

## CHENNAI METROPOLITAN WATER SUPPLY & SEWERAGE BOARD (CMWSSB)



**MPR (08) / (September 2020)**

### **PMC for Chennai Perur 400 MLD Desalination Plant and Allied Works**

Reference No.: Loan ID-P267

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9 October 2020

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# 1 EXECUTIVE SUMMARY

This Monthly Progress Report for September 2020 is submitted in accordance with the contractual requirements for Project Management Consultant ("PMC") services associated with the Chennai Perur 400 MLD Desalination Plant and allied works project being delivered for the Chennai Metropolitan Water Supply & Sewerage Board ("CMWSSB").

The document is structured to report on separately:

- Progress of the PMC (Consulting) Services
- Progress of the Project (the Works)

A summary of the key messages resulting during this period is provided in Table 1. Please peruse the full report for further details.

Table 1: Key Messages up to September 2020

Component	Key Message
PMC (Consulting) Services	<ul style="list-style-type: none"> <li>• Revised Monthly Progress Report (MPR 01) for January &amp; February 2020 submitted on 06.04.2020, 14.04.2020 and 26.05.2020</li> <li>• Revised Inception Report submitted on 04.04.2020 and 16.04.2020</li> <li>• Revised Design Criteria for CP4 components submitted on 16.04.2020</li> <li>• Monthly Progress Report (MPR 02) for March 2020 submitted on 17.04.2020 and 26.05.2020</li> <li>• Interim Report for the development of Concept Design for Chennai Perur 400MLD Desalination Plant for CP1 components submitted on 23.04.2020 and 26.05.2020</li> <li>• Quarterly Progress Report (QPR 01) for January to March 2020 submitted on 24.04.2020 and 22.05.2020</li> <li>• Monthly Progress Report (MPR 03) for April 2020 submitted on 09.05.2020 and 22.05.2020</li> <li>• Draft Environmental Impact Assessment (EIA) Review Report for CP1 submitted on 26.05.2020</li> <li>• Monthly Progress Report (MPR 04) for May 2020 submitted on 11.06.2020</li> <li>• Responses to JICA Comments and Revised Prequalification documents (RFQ) for CP1 on DBO basis submitted to CMWSSB on 24.06.2020</li> <li>• Concept Design Report for 400 MLD Desalination Plant at Perur (CP1) submitted on 10.07.2020</li> <li>• Monthly Progress Report (MPR 05) for June 2020 submitted on 10.07.2020 and 13.07.2020</li> <li>• Review note on Product Water Transmission Main from Perur DSP to Porur WDS for CP2 components submitted on 02.07.2020 and 15.07.2020</li> <li>• Quarterly Progress Report (QPR 02) for April to June 2020 submitted on 15.07.2020</li> <li>• Responses to JICA 2<sup>nd</sup> Comments and Revised Prequalification documents (RFQ) for CP1 on DBO basis submitted to CMWSSB on 17.08.2020</li> <li>• Monthly Progress Report (MPR 06) for July 2020 submitted on 10.08.2020</li> <li>• Bathymetry Survey fieldwork at Perur 400 MLD DSP has been completed on 28.08.2020.</li> <li>• Sea Water Sample collection work has been carried out at proposed 400MLD DSP at Perur and existing Nemmeli 100 DSP on 29.08.2020</li> <li>• Brine Diffusion Modelling Study has been carried out in September 2020</li> <li>• Response to JICA 3<sup>rd</sup> comments and Revised Prequalification documents (RFQ) for CP1 on DBO basis submitted to CMWSSB on 08.09.2020</li> </ul>

Component	Key Message
	<ul style="list-style-type: none"> <li>Monthly Progress Report (MPR 07) for August 2020 submitted on 10.09.2020</li> <li>Draft Environmental Impact Assessment (EIA) Review Report for CP1 and its Pumping Station (CP2-1) (Rev-1) submitted on 23.09.2020</li> <li>Revised Prequalification document (RFQ) for CP1 on DBO basis as per JICA 4<sup>th</sup> comments submitted to CMWSSB on 23.09.2020</li> <li>Topographical Survey drawing for Perur DSP site for CP1 components submitted to CMWSSB on 29.09.2020</li> <li>JICA has given the concurrence for Prequalification document (RFQ) for CP1 on DBO basis to CMWSSB on 30.09.2020</li> </ul>
	<ul style="list-style-type: none"> <li>Monthly Progressive expenditure (at actuals, i.e. based on bills passed till the end of September 2020) = Nil (INR) and Nil (USD)</li> <li>For SMEC India Pvt. Ltd., the Mobilisation advance payment (5% of Contract value) received on 19.05.2020 as against Advance Bank Guarantee.</li> <li>For SMEC International Pty Ltd, the Mobilisation advance payment (5% of Contract value) received on 17.09.2020 as against Advance Bank Guarantee.</li> </ul>
	<ul style="list-style-type: none"> <li>Monthly Progressive expenditure (Projected based on man-month consumed till the end of September 2020) = 2,25,19,270 (INR) and 661,890 (USD)</li> </ul>
	<ul style="list-style-type: none"> <li>Activities generally progressing on schedule</li> <li>An accelerated program being followed for CP1, which brings forward the issue of the RFP to market by 4 to 5 months</li> </ul>
	<ul style="list-style-type: none"> <li>The emerging COVID-19 virus outbreak is being monitored, and CMWSSB is to be informed of any impact on the mobilisation of PMC personnel. Due to the COVID-19 issues pandemic across the globe, the Government of Tamil Nadu announced and extended the partial 8<sup>th</sup> lockdown period from 01.09.2020 to 30.09.2020 throughout Tamil Nadu.</li> </ul>
	<ul style="list-style-type: none"> <li>No Project site work has been commenced</li> </ul>
Project (the Works)	<ul style="list-style-type: none"> <li>Progressive expenditure = Nil</li> </ul>
	<ul style="list-style-type: none"> <li>No activities scheduled to commence as of end September 2020</li> </ul>

Key items identified during this period for resolution with the CMWSSB include the following:

1. The impact of current water quality issues (i.e. white fibrous particles and associated elevated TOC and COD levels) being experienced at Nemmeli DSP on the selection of a preferred pre-treatment process arrangement being addressed during conceptual design.
2. Revision of the current concept for the site layout for the proposed reservoir and pumping station at the Porur Headworks site, due to other works currently under construction for CMWSSB.
3. Based on a discussion with CMWSSB officials, it is understood that the proposed desalination plant's land ownership transfer is in process. Upon receipt of the same, Consent To Establish (CTE) application will be forwarded to TNPCB (Tamil Nadu Pollution Control Board), the action to be taken up by CMWSSB.
4. Forest Clearance for cutting trees at Perur DSP site to be obtained from Tamil Nadu Forest Department.
5. Approval for the erection of offshore structure to be obtained from the Tamil Nadu Maritime Board.

6. System hydraulic design for the clear water transmission main from Perur DSP to Porur Headworks water transmission system (pumping station and transmission pipeline) and proposed water allocation to Chennai Core City and expansion area is to be resolved following initial analysis by PMC.
7. It is challenging to access the project site due to COVID-19 Pandemic issues spread across the globe. The Government of Tamil Nadu announced and extended the partial 8<sup>th</sup> lockdown period from 01.09.2020 to 30.09.2020 throughout Tamil Nadu.
8. Quick turn-round of requests with approvals (Work From Home) and follow up on timeline is essential to undertake the acceleration of CP1 components and regular timeline schedule for CP2 to CP4 components.
9. Non-Availability of most of the pipeline inventory data specific to the CP4 package in the digital format [Scaled AutoCAD/ GIS (.Prj)] files and conversion of the available physical data into required digital format.

## 2 ABBREVIATIONS & ACRONYMS

Abbreviation / Acronym	Meaning
BoQ	Bill of Quantity
CMWSSB	Chennai Metropolitan Water Supply and Sewerage Board
CP	Contract Package
DI	Ductile Iron
DMA	District Metered Area
DMS	Document Management System
DSP	Desalination Plant
GIS	Geographic Information System
HR & CE Board	Hindu Religious & Charitable Endowment Board
JICA	Japan International Cooperation Agency
MLD	Million Litres per day
MPR	Monthly Progress Report
MS	Mild Steel
NJSEI	NJS Engineers India Pvt Ltd.
O&M	Operation & Maintenance
ODA	Official Development Assistance
OJT	On-Job-Training
PMC	Project Management Consultant (Consortium)
PQ	Pre-Qualification
QPR	Quarterly Progress Report
RFP	Request for Proposal
RFQ	Request for Qualification
SMEC	SMEC International Pty Ltd
SMEC (India)	SMEC India Pvt Ltd
TCE	TATA Consulting Engineers Ltd.
TNPCB	Tamil Nadu Pollution Control Board
TOC	Total Organic Carbon
WDS	Water Distribution Station
WDZ	Water Distribution Zone



## 3 INTRODUCTION

### 3.1 This Progress Report

This is the seventh (8<sup>th</sup>) monthly progress report and covers activities of the Project Management Consultant (PMC services) and the Project (the Works) during **September 2020**.

### 3.2 PMC Services

The Consulting Services addressed by the series of Monthly Progress Report (“MPR”) to be delivered on this Project include design, preparation of bidding documents, tender evaluation, construction management and supervision for the proposed Chennai Perur 400 MLD Desalination Plant, its product water conveyance pipeline and all other allied works being carried out following with a Contract dated 09 January 2020 for Consulting Services between the Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB or “the Client”) and Consortium members comprising of SMEC International Pty Ltd (SMEC), Australia as the Lead Member of the Consortium, NJS Engineers India Pvt. Ltd. (NJSEI), TATA Consulting Engineers Limited (TCE) and SMEC India Pvt. Ltd. (SMEC India) as Associate Consultants to the Consortium.

The Terms of Reference (ToR) for the Consulting Services provide for 1988 person-months of PMC services (National Local 1603 person-months, including support staff, and International, 385 person-months) in the following main categories. However, the details of all the team with their role and person-months are mentioned in **Annexure 1**.

Table 2: Estimated Resourcing for PMC Services

Category	Resourcing
Management and Coordination, International and Local	87 person-months
Design, International	245 person-months
Design, Local	377 person-months
Safety, Environmental and Others, Local	265 person-months
Construction Supervision, Local	294 person-months
Support Staffs	720 person-months
<b>TOTAL</b>	<b>1988 person-months</b>

The Consulting Services are to be delivered in compliance with Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012.

### 3.3 PMC Scope of Work

The major components within the Scope of Work for the overall Project are listed below:

- CP1 - 400 MLD Sea Water Reverse Osmosis (SWRO) Desalination Plant at Perur
- CP2 - Pumping Stations & Reservoirs at Perur and Porur
- CP3 - Product Water Conveyance Main for about 65Km length from Perur to Porur
- CP4 - Improvements to Existing Distribution System in the core area of Chennai City
- CP5 - Installation of external dedicated transmission line

Further details on the components of the Contract packages are as summarised in **Annexure 2**.

The Consulting Services scope under each component (Contract Package) of the Project are as follows.

1. CP-1: Review of the current technical information, conducting supplementary natural condition surveys, preparation of conceptual design report with raw water assessment, review of marine works, assessment of operating conditions, process flow diagram, general layout review, water and mass balance and review of electrical, instrumentation and automation plans. Preparation of PQ and bid document with technical specifications, Minimum Functional Specification (MFS), Assistance in Bid evaluations and construction supervision activities.
2. CP-2: Review of technical information, conducting necessary topographical and geotechnical investigations, Hydraulic analysis of the transmission mains for finalising the pumps configurations, detail design of reservoir and pumping stations with all civil, electro-mechanical and instrumentation works, preparation of PQ (if necessary) and bid document with BoQ and technical specifications, Assistance in Bid evaluations and construction supervision activities.
3. CP-3: Construction supervision activities of the Product Water Conveyance Main from Perur to Porur.
4. CP-4: Review of technical information, collect and review of the topographical and pipe inventory data, preparation of hydraulic modelling and analysis of the existing water distribution network for improvement, the establishment of DMAs, preparation of the bid documents with BOQ and Construction supervision activities.
5. CP-5: Preparation of technical documents, monitor the progress of the construction activities (Necessary Technical Assistance by PMC).
6. All packages: Assist CMWSSB in environmental management and monitoring activities in all stages.

Also, the PMC will assist the CMWSSB in the development of organisational capability in several key areas, including the following:

- Asset Management
- Acceleration of installation of service connections and water meters
- Improvement of customer services and publication
- Improvement of business operation

For a more comprehensive description of PMC scope of services and related works, please refer to the Inception Report, Interim Report for the development of Concept Design for Chennai 400 MLD Desalination Plant at Perur for CP1 components, Draft Environmental Impact Assessment (EIA) Review Report for CP1 components (Rev-1), Revised Prequalification documents (RFQ) for CP1 on DBO basis, Concept Design Report for Chennai 400 MLD Desalination Plant at Perur for CP1 components and Review note on Product Water Transmission Main from Perur DSP to Porur WDS for CP2 components, Quarterly Progress Reports, Monthly Progress Reports for the Project.

## 4 PROGRESS REPORT FOR PMC SERVICES

### 4.1 Achieved Activities –September 2020

The activities achieved during September 2020 are listed in Table 3.

Table 3: Achieved Activities –September 2020

Package	Achieved Activities
CP1	Task 1: Data and information collection commenced (JICA documents, DPRs, water quality data)
	Task 2: Review of technical information commenced (JICA documents, DPRs, water quality data)
	Task 3: Conducting Surveys and Investigations <ul style="list-style-type: none"> <li>Carried out the Topographical Surveys at Perur Desalination Plant from 19.08.2020 to 07.09.2020</li> <li>Topographical Survey drawing for Perur DSP site for CP1 components submitted to CMWSSB on 29.09.2020</li> <li>Carried out the Bathymetry Survey fieldwork at Perur DSP site from 24.08.2020 to 28.08.2020</li> <li>Carried out Sea Water Sample Collection at Perur DSP and Nemmeli DSP on 29.08.2020</li> </ul>
	Task 4: Concept Design of Perur Desalination Plant has been submitted with design calculations based on the available existing data <ul style="list-style-type: none"> <li>Interim report for the development of Concept Designs for Chennai Perur 400 MLD Desalination Plant for CP1 components submitted to CMWSSB on 23.04.2020.</li> <li>Online Zoom Video conference call and discussion with CMWSSB officials on 30.04.2020 for the Interim Report for the development of Concept Design for Chennai Perur 400 MLD Desalination Plant for CP1 components.</li> <li>Online Zoom Video conference call and discussion with CE (O&amp;M)–II CMWSSB officials on 26.05.2020 for the progress of the consultancy work and technical discussion for CP1 to CP4 components.</li> <li>Preparation of proposed sludge treatment facility at Perur, RO Configuration – Conventional Design and RO Configuration – 3 Centre Design.</li> <li>Preparation and submission of sludge treatment process design, detail notes on 3 Centre or Pressure Centre Design.</li> <li>Preparation and submission of Mass Balance and Process Flow Diagram (Peak Flow and Normal Flow).</li> <li>Preparation of Summary of Revised Design Raw Sea Water Quality Parameters, Summary of major Product Water Quality Parameters, SWRO Desalination plant layout.</li> <li>Online Zoom Video conference call and discussion with Engineering Director (i/c) CMWSSB officials on 11.06.2020 for the progress of the consultancy work and technical discussion for CP1 to CP4 components.</li> <li>Preparation of Instrumentation Control Automation Works including plant operation control system, Redundancy Levels of DCS system, Central Control Room System, Instrumentation Plan, Critical Control Points, etc.</li> <li>Capital Cost Comparison DPR, JICA, PMC.</li> <li>Preparation of Operation &amp; Maintenance (O&amp;M) Cost, Minimum Functioning Specifications etc.</li> <li>Online MS Teams meeting Video conference call and discussion with Chief Engineer (Project-III) and SE (Desal) CMWSSB officials on 18.09.2020 for the progress of the consultancy work and technical discussion for CP1 to CP4 components.</li> </ul>
	Task 5: Submission of Concept Design Report:

Package	Achieved Activities
	<ul style="list-style-type: none"> <li>The Concept Design Report has been prepared based on the above activities, and this includes the review outcome of the existing technical documents and data, existing Desalination plants study and identified gaps in the process, proposed process description of all units of DSP and along with the recommendations, Block level Construction cost estimate and O&amp;M cost estimate, Gaps in the statutory approvals, process control philosophy, layout drawings, process flow diagrams etc.</li> <li>Concept Design Report for Chennai 400 MLD Desalination Plant at Perur for CP1 components submitted on 10.07.2020.</li> <li>Action Taken Report/clarification on the Draft Concept Design Report for CP1 submitted to CMWSSB on 05.08.2020 and 12.08.2020</li> </ul>
	<p>Task 6: Preparation of Technical Specifications:</p> <ul style="list-style-type: none"> <li>Preparation of Technical Specifications</li> </ul>
	<p>Task 7: Financial Analysis</p> <ul style="list-style-type: none"> <li>Preparation of Financial Analysis</li> </ul>
	<p>Task 9: Revised Request for Qualifications (RFQ) document was prepared on the DBO basis and issued to the Client for review. After review, CMWSSB has sent the RFQ to JICA for concurrence. Comments received from JICA on PQ documents on 05.06.2020.</p> <ul style="list-style-type: none"> <li>Online Zoom Video conference call and discussion with CE (Project)–II, CE (O&amp;M)–II CMWSSB officials on 15.06.2020 for the responses on JICA comments and Prequalification documents for CP1 on DBO basis.</li> <li>Responses to JICA comments and Revised Prequalification documents (RFQ) for CP1 on DBO basis submitted to CMWSSB on 24.06.2020.</li> <li>Online Microsoft Teams Meeting with Chief Development Operations (JICA) and CMWSSB officials on 03.07.2020 for a discussion on the responses for JICA comments on Prequalification documents for CP1 on DBO basis.</li> </ul> <p>After review, CMWSSB has sent the RFQ to JICA for concurrence. 2<sup>nd</sup> comments received from JICA on PQ documents on 13.08.2020.</p> <ul style="list-style-type: none"> <li>Responses to JICA 2<sup>nd</sup> comments and Revised Prequalification documents (RFQ) for CP1 on DBO basis submitted to CMWSSB on 17.08.2020.</li> </ul> <p>After review, CMWSSB has sent the RFQ to JICA for concurrence. 3<sup>rd</sup> comments received from JICA on PQ documents on 05.09.2020.</p> <ul style="list-style-type: none"> <li>Responses to JICA 3<sup>rd</sup> comments and Revised Prequalification documents (RFQ) for CP1 on DBO basis submitted to CMWSSB on 08.09.2020.</li> </ul> <p>After review, CMWSSB has sent the RFQ to JICA for obtaining the concurrence. 4<sup>th</sup> comments received from JICA on PQ documents on 23.09.2020.</p> <ul style="list-style-type: none"> <li>Revised Prequalification document (RFQ) for CP1 on DBO basis as per JICA 4<sup>th</sup> comments submitted to CMWSSB on 23.09.2020.</li> </ul> <p>After review, JICA has given final concurrence to CMWSSB regarding the Revised Prequalification document (RFQ) for CP1 on DBO basis on 30.09.2020.</p>
CP2	<p>Task 1: Data and information collection commenced (JICA documents, DPRs, Master Plan)</p> <p>Task 2: Review of technical information commenced (checking of the hydraulic design of the transmission system based on the available data)</p> <ul style="list-style-type: none"> <li>Calculation of CWR Capacity at Perur</li> <li>Reviewed the beneficiary population from Perur to Porur, and the observation was submitted to CMWSSB for feedback.</li> <li>Review note on Product Water Transmission Main from Perur DSP to Porur WDS for CP2 components submitted on 15.07.2020.</li> </ul>
CP3	No significant activities have been carried out during this period
CP4	<p>Task 1: Reconnaissance Survey, Data and information collection commenced (JICA documents, Master Plan)</p> <ul style="list-style-type: none"> <li>Review of Population projection and preparation of observations on population projection and demand considered in the JICA and Master plan documents.</li> <li>Population projection by PMC to arrive the beneficiary details for the year 2025</li> </ul>

Package	Achieved Activities
	<ul style="list-style-type: none"> <li>Site Visit to Area IX: Valluvarkottam Headworks and Southern Headworks on 15.06.2020</li> <li>Site Visit to Area XIII: Thiruvanniyur WDS, Velachery WDS (new) and Velachery WDS (Old) on 18.06.2020</li> <li>Site Visit to Area IX: Triplicane WDS on 13.07.2020</li> <li>Site Visit to Area XIII: Mylapore WDS, Nandanam WDS and Pallipattu WDS on 30.07.2020 and discussion with O&amp;M operator of CMWSSB.</li> </ul>
	Review of salient details and existing water distribution network drawings for CP4 components and identification of gaps in the available data
CP5	No activities have been carried out during this period
General	<p>Monthly Progress Report (MPR 06) for July 2020 submitted on 10.08.2020</p> <p>Draft Environmental Impact Assessment (EIA) Review Report for CP1 components submitted to CMWSSB on 26.05.2020</p> <ul style="list-style-type: none"> <li>Online Zoom Video conference call and discussion with SE (Desal) CMWSSB officials on 03.06.2020 for the Draft Environmental Impact Assessment (EIA) Review Report for CP1 components.</li> <li>Action Taken Report/clarification on the Draft Environmental Impact Assessment (EIA) Review Report for CP1 submitted to CMWSSB on 12.08.2020</li> </ul> <p>Draft Environmental Impact Assessment (EIA) Review Report for CP1 and CP2-1 components (Rev-1) submitted to CMWSSB on 23.09.2020</p> <p>Environmental and Social support activities commenced including documentation review and approvals planning</p>

Note – task numbering listed in Table above corresponds to masterwork schedule (refer **Annexure 4**)

## 4.2 Deliverables Status in September 2020

A listing of the full suite of project deliverables included under the Consulting Services and their current status or tentative completion date are listed in Table 4.

Table 4: Deliverables Status

Sl.No.	Report / Document	Tentative Date / Frequency / Status **
1	Inception Report	Inception Report submitted on 28.02.2020
		Observations on Inception Report received from CMWSSB on 30.03.2020
		Revised Inception Report submitted on 04.04.2020 and 16.04.2020
2	<b>For Design and Tender Assistance for CP1</b>	
	2.1 Conceptual Design Report	Interim report for development of Concept Designs for Perur 400 MLD Desalination Plant for CP1 submitted on 23.04.2020
		Concept Design Report for Chennai Perur 400 MLD Desalination Plant for CP1 submitted on 10.07.2020
	2.2 PQ Document	Draft PQ document for CP1 components submitted on 24.02.2020
		Revised PQ document for CP1 components have been submitted on 03.03.2020, 06.03.2020 for client review and sent to JICA for Concurrence for floating of the tender
		1 <sup>st</sup> comments received from JICA on PQ documents on 05.06.2020.

Sl.No.	Report / Document	Tentative Date / Frequency / Status **
		Responses to JICA comments and Revised Prequalification document (RFQ) have been submitted to CMWSSB on 24.06.2020
		2 <sup>nd</sup> comments received from JICA on PQ documents on 13.08.2020.
		Responses to JICA 2 <sup>nd</sup> comments and Revised Prequalification document (RFQ) on DBO basis have been submitted to CMWSSB on 17.08.2020
		3 <sup>rd</sup> comments received from JICA on PQ document on 05.09.2020.
		Responses to JICA 3 <sup>rd</sup> comments and Revised Prequalification document (RFQ) on DBO basis have been submitted to CMWSSB on 08.09.2020
		4 <sup>th</sup> comments have been received from JICA on PQ documents on 23.09.2020.
		Revised Prequalification document (RFQ) as per JICA 4 <sup>th</sup> comments have been submitted to CMWSSB on 23.09.2020
		JICA has given the concurrence for Prequalification document (RFQ) for CP1 on DBO basis to CMWSSB on 30.09.2020
	2.3 PQ Evaluation Report	December 2020 (July 2020)
	2.4 Bid (RFP) Document	February 2021 (September 2020)
	2.5 Bid Evaluation Report (Technical)	March 2021 (October 2020)
	2.6 Bid Evaluation Report (Financial)	April 2021 (December 2020)
3	<b>For Design and Tender Assistance for CP2</b>	
	3.1 Detailed Design Report and Drawings	Review note on Product Water Transmission Main from Perur DSP to Porur WDS for CP2 components submitted on 02.07.2020 (soft copy) and 15.07.2020 (hard copies)
		April 2021
	3.2 PQ Document (if required)	July 2021
	3.3 PQ Evaluation Report (if required)	August 2021
	3.4 Bid Document (RFP)	September 2021
	3.5 Bid Evaluation Report (Technical)	December 2021
	3.6 Bid Evaluation Report (Financial)	April 2021
4	<b>For Design and Tender Assistance for CP4</b>	
	4.1 Detailed Design Report and Drawings	December 2021
	4.2 Bid Document(s)	April 2022
	4.3 Bid Evaluation Report (Technical)	September 2022
	4.4 Bid Evaluation Report (Financial)	November 2022
5	<b>For Construction Supervision of CP 1</b>	
	5.1 Contractor's Design Review Report	Within 1 month after submission of the Contractor's design report
	5.2 Quality and Quantity Control Report	Every Month
	5.3 Final Inspection Report	At Appropriate timing
6	<b>For Construction Supervision of CP 2</b>	
	6.1 Quality and Quantity Control Report	Every Month
	6.2 Final Inspection Report	At Appropriate timing



Sl.No.	Report / Document	Tentative Date / Frequency / Status **
7	<b>For Construction Supervision of CP 3-1 to CP 3-4</b>	
	7.1 Quality and Quantity Control Report	Every Month
	7.2 Final Inspection Report (CP 3-1, CP 3-2)	At Appropriate timing
	7.3 Final Inspection Report (CP 3-3, CP 3-4)	At Appropriate timing
8	<b>For Construction Supervision of CP 4</b>	
	8.1 Quality and Quantity Control Report	Every Month
	8.2 Final Inspection Report	At Appropriate timing
9	<b>Environmental and Social Safeguard</b>	
	9.1 EIA Review Report for CP 1	Draft Environmental Impact Assessment (EIA) Review Report for CP1 component submitted to CMWSSB on 26.05.2020 Draft Environmental Impact Assessment (EIA) Review Report for CP1 and CP-2 components (Rev-1) have been submitted to CMWSSB on 23.09.2020
	9.2 Environmental Monitoring Report	Every Month
10	<b>Progress Report and Project Completion Report</b>	
	10.1 Monthly Progress Report (MPR)	<ul style="list-style-type: none"> <li>MPR 01 for Jan' &amp; Feb'2020 (2 copies) submitted on 10.03.2020 for review</li> <li>Observations on MPR 01 received from CMWSSB on 31.03.2020</li> <li>Revised MPR 01 for Jan' &amp; Feb'2020 (soft copy) submitted on 14.04.2020</li> <li>Revised MPR 01 for Jan' &amp; Feb'2020 (10 copies) submitted on 26.05.2020</li> <li>MPR 02 for March 2020 (10 copies) submitted on 26.05.2020</li> <li>MPR 03 for April 2020 (10 copies) submitted on 22.05.2020</li> <li>MPR 04 for May 2020 (soft copy) submitted on 10.06.2020 and 10 copies submitted on 11.06.2020</li> <li>MPR 05 for June 2020 (soft copy) submitted on 10.07.2020</li> <li>MPR 05 for June 2020 (10 copies) submitted on 13.07.2020</li> <li>MPR 06 for July 2020 (10 copies) submitted on 10.08.2020</li> <li>MPR 07 for August 2020 (10 copies) submitted on 10.09.2020</li> </ul>
	10.2 Quarterly Progress Report (QPR)	<ul style="list-style-type: none"> <li>QPR 01 for Jan' to March 2020 (soft copy) submitted on 24.04.2020</li> <li>QPR 01 for Jan' to March 2020 (10 copies) submitted on 26.05.2020</li> <li>QPR 02 for Apr' to June 2020 (10 copies) submitted on 15.07.2020</li> </ul>
	10.3 Project Completion Report (PCR)	Within 3 months after completion of the services

\*\* The tentative date of deliverables has 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.

It is highlighted that the tentative dates listed in Table 4 are subject to assumptions on the actual date of issue of tender documents to the market by CMWSSB.

During the Online Zoom meeting Video conference call held on 30.04.2020, the International experts expressed their concern on the resumption of International flights to Chennai and it may take longer duration due to COVID-19 pandemic across the globe. Hence, PMC requested CMWSSB to allow the International Experts to work from home. In general, both parties (PIU and PMC team) noted that due to the current COVID-19 Pandemic situation, an overall 2 months delay in floating of the RFQ and consequently the RFP for CP1 components. Where these tender dates are delayed, there will be an associated delay with the completion of tender evaluation reports. PMC also requested to consider the effort of national staff (outside Chennai) working from home on the Project, due to COVID-19 pandemic across the globe. CMWSSB also informed that the PMC members who are stationed outside Chennai and outside India of this Project Management Consultant Services to work from their home offices at their respective countries till 31.07.2020.

During the Online MS Teams meeting held on 18.09.2020, Project Manager indicated that due to COVID-19, some of the activities have been slipped out of the target date and requested CMWSSB to indicated the new target dates if they have anything in their consideration. CMWSSB advised to submit the revised Schedule for review and consideration. PMC revised the Annexure 3 – Overall Work Schedule and submitted on 28 September 2020 to CMWSSB for review and consideration.

Any impacts on the timing of deliverables will be communicated to CMWSSB regularly.

### 4.3 Actual Progress versus Planned Progress – Upto September 2020

The Actual progress during the month up to September 2020 is with planned progress is furnished in Table 5.

Table 5: Actual Progress vs Planned Progress

Sl.No.	Deliverable	Planned	Actual	Remarks/reasons for the delay
1	Draft PQ document for CP1	25.02.2020	24.02.2020	
2	Draft Inception Report	12.02.2020	28.02.2020	Delay has been happened due to more focus on CP1 PQ document preparation due to its priority as CMWSSB advise. Please Refer Minutes of Progress Review Meeting conducted by CE (O&M)-II, CMWSSB held on 14.02.2020 for the revised date, i.e. 28.02.2020 which has been conveyed to the Client. Accordingly, submission has been made.
3	Revised PQ document for CP1	03.03.2020	03.03.2020	
		06.03.2020	06.03.2020	CMWSSB; PQ documents sent to JICA for concurrence
4	Draft Monthly Progress Report (MPR 01) for January 2020 & February 2020	10.03.2020	10.03.2020	
5	Revised Inception Report	04.04.2020	04.04.2020	
		16.04.2020	16.04.2020	



Sl.No.	Deliverable	Planned	Actual	Remarks/reasons for the delay
6	Revised Monthly Progress Report (MPR 01) for January 2020 & February 2020	06.04.2020	06.04.2020	
		14.04.2020	14.04.2020	
		26.05.2020	26.05.2020	Hard copies submitted
7	Monthly Progress Report (MPR 02) for March 2020	17.04.2020	17.04.2020	
		26.05.2020	26.05.2020	Hard copies submitted
8	Interim report for the development of Concept Designs for Chennai Perur 400 MLD Desalination Plant for CP1 components	23.04.2020	23.04.2020	soft copy submitted
		23.04.2020	26.05.2020	Hard copies submitted
9	Quarterly Progress Report (QPR 01) for January 2020 to March 2020	24.04.2020	24.04.2020	
		22.05.2020	22.05.2020	Hard copies submitted
10	Monthly Progress Report (MPR 03) for April 2020	10.05.2020	09.05.2020	
		10.05.2020	22.05.2020	Hard copies submitted
11	Draft Environmental Impact Assessment (EIA) Review Report for CP1 components	20.04.2020	24.05.2020 (soft copy)	Delay has happened for the Environmental data collection from CMWSSB (Due to COVID-19 pandemic issues across the globe and continuous lockdown in India). Accordingly, submission has been made.
		20.04.2020	26.05.2020	Hard copies submitted
12	Monthly Progress Report (MPR 04) for May 2020	10.06.2020	10.06.2020	
		10.06.2020	11.06.2020	Hard copies submitted
13	Revised PQ document for CP1	24.06.2020	24.06.2020	Responses to JICA 1 <sup>st</sup> comments and Revised Prequalification document (RFQ) for CP1 on DBO basis submitted to CMWSSB (Hard copies submitted)
14	Monthly Progress Report (MPR 05) for June 2020	10.07.2020	10.07.2020	
		10.07.2020	13.07.2020	Hard copies submitted
15	Concept Design Report for Chennai Perur 400MLD Desalination Plant for CP1 components	30.06.2020	10.07.2020	Delay has happened for the finalising the cost comparison of DPR, Study Report and PMC CAPEX, OPEX etc. (Due to COVID-19 pandemic issues across the globe and continuous lockdown in Chennai). Accordingly, submission has been made.

Sl.No.	Deliverable	Planned	Actual	Remarks/reasons for the delay
16	Review note on Product Water Transmission Main from Perur DSP to Porur WDS for CP2 components	02.07.2020	02.07.2020	Soft copy submitted
		15.07.2020	15.07.2020	Hard copies submitted
17	Quarterly Progress Report (QPR 02) for April 2020 to June 2020	15.07.2020	15.07.2020	Hard copies submitted
18	Monthly Progress Report (MPR 06) for July 2020	10.08.2020	10.08.2020	Hard copies submitted
19	Revised PQ document for CP1	17.08.2020	17.08.2020	Responses to JICA 2 <sup>nd</sup> comments and Revised Prequalification document (RFQ) for CP1 on DBO basis submitted to CMWSSB (Hard copy submitted)
20	Revised PQ document for CP1	08.09.2020	08.09.2020	Responses to JICA 3 <sup>rd</sup> comments and Revised Prequalification document (RFQ) for CP1 on DBO basis submitted to CMWSSB (Hard copies submitted)
21	Monthly Progress Report (MPR 07) for August 2020	10.09.2020	10.09.2020	Hard copies submitted
22	Draft Environmental Impact Assessment (EIA) Review Report for CP1 and CP-2 components (Rev-1)	23.09.2020	23.09.2020	Hard copies submitted
23	Revised PQ document for CP1	23.09.2020	23.09.2020	Revised Prequalification document (RFQ) for CP1 on DBO basis as per JICA 4 <sup>th</sup> comments submitted to CMWSSB (Hard copies submitted)

Also, as per the baseline schedule, the PMC is progressing with the collection and review of data and information to inform early activities planned on CP1, CP2 and CP4.

#### 4.4 Financial Progress Upto September 2020

A summary of financial progress (at actuals based on the bills passed) for the PMC Services Contract at the end of September 2020 is included in Table 6.

Table 6: Financial Progress (Actual based on the bill passed) on PMC Services at the end of September 2020

Month	Monthly Expenditure	Cumulative Expenditure	% of Total Contract Value
January 2020	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
February 2020	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
March 2020	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
April 2020	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
May 2020 **	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
June 2020	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
July 2020	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
August 2020	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%
September 2020***	INR 0	INR 0	0.00%
	USD 0	USD 0	0.00%

\*\* For SMEC India Pvt. Ltd., the Mobilisation advance payment (5% of Contract value) have been received on 19.05.2020 as against Advance Bank Guarantee.

\*\*\* For SMEC International Pty Ltd, the Mobilisation advance payment (5% of Contract value) has been received on 17.09.2020 as against Advance Bank Guarantee.

However, a summary of financial progress (projected based on man-month consumed) for the PMC Services contract at the end of September 2020 is included in Table 7. For further details, please refer to **Annexure 5**.

Table 7: Financial Progress (Projected based on man-months consumed) on PMC Services at the end of September 2020

Month	Monthly Expenditure	Cumulative Expenditure	% of Total Contract Value
January 2020	INR 10,77,836	INR 10,77,836	0.18%
	USD 56,098	USD 56,098	0.60%
February 2020	INR 25,81,997	INR 36,59,833	0.62%
	USD 112,801	USD 168,899	1.79%
March 2020	INR 38,31,393	INR 74,91,226	1.30%
	USD 56,261	USD 225,159	2.39%
April 2020	INR 22,26,340	INR 97,17,566	1.69%
	USD 90,351	USD 315,518	3.35%
May 2020	INR 23,29,743	INR 1,20,47,309	2.09%
	USD 60,913	USD 376,431	4.00%
June 2020	INR 42,21,118	INR 1,62,68,427	2.83%
	USD 88,100	USD 464,532	4.94%
July 2020	INR 30,52,922	INR 1,85,36,918	3.22%
	USD 67,841	USD 532,374	5.66%
August 2020	INR 16,18,166	INR 2,01,14,190	3.49%
	USD 63,232	USD 595,604	6.33%
September 2020	<b>INR 24,19,135</b>	<b>INR 2,25,19,270</b>	<b>3.91%</b>
	<b>USD 66,287</b>	<b>USD 661,890</b>	<b>7.03%</b>

## 4.5 Staffing Inputs –September 2020

### 4.5.1 Mobilized Personnel

The following key Project resources were mobilised and commenced work on the Consulting Services:

Table 8: Mobilized Personnel (International / National)

Position / Role	Name of the staff	Category	Commenced Date	De-mobilisation date	Remobilisation date	Total months allocated	Total months mobilised so far (till September 2020 end)	Balance man-months available (October 2020 onwards)
Project Manager (Team Leader)	Dr P.Dharma Dharmabalan	I	14.02.2020	26.02.2020	07.04.2020	70	3.85	66.15
Desalination Expert	Dr.Ghulam Mustafa	I	10.02.2020	22.02.2020	01.04.2020	29.50	6.13	23.37
Additional Key Expert – International	Dr.Uday G.Kelkar	I	01.06.2020			2.50	0.69	1.81
Water Supply Engineer	Mr.Shane Farquharson	I	20.01.2020	20.03.2020		23	2.04	20.96
Mechanical Engineer (Desal)	Mr.Michel Morillon	I	20.01.2020	08.02.2020	23.02.2020	15	4.17	10.83
				15.03.2020	01.04.2020			
Contract Specialist (Desal)	Mr.Roderick Mackenzie	I	20.01.2020	15.02.2020		9	0.90	8.10
Civil and Structural Engineer (Desal)	Dr.D.Elanchezian	I	20.01.2020	04.04.2020		42	2.45	39.55
Financial Expert	Mr Hemant Chadha	I	22.06.2020			3	0.46	2.54
Civil Engineer	Mr.Ramesh Senthil	N	20.01.2020			72	7.89	64.11
Senior Civil Engineer	Mr.S.Siddappaswamy	N	27.01.2020	22.02.2020	01.04.2020	72	3.819	68.181
Senior Pipeline Engineer	Mr.Nagesh Chinnam	N	04.02.2020			72	4.318	67.682
Environmental Specialist - International	Dr.Alok Kumar	I	24.02.2020	07.03.2020	25.04.2020	15	1.272	13.728
Environmental Specialist - National	Mr.S.M.Karthikaeswaran	N	25.02.2020			30	6.409	23.591

Position / Role	Name of the staff	Category	Commenced Date	De-mobilisation date	Remobilisation date	Total months allocated	Total months mobilised so far (till September 2020 end)	Balance man-months available (October 2020 onwards)
Social Communication Specialist - National	Mrs.R.Kanmani (Replaced from Dr.Rajshekar Reddy)	N	21.09.2020			72	0.36	71.64
Pipeline Engineer-1	Mr.Rahul N Ramdhan (Replaced from Mr.Chandra Shekhar Reddy Yedla)	N	25.02.2020	05.03.2020		60	0.32	59.41
			23.09.2020				0.27	
Hydraulic Modeller-1	Mr.P.M.Saravanan	N	25.02.2020	27.02.2020		8	0.09	7.91
Contract Management Specialist	Mr.Santosh Biswa	N	02.03.2020			6	2.13	3.87
Quantity Surveyor-2	Mr.V.S.Rajasekar	N	21.09.2020	21.09.2020		70	0.318	69.682
CAD Operator-1	Mr.G.Murali	N	25.02.2020	24.03.2020	01.05.2020	30	5.67	24.33
Visa and Admin Officer	Mr.A.Renu Kumar	N	20.01.2020			70	8.12	61.88
Accountant	Mr.K.Manikandan	N	09.03.2020			70	6.58	63.42
Office Keeper-1	Mr.Pilominraj Raja (Replaced from Mr.R.Jagan)	N	03.02.2020			70	7.81	62.19
Office Keeper-2	Mr.Thiruvengadam Someswaran (Replaced from Mr.G.Arjun)	N	03.02.2020			70	7.81	62.19

I – International Staff

N – National Staff

A project office has been established in Chennai to accommodate PMC personnel and integrate resources from PMC partners into a united team. The permanent office is located at the Puravankara Primus building, Old Mahabalipuram Road, Okkiyampet, Thuraipakkam, Chennai 600 097. This office location is centrally positioned between the Client office and the Perur project site to balance both short and long-term commitments to the Project.

No PMC team has been permanently demobilised from the Project. However, some resources with intermittent or staged inputs were temporarily demobilised during the period due to COVID-19 pandemic issues.

After the COVID-19 pandemic issues resolved and the end of the 8<sup>th</sup> extended partial lockdown period in India, several of these team members are scheduled to return to Chennai for further inputs to this Project in the coming month of October 2020.

#### 4.5.2 Per-Diem Allowance

The following are the details of quantity for per-diem allowance for the staff of Consortium member of the Project on the Consulting Services:

Table 9: Details of Quantity for Per-Diem Allowance for Staff

Sl. No.	Name of the firm	Category	Total Number of Days (As per Contract Agreement)	Total Number of Days (As per Allocation of Consortium)	Number of Days of Claim up to August'2020	Number of Days of Claim in September 2020	Cumulative Number of Days of Claim up to September 2020	Balance Number of Days for Claim
1	NJS Engineers India Pvt. Ltd.	International	2250	1,440	12	0	12	1,428
2	SMEC India Pvt. Ltd.	International		810	138	0	138	672
		National	50	50	0	0	0	50
3	SMEC International Pty. Ltd.	Per-diem allowance in INR for the International Experts will be claimed by SMEC India Pvt. Ltd.						
4	TATA Consulting Engineers Ltd.	Not applicable. Hence no claim will be made for the entire project duration						
	<b>TOTAL</b>		<b>2,300</b>	<b>2,300</b>	<b>190</b>	<b>0</b>	<b>150</b>	<b>2,150</b>

#### 4.5.3 Summary of Personnel Inputs for the Period

A summary of personnel inputs for the period (September 2020) is included in **Annexure 6**. Planned mobilisation of PMC personnel for the next three (3) month period (up to December 2020) is presented in **Annexure 7**.

#### 4.5.4 Team Structure

A copy of the current PMC organisation chart is attached in **Annexure 8**.

##### 4.5.4.1 Change of Team Structure PMC's nominated key personnel for this Project

As at the end of September 2020, there are some changes to the PMC's nominated key personnel for this Project; however, two support staffs (Office Keeper-1 and Office Keeper-2) have been replaced with new personnel from July 2020 onwards.

Dr.Uday G.Kelkar, NJSEI Pvt. Ltd. have been mobilised for the Project since June 2020, as an additional Key Expert (International) with 2.50 man-months (Intermittent) by adjusting with the input man-months of Dr.Ghulam Mustafa (Desalination Expert), International Key Expert with remuneration of USD 26225 per Man month has been accepted by CMWSSB and JICA. As per CMWSSB letter dated 24.04.2020, it is informed that his input of 2.50 man-months is expected to spread over the entire Project duration and his cost is to be met from the cost of Desalination Expert, and there is no change in a project approved budget for this PMC assignment.

CMWSSB has provided the approval for the replacement of the following staffs during September 2020.

Sl. No.	Position	Original Staff as per Contract Agreement	Proposed Staff for replacement
	<b>KEY - INTERNATIONAL</b>		
1	Electrical Engineer (International)	Mr.Sergio de Bastos Vilar Magalhaes Paulo	Mr.Gilbert Z.Gonzales
	<b>NON KEY INTERNATIONAL</b>		
2	Monitoring & Control Expert (Desal)	Mr.Manikandan Ganesh Shoranur	Mr.Afzal Abdul Latheef
	<b>NON KEY – NATIONAL / LOCAL EXPERT</b>		
3	Mechanical Engineer	Mr.Surajit Debnath	Mr.Mayur Gupta
4	Electrical Engineer	Mr.G.V.K Mohan	Mr.Om Prakash Singh
5	Structural Engineer	Mr.M.K.Vinod	Ms.J.Sudha
6	Pipeline Engineer - 1	Mr.Chandra Shekhar Reddy Yedla	Mr.Rahul N Ramdhan
7	Pipeline Engineer – 2	Mr.V.Tulasi Ram	Mr.P.Thangavel
8	Social Communication Specialist	Dr.M.Rajsekhar Reddy	Mrs.R.Kanmani
9	Quantity Surveyor-1	Mr.Vinod Chandra K.C	Mr.R.Muthurajan

As per CMWSSB letter dated 10.09.2020, it is informed that above experts under International and Local Expert category i.e. Non-Key Experts (Sl.No.2 to 9) have been considered and approved for replacement.

As per CMWSSB letter dated 16.09.2020, it is informed that the above expert under International Key Expert category (Sl.No.1) has been considered and approved for replacement.

## 4.6 Meetings and Site Visits –September 2020

A summary of critical meetings and site visits completed during the period is furnished in

Table 10.



Table 10: Meetings and Site Visits (September 2020)

Date	Meeting	Location	Attendees
02.09.2020	Joint site visit with EE (Desal), EE (530 MLD) CMWSSB officials to Porur WDS for identification of allocated land for proposed Underground Tank and Pumping station.	Site Visit at Porur WDS	PMC member & CMWSSB officials
07.09.2020	Online Microsoft Teams Meeting conducted by Project Coordinator (PMC) for a discussion on the Qualification Criteria for Prequalification (PQ) documents (JICA 3 <sup>rd</sup> comments received from CMWSSB) for CP1 on DBO basis.	Online Microsoft Teams Meeting Video Conference Call	PMC members
11.09.2020	Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion on the deliverables/tasks / activities for CP1 to CP4 components	Online Microsoft Teams Meeting Video Conference Call	PMC members
18.09.2020	Online Microsoft Teams Meeting conducted by Chief Engineer (Project-III) and SE (Desal), CMWSSB for a discussion on Action Taken Report, progress review status of the consultancy work and technical presentation for CP1 to CP4 components.	Online Microsoft Teams Meeting Video Conference Call	PMC members & CMWSSB officials
21.09.2020	Joint site visit with EE (Desal) CMWSSB and HR&CE Board officials for finalisation of land allocation for proposed Perur Desalination Plant at Perur (CP1) and Sub Station at Perur (CP5).	Site Visit to Perur Proposed DSP and Sub Station	PMC members, CMWSSB and HR&CE Board officials
22.09.2020	Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion with M/s Indomer Coastal Hydraulics Pvt. Ltd. on Seawater Sample collection, testing, analysis report, Bathymetry Survey report and Draft Brine Diffusion Modelling study and for CP1 components.	Online Microsoft Teams Meeting Video Conference Call	PMC members
23.09.2020	Online Microsoft Teams Meeting conducted by Project Coordinator (PMC) for a discussion on the Qualification Criteria for Prequalification (PQ) documents (JICA 4 <sup>th</sup> comments received from CMWSSB) for CP1 on DBO basis.	Online Microsoft Teams Meeting Video Conference Call	PMC members
24.09.2020	Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion on Draft Seawater Sample collection and testing report for CP1 components.	Online Microsoft Teams Meeting Video Conference Call	PMC members
29.09.2020	Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion with M/s Indomer Coastal Hydraulics Pvt. Ltd. on Draft Brine	Online Microsoft Teams Meeting	PMC members

Date	Meeting	Location	Attendees
	Diffusion Modelling study and Seawater Sample collection and testing report for CP1 components.	Video Conference Call	

The regular meetings/technical discussions have been conducted by PMC teams on the preparation of Concept Design Report including Instrumentation and Control Works including plant operation control system, Instrumentation Plan, Capital Cost Comparison DPR, JICA, PMC. Preparation of Operation & Maintenance Cost, Minimum Functioning Specifications. Discussion on the responses for JICA 3<sup>rd</sup> and 4<sup>th</sup> comments and submission of updated Prequalification documents for CP1 components on DBO basis. Discussion on the Preliminary Social Assessment Review Report. Submission of Draft Environmental Impact Assessment (EIA) Review Report for CP1 and CP2-1 components (Rev-1), Monthly Progress Report (MPR 07) for August 2020. Also, regular interactions, discussions held with CMWSSB officials and other Project aspects until September 2020. Where formal minutes have not been recorded, these meetings are not listed in the above.

## 4.7 Health & Safety – September 2020

There are no health and safety incidents to report for September 2020, associated with the activities of the PMC. The evolving international situation regarding the COVID-19 virus is pandemic, however, of concern to the PMC, as restricted travel movements may impact mobilisation of international (and possibly national) staff. The PMC will keep CMWSSB informed of any developments that impact the delivery of the Consulting Services. It is requested that CMWSSB consider approval of out-of-Country professional inputs if the COVID-19 virus Pandemic situation worsens and travel restrictions are enforced, for the PMC to maintain progress on activities. Also, it is requested that CMWSSB to consider the approval of national and support staff for work from home inputs, if the COVID-19 virus Pandemic situation worsens and travel restrictions to sites are enforced, for the PMC to maintain progress on activities.

The details of Insurance are listed in Table 11.

Table 11: Details of Insurance

Name of the Firm	Type of Insurance	Name of the Agency	Insurance Value	Period Insurance from	Period Insurance to
<b>SMEC International Pty. Ltd.</b>	Third-Party Motor Vehicle Liability Insurance Third-Party Liability Insurance	SBI General Insurance	INR 100 Million	10.01.2020	09.01.2021
	Professional Liability	Engineering Consultants Underwriters Ltd.	AUD 10 Million	30.06.2020	31.12.2021
	Employer's Liability and Worker Compensation Insurance	CHUBB Insurance Singapore limited	SGD 10 Million	01.07.2019	31.12.2020
	Insurance against Loss or Damage	Not Applicable	-	-	-
<b>SMEC India Pvt. Ltd.</b>	Third-Party Motor Vehicle Liability Insurance Third-Party Liability Insurance	SBI General Insurance	INR 100 Million	10.01.2020	09.01.2021
	Professional Liability	Bajaj Allianz General Insurance Company Ltd.	INR 1000 Million	08.07.2020	07.07.2021
	Employer's Liability and Worker Compensation Insurance	IFFCO – TOKIO General Insurance Co. Ltd.	INR 640.84 Million	05.01.2020	04.01.2021
	Insurance against Loss or Damage	Bajaj Allianz General Insurance Company Ltd.	INR 8.40 Million	30.04.2020	29.04.2021
<b>NJS Engineers India Pvt. Ltd.</b>	Third-Party Motor Vehicle Liability Insurance		To be provided as and when vehicles are mobilised monthly		
	Professional Liability	New India Assurance Company Limited	INR 259 Million	20.04.2020	20.07.2027
	Employer's Liability and Worker Compensation Insurance	New India Assurance Company Limited	INR 20 Million	20.04.2020	19.04.2021
	Insurance against Loss or Damage	Not Applicable	-	-	-
<b>TATA Consulting Engineers Ltd.</b>	Third-Party Motor Vehicle Liability Insurance	IFFCO TOKIO General Insurance Company Ltd.	INR 0.62 Million	14.01.2020	13.01.2021
	Professional Liability	The New India Assurance Co. Ltd.	INR 1500 Million	03.10.2019	02.10.2020
	Employer's Liability and Worker Compensation Insurance	The New India Assurance Co. Ltd.	INR 1145 Million	01.04.2020	31.03.2021
	Insurance against Loss or Damage	The New India Assurance Co. Ltd.	INR 1000 Million	03.10.2019	02.10.2020

## 4.8 Variations

### 4.8.1 Submitted/Approved

There are some variation requests submitted or approved during this period.

- Dr.Uday G.Kelkar, NJSEI Pvt. Ltd. have been mobilised for the Project since June 2020, as an additional Key Expert (International) with 2.50 man-months (Intermittent) by adjusting with the input man-months of Dr.Ghulam Mustafa (Desalination Expert), International Key Expert with remuneration of USD 26225 per Man-month has been accepted by CMWSSB and JICA. As per CMWSSB letter dated 24.04.2020, it is informed that his input of 2.50 man-months is expected to spread over the entire project duration and his cost is to be met from the cost of Desalination Expert, and there is no change in Project approved budget for this PMC assignment.

The following staff CVs have been submitted for the replacement of 2 nos. of Key Expert (International), 1 no. of Non-Key Expert (International) and 7 nos. of Non-Key National / Local Expert (Non-evaluation position) vide our correspondence letters communicated to CMWSSB, we requested CMWSSB to provide approval kindly.

Sl. No.	Position	Original Staff as per Contract Agreement	Proposed Staff for replacement	Status
	<b>KEY - INTERNATIONAL</b>			
1	Electrical Engineer (International)	Mr.Sergio de Bastos Vilar Magalhaes Paulo	Mr.Gilbert Z.Gonzales	Approved
2	Pipeline Engineer (International)	Mr.John Goullee	Mr.Balvinder Singh Bahra	Not Approved
	<b>NON KEY INTERNATIONAL</b>			
3	Monitoring & Control Expert (Desal)	Mr.Manikandan Ganesh Shoranur	Mr.Afzal Abdul Latheef	Approved
	<b>NON KEY – NATIONAL / LOCAL EXPERT</b>			
4	Mechanical Engineer	Mr.Surajit Debnath	Mr.Mayur Gupta	Approved
5	Electrical Engineer	Mr.G.V.K Mohan	Mr.Om Prakash Singh	Approved
6	Structural Engineer	Mr.M.K.Vinod	Ms.J.Sudha	Approved
7	Pipeline Engineer - 1	Mr.Chandra Shekhar Reddy Yedla	Mr.Rahul N Ramdhan	Approved
8	Pipeline Engineer – 2	Mr.V.Tulasi Ram	Mr.P.Thangavel	Approved
9	Social Communication Specialist	Dr.M.Rajsekhar Reddy	Mrs.R.Kanmani	Approved
10	Quantity Surveyor-1	Mr.Vinod Chandra K.C	Mr.R.Muthurajan	Approved

### 4.8.2 Under Consideration

There are no future variations currently under consideration.

## 4.9 Communication and Correspondence

There is no progress on activities to report for Project communications this period. The PMC does, however, note the request of the CMWSSB to tighten up on Project communications and ensure that there is a “single voice” from the PMC during project discussions. Also, adherence to project communications protocols requires improved effort to ensure that correspondence is issued in the correct format and through agreed lines of communication.

The correspondence details of the letters submitted to CMWSSB and letters received from CMWSSB for the Project is furnished in Table 12.

Table 12: Details of Correspondence for the Project

Sl. No.	Details of Correspondence letter	Letter Correspondence reference number, date	Date of submission / received
1	Submission of Invoices from February 2020 to July 2020 for TATA Consulting Engineers Ltd. in Foreign Currency	Ref: SMEC/ CMWSSB / 5061185/173, Dt: 01.09.2020	01.09.2020
2	Submission of Revised Pre-Qualification document (RFQ) for CP1 on DBO basis (soft copy)	Soft copy sent by email to CMWSSB on 02.09.2020	02.09.2020
3	MOD Costing for CP1 (For arriving the bid capacity)	Soft copy sent by email to CMWSSB on 03.09.2020	03.09.2020
4	Reply letter to CMWSSB -Documents to be vetted by Key Experts and Authorized Signatory	Ref: SMEC/ CMWSSB /5061185/137, Dt: 10.09.2020	10.09.2020
5	Details of Sea Water Sample Collection location, Testing and analysis of various parameters carried by the laboratory	Ref: SMEC/ CMWSSB / 5061185/150, Dt: 04.09.2020	04.09.2020
6	Submission of Responses to JICA 3 <sup>rd</sup> comments and Revised Pre-Qualification document (RFQ) for CP1 on DBO basis (2 copies)	Ref: SMEC/ CMWSSB / 5061185/151, Dt: 08.09.2020	08.09.2020
7	Submission of Monthly Progress Report (MPR 07) for August 2020 (10 copies)	Ref:SMEC/CMWSSB/ 5061185/152, Dt: 10.09.2020	10.09.2020
8	Request for conduct a Review Meeting (presentation) for Concept Design Report (CP1) submitted to CMWSSB on 09.07.2020 and Review note on PWT Pipeline for CP2 submitted on 15.07.2020	Ref: SMEC/ CMWSSB / 5061185/153, Dt: 11.09.2020	11.09.2020
9	Submission of Invoice for August 2020 for SMEC International Pty Ltd in Foreign Currency (2 copies)	Ref: SMEC/ CMWSSB / 5061185/154, Dt: 14.09.2020	22.09.2020
10	Submission of Invoice for August 2020 for SMEC India Pvt. Ltd. in Foreign Currency (2 copies)	Ref: SMEC/ CMWSSB / 5061185/155, Dt: 14.09.2020	22.09.2020

Sl. No.	Details of Correspondence letter	Letter Correspondence reference number, date	Date of submission / received
11	Submission of Invoice for August 2020 for SMEC India Pvt. Ltd. in Local Currency (2 copies)	Ref: SMEC/ CMWSSB / 5061185/156, Dt: 14.09.2020	22.09.2020
12	Details of Invoices for August 2020 for all Consortium Members	Ref: SMEC/ CMWSSB / 5061185/157, Dt: 14.09.2020	22.09.2020
13	Affidavit for payment of TDS amount to the IT Department for NJS Engineers India Pvt. Ltd	Ref: SMEC/ CMWSSB / 5061185/160, Dt: 18.09.2020	18.09.2020
14	Replacement of Contract Specialist (Desal) (Key International Expert No.9 / Evaluation position) (softy copy sent to CMWSSB by email)	Ref: SMEC/ CMWSSB / 5061185/163, Dt: 19.09.2020	21.09.2020
15	Submission of Revised Pre-Qualification document (RFQ) for CP1 on DBO basis (soft copy)	Soft Copy sent by email to CMWSSB on 21.09.2020	21.09.2020
16	Data Collection of CP-4 Component	Ref: SMEC/ CMWSSB / 5061185/164, Dt: 22.09.2020	23.09.2020
17	Mobilisation of Mrs.R.Kanmani, Social Communication Specialist (Non-Key / Local Expert) from NJS Engineers India Pvt. Ltd.	Ref: SMEC/ CMWSSB / 5061185/165, Dt: 21.09.2020	22.09.2020
18	Submission of TDS Remittance Challan for SMEC International Pty Ltd - Mobilization Advance Payment	Ref: SMEC/ CMWSSB / 5061185/166, Dt: 23.09.2020	23.09.2020
19	Submission of Draft EIA Review report for 400 MLD Desalination Plant (CP1) and its Pumping Station (CP2-1) - R1 (5 Copies)	Ref: SMEC/ CMWSSB / 5061185/167, Dt: 23.09.2020	23.09.2020
20	Submission of Revised Pre-Qualification document (RFQ) for CP1 on DBO basis as per JICA 4 <sup>th</sup> comments dated 23.09.2020	Ref: SMEC/ CMWSSB / 5061185/172, Dt: 23.09.2020	23.09.2020
21	Replacement of Non-Key, Non-Evaluated Expert, Architect-National - M/s TCE	Ref: SMEC/ CMWSSB / 5061185/168, Dt: 25.09.2020	28.09.2020
22	Submission of Topographical Survey for 400 MLD Desalination Plant (CP1) and its Pumping Station (CP2-1) at Perur – R0 (3 copies)	Ref: SMEC/ CMWSSB / 5061185/169, Dt: 29.09.2020	29.09.2020
23	Request for conducting a Monthly Progress Review Meeting and Revised Schedule of Activities for all the Packages	Ref: SMEC/ CMWSSB / 5061185/170, Dt: 29.09.2020	29.09.2020
24	Reply Letter to CMWSSB - Details requested for Local Currency bill of NJS Engineers India Pvt. Ltd.	Ref: SMEC/ CMWSSB / 5061185/171, Dt: 29.09.2020	29.09.2020
25	Draft RFQ document clarifications with regard to non inclusion of certain specific eligibility criteria in the report	Received by email from CMWSSB on 01.09.2020	01.09.2020



Sl. No.	Details of Correspondence letter	Letter Correspondence reference number, date	Date of submission / received
26	Monthly payment in Foreign Currency (USD) Bill prepared – Signing of bills PMC's Authorised Signatory (Jan' to June 2020) for TCE	Letter No:CMWSSB/ SE(Desal)/ 400 MLD Plant/PMC-016/2020, Dt: 05.09.2020	05.09.2020
27	Draft RFQ – Comments from JICA	Received by email from CMWSSB on 05.09.2020	05.09.2020
28	Documents to be vetted by Key Experts and authorised signatory and Mr. Roderick absence	Letter No:CMWSSB/ SE(Desal)/ 400 MLD Plant/PMC-017/2020, Dt: 08.09.2020	08.09.2020
29	Replacement of 8 Nos. of Key Experts requested - Approved	Letter No:CMWSSB/SE(Desal)/ 400 MLD Plant/PMC-018/2020, Dt: 10.09.2020	10.09.2020
30	Email received from SE (Desal), CMWSSB for a discussion on Conceptual Design and Review Meeting on 18.09.2020	Received by email from CMWSSB on 15.09.2020	15.09.2020
31	Documents to be vetted by Key Experts and Authorized Signatory	Letter No:CMWSSB/ SE(Desal)/ 400 MLD Plant/PMC-019/2020, Dt: 15.09.2020	15.09.2020
32	Component CP4 - Improvement of existing water distribution network	Letter No:CMWSSB/SE(Desal)/ 400 MLD Plant/PMC-020/2020, Dt: 15.09.2020	15.09.2020
33	Replacement of Mr. Gilbert Z Gonzales Electrical Engineer (International Expert) - Approved	Letter No:CMWSSB/SE(Desal)/ 400 MLD Plant/PMC-021/2020, Dt: 16.09.2020	16.09.2020
34	Component CP1 (Construction of 400 MLD Desalination Plant) - Draft Request for Pre-Qualification Prepared and forwarded to JICA - Comments received - Forwarded	Letter No:CMWSSB/SE(Desal)/ 400 MLD Plant/PMC-022/2020, Dt: 23.09.2020	23.09.2020
35	Local Currency bills of M/s. NJS Engineers India Pvt Ltd - Detail of invoice of Transportation & Third Party vehicle Liability Insurance (Jan to June 2020)	Letter No:CMWSSB/SE(Desal)/ 400 MLD Plant/PMC-023/2020, Dt: 24.09.2020	24.09.2020
36	Minutes of Meeting (Review of Progress of work) held on 18.09.2020 conducted by CE (Project-III), CMWSSB	Received by email from CMWSSB on 28.09.2020	28.09.2020
37	Email received from SE (Desal) towards JICA has given concurrence for the draft RFQ of Component CP1 furnished to JICA on 23.09.2020	Received by email from CMWSSB on 30.09.2020	30.09.2020

The PMC team is maintaining the Document Management System (DMS) for the Project, and DMS will be provided to CMWSSB.

## 5 PROGRESS OUTLOOK FOR PMC SERVICES

### 5.1 Activities Planned Next Month

A summary of planned (key) activities for October 2020 is provided in Table 13.

Table 13: Planned Activities until October 2020 (PMC activities)

Contract Package	Activities (Planning for next months)
CP1	Task 3: Conducting Surveys and Investigations – Preparation of report on surveys and investigations on the following: <ul style="list-style-type: none"> <li>▪ Submission of seawater quality testing and analysis report</li> <li>▪ Submission of Report on the topographical survey at Porur WDS site</li> <li>▪ Submission of Report on the Bathymetry Survey</li> <li>▪ Submission of Brine Diffusion Modelling Study Report</li> </ul>
	Task 5: Preparation & Submission of Concept Design Report <ul style="list-style-type: none"> <li>▪ Preparation and Submission of Final Concept Design Report including Financial Modelling and Operation &amp; Maintenance Requirements</li> </ul>
	Task 6 Preparation of Technical Specifications
	Task 7 Financial Analysis <ul style="list-style-type: none"> <li>▪ Financial Modelling and Analysis</li> <li>▪ Preparation of Sensitivity Analysis</li> <li>▪ Preparation of Bid Parameters</li> </ul>
	Task 8 Preparation of O&M Requirements for Bid Document
	Task 9: Request for Qualification (RFQ) – issue document to market (Mid of October) <ul style="list-style-type: none"> <li>▪ Comments from JICA have been incorporated in the Notice Inviting Tender for PQ documents</li> <li>▪ Obtaining concurrence from JICA on Notice Inviting Tender for PQ documents for CP1 components</li> </ul>
	Task 10: Request for Proposal (RFP) – commence document preparation in early October 2020 <ul style="list-style-type: none"> <li>▪ Preparation of Instruction to Bidders</li> <li>▪ Preparation of Technical Specifications</li> </ul>
CP2	Task 1: Data collection – collection and verification of data on the existing/proposed CMWSSB water transmission system and proposed battery limits (including site information for Porur WDS)
	Task 2: Review the technical information - Decide on the preferred location of the new reservoir and pumping station on Porur Headworks site <ul style="list-style-type: none"> <li>▪ Pumps combination at Perur will be reviewed.</li> <li>▪ Review of the preliminary design in the DPR. Reviewing the AECOM report about Pumping Station at Perur and WDS and PS at Porur and giving our observations, if any.</li> <li>▪ Submission on Review Note on Product Water Transmission Main for arriving the pump head for Perur DSP.</li> </ul>
	Task 3: Conducting Surveys and Investigations - Confirm the scope of services for proposed site topographic survey and geotechnical investigation <ul style="list-style-type: none"> <li>▪ Submission of the topographical survey drawing for Porur WDS site</li> </ul>



Contract Package	Activities (Planning for next months)
	<ul style="list-style-type: none"> <li>Implementation of the topographical surveys for the construction area of the pumping stations in the premises of the Perur DSP, the pumping station and reservoir in the Porur WDS</li> </ul>
CP3	<p>Task 1: Design reviews – undertake the review of design and bid document deliverables (by others), if prioritised by CMWSSB</p> <ul style="list-style-type: none"> <li>Hydraulic analysis of the product water transmission main for final determination of the pump head and countermeasure for water hammer.</li> <li>Received the product water pipeline transmission design, we will review the final design to arrive at the pumping head required at Perur pumping station.</li> </ul> <p>Task 2: Review of draft CP3 bid documents (prepared by CMWSSB) and the issue of comments</p>
CP4	<p>Task 1: Reconnaissance Survey, Data and information collection – collect and verify data on the existing CMWSSB water distribution network according to agreed prioritisation of WZDs (Area X and Area XIII)</p> <ul style="list-style-type: none"> <li>Review of Technical information about the Project, revision of population and demand details with CMWSSB consent.</li> <li>Collect and review of the topographical survey for the Chennai core city.</li> <li>Review of the inventory data of the zone-wise distribution network provided by CMWSSB</li> <li>Reconnaissance Survey and a Site visit to various Water Distribution Stations.</li> </ul> <p>Task 1: GIS development – progressive development of the GIS database for existing water distribution asset inventory, including design of attribute data structure</p> <p>Task 2: Preliminary Design basis status report – a document for proposed design criteria for water distribution system modelling and design</p> <ul style="list-style-type: none"> <li>Preparation and submission of PMC observations on various components of the Master plan/ JICA report</li> </ul>
CP5	No planned activities during this period
General	<ul style="list-style-type: none"> <li>Preparation of updation of Concept Design Report for CP1 components – finalise based on Client/JICA reviews</li> <li>Preparation and Submission of Monthly Progress Report for September 2020</li> </ul> <p>External Approvals Register – confirm status and timing for all Project approvals and permits pre-requisite to delivering the Works and assemble in project-specific Register</p> <p>Project Updated EIA review report – complete review of the Project EIA review report and environmental commitments and brief package Leads on specific requirements relevant to each package</p> <ul style="list-style-type: none"> <li>Preparation of Environmental Management Plans and Environmental Monitoring Plans for CP1, CP2-1 and CP2-2 (for Perur pumping station).</li> <li>Presentation of Final Environmental Impact Assessment review report and finalisation of the EIA by incorporating the comments, if any, from CMWSSB.</li> <li>Preparation of Preliminary Social Assessment Review Report for CP1 and CP2 components</li> </ul> <p>Land acquisition/access status review – review and Report on the status of all land acquisition and access requirements for all Project sites/routes and develop an action plan to close gaps.</p>

## 5.2 Managing Progress Risks

A summary of potential progress risks (PMC activities) and proposed measures to mitigate/control these risks are provided in Table 14.

Table 14: Managing Progress Risks (PMC activities)

Contract Package	Risk	Control measure	Status
All	COVID-19 virus Pandemic restricts travel movements of PMC personnel and prevents mobilisation of key personnel	Agreement with CMWSSB for selected activities/tasks to be completed remotely (not Chennai based) to avoid any delays to progress	●
All	JICA concerns with the rate of progress and achieved activities to date	PMC has prepared an updated work schedule to compress the timeline for CP1 activities and shorten the duration through to tendering of this package. Scheduling for other package is also being reviewed to seek the opportunity to shorten project duration.	●
CP1	JICA concerns with the rate of progress and achieved activities to date	Enter upon permission for the DSP site to be obtained by CMWSSB from HR & CE Board	●
CP2	<b>Porur Headworks / WDS:</b> The site designated for construction of reservoir and pumping station at Porur is taken for other Project, and already construction of 6 MLD WTP is under progress. This will call for a change in the layout plan for the proposed reservoir and pumping station in the nearby area.	Details of existing assets on the Porur Headworks / WDS site to be provided by CMWSSB as a priority to allow the PMC to review the site layout concept urgently. Allocation of 400 Mld of treated water: CMWSSB has been requested to provide the quantities allocated enroute to Porur from Perur to review the pumping head requirement.	●
CP4	Lack of available digital data on the existing water distribution network (in AutoCAD drawing format) to develop an asset database and hydraulic model results in slower progress than estimated.	PMC to coordinate with internal CMWSSB (PIU) team looking at GIS development and will apply additional CAD/GIS resource if required for the digitisation of hard-copy network plans	●

Legend: Risk being managed (●); Risk managed with further action (●); Risk not effectively managed (●)

## 6 PROGRESS REPORT FOR PROJECT (THE WORKS)

At the time of preparing this Monthly Progress Report for September 2020, the Project works are yet to commence, and no contracts have been awarded. Comments made below reflect this current status.

It is expected in subsequent months that a more specific reporting format will be issued once works commence.

### 6.1 Achieved Activities –September 2020

There are no achieved activities (Works) to report.

### 6.2 Actual Progress versus Planned Progress –September 2020

The Project works are not scheduled to commence until later in 2020 (CP3 components). Other contract packages may start even later during 2021 and beyond.

There is no comparison of planned versus actual progress to report.

### 6.3 Financial Progress in September 2020

There is no financial progress to be reported for the Project.

### 6.4 Health & Safety –September 2020

There are no health and safety matters to report.

### 6.5 Environmental and Regulatory Compliance

There are no regulatory and compliance matters to be reported for the Project during the September 2020 period. We note that before this period, the CMWSSB has been awarded CRZ clearance for the Project.

### 6.6 Communication and Correspondence

Leading up to the appointment of the PMC, CMWSSB has engaged with relevant authorities and external stakeholders regarding the Project. A key stakeholder involved in progress to date is the Japan International Cooperation Agency (“JICA”), who will act on behalf of the Government of Japan to issue an Official Development Assistance (ODA) loan for the Project under Loan ID-P267.

Since the appointment of the PMC, limited Project communications with external stakeholders have transpired. A Project Communication Plan is required.

### 6.7 Variations

#### 6.7.1 Scope of Work

Nil.

#### 6.7.2 Schedule

Nil.

#### 6.7.3 Budget

Nil.

## 7 PROGRESS OUTLOOK FOR PROJECT (THE WORKS)

### 7.1 Activities Planned Next Month

No progress on construction activity is expected for the coming month of October 2020 as the works have not been tendered for any of the Contract Packages to date.

### 7.2 Managing Progress Risks

A summary of potential Project progress risks and proposed measures to mitigate/control these risks is provided in

Table 15.

Table 15: Managing Progress Risks (Project)

Contract Package	Risk	Control measure	Status
All	Approvals and permits for project execution are not in place when needed resulting in delays to construction	PMC to prepare a register that lists all approvals and permits required for project execution across each of the Contract Packages for tracking purposes	●

Legend: Risk being managed (●); Risk managed with further action (●); Risk not effectively managed (●)

## 8 ANNEXURES

The following annexures are included with this Monthly Progress Report:

- Annexure 1 - List of Experts with Name, Role and Man-months
- Annexure 2 – Project Scope
- Annexure 3 – Overall Work Schedule
- Annexure 4 – Work Schedule - Task Breakdown (Contract Package-wise)
- Annexure 5 – Projected Financial Progress Based on Man-months consumed Vs Actual Progress (Bill Passed)
- Annexure 6 – Personnel Inputs Summary
- Annexure 7 – Team Deployment Schedule for Next months
- Annexure 8 – Organisational Chart

## Annexure 1 List of Experts with Name, Role and Man-months

Sl. No.	Name of the Expert (International/ National Local)	Role/ Position	Staff Month (SM)
<b>KEY EXPERT</b>			
1	Dr.P.Dharmabalan	Project Manager- International Expert	70
2a	Dr.Ghulam Mustafa	Desalination Expert- International Expert	29.50
2b	Dr.Uday G.Kelkar	Additional Key Expert – International Expert	2.50
3	Shane Farquharson	Water Supply Engineer - International Expert	23
4	Michel Morillon	Mechanical Engineer (Desal)- International Expert	15
5	Mr.Gilbert Z Gonzales (Replaced from Sergio de Bastos Vilar Magalhaes Paulo)	Electrical Engineer (Desal)- International Expert	25
6	John Goullee	Pipeline Engineer-International Expert	70
7	Roderick Mackenzie	Contract Specialist (Desal) - International Expert	9
8	Tharloak S Bhatt	Contract Specialist (Distribution)- International Expert	8
9	S.Siddappaswamy	Senior Civil Engineer	72
10	Nagesh Chinnam	Senior Pipeline Engineer	72
	<b>Sub Total</b>		<b>396</b>
<b>NON KEY EXPERT - INTERNATIONAL</b>			
1	Dr.D.Elancherian	Civil and Structure Engineer (Desal)	42
2	Madhawa Delpachitra	Mechanical Engineer (Distribution)	4
3	Manfred Kurt (Meisner)	Electrical Engineer (Distribution)	4
4	Afzal Abdul Latheef (Replaced from Manikandan Ganesh Shoranur)	Monitoring and Control Expert (Desal)	11
5	Ashish Gosain	Monitoring and Control Expert (Distribution)	12
6	Shanmuganathan J	Specification Specialist (Desal)	4
7	Manish Chintamani Sane	Specification Specialist (Distribution)	3
8	Hemant Chadha	Financial Expert	3
9	Dr.Alok Kumar	Environmental Specialist	15
10	Santhosh Kumar	Commissioning Engineer	10
11	Rajesh Mishra	Social Communication Specialist	16
12	Hyacinth Augusto Vaz	Organisational Expert	9
	<b>Sub Total</b>		<b>133</b>
<b>NON KEY EXPERT - NATIONAL</b>			
13	Ramesh Senthil	Civil Engineer	72
14	Mr.Mayur Gupta (Replaced from Surajit Debnath)	Mechanical Engineer	40
15	Mr.Om Prakash Singh (Replaced from Mr.G.V.K.Mohan)	Electrical Engineer	45

Sl. No.	Name of the Expert (International/ National Local)	Role/ Position	Staff Month (SM)
16	Mrs.J.Sudha (Replaced from Mr.Vinod M K)	Structural Engineer	28
17	Kumar M	Architect	12
18	K.Senthil	Building Mechanical and Electrical Engineer	16
19	Mr.Rahul N Ramdhan (Replaced from Chandra Shekhar Reddy Yedla)	Pipeline Engineer 1	60
20	Mr.P.Thangavel (Replaced from Mr.V.Tulasi Ram)	Pipeline Engineer 2	60
21	Hema Kumar.S	Pipeline Engineer 3	50
22	P.M.Saravanan	Hydraulic Modeler - 1	8
23	V.Nandhini	Hydraulic Modeler - 2	8
24	Naisa Sreenivasulu Reddy	Construction Planner Cost Estimator	4
25	S.Sreenivasula Reddy	Specification Specialist	4
26	S.M.Karthikaeswaran	Environmental Specialist	30
27	Mrs.R.Kanmani (Replaced from Dr.M.Rajsekhar Reddy)	Social Communication Specialist	72
28	Najas Thattakatte Abdulkareem	Safety and Health Expert-1	40
29	Prasanth Balan	Safety and Health Expert-2	70
30	Mr.R.Muthurajan (Replaced from Mr.Vinod Chandra K.C)	Quantity Surveyor 1	50
31	V.S.Rajasekar	Quantity Surveyor 2	70
	<b>Sub Total</b>		<b>739</b>
<b>SUPPORTING STAFF</b>			
1	TBN	Secretary	70
2	G.Murali	CAD Operator-1	30
3	TBN	CAD Operator (2 Nos.)	60
4	Suresh Mohan Dwivedi	GIS Operator	18
5	TBN	Inspectors (4 Nos.)	200
6	TBN	Geotechnical Engineer	6
7	TBN	MIS Specialist	50
8	Santosh Biswa	Contract Management Specialist	6
9	A.Renu Kumar	Visa and Admin. Officer	70
10	K.Manikandan	Accountant	70
11	Pilominraj Raja (Replaced from Mr.R.Jagan)	Office Keeper-1	70
12	Thiruvengadam Someswaran (Replaced from Mr.G.Arjun)	Office Keeper-2	70
	<b>Sub Total</b>		<b>720</b>
	<b>Total</b>		<b>1988</b>

## Annexure 2 Project Scope

Sl. No.	Component	Construction Items
CP1	Construction of the Perur DSP (400 MLD)	<ul style="list-style-type: none"> <li>Seawater intake facilities</li> <li>Pre-treatment facility</li> <li>Seawater desalination facilities by Reverse Osmosis (RO) technology</li> <li>Post-treatment facility for remineralisation and disinfection</li> <li>Potable water storage</li> <li>Effluent discharge pipelines</li> <li>Pre-treatment and wastewater treatment facility</li> <li>All other buildings and structures necessary for the seawater desalination plant</li> <li>Perur electrical sub-station (80 MVA capacity).</li> <li>Perur UGT Product water tanks of Capacity 36 ML (4 compartments of each 9 ML)</li> <li>Proposed to construct a potable water tank of 10 ML capacity instead of 9 ML capacity</li> </ul>
CP2	Construction of Pumping Station and Reservoirs	<ul style="list-style-type: none"> <li>Pumphouse and pump facility at Perur DSP</li> <li>Porur UGT of Capacity of 10 ML</li> <li>Pumphouse and pump facility at Porur Headworks</li> </ul>
CP3	Construction of product water transmission system	<ul style="list-style-type: none"> <li>Product water transmission main (DN 1000, 1600, 1800 and 2000mm, 65 km, MS or DI pipe)</li> </ul>
CP4	Improvement of the existing distribution system in Chennai Core City	<ul style="list-style-type: none"> <li>Replacement of the existing distribution pipes (DN100-450 mm, 375km, DI pipe)</li> <li>Installation of supplementary distribution pipes to strengthen the capacity of the existing distribution networks (D150-700mm, 101km, DI pipe)</li> <li>Installation of new water distribution pipes in un-covered streets in Core city (DN100-150 mm, 258km, DI pipe)</li> <li>Reinforcement of the storage capacity of Under Ground Tank (UGT) and Elevated Storage Tanks (ESRs)</li> <li>Installation of service connections and water meters</li> <li>Setup of district metered areas (DMA)</li> </ul>
CP5	Installation of external power transmission line	<ul style="list-style-type: none"> <li>Construction of 230/110 kV transmission lines to achieve dedicated power feed to the existing Nammeli DSP, Nammeli Expansion DSP and the proposed Perur DSP</li> </ul>



## Annexure 3      Overall Work Plan

## Annexure 4 Work Schedule (Contract Package-wise)

## **Annexure 5      Projected Financial Progress Based on Man-months consumed Vs Actual Progress (Bill Passed)**

## Annexure 6 Personnel Inputs Summary

### PERSONNEL INPUT SUMMARY FOR SEPTEMBER 2020

Sl. No.	Key activity / significant task carried out	List of PMC team members	Working on Delivery
1	<ul style="list-style-type: none"> <li>Due to COVID-19 Pandemic issues across the globe, the Government of Tamil Nadu announced the partial 8<sup>th</sup> lockdown period from 01.09.2020 to 30.09.2020 throughout Chennai and its adjacent Districts in Tamil Nadu, so some the National staff (outside Chennai) and International staff are allowed to work on the Project as Work From Home option.</li> <li>Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion on the inclusion of Bid Capacity and EQC-3 in the Prequalification documents (PQ) documents for CP1 on DBO basis on 01.09.2020.</li> </ul>	Dr.P.Dharmabalan (Project Manager, International Expert); Mr.Siddappaswamy (Sr.Civil Engineer); Mr.S.Srinivasa Rao (Project Co-ordinator); Dr.Uday G.Kelkar (Additional Key Expert – International); Mr.R.Senthil (Civil Engineer); Mr.Santosh Biswa (Contract Management Specialist)	Submission of responses on comments and Revised Prequalification (PQ) documents for CP1 on DBO basis on 02.09.2020 (soft copy)
2	<ul style="list-style-type: none"> <li>Joint site visit with EE (Desal), EE (530 MLD) CMWSSB officials to Porur WDS for identification of allocated land for proposed Underground Tank (UGT) and Pumping station on 02.09.2020</li> </ul>	Mr.R.Senthil (Civil Engineer)	Identification of allocated land for proposed UGT and Pumping station on 02.09.2020
3	<ul style="list-style-type: none"> <li>Online Microsoft Teams Meeting conducted by SE (Desal), CMWSSB officials for a general discussion on the project review status on 02.09.2020</li> </ul>	Dr.P.Dharmabalan (Project Manager, International Expert); Mr.Siddappaswamy (Sr.Civil Engineer); Mr.S.Srinivasa Rao (Project Co-ordinator); Mr.R.Senthil (Civil Engineer)	General Discussion / Project review status on 02.09.2020
4	<ul style="list-style-type: none"> <li>Online Microsoft Teams Meeting conducted by Contract Management Specialist (PMC) for a discussion on 06.09.2020 for a discussion on the responses for JICA 3<sup>rd</sup> comments on Prequalification documents for CP1 on DBO basis.</li> </ul>	Mr.Siddappaswamy (Sr.Civil Engineer); Mr.Santosh Biswa (Contract Management Specialist) Mr.R.Senthil (Civil Engineer)	Submission of responses on JICA 3 <sup>rd</sup> comments and Revised Prequalification (PQ) documents for CP1 on DBO basis on 08.09.2020
5	<ul style="list-style-type: none"> <li>Online Microsoft Teams Meeting conducted by Project Coordinator (PMC) for a discussion on Qualification Criteria in the Prequalification documents (PQ) documents for CP1 on DBO basis on 07.09.2020.</li> </ul>	Mr.Siddappaswamy (Sr.Civil Engineer); Dr.Uday G.Kelkar (Additional Key Expert – International); Mr.Santosh Biswa (Contract Management Specialist) Mr.R.Senthil (Civil Engineer)	

Sl. No.	Key activity / significant task carried out	List of PMC team members	Working on Delivery
6	<ul style="list-style-type: none"> <li>Preparation of Monthly Progress Report (MPR 07) for August 2020</li> </ul>	Dr.Dharmabalan (Project Manager, International Expert); Mr.Siddappaswamy (Sr.Civil Engineer); Mr.Nagesh Chinnam (Senior Pipeline Engineer); Mr.R.Senthil (Civil Engineer)	MPR 07 (10 copies) submitted on 10.09.2020
7	<ul style="list-style-type: none"> <li>Preparation of Capital Cost Comparison DPR, JICA, PMC. Preparation of O&amp;M Cost, Minimum Functioning Specification, Draft Financial Analysis etc.</li> <li>Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion on the issues/ concerns for the specific tasks allocated / working deliverables/activities, project status on finalisation of Concept Design Report, Preparation of Request For Proposal (RFP) and Draft Environmental Impact Assessment (EIA) Review Report for CP1 components on 11.09.2020</li> </ul>	Dr.P.Dharmabalan (Project Manager, International Expert); Mr.S.Srinivasa Rao (Project Co-ordinator); Mr.Siddappaswamy (Sr.Civil Engineer); Dr.Ghulam Mustafa (Desalination Expert); Mr.Michel Morillon (Mechanical Engineer, Desal); Mr Hemant Chadha (Financial Expert); Dr.Alok Kumar (Environmental Specialist); Mr.R.Senthil (Civil Engineer); Mr.Nagesh Chinnam (Senior Pipeline Engineer); Mr.S.M.Karthikaeswaran (Environmental Specialist); Mr.Santosh Biswa (Contract Management Specialist)	Finalisation of Concept Design Report, Preparation of Request For Proposal (RFP) and Draft Environmental Impact Assessment (EIA) Review Report
8	<ul style="list-style-type: none"> <li>Finalisation of technical presentation for CP1 to CP4 components.</li> <li>Online MS Teams meeting Video conference call, discussion and presentation with Chief Engineer (Project-III) and SE (Desal) CMWSSB officials on 18.09.2020 for the progress of the consultancy work and technical discussion for CP1 to CP4 components.</li> </ul>	Dr.Dharmabalan (Project Manager, International Expert); Mr.Siddappaswamy (Sr.Civil Engineer); Mr.S.Srinivasa Rao (Project Co-ordinator); Dr.Ghulam Mustafa (Desalination Expert); Dr.Alok Kumar (Environmental Specialist); Mr.R.Senthil (Civil Engineer); Mr.S.M.Karthikaeswaran (Environmental Specialist); Mr.Nagesh Chinnam (Senior Pipeline Engineer); Mr Hemant Chadha (Financial Expert); Mr.Santosh Biswa (Contract Management Specialist); Mr.Afzal Abdul Latheef (Monitoring & Control Specialist (Desal)); Mr.Rajesh Mishra (Social Communication Specialist)	Presentation on Action Taken Report, the progress of the consultancy work and technical discussion for CP1 to CP4 components

Sl. No.	Key activity / significant task carried out	List of PMC team members	Working on Delivery
9	<ul style="list-style-type: none"> <li>Joint site visit with EE (Desal) CMWSSB and HR&amp;CE Board officials for finalisation of land allocation for proposed Perur Desalination Plant at Perur (CP1) and Sub Station at Perur (CP5) on 21.09.2020.</li> <li>Mobilisation of Mr.V.S.Rajasekar (Quantity Surveyor-2)</li> <li>Mobilisation of Mrs.R.Kanmani (Social Communication Specialist)</li> </ul>	Mr.S.M.Karthikaeswaran (Environmental Specialist); Mr.V.S.Rajasekar (Quantity Surveyor-2)	Identification of allocated land for proposed DSP and Substation on 21.09.2020
10	<ul style="list-style-type: none"> <li>Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion with M/s Indomer Coastal Hydraulics Pvt. Ltd. on Seawater Sample collection, testing, analysis report, Bathymetry Survey report and Draft Brine Diffusion Modelling study and for CP1 components on 22.09.2020</li> </ul>	Dr.Dharmabalan (Project Manager, International Expert); Mr.S.Srinivasa Rao (Project Co-ordinator); Dr.Ghulam Mustafa (Desalination Expert); Mr.Michel Morillon (Mechanical Engineer, Desal); Mr.R.Senthil (Civil Engineer); Mr.S.M.Karthikaeswaran (Environmental Specialist); Mr.Santosh Biswa (Contract Management Specialist)	Discussion on Draft Seawater Sample collection, testing, analysis report, Bathymetry Survey report and Draft Brine Diffusion Modelling study report
11	<ul style="list-style-type: none"> <li>Coordination with survey agency for carrying out the Topographical Survey at Perur DSP for CP1 19.08.2020 to 07.09.2020</li> <li>Mobilisation of Mr.Rahul N Ramdhan (Pipeline Engineer-1)</li> </ul>	Dr.Dharmabalan (Project Manager, International Expert); Mr.Siddappaswamy (Sr.Civil Engineer); Mr.S.Srinivasa Rao (Project Co-ordinator); Mr.R.Senthil (Civil Engineer); Mr.S.M.Karthikaeswaran (Environmental Specialist); Mr.G.Murali (CAD Operator-1)	Submission of Topographical Survey drawing for Perur DSP on 23.09.2020
12	<ul style="list-style-type: none"> <li>Discussion with EE (Desal), CMWSSB officials on the JICA 4<sup>th</sup> comments on Prequalification documents for CP1 components on DBO basis 23.09.2020</li> </ul>	Dr.P.Dharmabalan (Project Manager, International Expert); Mr.S.Srinivasa Rao (Project Co-ordinator); Dr.Uday G. Kelkar (Additional Key Expert – International); Dr.Ghulam Mustafa (Desalination Expert); Mr.R.Senthil (Civil Engineer); Mr.Santosh Biswa (Contract Management Specialist)	Submission of Revised Prequalification (PQ) document for CP1 components on DBO basis as per JICA 4 <sup>th</sup> comments on 23.09.2020

Sl. No.	Key activity / significant task carried out	List of PMC team members	Working on Delivery
13	<ul style="list-style-type: none"> <li>Preparation of Draft Environmental Impact Assessment (EIA) Review Report for CP1 and CP-2 components (Rev-1) on 01.09.2020 to 23.09.2020</li> </ul>	Dr.P.Dharmabalan (Project Manager, International Expert); Mr.S.Srinivasa Rao (Project Co-ordinator); Mr.Siddappaswamy (Sr.Civil Engineer); Dr.Alok Kumar (Environmental Specialist); Mr.S.M.Karthikaeswaran (Environmental Specialist)	Submission of Draft Environmental Impact Assessment (EIA) Review Report for CP1 and CP2-1 components on 23.09.2020
14	<ul style="list-style-type: none"> <li>Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion with M/s Indomer Coastal Hydraulics Pvt. Ltd. on Seawater Sample collection, testing, analysis report and Draft Brine Diffusion Modelling study and for CP1 components on 29.09.2020</li> </ul>	Dr.Dharmabalan (Project Manager, International Expert); Mr.S.Srinivasa Rao (Project Co-ordinator); Dr.Ghulam Mustafa (Desalination Expert); Mr.Michel Morillon (Mechanical Engineer, Desal); Mr.R.Senthil (Civil Engineer); Mr.S.M.Karthikaeswaran (Environmental Specialist)	Discussion on finalisation of Seawater Sample testing, analysis report, and Draft Brine Diffusion Modelling study report
15	<ul style="list-style-type: none"> <li>Online Microsoft Teams Meeting conducted by Project Manager (PMC) for a discussion on the preparation of preliminary social assessment review report for CP1 on 29.09.2020</li> </ul>	Dr.P.Dharmabalan (Project Manager, International Expert); Mr.S.M.Karthikaeswaran (Environmental Specialist); Mr.Rajesh Mishra (Social Communication Specialist) Mrs.R.Kanmani (Social Communication Specialist)	Preparation of preliminary social assessment review report for CP1 components



## Annexure 7 Team Deployment Schedule for Next months

## Annexure 8 Organisation Chart

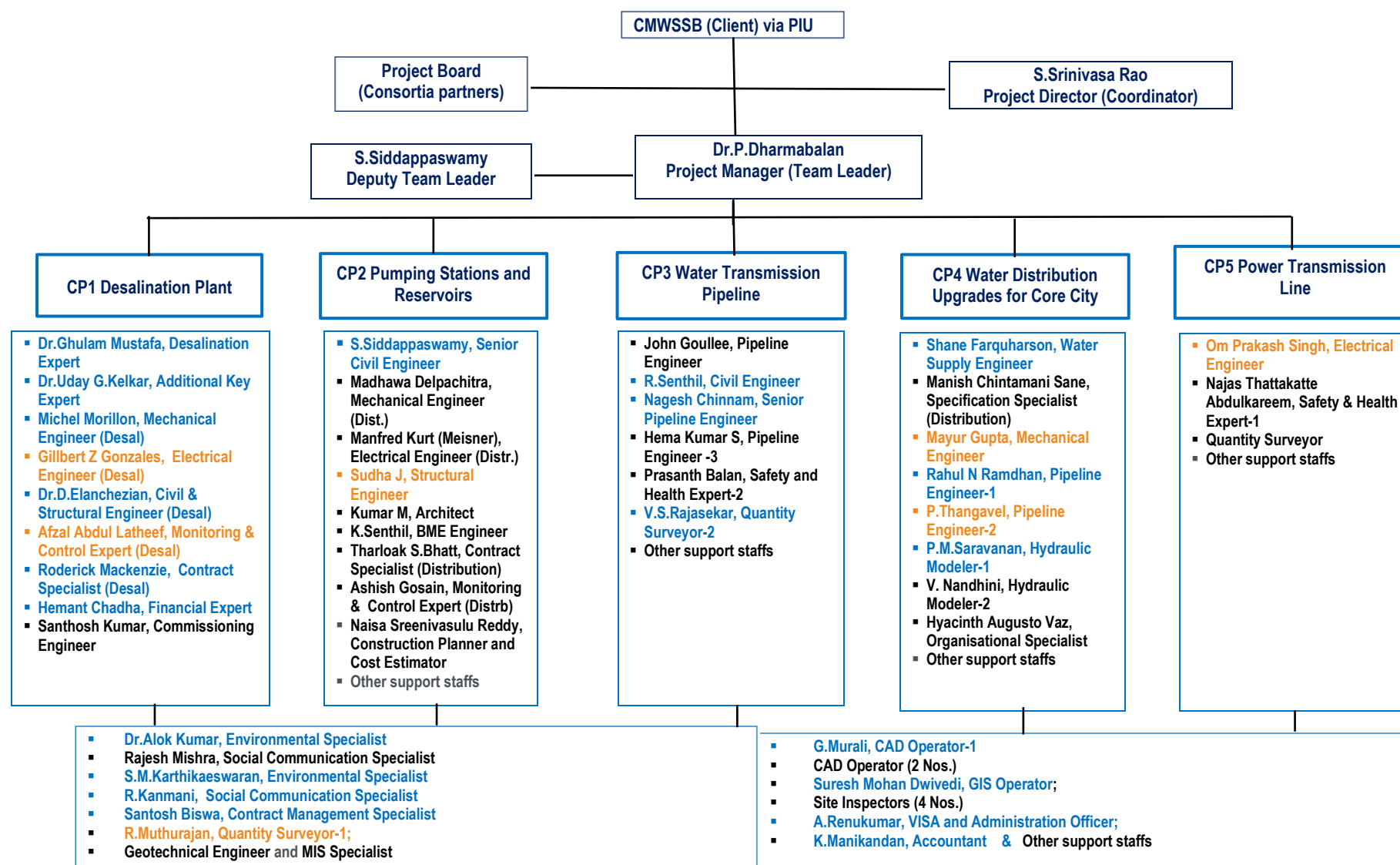


Figure 1: PMC Organisation Chart

The CHENNAI 400 MLD DESALINATION PLANT is a Project being delivered by the Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB) with the assistance of an Official Development Assistance (ODA) loan from the Japan International Cooperation Agency (JICA).

The Project Management Consultant (PMC) for the Chennai 400 MLD Desalination Plant project is a consortium led by SMEC International Pty Ltd in partnership with Tata Consulting Engineers Limited (TCE), NJS Engineers India Pvt Ltd (NJSEI) and SMEC India Pvt Ltd.

