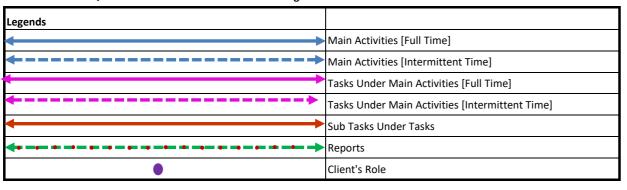


#### **WORK SCHEDULE - CP1** Project Name: Consultancy for "Design, Preparation of Bid Documents & Evaluation of Bids for the Proposed Construction of 400 MLD Capacity Seawater Reverse Osmosis Desalination Plant at Perur along East Coast Road, South of Chennai, Tamil Nadu and Construction Management & Supervision for the Proposed Desalination Plant and its Product Water Conveyance Pipeline from the Plant and upto Porur and all allied works. **Project Duration in Months** Task **Activities and tasks** Duration in Months Measurements, Claims and Financial Control 30 8 Task 17 Phase-II: Activities During Trial Run and Commissioning Pre Commissioning Activities 2 17.1 6 17.2 Commissioning Activities Monthly Progress Report with Quality & Quantity Control Monthly When Material / Equipment Testing & Inspection Report Ever 4.5.7 Task 18 2 PMC Services During Post-Construction As-Built Drawings 2 18.2 Submission of Project Completion Report [PCR] 2 nplementation of EIA and EoMP

Note: 1. The tentative date of deliverables have been worked out based on the discussion with CMWSSB officials, but the total time duration of each component is fixed as per ToR / as proposed by the PMC team.

- 2. \* During Video Conference call Zoom meeting held on 30.04.2020 with CMWSSB and PMC noted that due to the current COVID-19 Pandemic situation across the globe, overall 2 months delay in floating the RfQ and consequently the RfP for CP1.
- 3. CMWSSB has forwarded the PQ documents to JICA on March 2020 & August 2020 for concurrence



#### **WORK SCHEDULE - CP2** Project Name: Consultancy for "Design, Preparation of Bid Documents & Evaluation of Bids for the Proposed Construction of Seawater Reverse Osmosis Desalination Plant at Perur along East Coast Road, South of Chennai, Tamil Nadu and Construction Management & Supervision for the Proposed Desalination Plant and its Product Water Conveyance Pipeline from the Plant and upto Porur and all allied works. **Project Duration in Months** Activity **Activities and tasks** Duration Task in Months YEAR 2020 YEAR 2021 YEAR 2022 YEAR 2023 YEAR 2024 YEAR 2025 Bid process managemer **Design and Bid document preparation Construction and Commissioning Defect Liability Period Work Plan** and selection of (15 Months as per RFP) (24 Months) (12 Months) contractor (9 Months) Balance Team Mobilization by Commencement Date 1 Start Work Plan for Construction of Storage Reservoirs & of CP2 Pumping Stations (CP2) 15 4.5.8 **Design Works of CP2** Task 1 Data and Information Collection 1 1 Task 2 Review the Technical Information 1.50 Task 3 Conducting Surveys and Investigations Detailed Design of the Reservoirs and Pumping Stations 8 Task 4 Preparation & Submission of Draft Detailed Design Report 3 Task 5 Approval by CMWSSB Task 6 Preparation & Submission of Final Detailed Design Report 2 4.5.9 2 **Bid Documents Preparation for CP2** Preparation of Request for PreQualification [RFQ] 1 Approval by Task 7 Documents (If required) CMWSSB / JICA 1 Preparation of Request for Proposal [RFP] Documents Task 8 4.5.10 9 Tendering Assistance 8 Task 8 Prebid Meetings, Clarifications & Issue of Addendums etc. CMWSSB to Float **CMWSSB** to Float 1 Task 9 Submission of PQ Evaluation Report End of CP2 1 Task 10 | Submission of Bid Evaluation Report - Technical Approval by 1 CMWSSB / JICA Task 11 | Submission of Bid Evaluation Report - Financial 4.5.14 24 Construction supervision for CP2 Task 12 Phase-I: Pre-construction activities 2 Review of QAP & Construction Methodologies for Various 2 12.1 Works Task 13 Phase-II: Activities During Construction 20 13.1 Construction Supervision and Quality Control 20 20 13.2 Inspection of Material 13.3 Progress Monitoring, Record keeping and Reporting 20 20 13.4 Contract Management Measurements, Claims and Financial Control 20 13.5 Task 14 Phase-II: Activities During Trial Run and Commissioning 2 14.1 Pre Commissioning Activities

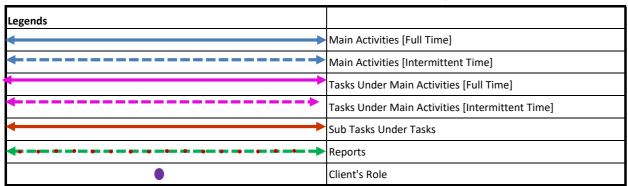
# WORK SCHEDULE - CP2

Project Name: Consultancy for "Design, Preparation of Bid Documents & Evaluation of Bids for the Proposed Construction of 400 MLD Capacity Seawater Reverse Osmosis Desalination Plant at Perur along East Coast Road, South of Chennai, Tamil Nadu and Construction

Management & Supervision for the Proposed Desalination Plant and its Product Water Conveyance Pipeline from the Plant and upto Porur and all allied works.

		Management & St	apervision i	101 111	СПОР	, , , , , , , , , , , , , , , , , , ,		.u.c.o.		aa		ouuce		c. co			.pc	co			aa a		0	uu c			011101	•									
																	P	roject	t Dura	tion i	n Mor	ths															
Activity	Task	Activities and tasks	Duration in Months	1112	2 3 4	5 6 7	8 9	9 10 1	11 <b>12</b> :	13 14 1	5 16 17	7 18 19	20 21	1 22 2	23 <b>24</b> 2	25 26 27	7 28 29	9 30 31	32 33	34 35	<b>36</b> 37	38 39	40 4	1 42	13 44	45 46	47 48	<b>3</b> 49 5	50 51 5	2 53 5	4 55 56	57 58	59 60	61 62	63 64 (	65 66 6	68 69 70
	14.2	Commissioning Activities	1																										4								
		Monthly Progress Report with Quality & Quantity Control Details	24														•	-	-		-				+-	-		++	,								
		Material / Equipment Testing & Inspection Report	24															-		-+-			++	++				++									
4.5.15	Task 15	Defect Liability Period	12																											+							
	15.1	As-Built Drawings	1																														<b>*</b>				
	15.2	Submission of Project Completion Report [PCR]	3																															•			
	Task 16	Regular Inspection During Defect Liability Period	12																											<b>-</b>							
		Implementation of EIA and EoMP	48					-			++	+				+	-						++								++-	-					

Note: The tentative date of deliverables have been worked out based on the discussion with CMWSSB officials, but the total time duration of each component is fixed as per ToR / as proposed by the PMC team.



## **WORK SCHEDULE - CP3**

Project Name: Consultancy for "Design, Preparation of Bid Documents & Evaluation of Bids for the Proposed Construction of 400 MLD Capacity Seawater Reverse Osmosis Desalination Plant at Perur along East Coast Road, South of Chennai, Tamil Nadu and Construction Management & Supervision for the Proposed Desalination Plant and its Product Water Conveyance Pipeline from the Plant and upto Porur and all allied works.

															F	Project	Durat	ion in N	onths													
Activity	Task	Activities and tasks	Duration in Months	1 2 3	4 5 6 7	8 9 10 11	12 13 14 15 16	17 18 19 2	0 21 22	23 24	25 26 2	27 28 29	9 30 31	32 33	34 35 3	36 37 38	8 39 40	41 42 43	44 45 4	46 47 4	49 50	51 52	53 54 5	55 56 53	7 58 59	<b>60</b> 6	1 62 63 64	65 66 67	68 69 70 7	1 72 73 74	75 76 7	7 78 79 8
					YEAR	SSB sent the		YEAR 2021				,	YEAR 20	22				YEAR 20	23				YEAR 2	2024				YEAR 202	5		YEAR 20	026
		Work Plan			RFP d	ocument to									(	Constru	iction a	ınd Comr	nissioni	ing (51	. Month	is)							Defect	Liability Pe	riod (12	2 Months
		Balance Team Mobilization by Commencement Date	1	+				*	Start	t of CP	3																					
4.5.14		Construction Supervision for CP3	51																													
	Task 1	Phase-I: Pre-construction activities	2					<b>**</b>																				8				
	1.1	Review of DPR for CP3	2					<b>+</b>																				f CP3				
	1.2	Reconnaissance Survey and Understand the Scheme Proposals for CP3	2					<b>*</b>																				End of				
		Assisting in Land Acquisition, Authority Permissions for the Facilities for CP3	7					-			•																					
		Developing the Reporting Requirements for CP3	2							4	<b>&gt;</b>																					
		Review of Good for Construction [GFC] Drawings, QA & QC Plans for CP3	7					4			•																					
	Task 2	Phase-II: Activities During Construction	46																									•				
	2.1	Construction Supervision and Quality Control	46																									•				
	2.2	Inspection of Material	46								-++	++-			-++	•++-			-+-			++-			++-	-	┝┝	•				
	2.3	Progress Monitoring, Record keeping and Reporting	46						<del> </del>			╺┿┿	<del>-</del>			╺┿┿	+		-++		- - -	-+-		- - -	++•	┿┿		<b>→</b>				
	2.4	Contract Management	46						<b>H-</b>			• + + •	+			╺┿┿	+		-++		- - -	++-		- - -	++-	+		<b>→</b>				
	2.5	Measurements, Claims and Financial Control	46								╺┾┼	•++•			+	•++•	-		-++		- - -	++-		- - -	++-	┼┽╌		•				
	Task 3	Phase-II: Activities During Trial Run and Commissioning	2																									† 				
	3.1	Pre Commissioning Activities	1																									<b>++</b>				
	1	Commissioning Activities	1																									+				
	1	Monthly Progress Report with Quality & Quantity Control Details	51					4	-		-	+-	-			-					++			-	+-			•				
		Material / Equipment Testing & Inspection Report	51					<b>-</b>			-++	++-				-						++-			++-		┝┝					
4.5.15	Task 4	Defect Liability Period	12																													
	4.1	As-Built Drawings	1																										*			
		Submission of Project Completion Report [PCR]	3																											<del></del>		
	Task 5	Regular Inspection During Defect Liability Period	12																												,	
		Implementation of EIA and EoMP	51								-++				-+-					- - -						-						

Note: The tentative date of deliverables have been worked out based on the discussion with CMWSSB officials, but the total time duration of each component is fixed as per ToR / as proposed by the PMC team.

Legends	
<del></del>	Main Activities [Full Time]
<b>←</b>	Main Activities [Intermittent Time]
	Tasks Under Main Activities [Full Time]
<b>————</b>	Tasks Under Main Activities [Intermittent Time]
<b>-</b>	Sub Tasks Under Tasks
<b>*</b>	Reports
•	Client's Role

									WO	RK SC	CHEC	ULE	- CP4	1																												
Projec	t Name	e: Consultancy for "Design, Preparation of Bid Documents & Eva	luation of	f Bid	for th												Osmos e from										id, Sou	ith of	Chenn	ai, Ta	mil Na	du and	d Cons	structio	on Mai	nageme	ent & S	upervi	sion fo	r the F	Proposed	
																					Proje	ct Du	ration	in Mo	onths																	
Activity	Task	Activities and tasks	Duration in	1 2	3 4	5 6	7 8	9 10 1:	<b>12</b> 13	14 15	16 17	18 19 2	0 21 22	23 <b>24</b>	25 26 2	27 28 2	29 30 3	31 32 3	3 34 35	5 <b>36</b> 37	7 38 3	9 40 4	1 42 43	44 45	46 47	<b>48</b> 49	50 51 5	2 53 54	55 56	57 58	59 60 61	62 63	64 65	66 67 6	68 69 70	71 72	73 74 75	76 77	78 79 80	81 82	83 84 85 86	87
			Months	ч		YEAR	2020		_		YE	AR 2021					YEAR 2						YEAR 20	23				YEA	R 2024				YI	EAR 2025	5			YE	AR 2026		YEAR 20	<b>027</b>
		Work Plan					ı	Design a		d docur 28 Mon		repara	tion			E		ocess r nd sele contr (9 Mo	ection of	of	t						Con		ion and (38 Md		nissioni	ng								Liabilit 2 Mont	ty Period ths)	
		Balance Team Mobilization by Commencement Date	1	**			Ш								Ш							Ш																				
					1 1	Start o		$\uparrow \downarrow$								Ш	Ш				Ш											Ш										
		Work Plan for Improvement of Existing Water Distribution System (CP4)						_																																		
4.5.11		Design Works of CP4	27	4												-	+																									
	Task	Reconnaissance Survey, Data and Information Collection	2		-																																					
	Task	2 Review and Analysis of Data	2		4-		- -	-																																		
	Task	3 Conducting Surveys and Investigations	3			<b>4</b> -																																				
	Task	Detailed Design of the Improvement of the Existing Water Distribution System CP4	18					4								+																										
	4.1	Upgradation of Existing network in GIS	12					•				-																														
	4.2	Creation of District Metered Areas (DMAs)	8					4			-																															
	4.3	Hydraulic Design and Modelling of distribution system	8								-																															
	4.4	Plan to Improve the Existing Network	6						+																																	
	4.5	Design and Improvement of Storage reservoirs	6						•						Ш						Ц																					
	4.6	Design and providing metered service connections	6							4		-																														
	4.7	Design the SCADA system	6							4		-																														
	Task	5 Preparation and Submission of Draft Detailed Project Report	2										-				by	Approva Dy CMWSSE																								
	5.1	Preparation and Submission of Final Detailed Project Report											4	-			1-																									
	Task	6 Assisting in procurement of Software to CMWSSB	2							4																																
	Task	7 Preparation of Technical Specifications	3												4	-																										
	Task	8 BoQ Preparation	2												+	*																										
	Task	9 Bid Documents Preparation for CP4	2												+	-																										
4.5.13		Tendering Assistance	9														<b>-</b>		+	++																						
	Task 1	Prebid Meetings, Clarifications & Issue of Addendums etc.	8												<b>+</b> -				-	-																						
		11 Submission of Draft Bid Evaluation Report	1											CM		to Float		**																								
	Task 1	12 Submission of Final Bid Evaluation Report - Technical	1													$\Box$	T	4				+	Approva																			
	Task 1	13 Submission of Bid Evaluation Report - Financial Evaluation	1																++				CMWSS	B / JICA																		

### **WORK SCHEDULE - CP4**

Project Name: Consultancy for "Design, Preparation of Bid Documents & Evaluation of Bids for the Proposed Construction of 400 MLD Capacity Seawater Reverse Osmosis Desalination Plant at Perur along East Coast Road, South of Chennai, Tamil Nadu and Construction Management & Supervision for the Proposed Desalination Plant and upto Porur and all allied works.

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																					P	roject	Dura	tion i	n Mon	ths																		
Activity	Task	Activities and tasks	Duration in Months	n 1	2 3	4 5	6 7 8	9 10	11 12 1	13 14 1	5 16 1	17 18 19	20 2:	1 22 23	<b>24</b> 25	26 27 2	28 29	30 31	32 33	34 35 <b>3</b>	6 37	38 39	40 41 4	42 43	45 46	6 47 48	49 50	51 52	53 54	55 56 5	7 58 5	9 <b>60</b> 61	1 62 6	3 64 6	5 66 6	7 68 69	9 70 71	<b>72</b> 73	74 75	76 77 7	78 79 8	80 81 8	32 83 <b>8</b>	4 85 86 8
4.5.15		Construction Supervision for CP4	38																																									
	Task 20	Phase-I: Pre-construction activities	2																			+																			Enc	d of CF	P4	11
	20.1	Review of QAP & Construction Methodologies for Various Works	2																			<b>+</b>																						
	Task 21	Phase-II: Activities During Construction	34																				┿	++							++	++		₩	++		++-	$\rightarrow$						
	21.1	Construction Supervision and Quality Control	34																			1	-											$\Box$	H		$\blacksquare$	-						
	21.2	Inspection of Material	34																				<b>←</b> − .			++-				-++	┿┿.	- - -		++	┿┿.			-+						
	21.3	Progress Monitoring, Record keeping and Reporting	34																			1	4-		- - -						++	-			++	+								
	21.4	Contract Management	34								П										П	-	4-								++		-	-	++									
	21.5	Measurements, Claims and Financial Control	34								$\top$											1	4-								++			-	++	+								
	Task 22	Phase-II: Activities During Trial Run and Commissioning	2			$\top$				$\top$								$\top$		$\top$		$\top$	$\top$									$\top$	$\top$											
		Pre Commissioning Activities	1								П							П	П												П			П					+					
	22.2	Commissioning Activities	1																																		П		**					
		Monthly Progress Report with Quality & Quantity Control Details	38																			4-	-				-	-		-	4-4-	-	++	++	-	1								
		Material / Equipment Testing & Inspection Report	38																						بابار								П											
4.5.7	Task 23	Defect Liability Period	12																																									
	23.1	As-Built Drawings	1																																					<b>+</b>	417			411
	23.2	Submission of Project Completion Report [PCR]	3																																					+				
	Task 24	Regular Inspection During Defect Liability Period	12																																				1			++	++	
		Implementation of EIA and EoMP	73		-			++-				++-				-++	-			-++	++				++-	-			++				++		-									

								W	ORK	( SCH	EDL	JLE -	- CP5	;																														
>																		F	Proje	ct Dui	ation	in M	onths	- 30	Mont	hs Inv	olven	nent							<u>=</u>									
i.	Task	Activities and tasks	Duration																																	$\Pi$	$\Pi$						/ 1 7	
Act		,	in	1 2 3	4 5	6 7	8 9 10	11 12	13 14	15 16 1	17 18	19 20	21 22	23 24	25 26	27 28	29 30	31 32	33 34	35 36	37 38	39 40	41 42	43 44	45 46	47 48	49 50	51 52 5	53 54 5	5 56 5	7 58 59	60 61	62 63	64 65 6	6 67 6	8 69 70	J 71 72	73 74	75 76	6 77 78	79 80	81 82 8	83 84 85	86 87
			Months																																	$\Delta \mathbf{L}$	$\Delta \mathbf{L}$							
4.5.16		Installation of External Power Transmission Line CP5	30									ŧ														+																		
	Task 1	Technical Coordination	30									ŧ					-			-+-				-+-							П					$\Pi T$	$\Pi T$							
	Task 2	Monthly Progress Report	30									÷		_						-			<b>, ,</b>		ľ	-																		
		Implementation of EIA and EoMP	30									+							-+-		-			-+-												1 7								

Note: The tentative date of deliverables have been worked out based on the discussion with CMWSSB officials, but the total time duration of each component is fixed as per ToR / as proposed by the PMC team.

Legends	
<del>\</del>	Main Activities [Full Time]
<b>←</b>	Main Activities [Intermittent Time]
·	Tasks Under Main Activities [Full Time]
<b>←</b>	Tasks Under Main Activities [Intermittent Time]
<b>←</b>	Sub Tasks Under Tasks
<b></b>	Reports
•	Client's Role