

**GOBIERNO DE PUERTO RICO  
JUNTA REGLAMENTADORA DE SERVICIO PÚBLICO  
NEGOCIADO DE ENERGÍA DE PUERTO RICO**

**NEPR**

**Received:**

**Nov 16, 2020**

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IN RE: SOLICITUD DE PROPUESTAS  
PARA GENERACION TEMPORERA DE  
EMERGENCIA

CASO NÚM.:  
NEPR-AP-2020-0001

ASUNTO:  
Reporte de Estatus y Progreso

**MOCIÓN PARA PRESENTAR REPORTE DE ESTATUS Y  
PROGRESO EN CUMPLIMIENTO DE ORDEN**

AL HONORABLE NEGOCIADO DE ENERGÍA:

COMPARECE la Autoridad de Energía Eléctrica de Puerto Rico a través de su representación legal y, en cumplimiento con la Orden del 22 de mayo del 2020,<sup>1</sup> presenta a el Negociado de Energía de la Junta Reglamentadora del Servicio Público (el “Negociado de Energía” o “Negociado”) el reporte titulado *Costa Sur Damage Assessment and Repairs Progress Status Report* fechado 16 de noviembre de 2020 (el “Reporte de Progreso”). Exhibit A. El Reporte de Progreso detalla las evaluaciones, reparaciones, compras y contrataciones relacionadas con la reparación de las unidades 5 y 6 de la Central Costa Sur.

RESPETUOSAMENTE SOMETIDO.

En San Juan, Puerto Rico, este 16 de noviembre de 2020.

/s/ Katuska Bolaños Lugo  
Katuska Bolaños Lugo  
[kbolanos@diazvaz.law](mailto:kbolanos@diazvaz.law)  
TSPR 18,888

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<sup>1</sup> Resolución y Orden del Negociado de Energía del 22 de mayo del 2020 (la “Orden del 22 de mayo”).

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### **CERTIFICADO DE NOTIFICACIÓN**

Certifico que en el día de hoy he radicado esta moción utilizando el sistema electrónico de radicación del Negociado de Energía en la siguiente dirección: <http://radicacion.energia.pr.gov> y, además, que he enviado copia de cortesía vía correo electrónico a [rstgo2@gmail.com](mailto:rstgo2@gmail.com); [rolando@bufeteemmanuelli.com](mailto:rolando@bufeteemmanuelli.com); [jessica@bufete-emmanuelli.com](mailto:jessica@bufete-emmanuelli.com); [notificaciones@bufete-emmanuelli.com](mailto:notificaciones@bufete-emmanuelli.com); [pedrosaade5@gmail.com](mailto:pedrosaade5@gmail.com); [larroyo@earthjustice.org](mailto:larroyo@earthjustice.org).

En San Juan, Puerto Rico, a 16 de noviembre de 2020.

s/ Katuska Bolaños Lugo  
Katuska Bolaños Lugo

Exhibit A

*Costa Sur Damage Assessment and Repairs Progress Status Report  
November 16, 2020*



**Puerto Rico  
Electric Power  
Authority**

# **Puerto Rico Electric Power Authority (PREPA)**

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**Costa Sur Damage Assessment and Repairs  
Progress Status Report  
November 16, 2020**

# Introduction and Outline

## Introduction

- This report outlines PREPA's progress in its assessment, repairs, and procurement activities related to the start-up of Costa Sur Unit 5 and Unit 6

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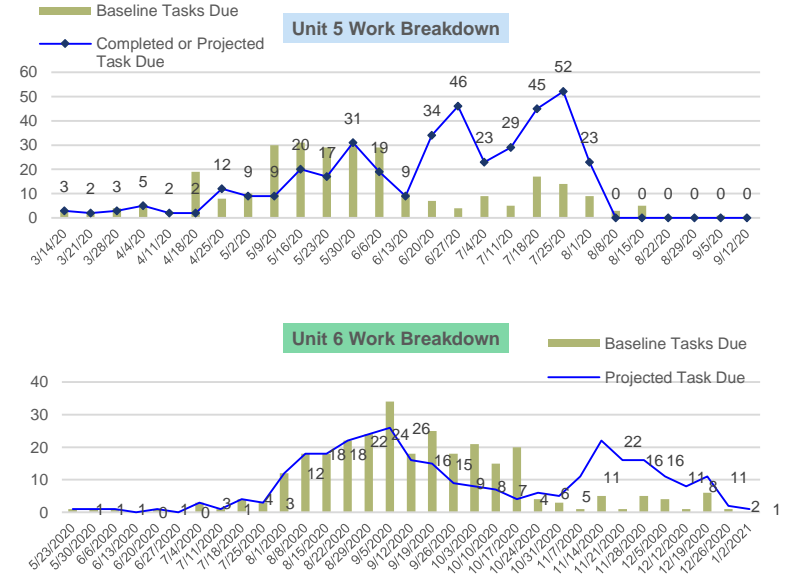


# Program Overview – Unit 5 & 6 Start-Up Activities

Budget	
Approved Budget for Program	\$40,200,000
Forecast Cost for Program (subject to change)	\$40,351,185
Unit 5 Start-Up	
A. Budget Baseline	\$25,200,000
B. Total Forecast Cost	\$18,791,260
C. Total Amount Invoiced (Contractors)	\$13,317,349
D. PREPA Expenses (Time & Materials)	\$4,128,360
E. Total Expenses (C+D)	\$17,445,710
F. Total Disbursements	\$14,062,544
Unit 6 Start-Up	
G. Budget Baseline	\$19,078,286
H. Total Forecast Cost	\$21,559,925
I. Total Amount Invoiced (Contractors)	\$5,867,654
J. PREPA Expenses (Time & Materials)	\$143,279
K. Total Expenses (I+J)	\$6,010,932
L. Total Disbursements	\$2,951,193

Procurement			
106 Total Procurements	20 Total Emergency Procurements	\$29.9.5M Total Amount Contracts Awarded	96.2% % Total Procurements Completed
Unit 5 Start-Up		Unit 6 Start-Up	
63 U5 Total Procurements	14 U5 Emergency Procurements	43 U6 Total Procurements	6 U6 Emergency Procurements
\$14.7M U5 Amount Contracts Awarded	100.0% U5 % Procurements Completed	\$15.2M U6 Amount Contracts Awarded	91.0% U6 % Procurements Completed

Schedule			
Unit 5 Start-Up		Unit 6 Start-Up	
3/23/2020 Repairs Start Date	8/1/2020 U5 Start-Up Date	6/1/2020 Repairs Start Date	12/23/2020 U6 Start-Up Date
100.0% Time Elapsed	100.0% % Completion	77.6% Time Elapsed	79.0% % Completion
401 Total Completed Tasks	0 Pending Tasks On-Track	216 Total Completed Tasks	20 Pending Tasks On-Track
0 Pending Tasks Delayed	0 Pending Tasks Overdue	64 Pending Tasks Delayed	7 Pending Tasks Overdue



Scope			
Unit 5 Start-Up		Unit 6 Start-Up	
55** Workstreams Identified	55 Workstreams at 100% Completion	27 Workstreams Identified	13 Workstreams at 100% Completion
Weekly Headcount (Maximum)*			
125* PREPA's Max Weekly Headcount		228* Max Total Weekly Headcount	
103* Contractor's Max Weekly Headcount			
Resource Breakdown			Headcount*
PREPA PMO			8
PREPA Costa Sur			56
PREPA Loan Employees			49
PREPA Electric Shop			12
Alonso & Carus			8
Brand			9
CHED			7
Energys			11
Ensya			2
ESI			6
GE Fieldcore			21
JC Mechanical			2
JR Insulation			18
LT Automation			4
MD&A			15
Total			228

\* Maximum weekly headcount based on week starting on 11/9/2020  
\*\* Workstreams not associated with Unit 5 start-up activities were moved to either Unit 6 start-up schedule or under long-term repairs



## Unit 5 Status Overview



# Unit 5 Status Overview

100.0%  
% Completion

100.0%  
Time Elapsed

**Management Notes:**

- Unit successfully delivered for commercial operations on 8/1/2020 (14 days ahead of schedule baseline date of 8/14)
- Total cost associated with Unit 5 repairs is approximately \$18.8M (\$6.4M below the budget baseline submitted)
- The PMO team continues to review the forecast cost for project closeout and adjust as needed. For this cycle, a few contracts in the procurement table were not used and were removed from the cost projection

**Key Project Metrics**

1/7/2020  
Outage Date

3/23/2020  
Repairs Start Date

\$25.2M  
Budget Baseline

8/1/2020\*  
U5 Start-Up Date

8/1/2020\*  
Project End Date

\$18.8M\*  
Forecast Expenses

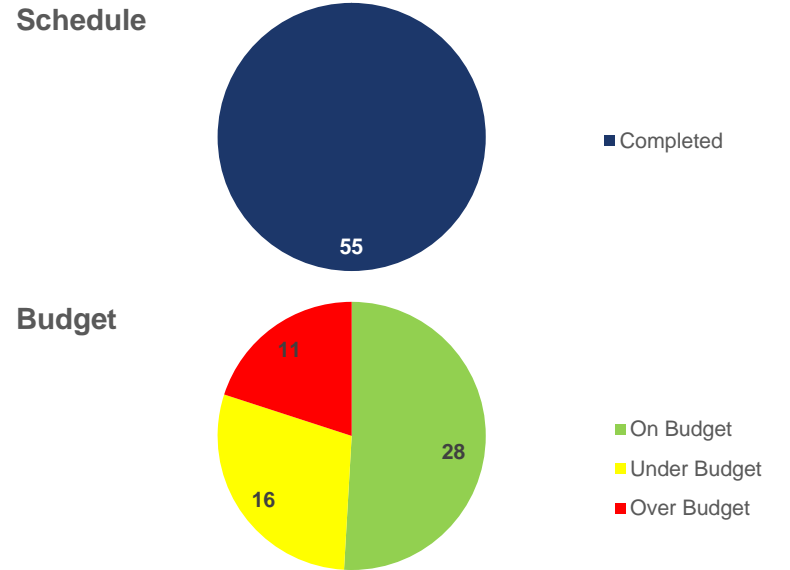
Schedule Metrics		
Metric	#	%
Scheduled Tasks	401	-
Completed Tasks	401	100.0%
Pending Task (On-Track)	0	0.0%
Pending Task (Delayed)	0	0.0%
Pending Task (Overdue)	0	0.0%

0  
Pending Tasks  
Due in July

0  
Pending Tasks  
Due in August

0  
Pending Tasks  
Due in September

Financial Metrics	
A. Budget Baseline	\$25,200,000
Expenses	
B. Total Forecast Cost*	\$18,791,260
C. Total Amount Invoiced	\$13,317,349
D. PREPA Related Expenses**	\$4,128,360
F. Total Expenses (C+D)	\$17,445,710
Balances	
G. Balance Available (A-F)	\$7,754,290
H. Forecast Balance (A-B)*	\$6,408,740
Disbursements	
I. Total Disbursements	\$14,062,544
J. % of YTD Expenses Paid (I/F)	80.6%



Scope Metrics		
55 Identified Workstreams***	55 Workstreams at 100% Completion	100.0% % of Workstreams Completed

**Max Weekly Headcount**

0  
PREPA's Max Weekly Headcount

0  
Contractor's Max Weekly Headcount

0  
Total Weekly Max Headcount

\* Excludes repairs not needed for start-up such as new Administrative and Laboratory buildings and concrete repairs discharge channel  
\*\* Includes expenses related to PREPA's labor and warehouse materials  
\*\*\* 7 Workstreams not associated with Unit 5 start-up activities were moved to either Unit 6 start-up schedule or under long-term repairs



# Summary by Initiative

Initiative Description	# Workstreams	% Completion	Pending Tasks	Finish Date	Budget Baseline	Total Forecast Amount	Total Committed	Total Invoices	Total Disbursements
01. Emergency Declaration	1	100%	0	3/23/2020	\$0	\$0	\$0	\$0	\$0
02. Engineering, Technical Studies & Inspection*	11	100%	0	7/29/2020	\$2,238,171	\$2,190,855	\$2,131,939	\$1,906,175	\$1,425,527
03. Asbestos Removal and Disposal Unit 5	1	100%	0	7/20/2020	\$199,000	\$0	\$199,000	\$0	\$0
04. Lead Removal Works Unit 5	1	100%	0	7/4/2020	\$1,111,843	\$199,994	\$1,018,268	\$194,425	\$18,225
05. Structural Repair Works Unit 5	3	100%	0	7/20/2020	\$3,431,193	\$2,083,193	\$2,141,808	\$2,668,538	\$2,140,205
06. Condensate Water Tank 5 Repairs	2	100%	0	7/23/2020	\$970,800	\$712,930	\$712,930	\$709,518	\$583,114
07. Boiler Unit 5 Repair Works	9	100%	0	7/24/2020	\$4,555,230	\$2,729,057	\$3,092,567	\$2,250,492	\$2,055,964
08. Auxiliary Equipment Inspection and Repair	9	100%	0	8/1/2020	\$4,659,436	\$3,423,913	\$3,516,023	\$3,210,038	\$2,927,510
09. Turbine Inspection and Repairs	1	100%	0	7/23/2020	\$0	\$193,110	\$193,110	\$193,110	\$183,116
10. Generator Inspection and Repairs	1	100%	0	7/28/2020	\$0	\$75,078	\$379,500	\$75,078	\$54,000
11. Operational Test and Control Tasks	5	100%	0	7/28/2020	\$144,000	\$0	\$0	\$0	\$0
12. Unit 5 Startup and Commissioning	1	100%	0	8/1/2020	\$72,000	\$0	\$0	\$0	\$0
13. Civil Repair and Other Areas Reconstruction	7	100%	0	7/27/2020	\$495,865	\$694,555	\$694,555	\$471,780	\$433,755
14. Inspections and Tests MPT	3	100%	0	8/1/2020	\$0	\$0	\$0	\$0	\$0
15. Supplementary Tasks, Future Works & Misc.	7	60%	6	3/8/2021	\$7,306,755	\$2,793,929	\$2,878,369	\$1,638,196	\$546,483
16. Operation Expenses (Payroll, Materials, etc.)**	-	-	0	8/1/2020	\$0	\$3,694,645	\$3,694,645	\$0	\$3,694,645
					<b>\$25,184,292</b>	<b>\$18,791,260</b>	<b>\$20,652,715</b>	<b>\$13,317,349</b>	<b>\$14,062,544</b>

\* Includes PREPA expenses related to Program Management Office (PMO)

\*\* Includes expenses related to PREPA's craft labor and warehouse materials



Puerto Rico Electric  
Power Authority

# Unit 5 Procurement Plan - Awarded

The following table outlines the procurements awarded with new or existing contracts to support Costa Sur Assessment & Repairs:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
1	MPT 4 Secondary Containment Repair Works	Emergency Procurement	\$38,783	48	86581	5 SENSES SOLUTIONS LLC.
2	MPT 5 Secondary Containment Repair Works	Emergency Procurement	\$17,480	57	86581	5 SENSES SOLUTIONS LLC.
3	Removal and Mitigation of Contaminated Soil Switchyard 115 kV	Emergency Procurement	\$19,928	59	86716	5 SENSES SOLUTIONS LLC.
4	Cleaning Main Turbine Oil Cooler (MOT)		\$9,994	62	87392	5 SENSES SOLUTIONS LLC.
5	Project Management and Data Analytics Support	Other	\$131,742	11	87670	ACUMENIAN LLC
6	A/C units duct fabrication		\$5,380	MISC	87147	AIT TECHNOLOGIES INC
7	A/C equipment and duct cleaning		\$86,595	19	86734	AIT TECHNOLOGIES INC
8	Natural Gas Line Pipe Structural Repair Works	Emergency Procurement	\$908,000	47	86823	ALL CONTRACTORS SERVICES CORP
9	Trailer for Costa Sur Repairs		\$78,325	54	86814	ALL CONTRACTORS SERVICES CORP
10	Temporary Laboratory Offices (Rental - 12 Months)	Emergency Procurement	\$76,275	53	87245	ALL CONTRACTORS SERVICES CORP
11	Temporary Administrative Offices (Rental - 12 Months)	Emergency Procurement	\$182,475	54	86552	ALL CONTRACTORS SERVICES CORP

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



# Unit 5 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements awarded with new or existing contracts to support Costa Sur Assessment & Repairs:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
12	Civil Works Control Room 5-6, Compressor Room, Shift Engineer Room	Emergency Procurement	\$413,827	26-29	86653	ALL CONTRACTORS SERVICES CORP
13	Crane Rental of 150 tons and 230 feet		\$218,300	MISC	82754	ALL CONTRACTORS SERVICES CORP
14	Turbine Oil Flush		\$183,116	62	80175	ALLIED POWER TECHNOLOGIES
15	NDT Services Unit 5	Emergency Procurement	\$36,485	32	86678	ALONSO CARUS IRON WORKS INC
16	Opacity Meter Purchase		\$66,971	43	84994	AP EQUIPMENT INC / LT AUTOMATION
17	Scaffolding Services	Service Upon Request Agreement	\$287,826	65	84611	BRAND ENERGY INFRASTRUCTURE
18	Superheater-Desuperheat Link Piping Installation U. 5		\$1,766,429	30	86214	CARIBE GE INTERNATIONAL ENERGY
19	Structural Repairs Unit 1-6	Request for Quotes (RFQs)	\$2,652,000	13-17	86331	CARIBE GE INTERNATIONAL ENERGY
20	Exterior mechanical inspection of the condition of the boilers	Service Upon Request Agreement	\$83,170	1	83998	CARIBE GE INTERNATIONAL ENERGY
21	Preliminary Inspection and Steel Structural Elements for Boilers and Auxiliary Equipment (units 3-6) and Preliminary Visual Inspection of Steam Piping and Equipment and Structural Supports.	Service Upon Request Agreement	\$360,275	2	84002	CARIBE GE INTERNATIONAL ENERGY
22	Interior mechanical inspection of the condition of the boilers Units 5 and 6	Service Upon Request Agreement	\$100,630	7	83998	CARIBE GE INTERNATIONAL ENERGY
23	Asbestos Removal & Disposal Works Unit 5	Emergency Procurement	\$0	12A	86559	Caribe Hydroblasting

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



# Unit 5 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements awarded with new or existing contracts to support Costa Sur Assessment & Repairs:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
24	Vacuum Pump Motor Repairs		\$7,577	31	87167	CORTES INDUSTRIAL ORGANIZATION
25	Project Management Services	Other	\$53,500	11	84270	CPM PR LLC
26	Geotechnical studies for Costa Sur		\$215,000	10	86920	EARTH ENGINEERS INC
27	Provide post-earthquake geotechnical evaluation of the foundation support of the different structures in the facility	Request for Quotes (RFQs)	\$349,066	10	86125	EARTH ENGINEERS INC
28	Structural Elements Immediate Repair Work to Allow Additional Interior Inspection of the Boilers and Other Equipment of the CSPP	Service Upon Request Agreement	\$68,441	5	82470	ENERSYS ENGINEERING CORP
29	Lead Removal Services	Service Upon Request Agreement	\$18,500	4	82470	ENERSYS ENGINEERING CORP
30	Structural Repair Works Old Condensate Water Tanks A-1-4, B-1-4 (Temporary Connection)	Service Upon Request Agreement	\$220,800	20	82470	ENERSYS ENGINEERING CORP
31	Old Water Condensate Tanks Interconnection Works to Unit 5 Demin Water Cycle System	Service Upon Request Agreement	\$153,000	24	82470	ENERSYS ENGINEERING CORP
32	Structural Repairs Cross Bracings Structure - Overhead Crane 1-6	Service Upon Request Agreement	\$78,492	25	82470	ENERSYS ENGINEERING CORP
33	Cable tray installation for switchgear equipment		\$32,258	MISC	86961	ENGINEERING SERVICES
34	Wall Panel Installation		\$33,694	MISC	87181	ENGINEERING SERVICES
35	Dearator Pump Repairs and Replacement		\$94,500	31	83250	ENGINEERING SERVICES

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



# Unit 5 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements awarded with new or existing contracts to support Costa Sur Assessment & Repairs:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
36	Repair Works on Valves (de Línea) Unit 5	Service Upon Request Agreement	\$178,818	33	83581	ENGINEERING SYSTEMS SALES
37	High Energy and Auxiliary steam and water pipes assessment for units 5 & 6		\$152,710	42	83534	ENVIRONICS ENGINEERING
38	Condenser Tube Cleaning		\$193,325	38	84907	ENVIRONICS ENGINEERING
39	Lead Paint and Asbestos Sampling Analysis		\$6,425	12, 12A	79564	Environmental Health & Safety Services
40	Project Financial Controls Support		\$45,473	11	2020-P00087	FUSIONWORKS
41	Visual Inspection and Ultrasonic Inspect API 653	Request for Quotes (RFQs)	\$134,448	6	85840	Heisen Global Engineering (HGE)
42	Condition Survey and Testing for Concrete Pedestals for Power Turbine and Generator Units , 5 and 6		\$55,160	8	85980	Heisen Global Engineering (HGE)
43	Design Work - Structural Repairs Condensa Tank 5 & Old Water Condensate tanks	Request for Quotes (RFQs)	\$146,662	22	86344	Heisen Global Engineering (HGE)
44	Structural engineering consulting		\$213,950	MISC	86919	Heisen Global Engineering (HGE)
45	Water Treatment Tank 2 Cleaning		\$0	19	85153	INDUCHEM SERVICES
46	Boiler Hydroblasting	Service Upon Request Agreement	\$58,020	19	80903	INDUCHEM SERVICES
47	Condenser Discharge Tube and Tunnel Cleaning		\$155,691	38	81017	INDUCHEM SERVICES

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



# Unit 5 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements awarded with new or existing contracts to support Costa Sur Assessment & Repairs:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
48	Boiler super vacuum	Service Upon Request Agreement	\$0	18	78061	INDUCHEM SERVICES
49	Lead Removal and Disposal Works - Structural Repairs Units 1-6	Emergency Procurement	\$193,569	12	86566	J R INDUSTRIAL CONTRACTORS INC
50	Insulation Repair Works in Boiler 5	Service Upon Request Agreement	\$450,000	37	86283	J R INDUSTRIAL CONTRACTORS INC
51	Integration of Raw Water Pumps Controls into DCS Foxboro	Service Upon Request Agreement	\$239,343	43	85590	LT AUTOMATION
52	Controls from interconnection work, all water condensate tank	Service Upon Request Agreement	\$46,232	24	65206	LT AUTOMATION
53	Relocation of Foxboro monitors and power circuits for opacity meters		\$66,500	43	87275	LT AUTOMATION
54	Integration of Demineralizer Controls into DCS	Service Upon Request Agreement	\$53,100	43	84651	LT AUTOMATION / Scheinder
55	Condensate Recirculating Discharge Pipe (12 ft diameter)	Emergency Procurement	\$975,000	39	86664	MALNAT ASOCIADOS
56	Underwater Visual Inspection of the Tunnels Condenser 5 and 6	Emergency Procurement	\$83,100	9	86495	MARINE DIVING CONTRACTORS
57	Overhead Crane Installation and Commissioning		\$1,553,502	36	82717	MASTER LINK CORPORATION
58	Turbine-Generator Inspection Work	Emergency Procurement	\$75,078	61	87153	MECHANICAL DYNAMICS ANALYSIS.3
59	Structural Repairs Condensate Tank 5	Emergency Procurement	\$345,468	22	86704	R G ENGINEERING INC

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



## Unit 5 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements awarded with new or existing contracts to support Costa Sur Assessment & Repairs:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
60	Repairs on fire protection systems	Service Upon Request Agreement	\$115,000	MISC	84101	R G ENGINEERING INC
61	Project Management Support	Other	\$58,635	11	85215	SCOTTMADDEN, INC
62	Cargo Elevators Repairs	Service Upon Request Agreement	\$28,945	41	82412	VERTECH INC
63	Existing Overhead Crane Units 3 and 6, Certification		\$34,412	25	84013	VITAL ENERGY CORPORATION
Estimated Total			\$14,707,400			

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.







## Unit 6 Status Overview

# Unit 6 Executive Summary

79.0%  
% Completion

77.6%  
Time Elapsed

Management Notes:

- Additional boiler repairs of approximately 30+ welds below burners are projected to be completed by 11/30; PMO personnel is accessing the impact to the schedule and any recovery actions that need to be taken
- Weather conditions have caused cancellation of scheduled work by several contractors
- PREPA's mechanical crews programmed to return to Costa Sur were delayed due to COVID cases reported in Aguirre Power Plant

Scope and Metrics by Workstream

27  
Identified Workstreams

13  
Workstreams at 100% Completion

0  
Workstreams Added (Since Last Report)

Financials

Budget Baseline	\$19,078,286
Forecast Cost	\$21,559,925
Total Invoiced Amount	\$5,867,654
PREPA Expenses	\$143,279
Total Expenses	\$6,010,932
Total Disbursements	\$2,951,193
Total Committed in Contracts	\$15,239,870

Procurement Status

43  
Total Procurements

6  
Emergency Procurements

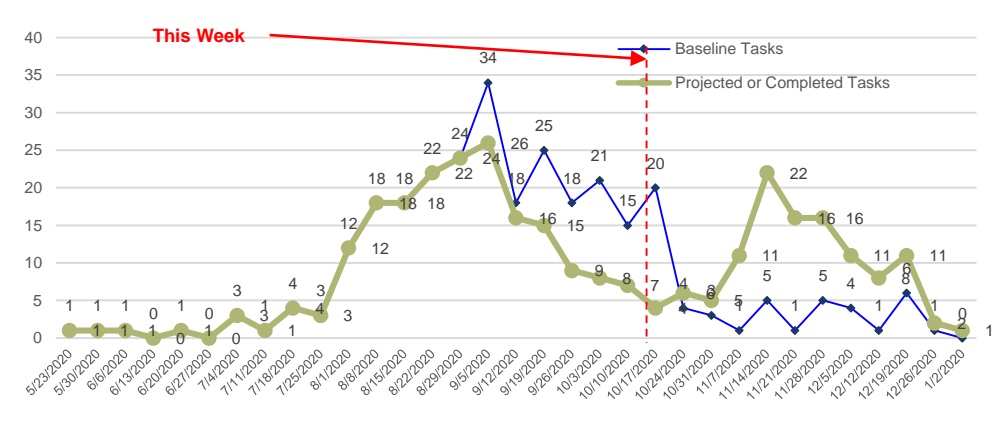
\$15.3M  
Amount Contracts Awarded

90.0%  
% Procurements Completed

In-Progress

Awarded

Schedule Work Breakdown



Schedule Metrics

307  
Total Scheduled Tasks

20  
Pending Tasks On-Track

74  
Tasks Due in November

216  
YTD Tasks Completed

64  
Pending Tasks Delayed

22  
Tasks Due in December

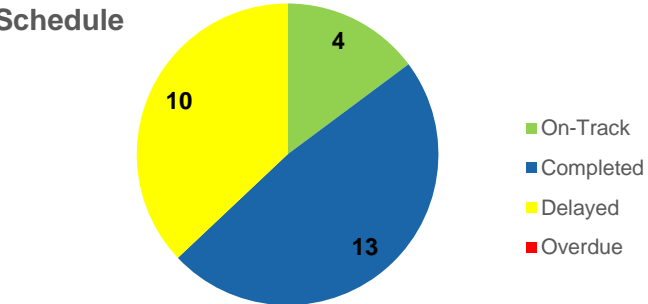
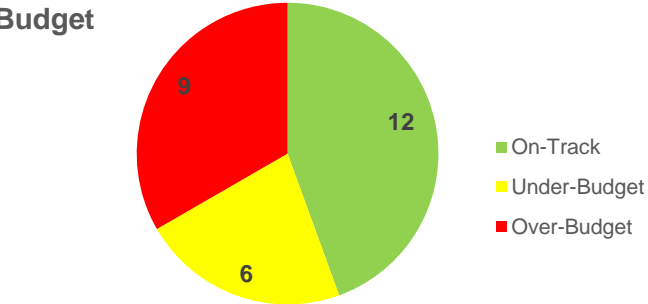
7  
Pending Tasks Overdue

Max. Weekly Headcount (based on week of 11/09)

125  
PREPA's Avg. Headcount

103  
Contractor's Avg. Headcount

261  
Max. Total Headcount



# Unit 6 Project Summary by Workstream

ID	Workstream Description	Forecast Cost	Resources Assigned	% Complete	Scheduled Start	Scheduled Finish	Status	Tasks Completed	Tasks Pending
1	Project Initiation, Procurement, and Other Work Activities	\$620,508	PREPA, Acumenian, Fusionworks, ScottMadden	84%	5/22/2020	11/24/2020	On Track	18	1
2	Emergency Declaration	\$0	PREPA	100%	5/22/2020	6/18/2020	Completed	0	0
3	Lead Removal Works	\$110,000	JR Industrial Contractors	100%	7/21/2020	9/4/2020	Completed	1	0
4	Asbestos Removal Works	\$100,000	Caribe Hydroblasting (CHED)	100%	7/20/2020	9/5/2020	Completed	1	0
5	Structural Steel Repair Works Unit 6	\$1,348,000	General Electric Fieldcore (GEF)	100%	7/27/2020	11/25/2020	Completed	67	0
6	Scaffolding Services	\$425,000	BRAND ENERGY INFRASTRUCTURE	100%	6/15/2020	6/29/2020	Completed	1	0
7	Boiler Wash	\$125,000	Induchem	100%	6/5/2020	7/13/2020	Completed	1	0
8	Cargo Elevator Repairs	\$15,000	Vertech	100%	8/15/2020	9/14/2020	Completed	0	0
10	Air-Preheater Repairs	\$1,541,195	JC Mechanical Industrial Services LLC	100%	8/17/2020	9/9/2020	Completed	1	0
11	Balance of Plant Works	\$230,226	PREPA	TBD	9/12/2020	11/25/2020	On Track	0	0
12	Boiler Repair Works	\$2,430,408	PREPA	85%	6/1/2020	11/30/2020	Delayed	7	6



# Unit 6 Project Summary by Workstream (Cont'd)

ID	Workstream Description	Forecast Cost	Resources Assigned	% Complete	Scheduled Start	Scheduled Finish	Status	Tasks Completed	Tasks Pending
13	Burner Repairs	\$180,402	PREPA	100%	8/25/2020	9/25/2020	Completed	1	0
14	Condensate Circulating Water System Repairs	\$1,111,325	Environics Engineers, Malnat	100%	6/29/2020	10/3/2020	Completed	3	0
15	Condensate Storage Tank Demolition, Design, and New construction	\$889,713	Alonso & Carus	81%	7/1/2020	1/18/2021	Delayed	2	2
17	Desuperheater Replacement Crossover Links	\$1,694,370	CARIBE GE INTERNATIONAL ENERGY	100%	7/24/2020	9/9/2020	Completed	58	0
18	Electrical and Instrumentation Works	\$1,423,806	PREPA, AIT Technologies, Engineering Services, ESI, LT Automation	79%	6/24/2020	12/16/2020	Delayed	25	24
19	Line and Safety Valves Repairs	\$219,513	Ensya	87%	8/6/2020	11/25/2020	Delayed	1	1
20	Mechanical Inspection, Repair & Alignment (Heaters, Fans, Pumps, and Valves)	\$681,032	PREPA	34%	8/17/2020	12/16/2020	Delayed	6	19
21	Pipe Type Cable Repairs	\$104,000	Environics Engineers	0%	11/30/2020	12/16/2020	Delayed	0	1
22	Stack, Insulation, and Refractory Works	\$945,926	JR Industrial Contractors	76%	6/1/2020	11/20/2020	Delayed	3	4
23	Turbine-Generator Repairs	\$6,699,587	PREPA, MD&A	78%	8/12/2020	12/15/2020	On Track	18	20
24	Cooler Main Oil Tank Cleaning and Repairs and Hydrogen Cooler Cleaning	\$125,962	PREPA	100%	9/1/2020	10/27/2020	Completed	1	0



# Unit 6 Project Summary by Workstream (Cont'd)

ID	Workstream Description	Est. Cost	Resources Assigned	% Complete	Scheduled Start	Scheduled Finish	Status	Tasks Completed	Tasks Pending
25	Unit 6 Start Up and Commissioning	\$0	PREPA	0%	12/18/2020	12/23/2020	Delayed	0	1
26	MPT 6 Secondary Containment Repair Works	\$29,550	5 Senses Solutions	100%	4/16/2020	10/14/2020	Completed	1	0
27	Operational Test and Control Tasks Unit 6	\$0	PREPA	0%	11/30/2020	12/21/2020	Delayed	0	11
MISC	Miscellaneous Expenses and Other Contracts	\$509,402	Heinsen Global Engineering (HGE), LT Automation	-	6/1/2020	12/23/2020	On Track	0	0
Total		\$21,559,925							



# Unit 6 Procurement Plan - Pipeline

The following table outlines the procurements currently in the pipeline to support the Costa Sur U6 Assessment and Start-Up Repairs:

#	Procurement Description	Procurement Type*	Est. Amount	Status	Target Date
1	Mitigation Contract – Mechanical Repairs with Stamp R (Boiler)	Service Upon Request Agreement	\$250,000	Contract Available When Needed	TBD
2	Mitigation Contract – Mechanical Repairs without Stamp R	Service Upon Request Agreement	\$450,000	Contract Available When Needed	TBD
3	Mitigation Contract – Electrical and Instrumentation Repairs	Service Upon Request Agreement	\$125,000	Contract Available When Needed	TBD
4	New Natural Gas Ignitors <i>(Not part of the Costa Sur Repairs budget)</i>	TBD	\$1,928,000	In-Planning Stage	TBD
Total			<b>\$2,788,000</b>		

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



# Unit 6 Procurement Plan – Awarded

The following table outlines the procurements currently in the pipeline to support the Costa Sur U6 Assessment and Repairs project:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
1	MPT 6 Secondary Containment Repair Works	Emergency Procurement	\$29,550	26	86581	5 SENSES SOLUTIONS LLC.
2	Project Management and Data Analytics Support	Other	\$100,000	1	87670	ACUMENIAN LLC
3	Civil, electrical and mechanical repairs to the Excitation Control Room Unit 6	Emergency Procurement	\$158,020	18	87646	AIT TECHNOLOGIES INC
4	Turbine Oil Flush		\$59,895	23	80175	ALLIED POWER TECHNOLOGIES
5	EATON Breaker LVAR 3000 Design, Frabrication, and Installation		\$191,985	18	86883	ALLIED POWER TECHNOLOGIES
6	Design & Construction of a New Water Condensate 6	Request for Proposal Process	\$845,013	15	87958	ALONSO CARUS IRON WORKS INC
7	Scaffolding Services	Service Upon Request Agreement	\$425,000	6	84611	BRAND ENERGY INFRASTRUCTURE
8	Structural Repairs Unit 1-6	Request for Quotes (RFQs)	\$1,348,000	5	86331	CARIBE GE INTERNATIONAL ENERGY
9	Desuperheater Link Repairs		\$1,694,370	17	87333	CARIBE GE INTERNATIONAL ENERGY
10	Boiler Tube Purchase (Bifurcate)		\$137,564	12	87998	CARIBE GE INTERNATIONAL ENERGY
11	Asbestos Removal & Disposal Works Unit 5	Emergency Procurement	\$100,000	4	86559	Caribe Hydroblasting

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



# Unit 6 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements currently in the pipeline to support the Costa Sur U6 Assessment and Repairs project:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
12	Project Management Services	Other	\$41,400	1	84270	CPM PR LLC
13	Labor for Boiler Tube (Bifurcate) Replacement	Service Upon Request Agreement	\$74,400	12	82470	ENERSYS ENGINEERING CORP
14	Transformer Testing		\$40,721	MISC	87169	ENGINEERING SERVICES
15	Dearator Pump Repairs and Replacement		\$94,500	12	83250	ENGINEERING SERVICES
16	Safety Line Valves Repairs		\$219,513	19	85203	ENGINEERING SYSTEMS SALES
17	Condenser Tube Cleaning and Outlet Boxes		\$193,325	14	84917	ENVIRONICS ENGINEERING
18	Lead Paint and Asbestos Sampling Analysis		\$10,000	12	86732	Environmental Health & Safety Services
19	Project Financial Controls Support		\$45,473	1	2020-P00087	FUSIONWORKS
20	Boiler Assessment	Service Upon Request Agreement	\$430,000	12	84002	GE FIELDCORE
21	Structural engineering consulting		\$19,700	15	86919	Heisen Global Engineering (HGE)
22	Boiler Hydroblasting	Service Upon Request Agreement	\$125,000	7	80903	INDUCHEM SERVICES

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.





# Unit 6 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements currently in the pipeline to support the Costa Sur U6 Assessment and Repairs project:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
23	Internal Cleaning Services for Steam Generator		\$102,256	18	78061	INDUCHEM SERVICES
24	Oil coolers cleaning		\$34,984	24	88156	INDUCHEM SERVICES
25	Lead Removal and Disposal Works - Structural Repairs Units 1-6	Emergency Procurement	\$100,000	3	86566	J R INDUSTRIAL CONTRACTORS INC
26	Stack cleaning , painting, refractory, and insulation work	Service Upon Request Agreement	\$600,000	22	86283	J R INDUSTRIAL CONTRACTORS INC
27	Replacement of Baskets Air Pre-heaters Baskets Unit 6 and associated repairs	Emergency Procurement	\$581,055	10	87663	JC MECHANICAL INDUSTRIAL SERVICES LLC
28	Controls from interconnection work, all water condensate tank	Service Upon Request Agreement	\$67,000	18	65206	LT AUTOMATION
29	SS TANKS FOR PLANT REVERSE OSMOSIS	Service Upon Request Agreement	\$0	MISC	81974	LT AUTOMATION
30	Unit 6 Turbine thermocouples and RTD wiring labor	Service Upon Request Agreement	\$9,402	MISC	R243112	LT AUTOMATION
31	Condenser Discharge Tube Unit 6	Emergency Procurement	\$918,000	14	87630	MALNAT ASOCIADOS
32	High Pressure Heater Repairs		\$131,032	20	81838	MALNAT ASOCIADOS
33	Hydrogen coolers cleaning		\$90,978	24	88465	MARINE DIVING CONTRACTORS

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.



## Unit 6 Procurement Plan – Awarded (Cont'd)

The following table outlines the procurements currently in the pipeline to support the Costa Sur U6 Assessment and Repairs project:

#	Procurement Description	Procurement Type*	Cost	Associated Workstream #	Contract #	Contractor Name
34	Replacement of Rails, Overhead Crane 5 and 6	Contract Amendment	\$0	9	82717	MASTER LINK CORPORATION
35	Turbine and Generator Repairs		\$5,847,849	23	87501	MECHANICAL DYNAMICS ANALYSIS.3
36	Project management and stakeholder management support		\$58,635	1	87756	SCOTTMADDEN, INC
37	Cargo Elevators Repairs	Service Upon Request Agreement	\$15,000	8	82412	VERTECH INC
38	Pipe Type Cable Repairs	Direct Negotiations	\$104,000	21	88249	ENVIRONICS ENGINEERING
39	Refractory inspection and repairs		\$196,250	22	88519	JR INDUSTRIAL CONTRACTORS INC
Estimated Total			\$15,239,870			

\* Note: Service Upon Request Agreements refers to agreements that PREPA has in place to be used in the event that a need arises from one of the plants within the specified scope. Cost associated with these contracts are only a fraction of the total contract amount.






# Appendix


# Emergency Management KPI Dashboard

DEMAND (MW)

2073

AS OF NOV 16, 2020

CUSTOMERS ENERGIZED

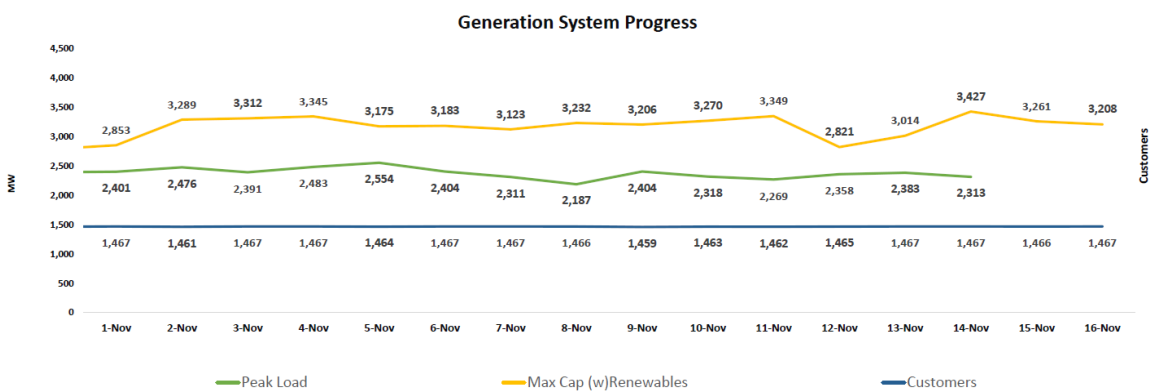
99.96%

1,467,572

Progress of Critical Generation System					
Power Plant	Unit	Power Plant Type	Installed Generation (MW)	Maximum Capacity (MW)	Actual Generation (MW)
San Juan	9	Base Load	100	90	83
275	5	Base Load	410	275	271
Aguirre	1	Base Load	450	450	268
Aguirre	2	Base Load	450	450	293
Aguirre CC	Stag 1	Base Load	296	148	0
Aguirre CC	Steam 1	Base Load	96	18	0
Aguirre CC	Stag 2	Base Load	296	145	0
San Juan CC	CT 5	Base Load	160	135	119
San Juan CC	STG 5	Base Load	60	41	38
Cambalache	2	Peaker	82.5	76	0
Daguao	1-1	Peaker	18	19	0
Daguao	1-2	Peaker	21	16	0
Palo Seco Hidrogas	1-1	Peaker	21	19	0
Palo Seco Hidrogas	2-1	Peaker	21	20	0
Jobos	1-1	Peaker	21	19	0
Jobos	1-2	Peaker	21	19	0
Mayaguez	2	Peaker	55	55	0
Mayaguez	3	Peaker	55	25	0
Mayaguez	4	Peaker	55	50	0
Yabucoa	1-1	Peaker	21	18	0
Hidroeléctricas		Peaker	26	25	1
EcoEléctrica	1	Base Load	183	183	152
EcoEléctrica	2	Base Load	183	183	152
ECO	Steam	Base Load	184	184	153
AES	1	Base Load	262	258	257
AES	2	Base Load	262	258	257
Sub - Total			3810	3179	2044
Renewables		Renewables	194	29	29
Total			4004	3208	2073

Generation Units Out of Service					
Power Plant	Unit	Power Plant Type	Installed Generation (MW)	Maximum Capacity (MW)	Expected date to be online*
San Juan	7	Base Load	100	70	Available for Emergencies
San Juan	8	Base Load	100	40	Available for Emergencies
Palo Seco	3	Base Load	216	90	December 19, 2020
Palo Seco	4	Base Load	216	140	November 19, 2020
Costa Sur	6	Base Load	410	410	December 23, 2020
Aguirre CC	Stag 1 (1-2)	Base Load	50	50	December 10, 2020
Aguirre CC	Stag 2 (2-2)	Base Load	50	50	November 27, 2020
Aguirre CC	Steam 2	Base Load	96	50	TBD
San Juan CC	CT 6	Base Load	160	160	December 14, 2020
San Juan CC	STG 6	Base Load	60	60	December 14, 2020
Cambalache	3	Peaker	82.5	77	November 23, 2020
Aguirre Hidrogas	2-1	Peaker	21	21	TBD
Aguirre Hidrogas	2-2	Peaker	21	21	TBD
Palo Seco Hidrogas	1-2	Peaker	21	19	TBD
Palo Seco Megagens	1, 2, 3	Peaker	66	66	Available for Emergencies
Costa Sur Hidrogas	1-1	Peaker	21	21	TBD
Costa Sur Hidrogas	1-2	Peaker	21	21	TBD
Mayaguez	1	Peaker	55	25	TBD
Yabucoa	1-2	Peaker	21	20	TBD
Vega Baja	1-1	Peaker	21	21	November 16, 2020
Vega Baja	1-2	Peaker	21	19	TBD
Sub-Total			1829.5	1451	
Cambalache	1	Peaker	83		Long Term Outage
Palo Seco Hidrogas	2-2	Peaker	21		Long Term Outage
Palo Seco Hidrogas	3-1	Peaker	21		Long Term Outage
Palo Seco Hidrogas	3-2	Peaker	21		Long Term Outage
Palo Seco	1	Base Load	85	65	Long Term Outage
Palo Seco	2	Base Load	85		Long Term Outage
San Juan Steam	10	Base Load	100		Long Term Outage
Sub-Total			416	65	
Total			2245	1516	

\*The dates are as of current information and system conditions, which may vary or change with unexpected events in the electrical system operation.



# Project Team and Roles and Responsibilities Matrix

Project Team Members include a diverse representation from different areas of the organization such as Generation, PMO, DFMO, and key advisors .

Team Grouping	Key Roles and Responsibilities
<b>Executive Team</b>	<ul style="list-style-type: none"> <li>Establish governance, provide direction and oversight to broader project team</li> <li>Assign resources, resolve conflicts and risks, and approve execution plan</li> <li>Manage stakeholder communications and engagement</li> </ul>
<b>Management Team</b>	<ul style="list-style-type: none"> <li>Review project needs, issues, risks, and plans; resolve or escalate as needed</li> <li>Provide input, feedback, and direction to the Execution and Procurement Team</li> <li>Provide oversight of the contractors/vendors supporting the project</li> </ul>
<b>Procurement Team</b>	<ul style="list-style-type: none"> <li>Manage the procurement of goods and services needed to support the Execution Team</li> <li>Provide regular status updates on all procurements</li> <li>Escalate issues, risks, and/or concerns as needed</li> </ul>
<b>Execution Team</b>	<ul style="list-style-type: none"> <li>Manage the project scope, budget, and schedule</li> <li>Engage regularly with controls team to provide timely and accurate update on execution</li> <li>Manage contractors/vendors supporting the project</li> </ul>
<b>Controls Team</b>	<ul style="list-style-type: none"> <li>Collect data and information related to the project scope, budget, and schedule</li> <li>Develop and maintain master project schedule</li> <li>Provide project information and progress to the Reporting Team</li> </ul>
<b>Reporting Team</b>	<ul style="list-style-type: none"> <li>Develop standard project status progress reports</li> <li>Manage stakeholder needs and request for communications</li> </ul>
<b>PREB/FOMB Interface Team</b>	<ul style="list-style-type: none"> <li>Identify stakeholder engagement and communication needs</li> <li>Communicate with Management and Executive Team on stakeholder requests</li> <li>Review all communications issued to the stakeholder group</li> <li>Provide interface support with stakeholder groups</li> </ul>
<b>FEMA Interface Team</b>	<ul style="list-style-type: none"> <li>Identify stakeholder engagement and communication needs</li> <li>Communicate with Management and Executive Team on stakeholder requests</li> <li>Review all communications issued to the stakeholder group</li> <li>Provide support to secure funding and any associated documentation</li> <li>Provide interface support with FEMA</li> </ul>

