VIA CORREO ELECTRÓNICO

2 de febrero de 2024

Yamil Rivera Vélez
Secretario del Senado
Senado de Puerto Rico

RE: Petición de Información 2024-0011

Estimado señor Rivera Vélez:

Se hace referencia a su misiva con fecha del 16 de enero de 2024 ("Solicitud"), y recibida por la Autoridad de Asesoría Financiera y Agencia Fiscal de Puerto Rico ("AAFAF").

Antes de atender la Solicitud, es menester señalar que el Sistema de Retiro de los Empleados de la Autoridad de Energía Eléctrica ("SREAEE") ha alegado ser un ente independiente y privado, con personalidad jurídica y patrimonio autónomo separados de la Autoridad de Energía Eléctrica ("AEE")[1]. La acción oficial de la creación del Sistema la realizó la Junta de Gobierno de la AEE al aprobar la Resolución 200 del 25 de junio de 1945, en el la cual se incluyó un reglamento que habría de regir al SREAEE y estableciendo como su ente rector una junta de síndicos ("Junta de Síndicos"). Como consecuencia de lo anterior, es la Junta de Síndicos la que maneja las operaciones del SREAEE y custodia toda información relativa a su operación y los beneficios que la misma otorga a sus beneficiarios.

A continuación, se atiende cada uno de los requerimientos de la Solicitud:

1. *Proveer copia de los informes actuariales preparados por los consultores externos de la Autoridad de Energía Eléctrica (AEE), correspondientes a los pasados cinco (5) años.*

   La Junta de Síndicos de la SREAEE es la entidad responsable de completar y custodiar los informes actuariales oficiales sobre el SREAEE. No obstante, se adjuntan a esta misiva los estudios actuariales que se

[1] La naturaleza e independencia fiscal del SREAEE fue confirmada mediante sentencia final y inapelable por parte del Tribunal de Primera Instancia de Puerto Rico, región judicial de San Juan, en el caso titulado UTIER v. PREPA, Caso Civil SJ2015CV00100.

pudieron razonablemente identificar bajo custodia de la AEE, producidos por su consultor externo (AON). *Véase, Anejo A.*

2. *Proveer informe de las aportaciones efectuadas por el patrono (AEE) al sistema de retiro, por los pasados cinco (5) años.*

Véase, Anejo B.

3. *Proveer informe sobre cualquier análisis o evaluaciones de alternativas de reestructuración del fondo de pensiones del sistema de retiro de la AEE.*

De conformidad con el Título III de la ley denominada como la *Puerto Rico Oversight, Management, and Economic Stability Act* ("PROMESA"), la Junta de Supervisión y Administración Financiera ("JSAF") es el representante único del deudor (la AEE), en el proceso de reestructuración de sus obligaciones, con el derecho exclusivo de proponer un Plan de Ajuste para la AEE que atienda las obligaciones hacia los retirados de la AEE. Consecuentemente, este requerimiento de información debe ser dirigido a la JSAF.

4. *Indicar estatus de la cartera de inversiones del fideicomiso (fondo de retiro) y desglosar los administradores de dichos fondos.*

La Junta de Síndicos de la SREAEE es la entidad responsable de manejar, invertir, y custodiar la cartera de inversiones de la SREAEE. Consecuentemente, este requerimiento de información debe ser dirigido a la SREAEE.

5. *Desglose del informe de la estructura de beneficios de los empleados de la AEE: Retirados, Participantes activos, y Empleados transferidos a otras agencias conforme a la Ley 120-2018.*

La Junta de Síndicos de la SREAEE es la entidad responsable de administrar y pagar los beneficios de los retirados de la AEE. Consecuentemente, este requerimiento de información debe ser dirigido a la SREAEE.

6. *Desglose del balance de los desembolsos que tiene que hacer el fondo del retiro por virtud de pensionados, participantes activos y los transferidos a otras agencias.*

La Junta de Síndicos de la SREAEE es la entidad responsable de administrar, pagar, y custodiar la información relacionada con los beneficios a los retirados de la AEE. Consecuentemente, este requerimiento de información debe ser dirigido a la SREAEE.

7. *Provea los balances de aportaciones para abonar al servicio de la deuda efectuados a través de la tarifa de la AEE a partir del 2016.*

La AEE no ha emitido pago al servicio de su deuda desde el 2016.

8. *Provea información sobre aportación, si alguna, mediante la estructura de tarifa de LUMA para el pago de la obligación del servicio de la deuda, y si dichas aportaciones se han efectuado a partir del comienzo de cobro de la tarifa por parte de LUMA.*

La AEE no ha emitido pago al servicio de su deuda desde el 2016, mucho antes de que LUMA asumiera la operación del sistema de transmisión y distribución de la AEE.

Una vez más, gracias por su continua atención a este particular y no dude en contactarme en el futuro.

Cordialmente,

Luis Rivera

Lcdo. Luis R. Rivera Cruz
Director de Asuntos Intergubernamentales
y Asesor Ejecutivo Senior

Actuarial Valuation Report

Employees’ Retirement System

Sponsored by Puerto Rico Electric Power Authority (PREPA)

Valuation Date of June 30, 2018

Empower Results®

November 19, 2020

Mr. Nelson Morales
Chief Financial Officer
Puerto Rico Electric Power Authority
1100 Ave. Ponce de León
Controller's Office, # 513
Santurce, Puerto Rico 00907

Subject: Puerto Rico Electric Power Authority Employees' Retirement System—
Actuarial Valuation Report as of June 30, 2018

Dear Mr. Morales,

We proudly present Aon's Actuarial Valuation Report (the Report) for the Puerto Rico Electric Power Authority Employees' Retirement System (the System) as of June 30, 2018. It is important to note that this report is provided in the context of the on-going restructuring of PREPA and ERS under formal proceedings authorized and required by PROMESA.

Aon has been retained by PREPA as an independent actuarial consultant regarding the financial status of the System's pension plan (the Plan) and the analysis of plan design alternatives. This Report documents the pension liabilities and the demographic information Aon has used to estimate the long-term impact on liabilities and costs of alternative scenarios.

This Report includes a calculation of the actuarial accrued liability, a statement of the market value of assets, a calculation of the funded status and development of Actuarially Determined Contribution for the 2020 fiscal year as prescribed under the funding policy approved by the System. The demographic data used to develop these results is based on census data as of April 25, 2018. The actuarial accrued liability was calculated using a 6.30% discount rate, which represents the expected rate of return over a 10-year horizon using Aon's capital market assumptions and assuming that sustainable annual contributions are made. Detailed information regarding the asset allocation and expected return assumptions is shown on Page 12. The salary scale assumption is predicated on PREPA's Fiscal Plan. Other demographic assumptions are based on the most recent demographic assumption study provided by the System's actuary.

Our baseline calculation shows that the Plan is 26% funded. This means all assets in the Plan's trust, including those that may not be liquid, cover 26% of the actuarial accrued liability associated with the Plan. The fiscal 2020 required contribution is $266 million. However, the expected benefit payment for the same period is $280 million which is larger than the required contribution amount and represents about 27% of the market value of assets as of June 30, 2018. Due to the low funded ratio and significant outflow of plan assets, PREPA should consider making contributions before fiscal 2020 to provide additional liquidity.

The Employee Retirement System is a single employer defined benefit pension plan sponsored by PREPA and administered by ERS. All of PREPA's permanent full-time employees are eligible to participate in the Plan. The System issues a publicly available financial report that includes financial statements and required supplementary information for the Plan.

This Report is an independent actuarial valuation of the PREPA pension liabilities. It does not duplicate or replace the funding valuations or financial reports provided by the System's actuary. Our valuation is based on the information provided by PREPA. No reconciliations of demographic or financial information was conducted because Aon was not provided with sufficient historical information and it was beyond the scope of the engagement.

The Table of Contents following this letter outlines sections included in this Report.

Sincerely,

Aon

Mark D. Meyer, JD, FSA, EA, MAAA
Partner

Benjamin Law, ASA, EA
Senior Consultant

MDM/BL:mw

cc: Mr. Jaime A López Díaz, PREPA
Mr. Fernando M. Padilla, PREPA
Ms. Mari Wildy Toro Rodriguez, PREPA
Mr. Romano A Zampierollo Vilá, PREPA
Mr. Eric Atwater, Aon
Ms. Brittany Erwin, Aon
Ms. Christine Giurato, Aon
Mr. Jason Rossiter, Aon

Introduction

This report documents the calculated funded status as of June 30, 2018 for the Employees' Retirement System of the Puerto Rico Electric Power Authority (PREPA). The information provided in this report is intended strictly for documenting the calculated actuarial accrued liability and Actuarially Determined Contribution for the 2020 fiscal year (beginning July 1, 2019 and ending June 30, 2020).

Determinations for purposes other than the ones described above may be significantly different from the results in this report. Thus, the use of this report for purposes other than those expressed here may not be appropriate.

This funding calculations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. The funding calculations are calculated based on our understanding of the applicable laws and regulations governing the System, including any guidance or interpretations provided by PREPA prior to the issuance of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due (but not limited to) to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in actuarial methods or in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- Changes in plan provisions or applicable law.

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

The funding calculations shown in this report are determined based on the plan assets and liabilities. The market value of assets as of June 30, 2018 was provided by the System. Plan liabilities are measured based on the interest rates and other assumptions summarized in the Actuarial Assumptions and Methods section of this report.

These calculated funded status measurements may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and funded status measurements for plan sponsor and plan disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions.

In determining the Actuarially Determined Contribution for the Employees' Retirement System, Aon may be assisting the appropriate plan fiduciary as it performs tasks that are required for the administration for an employee benefit plan. Aon may be consulting with the employer/plan sponsor (PREPA) as it considers alternative strategies for funding the plan. Thus, Aon potentially will be providing assistance to PREPA (and/or certain of its employees) acting in a fiduciary capacity (for the benefit of plan participants and beneficiaries) and to PREPA (and/or its executives) acting in a settlor capacity (for the benefit of the employer sponsoring the Employees' Retirement System).

In conducting the funding measurement, we have relied on employee census, plan provisions, and asset information supplied by PREPA and the System. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. Because of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

The actuarial assumptions and methods used in this funding assessment are described in the Actuarial Assumptions and Methods section of this report. PREPA selected the funding economic and demographic assumptions and prescribed them for use for purposes of compliance with the laws and regulations governing the System. Aon provided guidance with respect to these funding economic assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience. Aon did not have all the necessary historical data to provide guidance with respect to the demographic assumptions. Cavanaugh Macdonald Consulting (CMC) provided guidance on the demographic assumptions which were updated because of an experience study dated June 11, 2018.

The undersigned are familiar with the near-term and long-term aspects of pension valuations and collectively meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. The information provided in this report is dependent upon various factors as documented throughout this report, which may be subject to change. Each section of this report is an integral part of the actuarial opinions.

To our knowledge, no colleague of Aon providing services to PREPA has any material direct or indirect financial interest in PREPA. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this actuarial documentation report for PREPA.

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November 2020

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Calculated Funded Status

Summary

The following table illustrates the calculated unfunded actuarial accrued liability under the plan's funding policy.

	Valuation Date June 30, 2018
Actuarial Accrued Liability	
Retired Participants and Beneficiaries Receiving Payment	$ 3,002,175,159
Disabled Participants	0
Terminated Vested Participants	0
Active Participants	1,006,430,196
Total	$ 4,008,605,355
Actuarial Value of Assets	(1,057,641,001)
Unfunded Actuarial Accrued Liability	$ 2,950,964,354
Funded Ratio	26.38%
Discount Rate	6.30%

Actuarially Determined Contribution

The following table illustrates the Actuarially Determined Contribution under the plan's funding policy as prescribed by the System. The June 30, 2018 results are used as the basis to calculate the net employer contribution for fiscal period July 1, 2019 through June 30, 2020 (i.e. fiscal year 2020).

Valuation Date	**June 30, 2018**
(a) Normal Cost at Beginning of Year (BOY)	$ 29,981,984
(b) Amortization of the Unfunded Actuarial Accrued Liability	236,589,457
(c) Total Actuarially Determined Contribution at BOY (a)+(b)	$ 266,571,441
(d) Interest to End of Year (EOY) at 6.30%	16,794,001
(e) Total Actuarially Determined Contribution at EOY (c)+(d)	$ 283,365,442
(f) Interest adjustment for Timing of Payments	9,489,122
(g) Less Employee Contributions	(27,133,637)
Net Employer Contribution for Fiscal Year 2020 (e)+(f)+(g)	$ 265,720,927

Market Value of Assets as of June 30, 2018

Asset Class	Allocation %	Market Value
Equities	56.17%	$ 594,053,854
Fixed Income	8.45%	89,364,069
Real Estate	4.42%	46,721,883
Venture Capital & Partnerships	8.59%	90,856,466
Other Assets[1]	21.18%	224,055,937
Cash & Cash Equivalents	1.35%	14,323,792
Adjustments to Cash	-0.16%	(1,735,000)
Total	100.00%	$ 1,057,641,001

[1] Other assets include $139,397,477 in PREPARS employee's loans, $76,166,229 in PREPARS mortgages, and $8,492,231 Short-term investments/cash

Projected Benefit Payments

The following table shows the projected benefit payments for current and future retirees and beneficiaries.

($ in millions)

Fiscal Year Beg June 30	Benefit Payments	Fiscal Year Beg June 30	Benefit Payments	Fiscal Year Beg June 30	Benefit Payments
2018	278.19	2048	210.24	2078	8.81
2019	281.56	2049	200.31	2079	7.23
2020	284.83	2050	190.59	2080	5.88
2021	287.13	2051	180.72	2081	4.73
2022	288.48	2052	170.82	2082	3.78
2023	289.85	2053	161.13	2083	2.99
2024	291.83	2054	151.41	2084	2.34
2025	294.25	2055	141.77	2085	1.81
2026	297.80	2056	132.39	2086	1.39
2027	299.89	2057	123.11	2087	1.06
2028	301.19	2058	114.03	2088	0.79
2029	302.19	2059	105.27	2089	0.59
2030	304.78	2060	96.76	2090	0.43
2031	306.08	2061	88.55	2091	0.31
2032	307.63	2062	80.72	2092	0.23
2033	308.06	2063	73.25	2093	0.16
2034	307.36	2064	66.17	2094	0.11
2035	305.52	2065	59.51	2095	0.08
2036	302.03	2066	53.25	2096	0.05
2037	298.10	2067	47.42	2097	0.04
2038	293.44	2068	42.01	2098	0.02
2039	286.84	2069	37.02	2099	0.02
2040	279.35	2070	32.43	2100	0.01
2041	272.31	2071	28.24	2101	0.01
2042	265.67	2072	24.43		
2043	257.17	2073	21.00		
2044	248.26	2074	17.93		
2045	238.90	2075	15.19		
2046	229.43	2076	12.77		
2047	220.01	2077	10.65		

Sensitivity

The following table illustrates the impact of interest rate sensitivity on the Accrued Actuarial Liability as of June 30, 2018:

	1% Decrease (5.30%)	Current Rate (6.30%)	1% Increase (7.30%)
(1) Actuarial Accrued Liability	$ 4,455,027,607	$ 4,008,605,355	$ 3,633,154,807
(2) Actuarial Value of Assets	(1,057,641,001)	(1,057,641,001)	(1,057,641,001)
(3) Unfunded Actuarial Accrued Liability	$ 3,397,386,606	$ 2,950,964,354	$ 2,575,513,806

Appendix

Participant Data

The funding assessment was based on personnel information from PREPA records as of April 25, 2018. Following are some of the pertinent characteristics from the personnel data as of that date. Both age and service have been determined using years and months as of June 30, 2018.

	June 30, 2018
Active Participants – Hired Before January 1, 1993	
Number	1,117
Average Age	54.3
Average Service	28.2
Average Annual Salary	$ 46,780
Active Participants – Hired After January 1, 1993	
Number	4,843
Average Age	46.0
Average Service	15.7
Average Annual Salary	$ 40,418
Active Participants - Total	
Number	5,960
Average Age	47.5
Average Service	18.0
Average Annual Salary	$ 41,610
Inactives With Deferred Benefits[1]	
Number	0
Average Current Age	N/A
Average Monthly Benefit	N/A
Disabled Participants[1]	
Number	0
Average Current Age	N/A
Average Monthly Benefit	N/A
Inactives Receiving Payment	
Number	12,393
Average Current Age	70.4
Average Monthly Benefit	$ 1,723
Total Participants	
Number	18,353

[1] Data received from PREPA does not contain indicators for inactives with deferred benefits or disabled participants

Distribution of Active Participants by Age and Service

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
	25	50	2							77
	$24,473	$36,538	$37,928							$32,657
<30	$6,882	$21,906	$51,458							$18,662
	22	131	93	1						247
	$31,875	$37,681	$37,133	$41,153						$36,972
30-34	$7,837	$26,737	$50,126	$80,952						$34,525
	27	163	346	187	3					726
	$34,182	$37,232	$39,306	$39,263	$61,685					$38,731
35-39	$8,036	$27,319	$61,262	$79,447	$102,088					$56,626
	12	86	317	535	201	4				1,155
	$32,214	$36,933	$38,749	$41,778	$42,073	$38,754				$40,527
40-44	$10,949	$27,930	$62,931	$86,834	$114,232	$116,963				$79,944
	16	90	270	432	503	192	5			1,508
	$32,015	$37,678	$38,405	$41,295	$44,249	$43,798	$39,489			$41,762
45-49	$7,312	$27,742	$64,833	$89,156	$127,180	$132,063	$132,782			$98,845
	9	55	124	241	304	413	85			1,231
	$37,676	$37,556	$37,824	$40,838	$44,765	$49,428	$45,664			$44,550
50-54	$10,254	$29,262	$65,328	$93,472	$131,366	$154,430	$156,795			$121,265
	2	25	87	116	183	175	104	1		693
	$0	$40,465	$37,995	$40,021	$43,476	$45,113	$48,254	$36,641		$43,096
55-59	$0	$29,087	$61,595	$93,498	$131,281	$143,183	$169,673	$114,802		$121,270
	1	6	17	53	68	75	35	2		257
	$43,154	$37,846	$40,229	$39,586	$42,182	$44,139	$45,899	$71,682		$42,727
60-64	$6,349	$23,773	$69,419	$95,077	$132,879	$138,314	$165,041	$292,778		$125,227
		1	3	8	11	15	7	1	1	47
		$35,529	$42,250	$38,070	$39,573	$42,414	$50,944	$42,687	$49,121	$42,271
65-69		$76,762	$81,519	$85,004	$122,711	$128,000	$182,521	$203,647	$236,207	$127,424
	1	1	3	3	2	1	7		1	19
	$73,067	$38,415	$35,550	$37,281	$39,473	$36,095	$40,925		$41,009	$40,658
70+	$2,450	$21,224	$56,242	$83,501	$118,345	$103,298	$144,584		$270,316	$108,700
	115	608	1,262	1,576	1,275	875	243	4	2	5,960
	$31,218	$37,463	$38,585	$40,973	$43,801	$46,692	$46,695	$55,673	$45,065	$41,610
Total	$8,131	$27,199	$62,148	$88,374	$126,923	$145,171	$163,235	$226,001	$253,261	$95,124

Distribution of Active Participants by Age and Service – Hired Before January 1, 1993

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<30										
30-34										
35-39										
40-44						3 $39,205 $118,134				3 $39,205 $118,134
45-49						189 $43,905 $132,163	5 $39,489 $132,782			194 $43,792 $132,179
50-54						413 $49,428 $154,430	85 $45,664 $156,795			498 $48,785 $154,831
55-59						172 $45,242 $143,568	104 $48,254 $169,673	1 $36,641 $114,802		277 $46,342 $153,068
60-64						75 $44,139 $138,314	35 $45,899 $165,041	2 $71,682 $292,778		112 $45,181 $149,094
65-69						15 $42,414 $128,000	7 $50,944 $182,521	1 $42,687 $203,647	1 $49,121 $236,207	24 $45,193 $150,216
70+						1 $36,095 $103,298	7 $40,925 $144,584		1 $41,009 $270,316	9 $40,398 $153,967
Total						868 $46,767 $145,360	243 $46,695 $163,235	4 $55,673 $226,001	2 $45,065 $253,261	1,117 $46,780 $149,666

Distribution of Active Participants by Age and Service – Hired After January 1, 1993

Number of Participants, Average Salary and Average Contribution Balance

Attained	Years of Service									
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
	25	50	2							77
	$24,473	$36,538	$37,928							$32,657
<30	$6,882	$21,906	$51,458							$18,662
	22	131	93	1						247
	$31,875	$37,681	$37,133	$41,153						$36,972
30-34	$7,837	$26,737	$50,126	$80,952						$34,525
	27	163	346	187	3					726
	$34,182	$37,232	$39,306	$39,263	$61,685					$38,731
35-39	$8,036	$27,319	$61,262	$79,447	$102,088					$56,626
	12	86	317	535	201	1				1,152
	$32,214	$36,933	$38,749	$41,778	$42,073	$37,401				$40,531
40-44	$10,949	$27,930	$62,931	$86,834	$114,232	$113,450				$79,842
	16	90	270	432	503	3				1,314
	$32,015	$37,678	$38,405	$41,295	$44,249	$37,037				$41,462
45-49	$7,312	$27,742	$64,833	$89,156	$127,180	$125,926				$93,896
	9	55	124	241	304					733
	$37,676	$37,556	$37,824	$40,838	$44,765					$41,672
50-54	$10,254	$29,262	$65,328	$93,472	$131,366					$98,495
	2	25	87	116	183	3				416
	$0	$40,465	$37,995	$40,021	$43,476	$37,707				$40,935
55-59	$0	$29,087	$61,595	$93,498	$131,281	$121,494				$99,939
	1	6	17	53	68					145
	$43,154	$37,846	$40,229	$39,586	$42,182					$40,831
60-64	$6,349	$23,773	$69,419	$95,077	$132,879					$106,816
		1	3	8	11					23
		$35,529	$42,250	$38,070	$39,573					$39,223
65-69		$76,762	$81,519	$85,004	$122,711					$101,212
	1	1	3	3	2					10
	$73,067	$38,415	$35,550	$37,281	$39,473					$40,892
70+	$2,450	$21,224	$56,242	$83,501	$118,345					$67,959
	115	608	1,262	1,576	1,275	7				4,843
	$31,218	$37,463	$38,585	$40,973	$43,801	$37,376				$40,418
Total	$8,131	$27,199	$62,148	$88,374	$126,923	$122,245				$82,483

Distribution of Inactive Participants by Age and Years Since Retirement

Number of Participants and Average Monthly Benefit

Attained Age	Years since Retirement									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<50	189 $1,631	82 $693	20 $527	7 $720	4 $148	3 $360				305 $1,254
50-54	666 $2,622	156 $1,669	56 $612	34 $596	9 $542					921 $2,244
55-59	756 $2,877	323 $2,485	100 $1,323	37 $604	27 $502	2 $504				1,245 $2,528
60-64	480 $2,325	366 $2,535	312 $2,231	133 $1,297	52 $577	12 $545	2 $515		1 $306	1,358 $2,173
65-69	270 $1,776	306 $2,036	442 $2,405	660 $2,013	155 $1,131	60 $507	22 $485	13 $443	10 $486	1,938 $1,920
70-74	163 $880	259 $1,291	321 $1,655	721 $2,186	677 $1,867	115 $984	49 $529	32 $451	18 $457	2,355 $1,703
75-79	114 $524	127 $812	189 $1,092	352 $1,574	489 $1,831	359 $1,686	70 $1,000	28 $467	29 $564	1,757 $1,436
80-84	107 $448	93 $409	95 $516	191 $1,071	266 $1,412	248 $1,602	216 $1,490	64 $969	29 $518	1,309 $1,154
85-89	41 $352	84 $373	64 $370	52 $261	109 $803	131 $1,097	119 $1,377	120 $1,476	41 $1,031	761 $916
90+	25 $321	45 $341	37 $349	37 $228	43 $362	51 $738	54 $1,117	58 $1,327	94 $1,152	444 $774
Total	2,811 $2,170	1,841 $1,734	1,636 $1,687	2,224 $1,756	1,831 $1,563	981 $1,362	532 $1,229	315 $1,109	222 $880	12,393 $1,723

Expected Rate of Return and Asset Allocation

The long-term expected rate of return on pension plan investments was determined using Aon's capital market assumptions as of June 30, 2018 over a 10-year time horizon. The model assumes general inflation of 2.3%. Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation based on "Statement of Investment Policy Objectives and Guidelines" as of March 30, 2015, are summarized in the following table:

Asset Class	Expected Nominal Rate of Return	Target Allocation
Large Cap U.S. Equity	6.30%	22.00%
Small Cap U.S. Equity	6.50%	10.00%
International (Non-U.S.) Equity (Developed)	7.40%	15.00%
Emerging Markets Equity	7.90%	5.00%
Core U.S. Fixed Income (Market Duration)	3.40%	25.00%
Private Real Estate (Core)	5.30%	5.00%
Private Equity	8.40%	5.00%
Hedge Funds – Equity Long/Short	5.50%	8.00%
Hedge Funds – Fixed Income Arbitrage	4.90%	5.00%

Actuarial Assumptions and Methods

Funding Discount Rate	6.30%.
Expected Return on Assets	6.30%.
General Inflation	2.30%.
Percent Married	100% of employees are assumed to be married, and wives are assumed to be 4 years younger than their husbands.
Decrements	
Mortality Rates	Headcount-weighted RP-2014 Mortality projected to 2018 using Scale BB, set back one year for males for actives and healthy annuitants and headcount-weighted RP-2014 Disabled Mortality projected to 2018 using Scale BB for disabled annuitants.
Disability Rates	See Table I.
Termination Rates	See Table II.
Retirement Rates	See Table III.
Interest Credit Rate	5% per annum on member contribution account balances.
Salary Increases	1.0% per annum until 2023; 2.3% thereafter.
Actuarial Value of Assets	Market value of assets as of June 30, 2018 provided by the Employees' Retirement System
Amortization Basis for Funding	Level dollar payment based on 22-year closed amortization as of June 30, 2018.
Actuarial Cost Method	Entry Age Normal.
Discount Rate Method	Equal to the Expected Return on Assets.
Valuation Date	June 30, 2018.
Measurement Date	June 30, 2018.
Census Data	April 25, 2018.

Actuarial Assumptions and Methods

Table I

Disability Rates

Age	Rate
20	0.05%
25	0.05%
30	0.20%
35	0.40%
40	0.45%
45	0.62%
50	1.00%
55	1.50%
60	2.00%
65	2.50%
70+	0.00%

Table II

Termination Rates

Service	Rate
0	3.50%
1	1.35%
2	1.00%
3	1.00%
4	1.00%
5*	1.00%
6*	0.90%
7*	0.90%
8*	0.90%
9*	1.00%
10+	0.00%

* At age 60, member is assumed to retire.

Table III

Retirement Rates—Hired Before January 1, 1993

Age	Less than 25 Years of Service Rate	25 or More Years of Service Rate
45	2.50%	15.50%
50	5.00%	15.50%
55	5.00%	15.50%
60	5.00%	15.50%
65	16.00%	38.00%
70+	100.00%	100.00%

Retirement Rates—Hired on or After January 1, 1993

Age	Less than 30 Years of Service Rate	30 or More Years of Service Rate
45	1.00%	2.00%
50	2.00%	4.00%
55	2.00%	32.00%
60	5.00%	19.00%
65	20.00%	39.00%
70+	100.00%	100.00%

Actuarial Assumptions and Methods

Discussion of Actuarial Assumptions and Methods

For the funding calculations, PREPA selected the economic and demographic assumptions and prescribed them for use for purposes of compliance with the laws and regulations governing the System. Aon provided guidance with respect to these economic assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience. Cavanaugh Macdonald Consulting provided the demographic assumptions which were updated because of a recent experience study dated June 11, 2018.

The asset method used for the funding calculations are based on a market value of asset method, which is different the method currently used by the System's actuary.

Calculation of Normal Costs and Liabilities

The method used to calculate the normal cost, and actuarial accrued liability for determining the Actuarially Determined Contribution is the entry age normal cost method. Under this cost method, the actuarial accrued liability is based on a prorated portion of the present value of all benefits earned to date over expected future working life time. The proration is determined so that the cost with respect to service accrued from date of hire is recognized as a level percentage of pay each year. The Normal Cost is equal to the prorated cost for the year.

Amortization Method and Required Employer Contribution

The employer contributions consist of the Normal Cost and the Amortization of the Unfunded Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability (UAAL) is the Actuarial Accrued Liability less the asset value at the measurement date. As of June 30, 2010, a 30-year amortization period was established on a closed basis. As of June 30, 2018, the remaining amortization period is 22 years. The amortization of the UAAL is calculated as a level dollar amount, similar to a conventional home mortgage.

Plan Provisions

Participation	All employees participate. Each member participates under an optional regimen of benefits supplementary to or coordinated with Social Security. All members hired after September 30, 1990 can only participate in the supplementary scheme.
Compensation	Average of the three highest annual base salaries. For new members hired on or after January 1, 1993, annual compensation is limited to $50,000.
Merit Annuity	
Eligibility	For members hired before January 1, 1993, 25 to 30 years of service. For members hired on or after January 1, 1993, there is a minimum age requirement of 55 years of age and 30 years of service. For this group, reduced benefits payable with less than age 55 are effective January 1, 2015.
Basic (Supplementary) Benefit	Life annuity of 2.5% of compensation times years of service up to 30.
Coordinated Benefit	Up to Age 65: Basic (Supplementary) Benefit. After Age 65: Basic (Supplementary) Benefit minus $40 for each year of service up to 30.
Maximum Benefit	75% of compensation. The maximum is applied to all pensions paid by the System.
Accrued Benefit	
Basic (Supplementary) Benefit	1-1/2% of compensation for each year of service, plus 1/2% of compensation for each year of service after 20 years.
Coordinated Benefit	Up to Age 65: Basic (Supplementary) Benefit. After Age 65: Basic (Supplementary) Benefit minus $19 for each year of service up to 30.
Age Retirement	
Eligibility	60 years of age with at least 5 years of service.
Supplementary Pension	Life annuity of basic (supplementary) benefit.
Coordinated Pension	Life annuity of basic (supplementary) benefit until age 65 and coordinated benefit thereafter.

Actuarial Equivalent (Service) Retirement	
Eligibility	20 years of service.
Supplementary Pension	Immediate life annuity of actuarially equivalent value to basic (supplementary) benefit.
Coordinated Pension	Immediate life annuity of basic (supplementary) benefit until age 65 and of actuarially equivalent value to the coordinated benefit after age 65.
Actuarial Equivalent	Benefit of equivalent value to a deferred life annuity payable from age 60 on.
Separation Pension	
Eligibility	Any age with at least 10 years of service.
Supplementary Pension	Deferred life annuity, payable at age 60, consisting of a basic (supplementary) benefit.
Coordinated Pension	Deferred life annuity, payable at age 60, consisting of a basic (supplementary) benefit until age 65 and of the coordinated benefit thereafter.
Disability Pension	
Eligibility	Any age with at least 5 years of service (10 years of service if hired after December 31, 1992).
Regular Benefit	If eligible for a retirement pension or merit annuity, such applicable amount.
Alternative Benefit	If not eligible for a retirement pension or merit annuity, will receive: ▪ Supplementary Pension: The greater of 90% of the basic (supplementary) benefit or 20% of Final Average Compensation. ▪ Coordinated Pension: – Up to Age 65: Supplementary Pension Benefit. – After Age 65: Supplementary Pension Benefit minus $17.10 for each year of credited service. The resulting benefit cannot be less than 17.5% of Final Average Compensation.

Death Benefit

Benefit	Lump sum payment equal to the last salary at the time of retirement from active service or death in active service. The lump sum payment may be reduced in certain situations as described below.
Eligibility	Participants with all credited service with PREPA and age 60 with 15 years of credited service or under age 60 with 20 years of credited service at retirement date or death in active service:

- Receive the full benefit. Members that comply with the age and service requirements have the option to receive payment while in active service. Members who elect to receive their death benefit early will have an increase in their employee contribution rate.

Retirees with age 60 and less than 15 years of service or under age 60 with less than 20 years of service:

- The benefit will be based on a proportion of actual years of service and corresponding requirement of service according to age.

Retirees with combined credited service from PREPA and other government agency:

- The benefit will be based on compensation from PREPA and the other government agency.

Disability with less than 5 years of service (10 years for members hired after December 31, 1992):

- The benefit is proportionally reduced over 5 or 10 years depending on the hired date

Survivor Benefit

The surviving spouses of retired members receiving a pension benefit will receive a life annuity equal to 30% of the annual pension payable to the member at the time of death.

Employee Contributions	Employee contributions are generally 9.06% of salary. Employees who elect to receive early payment of their death benefit contribute 10.31% of salary if no additional death benefit is payable at retirement and 13.86% of salary if the increase in salary is payable at retirement. The employee pays the higher contribution rate from the time the early death benefit is paid until retirement. For new members, on or after January 1, 1993, employee contributions are 11% of salary. For supplementary members said contributions are applied to the System. For coordinated members, the part equivalent to 4% of salary up to $4,200 is included as part of the employee contribution to Social Security, and the remainder is applied to the System.
Refund of Employee Contributions	The employee contributions dedicated to the System will be reimbursed, with interest at a rate of 5%, as follows: (i) Upon death in active service. (ii) Upon separation of a member not entitled to a benefit. (iii) Optionally upon separation, instead of a deferred benefit, or upon death before retirement. (iv) Upon death after commencement of a pension. Reimbursement includes the part in excess of the installments already received, if the member has not elected an optional benefit
Cost-of-Living Adjustment	A. Increase effective July 1, 1992 to all pensions granted on or before June 30, 1990 as follows: 1) 8% increase for the monthly pension up to $300. 2) 4% increase for the monthly pension between $300 and $600. 3) 2% increase for the monthly pension in excess of $600. B. The minimum monthly increase will be $25 and the maximum $50. C. Actuarial pensions will be granted the minimum increase of $25 per month if they were granted on or before June 30, 1990. D. These increases, under the same conditions, will be granted automatically every three years beginning July 1, 1992 or from the retirement date for all those who retire after June 30, 1990.

Annual Christmas Bonus	Effective with the June 30, 2002 actuarial valuation, an annual $300 Christmas bonus is payable to all current and future retirees and beneficiaries. Effective with the June 30, 2003 actuarial valuation, an additional annual $100 Christmas bonus is payable to all current and future retirees and beneficiaries, for a total of $400 per year.
Summer Bonus	Effective with the June 30, 2003 actuarial valuation, an annual $100 summer bonus is payable to all current and future retirees and beneficiaries.
Funeral Benefit	Effective with the June 30, 2004 actuarial valuation, a lump sum Funeral Benefit of $1,000 is payable to all current and future retirees.

Notes

- The PREPA ERS became effective as of July 1, 1945 and includes the general fund for regular benefits among others. The valuation only covers the liabilities of the general fund.
- Certain provisions of the Rules and Regulations are not described in the summary because of little applicability, for example, variations in formulas when annual compensation is below $5,000, or with respect to members whose service is before July 1, 1973. In general, if a member has the right to two comparable benefits, he will receive the greater, not both.
- There are optional forms of pensions with actuarial adjustments. No additional cost is assumed with respect to optional benefits with actuarial adjustments. It is assumed that members severed before retirement will elect to leave their contributions in the System and will not elect to pay for the death benefit.

Proprietary & Confidential

Actuarial Valuation Report

Employees' Retirement System

Sponsored by Puerto Rico Electric Power Authority (PREPA)

Valuation Date of June 30, 2019

Empower Results®

Empower Results®

November 18, 2020

Mr. Nelson Morales
Chief Financial Officer
Puerto Rico Electric Power Authority
1100 Ave. Ponce de León
Controller's Office, # 513
Santurce, Puerto Rico 00907

Subject: Puerto Rico Electric Power Authority Employees' Retirement System—
Actuarial Valuation Report as of June 30, 2019

Dear Mr. Morales,

We proudly present Aon's Actuarial Valuation Report (the Report) for the Puerto Rico Electric Power Authority Employees' Retirement System (the System) as of June 30, 2019. It is important to note that this report is provided in the context of the ongoing restructuring of PREPA and ERS under formal proceedings authorized and required by PROMESA.

Aon has been retained by PREPA as an independent actuarial consultant regarding the financial status of the System's pension plan (the Plan) and the analysis of plan design alternatives. This Report documents the pension liabilities and the demographic information Aon has used as the baseline to estimate the long-term impact on liabilities and costs of alternative scenarios. A draft June 30, 2018 Actuarial Valuation Report was issued by Aon on January 11, 2019.

This Report includes a calculation of the actuarial accrued liability, a statement of the market value of assets, a calculation of the funded status, and development of the Actuarially Determined Contribution (ADC) for the 2021 fiscal year as prescribed under the funding policy approved by the System. The demographic data used to develop these results is based on census data as of February 13, 2020 for actives and June 30, 2019 for beneficiaries and retirees.

The actuarial accrued liability was calculated using a 6.30% discount rate, which represents the expected rate of return over a 10-year horizon using Aon's capital market assumptions as of June 30, 2018 and assuming that sustainable annual contributions are made. The long-term expected rate of return assumption was reviewed against Aon's capital market assumptions as of June 30, 2019 over a 10-year time horizon, and 6.30% continued to be within the 25th to 75th percentile. Detailed information regarding the asset allocation and expected return assumptions is shown on Page 12. The salary scale assumption is predicated on PREPA's Fiscal Plan. Other demographic assumptions are based on the most recent demographic assumption study provided by the System's actuary and are unchanged from those used for the June 30, 2018 Actuarial Valuation Report produced by Aon.

Our baseline calculation shows that the Plan is 23% funded at June 30, 2019, a decrease from 26% at June 30, 2018. The decrease in funded status is primarily due to lower than expected employer contribution made to the Plan's trust during fiscal 2019. A funded ratio of 23% means all assets in the Plan's trust, including those that may not be liquid, cover 23% of the actuarial accrued liability associated with the Plan. The fiscal 2021 required contribution is $275 million. However, the expected benefit payment for the same period is $281 million which is larger than the required contribution amount and represents about 31% of the market value of assets as of June 30, 2019. Due to the low funded ratio and significant outflow of plan assets, PREPA should consider making contributions significantly more than the current expected level of approximately $71 million per year to provide additional liquidity. Please recall that the liability included in this Report is calculated assuming the ADC is contributed annually.

The projections provided to PREPA and Ankura on June 12, 2020 where PREPA contributes $71 million until the Plan's assets are depleted have been included as an appendix to this Report. In those projections, assets are expected to be depleted by June 30, 2025. Effective fiscal 2027, PREPA is assumed to contribute the entire Pay-As-You-Go contributions equal to expected benefit payments less employee contributions and the remaining assets. Also effective fiscal 2027, the discount rate used to value liability is reduced from 6.30% to 2.50%, which represents an estimated municipal bond index rate.

The Employee Retirement System is a single employer defined benefit pension plan sponsored by PREPA and administered by ERS. All of PREPA's permanent full-time employees are eligible to participate in the Plan. The System issues a publicly available financial report that includes financial statements and required supplementary information for the Plan.

This Report is an independent actuarial valuation of the PREPA pension liabilities. It does not duplicate or replace the funding valuations or financial reports provided by the System's actuary. Our valuation is based on the information provided by PREPA. No reconciliations of demographic or financial information was conducted because Aon was not provided with sufficient historical information and it was beyond the scope of the engagement.

The Table of Contents following this letter outlines sections included in this Report.

Sincerely,

Aon

Mark Meyer

Mark D. Meyer, JD, FSA, EA, MAAA
Partner

Ben Law

Benjamin Law, ASA, EA
Senior Consultant

MDM/BL:mw
cc: Mr. Jaime A López Díaz, PREPA
Mr. Fernando M. Padilla, PREPA
Ms. Mari Wildy Toro Rodriguez, PREPA
Mr. Romano A Zampierollo Vilá, PREPA
Ms. Brittany Erwin, Aon
Ms. Emily Hayes, Aon
Mr. Jason Rossiter, Aon

Introduction

This report documents the calculated funded status as of June 30, 2019 for the Employees' Retirement System of the Puerto Rico Electric Power Authority (PREPA). The information provided in this report is intended strictly for documenting the calculated actuarial accrued liability and Actuarially Determined Contribution for the 2021 fiscal year (beginning July 1, 2020 and ending June 30, 2021).

Determinations for purposes other than the ones described above may be significantly different from the results in this report. Thus, the use of this report for purposes other than those expressed here may not be appropriate.

This funding calculations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. The funding calculations are calculated based on our understanding of the applicable laws and regulations governing the System, including any guidance or interpretations provided by PREPA prior to the issuance of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to (but not limited to) such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in actuarial methods or in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- Changes in plan provisions or applicable law.

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

The funding calculations shown in this report are determined based on the plan assets and liabilities. The market value of assets as of June 30, 2019 was provided by the System. Plan liabilities are measured based on the interest rates and other assumptions summarized in the Actuarial Assumptions and Methods section of this report.

These calculated funded status measurements may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and funded status measurements for plan sponsor and plan disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions.

In determining the Actuarially Determined Contribution for the Employees' Retirement System, Aon may be assisting the appropriate plan fiduciary as it performs tasks that are required for the administration for an employee benefit plan. Aon may be consulting with the employer/plan sponsor (PREPA) as it considers alternative strategies for funding the plan. Thus, Aon potentially will be providing assistance to PREPA (and/or certain of its employees) acting in a fiduciary capacity (for the benefit of plan participants and beneficiaries) and to PREPA (and/or its executives) acting in a settlor capacity (for the benefit of the employer sponsoring the Employees' Retirement System).

In conducting the funding measurement, we have relied on employee census, plan provisions, and asset information supplied by PREPA and the System. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. Because of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

The actuarial assumptions and methods used in this funding assessment are described in the Actuarial Assumptions and Methods section of this report. PREPA selected the funding economic and demographic assumptions and prescribed them for use for purposes of compliance with the laws and regulations governing the System. Aon provided guidance with respect to these funding economic assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience. Aon did not have all the necessary historical data to provide guidance with respect to the demographic assumptions. Cavanaugh Macdonald Consulting (CMC) provided guidance on the demographic assumptions which were updated because of an experience study dated June 11, 2018.

The undersigned are familiar with the near-term and long-term aspects of pension valuations and collectively meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. The information provided in this report is dependent upon various factors as documented throughout this report, which may be subject to change. Each section of this report is an integral part of the actuarial opinions.

To our knowledge, no colleague of Aon providing services to PREPA has any material direct or indirect financial interest in PREPA. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this actuarial documentation report for PREPA.

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November 2020

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Calculated Funded Status

Summary

The following table illustrates the calculated unfunded actuarial accrued liability under the plan's funding policy.

	Valuation Date June 30, 2018	Valuation Date June 30, 2019
Actuarial Accrued Liability		
Retired Participants and Beneficiaries Receiving Payment	$ 3,002,175,159	$ 3,088,768,670
Disabled Participants	0	0
Terminated Vested Participants	0	0
Active Participants	1,006,430,196	838,477,233
Total	$ 4,008,605,355	$ 3,927,245,903
Actuarial Value of Assets	(1,057,641,001)	(915,853,157)
Unfunded Actuarial Accrued Liability	$ 2,950,964,354	$ 3,011,392,746
Funded Ratio	26.38%	23.32%
Discount Rate	6.30%	6.30%

Actuarially Determined Contribution

The following table illustrates the Actuarially Determined Contribution under the plan's funding policy as prescribed by the System. The June 30, 2018 results are used as the basis to calculate the net employer contribution for fiscal period July 1, 2019 through June 30, 2020 (i.e. fiscal year 2020), and the June 30, 2019 results are used as the basis to calculate the net employer contribution for fiscal period July 1, 2020 through June 30, 2021 (i.e. fiscal year 2021).

Valuation Date	June 30, 2018	June 30, 2019
(a) Normal Cost at Beginning of Year (BOY)	$ 29,981,984	$ 26,411,858
(b) Amortization of the Unfunded Actuarial Accrued Liability	236,589,457	246,921,947
(c) Total Actuarially Determined Contribution at BOY (a)+(b)	$ 266,571,441	$ 273,333,805
(d) Interest to End of Year (EOY) at 6.30%	16,794,001	17,220,030
(e) Total Actuarially Determined Contribution at EOY (c)+(d)	$ 283,365,442	$ 290,553,835
(f) Interest adjustment for Timing of Payments	9,489,122	9,729,841
(g) Less Employee Contributions	(27,133,637)	(25,299,620)
Net Employer Contribution for Fiscal Year 2020 [2021] (e)+(f)+(g)	$ 265,720,927	$ 274,984,056

Market Value of Assets as of June 30, 2018

Asset Class	Allocation %	Market Value
Equities	56.17%	$ 594,053,854
Fixed Income	8.45%	89,364,069
Real Estate	4.42%	46,721,883
Venture Capital & Partnerships	8.59%	90,856,466
Other Assets[1]	21.18%	224,055,937
Cash & Cash Equivalents	1.35%	14,323,792
Adjustments to Cash	-0.16%	(1,735,000)
Total	100.00%	$ 1,057,641,001

Market Value of Assets as of June 30, 2019

Asset Class	Allocation %	Market Value
Equities	53.71%	$ 491,936,787
Fixed Income	9.92%	90,845,694
Real Estate	4.22%	38,667,303
Venture Capital & Partnerships	6.95%	63,614,127
Other Assets[2]	23.80%	218,012,470
Cash & Cash Equivalents	1.28%	11,718,081
Adjustments to Cash	0.12%	1,058,695
Total	100.00%	$ 915,853,157

[1] Other assets include $139,397,477 in PREPARS employee's loans, $76,166,229 in PREPARS mortgages, and $8,492,231 Short-term investments/cash.
[2] Components of Other Assets were not provided for June 30, 2019.

Projected Benefit Payments

The following table shows the projected benefit payments for current and future retirees and beneficiaries.

($ in millions)

Fiscal Year Beg June 30	Benefit Payments	Fiscal Year Beg June 30	Benefit Payments	Fiscal Year Beg June 30	Benefit Payments
2019	281.15	2049	195.07	2079	8.02
2020	282.92	2050	185.81	2080	6.64
2021	284.42	2051	176.38	2081	5.46
2022	284.98	2052	166.86	2082	4.46
2023	285.51	2053	157.49	2083	3.62
2024	286.77	2054	148.09	2084	2.92
2025	288.37	2055	138.78	2085	2.34
2026	291.31	2056	129.70	2086	1.86
2027	293.11	2057	120.72	2087	1.47
2028	294.22	2058	111.94	2088	1.15
2029	295.08	2059	103.45	2089	0.90
2030	297.54	2060	95.20	2090	0.69
2031	298.75	2061	87.26	2091	0.53
2032	300.15	2062	79.68	2092	0.40
2033	300.36	2063	72.44	2093	0.30
2034	299.48	2064	65.58	2094	0.23
2035	297.52	2065	59.13	2095	0.17
2036	293.89	2066	53.07	2096	0.12
2037	289.89	2067	47.41	2097	0.09
2038	285.13	2068	42.16	2098	0.06
2039	278.67	2069	37.30	2099	0.04
2040	271.32	2070	32.84	2100	0.03
2041	264.33	2071	28.76		
2042	257.76	2072	25.04		
2043	249.42	2073	21.68		
2044	240.73	2074	18.66		
2045	231.65	2075	15.96		
2046	222.45	2076	13.57		
2047	213.36	2077	11.46		
2048	204.18	2078	9.62		

Sensitivity

The following table illustrates the impact of interest rate sensitivity on the Accrued Actuarial Liability as of June 30, 2018:

	1% Decrease (5.30%)	Current Rate (6.30%)	1% Increase (7.30%)
(1) Actuarial Accrued Liability	$ 4,455,027,607	$ 4,008,605,355	$ 3,633,154,807
(2) Actuarial Value of Assets	(1,057,641,001)	(1,057,641,001)	(1,057,641,001)
(3) Unfunded Actuarial Accrued Liability	$ 3,397,386,606	$ 2,950,964,354	$ 2,575,513,806

The following table illustrates the impact of interest rate sensitivity on the Accrued Actuarial Liability as of June 30, 2019:

	1% Decrease (5.30%)	Current Rate (6.30%)	1% Increase (7.30%)
(1) Actuarial Accrued Liability	$ 4,357,256,177	$ 3,927,245,903	$ 3,564,949,711
(2) Actuarial Value of Assets	(915,853,157)	(915,853,157)	(915,853,157)
(3) Unfunded Actuarial Accrued Liability	$ 3,441,403,020	$ 3,011,392,746	$ 2,649,096,554

Appendix

Participant Data

The funding assessment was based on personnel information from PREPA records as of February 13, 2020 for actives and June 30, 2019 for beneficiaries and retirees. Following are some of the pertinent characteristics from the personnel data as of that date. Both age and service have been determined using years and months as of June 30, 2019.

	June 30, 2018	June 30, 2019
Active Participants – Hired Before January 1, 1993		
Number	1,117	635
Average Age	54.3	54.5
Average Service	28.2	28.7
Average Annual Salary	$ 46,780	$ 46,704
Active Participants – Hired After January 1, 1993		
Number	4,843	4,700
Average Age	46.0	46.4
Average Service	15.7	16.1
Average Annual Salary	$ 40,418	$ 41,284
Active Participants - Total		
Number	5,960	5,335
Average Age	47.5	47.4
Average Service	18.0	17.6
Average Annual Salary	$ 41,610	$ 41,929
Inactives With Deferred Benefits[1]		
Number	0	0
Average Current Age	N/A	N/A
Average Monthly Benefit	N/A	N/A
Disabled Participants[1]		
Number	0	0
Average Current Age	N/A	N/A
Average Monthly Benefit	N/A	N/A
Inactives Receiving Payment		
Number	12,393	12,583
Average Current Age	70.4	70.7
Average Monthly Benefit	$ 1,723	$ 1,758
Total Participants		
Number	18,353	17,918

[1] Data received from PREPA does not contain indicators for inactives with deferred benefits or disabled participants

Distribution of Active Participants by Age and Service

As of June 30, 2019

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
	64	29	2							95
<30	$28,304	$36,924	$41,633							$31,216
	$4,594	$29,570	$60,244							$13,484
	49	90	77	0						216
30-34	$32,556	$38,434	$38,765	$0						$37,218
	$7,342	$32,747	$58,153	$0						$35,908
	57	109	297	138	2					603
35-39	$32,983	$38,156	$39,967	$40,104	$51,217					$39,048
	$7,010	$33,723	$66,982	$93,175	$130,414					$61,679
	40	75	266	517	143	1				1,042
40-44	$31,991	$38,210	$39,772	$42,225	$44,537	$45,533				$41,237
	$6,523	$35,075	$72,612	$98,933	$130,006	$166,502				$87,991
	32	71	220	474	448	133	4			1,382
45-49	$30,569	$38,369	$38,796	$42,703	$45,198	$44,310	$38,074			$42,527
	$7,880	$36,458	$72,376	$102,142	$143,020	$153,247	$144,437			$109,806
	18	54	106	276	348	242	78			1,122
50-54	$43,828	$37,460	$38,313	$41,105	$45,550	$49,281	$45,707			$44,172
	$13,680	$36,212	$72,743	$105,291	$148,139	$169,057	$168,609			$128,490
	11	22	88	143	180	124	70			638
55-59	$46,342	$38,614	$38,304	$40,157	$44,002	$48,757	$46,819			$43,442
	$3,473	$38,401	$72,776	$106,880	$148,879	$168,107	$178,712			$129,526
	1	5	22	45	60	46	18	1		198
60-64	$24,960	$53,999	$41,691	$39,548	$42,451	$44,712	$44,056	$55,146		$42,645
	$2,607	$32,827	$66,703	$102,808	$149,226	$162,884	$188,200	$252,047		$134,353
		1	2	2	7	10	5	1		28
65-69		$37,635	$37,148	$36,455	$41,289	$45,700	$46,751	$42,687		$43,118
		$35,317	$86,112	$90,062	$149,142	$152,907	$185,802	$233,027		$147,242
	1		2	5		1	1		1	11
70+	$73,067		$35,424	$42,537		$36,095	$37,011		$41,009	$42,792
	$0		$68,784	$117,081		$120,180	$137,899		$308,661	$130,293
	273	456	1,082	1,600	1,188	557	176	2	1	5,335
Total	$32,752	$38,287	$39,322	$41,724	$44,889	$47,506	$45,787	$48,917	$41,009	$41,929
	$6,749	$34,418	$69,906	$101,330	$144,201	$164,131	$174,479	$242,537	$308,661	$102,513

Distribution of Active Participants by Age and Service—Hired Before January 1, 1993

As of June 30, 2019

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<30										
30-34										
35-39										
40-44										
45-49						93 $43,310 $147,912	4 $38,074 $144,437			97 $43,094 $147,755
50-54						213 $49,254 $167,976	78 $45,707 $168,609			291 $48,303 $168,143
55-59						101 $47,173 $163,856	70 $46,819 $178,712			171 $47,028 $170,038
60-64						39 $44,712 $160,323	18 $44,056 $188,200	1 $55,146 $252,047		58 $44,688 $170,424
65-69						9 $44,003 $140,250	5 $46,751 $185,802	1 $42,687 $233,027		15 $44,831 $161,619
70+						1 $36,095 $120,180	1 $37,011 $137,899		1 $41,009 $308,661	3 $38,038 $188,914
Total						456 $47,060 $161,683	176 $45,787 $174,479	2 $48,917 $242,537	1 $41,009 $308,661	635 $46,704 $165,757

Distribution of Active Participants by Age and Service—Hired After January 1, 1993

As of June 30, 2019

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
	64	29	2							95
<30	$28,304	$36,924	$41,633							$31,216
	$4,594	$29,570	$60,244							$13,484
	49	90	77	0						216
30-34	$32,556	$38,434	$38,765	$0						$37,218
	$7,342	$32,747	$58,153	$0						$35,908
	57	109	297	138	2					603
35-39	$32,983	$38,156	$39,967	$40,104	$51,217					$39,048
	$7,010	$33,723	$66,982	$93,175	$130,414					$61,679
	40	75	266	517	143	1				1,042
40-44	$31,991	$38,210	$39,772	$42,225	$44,537	$45,533				$41,237
	$6,523	$35,075	$72,612	$98,933	$130,006	$166,502				$87,991
	32	71	220	474	448	40				1,285
45-49	$30,569	$38,369	$38,796	$42,703	$45,198	$46,635				$42,485
	$7,880	$36,458	$72,376	$102,142	$143,020	$164,585				$107,026
	18	54	106	276	348	29				831
50-54	$43,828	$37,460	$38,313	$41,105	$45,550	$49,483				$42,725
	$13,680	$36,212	$72,743	$105,291	$148,139	$177,022				$114,640
	11	22	88	143	180	23				467
55-59	$46,342	$38,614	$38,304	$40,157	$44,002	$55,712				$42,129
	$3,473	$38,401	$72,776	$106,880	$148,879	$187,137				$114,634
	1	5	22	45	60	7				140
60-64	$24,960	$53,999	$41,691	$39,548	$42,451	$44,714				$41,799
	$2,607	$32,827	$66,703	$102,808	$149,226	$176,784				$119,050
		1	2	2	7	1				13
65-69		$37,635	$37,148	$36,455	$41,289	$60,977				$41,142
		$35,317	$86,112	$90,062	$149,142	$266,813				$130,652
	1		2	5						8
70+	$73,067		$35,424	$42,537						$44,575
	$0		$68,784	$117,081						$100,982
	273	456	1,082	1,600	1,188	101				4,700
Total	$32,752	$38,287	$39,322	$41,724	$44,889	$49,518				$41,284
	$6,749	$34,418	$69,906	$101,330	$144,201	$174,883				$94,071

Distribution of Inactive Participants by Age and Years Since Retirement

As of June 30, 2019

Number of Participants and Average Monthly Benefit

Attained Age	Years since Retirement									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<50	134	92	21	8	3		1			259
	$1,522	$734	$594	$581	$244		$301			$1,118
50-54	484	300	52	27	9	1	2			875
	$2,611	$2,126	$608	$619	$511	$512	$346			$2,235
55-59	557	641	105	38	28	5	1			1,375
	$2,746	$2,736	$1,547	$711	$503	$539	$557			$2,538
60-64	363	557	282	116	49	13	2	1	1	1,384
	$2,104	$2,679	$2,378	$1,266	$579	$557	$623	$513	$306	$2,248
65-69	195	389	432	575	144	61	20	10	6	1,832
	$1,516	$2,128	$2,529	$2,021	$1,135	$479	$473	$462	$507	$1,958
70-74	161	282	341	665	687	133	48	34	17	2,368
	$682	$1,466	$1,702	$2,203	$1,964	$1,040	$559	$490	$532	$1,735
75-79	133	129	203	341	509	397	71	23	31	1,837
	$528	$922	$1,153	$1,630	$1,940	$1,668	$937	$496	$540	$1,482
80-84	116	103	96	175	295	267	226	55	39	1,372
	$516	$470	$549	$1,188	$1,456	$1,739	$1,554	$1,057	$549	$1,234
85-89	55	80	64	54	107	147	138	121	38	804
	$445	$369	$441	$375	$885	$1,156	$1,485	$1,509	$1,021	$987
90+	27	42	47	52	42	44	63	57	103	477
	$344	$364	$351	$293	$275	$623	$1,047	$1,463	$1,215	$775
Total	2,225	2,615	1,643	2,051	1,873	1,068	572	301	235	12,583
	$1,946	$2,067	$1,754	$1,766	$1,646	$1,406	$1,272	$1,187	$913	$1,758

Expected Rate of Return and Asset Allocation

The long-term expected rate of return on pension plan investments was first developed using Aon's capital market assumptions as of June 30, 2018 over a 10-year time horizon.

The long-term expected rate of return assumption was reviewed against Aon's capital market assumptions as of June 30, 2019 over a 10-year time horizon, and 6.30% continued to be within the 25^{th} to 75^{th} percentile. The expected nominal rate of return shown below assumes general inflation of 2.1%. Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation based on "Statement of Investment Policy Objectives and Guidelines" as of March 30, 2015, are summarized in the following table:

Asset Class	Expected Nominal Rate of Return	Target Allocation
Large Cap U.S. Equity	6.20%	22.00%
Small Cap U.S. Equity	6.40%	10.00%
International (Non-U.S.) Equity (Developed)	7.30%	15.00%
Emerging Markets Equity	7.90%	5.00%
Core U.S. Fixed Income (Market Duration)	2.50%	25.00%
Private Real Estate (Core)	5.10%	5.00%
Private Equity	8.70%	5.00%
Hedge Funds – Equity Long/Short	3.60%	8.00%
Hedge Funds – Fixed Income Arbitrage	3.60%	5.00%

Actuarial Assumptions and Methods

Funding Discount Rate	6.30%.
Expected Return on Assets	6.30%.
General Inflation	2.10%.
Percent Married	100% of employees are assumed to be married, and wives are assumed to be 4 years younger than their husbands.
Decrements	
Mortality Rates	Headcount-weighted RP-2014 Mortality projected to 2018 using Scale BB, set back one year for males for actives and healthy annuitants and headcount-weighted RP-2014 Disabled Mortality projected to 2018 using Scale BB for disabled annuitants.
Disability Rates	See Table I.
Termination Rates	See Table II.
Retirement Rates	See Table III.
Interest Credit Rate	5% per annum on member contribution account balances.
Salary Increases	1.0% per annum until 2023; 2.3% thereafter.
Actuarial Value of Assets	Market value of assets as of June 30, 2019 provided by the Employees' Retirement System.
Amortization Basis for Funding	Level dollar payment based on 21-year closed amortization as of June 30, 2019.
Actuarial Cost Method	Entry Age Normal
Discount Rate Method	Equal to the Expected Return on Assets.
Valuation Date	June 30, 2019.
Measurement Date	June 30, 2019.
Census Data	February 13, 2020 for actives, June 30, 2019 for beneficiaries and retirees; all census data provided by PREPA.

Actuarial Assumptions and Methods

Table I

Disability Rates

Age	Rate
20	0.05%
25	0.05%
30	0.20%
35	0.40%
40	0.45%
45	0.62%
50	1.00%
55	1.50%
60	2.00%
65	2.50%
70+	0.00%

Table II

Termination Rates

Service	Rate
0	3.50%
1	1.35%
2	1.00%
3	1.00%
4	1.00%
5*	1.00%
6*	0.90%
7*	0.90%
8*	0.90%
9*	1.00%
10+	0.00%

* At age 60, member is assumed to retire.

Table III

Retirement Rates—Hired Before January 1, 1993

Age	Less than 25 Years of Service Rate	25 or More Years of Service Rate
45	2.50%	15.50%
50	5.00%	15.50%
55	5.00%	15.50%
60	5.00%	15.50%
65	16.00%	38.00%
70+	100.00%	100.00%

Retirement Rates—Hired on or After January 1, 1993

Age	Less than 30 Years of Service Rate	30 or More Years of Service Rate
45	1.00%	2.00%
50	2.00%	4.00%
55	2.00%	32.00%
60	5.00%	19.00%
65	20.00%	39.00%
70+	100.00%	100.00%

Actuarial Assumptions and Methods

Discussion of Actuarial Assumptions and Methods

For the funding calculations, PREPA selected the economic and demographic assumptions and prescribed them for use for purposes of compliance with the laws and regulations governing the System. Aon provided guidance with respect to these economic assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience. Cavanaugh Macdonald Consulting provided the demographic assumptions which were updated because of a recent experience study dated June 11, 2018.

The asset method used for the funding calculations are based on a market value of asset method, which is different the method currently used by the System's actuary.

Calculation of Normal Costs and Liabilities

The method used to calculate the normal cost, and actuarial accrued liability for determining the Actuarially Determined Contribution is the entry age normal cost method. Under this cost method, the actuarial accrued liability is based on a prorated portion of the present value of all benefits earned to date over expected future working life time. The proration is determined so that the cost with respect to service accrued from date of hire is recognized as a level percentage of pay each year. The Normal Cost is equal to the prorated cost for the year.

Amortization Method and Required Employer Contribution

The employer contributions consist of the Normal Cost and the Amortization of the Unfunded Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability (UAAL) is the Actuarial Accrued Liability less the asset value at the measurement date. As of June 30, 2010, a 30-year amortization period was established on a closed basis. As of June 30, 2019, the remaining amortization period is 21 years. The amortization of the UAAL is calculated as a level dollar amount, similar to a conventional home mortgage.

Plan Provisions

Participation	All employees participate. Each member participates under an optional regimen of benefits supplementary to or coordinated with Social Security. All members hired after September 30, 1990 can only participate in the supplementary scheme.
Compensation	Average of the three highest annual base salaries. For new members hired on or after January 1, 1993, annual compensation is limited to $50,000.
Merit Annuity	
Eligibility	For members hired before January 1, 1993, 25 to 30 years of service. For members hired on or after January 1, 1993, there is a minimum age requirement of 55 years of age and 30 years of service. For this group, reduced benefits payable with less than age 55 are effective January 1, 2015.
Basic (Supplementary) Benefit	Life annuity of 2.5% of compensation times years of service up to 30.
Coordinated Benefit	Up to Age 65: Basic (Supplementary) Benefit. After Age 65: Basic (Supplementary) Benefit minus $40 for each year of service up to 30.
Maximum Benefit	75% of compensation. The maximum is applied to all pensions paid by the System.
Accrued Benefit	
Basic (Supplementary) Benefit	1-1/2% of compensation for each year of service, plus 1/2% of compensation for each year of service after 20 years.
Coordinated Benefit	Up to Age 65: Basic (Supplementary) Benefit. After Age 65: Basic (Supplementary) Benefit minus $19 for each year of service up to 30.
Age Retirement	
Eligibility	60 years of age with at least 5 years of service.
Supplementary Pension	Life annuity of basic (supplementary) benefit.
Coordinated Pension	Life annuity of basic (supplementary) benefit until age 65 and coordinated benefit thereafter.

Actuarial Equivalent (Service) Retirement	
Eligibility	20 years of service.
Supplementary Pension	Immediate life annuity of actuarially equivalent value to basic (supplementary) benefit.
Coordinated Pension	Immediate life annuity of basic (supplementary) benefit until age 65 and of actuarially equivalent value to the coordinated benefit after age 65.
Actuarial Equivalent	Benefit of equivalent value to a deferred life annuity payable from age 60 on.
Separation Pension	
Eligibility	Any age with at least 10 years of service.
Supplementary Pension	Deferred life annuity, payable at age 60, consisting of a basic (supplementary) benefit.
Coordinated Pension	Deferred life annuity, payable at age 60, consisting of a basic (supplementary) benefit until age 65 and of the coordinated benefit thereafter.
Disability Pension	
Eligibility	Any age with at least 5 years of service (10 years of service if hired after December 31, 1992).
Regular Benefit	If eligible for a retirement pension or merit annuity, such applicable amount.
Alternative Benefit	If not eligible for a retirement pension or merit annuity, will receive:

- Supplementary Pension: The greater of 90% of the basic (supplementary) benefit or 20% of Final Average Compensation.
- Coordinated Pension:
  - Up to Age 65: Supplementary Pension Benefit.
  - After Age 65: Supplementary Pension Benefit minus $17.10 for each year of credited service. The resulting benefit cannot be less than 17.5% of Final Average Compensation.

Death Benefit	
Benefit	Lump sum payment equal to the last salary at the time of retirement from active service or death in active service. The lump sum payment may be reduced in certain situations as described below.
Eligibility	Participants with all credited service with PREPA and age 60 with 15 years of credited service or under age 60 with 20 years of credited service at retirement date or death in active service: ▪ Receive the full benefit. Members that comply with the age and service requirements have the option to receive payment while in active service. Members who elect to receive their death benefit early will have an increase in their employee contribution rate. Retirees with age 60 and less than 15 years of service or under age 60 with less than 20 years of service: ▪ The benefit will be based on a proportion of actual years of service and corresponding requirement of service according to age. Retirees with combined credited service from PREPA and other government agency: ▪ The benefit will be based on compensation from PREPA and the other government agency. Disability with less than 5 years of service (10 years for members hired after December 31, 1992): ▪ The benefit is proportionally reduced over 5 or 10 years depending on the hired date
Survivor Benefit	The surviving spouses of retired members receiving a pension benefit will receive a life annuity equal to 30% of the annual pension payable to the member at the time of death.

Employee Contributions	Employee contributions are generally 9.06% of salary. Employees who elect to receive early payment of their death benefit contribute 10.31% of salary if no additional death benefit is payable at retirement and 13.86% of salary if the increase in salary is payable at retirement. The employee pays the higher contribution rate from the time the early death benefit is paid until retirement. For new members, on or after January 1, 1993, employee contributions are 11% of salary. For supplementary members said contributions are applied to the System. For coordinated members, the part equivalent to 4% of salary up to $4,200 is included as part of the employee contribution to Social Security, and the remainder is applied to the System.
Refund of Employee Contributions	The employee contributions dedicated to the System will be reimbursed, with interest at a rate of 5%, as follows: (i) Upon death in active service. (ii) Upon separation of a member not entitled to a benefit. (iii) Optionally upon separation, instead of a deferred benefit, or upon death before retirement. (iv) Upon death after commencement of a pension. Reimbursement includes the part in excess of the installments already received, if the member has not elected an optional benefit
Cost-of-Living Adjustment	A. Increase effective July 1, 1992 to all pensions granted on or before June 30, 1990 as follows: 1) 8% increase for the monthly pension up to $300. 2) 4% increase for the monthly pension between $300 and $600. 3) 2% increase for the monthly pension in excess of $600. B. The minimum monthly increase will be $25 and the maximum $50. C. Actuarial pensions will be granted the minimum increase of $25 per month if they were granted on or before June 30, 1990.

	D. These increases, under the same conditions, will be granted automatically every three years beginning July 1, 1992 or from the retirement date for all those who retire after June 30, 1990.
Annual Christmas Bonus	Effective with the June 30, 2002 actuarial valuation, an annual $300 Christmas bonus is payable to all current and future retirees and beneficiaries. Effective with the June 30, 2003 actuarial valuation, an additional annual $100 Christmas bonus is payable to all current and future retirees and beneficiaries, for a total of $400 per year.
Summer Bonus	Effective with the June 30, 2003 actuarial valuation, an annual $100 summer bonus is payable to all current and future retirees and beneficiaries.
Funeral Benefit	Effective with the June 30, 2004 actuarial valuation, a lump sum Funeral Benefit of $1,000 is payable to all current and future retirees.

Notes

- The PREPA ERS became effective as of July 1, 1945 and includes the general fund for regular benefits among others. The valuation only covers the liabilities of the general fund.
- Certain provisions of the Rules and Regulations are not described in the summary because of little applicability, for example, variations in formulas when annual compensation is below $5,000, or with respect to members whose service is before July 1, 1973. In general, if a member has the right to two comparable benefits, he will receive the greater, not both.
- There are optional forms of pensions with actuarial adjustments. No additional cost is assumed with respect to optional benefits with actuarial adjustments. It is assumed that members severed before retirement will elect to leave their contributions in the System and will not elect to pay for the death benefit.

Current Funding Scenario (Provided to PREPA on June 12, 2020)

Aon prepared a projection on June 12, 2020, to illustrate how soon the pension asset will be fully depleted (i.e., asset value equals $0) if current budgeted contributions continue. This projection was prepared at the FOMC request for a projection assuming $71M in contributions beyond fiscal 2021.

We produced the updated projection with the following assumptions:

- Assumes employer contribution amounts of $66M for fiscal 2020 and $71M for fiscal 2021 and beyond until the assets are depleted by the 6/30/2025 valuation date (i.e., fiscal year 2027). Effective fiscal 2027, PREPA is assumed to contribute the entire Pay-As-You-Go contributions equal to expected benefit payments less employee contributions and the remaining assets.
- The updated projection also assumes all actual economic and demographic experience is "as expected". Any significant deviation between expected and actual experience may change the depletion date significantly. For example, if asset return is less than the assumed rate of return of 6.30% in the next few years, the depletion date could be sooner than the 6/30/2025 valuation date.
- When the pension asset goes to $0 and PREPA funds the pension plan on a Pay-As-You-Go basis, the discount rate of 6.30% is no longer supportable and should be based on a bond index rate. Therefore, starting with the 6/30/2025 valuation date, the discount rate used to value liability is reduced from 6.30% to 2.50%, which represents an estimated municipal bond index rate. The reduction in discount rate will increase the unfunded liability drastically. At the 6/30/2025 valuation date, the unfunded actuarial liability (UAL) is estimated to be $5.6B.
- We included the projected active and retired headcounts in the exhibit. Separately, we also attached a summary of economic and demographic assumptions used in the projections.

We have used strong terms to describe this scenario to emphasize that current pension contributions to the pension plan are severely inadequate and unrealistic. This is all the more true because of the PREPA commitment to maintain current benefit levels as part of the bankruptcy reorganization.

Please note that it is likely that pension assets available to pay benefits will likely be depleted sooner than the 6/30/2025 valuation date for three reasons:

1. A substantial amount of assets are accumulated contributions made by active PREPA employees. They are likely not available to pay benefits to retirees.
2. A substantial amount of assets are mortgages payable by PREPA employees and retirees. They are illiquid and likely could only be sold at a discount.
3. There are other illiquid assets that would need to be sold at a discount and the asset allocation would need to change to meet short term cash needs and would reduce the rate of return on assets.

This scenario is materially different than the May 19 projection. Our May 19, 2020, Updated Baseline and Projected ADC illustration had this essential assumption: Assumes employer contribution amounts of $66M for fiscal 2020 and $71M for fiscal 2021. **Effective fiscal 2022, PREPA is assumed to contribute the annual required ADC amount.**

The near-term ramifications of inadequate pension contributions must be carefully considered, including the likely severe cuts to benefit levels when the assets are depleted. We had discussed in earlier conversations about a potential financing vehicle called the Pension Obligation Bond (POB). We believe this option may provide PREPA the liquidity it needs and also some flexibility in financing the payments. We suggest PREPA to explore this as one of the options to address the pension liquidity concern.

Summary of Assumptions and Methods

- Assets are assumed to return -2.0% during fiscal 2020 and 6.3% per year thereafter.
- Assumes employer contribution amounts of $66M for fiscal 2020 and then $71M until assets depleted. Once assets are depleted, PREPA assumed to pay expected benefit payments less employee contributions.
- Discount rates used for calculating the liability are 6.30% from 6/30/2019 to 6/30/2024, and 2.50% thereafter.

		Headcount		Funded Status			Employer Contribution		
Valuation Date	Fiscal Year	Actives	Retirees and Beneficiaries	AAL	MVA	UAL	Assumed Contribution	Expected Benefit Payment	Required Contribution (ADC)
6/30/2019	2021	5,335	12,583	$ 3,927.25	$ 915.85	$ 3,011.39	$ 66.00	$ 281.15	$ 274.98
6/30/2020	2022	5,098	12,679	$ 3,911.74	$ 709.58	$ 3,202.16	$ 71.00	$ 282.92	$ 299.03
6/30/2021	2023	4,888	12,729	$ 3,892.35	$ 560.91	$ 3,331.44	$ 71.00	$ 284.42	$ 319.04
6/30/2022	2024	4,683	12,753	$ 3,869.17	$ 400.50	$ 3,468.67	$ 71.00	$ 284.98	$ 341.57
6/30/2023	2025	4,480	12,759	$ 3,842.96	$ 228.58	$ 3,614.38	$ 71.00	$ 285.51	$ 367.07
6/30/2024	2026	4,277	12,748	$ 3,813.59	$ 44.47	$ 3,769.12	$ 220.83	$ 286.77	$ 396.12
6/30/2025	**2027**	**4,044**	**12,748**	**$ 5,649.53**	**$ -**	**$ 5,649.53**	**$ 267.69**	**$ 288.37**	**$ 267.69**
6/30/2026	2028	3,789	12,752	$ 5,557.57	$ -	$ 5,557.57	$ 271.62	$ 291.31	$ 271.62
6/30/2027	2029	3,503	12,771	$ 5,457.69	$ -	$ 5,457.69	$ 274.67	$ 293.11	$ 274.67
6/30/2028	2030	3,223	12,766	$ 5,350.23	$ -	$ 5,350.23	$ 277.03	$ 294.22	$ 277.03
6/30/2029	2031	2,958	12,733	$ 5,235.65	$ -	$ 5,235.65	$ 279.09	$ 295.08	$ 279.09
6/30/2030	2032	2,706	12,674	$ 5,114.08	$ -	$ 5,114.08	$ 282.72	$ 297.54	$ 282.72
6/30/2031	2033	2,428	12,626	$ 4,983.80	$ -	$ 4,983.80	$ 285.30	$ 298.75	$ 285.30
6/30/2032	2034	2,157	12,557	$ 4,845.27	$ -	$ 4,845.27	$ 288.04	$ 300.15	$ 288.04
6/30/2033	2035	1,887	12,476	$ 4,698.03	$ -	$ 4,698.03	$ 289.63	$ 300.36	$ 289.63
6/30/2034	2036	1,630	12,370	$ 4,542.95	$ -	$ 4,542.95	$ 290.08	$ 299.48	$ 290.08
6/30/2035	2037	1,388	12,238	$ 4,380.96	$ -	$ 4,380.96	$ 289.42	$ 297.52	$ 289.42
6/30/2036	2038	1,174	12,071	$ 4,213.11	$ -	$ 4,213.11	$ 286.96	$ 293.89	$ 286.96
6/30/2037	2039	988	11,866	$ 4,041.28	$ -	$ 4,041.28	$ 283.98	$ 289.89	$ 283.98
6/30/2038	2040	821	11,637	$ 3,866.15	$ -	$ 3,866.15	$ 280.17	$ 285.13	$ 280.17
6/30/2039	2041	675	11,381	$ 3,688.63	$ -	$ 3,688.63	$ 274.55	$ 278.67	$ 274.55
6/30/2040	2042	559	11,091	$ 3,510.71	$ -	$ 3,510.71	$ 267.86	$ 271.32	$ 267.86
6/30/2041	2043	466	10,777	$ 3,333.77	$ -	$ 3,333.77	$ 261.42	$ 264.33	$ 261.42
6/30/2042	2044	384	10,451	$ 3,157.87	$ -	$ 3,157.87	$ 255.33	$ 257.76	$ 255.33
6/30/2043	2045	299	10,129	$ 2,982.77	$ -	$ 2,982.77	$ 247.52	$ 249.42	$ 247.52
6/30/2044	2046	234	9,790	$ 2,810.20	$ -	$ 2,810.20	$ 239.24	$ 240.73	$ 239.24
6/30/2045	2047	185	9,438	$ 2,640.90	$ -	$ 2,640.90	$ 230.46	$ 231.65	$ 230.46
6/30/2046	2048	148	9,079	$ 2,475.66	$ -	$ 2,475.66	$ 221.50	$ 222.45	$ 221.50
6/30/2047	2049	117	8,720	$ 2,314.92	$ -	$ 2,314.92	$ 212.61	$ 213.36	$ 212.61
6/30/2048	2050	93	8,359	$ 2,158.79	$ -	$ 2,158.79	$ 203.59	$ 204.18	$ 203.59
6/30/2049	2051	70	8,002	$ 2,007.59	$ -	$ 2,007.59	$ 194.63	$ 195.07	$ 194.63
6/30/2050	2052	49	7,649	$ 1,861.42	$ -	$ 1,861.42	$ 185.50	$ 185.81	$ 185.50
6/30/2051	2053	34	7,296	$ 1,720.58	$ -	$ 1,720.58	$ 176.16	$ 176.38	$ 176.16
6/30/2052	2054	22	6,944	$ 1,585.47	$ -	$ 1,585.47	$ 166.72	$ 166.86	$ 166.72
6/30/2053	2055	15	6,592	$ 1,456.40	$ -	$ 1,456.40	$ 157.39	$ 157.49	$ 157.39
6/30/2054	2056	9	6,243	$ 1,333.45	$ -	$ 1,333.45	$ 148.03	$ 148.09	$ 148.03
6/30/2055	2057	6	5,896	$ 1,216.84	$ -	$ 1,216.84	$ 138.74	$ 138.78	$ 138.74
6/30/2056	2058	4	5,552	$ 1,106.69	$ -	$ 1,106.69	$ 129.67	$ 129.70	$ 129.67
6/30/2057	2059	3	5,213	$ 1,002.93	$ -	$ 1,002.93	$ 120.70	$ 120.72	$ 120.70
6/30/2058	2060	2	4,878	$ 905.65	$ -	$ 905.65	$ 111.93	$ 111.94	$ 111.93
6/30/2059	2061	1	4,549	$ 814.82	$ -	$ 814.82	$ 103.45	$ 103.45	$ 103.45

Funding Valuation Report

Employees’ Retirement System

Sponsored by Puerto Rico Electric Power Authority (PREPA)

Measurement Date as of June 30, 2020

Empower Results®

Empower Results®

December 7, 2020

Mr. Nelson Morales
Chief Financial Officer
Puerto Rico Electric Power Authority
1100 Ave. Ponce de León
Controller's Office, # 513
Santurce, Puerto Rico 00907

Subject: Puerto Rico Electric Power Authority Employees' Retirement System—
Actuarial Valuation Report as of June 30, 2020

Dear Mr. Morales,

We proudly present Aon's Actuarial Valuation Report (the Report) for the Puerto Rico Electric Power Authority Employees' Retirement System (the System) as of June 30, 2020. It is important to note that this report is provided in the context of the ongoing restructuring of PREPA and ERS under formal proceedings authorized and required by PROMESA.

Aon has been retained by PREPA as an independent actuarial consultant regarding the financial status of the System's pension plan (the Plan) and the analysis of plan design alternatives. This Report documents the pension liabilities and the demographic information Aon has used as the baseline to estimate the long-term impact on liabilities and costs of alternative scenarios. Aon has previously prepared two funding valuation reports, with the latest report being the June 30, 2019 Actuarial Valuation Report issued on November 19, 2020.

This Report includes a calculation of the actuarial accrued liability, a statement of the market value of assets, a calculation of the funded status, and development of the Actuarially Determined Contribution (ADC) for the 2022 fiscal year as prescribed under the funding policy approved by the System. The demographic data used to develop these results is based on census data provided by PREPA.

The actuarial accrued liability was calculated using a 5.30% discount rate, which represents the expected rate of return over a 10-year horizon using Aon's capital market assumptions as of June 30, 2020 and assuming that sustainable annual contributions are made. The long-term expected rate of return assumption was reviewed against Aon's capital market assumptions as of June 30, 2020 over a 10-year time horizon, and 5.30% is in the 50th percentile. Detailed information regarding the asset allocation and expected return assumptions is shown on Page 12. Note that this assumption was reduced from 6.30% used in the June 30, 2019 actuarial valuation due to a change in market conditions. The salary scale assumption is predicated on PREPA's Fiscal Plan. Other demographic assumptions are based on the most recent demographic assumption study provided by the System's actuary and are unchanged from those used in the June 30, 2018 and June 30, 2019 Actuarial Valuation Reports produced by Aon.

Our calculation shows that the Plan is 17.6% funded at June 30, 2019, a decrease from 23.3% at June 30, 2019. The decrease in funded percentage is primarily due to a decrease in discount rate from 6.30% to 5.30%, and lower than expected employer contributions made to the Plan's trust during fiscal 2020. A funded ratio of 17.6% means all assets in the Plan's trust, including those that may not be liquid, cover 17.6% of the actuarial accrued liability associated with the Plan. The fiscal 2022 required contribution is $313 million. The expected benefit payment for the same period is $283 million, which represents about 38% of the market value of assets as of June 30, 2020. Due to the low funded ratio and significant outflow of plan assets, the current expected contribution level of approximately $71 million per year is inadequate to sustain the plan. Please recall that the liability included in this Report is calculated assuming the full ADC is contributed annually after 2021.

Included in the appendix of this Report is a projection of the scenario where PREPA contributes $71 million until the Plan's assets are depleted. In this projection, assets are expected to be depleted by June 30, 2025. Effective fiscal 2027, PREPA is assumed to contribute the entire Pay-As-You-Go contributions equal to expected benefit payments less employee contributions and the remaining assets. Also for illustrative purposes, the discount rate used to value liability beginning in the June 30, 2025 valuation, is reduced from 5.30% to 2.50%, which is representative of the current market rate.

The Employee Retirement System is a single employer defined benefit pension plan sponsored by PREPA and administered by ERS. All of PREPA's permanent full-time employees are eligible to participate in the Plan. The System issues a publicly available financial report that includes financial statements and required supplementary information for the Plan.

This Report is an independent actuarial valuation of the PREPA pension liabilities. It does not duplicate or replace the funding valuations or financial reports provided by the System's actuary. Our valuation is based on the information provided by PREPA. No reconciliations of demographic or financial information was conducted because Aon was not provided with sufficient historical information and it was beyond the scope of the engagement.

The Table of Contents following this letter outlines sections included in this Report.

Sincerely,

Aon

Mark Meyer

Mark D. Meyer, JD, FSA, EA, MAAA

Ben Law

Benjamin Law, ASA, EA

MDM/BL:mw
cc: Mr. Jaime A López Díaz, PREPA
Mr. Fernando M. Padilla, PREPA
Ms. Mari Wildy Toro Rodriguez, PREPA
Mr. Romano A Zampierollo Vilá, PREPA
Ms. Brittany Erwin, Aon
Ms. Emily Hayes, Aon
Mr. Jason Rossiter, Aon

Introduction

This report documents the calculated funded status as of June 30, 2020 for the Employees' Retirement System of the Puerto Rico Electric Power Authority (PREPA). The information provided in this report is intended strictly for documenting the calculated actuarial accrued liability and Actuarially Determined Contribution for the 2022 fiscal year (beginning July 1, 2021 and ending June 30, 2022).

Determinations for purposes other than the ones described above may be significantly different from the results in this report. Thus, the use of this report for purposes other than those expressed here may not be appropriate.

This funding calculation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. The funding calculations are calculated based on our understanding of the applicable laws and regulations governing the System, including any guidance or interpretations provided by PREPA prior to the issuance of this report.

A valuation model was used to develop the liabilities for this valuation. The valuation model relies on ProVal software, which was developed by Winklevoss Technologies, LLC. Experts within Aon selected this software and determined it is appropriate for performing valuations. We coded and reviewed the software for the provisions, assumptions, methods, and data of the Employees' Retirement System of the Puerto Rico Electric Power Authority.

A model was used to develop the expected rate of return on assets (i.e., funding discount rate) assumption. The undersigned relied on experts at Aon Investment Consulting for the development of the capital market assumptions and the model underlying the expected rate of return on assets.

The valuation model outputs various cost scenarios. The "1% increase" and "1% decrease" interest rate scenarios vary only the discount rate assumption, in order to illustrate the impact of a change in that assumption in isolation. In practice, certain other assumptions would also be expected to vary when the discount rate changes. Therefore, the output from these scenarios should be used solely for assessing the impact of the discount rate in isolation and may not represent a realistic set of results for other purposes.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to (but not limited to) such factors as the following:

- Restructuring events such as P3 initiatives for Transmission and Distribution System;
- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in actuarial methods or in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- Changes in plan provisions or applicable law.

Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

The funding calculations shown in this report are determined based on the plan assets and liabilities. The market value of assets as of June 30, 2020 was provided by the System. Plan liabilities are measured based on the interest rates and other assumptions summarized in the Actuarial Assumptions and Methods section of this report.

These calculated funded status measurements may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations, and funded status measurements for plan sponsor and plan disclosure and reporting purposes may not be appropriate for assessing the need for or the amount of future contributions.

In determining the Actuarially Determined Contribution for the Employees' Retirement System, Aon may be assisting the appropriate plan fiduciary as it performs tasks that are required for the administration for an employee benefit plan. Aon may be consulting with the employer/plan sponsor (PREPA) as it considers alternative strategies for funding the plan. Thus, Aon potentially will be providing assistance to PREPA (and/or certain of its employees) acting in a fiduciary capacity (for the benefit of plan participants and beneficiaries) and to PREPA (and/or its executives) acting in a settlor capacity (for the benefit of the employer sponsoring the Employees' Retirement System).

In conducting the funding measurement, we have relied on employee census, plan provisions, and asset information supplied by PREPA and the System. While we cannot verify the accuracy of all the information, the supplied information was reviewed for consistency and reasonableness. Because of this review, we have no reason to doubt the substantial accuracy or completeness of the information and believe that it has produced appropriate results.

The actuarial assumptions and methods used in this funding assessment are described in the Actuarial Assumptions and Methods section of this report. PREPA selected the funding economic and demographic assumptions and prescribed them for use for purposes of compliance with the laws and regulations governing the System. Aon provided guidance with respect to these funding economic assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience. Aon did not have all the necessary historical data to provide guidance with respect to the demographic assumptions. Cavanaugh Macdonald Consulting (CMC) provided guidance on the demographic assumptions which were updated because of an experience study dated June 11, 2018.

The undersigned are familiar with the near-term and long-term aspects of pension valuations and collectively meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. The information provided in this report is dependent upon various factors as documented throughout this report, which may be subject to change. Each section of this report is an integral part of the actuarial opinions.

To our knowledge, no colleague of Aon providing services to PREPA has any material direct or indirect financial interest in PREPA. Thus, we believe there is no relationship existing that might affect our capacity to prepare and certify this actuarial documentation report for PREPA.

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December 2020

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Calculated Funded Status

Summary

The following table illustrates the calculated unfunded actuarial accrued liability under the plan's funding policy.

	Valuation Date June 30, 2019	**Valuation Date June 30, 2020**
Actuarial Accrued Liability		
Retired Participants and Beneficiaries Receiving Payment	$ 3,088,768,670	$ 3,361,917,870
Disabled Participants	0	0
Terminated Vested Participants	0	0
Active Participants	838,477,233	972,567,811
Total	$ 3,927,245,903	$ 4,334,485,681
Actuarial Value of Assets	(915,853,157)	(762,439,313)
Unfunded Actuarial Accrued Liability	$ 3,011,392,746	$ 3,572,046,368
Funded Ratio	23.32%	17.59%
Discount Rate	6.30%	5.30%

Actuarially Determined Contribution

The following table illustrates the Actuarially Determined Contribution under the plan's funding policy as prescribed by the System. The June 30, 2019 results are used as the basis to calculate the net employer contribution for fiscal period July 1, 2020 through June 30, 2021 (i.e. fiscal year 2021), and the June 30, 2020 results are used as the basis to calculate the net employer contribution for fiscal period July 1, 2021 through June 30, 2022 (i.e. fiscal year 2022).

Valuation Date	**June 30, 2019**	**June 30, 2020**
(a) Normal Cost at Beginning of Year (BOY)	$ 26,411,858	$ 32,617,121
(b) Amortization of the Unfunded Actuarial Accrued Liability	246,921,947	279,170,220
(c) Total Actuarially Determined Contribution at BOY (a)+(b)	$ 273,333,805	$ 311,787,341
(d) Interest to End of Year (EOY) at 6.30%/5.30%	17,220,030	16,524,729
(e) Total Actuarially Determined Contribution at EOY (c)+(d)	$ 290,553,835	$ 328,312,070
(f) Interest adjustment for Timing of Payments	9,729,841	9,276,415
(g) Less Employee Contributions	(25,299,620)	(24,453,385)
Net Employer Contribution for Fiscal Year 2021 [2022] (e)+(f)+(g)	$ 274,984,056	$ 313,135,100

Market Value of Assets as of June 30, 2019

Asset Class	Allocation %	Market Value
Equities	53.71%	$ 491,936,787
Fixed Income	9.92%	90,845,694
Real Estate	4.22%	38,667,303
Venture Capital & Partnerships	6.95%	63,614,127
Other Assets	23.80%	218,012,470
Cash & Cash Equivalents	1.28%	11,718,081
Adjustments to Cash	0.12%	1,058,695
Total	100.00%	$ 915,853,157

Market Value of Assets as of June 30, 2020

Asset Class	Allocation %	Market Value
Equities	49.59%	$ 378,104,233
Fixed Income	13.88%	105,864,027
Real Estate	4.05%	30,872,177
Venture Capital & Partnerships	5.55%	42,278,970
Other Assets[1]	26.73%	203,769,237
Cash & Cash Equivalents	0.20%	1,550,285
Adjustments to Cash	0.00%	384
Total	100.00%	$ 762,439,313

[1] Other assets include $115M in PREPARS employee's loans, $77M in PREPARS mortgages, and $12M Short-term investments/cash.

Projected Benefit Payments

The following table shows the projected benefit payments for current and future retirees and beneficiaries.

($ in millions)

Fiscal Year Beg June 30	Benefit Payments	Fiscal Year Beg June 30	Benefit Payments	Fiscal Year Beg June 30	Benefit Payments
2020	282.92	2049	195.07	2078	9.62
2021	284.42	2050	185.81	2079	8.02
2022	284.98	2051	176.38	2080	6.64
2023	285.51	2052	166.86	2081	5.46
2024	286.77	2053	157.49	2082	4.46
2025	288.37	2054	148.09	2083	3.62
2026	291.31	2055	138.78	2084	2.92
2027	293.11	2056	129.70	2085	2.34
2028	294.22	2057	120.72	2086	1.86
2029	295.08	2058	111.94	2087	1.47
2030	297.54	2059	103.45	2088	1.15
2031	298.75	2060	95.20	2089	0.90
2032	300.15	2061	87.26	2090	0.69
2033	300.36	2062	79.68	2091	0.53
2034	299.48	2063	72.44	2092	0.40
2035	297.52	2064	65.58	2093	0.30
2036	293.89	2065	59.13	2094	0.23
2037	289.89	2066	53.07	2095	0.17
2038	285.13	2067	47.41	2096	0.12
2039	278.67	2068	42.16	2097	0.09
2040	271.32	2069	37.30	2098	0.06
2041	264.33	2070	32.84	2099	0.04
2042	257.76	2071	28.76	2100	0.03
2043	249.42	2072	25.04		
2044	240.73	2073	21.68		
2045	231.65	2074	18.66		
2046	222.45	2075	15.96		
2047	213.36	2076	13.57		
2048	204.18	2077	11.46		

Sensitivity

The following table illustrates the impact of interest rate sensitivity on the Accrued Actuarial Liability as of June 30, 2019:

	1% Decrease (5.30%)	**Current Rate (6.30%)**	**1% Increase (7.30%)**
(1) Actuarial Accrued Liability	$ 4,357,256,177	$ 3,927,245,903	$ 3,564,949,711
(2) Actuarial Value of Assets	(915,853,157)	(915,853,157)	(915,853,157)
(3) Unfunded Actuarial Accrued Liability	$ 3,441,403,020	$ 3,011,392,746	$ 2,649,096,554

The following table illustrates the impact of interest rate sensitivity on the Accrued Actuarial Liability as of June 30, 2020:

	1% Decrease (4.30%)	**Current Rate (5.30%)**	**1% Increase (6.30%)**
(1) Actuarial Accrued Liability	$ 4,839,598,856	$ 4,334,485,681	$ 3,911,743,715
(2) Actuarial Value of Assets	(762,439,313)	(762,439,313)	(762,439,313)
(3) Unfunded Actuarial Accrued Liability	$ 4,077,159,543	$ 3,572,046,368	$ 3,149,304,402

Appendix

Participant Data

The funding assessment was based on personnel information from PREPA records. Following are some of the pertinent characteristics from the personnel data as of that date. Prior year characteristics are also provided for comparison purposes. Both age and service have been determined using years and months as of the valuation date.

	June 30, 2018	June 30, 2019
Active Participants – Hired Before January 1, 1993		
Number	1,117	635
Average Age	54.3	54.5
Average Service	28.2	28.7
Average Annual Salary	$ 46,780	$ 46,704
Active Participants – Hired After January 1, 1993		
Number	4,843	4,700
Average Age	46.0	46.4
Average Service	15.7	16.1
Average Annual Salary	$ 40,418	$ 41,284
Active Participants - Total		
Number	5,960	5,335
Average Age	47.5	47.4
Average Service	18.0	17.6
Average Annual Salary	$ 41,610	$ 41,929
Inactives With Deferred Benefits[1]		
Number	0	0
Average Current Age	N/A	N/A
Average Monthly Benefit	N/A	N/A
Disabled Participants[1]		
Number	0	0
Average Current Age	N/A	N/A
Average Monthly Benefit	N/A	N/A
Inactives Receiving Payment		
Number	12,393	12,583
Average Current Age	70.4	70.7
Average Monthly Benefit	$ 1,723	$ 1,758
Total Participants		
Number	18,353	17,918

[1] Data received from PREPA does not contain indicators for inactives with deferred benefits or disabled participants

Distribution of Active Participants by Age and Service

As of June 30, 2019

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<30	64	29	2							95
	$28,304	$36,924	$41,633							$31,216
	$4,594	$29,570	$60,244							$13,484
30-34	49	90	77	0						216
	$32,556	$38,434	$38,765	$0						$37,218
	$7,342	$32,747	$58,153	$0						$35,908
35-39	57	109	297	138	2					603
	$32,983	$38,156	$39,967	$40,104	$51,217					$39,048
	$7,010	$33,723	$66,982	$93,175	$130,414					$61,679
40-44	40	75	266	517	143	1				1,042
	$31,991	$38,210	$39,772	$42,225	$44,537	$45,533				$41,237
	$6,523	$35,075	$72,612	$98,933	$130,006	$166,502				$87,991
45-49	32	71	220	474	448	133	4			1,382
	$30,569	$38,369	$38,796	$42,703	$45,198	$44,310	$38,074			$42,527
	$7,880	$36,458	$72,376	$102,142	$143,020	$153,247	$144,437			$109,806
50-54	18	54	106	276	348	242	78			1,122
	$43,828	$37,460	$38,313	$41,105	$45,550	$49,281	$45,707			$44,172
	$13,680	$36,212	$72,743	$105,291	$148,139	$169,057	$168,609			$128,490
55-59	11	22	88	143	180	124	70			638
	$46,342	$38,614	$38,304	$40,157	$44,002	$48,757	$46,819			$43,442
	$3,473	$38,401	$72,776	$106,880	$148,879	$168,107	$178,712			$129,526
60-64	1	5	22	45	60	46	18	1		198
	$24,960	$53,999	$41,691	$39,548	$42,451	$44,712	$44,056	$55,146		$42,645
	$2,607	$32,827	$66,703	$102,808	$149,226	$162,884	$188,200	$252,047		$134,353
65-69		1	2	2	7	10	5	1		28
		$37,635	$37,148	$36,455	$41,289	$45,700	$46,751	$42,687		$43,118
		$35,317	$86,112	$90,062	$149,142	$152,907	$185,802	$233,027		$147,242
70+	1		2	5		1	1		1	11
	$73,067		$35,424	$42,537		$36,095	$37,011		$41,009	$42,792
	$0		$68,784	$117,081		$120,180	$137,899		$308,661	$130,293
Total	273	456	1,082	1,600	1,188	557	176	2	1	5,335
	$32,752	$38,287	$39,322	$41,724	$44,889	$47,506	$45,787	$48,917	$41,009	$41,929
	$6,749	$34,418	$69,906	$101,330	$144,201	$164,131	$174,479	$242,537	$308,661	$102,513

Distribution of Active Participants by Age and Service—Hired Before January 1, 1993

As of June 30, 2019

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<30										
30-34										
35-39										
40-44										
45-49						93 $43,310 $147,912	4 $38,074 $144,437			97 $43,094 $147,755
50-54						213 $49,254 $167,976	78 $45,707 $168,609			291 $48,303 $168,143
55-59						101 $47,173 $163,856	70 $46,819 $178,712			171 $47,028 $170,038
60-64						39 $44,712 $160,323	18 $44,056 $188,200	1 $55,146 $252,047		58 $44,688 $170,424
65-69						9 $44,003 $140,250	5 $46,751 $185,802	1 $42,687 $233,027		15 $44,831 $161,619
70+						1 $36,095 $120,180	1 $37,011 $137,899		1 $41,009 $308,661	3 $38,038 $188,914
Total						456 $47,060 $161,683	176 $45,787 $174,479	2 $48,917 $242,537	1 $41,009 $308,661	635 $46,704 $165,757

Distribution of Active Participants by Age and Service—Hired After January 1, 1993

As of June 30, 2019

Number of Participants, Average Salary and Average Contribution Balance

Attained Age	Years of Service									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<30	64	29	2							95
	$28,304	$36,924	$41,633							$31,216
	$4,594	$29,570	$60,244							$13,484
30-34	49	90	77	0						216
	$32,556	$38,434	$38,765	$0						$37,218
	$7,342	$32,747	$58,153	$0						$35,908
35-39	57	109	297	138	2					603
	$32,983	$38,156	$39,967	$40,104	$51,217					$39,048
	$7,010	$33,723	$66,982	$93,175	$130,414					$61,679
40-44	40	75	266	517	143	1				1,042
	$31,991	$38,210	$39,772	$42,225	$44,537	$45,533				$41,237
	$6,523	$35,075	$72,612	$98,933	$130,006	$166,502				$87,991
45-49	32	71	220	474	448	40				1,285
	$30,569	$38,369	$38,796	$42,703	$45,198	$46,635				$42,485
	$7,880	$36,458	$72,376	$102,142	$143,020	$164,585				$107,026
50-54	18	54	106	276	348	29				831
	$43,828	$37,460	$38,313	$41,105	$45,550	$49,483				$42,725
	$13,680	$36,212	$72,743	$105,291	$148,139	$177,022				$114,640
55-59	11	22	88	143	180	23				467
	$46,342	$38,614	$38,304	$40,157	$44,002	$55,712				$42,129
	$3,473	$38,401	$72,776	$106,880	$148,879	$187,137				$114,634
60-64	1	5	22	45	60	7				140
	$24,960	$53,999	$41,691	$39,548	$42,451	$44,714				$41,799
	$2,607	$32,827	$66,703	$102,808	$149,226	$176,784				$119,050
65-69		1	2	2	7	1				13
		$37,635	$37,148	$36,455	$41,289	$60,977				$41,142
		$35,317	$86,112	$90,062	$149,142	$266,813				$130,652
70+	1		2	5						8
	$73,067		$35,424	$42,537						$44,575
	$0		$68,784	$117,081						$100,982
Total	273	456	1,082	1,600	1,188	101				4,700
	$32,752	$38,287	$39,322	$41,724	$44,889	$49,518				$41,284
	$6,749	$34,418	$69,906	$101,330	$144,201	$174,883				$94,071

Distribution of Inactive Participants by Age and Years Since Retirement

As of June 30, 2019

Number of Participants and Average Monthly Benefit

Attained Age	Years since Retirement									
	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
<50	134 $1,522	92 $734	21 $594	8 $581	3 $244		1 $301			259 $1,118
50-54	484 $2,611	300 $2,126	52 $608	27 $619	9 $511	1 $512	2 $346			875 $2,235
55-59	557 $2,746	641 $2,736	105 $1,547	38 $711	28 $503	5 $539	1 $557			1,375 $2,538
60-64	363 $2,104	557 $2,679	282 $2,378	116 $1,266	49 $579	13 $557	2 $623	1 $513	1 $306	1,384 $2,248
65-69	195 $1,516	389 $2,128	432 $2,529	575 $2,021	144 $1,135	61 $479	20 $473	10 $462	6 $507	1,832 $1,958
70-74	161 $682	282 $1,466	341 $1,702	665 $2,203	687 $1,964	133 $1,040	48 $559	34 $490	17 $532	2,368 $1,735
75-79	133 $528	129 $922	203 $1,153	341 $1,630	509 $1,940	397 $1,668	71 $937	23 $496	31 $540	1,837 $1,482
80-84	116 $516	103 $470	96 $549	175 $1,188	295 $1,456	267 $1,739	226 $1,554	55 $1,057	39 $549	1,372 $1,234
85-89	55 $445	80 $369	64 $441	54 $375	107 $885	147 $1,156	138 $1,485	121 $1,509	38 $1,021	804 $987
90+	27 $344	42 $364	47 $351	52 $293	42 $275	44 $623	63 $1,047	57 $1,463	103 $1,215	477 $775
Total	2,225 $1,946	2,615 $2,067	1,643 $1,754	2,051 $1,766	1,873 $1,646	1,068 $1,406	572 $1,272	301 $1,187	235 $913	12,583 $1,758

Expected Rate of Return and Asset Allocation

The long-term expected rate of return assumption was reviewed against Aon’s capital market assumptions as of June 30, 2020 over a 10-year time horizon. The expected nominal rate of return shown below assumes general inflation of 2.0%. Best estimates of geometric real rates of return for each major asset class included in the pension plan’s target asset allocation based on “Statement of Investment Policy Objectives and Guidelines” as of March 30, 2015, are summarized in the following table:

Asset Class	Expected Nominal Rate of Return	Target Allocation
Large Cap U.S. Equity	5.90%	22.00%
Small Cap U.S. Equity	6.10%	10.00%
International (Non-U.S.) Equity (Developed)	7.20%	15.00%
Emerging Markets Equity	7.70%	5.00%
Core U.S. Fixed Income (Market Duration)	1.20%	25.00%
Private Real Estate (Core)	5.50%	5.00%
Private Equity	8.40%	5.00%
Hedge Funds – Equity Long/Short	2.90%	8.00%
Hedge Funds – Fixed Income Arbitrage	2.90%	5.00%

It is important to note that COVID-19 disrupted financial markets during the Second Quarter of 2020. Further, the Federal Reserve’s latest economic forecasts suggest that interest rates will remain near zero at least through 2023. These correlated events caused a material decline in expected rates of return as of June 30, 2020 compared to one year earlier.

Actuarial Assumptions and Methods

Funding Discount Rate	5.30%. Prior year was 6.30%
Expected Return on Assets	5.30%. Prior year was 6.30%
General Inflation	2.00%.
Percent Married	100% of employees are assumed to be married, and wives are assumed to be 4 years younger than their husbands.
Decrements	
Mortality Rates	Headcount-weighted RP-2014 Mortality projected to 2018 using Scale BB, set back one year for males for actives and healthy annuitants and headcount-weighted RP-2014 Disabled Mortality projected to 2018 using Scale BB for disabled annuitants.
Disability Rates	See Table I.
Termination Rates	See Table II.
Retirement Rates	See Table III.
Interest Credit Rate	5% per annum on member contribution account balances.
Salary Increases	1.0% per annum until 2023; 2.3% thereafter.
Actuarial Value of Assets	Market value of assets as of June 30, 2020 provided by the Employees' Retirement System.
Amortization Basis for Funding	Level dollar payment based on 20-year closed amortization as of June 30, 2020.
Actuarial Cost Method	Entry Age Normal
Discount Rate Method	Equal to the Expected Return on Assets.
Valuation Date	June 30, 2019.
Measurement Date	June 30, 2020.
Census Data	Data received on February 13, 2020 for actives, June 30, 2019 for beneficiaries and retirees; the data was rolled forward to June 30, 2020 using standard methodology

Changes in Methods/Assumptions Since the Prior Year

Method Changes
The funding valuation reflects no method changes

Assumption Changes
The financial valuation reflects the following assumption changes.

- A change in the assumed expected rate of return on assets and funding discount rate from 6.30% to 5.30%

Actuarial Assumptions and Methods

Table I

Disability Rates

Age	Rate
20	0.05%
25	0.05%
30	0.20%
35	0.40%
40	0.45%
45	0.62%
50	1.00%
55	1.50%
60	2.00%
65	2.50%
70+	0.00%

Table II

Termination Rates

Service	Rate
0	3.50%
1	1.35%
2	1.00%
3	1.00%
4	1.00%
5*	1.00%
6*	0.90%
7*	0.90%
8*	0.90%
9*	1.00%
10+	0.00%

* At age 60, member is assumed to retire.

Table III

Retirement Rates—Hired Before January 1, 1993

Age	Less than 25 Years of Service Rate	25 or More Years of Service Rate
45	2.50%	15.50%
50	5.00%	15.50%
55	5.00%	15.50%
60	5.00%	15.50%
65	16.00%	38.00%
70+	100.00%	100.00%

Retirement Rates—Hired on or After January 1, 1993

Age	Less than 30 Years of Service Rate	30 or More Years of Service Rate
45	1.00%	2.00%
50	2.00%	4.00%
55	2.00%	32.00%
60	5.00%	19.00%
65	20.00%	39.00%
70+	100.00%	100.00%

Actuarial Assumptions and Methods

Discussion of Actuarial Assumptions and Methods

For the funding calculations, PREPA selected the economic and demographic assumptions and prescribed them for use for purposes of compliance with the laws and regulations governing the System. Aon provided guidance with respect to these economic assumptions, and it is our belief that the assumptions represent reasonable expectations of anticipated plan experience. Cavanaugh Macdonald Consulting provided the demographic assumptions which were updated because of a recent experience study dated June 11, 2018.

The asset method used for the funding calculations are based on a market value of asset method, which is different the method currently used by the System’s actuary.

Calculation of Normal Costs and Liabilities

The method used to calculate the normal cost, and actuarial accrued liability for determining the Actuarially Determined Contribution is the entry age normal cost method. Under this cost method, the actuarial accrued liability is based on a prorated portion of the present value of all benefits earned to date over expected future working life time. The proration is determined so that the cost with respect to service accrued from date of hire is recognized as a level percentage of pay each year. The Normal Cost is equal to the prorated cost for the year.

Amortization Method and Required Employer Contribution

The employer contributions consist of the Normal Cost and the Amortization of the Unfunded Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability (UAAL) is the Actuarial Accrued Liability less the asset value at the measurement date. As of June 30, 2010, a 30-year amortization period was established on a closed basis. As of June 30, 2020, the remaining amortization period is 20 years. The amortization of the UAAL is calculated as a level dollar amount, similar to a conventional home mortgage.

Plan Provisions

Participation	All employees participate. Each member participates under an optional regimen of benefits supplementary to or coordinated with Social Security. All members hired after September 30, 1990 can only participate in the supplementary scheme.
Compensation	Average of the three highest annual base salaries. For new members hired on or after January 1, 1993, annual compensation is limited to $50,000.
Merit Annuity	
Eligibility	For members hired before January 1, 1993, 25 to 30 years of service. For members hired on or after January 1, 1993, there is a minimum age requirement of 55 years of age and 30 years of service. For this group, reduced benefits payable with less than age 55 are effective January 1, 2015.
Basic (Supplementary) Benefit	Life annuity of 2.5% of compensation times years of service up to 30.
Coordinated Benefit	Up to Age 65: Basic (Supplementary) Benefit. After Age 65: Basic (Supplementary) Benefit minus $40 for each year of service up to 30.
Maximum Benefit	75% of compensation. The maximum is applied to all pensions paid by the System.
Accrued Benefit	
Basic (Supplementary) Benefit	1-1/2% of compensation for each year of service, plus 1/2% of compensation for each year of service after 20 years.
Coordinated Benefit	Up to Age 65: Basic (Supplementary) Benefit. After Age 65: Basic (Supplementary) Benefit minus $19 for each year of service up to 30.
Age Retirement	
Eligibility	60 years of age with at least 5 years of service.
Supplementary Pension	Life annuity of basic (supplementary) benefit.
Coordinated Pension	Life annuity of basic (supplementary) benefit until age 65 and coordinated benefit thereafter.

Actuarial Equivalent (Service) Retirement	
Eligibility	20 years of service.
Supplementary Pension	Immediate life annuity of actuarially equivalent value to basic (supplementary) benefit.
Coordinated Pension	Immediate life annuity of basic (supplementary) benefit until age 65 and of actuarially equivalent value to the coordinated benefit after age 65.
Actuarial Equivalent	Benefit of equivalent value to a deferred life annuity payable from age 60 on.
Separation Pension	
Eligibility	Any age with at least 10 years of service.
Supplementary Pension	Deferred life annuity, payable at age 60, consisting of a basic (supplementary) benefit.
Coordinated Pension	Deferred life annuity, payable at age 60, consisting of a basic (supplementary) benefit until age 65 and of the coordinated benefit thereafter.
Disability Pension	
Eligibility	Any age with at least 5 years of service (10 years of service if hired after December 31, 1992).
Regular Benefit	If eligible for a retirement pension or merit annuity, such applicable amount.
Alternative Benefit	If not eligible for a retirement pension or merit annuity, will receive:

- Supplementary Pension: The greater of 90% of the basic (supplementary) benefit or 20% of Final Average Compensation.
- Coordinated Pension:
  - Up to Age 65: Supplementary Pension Benefit.
  - After Age 65: Supplementary Pension Benefit minus $17.10 for each year of credited service. The resulting benefit cannot be less than 17.5% of Final Average Compensation.

Death Benefit

Benefit	Lump sum payment equal to the last salary at the time of retirement from active service or death in active service. The lump sum payment may be reduced in certain situations as described below.
Eligibility	Participants with all credited service with PREPA and age 60 with 15 years of credited service or under age 60 with 20 years of credited service at retirement date or death in active service: ▪ Receive the full benefit. Members that comply with the age and service requirements have the option to receive payment while in active service. Members who elect to receive their death benefit early will have an increase in their employee contribution rate. Retirees with age 60 and less than 15 years of service or under age 60 with less than 20 years of service: ▪ The benefit will be based on a proportion of actual years of service and corresponding requirement of service according to age. Retirees with combined credited service from PREPA and other government agency: ▪ The benefit will be based on compensation from PREPA and the other government agency. Disability with less than 5 years of service (10 years for members hired after December 31, 1992): ▪ The benefit is proportionally reduced over 5 or 10 years depending on the hired date
Survivor Benefit	The surviving spouses of retired members receiving a pension benefit will receive a life annuity equal to 30% of the annual pension payable to the member at the time of death.

Employee Contributions	Employee contributions are generally 9.06% of salary. Employees who elect to receive early payment of their death benefit contribute 10.31% of salary if no additional death benefit is payable at retirement and 13.86% of salary if the increase in salary is payable at retirement. The employee pays the higher contribution rate from the time the early death benefit is paid until retirement. For new members, on or after January 1, 1993, employee contributions are 11% of salary. For supplementary members said contributions are applied to the System. For coordinated members, the part equivalent to 4% of salary up to $4,200 is included as part of the employee contribution to Social Security, and the remainder is applied to the System.
Refund of Employee Contributions	The employee contributions dedicated to the System will be reimbursed, with interest at a rate of 5%, as follows: (i) Upon death in active service. (ii) Upon separation of a member not entitled to a benefit. (iii) Optionally upon separation, instead of a deferred benefit, or upon death before retirement. (iv) Upon death after commencement of a pension. Reimbursement includes the part in excess of the installments already received, if the member has not elected an optional benefit
Cost-of-Living Adjustment	A. Increase effective July 1, 1992 to all pensions granted on or before June 30, 1990 as follows: 1) 8% increase for the monthly pension up to $300. 2) 4% increase for the monthly pension between $300 and $600. 3) 2% increase for the monthly pension in excess of $600. B. The minimum monthly increase will be $25 and the maximum $50. C. Actuarial pensions will be granted the minimum increase of $25 per month if they were granted on or before June 30, 1990.

D. These increases, under the same conditions, will be granted automatically every three years beginning July 1, 1992 or from the retirement date for all those who retire after June 30, 1990.

Annual Christmas Bonus

Effective with the June 30, 2002 actuarial valuation, an annual $300 Christmas bonus is payable to all current and future retirees and beneficiaries.

Effective with the June 30, 2003 actuarial valuation, an additional annual $100 Christmas bonus is payable to all current and future retirees and beneficiaries, for a total of $400 per year.

Summer Bonus

Effective with the June 30, 2003 actuarial valuation, an annual $100 summer bonus is payable to all current and future retirees and beneficiaries.

Funeral Benefit

Effective with the June 30, 2004 actuarial valuation, a lump sum Funeral Benefit of $1,000 is payable to all current and future retirees.

Notes

- The PREPA ERS became effective as of July 1, 1945 and includes the general fund for regular benefits among others. The valuation only covers the liabilities of the general fund.
- Certain provisions of the Rules and Regulations are not described in the summary because of little applicability, for example, variations in formulas when annual compensation is below $5,000, or with respect to members whose service is before July 1, 1973. In general, if a member has the right to two comparable benefits, he will receive the greater, not both.
- There are optional forms of pensions with actuarial adjustments. No additional cost is assumed with respect to optional benefits with actuarial adjustments. It is assumed that members severed before retirement will elect to leave their contributions in the System and will not elect to pay for the death benefit.

Current Funding Scenario

The projection below illustrates how soon the pension asset will be fully depleted (i.e., asset value equals $0) if current budgeted contributions continue. We produced the updated projection with the following assumptions:

- Assumes employer contribution amounts of $71M for fiscal 2021 and beyond until the assets are depleted by the 6/30/2025 valuation date (i.e., fiscal year 2027). Effective fiscal 2027, PREPA is assumed to contribute the entire Pay-As-You-Go contributions equal to expected benefit payments less employee contributions and the remaining assets.
- The updated projection also assumes all actual economic and demographic experience is "as expected". Any significant deviation between expected and actual experience may change the depletion date significantly. For example, if asset return is less than the assumed rate of return of 5.30% in the next few years, the depletion date could be sooner than the 6/30/2025 valuation date.
- When the pension asset goes to $0 and PREPA funds the pension plan on a Pay-As-You-Go basis, the discount rate of 5.30% is no longer supportable and should be based on a bond index rate. Therefore, starting with the 6/30/2025 valuation date, the discount rate used to value liability is reduced from 5.30% to 2.50%, which is representative of the current market rate. The reduction in discount rate will increase the unfunded liability drastically. At the 6/30/2025 valuation date, the unfunded actuarial liability (UAL) is estimated to be $5.7B.
- We included the projected active and retired headcounts in the exhibit. Separately, we also attached a summary of economic and demographic assumptions used in the projections.

We have used strong terms to describe this scenario to emphasize that current pension contributions to the pension plan are severely inadequate and unrealistic. This is all the more true because of the PREPA commitment to maintain current benefit levels as part of the bankruptcy reorganization.

Please note that it is likely that pension assets available to pay benefits will likely be depleted sooner than the 6/30/2025 valuation date for three reasons:

1. A substantial amount of assets are accumulated contributions made by active PREPA employees. They are likely not available to pay benefits to retirees.
2. A substantial amount of assets are mortgages payable by PREPA employees and retirees. They are illiquid and likely could only be sold at a discount.
3. There are other illiquid assets that would need to be sold at a discount and the asset allocation would need to change to meet short term cash needs and would reduce the rate of return on assets.

The near-term ramifications of inadequate pension contributions must be carefully considered, including the likely severe cuts to benefit levels when the assets are depleted. We had discussed in earlier conversations about a potential financing vehicle called the Pension Obligation Bond (POB). We believe this option may provide PREPA the liquidity it needs and some flexibility in financing the payments. We suggest PREPA to explore this as one of the options to address the pension liquidity concern.

Summary of Assumptions and Methods

- Assets are assumed to return 5.3% per year starting fiscal 2021.
- Assumes employer contribution amounts of $71M until assets depleted. Once assets are depleted, PREPA assumed to pay expected benefit payments less employee contributions.
- Discount rates used for calculating the liability are 5.30% from 6/30/2020 to 6/30/2024, and 2.50% thereafter.

		Headcount		Funded Status			Employer Contribution		
Valuation Date	Fiscal Year	Actives	Retirees and Beneficiaries	AAL	MVA	UAL	Assumed Contribution	Expected Benefit Payment	Required Contribution (ADC)
6/30/2020	2022	5,098	12,679	$ 4,334	$ 762	$ 3,572	$ 71	$ 283	$ 313
6/30/2021	2023	4,888	12,729	$ 4,307	$ 610	$ 3,697	$ 71	$ 284	$ 333
6/30/2022	2024	4,683	12,753	$ 4,276	$ 448	$ 3,828	$ 71	$ 285	$ 355
6/30/2023	2025	4,480	12,759	$ 4,241	$ 276	$ 3,965	$ 71	$ 286	$ 379
6/30/2024	2026	4,277	12,748	$ 4,202	$ 93	$ 4,110	$ 173	$ 287	$ 407
6/30/2025	**2027**	**4,044**	**12,748**	**$ 5,650**	**$ -**	**$ 5,650**	**$ 268**	**$ 288**	**$ 268**
6/30/2026	2028	3,789	12,752	$ 5,558	$ -	$ 5,558	$ 272	$ 291	$ 272
6/30/2027	2029	3,503	12,771	$ 5,458	$ -	$ 5,458	$ 275	$ 293	$ 275
6/30/2028	2030	3,223	12,766	$ 5,350	$ -	$ 5,350	$ 277	$ 294	$ 277
6/30/2029	2031	2,958	12,733	$ 5,236	$ -	$ 5,236	$ 279	$ 295	$ 279
6/30/2030	2032	2,706	12,674	$ 5,114	$ -	$ 5,114	$ 283	$ 298	$ 283
6/30/2031	2033	2,428	12,626	$ 4,984	$ -	$ 4,984	$ 285	$ 299	$ 285
6/30/2032	2034	2,157	12,557	$ 4,845	$ -	$ 4,845	$ 288	$ 300	$ 288
6/30/2033	2035	1,887	12,476	$ 4,698	$ -	$ 4,698	$ 290	$ 300	$ 290
6/30/2034	2036	1,630	12,370	$ 4,543	$ -	$ 4,543	$ 290	$ 299	$ 290
6/30/2035	2037	1,388	12,238	$ 4,381	$ -	$ 4,381	$ 289	$ 298	$ 289
6/30/2036	2038	1,174	12,071	$ 4,213	$ -	$ 4,213	$ 287	$ 294	$ 287
6/30/2037	2039	988	11,866	$ 4,041	$ -	$ 4,041	$ 284	$ 290	$ 284
6/30/2038	2040	821	11,637	$ 3,866	$ -	$ 3,866	$ 280	$ 285	$ 280
6/30/2039	2041	675	11,381	$ 3,689	$ -	$ 3,689	$ 275	$ 279	$ 275
6/30/2040	2042	559	11,091	$ 3,511	$ -	$ 3,511	$ 268	$ 271	$ 268
6/30/2041	2043	466	10,777	$ 3,334	$ -	$ 3,334	$ 261	$ 264	$ 261
6/30/2042	2044	384	10,451	$ 3,158	$ -	$ 3,158	$ 255	$ 258	$ 255
6/30/2043	2045	299	10,129	$ 2,983	$ -	$ 2,983	$ 248	$ 249	$ 248
6/30/2044	2046	234	9,790	$ 2,810	$ -	$ 2,810	$ 239	$ 241	$ 239
6/30/2045	2047	185	9,438	$ 2,641	$ -	$ 2,641	$ 230	$ 232	$ 230
6/30/2046	2048	148	9,079	$ 2,476	$ -	$ 2,476	$ 222	$ 222	$ 222
6/30/2047	2049	117	8,720	$ 2,315	$ -	$ 2,315	$ 213	$ 213	$ 213
6/30/2048	2050	93	8,359	$ 2,159	$ -	$ 2,159	$ 204	$ 204	$ 204
6/30/2049	2051	70	8,002	$ 2,008	$ -	$ 2,008	$ 195	$ 195	$ 195
6/30/2050	2052	49	7,649	$ 1,861	$ -	$ 1,861	$ 185	$ 186	$ 185
6/30/2051	2053	34	7,296	$ 1,721	$ -	$ 1,721	$ 176	$ 176	$ 176
6/30/2052	2054	22	6,944	$ 1,585	$ -	$ 1,585	$ 167	$ 167	$ 167
6/30/2053	2055	15	6,592	$ 1,456	$ -	$ 1,456	$ 157	$ 157	$ 157
6/30/2054	2056	9	6,243	$ 1,333	$ -	$ 1,333	$ 148	$ 148	$ 148
6/30/2055	2057	6	5,896	$ 1,217	$ -	$ 1,217	$ 139	$ 139	$ 139
6/30/2056	2058	4	5,552	$ 1,107	$ -	$ 1,107	$ 130	$ 130	$ 130
6/30/2057	2059	3	5,213	$ 1,003	$ -	$ 1,003	$ 121	$ 121	$ 121
6/30/2058	2060	2	4,878	$ 906	$ -	$ 906	$ 112	$ 112	$ 112
6/30/2059	2061	1	4,549	$ 815	$ -	$ 815	$ 103	$ 103	$ 103

TRANSFERS TO ERS						
Month (A)		ERS Requested Amount	Check Date		PREPA Paid Amount (Monthly)	
May 2023	$	4,095,130	05/19/23	$	4,095,130	
June 2023	$	26,255,039	06/14/23	$	26,255,039	
July 2023	$	22,441,541	07/19/23	$	22,441,541	
August 2023	$	24,299,477	08/16/23	$	24,299,477	
September 2023	$	23,372,617	09/20/23	$	23,372,617	
October 2023	$	21,740,233	10/23/23	$	21,740,233	
November 2023	$	29,990,780	11/15/23	$	29,990,780	
December 2023	$	24,844,990	12/18/23	$	24,844,990	
January 2024	$	22,840,549	01/17/24	$	22,840,549	(B)
	$	**199,880,356**		**$**	**199,880,356**	

EMPLOYER CONTRIBUTIONS					
Month (A)		ERS Requested Amount	Check Date		PREPA Paid Amount (Monthly)
July 2017	$	13,122,212	Various	$	13,122,212
August 2017	$	6,579,515	Various	$	6,579,515
September 2017	$	6,412,895	Various	$	6,412,895
October 2017	$	6,490,041	Various	$	6,490,041
November 2017	$	9,378,390	Various	$	9,378,390
December 2017	$	5,966,148	Various	$	5,966,148
January 2018	$	6,406,202	Various	$	6,406,202
February 2018	$	6,376,694	Various	$	6,376,694
March 2018	$	6,329,921	Various	$	6,329,921
April 2018	$	6,304,376	Various	$	6,304,376
May 2018	$	9,200,157	Various	$	9,200,157
June 2018	$	6,136,274	Various	$	6,136,274
July 2018	$	6,115,024	Various	$	6,115,024
August 2018	$	6,043,444	Various	$	6,043,444
September 2018	$	5,927,846	Various	$	5,927,846
October 2018	$	5,759,737	Various	$	5,759,737
November 2018	$	8,348,419	Various	$	8,348,419
December 2018	$	5,201,881	Various	$	5,201,881
January 2019	$	5,865,353	Various	$	5,865,353
February 2019	$	5,834,331	Various	$	5,834,331
March 2019	$	5,924,773	Various	$	5,924,773
April 2019	$	5,924,401	Various	$	5,924,401
May 2019	$	8,591,287	Various	$	8,591,287
June 2019	$	5,812,837	Various	$	5,812,837
July 2019	$	5,770,220	Various	$	5,770,220
August 2019	$	5,704,457	Various	$	5,704,457
September 2019	$	5,622,904	Various	$	5,622,904
October 2019	$	8,325,767	Various	$	8,325,767
November 2019	$	4,962,877	Various	$	4,962,877
December 2019	$	5,190,165	Various	$	5,190,165
January 2020	$	5,837,834	Various	$	5,837,834
February 2020	$	5,938,215	Various	$	5,938,215
March 2020	$	5,894,535	Various	$	5,894,535
April 2020	$	8,799,393	Various	$	8,799,393
May 2020	$	5,856,891	Various	$	5,856,891
June 2020	$	5,788,723	Various	$	5,788,723
July 2020	$	5,834,496	Various	$	5,834,496
August 2020	$	5,626,853	Various	$	5,626,853
September 2020	$	5,733,116	Various	$	5,733,116
October 2020	$	8,442,139	Various	$	8,442,139
November 2020	$	5,439,720	Various	$	5,439,720
December 2020	$	5,309,613	Various	$	5,309,613
January 2021	$	5,905,458	Various	$	5,905,458
February 2021	$	5,868,842	Various	$	5,868,842
March 2021	$	5,864,384	Various	$	5,864,384
April 2021	$	8,439,065	Various	$	8,439,065
May 2021	$	5,613,563	Various	$	5,613,563
June 2021	$	4,314,475	Various	$	4,314,475
July 2021	$	1,331,035	Various	$	1,331,035
August 2021	$	1,229,656	Various	$	1,229,656
September 2021	$	1,825,187	Various	$	1,825,187
October 2021	$	1,200,447	Various	$	1,200,447
November 2021	$	1,173,478	Various	$	1,173,478
December 2021	$	1,133,702	Various	$	1,133,702
January 2022	$	1,276,435	Various	$	1,276,435
February 2022	$	1,273,661	Various	$	1,273,661
March 2022	$	1,992,359	Various	$	1,992,359
April 2022	$	1,373,123	Various	$	1,373,123
May 2022	$	1,410,137	Various	$	1,410,137
June 2022	$	1,388,314	Various	$	1,388,314
July 2022	$	1,368,707	Various	$	1,368,707
August 2022	$	1,301,407	Various	$	1,301,407
September 2022	$	1,941,615	Various	$	1,941,615
October 2022	$	1,252,766	Various	$	1,252,766
November 2022	$	1,198,922	Various	$	1,198,922
December 2022	$	1,126,436	Various	$	1,126,436
January 2023	$	1,374,993	Various	$	1,374,993
February 2023	$	1,362,640	Various	$	1,362,640
March 2023	$	2,037,312	Various	$	2,037,312
April 2023	$	1,340,318	Various	$	1,340,318
May 2023	$	1,310,532	Various	$	1,310,532
June 2023	$	1,282,484	Various	$	1,282,484
July 2023	$	626,640	Various	$	626,640
August 2023	$	485,471	Various	$	485,471
September 2023	$	278,107	Various	$	278,107
October 2023	$	254,053	Various	$	254,053
	$	**345,285,801**		**$**	**345,285,801**

OTHERS				
Month (A)	ERS Requested Amount	Check Date	PREPA Amount Paid	Notes
September 2021	$ 1,547,001	09/02/21	$ 1,547,001	Difference in budgeted amount for FY 22 vs amount paid as of August 2021 for employer contribution
December 2021	$ 2,108,981	12/23/21	$ 2,108,981	Difference in budgeted amount for FY22 vs amount paid as of October 2021
April 2022	$ 4,775,354	04/01/22	$ 4,775,354	True up of budgeted amount for FY22 vs actual amount paid as of March 2022
June 2022	$ 1,661,130	06/29/22	$ 1,661,130	Budget FY22 vs Amount Paid June 22
	$ 10,092,467		**$ 10,092,467**	
Total PREPA Payments July 2017 - January 2024	**$ 555,258,624**		**$ 555,258,624**	
Amount per SPH	532,418,075		532,418,075	
Check	22,840,549		22,840,549	(B)

Notes

(A) The categorization of the monthly total is based on check date, not invoice date.

(B) PREPA's January 2024 payment of $22.8 million to the ERS is not included in the Supplier Payment History as it was paid with the Commonwealth loan proceeds.

VÍA CORREO ELECTRÓNICO
(secretaria@senado.pr.gov)

2 de febrero de 2024

Hon. Yamil Rivera Velez
Secretario del Senado
Senado de Puerto Rico

Re: Petición de Información 2024-0011

Estimado señor Secretario:

El pasado 16 de enero de 2024, recibimos la petición de información de referencia concediéndonos hasta el 23 de enero de 2024 para proveer cierta información relacionada con el plan de reestructuración de la deuda de la Autoridad de Energía Eléctrica de Puerto Rico (AEE). El 19 de enero de 2024, le solicitamos por correo electrónico una breve prórroga hasta hoy, 2 de febrero de 2024, para poder cumplir responsablemente con la información requerida. La prórroga fue concedida durante Sesión y notificada el 22 de enero de 2024.

En cumplimiento de la solicitud de información al Secretario del Departamento de Hacienda, incluimos la siguiente información:

1. **Depósitos (balance) efectuados al "Treasury Single Account" (TSA)**

En la siguiente tabla, mostramos los balances en depósitos del TSA para los años fiscales 2021 y 2022, los trimestres del Año Fiscal 2023 y los balances mensuales del Año Fiscal 2024 hasta el 31 de enero de 2024.

TSA Cash Balance	FY2021	FY2022	FY2023				FY2024						
(figures in millions)	June-21	June-22	Sep-22	Dec-22	Mar-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Operational Account - 30049458	2,000	1,000	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Money Market BPPR - 030091020	5,742	2,932	1,909	1,981	1,961	2,840	2,438	1,904	1,621	1,220	2,347	2,538	4,516
TSA Operational Cash	**7,742**	**3,932**	**3,909**	**2,981**	**2,961**	**3,840**	**3,438**	**2,904**	**2,621**	**2,220**	**3,347**	**3,538**	**5,516**
Emergency Reserve Account BPPR - 0300910	304	424	472	352	354	1,034	1,038	1,034	1,034	1,034	1,052	1,052	1,052
Hacienda POA - 030013488	-	2,900	1,475	1,140	1,027	908	908	908	908	908	908	756	756
Citibank - Hacienda TSA - 0400109036	3,624	743	744	2,249	2,271	1,293	1,297	1,302	1,306	1,311	1,316	1,320	1,326
TSA Reserves	**3,928**	**4,067**	**2,691**	**3,741**	**3,652**	**3,236**	**3,244**	**3,245**	**3,249**	**3,254**	**3,276**	**3,129**	**3,134**
TOTAL TSA CASH BALANCES [1]	$ 11,671	$ 7,999	$ 6,600	$ 6,722	$ 6,613	$ 7,076	$ 6,682	$ 6,149	$ 5,870	$ 5,474	$ 6,623	$ 6,666	$ 8,650
GENTAX SURI - 30103630 [2]	158	240	399	819	689	1,197	1,709	2,363	2,061	2,912	1,561	2,274	828
TOTAL TSA with Sweep Accounts	$ 11,828	$ 8,239	$ 6,999	$ 7,542	$ 7,302	$ 8,274	$ 8,391	$ 8,512	$ 7,930	$ 8,386	$ 8,184	$ 8,941	$ 9,478

Aclaramos que el TSA está compuesto por una cuenta bancaria principal operacional del Gobierno en la que se depositan la gran parte de los fondos y se desembolsan la mayoría de los gastos gubernamentales, así como otras cuentas complementarias. El mismo incluye recaudaciones de impuestos, cargos por servicios, recaudaciones intergubernamentales, entre otros recibos y depósitos.

De igual modo, el TSA se nutre la cuenta de la *GenTax Sweep Account*, la cual contiene ingresos del Fondo General no conciliados y la cuenta de *IVU Sweep Account*, la cual contiene los montos de IVU no conciliados. Ambas cuentas se transfieren regularmente al TSA.

2. **Balances de las cuentas bancarias de la Autoridad de Energía Eléctrica de PR (AEE)**

En la siguiente tabla, mostramos la información bancaria de las cuentas bancarias correspondientes a AEE para los meses del Año Fiscal 2024 hasta el 31 de diciembre de 2023.

Financial Institution	Account Description - Bank	7/31/2023	8/31/2023	9/30/2023	10/31/2023	11/30/2023	12/31/2023
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	52,168,091	65,489,196	10,895,739	48,665,282	22,338,573	55,461,992
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	75,521	115,756	71,966	102,913	48,531	102,145
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	21,193,920	11,738,484	1,588,255	2,279,522	4,367,739	4,979,365
Oriental Bank	NOT AVAILABLE	64,161,595	72,818,715	81,278,240	128,366,179	126,851,842	131,024,948
Oriental Bank	NOT AVAILABLE	-	-	-	-	-	41,777
First Bank	SUPER NOW NON PROFIT	15,581,249	4,350,137	119,920,710	31,026,332	73,159,119	24,374,401
Citibank	PREPA GF	4,814,134	1,724,455	1,250,385	1,643,385	3,499,842	1,071,488
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	233,417	374,197	104,831	77,113	84,070	70,070
Citibank	PREPA CFG	1,591,569	1,597,252	1,602,612	1,608,520	1,614,183	1,619,845
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	2,224,303	2,232,559	2,240,417	2,249,177	2,257,404	2,265,349
Citibank	FONDO ROTATIVO JCA	3,300,127	3,659,861	4,687,598	4,687,598	4,687,598	4,687,598
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	263,300	263,275	263,250	263,225	263,200	263,175
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	76,235	76,235	76,267	76,267	-	-
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	19,180,203	19,180,203	19,180,203	19,180,203	-	-
Banco Popular de PR	AUTORIDAD DE ENERGIA ELECTRICA DE PUERTO	1,315,608	1,320,491	1,325,138	1,330,320	1,335,185	1,339,885
Citibank	PREPA INSURANCE	29,156,810	29,260,929	29,595,538	29,704,637	29,809,219	29,913,306
US Bank	Sinking Fund Interest	16,878,989	19,879,060	19,879,135	19,879,217	19,881,116	19,881,198
US Bank	Sinking Fund Reserve	59,820	59,820	59,820	59,820	59,821	59,821
US Bank	Self Insurance	1,130	1,130	1,130	1,130	1,130	1,130
US Bank	Self Insurance Sub A	73	73	73	73	73	73
US Bank	Self Insurance	36,897	36,898	36,898	36,898	36,898	36,951
US Bank	Sinking Fund Reserve Sub A	290	290	290	290	290	290
US Bank	Sinking Fund Reserve Sub B	414	414	414	414	414	414
US Bank	Sinking Fund Reserve Sub C	93	93	93	93	93	93
US Bank	Sinking Fund Reserve Sub D	126,713	126,713	126,714	126,714	126,715	126,715
US Bank	Ser VV Escrow Dep	10	10	10	10	10	10
US Bank	CAPI Series 2012A	789	789	789	789	789	789
US Bank	PREPA Rev Fund Ser 2013A	65,709	65,710	65,710	65,710	65,710	65,711
US Bank	CAPI Series 2013A	153	153	153	153	153	153
Banco Popular de PR	Nómina Confianza	12,191	6,806	3,612	3,612	3,612	503,612
First Bank	Const.	1,191,523	1,191,523	1,191,523	1,204,885	1,204,885	1,204,885
First Bank	Const.	17,338,842	14,338,842	14,338,842	14,338,842	14,443,784	14,473,784
First Bank	Const.	3,426,396	3,426,396	3,426,396	3,464,821	3,464,821	3,464,821
Citibank	Const.	25,979	605,671	960,636	3,333,068	3,344,803	4,197,106
US Bank	Const.	994,856	998,857	1,002,879	1,006,967	1,011,225	1,015,363
First Bank	Operating Account	66,432,601	239,211,593	108,271,994	63,864,126	145,187,978	167,725,838
First Bank	Non Federally Funded Capital Account	30,130,316	4,932,360	34,243,827	34,377,612	24,426,769	26,868,018
First Bank	Outage Events Reserve Account	1,475,440	1,480,979	1,486,381	1,492,188	30,063,315	1,566,275
First Bank	Gen Expend. Purchased Power Acct.	60,582,564	70,849,488	46,302,020	36,620,581	10,259,223	20,877,759
First Bank	Gen Expend. Fuel Acct.	326,011,729	258,017,850	74,153,450	117,585,885	175,998,869	162,199,993
First Bank	Contingency Reserve Acct.	78,453,542	78,748,054	79,035,301	79,344,080	79,644,066	79,955,223
First Bank	Federally Funded Capital Account	408,383,101	265,947,225	305,697,256	397,252,022	344,349,483	333,342,543
Banco Popular de PR	FEMA 4473 DR PR Earthquake	6,702,887	6,702,887	6,702,887	6,702,887	-	-
Banco Popular de PR	FEMA 4493 DR PR COVID 19	1,875,438	1,875,438	1,875,438	1,875,438	-	-
Banco Popular de PR	FEMA 4339 DR 428 Generation Projects	20,124,423	20,124,423	20,124,423	20,124,423	-	-
Banco Popular de PR	ARPA Funds	-	50,627,127	50,627,127	-	349,269	349,269
Banco Popular de PR	FEMA Reimbursement	134,996,083	124,318,981	206,361,265	147,819,489	102,605,920	240,963,648
Banco Popular de PR	FEMA Working Capital Advances (2)	41,496,066	41,650,074	41,796,664	73,816,540	74,086,476	18,839,967
First Bank		66,193,879	54,578,755	45,474,079	3,650,400	24,311,383	6,567,558
Banco Popular de PR	HMGP DR 4339	1,057,521	1,718,488	2,193,106	3,109,563	947,732	23,606,622
First Bank	Genera PR - Mobilization Account	15,242,206	14,030,521	4,930,555	4,949,818	3,340,263	3,353,313
US Bank	Sobrantes Series 2010XX	176	176	176	176	176	176
First Bank	GenCo Reserve Account	30,141,743	30,254,894	30,365,254	23,342,095	30,580,218	30,699,690
Banco Popular de PR	HydroCo Operating Account	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000
Citibank	Working Capital Advances - Generation Projects				31,812,809	31,924,729	33,263,170
US Bank	Series 2010 EEE Construction Account				826	833	837
Banco Popular de PR	Loan - ERS						115,000,000
ICE CUENTAS BANCARIAS		$ 1,547,196,660	$ 1,522,410,305	$ 1,377,217,469	$ 1,364,925,136	$ 1,394,439,545	$ 1,569,828,161

Cabe destacar que la información presentada tanto de TSA como de las cuentas bancarias de la AEE, es información que se publica mensualmente en las páginas electrónicas del Departamento de Hacienda y de la Autoridad de Asesoría Financiera y Agencia Fiscal de Puerto Rico.

Esperamos que estos comentarios sean de utilidad a esta Secretaría y nos reiteramos a su disposición de necesitar información adicional.

Cordialmente,

Lcdo. José Francisco Chaves Ortiz
Secretario Auxiliar
Oficina de Asuntos Legales