



Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204
PortlandGeneral.com

February 15, 2019

Public Utility Commission of Oregon
Attn: John Crider
Administrator, Energy Rates, Finance and Audit Division
201 High Street SE, Suite 100
PO Box 1088
Salem, OR 97301

RE: UE 335 PGE's 2018 Capital Project Report

Dear Mr. Crider;

Enclosed, per Paragraph 2(e) of the Partial Stipulation dated September 6, 2018, is Portland General Electric Company's list of capital projects projected for 2018, the capital projects placed into service in 2018, and the projected and actual cost by project. Also, included is the monthly actuals close to plant for each project.

If you have any questions or require further information, please call me at (503) 464-7805.

Sincerely,

A handwritten signature in blue ink, appearing to read "Stefan Brown", is written over a light blue rectangular background.

Stefan Brown
Manager, Regulatory Affairs

Enclosure

Funding Project Description	Projected Fully Loaded Yearend	Actual Fully Loaded CWIP*	Variance From Actual to Projected
	2018 CWIP* Transferred to Plant \$ (as of 9/30/2018)	Transferred to Plant \$ (as of 12/31/2018)	
P14628 Replace Failed Underground Cables	14,934,185	15,894,801	960,615
P14757 Underground Locating	384,439	378,447	(5,991)
P16567 UG FITNES	596,211	883,966	287,754
P17265 Tektronix Sub - New Switchgear & Ca	-	775	775
P17443 T&D Major System Inspect, Replace	14,380,251	18,439,850	4,059,599
P19712 Underperforming Feeder Improvements	1,093,473	1,101,567	8,094
P20807 Bvr-Reconfig. KB Pipeline Inside PI	-	44,072	44,072
P22449 Colstrip Capital Project	4,577,397	2,659,533	(1,917,864)
P22722 Pelton/Round Butte PME - Recreation	154,290	-	(154,290)
P22723 Pelton/Round Butte PME - Aquatic Re	1,948,703	4,175	(1,944,528)
P22727 Pelton/Round Butte PME - Lower Rive	68,441	42,467	(25,974)
P22771 PRB PME - Habitat Fund	679,432	-	(679,432)
P22840 Replace/Rewind Failed Sub Transfrmr	1,020,280	1,020,341	62
P23077 Horizon 230kV - Phase 1 Constructio	15,810	16,152	343
P23438 Various Substations - Install SCADA	60	2,529	2,469
P23528 Clackamas PME - Recreation, Aesthet	922,924	787,933	(134,991)
P23599 Clackamas PME - Aquatics	891,523	52,455	(839,069)
P23754 AMI - Advanced Metering Infrastruct	-	(8,512)	(8,512)
P23970 Corporate Strategic Fiber Project	973,226	1,081,082	107,856
P24225 Beaver - Install Remedial Action Sc	5,513	5,404	(109)
P24723 Substation Arc Flash Mitigation	5,262,472	5,605,677	343,205
P24995 PRB Water Fund	686,401	-	(686,401)
P25250 Scholls Ferry Substation - Construc	-	(12)	(12)
P25502 Server Infrastructure Fitness	22,070	22,070	-
P26122 Transmission Pole Full Length Repla	-	(19)	(19)
P26261 Mt Hood Corridor Reliability Projec	1,263	2,204	941
P26416 Clackamas PME - Habitat Improvement	204,481	249,826	45,344
P26724 Rosemont Sub - New DistTransformer	856	557	(299)
P26874 QRP Reliability Improvements (2012-	70,000	71,930	1,930
P27149 DSG Dispatchable Standby Generation	-	14	14
P27182 C Springs 1&2 - Upgrade Fire System	-	(21,680)	(21,680)
P35023 Maximo for IT	-	(273)	(273)
P35040 Feeder Monitoring	104,354	49,364	(54,991)
P35070 Vehicle Vintage Replacement	(284,780)	473,397	758,176
P35085 Substation Fitness	81,163	88,028	6,866
P35100 Purchase Project Porfolio Mgmt Tool	25	25	-
P35127 CS - Install Warehouse Mezzanine	(230,946)	(230,946)	-
P35139 Facilities Fitness	17,601	2,671	(14,930)
P35149 Colstrip Transmission NW Energy	320,255	161,189	(159,067)
P35150 BR - Replace HRSG Superheaters	216,854	216,854	-
P35155 Install NERC CIP Substation Access	65	65	-
P35172 PSES - Generation Fitness Fund	4,291,760	4,584,063	292,303
P35185 BC - Install Laser Anemometry Pilot	1,818	1,818	-
P35205 Port Westward 2 Construction	-	673	673
P35210 BN Capital Tools & Lab Equip	58,080	107,387	49,306
P35212 Misc. Pumps, Valves, Motors	204,960	148,195	(56,765)
P35214 BN - Misc. Pumps, Valves, Motors	18,023	98,213	80,190
P35217 Generation Cap Tools & Lab Equip	449,395	523,843	74,448
P35221 PRB Capital Tools & Lab Equip	30,503	35,759	5,257
P35228 Clackamas PME Road Fund	48,462	4,960	(43,501)
P35327 Marquam Tri-Met Bridge 115kV Line	6,361,464	6,361,464	-
P35329 Blue Lake/Gresham - System Upgrades	28,927,331	28,301,462	(625,869)
P35344 Install LED Streetlights	14,355	14,765	410
P35349 Dist Line Sys - Equip Replacement	377,735	441,362	63,628
P35352 Consolidation of Regional Line Disp	930	910	(19)
P35360 FY: Purchase Work Barge	-	7	7
P35407 2020 Vision Wave 2 -MMS,GIS,OMS	569	569	(0)
P35479 TASNET SCADA System Replacement	912,964	925,286	12,322
P35481 KB Pipeline - Beaver T replacement	-	821	821
P35484 230kV Pole Replacements	416,286	542,300	126,014
P35501 Hayden Island Substation Upgrades	17	16	(0)

P35522 Desktop Computer Fitness Program	1,494	2,061	567
P35532 WTC Floor Upgrade	-	558	558
P35535 Generating Plants Cyber Security	(20,865)	1,522	22,387
P35537 BPA Relay Rep Malin Round Mtn #1 #2	242,000	-	(242,000)
P35556 Avian Protection Program	92,552	174,421	81,869
P35565 PSES - Generation Site Paving	615,227	124,920	(490,307)
P35570 West Union - 115kV Conversion	4,345,135	4,442,377	97,242
P35571 Shute Substation - Build New Sub	(909)	399	1,308
P35572 Build New Rock Creek Substation	173,170	50,170	(123,000)
P35573 Ruby - 115kV Conversion	1	1	-
P35591 As-Built Drawings - Generation	945,127	1,114,061	168,934
P35619 CET Install Oracle CC&B/MDM Systems	145,055,407	143,181,467	(1,873,940)
P35631 Sunset - D1X Transformer Upgrades	13	13	(0)
P35640 CET- Employee Advocacy & Engagement	5	5	0
P35650 Emergent Radio Equipment	69,140	61,143	(7,997)
P35672 ETRM Risk Management Consolidation	-	1,016	1,016
P35677 BR: Install NGP Corrosion Protction	25	-	(25)
P35679 Construct Marquam Project	51,394,615	51,584,798	190,183
P35683 EMS Readiness Center Enhancement	307	307	(0)
P35688 BI & Data Management for PGE	12,341	(0)	(12,341)
P35802 Horizon Phase II Project	2,297,248	2,903,964	606,716
P35813 Beaverton-Denny115kV Reconductor	(326)	(317)	9
P35815 Abernethy Substation Capacity Addn	3,380,699	3,378,501	(2,198)
P35820 Estacada Capacity Addition	0	1	0
P35823 Big IQ purchase and configuration	147	147	(0)
P35828 Faraday Switchyard 115kV Upgrade	414	463	49
P35831 X-Phase Synchrophasor Installation	1,996	1,996	0
P35834 Round Butte Transmission Upgrades	(193,202)	-	193,202
P35835 Portland Service Center Upgrade	7,798,622	8,219,005	420,383
P35842 N. Plains - Pumpkin Ridge Recond.	5,848	5,848	-
P35844 2015 Corporate Furniture Purchases	198	198	-
P35846 CPP Switch Replacement	206,070	520,025	313,955
P35849 PeopleSoft HR 9.2 Upgrade	1,017,726	1,017,536	(190)
P35853 PeopleSoft Financials 9.2 Upgrade	8,760	8,760	-
P35855 AMI Infrastructure Improvements	170,976	109,704	(61,272)
P35860 Application Password Vaulting	(90,001)	(79,501)	10,500
P35873 Certificate Management Phase II	-	(375)	(375)
P35881 IT for Facilities & Communications	18,613	19,894	1,280
P35890 Purchase Distribution Transformers	11,141,241	10,560,328	(580,913)
P35892 Purchase Customer Meters	2,764,660	3,233,121	468,460
P35894 Communications Fitness	839,311	934,654	95,342
P35908 SAM: Proactive UG Cable Program	9,814,304	9,030,485	(783,819)
P35914 Substation Fitness 2015-2018	4,422,500	4,141,947	(280,553)
P35916 PW: Install Modular CT Insulation	81,384	81,384	-
P35924 Distribution System Construction II	45,904,852	50,117,494	4,212,642
P35925 Dist. Customer Line Construction II	32,335,960	36,214,290	3,878,330
P35938 Field Voice Communications System	28,234,063	14,361,334	(13,872,729)
P35940 FY: Unit 1-5 Relay Upgrade	2,716	-	(2,716)
P35941 OG: Switchyard Upgrade	5,555,109	5,621,807	66,697
P35942 Replace Engine Generator at Malin	-	92,834	92,834
P35946 RB: Replace VAR-4 Transformer	7	7	-
P35951 BC: Construct 230kV Ring Bus	2,677,659	2,932,211	254,552
P35956 BR: Upgrade MCC's for HRSG's	61,840	61,840	-
P35959 WSH Structural/Reliability Upgrades	5,594,615	8,715,637	3,121,021
P35975 Substation Interconnection Const	7	7	-
P35980 PCB Transformer Replacement	16,161,196	16,946,144	784,948
P35995 Downtown UG Core Cable Replacement	414,724	409,757	(4,967)
P36005 Spectrum - 700mhz	16,854	16,854	0
P36015 Remediation/Decom Vacant Land	76,454	-	(76,454)
P36029 Elma Capacity Addition	9,179,338	9,200,146	20,807
P36036 Canemah-Sullivan 57kV Project	88,253	92,619	4,366
P36039 Harborton Reliability Project	541,024	12,914	(528,110)
P36042 Tektronix Substation Upgrade	19,049	18,529	(520)
P36044 3WTCPL Upgrade	2,654,238	3,047,868	393,629
P36046 Corporate Security Fitness	249,226	190,490	(58,736)
P36054 2016 CyberSecurity Fitness	34,000	34,000	-

P36055 Corp Security Failover Part II	2,111	2,111	-
P36056 Upgrade/Add Revenue Meters	3,060,000	3,008,625	(51,375)
P36061 BR: CTG Rewind Program 2016 - 2018	2,880,763	1,461	(2,879,303)
P36062 RB: Airgap Monitor Upgrade RealTime	37	37	-
P36083 Replace Xfer trip at Grizzly	-	250,000	250,000
P36087 PRB - Misc. Pumps, Valves, Motors	5,028	11,518	6,490
P36088 SAM: Rivergate N Substation Rebuild	27,421	28,382	961
P36101 Substation Communication Upgrade	526,441	-	(526,441)
P36105 2016-2019 Dispatchable Standby Gen	935,422	651,945	(283,478)
P36106 UPS Battery/Capacitor Fitness	18,306	109,645	91,339
P36109 Distribution Automation	98,695	100,430	1,735
P36116 Wind Generation Fitness Program	4,180,674	6,244,326	2,063,651
P36122 Performance & Reliability Software	13,510	15,222	1,712
P36127 OG: Build Timothy Lake Powerhouse	8,952,670	9,457,460	504,790
P36133 WSH: Upgrade Comm. Infrastructure	38,951	39,479	528
P36134 Hydro Control System Upgrade	9,941,604	9,363,560	(578,044)
P36135 BC: Construct Warehouse/Shop Bldg	787,191	787,191	-
P36138 PW2 Add Blackstart Capability	255,075	81,419	(173,655)
P36145 Downtown Reach - DSL Easements	1,337	1,337	-
P36146 Energy Market Readiness Project	(52,202)	(163,125)	(110,923)
P36166 Orient sub: Capacity Addition	9,055,798	8,263,406	(792,391)
P36170 OHSU Infrastructure Upgrades	631,479	551,022	(80,457)
P36175 Nike Campus UG Primary Service	2,423,473	-	(2,423,473)
P36177 Energy Tracker Replacement	11,197	-	(11,197)
P36178 North Portland Conversion	4,116	-	(4,116)
P36179 EMS Upgrades for EIM	(7,365)	(7,365)	0
P36180 Purchase Vehicles SDPM & Distribut	6,552	6,422	(130)
P36189 PACE HR	2,656	7,746	5,090
P36193 Energy Network Redesign	9,753	9,753	-
P36195 PACE - Finance - Financials	3,203	3,203	-
P36205 Metal Streetlight Grounding	553,029	499,961	(53,068)
P36209 Silverton Capacity Addition	711,536	282,046	(429,490)
P36211 Shute-West Union 115 line addition	7,352,181	7,777,199	425,018
P36218 Upgrade 3WTCBR Control Room	731	731	-
P36222 Legacy Tool Replacement Project	-	32,924	32,924
P36223 Replace Primary Cables Ronler Acres	291,203	291,203	-
P36224 myAccess (aka, 'replace ITIM', IAM)	1,914,967	77,219	(1,837,748)
P36228 Generation Cyber Security NIDs	6,181	6,181	-
P36229 McGill Sub Capacity Additions	4,774,194	4,289,864	(484,330)
P36234 Install Storeroom Pole Bunkers	223,621	203,757	(19,863)
P36235 Install Low OH Services Guarding	167,369	232,278	64,909
P36240 Tabor Control Enclosure Upgrades	1,603,733	1,603,733	-
P36249 Shute Sub - Build Storage Yard	349,617	349,617	-
P36251 Shute WJ2 Switchgear	3,152,104	3,196,862	44,759
P36252 Sunset WR2 DGA Monitor	254,745	243,765	(10,980)
P36260 2017 Facilities Capital Fitness	4,212	3,537	(675)
P36264 Websphere Disaster Recovery	3,083,518	3,145,458	61,940
P36270 Roseway Substation Expansion	12,450	33,877	21,427
P36271 OG: Timothy Spillway Modifications	311,922	4,112	(307,810)
P36272 T&D Substation Reliability Upgrades	(5,766)	(5,766)	-
P36273 Replace Glendoveer-Gresham 115kV	13,790	13,790	-
P36275 CCC/WLC Corp Training Upgrade	240,904	240,904	(0)
P36276 Workplace EV Charging Phase 2	47,104	186,635	139,531
P36280 Purchase Mobile Transformers	127,617	145,596	17,978
P36283 Comm Tech Dept - Buy Test Equipment	198,074	256,618	58,544
P36284 2017 Server Fitness	96,902	96,907	5
P36285 PurchaseT&D - Tools & Lab Equipment	605,100	897,377	292,277
P36286 2017 Network Fitness	443,397	405,898	(37,499)
P36287 2017 Cyber Security Fitness	184,442	191,102	6,660
P36288 2017 Desktop Fitness	170,750	255,327	84,577
P36290 BR: Replace second VFD for BFP	4,803	4,803	-
P36293 BR - Replace Steam Turbine ETD	6,770	6,770	-
P36296 NF: Install Xfrmr Depressurization	657,369	657,338	(32)
P36301 SN: Throat Liner Unit 13	2,435	2,435	-
P36302 CS - Storage/Shop Building	474,125	475,393	1,268
P36303 Westside Digital Upgr/RAS Proj	548,365	549,935	1,570

P36305 BC - Replace Climb Assist	325,292	325,245	(46)
P36307 PRP - Vehicles & Capital Equipment	163,673	138,634	(25,038)
P36324 Garden Home Substation Upgrade	1,894,991	-	(1,894,991)
P36326 Install Database Monitoring Tool	528	528	-
P36327 Replace Kelley Point Switchgear	1,215,314	1,216,550	1,235
P36329 BR: Overhaul GT Units	507,548	507,548	-
P36334 Sherwood Security Upgrades	3,308,622	30,851	(3,277,770)
P36335 Delaware Substation Rebuild	6,764,587	6,988,989	224,401
P36338 BR: Unit 8 Repair	2,377	2,377	-
P36339 PSC Transformer Shop Enclosure	13,756	13,756	-
P36341 St Marys System Protection Upgrade	53,830	-	(53,830)
P36353 NF: Install Fish Ladder Pumps	48	48	-
P36354 Spectrum - 200mhz	(5,865)	-	5,865
P36357 Purchase OSISoft Licenses	9,250	9,250	0
P36358 Purchase IT Storage for Critical Sy	21,730	21,730	-
P36361 Sunset Capacity Addition - WJ9	1,832,336	1,889,465	57,129
P36365 CY: Complete Carty As-Built	9,503	9,503	-
P36368 Energy Tracker to OPower Conversion	1,405,854	1,405,876	21
P36371 Install e-locks at CIP sites	1,221,205	1,183,413	(37,791)
P36375 CS Performance Upgrades	5,078,734	4,786,193	(292,541)
P36378 Centennial Substation Upgrades	5,797	1,130	(4,666)
P36393 McLoughlin Storage Yard Expansion	13,612	13,612	-
P36394 Vintage Vehicle Replacement II	12,605,226	12,052,710	(552,515)
P36407 Automate Development Operations	1,334,837	1,334,837	-
P36408 Parks Fitness Fund	218,105	236,445	18,340
P36409 RM: Upgrade Attraction Water Pumps	6,083	6,083	-
P36412 Incremental Added Vehicles	1,098,082	1,207,582	109,501
P36413 Double Pole Project	642,609	221,564	(421,045)
P36415 PACE - Enterprise Data Warehouse	67,509	67,509	-
P36423 PW: Charge Air Cooler In site clean	535,466	-	(535,466)
P36426 RM: Traveling Screen Replacement	493,451	447,828	(45,622)
P36429 BR: Purchase Capital Spares	641,353	642,269	916
P36431 PW - New Generation Building Roof	-	305,932	305,932
P36432 CS:Install GE Network Security Cent	124,851	125,108	257
P36433 BR: Upgrade Critical Valves	218,658	209,609	(9,049)
P36435 Gen CIPv5 and Security Improvements	405,449	452,928	47,478
P36440 3WTC Building Security Hardening	208,168	231,956	23,787
P36442 2018 Fitness for Facilities Mgmt	1,304,983	1,327,843	22,860
P36443 2018 Capital Furniture Purchases	229,839	334,826	104,988
P36444 WSH: Upgrade Excitation System	129,379	-	(129,379)
P36445 BN: Gen CIPv5 Security Improvements	226,645	305,498	78,853
P36449 PRB: Upgrade Excitation System	70,603	-	(70,603)
P36450 Urban Feeder UG Conversion	4,367,360	2,391,744	(1,975,616)
P36451 CY: Upgrade Heat Trace System	13,781	13,781	-
P36454 Substation Rerock - multiple sites	2,322,423	2,580,803	258,380
P36463 BR- Install Vibration Monitoring	347,318	261,297	(86,020)
P36464 Facilities Asphalt R&R Project	364,981	364,981	-
P36467 Malin Replace SER/SCADA RTU	73,048	-	(73,048)
P36469 Zetron Expansion	12,276	199,943	187,667
P36470 Sensus DT34 Meter Exchanges	329,330	48,379	(280,951)
P36472 2018 System Growth Blanket	617,562	1,957,438	1,339,876
P36473 2018 Infrastructure Fitness Blanket	1,496,131	3,362,457	1,866,326
P36485 Intel D1X Add and Replace Cables	1,960,529	4,004,664	2,044,134
P36487 PGE Safety - Vehicle for Generation	1,464	1,462	(2)
P36488 Furniture - Staff Growth (TDRI)	16,921	16,921	-
P36489 T&D Application Reliability Imprvmt	8,094	3,622	(4,472)
P36490 Build WTC Integrated Sec Ops Ctr	11,124	11,483	359
P36491 Purchase Forklift for Meter Warehou	34,986	34,986	-
P36497 3G Meter Replacement Project	986,463	791,676	(194,787)
P36498 Silverton West Feeder Reconductor	1,008,018	1,035,375	27,357
P36502 IT Storage for Critical Systems	1,203,620	1,203,609	(11)
P36503 Enterprise Performance Monitoring	1,939,496	105,401	(1,834,095)
P36505 Netapp Storage Array	108,796	108,785	(11)
P36506 Customer Touchpoints infrastructure	(698)	(698)	-
P36507 Desktop Hardware for CET	366,000	366,000	-
P36508 Verizon High Speed Deployment	66,856	-	(66,856)

P36515 Tipping Point Upgrade	43,516	43,479	(37)
P36516 2018 Server Vintage	2,126,592	1,411,810	(714,782)
P36517 Secure Internet Facing Zone (SIFZ)	150,331	150,327	(4)
P36518 Office 2016 Upgrade	(1,099)	117,474	118,574
P36519 Conference Room IT Updates	115,453	138,491	23,038
P36521 Build Automation Infrastructure	272,147	118,933	(153,214)
P36522 Distribution Automation	155,369	-	(155,369)
P36524 2018 Network Vintage	2,295,154	1,981,161	(313,993)
P36525 2018 Desktop Vintage	4,011,280	6,190,530	2,179,249
P36527 TRIP (TripSaver II) Implementation	1,519,678	-	(1,519,678)
P36530 Substation upgrades for BNRG Solar	-	237,481	237,481
P36536 SN: Upgrade Cooling Water System	661,839	653,723	(8,115)
P36537 Unjacketed Cable Replacement Prgrm	3,892,956	2,093,148	(1,799,807)
P36538 2018 Facilities Mgmt MySafety	103,260	144,879	41,618
P36541 Build TD&G Metrics	951,761	-	(951,761)
P36542 Data Security Project	456,579	-	(456,579)
P36545 Tree Wire Installment Program	196,458	279,895	83,437
P36546 Data Center Resiliency 2018	3,672,849	2,884,564	(788,285)
P36547 Web Security Capacity Expansion	71,021	89,463	18,442
P36548 Digital Board Upgrade	35,065	79,154	44,089
P36549 Cisco Agent Desktop Replacement	800,216	687,743	(112,473)
P36551 Kelley Point Switch Replacement	723,936	-	(723,936)
P36554 Vulnerability Scanning Tool	5,884	55,331	49,447
P36555 Threat Response and EDR Tool	346,368	370,226	23,858
P36558 Purchase of Oracle Software	742,996	740,775	(2,221)
P36576 Update/Replace EMS System	1,108,469	599,988	(508,481)
P36577 ARM and Maximo Reliability	2,087,686	842,066	(1,245,619)
P36578 GIS Reliability	32,922	63,370	30,448
P36579 OMS Reliability	58,347	228,915	170,568
P36580 OIS Reliability	65,000	-	(65,000)
P36583 Strategic Spare Substation Equip	3,950,301	-	(3,950,301)
P36593 Install Lanyard Safety Alarms	49,409	267,369	217,960
P36594 Redesign Certificate Management	105,544	-	(105,544)
P36595 NextGen Firewall	1,029,549	1,166,688	137,139
P36619 COOL Rpt Mgmt Sys replacement	60,000	-	(60,000)
P36643 Implement a Centralized Log Aggrega	570,075	340,794	(229,281)
P36647 Improve IT Disaster Rcvry Capabilit	1,878,094	1,674,543	(203,551)
P36657 CSS Office Reconfiguration	9,712	39,685	29,973
P36659 PSLD Facilities Upgrade	7,914	341,385	333,471
P36660 Implement Tier 2 compute and storag	849,397	849,397	-
P36661 Deploy Multi Factor Authentication	-	84,212	84,212
P36668 Maxim Second 115kV Tap	12,812	(40,116)	(52,928)
P36670 Backup Design	-	2,922	2,922
P36673 Purchase Water Trailers	21,087	41,590	20,502
P36677 Endpoint Replacement	905,596	59,834	(845,762)
P36679 Orenco Substation 115kV Rebuild	-	37,644	37,644
P36682 Customer Research Database	380,325	-	(380,325)
P36690 New 115kV Tapline for CRPUD Sub	4,160	(312,651)	(316,811)
P36700 Mcloughlin Pole yard	549,222	341,124	(208,098)
P36701 BusinessIntelligence - Advanced SAS	623,549	41,777	(581,772)
P36702 Health - Gym Fitness Projects	-	60,562	60,562
	659,812,169	631,705,259	(28,106,910)

* CWIP=Construction Work in Progress

P36431 PW - New Generation Building Roof	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	305,932	305,932
P36432 CS:Install GE Network Security Cent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125,108	125,108
P36433 BR: Upgrade Critical Valves	-	305	142,250	25,035	(2,025)	627	122	8,785	1,604	32,332	199	-	-	-	-	377	209,609	
P36435 Gen CIPv5 and Security Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	452,928	452,928
P36440 3WTC Building Security Hardening	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	231,956	231,956
P36442 2018 Fitness for Facilities Mgmt	10,521	-	11,444	112,888	2,483	43,378	121	85,036	38,100	135,519	622	-	-	-	-	887,731	1,327,843	
P36443 2018 Capital Furniture Purchases	-	32,663	13,031	18,186	15,310	24,246	-	34,197	-	57,000	110,600	-	-	-	-	29,594	334,826	
P36445 BN: Gen CIPv5 Security Improvements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	305,498	305,498
P36450 Urban Feeder UG Conversion	-	-	-	-	-	3,313	-	-	-	331,469	638,982	661,428	-	-	-	756,551	2,391,744	
P36451 CY: Upgrade Heat Trace System	3,505	5,372	(382)	5,298	(31)	(4)	24	-	-	-	-	-	-	-	-	-	-	13,781
P36454 Substation Rerock - multiple sites	706,534	3,959	60,724	97,797	5,681	548,995	(14)	17,430	(1)	468,648	101,452	-	-	-	-	569,596	2,580,803	
P36463 BR- Install Vibration Monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	261,297	261,297
P36464 Facilities Asphalt R&R Project	-	-	-	-	-	-	-	189,209	175,773	-	-	-	-	-	-	-	-	364,981
P36469 Zetron Expansion	-	-	-	-	-	-	-	-	-	-	5,670	13,011	-	-	-	181,262	199,943	
P36470 Sensus DT34 Meter Exchanges	-	-	-	-	-	-	-	1,963	12	2,355	12	-	-	-	-	44,038	48,379	
P36472 2018 System Growth Blanket	-	-	356,203	3,391	18,396	194,174	29,244	865	15,288	9,944	206,096	-	-	-	-	1,123,836	1,957,438	
P36473 2018 Infrastructure Fitness Blanket	-	4,156	867,063	106,010	39,528	(36,877)	-	(395,338)	514	997,636	61,918	-	-	-	-	1,717,846	3,362,457	
P36485 Intel D1X Add and Replace Cables	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,004,664	4,004,664
P36487 PGE Safety - Vehicle for Generation	1,363	124	(199)	2	(14)	(1)	(8)	1	197	(4)	1	-	-	-	0	-	1,462	
P36488 Furniture - Staff Growth (TDRI)	-	16,921	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,921	
P36489 TBD Application Reliability Imprvmt	186	20	8,059	7,975	16,575	12,914	-	16,120	1,553	(18,290)	(43,128)	-	-	-	1,637	-	3,622	
P36490 Build WTC Integrated Sec Ops Ctr	(9,611)	6,773	(254)	13,951	211	48	-	6	-	(6)	(0)	-	-	-	365	-	11,483	
P36491 Purchase Forklift for Meter Warehou	-	-	-	-	-	34,986	-	-	-	-	-	-	-	-	-	-	34,986	
P36497 3G Meter Replacement Project	-	-	98,505	70,161	62,094	84,790	40,990	130,301	80,523	100,952	84,638	-	-	-	38,721	-	791,676	
P36498 Silverton West Feeder Reconnector	510,964	687,340	190,402	162,351	(539,119)	(35,646)	(7,318)	16,142	22,903	(1,490)	21,629	-	-	-	7,218	-	1,035,375	
P36502 IT Storage for Critical Systems	-	1,200,000	-	-	-	-	-	-	3,620	(11)	-	-	-	-	-	-	1,203,609	
P36503 Enterprise Performance Monitoring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	105,401	105,401	
P36505 Netapp Storage Array	-	6,147	33,133	21,896	15,820	24,050	7,132	596	23	(181)	(3)	-	-	-	173	-	108,785	
P36506 Customer Touchpoints infrastructure	-	-	(698)	-	-	-	-	-	-	-	-	-	-	-	-	-	(698)	
P36507 Desktop Hardware for CET	-	366,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	366,000	
P36515 Tipping Point Upgrade	-	-	-	-	-	-	43,549	(55)	22	(72)	4	-	-	-	31	-	43,479	
P36516 2018 Server Vintage	-	12,183	66,396	88,045	124,434	135,700	192,590	885,825	136,230	(537,179)	139,063	-	-	-	168,524	-	1,411,810	
P36517 Secure Internet Facing Zone (SIFZ)	-	-	-	-	97,750	51,861	723	(6)	2	(8)	0	-	-	-	3	-	150,327	
P36518 Office 2016 Upgrade	-	-	-	-	-	-	-	-	27,847	3,343	2,465	-	-	-	83,820	-	117,474	
P36519 Conference Room IT Updates	-	-	-	683	2,430	885	40,876	575	-	2,512	-	-	-	-	90,530	-	138,491	
P36521 Build Automation Infrastructure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118,933	118,933	
P36524 2018 Network Vintage	-	60,026	30,323	29,900	30,193	55,132	722,027	62,127	57,795	267,911	386,727	-	-	-	279,002	-	1,981,161	
P36525 2018 Desktop Vintage	-	23,774	459,277	770,675	214,830	241,023	290,150	363,906	507,660	552,221	935,411	-	-	-	1,831,603	-	6,190,530	
P36530 Substation upgrades for BNRG Solar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	237,481	237,481	
P36536 SN: Upgrade Cooling Water System	-	-	-	-	-	-	-	347,262	260,752	27,194	3,118	-	-	-	15,397	-	653,723	
P36537 Unjacketed Cable Replacement Prgrm	-	-	-	67	3,479	294,346	199,582	470,641	181,374	164,864	318,428	-	-	-	460,367	-	2,093,148	
P36538 2018 Facilities Mgmt MySafety	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144,879	144,879	
P36545 Tree Wire Installment Program	-	-	-	7,506	15,754	(21,336)	(1,256)	77,731	106,840	80,325	9,071	-	-	-	5,259	-	279,895	
P36546 Data Center Resiliency 2018	-	-	-	26,577	51,518	37,948	23,361	25,577	1,959,046	38,600	41,644	-	-	-	680,292	-	2,884,564	
P36547 Web Security Capacity Expansion	-	-	-	-	-	71,021	-	-	-	17,618	807	-	-	-	18	-	89,463	
P36548 Digital Board Upgrade	-	-	-	-	-	-	-	35,063	1	777	30,598	-	-	-	12,714	-	79,154	
P36549 Cisco Agent Desktop Replacement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	687,743	-	687,743	
P36554 Vulnerability Scanning Tool	-	-	-	-	-	-	-	2,410	-	3,651	689	-	-	-	48,581	-	55,331	
P36555 Threat Response and EDR Tool	-	-	-	-	-	-	-	2,974	-	2,064	-	-	-	-	365,189	-	370,226	
P36558 Purchase of Oracle Software	-	-	-	-	-	-	-	-	742,996	(2,221)	-	-	-	-	-	-	740,775	
P36576 Update/Replace EMS System	-	-	-	-	-	-	-	-	-	677,113	3,627	-	-	-	(80,752)	-	599,988	
P36577 ARM and Maximo Reliability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	842,066	-	842,066	
P36578 GIS Reliability	-	-	-	-	-	-	-	-	-	-	49,954	-	-	-	13,417	-	63,370	
P36579 OMS Reliability	-	-	-	-	-	-	-	-	-	-	30,913	(0)	-	-	198,002	-	228,915	
P36593 Install Lanyard Safety Alarms	-	-	-	-	-	-	49,409	-	-	155,578	17,758	-	-	-	44,624	-	267,369	
P36595 NextGen Firewall	-	-	-	-	-	-	-	182,108	366,363	47,701	407,451	-	-	-	163,065	-	1,166,688	
P36643 Implement a Centralized Log Aggrega	-	-	-	-	-	-	-	-	-	-	-	-	-	-	340,794	-	340,794	
P36647 Improve IT Disaster Rcvry Capabilit	-	-	-	-	-	-	-	-	-	-	1,298,365	-	-	-	376,178	-	1,674,543	
P36657 CSS Office Reconfiguration	-	-	-	-	-	-	-	-	9,712	2,557	-	-	-	-	27,416	-	39,685	
P36659 PSLD Facilities Upgrade	-	-	-	-	-	-	-	-	-	107,228	191,874	-	-	-	42,283	-	341,385	
P36660 Implement Tier 2 compute and storag	-	-	-	-	-	-	-	849,397	-	-	-	-	-	-	-	-	849,397	
P36661 Deploy Multi Factor Authentication	-	-	-	-	-	-	-	-	-	-	4,990	-	-	-	79,222	-	84,212	
P36668 Maxim Second 115kV Tap	-	-	-	-	-	-	-	-	-	(41,700)	-	-	-	-	1,584	-	(40,116)	
P36670 Backup Design	-	-	-	-	-	-	-	-	-	-	2,909	-	-	-	13	-	2,922	
P36673 Purchase Water Trailers	-	-	-	-	-	-	-	-	-	39,294	2,316	-	-	-	(21)	-	41,590	
P36677 Endpoint Replacement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59,834	-	59,834	
P36679 Orenco Substation 115KV Rebuild	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37,644	-	37,644	
P36690 New 115kV Tapline for CRPUD Sub	-	-	-	-	-	-	-	-	-	-	(315,000)	-	-	-	2,349	-	(312,651)	
P36700 Mcloughlin Pole yard	-	-	-	-	-	-	-	-	-	-	-	-	-	-	341,124	-	341,124	
P36701 BusinessIntelligence - Advanced SAS	-	-	-	-	-	-	-	-	-	-	965	(0)	-	-	40,812	-	41,777	
P36702 Health - Gym Fitness Projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60,562	-	60,562	
Grand Total	20,193,233	30,046,745	28,338,679	67,287,589	173,851,746	39,409,335	28,916,842	42,078,935	24,477,520	32,700,559	40,958,814	103,445,262	631,705,259					

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