
2	Construction of stores for hydro mechanical parts/spares at Maneri Dam	0.50	The existing stores at Maneri dam is temporary, quite old and also damaged. It is necessary to construct a new permanent store to keep the hydro mechanical parts/spares parts safely.	To repair the hydromechanical/electrical fault at the earliest some necessary spare parts/equipments are stored at dam site also, so that fault/breakdown could be repaired in the minimum possible time and generation could be resumed at the earliest.	Estimate as per PWD SOR Bhatwari Block & DSR .
3	Construction of residential blocks at Tiloth, Kuteti Devi and Maneri dam Colony	4.00	The residences of Tiloth, Kuteti Devi and Maneri dam colony is approximately 40 yers old and are damaged. Though the minimum minor repair works is carried out every year by O&M budget, but it is not successful completely. These residences are not framed strucure and so risky on seismic point of view, because this area falls in high seismic zone. Therefore, new residences of framed strucure are proposed to be constructed in view of saftey consideration.	For safety consideration, new residences of framed strucure are essensitally required to be constructed for employees of MB-I project.	Estimate as per PWD SOR Bhatwari Block & DSR .
4	Repair & Maintenance of Officers Transit Camp at Maneri dam coloy.	0.55	This Officers Transit Camp at Maneri dam colony is used by officials/consultants/delegation of central government frequently visiting the project site. This building now needs comprehensive repair work to keep it in good condition.	Being a important infrastructure part of project, it necessary to keep it in good condition, so that comfortable stay facility could be provided to government officials/delegates visiting the project site.	Estimate as per PWD SOR Bhatwari Block & DSR .


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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
5	Construction of school building at Tiloth	3.50	Saraswati Vidya Mandir School in Tiloth Colony, is established for more than 30 years ago in temporary type teen shed. The children's of the Nigam employees are studying in this school. The condition of all rooms of school is very bad. The false ceiling purlins, props has been deteriorated by termite and iron sheets are damaged badly due to rust. Due to deteriorated condition of the building, any mis-happening may take place. Hence the construction of double storey new school building is necessary.	This school was started under assistance of project head of MB-I during the construction phase for childrens of employees of MB-I and also for project affected villagers, which is still running. Now new building is required to be constructed to continue the school as a social responsibility and safety point of view.	Estimate as per PWD SOR Bhatwari Block & DSR .
6	Construction of sewer line and installation of STP in residential colony of Power House and Maneri dam (Kuteti Devi, Tiloth, Maneri Dam) and in Tiloth Power House area.	3.50	The project & its residential colony lies along the bank of Bhagirathi river. As per Hon'ble NGT Guideline sewerline & STP is necessary under clean Ganga Mission Project	As per Hon'ble NGT Guideline sewerline & STP is necessary under clean Ganga Mission Project	
		14.05			


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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
3	Major Civil Works				
1	Fencing of UJVNL land under MB-I Project	3.00	The total project land of MB-I project is approximately 10 hectare. These lands were acquired/purchased in 1980s. Maneri dam, Tiloth power house, switchyard, offices, stores, residential colony at Maneri dam, Kuteti Devi and Tiloth etc had constructed on these land. Remaining patches of land are kept free for use in future requirements. At the beginning the project area was thinly populated and no fencing was constructed around these land. Over the course of time, the nearby vicinity of power house, Maneri dam has been developed and become heavily populated. Due to unfenced open land at many locations, peoples are trying to enchroac these lands, which are creating unnecessary land disputes. Therefore fencing work of all UJVNL land is essentially required.	The land belongs with MB-I project is valuable assests of power plant. Fencing of these lands are utmost important to prevent the enchroachment and to avoid unnecessary litigation. To availing the loan for important project work, undisputed land is essentially required.	Estimate as per PWD SOR Bhatwari Block & DSR .
2	Structural & non structural measures to pass the increased discharge of Maneri Dam. Including the consulatncy work of model studies and Computational fluid dynamics	5.00	The original design flood for Maneri dam is- Spillway discharge capacity = 5000 m3/sec. Over toppling = 7500 m3/sec. Recently the CWC has reviewed the design flood of Maneri dam and conveyed vide letter dated 05-10-2018 as – 1day SPF = 8368 cumec 1day PMF= 10533 cumec On the basis of above revised design flood as provided by CWC, structural and non-structural measures would be required to cope up the situation to pass the revised design flood.	It is necessary to do this work to cope up the situation to pass the revised design flood as provided by CWC so as to ensure the safety of Maneri Dam.	Estimate as per PWD SOR Bhatwari Block / DSR/Rate analysis/CWC guidelines for river valley projects where required .


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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
3	Development of park for officers and staff of MB-I in reclaimed land near Tiloth Power House	0.70	This land was damaged and washed out during the flash flood in the year 2012 & 2013 but the same has been reclaimed after reconstruction of protection wall. There is no proper play ground and open area inside the colony premises for the employees as well as for their childrens deputed at MB-I. Officers/staff unions are continuously demanding for proper play ground and open area for different recreational/physical fitness activity like yoga etc.	This park will provide the space for morning walk, playing activity, yoga etc, which will improve the physical fitness of employees posted in MB-I. The improvement in physical fitness of employee will enhance thier performance in thier duty and indirectly performance of plant will also improve.	Estimate as per PWD SOR Bhatwari Block & DSR .
4	Major repair and renovation of Maneri Dam.	5.00	The project was commissioned in year 1984. Now the control room, seepage gallery, deck slab and dam premise etc needs comprehensive repair and renovation work. Repair/re-construction of road to flushing conduit and shotcrete work on nearby fractured hill slope is also essentially required for saftey of dam area.	For safety of Maneri dam this comprehensive repair and renovation work is necessary.	Estimate as per PWD SOR Bhatwari Block & DSR .
		13.70			
4	Plant & Machinery	-			
5	Vehicles	-			
6	Furniture & Fixtrues	-			
7	Office Equipments				
1	Procurement of office equipments	0.08	The existing equipments has become old and also damaged to some extent. Procurement is necessary as per requirement.	For smooth functioning of office, field hostel, OTC purchase of furniture is required	Quotation from authorised dealer.
		0.08			
	Total	27.83			


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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
A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1		67.17		High Reliability, Enhanced Output, Improved Generation, Safety of man & machinery, Life enhancement	Payments against supply and works.
		67.17			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	67.17			


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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
1	Land	-			
2	Building				
1	Construction of residential blocks at Tiloth, Kuteti Devi and Maneri dam Colony	4.00	The residences of Tiloth, Kuteti Devi and Maneri dam colony is approximately 40 yers old and are damaged. Though the minimum minor repair works is carried out every year by O&M budget, but it is not successful completely. These residences are not framed structure and so risky on seismic point of view, because this area falls in high seismic zone. Therefore, new residences of framed structure are proposed to be constructed in view of saftey consideration.	For safety consideration, new residences of framed strucure are essensitally required to be constructed for employees of MB-I project.	Estimate as per PWD SOR Bhatwari Block & DSR .
		4.00			
3	Major Civil Works				
1	Structural & non structural measures to pass the increased discharge of Maneri Dam. Including the consulatncy work of model studies and Computational fluid dynamics	10.00	The original design flood for Maneri dam is- Spillway discharge capacity = 5000 m3/sec. Over toppling = 7500 m3/sec. Recently the CWC has reviewed the design flood of Maneri dam and conveyed vide letter dated 05-10-2018 as – 1day SPF = 8368 cumec 1day PMF= 10533 cumec On the basis of above revised design flood as provided by CWC, structural and non-structural measures would be required to cope up the situation to pass the revised design flood.	It is necessary to do this work to cope up the situation to pass the revised design flood as provided by CWC so as to ensure the saftey of Maneri Dam.	Estimate as per PWD SOR Bhatwari Block / DSR/Rate analysis/CWC guidelines for river valley projects where required .
2	Construction of protection wall along right bank of Maneri Dam reservoir.	9.50	There are schools, villages, hotels, houses etc along right bank in u/s of Maneri dam reservoir. In high flood the level of reservoir may rise and enter to these areas. To protect these areas, constructin of protection wall is required.	For safety of schools, villages, hotels, houses etc along right bank in u/s of Maneri dam reservoir, construction of protection wall is essentialy required.	Estimate as per PWD SOR Bhatwari Block / DSR/Rate analysis/CWC guidelines for river valley projects where required .


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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
3	Purchase of forest/private land for construction of additional spillway/tunnel or any other suitable arrangements to pass the increased discharge of Maneri Dam as per revised design flood provided by CWC	2.00	The original design flood for Maneri dam is- Spillway discharge capacity = 5000 m3/sec. Over toppling = 7500 m3/sec. Recently the CWC has reviewed the design flood of Maneri dam and conveyed vide letter dated 05-10-2018 as – 1day SPF = 8368 cumec 1day PMF= 10533 cumec On the basis of above revised design flood, structural and non-structural measures would be required to cope up the situation to pass the revised design flood. For structural measures land would be required for construction.	It is necessary to do this work to cope up the situation to pass the revised design flood so as to ensure the safety of Dam.	As per the government orders / circles rates / mutual understanding between the parties. The estimated cost includes the land cost, compensation if required, afforestation cost etc.
		21.50			
4	Plant & Machinery				
5	Vehicles				
6	Furniture & Fixtures				
7	Office Equipments				
	Total	25.50			


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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
A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1		17.75		High Reliability, Enhanced Output, Improved Generation, Safety of man & machinery, Life enhancement	Payments against supply and works.
		17.75			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	17.75			


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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
1	Land	-			
2	Building				
1	Construction of residential blocks at Tiloth, Kuteti Devi and Maneri dam Colony	2.00	The residences of Tiloth, Kuteti Devi and Maneri dam colony is approximately 40 yers old and are damaged. Though the minimum minor repair works is carried out every year by O&M budget, but it is not successful completely. These residences are not framed strucure and so risky on seismic point of view, because this area falls in high seismic zone. Therefore, new residences of framed strucure are proposed to be constructed in view of saftey consideration.	For safety consideration, new residences of framed strucure are essensitally required to be constructed for employees of MB-I project.	Estimate as per PWD SOR Bhatwari Block & DSR .
		2.00			
3	Major Civil Works				
c	Structural & non structural measures to pass the increased discharge of Maneri Dam. Including the consulatncy work of model studies and Computational fluid dynamics	15.00	The original design flood for Maneri dam is- Spillway discharge capacity = 5000 m3/sec. Over toppling = 7500 m3/sec. Recently the CWC has reviewed the design flood of Maneri dam and conveyed vide letter dated 05-10-2018 as – 1day SPF = 8368 cumec 1day PMF= 10533 cumec On the basis of above revised design flood as provided by CWC, structural and non-structural measures would be required to cope up the situation to pass the revised design flood.	It is necessary to do this work to cope up the situation to pass the revised design flood as provided by CWC so as to ensure the saftey of Maneri Dam.	Estimate as per PWD SOR Bhatwari Block / DSR/Rate analysis/CWC guidelines for river valley projects where required .


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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
d	Purchase of forest/private land for construction of additional spillway/tunnel or any other suitable arrangements to pass the increased discharge of Maneri Dam as per revised design flood provided by CWC	1.50	The original design flood for Maneri dam is- Spillway discharge capacity = 5000 m3/sec. Over toppling = 7500 m3/sec. Recently the CWC has reviewed the design flood of Maneri dam and conveyed vide letter dated 05-10-2018 as – 1day SPF = 8368 cumec 1day PMF= 10533 cumec On the basis of above revised design flood, structural and non-structural measures would be required to cope up the situation to pass the revised design flood. For structural measures land would be required for construction.	It is necessary to do this work to cope up the situation to pass the revised design flood so as to ensure the safety of Dam.	As per the government orders / circles rates / mutual understanding between the parties. The estimated cost includes the land cost, compensation if required, afforestation cost etc.
		16.50			
4	Plant & Machinery	-			
5	Vehicles	-			
6	Furniture & Fixtures	-			
7	Office Equipments	-			
	Total	18.50			


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A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1		18.38		High Reliability, Enhanced Output, Improved Generation, Safety of man & machinery, Life enhancement	Payments against supply and works.
		18.38			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	18.38			


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