

**BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON**

UE 319

Customer Services & CET

PORTLAND GENERAL ELECTRIC COMPANY

Direct Testimony and Exhibits of

*Kristin Stathis
Carol Dillin*

February 28, 2017

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I. Introduction

1 **Q. Please state your names and positions with Portland General Electric Company (PGE).**

2 A. My name is Kristin Stathis. I am Vice President of Customer Service Operations.

3 My name is Carol Dillin. I am Vice President of Customer Strategies and Business
4 Development.

5 Our qualifications appear at the end of this testimony.

6 **Q. What is the purpose of your testimony?**

7 A. We explain PGE’s forecast of Customer Service operations and maintenance (O&M) costs¹
8 for the 2018 test year and compare them to 2016, which represents PGE’s most recent actual
9 results. We also discuss initiatives that support improving the customer experience through:

- 10 • Increasing operational efficiency and effectiveness;
- 11 • Meeting customer needs through technological improvements in how we serve them;
- 12 • Providing self-service options² targeted to meet our customers’ needs and
13 expectations; and
- 14 • Improving business processes for billing and enhanced customer channels.³

15 **Q. Please describe the functions of PGE’s Customer Service organization.**

16 A. Our Customer Service functions support direct operations of smart meters, billing, payment
17 processing, collections, and responding to customers. The last category entails responding
18 in a timely, courteous, and professional manner to customer requests received through

¹ PGE’s Customer Service costs are consistent with FERC Chart of Accounts categories Customer Accounts Expenses and Customer Service and Informational Expenses (i.e., accounts 901-910).

² “Self-service” refers to a customer’s ability to conduct a transaction on his or her own, without needing to speak to a company representative.

³ “Customer channel” refers to a method of customer interaction chosen by customers based on what services are available through that channel. Internet, Interactive Voice Response, mobile platform, and community offices are examples of distinct customer channels for payment.

1 various channels such as the contact center, community offices, mail (postal or e-mail),
2 mobile platform, Interactive Voice Response (IVR),⁴ and by working directly with
3 customers in their homes and/or places of business. Within Customer Service, we classify
4 strategic activities as those that include: 1) researching and collecting direct feedback from
5 customers regarding their experiences and expectations; 2) monitoring customer feedback
6 and satisfaction levels; and 3) developing and delivering products and services that best
7 meet customer needs.

8 **Q. How is your testimony organized?**

9 A. In Section II, we provide a brief overview of PGE's Customer Service organization and
10 explain PGE's request for forecasted 2018 costs in comparison to 2016 actual costs. In
11 Section III, we discuss PGE's rate for uncollectible accounts. In Section IV, we provide an
12 update to the Customer Engagement Transformation (CET) program, describing progress
13 since 2014 and our expectations as we complete this project in 2018. In that section, we also
14 discuss CET costs, including total capital costs, and the deferral mechanism for program
15 development costs. We provide concluding remarks in Section V and our qualifications are
16 summarized in Section VI.

⁴ IVR refers to a call center technology that allows customers to use touch-tone telephones to interact with computer systems.

II. Customer Service Overview

A. Goals

1 **Q. Please describe PGE's goals for the Customer Service organization.**

2 A. The Customer Service organization's primary goal is to deliver value to our customers by
3 ensuring that we provide outstanding customer service at a reasonable cost. In addition to
4 providing timely and accurate customer usage data plus effective metering, billing,
5 collection, and response services to all customers, PGE is focused on improving the value it
6 delivers through operational quality. PGE has implemented projects that improve service,
7 increase efficiency, and provide benefits and convenience to customers in how they interact
8 with us. Customer value is achieved by PGE investing in our employees and culture of
9 continuous improvement, evaluating and deploying new technologies that support business
10 and customer needs, and delivering innovative programs and solutions that benefit
11 customers.

12 **Q. How does PGE determine whether it is achieving its goals for Customer Service?**

13 A. PGE determines whether it is achieving its goals primarily by evaluating feedback gathered
14 directly from its customers. Feedback from residential and business customers is gathered
15 in a variety of ways including: quarterly, semi-annual, and annual customer satisfaction
16 surveys; on-going surveys on customer transactions with PGE that are completed on the
17 phone or our website; and occasional customer focus groups on specific topics. This
18 feedback is used to improve PGE's service and identify customer interest in new programs
19 and service options.

20 **Q. What is PGE doing to respond to the feedback it receives from customers?**

21 A. As noted above, PGE has implemented projects that improve service, increase efficiency,
22 and provide benefits and convenience to customers in how they interact with PGE such as

1 paperless billing and automated web-enabled ‘customer move’ service requests (discussed in
2 Docket No. UE 283).

3 Since PGE’s most recent rate case, Docket No. UE 294, we have been focused primarily on
4 CET work, discussed further in Section IV, and implementation of demand response pilots
5 identified in PGE’s Smart Grid Report and Integrated Resource Plan. Customer feedback
6 continues to be used to inform our decisions related to products and services as well as
7 business processes. Other improvement initiatives, outside of the CET program, are
8 considered on a case-by-case basis and prioritized against the overall CET effort.

B. O&M Costs

9 Q. What are PGE’s forecasted Customer Service costs for the 2018 test year?

10 A. PGE forecasts approximately \$75.3 million in Customer Service O&M for 2018, excluding
11 uncollectible expenses, which are a revenue sensitive cost. This represents a \$9.8 million
12 increase relative to PGE’s 2016 actual costs. The overall increase to Customer Service is
13 attributed primarily to cost escalation, new or expanded programs (such as energy storage),
14 and charges/allocations for Information Technology (IT). Table 1 summarizes these costs
15 and they are discussed in more detail below.

Table 1
Customer Service O&M Expenses (\$Millions) and FTEs

Category	2016 Actuals	2018 Forecast	Delta (2018-2016)*
Labor (excluding CET)	\$28.9	\$32.1	\$3.2
Non-Labor (excluding CET)	\$14.8	\$16.7	\$1.9
Subtotal*	\$43.7	\$48.8	\$5.1
CET Program Costs	\$4.5	\$1.4	(\$3.1)
IT Costs	\$17.3	\$25.1	\$7.8
Subtotal*	\$65.5	\$75.3	\$9.8
Uncollectibles	\$5.2	\$7.0	\$1.8
Total Base Business Costs*	\$70.6	\$82.3	\$11.6
FTEs	448	454	6.0

* May not sum due to rounding

1 **Q. Please explain the forecasted increase in costs from 2016 to 2018.**

2 A. In addition to cost escalation, the primary increase in Customer Service non-labor costs from
3 2016 to 2018 is a function of outside services to support research, program development,
4 and program design in relation to: energy storage, electric vehicles, distributed generation,
5 other emerging technologies, and demand response programs.

6 **Q. What accounts for the increase in labor costs from 2016 to 2018?**

7 A. The primary driver is wage and salary escalation, which is discussed in detail in PGE
8 Exhibit 400. There is a small increase in full time equivalent employees (FTEs) that is due
9 to customer growth, which has increased significantly in the recent past. PGE Exhibits 800,
10 and 1200, discuss customer growth in more detail.

11 **Q. Do you address IT costs in this testimony?**

12 A. No. Because IT costs are charged or allocated to all operating areas of the company, they
13 are discussed in detail in PGE Exhibit 500.

III. Write-offs of Uncollectible Accounts

1 **Q. What is the current allowed Uncollectible Rate for 2016?**

2 A. PGE's current approved uncollectible rate is 0.4032% of light and power retail revenue
3 based on PGE's UE 294 general rate case.

4 **Q. What uncollectibles rate does PGE propose for 2018, and how did PGE arrive at that
5 rate?**

6 A. PGE proposes a 0.370% uncollectibles rate for 2018 light and power; a reduction of
7 0.0332% from the currently approved rate. This rate is based on a five-year average of
8 actual write-offs (i.e., 2012–2016).

9 **Q. Why is PGE using a five-year average?**

10 A. A five-year average better reflects economic cycles and normalizes significant one-time
11 positive or negative events such as the planned suspension of some credit and collection
12 activities for part of 2018.

13 **Q. Why would you suspend credit and collection activities for part of 2018?**

14 A. The reason is that PGE is planning to go live with the new Customer Information System in
15 the second quarter of 2018 (discussed in Section IV, below) and limiting credit and
16 collection activities is a standard practice when implementing a new CIS. For example, we
17 may choose not to disconnect customers during a portion of the system go-live and
18 stabilization period, and may suspend late notices and/or credit reminder calls, in part to
19 minimize calls to the Contact Center, also described in Section IV, below. This logically
20 may result in a higher actual uncollectible rate in 2018 than would otherwise occur.
21 Therefore, using the five-year average normalizes that significant one-time event.

IV. Customer Engagement Transformation (CET)

A. Overview

1 **Q. Please provide a brief summary of the CET program.**

2 A. CET is a comprehensive multiyear program (i.e., 2014 to 2018) comprised of 24 projects
3 focused on operational efficiencies, process improvements, employee development, business
4 strategies, customer strategies, and the replacement of two large customer systems:

- 5 • Customer Information System (CIS); and
- 6 • Meter Data Management System (MDMS).

7 We refer to the effort to replace the CIS and MDMS as the Customer Touchpoints
8 project, and this replacement effort is the CET program's focus and sole project for 2017
9 and 2018.

10 **Q. Why are you replacing these systems?**

11 A. Our current systems (installed 15 years ago) are so outdated that they are no longer
12 supported by the product vendors, are difficult and costly to maintain, and are inadequate for
13 efficient customer service. Replacement is critical to maintaining operations because the
14 cost to maintain the old systems and risk associated with them increase the longer we wait.
15 In conjunction with replacing these systems, we are taking advantage of opportunities to
16 make improvements such as implementing more efficient billing through automation and
17 improving key business processes that have an impact on customer experience.

18 The additional functionality of the new systems will provide PGE with opportunities to
19 improve the way we engage and serve our customers. We discussed CET in detail in our
20 last three general rate cases (UE 262, PGE Exhibit 900, Section III; UE 283, PGE Exhibit
21 1000, Section IV; and UE 294, Exhibit 900, Section III).

22 **Q. Has the CET timeline and/or roadmap changed since PGE's last general rate case?**

1 A. Yes. PGE recognized the need to revise the schedule for the CIS/MDMS replacement
2 projects and moved their start date from April 2015 to January 2016. As a result, the
3 expected completion date was moved from the second quarter of 2017 to the second quarter
4 of 2018. The revised CET roadmap is provided in PGE Exhibit 901.

5 **Q. Why was this change necessary?**

6 A. It was necessary to adjust the CET schedule for several reasons:

- 7 1. An overlap in work groups and resources needed for both CET and PGE's Wave 2
8 project.⁵
- 9 2. Employees needed time to adjust to the new system processes initiated by Wave 2
10 systems (i.e., Maximo and Field Manager/Scheduler, Geographic Information
11 System/Graphic Work Design and Outage Management System).
- 12 3. Feedback from employees signaled the need for a moderated pace of change within
13 PGE.

14 **B. Implementation**

15 **Q. What CET activities have you implemented to date?**

16 A. PGE completed several operational efficiency projects under CET prior to the start of
17 Customer Touchpoints:

- 18 • Contact Center Improvement – Helped reduce average call handling time, improved
19 the effectiveness of forecasting and scheduling processes, and freed up capacity that
20 can be redeployed toward improving service levels.

⁵ The Wave 2 project (i.e., the transmission and distribution portion of the 2020 Vision initiative) was discussed in PGE's previous three general rate cases: PGE Exhibit 800, UE 262; PGE Exhibit 900, UE 283; PGE Exhibit 800, UE 294.

- 1 • Billing and Credit – Simplified reports in Billing and Credit reduced nearly 12,000
2 monthly bill reviews.
- 3 • Paperless Bill – Focused effort on increasing paperless bill enrollment, increasing
4 participation to 27.1%.
- 5 • Knowledge Management – Provides a standardized, searchable, single-source
6 knowledge management system so customer service employees can quickly access
7 information they need to serve customers.
- 8 • Quality Customer Interactions – Improves the quality of interactions between
9 Customer Service Operations (CSO) employees and customers by improving the
10 process for receiving customer feedback and standardizing CSO’s Quality Assurance
11 and performance programs.
- 12 • Workforce Management – Improves the effectiveness of workload forecasting and
13 optimizing employee schedules throughout CSO, freeing up capacity that can be
14 applied toward improving service levels or reducing costs.
- 15 • People Development for CSO – Identifies and develops new skills to build workforce
16 capabilities for the future, enable CSO to adopt new systems and processes, and
17 continue to improve customer service and operational efficiencies.

18 **Q. What have you completed to date in the Customer Touchpoints project?**

19 A. The Customer Touchpoints project achieved several milestones, including:

- 20 • Completed licensing of Oracle’s Customer Care and Billing (CC&B) and meter data
21 management solutions, along with seven other Oracle modules for the meter-to-cash
22 and customer service and support functions of the business. This integrated
23 technology solution will replace PGE’s existing CIS and meter data consolidator
24 systems and approximately 50 other applications and databases currently in use.

1 CC&B and associated Oracle modules will introduce new capabilities to help us serve
2 customers in new and more effective ways, enabled by underlying process
3 improvements and automation, such as automated billing of net metering.

- 4 • Automated the building, deployment and testing of applications and infrastructure.
5 IT build automation saves time, standardizes processes, improves the consistency and
6 quality of application and database builds, reduces manual steps that introduce costly
7 errors, and frees administrators to focus on higher-value tasks.
- 8 • Implemented iterative design and build cycles. The technology is continuously
9 delivered across three cycles of building new functionality and testing future-state
10 processes in the system. Currently, the project has completed two of the three cycles
11 and the system can print a bill for several residential rate schedules, going from
12 meter-read to bill.
- 13 • Conducted data cleansing, data conversion and initial configuration. Cleaning and
14 converting sets of PGE basic residential customer data from our existing CIS into a
15 base version of the new technology, as well as performing initial configuration,
16 minimizes project risks and helps ensure that the end-product meets business needs.
17 Demonstrating a working version of the new technology as the project proceeds
18 through its series of iterative design and development cycles enables the project team
19 and subject matter experts from the business to see how the new system will work. It
20 also permits the team to test successively more complex components of the systems.

21 **Q. What is CET's focus in 2017 and 2018?**

22 A. In 2017, the CET program will complete the third and final design/build/test cycle. The
23 focus will then shift to end-to-end testing and finally implementation. Key CET activities in
24 2017 and 2018 are: 1) system design, hardware installation, software implementation and

1 testing; 2) training employees to work with the new systems and business processes; and
2 3) deployment and stabilization.

3 1. System design, hardware installation, software implementation and testing:

- 4 • Complete system-design requirements, with hardware and software installed.
- 5 • Ensure that data and process-integrity remain intact through rigorous system build-out
6 and testing.
- 7 • Continue testing the new systems by completing “dry-runs” or practice “go-lives” to
8 validate system stability and performance.

9 2. Employee training and preparedness for the adoption of new processes and systems:

- 10 • Continue to support employee adoption of new processes and systems by designing
11 and delivering various training activities, providing opportunities for employees to
12 practice using the new system, and supporting leadership as they guide the workforce
13 through these changes.

14 3. Deployment and stabilization:

- 15 • In 2017, we will finalize the build-out of the new CIS and MDMS. Beginning in the
16 middle of the year, we will conduct end-to-end testing to ensure that all business
17 processes work as designed, and that bills can be produced accurately and timely.
- 18 • Also starting in 2017, we will set the baseline metrics and service levels for all groups
19 that will be using the new CIS and MDMS. During the testing phase, we will
20 determine how these metrics will adjust with the new processes and systems.
21 Ultimately, these metrics will help us determine that the systems have been stabilized
22 and we are back to “normal” business.

1 **Q. In Section III, you mentioned suspending certain collection activities during the system**
2 **go-live and stabilization period. Are you suspending any other activities due to CET**
3 **implementation?**

4 A. Yes. We plan to suspend some collection and credit activities, non-critical meter exchanges,
5 and other non-critical activities. The reasons for suspending these include:

- 6 • Reducing customer phone calls as employees are first learning the new system.
7 Because average call handle-times are expected to increase at first, reducing call
8 volumes can help manage wait times.⁶ We expect the revenue and collections
9 suspension to reduce the number of collection and reconnect calls.
- 10 • Reducing non-critical work in the system as the project team fine-tunes the system.
11 Suspending price-changes during stabilization will eliminate an unknown variable
12 from the system and allow data-comparison that will enable better testing of the data.
- 13 • We will increase meter and service-order work prior to go-live so that only critical
14 customer-requested meter or service order work will need to be completed after
15 deployment, as employees are learning to use new systems.

C. Benefits

16 **Q. Please describe benefits this program will provide.**

17 A. The implementation of new systems will provide several enhancements that are responsive
18 to customer needs, including the ability for customers to:

- 19 • Make one-time check payments over the phone; currently customers are redirected to
20 the IVR system or the PGE website to make the payment.

⁶ Customer wait times in PGE's call center are the result of how many calls we receive and how long they take to process.

- 1 • Enroll in Auto Pay or update bank account information over the phone.
- 2 • Choose the specific date their bill will be due, instead of the bill cycle (date range),
- 3 helping customers better plan and manage their cash flow.
- 4 • Enroll in the Preferred Due Date program with fewer restrictions making it more
- 5 accessible to customers who could benefit the most.
- 6 • Keep their new account number permanently (when new systems are implemented),
- 7 even when they move to a different address within PGE's service territory.

8 Finally, the new CIS will support more varied pricing options compared to what is available
9 with our current system.

D. Costs

10 **Q. What is the total cost of the CET program?**

11 A. The total cost of the CET program is currently estimated to be \$140.0 million in capital and
12 \$27.5 million in program development O&M costs. Of the total capital cost, projects
13 representing approximately \$128.0 million will become operational in 2018. This amount
14 represents the main components of the Customer Touchpoints project. PGE Exhibit 902
15 provides the amounts of capital that close to plant (i.e., become operational) by year.

16 **Q. Are the 2018 CET capital costs included in PGE's proposed prices effective January 1,**
17 **2018?**

18 A. No. Because PGE has set rate base as of December 31, 2017, and the largest components of
19 CET capital (i.e., CIS and MDMS) go live in 2018, they are not part of the prices that will
20 go into effect on January 1, 2018. As noted in PGE Exhibit 200, Section VI, PGE is using
21 year-end 2017 rate base to preclude assets that are not in service prior to January 1, 2018,
22 when prices go into effect. PGE also excludes the associated 2018 depreciation and
23 amortization to be consistent with normalization rules in the Internal Revenue Code, Section

1 168(i)(9), as described in PGE Exhibit 200, Section III. PGE will propose cost recovery for
2 the 2018 CET costs in a future proceeding.

3 **Q. Are CET program development O&M costs included in PGE's proposed prices**
4 **effective January 1, 2018?**

5 A. Yes. CET program development O&M costs are being incurred from 2014 through 2018
6 and are part of deferral and amortization mechanisms that have been previously, and are
7 currently, included in base rates.

8 **Q. How, specifically, are you treating the program development O&M costs?**

9 A. In our three previous general rate cases, CET O&M costs were treated as a regulatory asset
10 and set to be amortized over the remaining development life of the project, ending in 2018.
11 The result of this mechanism was that:

- 12 • 2014-2016 CET O&M costs have three vintages of amortization as reflected in PGE
13 Exhibit 903; and
- 14 • The regulatory asset and amortization costs were included in base prices in each rate
15 case from 2014 through 2016 (i.e., 2014, UE 262; 2015, UE 283; and 2016, UE 294).

16 Because PGE did not file a 2017 general rate case, the 2017 CET program development
17 O&M costs were deferred separately by Commission Order No. 16-487 (Docket No.
18 UM 1796).

19 **Q. How are you proposing to treat the program development O&M costs in the**
20 **2018 general rate case?**

21 A. The original intent of the CET deferral mechanism was for all vintages to be amortized over
22 the remaining period of CET development, which would end in 2018. Based on this, and
23 reflected in PGE Exhibit 903, PGE would amortize approximately \$8.0 million in 2018,
24 either in base rates or through a supplemental schedule. As summarized in PGE Exhibit

1 903, the \$8.0 million consists of the final year of amortization for the 2014-2016 deferral
2 vintages plus the 2018 CET program development O&M. Because the 2017 deferral was
3 created in a non-rate case proceeding, we expected that vintage to be amortized separately.

4 **Q. Does PGE Exhibit 903 represent your current proposal?**

5 A. No. We believe that a better and more meaningful approach would be to amortize all
6 remaining CET program development O&M over ten years beginning in 2018. This would
7 have the additional effect of lowering the price impact in 2018 from approximately \$8.0
8 million to \$1.4 million, and would include the 2017 deferral. Consequently, as part of this
9 filing, we request that the Commission issue an accounting order authorizing the following
10 with respect to CET program development O&M:

- 11 • The 2018 costs to be booked to a regulatory asset and included in rate base, as
12 applicable, along with all remaining balances from prior CET deferral vintages
13 (similar to 2014-2016 CET deferral treatment); and
- 14 • The remaining balance of all the 2014-2018 deferrals to be amortized in base prices
15 over ten years beginning in 2018. This proposal is summarized in PGE Exhibit 904.

16 **Q. Does the proposed mechanism include the 2017 vintage deferral?**

17 A. Yes. Our proposal includes the 2017 deferral because it is no different than the 2014-2016
18 deferrals as included in their respective rate cases. This would allow the entire remaining
19 balance of CET program development O&M to receive consistent treatment while
20 minimizing rate filings and price changes.

V. Conclusion

1 **Q. You stated that PGE’s goal for Customer Service is to deliver value to its customers by**
2 **providing quality service at a reasonable cost. Are the activities planned within your**
3 **Customer Service organization necessary to achieve this goal?**

4 A. Yes. The projects PGE has completed, the projects currently underway, and the
5 comprehensive plans we have for the future demonstrate PGE’s commitment to its
6 customers to operate our business in a smart, efficient, and cost-effective manner, while
7 enhancing and simplifying their experience with PGE.

8 In order to achieve this goal, we are completing the CET program in 2018 and request the
9 Commission approve the following:

- 10 • PGE’s forecasted increase in base business costs for Customer Services as described
11 in Section II, part B, above, to be effective January 1, 2018.
- 12 • An accounting order authorizing:
 - 13 ○ The 2018 CET program development O&M costs to be booked to a regulatory
14 asset and included in rate base, as applicable, along with all remaining balances
15 from prior CET deferral vintages (similar to 2014-2016 CET deferral treatment);
16 and
 - 17 ○ The remaining balance of all the 2014-2018 deferrals to be amortized in base
18 prices over ten years beginning in 2018.

VI. Qualifications

1 **Q. Ms. Stathis, please describe your educational background and qualifications.**

2 A. I received a Bachelor of Science Degree in Political Science from Willamette University and
3 a post-baccalaureate certificate in accounting from Portland State University. I previously
4 qualified as a certified public accountant in the State of Oregon. I am on the boards of
5 Marylhurst University; the Oregon Alliance of Independent Colleges and Universities; and
6 the Western Energy Institute. I serve as Vice President, Customer Service Operations, at
7 PGE and have been in this role since June 2011. In this position, I am responsible for
8 operational functions including meter services and field operations for meters, smart
9 metering, billing, credit and collections, community offices and the contact center. I began
10 my career with PGE twenty-three years ago as a financial analyst. Since then, I have served
11 in a number of roles including Assistant Treasurer and Manager of Corporate Finance,
12 General Manager of Power Supply Risk Management and General Manager of Revenue
13 Operations.

14 **Q. Ms. Dillin, please describe your qualifications.**

15 A. I received a Bachelor of Arts in Journalism and Spanish from the University of Oregon. I
16 have taken post-graduate business courses at Marylhurst University, and am a graduate of
17 the American Leadership Forum class of 2005. I am on the boards of The Center for
18 Women’s Leadership, PGE Foundation, BEST, and the Business Advisory Council for
19 Portland State University. I serve as Vice President, Customer Strategies and Business
20 Development at PGE and have been in this role since June 2011. In this position, I am
21 responsible for the Retail Customer Strategies for PGE. This includes Customer Research
22 and Analysis, Customer Program Development and Management, Retail Technical
23 Strategies, Business Customer Group, Smart Grid, R&D, and Economic Development.

1 Since beginning my career at PGE twenty-nine years ago, I have served in a number of roles
2 including Public Information Specialist; Director, Corporate Communications and
3 Community Affairs; Vice President, Public Policy; and President of the PGE Foundation.

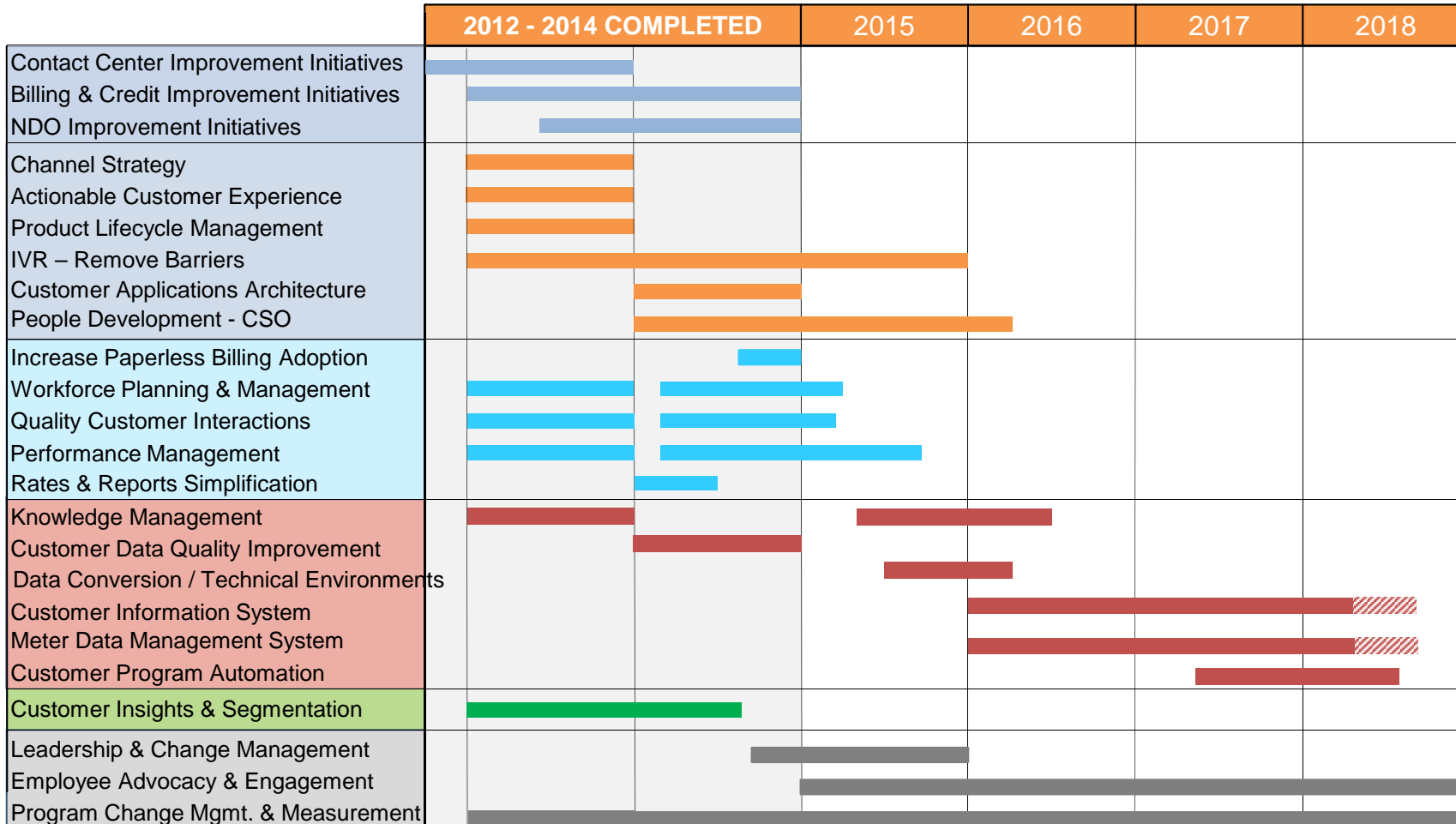
4 **Q. Does this conclude your testimony?**

5 A. Yes.

List of Exhibits

<u>PGE Exhibit</u>	<u>Description</u>
901	CET Roadmap
902	CET Capital Costs by Year
903	CET Program Development Costs with Original Amortization
904	CET Program Development Costs with Proposed Amortization

CET Roadmap



- Improvement Initiatives
- Strategy & Governance
- Operational Efficiencies
- Analytics & Reporting
- Systems
- Shaded bars indicate post go-live system stabilization
- Change Management



NDO – Network Data Operations, department that operates Smart Meter System

IVR – Interactive Voice Response, enables telephone self-service

CSO – Customer Service Operations

CS&BD – Customer Service and Business Development

Asset Category	Account	2015 Actuals	2016 Actuals	2017 Forecast	2018 Forecast	Totals
Customer Touchpoints						
software - 10 year amortization	303	\$ -	\$ 1,908,635	\$ -	\$ 128,000,000	\$ 129,908,635
computer	39102	\$ 463,842	\$ 1,165,965	\$ 5,460,770	\$ -	\$ 7,090,577
furniture	391	\$ 225,498	\$ 317,957	\$ -	\$ -	\$ 543,455
		\$ 689,340	\$ 3,392,557	\$ 5,460,770	\$ 128,000,000	\$ 137,542,667
Other CET						
software - 10 year amortization	303	\$ 533,405	\$ 1,738,895	\$ -	\$ -	\$ 2,272,300
computer	39102	\$ 29,711	\$ 188,934	\$ -	\$ -	\$ 218,645
furniture	391	\$ -	\$ -	\$ -	\$ -	\$ -
		\$ 563,116	\$ 1,927,829	\$ -	\$ -	\$ 2,490,945
Total CET						
software - 10 year amortization	303	\$ 533,405	\$ 3,647,530	\$ -	\$ 128,000,000	\$ 132,180,935
computer	39102	\$ 493,553	\$ 1,354,899	\$ 5,460,770	\$ -	\$ 7,309,222
furniture	391	\$ 225,498	\$ 317,957	\$ -	\$ -	\$ 543,455
		\$ 1,252,456	\$ 5,320,386	\$ 5,460,770	\$ 128,000,000	\$ 140,033,612

**CET Program Development O&M
 Deferral Mechanism
 (\$000)**

Line No.	Category	2014 ^(a)	2015 ^(b)	2016 ^(c)	2017 ^(d)	2018	2019
1	CET Deferrals	\$7,483	\$5,754	\$4,193	\$6,602	\$3,465	
	Amortizations						
2	2014 Deferral (UE 262) ^(a)	\$1,600	\$1,600	\$1,600	\$1,600	\$1,600	
3	2015 Deferral (UE 283) ^(b)		\$1,330	\$1,330	\$1,330	\$1,330	
4	2016 Deferral (UE 294) ^(c)			\$1,558	\$1,558	\$1,558	
5	2017 Deferral (UM 1796) ^(d)				\$0	\$0	\$6,602
6	2018 Costs					\$3,465	
7	Adjust 2014-2016 amortization					(\$566)	
8	Total amortizations by year	\$1,600	\$2,930	\$4,488	\$4,488	\$7,388	\$6,602
9	Rate base deferral balance at year end	\$5,883	\$8,707	\$8,411	\$3,923	\$0	
10	UM 1796 balance at year end				\$6,602	\$6,602	\$0

Notes:

- (a) Approved by Commission Order No. 13-459
- (b) Approved by Commission Order No. 14-422
- (c) Approved by Commission Order No. 15-356
- (d) Deferred by Commission Order 16-487

**CET Program Development O&M
 Modified/Proposed Deferral Mechanism
 (\$000)**

Line No.	Category	2014 ^(a)	2015 ^(b)	2016 ^(c)	2017 ^(d)	2018 ^(e)	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	CET Deferrals	\$7,483	\$5,754	\$4,193	\$6,602	\$3,465									
	Amortizations														
2	2014 Deferral Amortization (UE 262) ^(a)	\$1,600	\$1,600	\$1,600	\$1,600										
3	2015 Deferral Amortization (UE 283) ^(b)		\$1,330	\$1,330	\$1,330										
4	2016 Deferral Amortization (UE 294) ^(c)			\$1,558	\$1,558										
5	2017 Deferral (UM 1796) ^(d)				\$0										
6	2018 ^(e)					\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399
7	Total amortizations by year	\$1,600	\$2,930	\$4,488	\$4,488	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399	\$1,399
8	Rate Base deferral balance at year end	\$5,883	\$8,707	\$8,411	\$3,923	\$12,591	\$11,192	\$9,793	\$8,394	\$6,995	\$5,596	\$4,197	\$2,798	\$1,399	\$0
9	UM 1796 balance at year end				\$6,602										

Notes:

- (a) Approved by Commission Order No. 13-459
- (b) Approved by Commission Order No. 14-422
- (c) Approved by Commission Order No. 15-356
- (d) Deferred by Commission Order 16-487
- (e) Modify CET mechanism to 10 year amortization of all deferral vintages including the 2017 deferral