

ANNEXURE - 11


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

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	Procurement of Rotor pole Coil for 76 MW Machine	0.35	only 2 repaired coil is available in plat against 72 installed coil.	Spare coil to reduce outage period of unit whenever fault occurred in rotor pole coils to reduce the down time of m/c & Gen Loss also NAPAF Loss. 2(e)	OEM Offer
2	Procurement of Spares of Generator Transformers	0.69	no apares are available.	availability of various spares of transformer to minimise the generation loss and NAPAF Loss. 2(e)	OEM Offer
3	Up-Gradation of scope Make HISAC 2406 with the latest HISAC ULTIMA including buyback of Old and used HISAC 2406	0.18	for testing of Cuircuit breaker	Upgrade the SCOPE make HISAC 2406 with the latest HISAC ULTIMA as the same has been recommended by M/s Siemens the OEM of the 220KV CB for testing of CB. 2(e)	OEM Offer
4	Portable Dissolved Gas Analyser for Transformer oil	0.56	to reduce the fault possibility	For time to time at site testing of healthiness of Generator Transformer to reduce the fault possibility. 2(e)	Budgetory offer
5	Fabrication & Fixing of Protection cover of surge shaft	0.79	To Prevent the entry of foreign material in surge shaft	Sufficient protection be provided to surge shaft prevent entry of foreign material in surge shaft and the resulting to safety of m/c & subsequent generation loss. 2(e)	Budgetory offer


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6	Renovation of 33/11 KV substation (DPH) at Dharasu Power House	0.08	to increase the stability of the system	For healthiness of the system it is proposed to procure new circuit breakers and renovate the DPH to avoid the miss-happening and smooth operation. 2(e)	Budgetory offer
7	Up-Gradation of Scada System at Dharasu Power House	0.40	effective monitoring of machines parameter	For upgradation of obsolete testing through OEM M/s BHEL. 2(e)	OEM Offer
		3.04			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	3.04			


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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
1	Land	-			
2	Building				
1	Renovation of CP type Quarters at Shaktipuram colony Chinyalisaur, MB-II.	0.50	The residences of Shaktipuram colony is approximately 40 yrs 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. The construction of new residences is proposed in phased manner. Meanwhile renovation of existing residences is necessary to improve the condition of the building regarding safety consideration. Officers/staff continuously demanding the renovation of their residences.	In view of safety of the building and demand of employees of MB-II this renovation work is necessary.	Estimate as per PWD SOR Chinyalisaur Block.
2	Construction of Security hut and its associate work at Dharasu Power house Complex at Dharasu, Uttarkashi.	0.12	This work is necessary for security purpose of Dharasu Power House of MB-II.	For safety and security of Dharasu power house security fencing is necessary	Estimate as per PWD SOR Chinyalisaur Block.
3	Construction of security hut & fencing at Dhanari Gad Adit of MB-II Project at Dhanari, Uttarkashi.	0.17	Construction of security fencing at Dhanari Gad Adit is necessary to prevent the entry of anti-social elements and to ensure the safety of HRT.	For safety and security of HRT construction of security fencing & hut at Dhanari Gad Adit is necessary	Estimate as per PWD SOR Chinyalisaur Block.
4	Renovation of type -III Club near Shiv Mandir at Shaktipuram colony Chinyalisaur, Uttarkashi	0.20	This type-III club building in Shaktipuram colony is approximately 40 yrs old and are damaged badly. For enhancing the life of the building and in view of demand of power house employee this renovation work is necessary.	In view of safety of the building and demand of employees of MB-II this renovation work is necessary.	Estimate as per PWD SOR Chinyalisaur Block.


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5	Construction of multipurpose Hall at Shaktipuram colony, Chinyalisaur, Uttarkashi	1.20	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 Shaktipuram colony.	This multipurpose hall will provide the space for indoor games, cultural activities, yoga etc, which will improve the fitness of employees posted in MB-II. This facility is necessary on fitness point of view. The improvement in fitness of employee will enhance thier performance which ultimately will improve energy generation	Estimate as per PWD SOR Chinyalisaur Block.
6	Design, Supply, Erection, Commissioning & Testing of Sewer Treatment Plant with (STP) with BIO-DIGESTER, REED BED & ETP in Shaktipuram Colony, Chinyalisaur, Uttarkashi	0.20	The project & its residential colony lies along the bank of Bhagirahthi 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	For Quotation basis.
7	Design, Supply, Erection, Commissioning & Testing of Sewer Treatment Plant with (STP) with BIO-DIGESTER, REED BED & ETP and Laying of sewer line in Joshiyara colony, Uttarkashi.	0.20	The project & its residential colony lies along the bank of Bhagirahthi 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	Market quotation from experience firm
		2.59			


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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
3	Major Civil Works				
1	Flood protection works right bank of Bhagirathi river in front of Tail Race Channel at Dharasu power house near Hitara village, Dharasu, Uttarkashi.	1.70	This work is important and necessary for security and safety of power house area of right bank of Bhagirathi river in front of Tail Race Channel at Dharasu Power house near Hitara Village of MB-II project.	This work is necessary for safety of tail race channel and power house structure.	Estimate as per PWD SOR Chinyalisaur Block.
2	Laying of sewer line work and its appurtenant works at shaktipuram colony, chinyalisaur	1.20	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	Estimate as per PWD SOR Chinyalisaur Block.
3	Providing and fixing of Chain-link fencing in Periphery of Shring Camp and NPCC camp of Dharasu Power house, MB-II,	0.35	This work is important and necessary for security and safety of Dharasu Power House area of MB-II project Chinyalisaur.	For safety and security of Dharasu power house security fencing is necessary	Estimate as per PWD SOR Chinyalisaur Block.
4	Protection work on hill slope from chainage 30M to 180M form Dharasu Steel Bridge to Dharasu Power house of Maneri Bhal Project Stage-II at Dharasu, Uttarkashi	0.50	Loose boulder from hill slope along the approach road to Dharasu Power Houses falls in rainy season directly hits on approach road. It is dangerous for vehicle/employess moving on the road. It is necessary to protect this hill slope to avoid any accident.	For safety of employees, who are working in power house, this slope protection work is necessary.	Estimate as per PWD SOR Chinyalisaur Block.
5	Fencing and CC road work of Office and Residential colony of Joshiyara Uttarkashi.	0.40	The road for police line is passing inside the project area through the Joshiyara barrage. Some times heavy vehicle has also passes through the barrage. For safety of barrage structure an independent road outside the Joshiyara barrage along the right bank of Bhagirathi river it necessary.	For safety and security reasons of barrage structure this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block .


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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
6	CC Road and Fencing work from Police line to sadhubela Gyansu at right side Uttarkashi.	0.45	The road for police line is passing inside the project area through the Joshiyara barrage. Some times heavy vehicle has also passes through the barrage. For safety of barrage structure an independent road outside the Joshiyara barrage along the right bank of Bhagirathi river it necessary.	For safety and security reasons of barrage structure this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block .
7	Flood Protection work left bank of the Bhagirathi river downstream of Tail Race Channel at Dharasu Power house, MB-II, Dharasu, Uttarkashi.	0.60	For safety of TRC and smooth operation of Power House, it is required to construct protection wall ahead TRC	For safety of TRC structure this work is necessary	Estimate as per PWD SOR Chinyalisaur Block .
		5.20			
4	Plant & Machinery				
1	Dismantling and Reconstruction of Left Wing Wall at Downstream of Joshiyara Barrage of MB-II Project at Joshiyara	8.00	Foundation of wing wall was constructed in 1985 to 1990 during the initial phase of construction of MB-II Project. Since its construction in 1985, this structure has witnessed so many floods. The recent flash flood i.e in the year 2012 & 2013, has raised the river bed level in the u/s reach by 3-4m. Due to rise of river bed in u/s side the flow pattern of river has changed, which caused adverse flow conditions in the downstream of Barrage. The foundation of wing wall has damaged adversely in the monsoon season of 2017. So reconstruction of this downstream left wing walls is urgently required. This work has been started.	For smooth operation of Joshiyara barrage this work is necessary	
		8.00			
5	Vehicles	-			
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, procurement of furniture is necessary	Quotation from authorised dealer.
		0.10			
7	Office Equipments				
	Total	15.89			


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A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1	Procurement of Rotor pole Coil for 76 MW Machine	1.77	only 2 repaired coil is available in plant against 72 installed coil.	Spare coil to reduce outage period of unit whenever fault occurred in rotor pole coils to reduce the down time of m/c & Gen Loss also NAFPAF Loss. 2(e)	OEM Offer
2	Supply, Design, Erection, Testing and Commissioning of 4 Nos 245 KV Gas Circuit Breakers including interfacing of existing control scheme and dismantling of existing circuit breakers	0.75	to ensure no generation loss	Necessary to replace the Siemens make breakers of all the units to avoid the possibility of busting of breakers again, to ensure safety of employees and No generation loss. 2(e)	L-1 from open tender
3	Design Supply, Design, Erection, Testing and Commissioning of air conditioning system (VRF & Ductable unit) including 2 years comprehensive AMC after expiry of one year after the successful commissioning and handing over the system	2.38	healthiness of protection system	Necessary to provide the centralised air condition system at power house to ensure healthiness of protection system of power house and to ensure safe and reliable operation of the machines. 2(e)	Budgetary offer
4	Procurement of 02 Nos Runner	4.40	reduce the maintenance time	reduce the maintenance time of the machine 2(e)	OEM Offer


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5	Procurement of 2 Nos Xylem make flygt model submersible pump set of 90 KW	1.44	increase the reliability of cooling water system	Required to supply the cooling water of the turbine, generator and generator transformers 2(e)	OEM Offer
6	Renoation of 33/11 KV substation (DPH) at Dharasu Power House	0.79	to increase the stability of the system	For healthiness of the system it is proposed to procure new circuit breakers and renovate the DPH to avoid the miss-happening and smooth operation during the operation 2(e)	Budgetory offer
7	Up-Gradation of Scada System at Dharasu Power House	0.08	effective monitoring of machines parameter	For upgradation of obsolete testing through OEM M/s BHEL. 2(e)	OEM Offer
		11.61			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	11.61			


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1	Land	-			
2	Building				
1	Renovation of CP type Quarters at Shaktipuram colony Chinyalisaur, MB-II.	0.50	The residences of Shaktipuram colony is approximately 40 years 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. The construction of new residences is proposed in phased manner. Meanwhile renovation of existing residences is necessary to improve the condition of the building regarding safety consideration. Officers/staff continuously demanding the renovation of their residences.	In view of safety of the building and demand of employees of MB-II this renovation work is necessary.	Estimate as per PWD SOR Chinyalisaur Block.
2	Design, Supply, Erection, Commissioning & Testing of Sewer Treatment Plant with (STP) with BIO-DIGESTER, REED BED & ETP in Shaktipuram Colony, Chinyalisaur, Uttarkashi	0.50	The project & its residential colony lies along the bank of Bhagirahiti 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	For Quotation basis.
3	Providing and fixing of chain-link fencing for CP type Residence at Shaktipuram Colony, Chinyalisaur, Uttarkashi.	0.50	For safety of UJVNL employees children, it is necessary to construct chain link fencing in CP type Qtr.	For safety of childrens and to prevent the animals to enter insied the colony premises construction of this fencing is necessary.	Estimate as per PWD SOR Chinyalisaur Block .


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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
4	Construction of office building complex and transit camp outside of Dharasu power house complex, MB-II	1.00	At present offices related to operation work of Power House is temporally arranged inside power house main building. The space is very limited. For security reasons the offices should be away from main building so that outsiders may not enter in machine hall. So it necessary to construct an office building & transit came outside the main power house building.	Office complex cum transit camp building is necessary for official work of power house	Estimate as per PWD SOR Chinyalisaur Block .
5	Construction of School building for Saraswati vidhya mandir at shaktipuram colony chinyalisaur, Uttarkashi.	2.50	The Saraswati Vidhya Mandir school is running in temporary tin shed structure in UJVNL premises from last 35 Years. This school was started under project head, which is still continues. The children of UJVNL employees are studying in this school. The shed are badly damaged. It is necessary to construct a new school building in place of repair of existing temporary sheds.	This school was started under project head of MB-II, which is still continues. The children of UJVNL employees are studying in this school. For safety of children it is necessary to construct a new school building.	Estimate as per PWD SOR Chinyalisaur Block .
6	Reconstruction of damaged BP, CP & DP type quarter at shaktipuram colony, MB-II, Chinyalisaur	4.00	These type residences are approximately 35 years old and some of these are badly damaged. 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 safety consideration.	For safety consideration, new residences of framed structure are essentially required to be constructed for employees of MB-II project.	Estimate as per PWD SOR Chinyalisaur Block .
7	Renovation of existing AP, BP and CP type residential quarter of shaktipuram colony chinyalisaur	1.00	These type residences are approximately 35 years old and are badly damaged. These residences are not framed structure and so risky on seismic point of view, because this area falls in high seismic zone. Therefore, some residences needs comprehensive repair to make them safe for living.	For safety of residents of MB-II, special comprehensive repair is necessary in some buildings.	Estimate as per PWD SOR Chinyalisaur Block .
8	Construction of office building for Civil Division at Shaktipuram Colony Chinyalisaur, MB-II, Uttarkashi.	0.25	All civil maintenance work of Dharasu power house, colony, other offices are being lookafter by this civil unit. The existing office running in temporary shed are badly damaged. It is proposed that new office building may be constructed.	For office work it is necessary to construct a new permanent office building for civil division. This office building is a part of MB-II plant	Estimate as per PWD SOR Chinyalisaur Block .


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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
9	Design, Supply, Erection, Commissioning & Testing of Sewer Treatment Plant with (STP) with BIO-DIGESTER, REED BED & ETP and Laying of sewer line in Joshiyara colony, Uttarkashi.	1.00	The project & its residential colony lies along the bank of Bhagirahiti 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	Market quotation from experience firm
		11.25			
3	Major Civil Works				
1	Laying of sewer line work and its appurtenant works at shaktipuram colony, chinyalisaur	0.50	The project & its residential colony lies along the bank of Bhagirahiti 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	Estimate as per PWD SOR Chinyalisaur Block.
2	Slope stability analysis of hill slope behind surge shaft tank of Maneri Bhali Project Stage-II, Dharasu, Uttarkashi	0.60	This work is necessary to asses the efficiency and performance of protection work executed on hill slope of surge shaft.	For safety of surge shaft tank this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block.
3	Construction of Retaining wall for Proper approach to Pen stock adit, MB-II, Dharasu power House, Uttarkashi.	0.50	To make the proper approach and accesibility to Penstock Adit near Dharasu Power House, construction of retaining wall is necessary.	For future repair of Penstock, this Adit will be used. So to enabling the proper approach, this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block .


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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
4	Protection work on hill slope from chainage 30M to 180M form Dharasu Steel Bridge to Dharasu Power house of Maneri Bhali Project Stage-II at Dharasu, Uttarkashi	0.20	Loose boulder from hill slope along the approach road to Dharasu Power Houses falls in rainy season directly hits on approach road. It is dangerous for vehicle/employess moving on the road. It is necessary to protect this hill slope to avoid any accident.	For safety of employees, who are working in power house, this slope protection work is necessary.	Estimate as per PWD SOR Chinyalisaur Block.
5	Land Escaping and Development of gardening near Shring Camp , MB-II, Dharasu Power House, Uttarkashi..	0.50	The proposed land is located right just outside entrance of Dharasu power house. For aesthetic look and create hygienic enviornment of project , must required land escaping for developing garden, park and plantation as per ISO norms. It will also used like a play ground/yoga place for the employees as well as for their childerns 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. In future this will also be useful as tourist place	This park will provide the space for morning walk, playing activity, yoga etc, which will improve the fitness of employees posted in MB-I. The improvement in fitness of employee will enhance thier performance and ultimately leading to improvement in energy generation.	Estimate as per PWD SOR Chinyalisaur Block .
6	Providing of balance stone pitching near shring camp,MB-II,Dharasu Power House,Uttarkashi.	0.70	For safety of left river bank near Dharasu Power House from floods, the stone pitching in balance portion is necessary to be completed. It will prevent the possibility of entering the river water in Dharasu Power House area.	For safety of Dharasu Power House area, this work is necessary	Estimate as per PWD SOR Chinyalisaur Block .
7	Providing of gabions in hill slope behing surge tank of MB-II ,Dharasu Power House,Uttarkashi.	1.20	Behind surge shaft the existing gabions at lower portion of hill slope has damaged due to falling of big boulders and muck from upper portion. It is necessary to remove these existing damaged portion of gabions. Re-construct the same is necessary so that boulders in damaged gabions could be prevented from fall into surge tank.	For safety of surge shaft tank this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block .


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8	Laying of Semi Dense Bituminous Concrete roads (SDBC) at Shaktipuram colony premises of MB-II Project.	1.50	This work is important and necessary for the safety of colony internal road as well as safety of employees of UJVNL travelling at Shaktipuram colony, Chinyalisaur of MB-II project.	This work is necessary for safety of internal road of shaktipuram colony	Estimate as per PWD SOR Chinyalisaur Block .
9	Re-alignment, repairing and laying of 5 inch & 3 inch drinking water pipe line from nagun gad to Shaktipuram colony	0.80	The existing water supply line is 8km long from Nagun gad to colony. Due to falling boulders and land slides in rainy season, this line has damaged at many places. Also due to construction of many buildings at various places the supply line is going under the houses of local people. So re-alignment and repair is urgently required for smooth operation of water supply line.	To maintain the drinking water supply in Shaktipuram colony, this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block .
10	Flood Protection work left bank of the Bhagirathi river downstream of Tail Race Channel at Dharasu Power house, MB-II, Dharasu, Uttarkashi.	1.60	For safety of TRC and smooth operation of Power House, it is required to construct protection wall ahead TRC	For safety of TRC structure this work is necessary	Estimate as per PWD SOR Chinyalisaur Block .
		8.10			
4	Plant & Machinery				
1	Providing and laying of Granite stone Flooring in Dharasu power house and workshop building.	1.10	The machine floor of power house building has damaged and needs a major repair/replacement of broken tiles.	The granite stone flooring work is required to keep the power house floor safe, durable and clean.	Estimate as per PWD SOR Chinyalisaur Block .


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2	Re-design and reconstruction of damaged stilling basin of Joshiyara barrage	2.50	The CC floor of stilling basin of spillway gate 1 & 2 are badly damaged. External expert apprised that in early day i.e. in 80's he was associated with hydraulic design of Joshiyara Barrage and there was provision of rock anchors in the stilling basin to account for the heavy uplift pressure. He suggested that the drawings of the structure should be collected and necessary remedial measures should be taken to avoid any massive damage in future. So re-design and reconstruction of stilling basin is required for safety of barrage.	For safety and smooth operation of Joshiyara barrage of MB-II project this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects
3	Treatment of surface cracks in barrage Piers at upstream face	0.20	External experts advised that upper 4 to 5 m portion of pier may be kept in position by 32mm dia HYSD 500 bar at least in 4 rows @ 3m c/c spacing in staggered manner followed by post tensioning to impart the compression in pier.	For safety and smooth operation of Joshiyara barrage of MB-II project this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects
4	Construction of CC Road from Road Culvert to Flushing Conduit in side barrage area	0.70	To inspect and maintain the flushing conduit area construction of approach road is required	For inspection and maintainance of flushing conduit area construction of approach road is necessary	Estimate as per PWD SOR Chinyalisaur Block.
5	Leakage control work on u/s right side of reservoir area towards Gyansu Basti to prevent the water logging in the Gyansu village area	5.00	There is a heavy leakage towards right bank of upstream side. Due to this leakage the cultivation field in that area has become water logged. Also the house constructed in that area are facing seepage problem inside their houses. Peoples of that are demanding their rehabilitation, if this problem will not be sorted soon. It is proposed that some land towards this side shall be acquired to meet the space requirement for construction of cut off wall, seepage well etc so that permanent solution can be made.	For safety of cultivated land and residential building of Gyansu village located on right bank of Joshiyara reservoir, this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects


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6	Dismantling and Reconstruction of Left Wing Wall at Downstream of Joshiyara Barrage of MB-II Project at Joshiyara	5.00	Foundation of wing wall was constructed in 1985 to 1990 during the initial phase of construction of MB-II Project. Since its construction in 1985, this structure has witnessed so many floods. The recent flash flood i.e in the year 2012 & 2013, has raised the river bed level in the u/s reach by 3-4m. Due to rise of river bed in u/s side the flow pattern of river has changed, which caused adverse flow conditions in the downstream of Barrage. The foundation of wing wall has damaged adversely in the monsoon season of 2017. So reconstruction of this downstream left wing walls is urgently required. This work has been started.	For smooth operation of Joshiyara barrage this work is necessary	
		14.50			
5	Vehicles	-			
6	Furniture & Fixtures	-			
7	Office Equipments				
1	Procurement of office equipments	0.08	The existing equipments has become old and also malfunctioning to some extent. Procurement is necessary as per requirement.	For smooth functioning of office, procurement of office equipment is necessary	Quotation from authorised dealer.
		0.08			
	Total	33.93			


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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
A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1	Procurement of 02 Nos Runner	17.60	reduce the maintenance time	Reduce the maintenance time of the machine 2(e)	OEM Offer
2	Procurement of 2 Nos Xylem make flygt model submersible pump set of 90 KW	1.44	increase the reliabilty of cooling water system	Required to supply the cooling water of the turbine, generator and generator transformers 2(e)	OEM Offer
		19.04			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	19.04			


 (Purushottam Singh)
 Director (Operation)
 UJVN Ltd.
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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	Providing and fixing of chain-link fencing for CP type Residence at Shaktipuram Colony, Chinyalisaur, Uttarkashi.	0.50	For safety of UJVNL employees children, it is necessary to construct chain link fencing in CP type Qtr.	For safety of childrens and to prevent the animals to enter insied the colony premises construction of this fencing is necessary.	Estimate as per PWD SOR Chinyalisaur Block .
2	Construction of office building complex and transit camp outside of Dharasu power house complex, MB-II	2.00	At present offices related to operation work of Power House is temporally arranged inside power house main building. The space is very limited. For security reasons the offices should be away from main building so that outsiders may not enter in machine hall. So it necessary to construct an office building & transit came outside the main power house building.	Office complex cum transit camp building is necessary for official work of power house	Estimate as per PWD SOR Chinyalisaur Block .
3	Reconstruction of damaged BP, CP & DP type quarter at shaktipuram colony, MB-II, Chinyalisaur	4.00	These type residences are approximately 35 years old and some of these are badly damaged. 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-II project.	Estimate as per PWD SOR Chinyalisaur Block .
4	Renovation of existing AP, BP and CP type residential quarter of shaktipuram colony chinyalisaur	1.00	These type residences are approximately 35 years old and are badly damaged. These residences are not framed strucure and so risky on seismic point of view, because this area falls in high seismic zone. Therefore, some residences needs comprehensive repair to make them safe for living.	For safety of residents of MB-II, special comprehensive repair is necessary in some buildings.	Estimate as per PWD SOR Chinyalisaur Block .
5	Construction of office building for Civil Division at Shaktipuram Colony Chinyalisaur, MB-II, Uttarkashi.	0.75	All civil maintenance work of Dharasu power house, colony, other offices are being lookafter by this civil unit. The existing office running in temporary shed are badly damaged. It is proposed that new office building may be constructed.	For office work it is necessary to construct a new permanent office building for civil division. This office building is a part of MB-II plant	Estimate as per PWD SOR Chinyalisaur Block .
		8.25			


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3	Major Civil Works				
1	Construction of Retaining wall for Proper approach to Pen stock adit, MB-II, Dharasu power House, Uttarkashi.	0.30	To make the proper approach and accessibility to Penstock Adit near Dharasu Power House, construction of retaining wall is necessary.	For future repair of Penstock, this Adit will be used. So to enabling the proper approach, this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block .
2	Protection work from chainage 0 Rm to 400 Rm right side of Bhagirathi river for safety of plant store, MB-II, Chinyalisaur	3.00	For drinking water supply to Power House colony area (named as Shaktipuram Colony) arrangement of lift scheme including pumps, storage tank etc are installed in Plant Store at Chinyalisaur near Bhagirathi River. Due to recent flood of 2012 & 2013 the 40% area of plant store has eroded by flood water. If this plant store area has not protected then in near future it may be washed out completely. In that case there is no alternative space is available for construction of this water pumping plant. During monsoon season of 04 months when gravity water pipe line became damaged, then water is made available from this pumping plant. So it is necessary to construct a toe CC protection wall around plant store to prevent the further damage	For the safety of plant store and Nigam land , protection work around this plant store is necessary.	Estimate as per PWD SOR Chinyalisaur Block .
3	Land Escaping and Development of gardening near Shring Camp , MB-II, Dharasu Power House, Uttarkashi..	0.50	The proposed land is located right just outside entrance of Dharasu power house. For aesthetic look and create hygienic environment of project , must required land escaping for developing garden, park and plantation as per ISO norms. It will also used like a play ground/yoga place for the employees as well as for their childerns 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. In future this will also be useful as tourist place	This park will provide the space for morning walk, playing activity, yoga etc, which will improve the fitness of employees posted in MB-I. The improvement in fitness of employee will enhance thier performance and ultimately leading to improvement in energy generation.	Estimate as per PWD SOR Chinyalisaur Block .
		3.80			


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4	Plant & Machinery				
1	Miscellaneous civil works i.e. leakage control, Shotcrete and drainage hole inside of valve chamber, MB.-II, Uttarkashi.	0.90	For safety of valve house chamber structure of MB-II, mis. Civil works i.e. leakage control, shotcrete is to be urgently required.	For safety of valve house chamber of MB-II project this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block .
2	Re-design and reconstruction of damaged stilling basin of Joshiyara barrage	2.00	The CC floor of stilling basin of spillway gate 1 & 2 are badly damaged. External expert apprised that in early day i.e. in 80's he was associated with hydraulic design of Joshiyara Barrage and there was provision of rock anchors in the stilling basin to account for the heavy uplift pressure. He suggested that the drawings of the structure should be collected and necessary remedial measures should be taken to avoid any massive damage in future. So re-design and reconstruction of stilling basin is required for safety of barrage.	For safety and smooth operation of Joshiyara barrage of MB-II project this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects
3	Treatment of surface cracks in barrage Piers at upstream face	0.70	External experts advised that upper 4 to 5 m portion of pier may be kept in position by 32mm dia HYSD 500 bar at least in 4 rows @ 3m c/c spacing in staggered manner followed by post tensioning to impart the compression in pier.	For safety and smooth operation of Joshiyara barrage of MB-II project this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects
4	Leakage control work on u/s right side of reservoir area towards Gyansu Basti to prevent the water logging in the Gyansu village area	6.00	There is a heavy leakage towards right bank of upstream side. Due to this leakage the cultivation field in that area has become water logged. Also the house constructed in that area are facing seepage problem inside their houses. Peoples of that are demanding their rehabilitation, if this problem will not be sorted soon. It is proposed that some land towards this side shall be acquired to meet the space requirement for construction of cut off wall, seepage well etc so that permanent solution can be made.	For safety of cultivated land and residential building of Gyansu village located on right bank of Joshiyara reservoir, this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects
5	Instrumentation of Joshiyara Barrage.	0.70	Various types of instruments are required to measure stresses, pressure etc in the barrage structure.	For monitoring of health oh Joshiyara barrage, it is necessary to install the basic instruments inside barrage.	As per market quotation from authorised firm
6	Reaming / Re-drilling of clogged drain holes of foundation gallery of Joshiyara Barrage	0.20	The clogged drain holes will be re-drilled up to required depth as per the requirement to ensure the proper drainage of seepage water	For safety of Joshiyara barrage, this work is necessary	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects


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7	Dismantling and Reconstruction of Left Wing Wall at Downstream of Joshiyara Barrage of MB-II Project at Joshiyara	5.00	Foundation of wing wall was constructed in 1985 to 1990 during the initial phase of construction of MB-II Project. Since its construction in 1985, this structure has witnessed so many floods. The recent flash flood i.e in the year 2012 & 2013, has raised the river bed level in the u/s reach by 3-4m. Due to rise of river bed in u/s side the flow pattern of river has changed, which caused adverse flow conditions in the downstream of Barrage. The foundation of wing wall has damaged adversely in the monsoon season of 2017. So reconstruction of this downstream left wing walls is urgently required. This work has been started.	For smooth operation of Joshiyara barrage this work is necessary	
		15.50			
5	Vehicles	-			
6	Furniture & Fixtures	-			
7	Office Equipments	-			
	Total	27.55			


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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
A	Land	-			
B	Building	-			
C	Major Civil Works	-			
D	Plant & Machinery				
1	Procurement of 2 Nos Xylem make flygt model submersible pump set of 90 KW	1.44	increase the reliabilty of cooling water system	Required to supply the cooling water of the turbine, generator and generator transformers 2(e)	OEM Offer
		1.44			
E	Vehicles	-			
F	Furniture & Fixtures	-			
G	Office Equipment	-			
H	Others	-			
	Total	1.44			


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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 office building complex and transit camp outside of Dharasu power house complex, MB-II	2.00	At present offices related to operation work of Power House is temporarily arranged inside power house main building. The space is very limited. For security reasons the offices should be away from main building so that outsiders may not enter in machine hall. So it necessary to construct an office building & transit came outside the main power house building.	Office complex cum transit camp building is necessary for official work of power house	Estimate as per PWD SOR Chinyalisaur Block .
2	Reconstruction of damaged BP, CP & DP type quarter at shaktipuram colony, MB-II, Chinyalisaur	4.00	These type residences are approximately 35 years old and some of these are badly damaged. 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 structure are essensitally required to be constructed for employees of MB-II project.	Estimate as per PWD SOR Chinyalisaur Block .
3	Renovation of existing AP, BP and CP type residential quarter of shaktipuram colony chinyalisaur	1.00	These type residences are approximately 35 years old and are badly damaged. These residences are not framed structure and so risky on seismic point of view, because this area falls in high seismic zone. Therefore, some residences needs comprehensive repair to make them safe for living.	For safety of residents of MB-II, special comprehensive repair is necessary in some buildings.	Estimate as per PWD SOR Chinyalisaur Block .
		7.00			


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3	Major Civil Works				
8	Protection work from chainage 0 Rm to 400 Rm right side of Bhagirathi river for safety of plant store, MB-II, Chinyalisaur	1.00	For drinking water supply to Power House colony area (named as Shaktipuram Colony) arrangement of lift scheme including pumps, storage tank etc are installed in Plant Store at Chinyalisaur near Bhagirathi River. Due to recent flood of 2012 & 2013 the 40% area of plant store has eroded by flood water. If this plant store area has not protected then in near future it may be washed out completely. In that case there is no alternative space is available for construction of this water pumping plant. During monsoon season of 04 months when gravity water pipe line became damaged, then water is made available from this pumping plant. So it is necessary to construct a toe CC protection wall around plant store to prevent the further damage	For the safety of plant store and Nigam land , protection work around this plant store is necessary.	Estimate as per PWD SOR Chinyalisaur Block .
		1.00			
4	Plant & Machinery				
1	Re-design and reconstruction of damaged stilling basin of Joshiyara barrage	0.50	The CC floor of stilling basin of spillway gate 1 & 2 are badly damaged. External expert apprised that in early day i.e. in 80's he was associated with hydraulic design of Joshiyara Barrage and there was provision of rock anchors in the stilling basin to account for the heavy uplift pressure. He suggested that the drawings of the structure should be collected and necessary remedial measures should be taken to avoid any massive damage in future. So re-design and reconstruction of stilling basin is required for safety of barrage.	For safety and smooth operation of Joshiyara barrage of MB-II project this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects


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2	Leakage control work on u/s right side of reservoir area towards Gyansu Basti to prevent the water logging in the Gyansu village area	2.00	There is a heavy leakage towards right bank of upstream side. Due to this leakage the cultivation field in that area has become water logged. Also the house constructed in that area are facing seepage problem inside their houses. Peoples of that are demanding their rehabilitation, if this problem will not be sorted soon. It is proposed that some land towards this side shall be acquired to meet the space requirement for construction of cut off wall, seepage well etc so that permanent solution can be made.	For safety of cultivated land and residential building of Gyansu village located on right bank of Joshiyara reservoir, this work is necessary.	Estimate as per PWD SOR Chinyalisaur Block /CWC guidelines for river valley projects
		2.50			
5	Vehicles				
6	Furniture & Fixtures				
7	Office Equipments				
	Total	10.50			


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