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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Application of Pacific Gas and Electric
Company to Revise Its Electric Marginal
Costs, Revenue Allocation and Rate Design.

(U 39 M)

Application 16-06-013
(Filed June 30, 20116)

**BRATTLE GROUP REPORT ON FIXED CHARGES IN RESIDENTIAL TARIFFS
SUBMITTED BY PACIFIC GAS AND ELECTRIC COMPANY FOR WORKSHOP ON
NOVEMBER 2, 2016**

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Dated: October 26, 2016

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Pursuant to the Administrative Law Judge’s ruling on the residential fixed charge workshops in this proceeding and PG&E’s representation at the first such workshop on October 13, 2016, PG&E attaches material for the second workshop on November 2, 2016 that provides benchmarking data on the fixed cost methodologies used by other public utilities commissions and utilities in other jurisdictions. This workshop material consists of the attached report prepared by The Brattle Group entitled “Methodologies for Establishing Fixed Charges in Residential Tariffs: A Survey.” PG&E also will provide additional hard copies and information on the report and respond to questions on the Report as appropriate at the November 2, 2016, workshop.

Respectfully submitted,

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By: _____ /s/
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Methodologies for Establishing Fixed Charges in Residential Tariffs: A Survey

PREPARED FOR


Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company

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October 26, 2016



This report was prepared for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company. All results and any errors are the responsibility of the authors and do not represent the opinion of The Brattle Group or its clients.

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Executive Summary

This report surveys the methodology for designing and establishing the levels of fixed charges for residential customers of electricity in the United States. Information is presented on the methodology and application of fixed charges by individual electric utilities located around the country and supported by the corresponding state public utility commissions or other regulatory body.

We reached out to thirty-seven utilities across the country and asked them a series of questions addressing the underlying theory, practical methodology, and implementation of fixed charges. They were also asked to provide written evidentiary testimony and links to regulatory commission decisions and guidance. Thirty-three utilities responded to the survey.¹ Their information is presented in this report along with information on two other municipal utilities in California that was gleaned from the municipal utilities' websites. This document generally reflects information available in Q1 2016 unless otherwise noted.

The surveyed utilities lie in regions that have a similar regulatory environment to California's in terms of the stated goals and public policies supporting energy efficiency and renewable energy resources.² The group of utilities that responded to the survey covers four major regions and 23 states. Initially, utilities for the survey were chosen on the basis of having residential fixed charges greater than \$5.00/month; however, this list was expanded in order to capture more utilities with similar regulatory environments that may have lower residential fixed charges. The initial survey instrument contained 19 questions. A supplemental survey containing five

¹ These utilities include subsidiaries of major utility companies and utilities that serve multiple regions with separate rates for each region. For example, the survey response for Eversource encompasses Connecticut Light & Power, Public Service Company of New Hampshire, and Western Massachusetts Electric Company.

² For example, New York's Reforming the Energy Vision ("REV") initiative which includes a NY State Energy Plan proposes three statewide clean energy targets to be completed by 2030 including reducing greenhouse emissions by 40% from 1990 levels, generating 50% of electricity from renewable energy sources, and increasing statewide energy efficiency by 600 trillion British thermal units. "The Energy to Lead," *New York State Energy Plan Volume 1*, 2015, pp. 44-45, <https://static1.squarespace.com/static/576aad8437c5810820465107/t/5797fc52f5e231d942a2d79b/1469578322990/2015-state-energy-plan-pf.pdf>.

additional questions was also submitted to each responding utility (reproduced in Appendix A). Survey responses were compiled in a database, collated by region and presented in this report.³

As evidenced by the utility responses presented in this report, fixed charges are routinely applied by investor-owned utilities in other states and also applied by municipal utilities in California. Indeed, several utilities have had fixed charges for decades.

Many of the utilities identified have approved residential fixed charges that exceed California's statutory limit of \$10.00/month (adjusted by the Consumer Price Index) for investor-owned utilities. In addition, several utilities also identified residential fixed costs in excess of \$10.00/month. In other states, and in California's municipal utilities, fixed charges are also routinely adjusted upward to reflect changes in fixed costs and changes in the utility business environment.

Several state utility commissions distinctly mention fixed charges in their final decisions as a means of aligning fixed costs with revenues and cost causation. Some go a step further to suggest that over time, fixed charges should be moved closer to total fixed costs, including costs that do not vary with the volume of electricity consumed, as determined by utilities' cost of service studies. Notably, the survey reveals that the presence of decoupling does not eliminate support for fixed charges.

Only four out of the 37 utilities surveyed differentiate their fixed charges based on the size of the customer or by the type of the customers dwelling. Some utilities offer a lower fixed charge to low-income customers or alternatively offer a fixed credit to low-income customers which could be characterized as simply providing a lower fixed charge to low-income customers. Only one utility in the survey uses the fixed charge revenues to reduce the revenues collected in the first tier rates exclusively in an inclining block rate structure. Some utilities indicate that they design

³ Information that does not have a direct citation in the summaries below was provided by the utility in the survey response and a corresponding document may not have been included. In many cases, information drawn from the survey is drawn verbatim. All cited documentation, as well as additional documentation regarding each fixed charge, is included in Appendix B. Additionally, in order to identify utilities whose revenues are subject to decoupling and whose rates are set in reliance on marginal (as opposed to embedded) costs, a " D " is included next to the utility headings for utilities that use decoupling and an " M " is included next to the utility headings for utilities that use marginal costs.

their fixed charges based on customer-related fixed costs, which are defined as the costs of the meter, service drop, a portion of the transformer, billing, and customer service unless otherwise specified. A summary of the results appears in Table 1 and Table 2. Care should be taken when reviewing the “Percentage of Fixed Costs recovered through Fixed Charges” column. Depending on how each utility defines their fixed costs (see the detailed text for each utility), the self-reported percentages will be very different. For example, if a utility includes a portion of the distribution grid as a fixed cost, the reported percentage of fixed costs recovered via fixed charges will generally be lower. Conversely, if a utility narrowly defines fixed costs to only include traditional customer-related fixed costs, then the reported percentage of fixed costs recovered via fixed charges will generally be higher.

Table 1: A Summary of Fixed Charges in Residential Tariffs

| What cost categories are included in fixed costs? | |
|---|---|
| NORTHEAST & MIDDLE ATLANTIC | |
| Baltimore Gas & Electric | Metering, meter reading, billing and collections, customer care, and service connection. |
| Central Hudson Gas & Electric | Metering, billing, and customer care. |
| Consolidated Edison Company | Overhead and underground service connections, metering equipment, meter reading and maintenance, meter installations, customer service, customer accounting, uncollectibles, and minimum system costs which include a portion of fixed costs for transformers and secondary distribution lines. |
| Rochester Gas and Electric | Meters, service drop, meter reading and billing, distribution substation and trunkline feeder costs, upstream line and substation costs, and marginal transmission costs. |
| New York State Electric Gas Corporation | Meters, service drop, meter reading and billing, distribution substation and trunkline feeder costs, upstream line and substation costs, and marginal transmission costs. |
| Central Maine Power | Meters, service drop, meter reading and billing, distribution substation and trunkline feeder costs, upstream line and substation costs, and marginal transmission costs. |
| Eversource Energy | |
| Connecticut Light & Power | Meters and services, meter reading, customer records and collection, customer service, additional overhead expenses that may be allocated and included in customer-related costs, and minimum system cost components such as service transformers, lines, and poles. |
| Public Service Company of New Hampshire | Meters and services, meter reading, customer records and collection, customer service, additional overhead expenses that may be allocated and included in customer-related costs, and minimum system cost components such as service transformers, lines, and poles. |
| Western Massachusetts Electric Company | Meters and services, meter reading, customer records and collection, customer service, and additional overhead expenses that may be allocated and included in customer-related costs. |
| United Illuminating Company | Metering, billing, customer care, service lines, transformers, and a portion of allocated poles and wires. |
| MIDWEST & SOUTH | |
| Commonwealth Edison | Services, customer installations, billing, indirect uncollectibles, customer information, and revenue-related customer costs. |
| DTE Energy | Metering, overhead and underground services, customer records and collection, and customer service expenses. |
| Indiana Michigan Power Company | |
| Indiana Michigan - Indiana | Distribution costs such as metering costs, customer account and service expenses, general and administrative expenses, depreciation, and taxes. |
| Indiana Michigan - Michigan | Distribution costs such as metering costs, customer account and service expenses, general and administrative expenses, depreciation, and taxes. |
| Madison Gas & Electric | Costs of customer accounts and services, a portion of allocated administrative and general expenses, general and common plant depreciation and return, and taxes, distribution plant depreciation and return, and operating and maintenance expenses. |
| Oklahoma Gas & Electric | Customer billing, administration, metering, service drop, and a portion of the transformer, lines, and poles. |
| Omaha Public Power District | Customer-related fixed costs including customer-related distribution system fixed costs. |
| Westar Energy | Meters, billing, meter reading, service lines, and a portion of distribution. |
| Florida Light & Power | Pull-offs, installations on customer premises, meters, service drops, and customer collections, services, and sales costs. |
| Georgia Power | Metering and billing and cost components of the minimum distribution system such as poles, overhead conductors, underground conduits, conductors and devices, and line transformers. |
| WEST OTHER THAN CALIFORNIA | |
| PacifiCorp | |
| Rocky Mountain Power - Utah | Customer-related customer service and distribution costs. |
| Rocky Mountain Power - Wyoming | Customer service and distribution costs. |
| Rocky Mountain Power - Idaho | Customer service and distribution costs. |
| Pacific Power & Light - Washington | Customer-related customer service and distribution costs. |
| Pacific Power & Light - Oregon | Customer service and distribution costs. |
| Pacific Power & Light - California | Customer service and distribution costs. |
| Portland General Electric | Customer service costs, uncollectibles, and the customer-related portion of the service lateral and transformer. |
| Public Service Company of Colorado | Investment costs of meters and service drops, meter reading, customer service and billing expenses, and some allocated overhead costs. |
| CALIFORNIA | |
| Glendale Water & Power | * |
| Modesto Irrigation District | Customer-related expenses. |
| Riverside Public Utilities | Meter reading, billing, customer service and administration, and debt service related costs. |
| Sacramento Municipal Utility District | Cost of metering, billing, customer services, transformers, poles, wires, and other electric equipment used to provide reliable electric service. |
| Turlock Irrigation District | Billing and collection, meter reading, service drops, final line transformers, general and administrative expenses, and other related expenses. |

Notes: *Response or specific information not available.

Table 2: A Summary of Fixed Charges in Residential Tariffs

| | Size of General Residential Fixed Charge | Percentage of Fixed Costs Recovered Through Fixed Charge | Cost Studies Used for Class Revenue Allocation and Rate Design | Fixed Charges for Non-Residential Customers | Decoupling | Marginal Cost | Capacity or Demand-Related Costs Included in Fixed Charge | Difference in Fixed Charge for Type of Customer Dwelling or Size of the Customer | Low-Income Customer Fixed Charge Discount or Bill Credit | Fixed Charges to Reduce Tier 1 Rates |
|---|--|--|--|---|------------|---------------|---|--|--|--------------------------------------|
| NORTHEAST & MIDDLE ATLANTIC | | | | | | | | | | |
| Baltimore Gas & Electric | \$7.90 | 45% | X | X | X | | | | X | |
| Central Hudson Gas & Electric | \$24.00 | 69% | X | X | X | | | | X | |
| Consolidated Edison Company | \$15.76 | 77% | X | X | X | | | | X | |
| Rochester Gas and Electric | \$22.10 | 47% | | X | X | X | X | X | | |
| New York State Electric Gas Corporation | \$15.92 | 39% | | X | X | X | X | | | |
| Central Maine Power | \$12.88 | 23% | X | X | X | X | X | | | |
| Eversource Energy | | | | | | | | | | |
| Connecticut Light & Power | \$19.25 - \$23.75 | * | X | X | X | | X | | | |
| Public Service Company of New Hampshire | \$12.75 | * | X | X | | | X | | | |
| Western Massachusetts Electric Company | \$6.00 | * | X | X | X | | | | X | |
| United Illuminating Company | \$17.25 | * | X | X | X | | X | | | |
| MIDWEST & SOUTH | | | | | | | | | | |
| Commonwealth Edison | \$13.35 - \$17.66 | 40% | X | X | | | | X | | |
| DTE Energy | \$6.00 | 25% | X | X | | | | | X | |
| Indiana Michigan Power Company | | | | | | | | | | |
| Indiana Michigan - Indiana | \$7.30 | 100% | X | X | | | | | | |
| Indiana Michigan - Michigan | \$7.25 | 100% | X | X | | | | | | |
| Madison Gas & Electric | \$19.00 | 88% | X | X | | | X | | | |
| Oklahoma Gas & Electric | \$13.00 | * | X | X | | | | | X | |
| Omaha Public Power District | \$15.00 | 100% | X | X | | | | | X | |
| Westar Energy | \$14.50 | 14% | X | X | | | | | | |
| Florida Light & Power | \$7.87 | 26% | X | X | | | X | | | |
| Georgia Power | \$10.00 | 50% | X | X | | | | | X | |
| WEST OTHER THAN CALIFORNIA | | | | | | | | | | |
| PacifiCorp | | | | | | | | | | |
| Rocky Mountain Power - Utah | \$6.00 - \$12.00 | * | X | X | | | | X | | |
| Rocky Mountain Power - Wyoming | \$20.00 | * | X | X | | | X | | | |
| Rocky Mountain Power - Idaho | \$5.00 | * | X | X | | | X | | | |
| Pacific Power & Light - Washington | \$7.75 | 28% | X | X | | | | | X | |
| Pacific Power & Light - Oregon | \$9.50 | * | X | X | | X | X | | | |
| Pacific Power & Light - California | \$7.07 | * | X | X | | X | X | | X | |
| Portland General Electric | \$10.50 | 49% | X | X | X | X | | | | |
| Public Service Company of Colorado | \$7.71 | 100% | X | X | | | | | | |
| CALIFORNIA | | | | | | | | | | |
| Glendale Water & Power | \$11.00 | * | * | X | | * | * | | X | * |
| Modesto Irrigation District | \$20.00 | * | X | X | | | | | X | X |
| Riverside Public Utilities | \$8.06 | * | * | X | | | | X | | |
| Sacramento Municipal Utility District | \$18.00 | 75% | X | X | | X | | | X | |
| Turlock Irrigation District | \$17.00 | * | * | X | | | | | X | * |

Notes: *Response or specific information not available.

Fixed Charges by Region

I. NORTHEAST AND MIDDLE ATLANTIC

A. Baltimore Gas & Electric Company^D

Maryland, Maryland Public Service Commission

Baltimore Gas and Electric's ("BG&E") fixed charges are designed to collect the fixed costs of metering, meter reading, billing and collections, customer care, and the service connection. These fixed costs are estimated using the embedded cost methodology. BG&E uses an electric cost of service study ("ECOSS") for class revenue allocation and rate design. The utility states that the ECOSS "is developed to allocate costs to individual classes then 'match' distribution revenues from each rate class with rate base and expenses allocated to the given class."⁴ The utility defines classes for revenue allocation using the ECOSS generally based on the utility's tariff rate classes where some like classes are combined.⁵ The utility uses the same methodology to collect fixed costs from residential and non-residential customers.

There are two residential customer rate schedules: the residential service schedule and the residential optional time-of-use ("TOU") schedule. The general residential service fixed charge is \$7.90/month⁶ and the residential optional TOU fixed charge is \$12.00/month.⁷ A state-mandated Electric Universal Service Program provides bill assistance to low-income residential BG&E customers. The funding for this program comes from surcharges placed on non-low income customer bills, which the utility applies as credits to low-income customer bills. For general residential service customers, the current level of the fixed customer charge recovers approximately 45 percent of fixed costs.

In its recent Smart Grid case before the Maryland Public Service Commission ("MPSC") filed in November 2015, the utility proposed increasing the general residential service fixed charge to

⁴ Maryland Public Service Commission, *Prepared Direct Testimony of David E. Greenberg on Behalf of Baltimore Gas and Electric Company*, Case No. 9406, November 6, 2015, p. 15.

⁵ *Id.*, pp. 27-29, Exhibit DEG-2.

⁶ "Residential Service-Electric Schedule R," Baltimore Gas and Electric Company, effective June 4, 2016, accessed October 23, 2016, https://www.bge.com/MyAccount/MyBillUsage/Documents/Electric/P3_SCH_R.pdf.

⁷ "Residential Optional Time-of-Use – Electric Schedule RL," Baltimore Gas and Electric Company, effective June 4, 2016, accessed October 23, 2016, https://www.bge.com/MyAccount/MyBillUsage/Documents/Electric/P3_SCH_RL.pdf.

\$12.00/month to match the residential optional TOU fixed charge.⁸ BG&E's testimony explains that, with the installation of smart meters, the difference in service costs between general residential service and residential optional TOU service will not be substantially different as both groups of residential customers will be using the same meter.⁹ Unless a customer decides not to receive a Smart Meter, there is no difference in customers who can be served under either schedule. The ECOSS presented in this rate case indicates that the full costs for both the general residential service class and residential optional TOU class are approximately \$16.00/month.¹⁰ The testimony supports that an increase in residential fixed charges will bring cost recovery closer to ECOSS levels. MPSC Staff recommended a more gradual increase to \$7.90/month on the basis that limiting the fixed charge increase "provides customers more control over their bills and promotes policy goals of energy efficiency as outlined in the EmPOWER Maryland Act."¹¹ On June 3, 2016, the MPSC accepted the Staff's recommendation and granted an increase in the general residential service fixed charge from \$7.50/month to \$7.90/month effective June 4, 2016.¹² This increase maintains the same proportion of fixed to variable rate revenue from the residential fixed charge of 19.4 percent.¹³

⁸ Maryland Public Service Commission, *Prepared Direct Testimony of John C. Frain on Behalf of Baltimore Gas and Electric Company*, Case No. 9406, November 6, 2015, pp. 12-14.

⁹ *Ibid.*

¹⁰ *Ibid.*

¹¹ Maryland Public Service Commission, *Order No. 87591*, Case No. 9406, June 3, 2016, pp. 190-191, <http://www.psc.state.md.us/wp-content/uploads/Order-No.-87591-Case-No.-9406-BGE-Rate-Case.pdf>.

¹² *Id.*, pp. 192-193.

¹³ *Ibid.*

B. Central Hudson Gas & Electric ^D New York, New York Public Service Commission

Central Hudson's fixed charge seeks to collect fixed costs for metering, billing, and customer care as well as the customer portion of primary and secondary lines, transformers and services. These fixed costs are based on an ECOSS that takes into account projected costs of the future rate year. The ECOSS is used for both class revenue allocation and rate design. Central Hudson defines the classes for revenue allocation on various levels. Classes are first defined as residential, non-residential, or lighting (un-metered). Residential classes are separated into general service or TOU, non-residential customer classes are defined based on service level, and lighting classes are defined by type.¹⁴ The utility indicates that for residential customers, non-demand fixed charges are typically set lower than the fixed costs allocated to the residential class in the ECOSS. Revenues and sales are decoupled for residential and some non-residential classes. The decoupling mechanism includes fixed charges as it is calculated using revenue per customer class.

There are different fixed charges for general service and TOU service for residential customers as well as an income-based discount which is provided through a separate program.¹⁵ General residential customers have a fixed customer charge of \$24.00/month while TOU residential customers have a fixed customer charge of \$27.00/month.¹⁶ In order to maintain the current level of fixed charges as determined in the last rate case described below, Central Hudson collects fixed charges in excess of the fixed costs for certain customer classes.¹⁷ These classes typically have fixed charges with a smaller proportion of total costs that are fixed, less than 22 percent. The proportion of total fixed costs that are included in fixed charges for residential and non-demand customers (the utilities' most populous classes) are much greater, from 50 to 68 percent. Sixty-nine percent of fixed costs are recovered through fixed charges for standard residential customers and 54 percent are recovered for TOU residential customers.

Since 2001, when Central Hudson unbundled delivery and supply components, the utility's general residential service customer class fixed charges have increased by 236 percent as the

¹⁴ Lighting includes area lighting, street lighting, and traffic signals.

¹⁵ The low-income program offers discounted monthly budget bills, arrears forgiveness, and bill credits.

¹⁶ "Delivery Rate Summary," Central Hudson, effective July 1, 2015, July 1, 2016 and July 1, 2017, pp. 5-6, <http://www.centralhudson.com/pdf/deliveryratesummary.pdf>.

¹⁷ These customer classes include Non-Residential - Non-Demand, Non-Residential - Primary Demand >= 1 MW, Non-Residential - Substation, Non-Residential - Transmission, Lighting - Area, Lighting - Street & Highway, and Lighting - Traffic Signal.

utility continues to propose the alignment of fixed charges with recovery of fixed costs. In the last rate case, in which the utility proposed a three-year rate plan from July 2015 to June 2018, the New York Public Service Commission (“NYPSC”) rejected a \$5.00/month increase in the residential fixed charge and required that the utility maintain the customer charge at \$24.00/month, where it is currently.¹⁸ The NYPSC stated that they rejected the increase in fixed charges because the REV initiative in New York is likely to impact rates before the end of the three-year rate plan.¹⁹ Therefore, it would be logical to avoid making tariff changes that would potentially change again in the near future. However, the NYSPC also stated that “it is appropriate in the rate design in this case to rely on the ECOSS study and familiar cost of service principles as a guide for the apportionment of the electric revenue requirement increases between fixed and volumetric charges.”²⁰

¹⁸ New York Public Service Commission, *Order Approving Rate Plan*, Case No. 14-E-0318, June 17, 2015, p. 56-58, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={FBCE2FF2-61D7-47A9-9956-773EFC20944A}>.

¹⁹ In the REV proceedings regarding the adoption of a ratemaking and utility revenue model policy framework, the NYPSC stated rate design principles which indicate that “Rates should reflect cost causation, including embedded costs as well as long-run marginal and future costs. Fixed charges should only be used to recover costs that do not vary with demand or energy use.” New York Public Service Commission, *Order Adopting a Ratemaking and Utility Revenue Model Policy Framework*, Case No. 14-M-0101, May 19, 2016.

²⁰ New York Public Service Commission, *Order Approving Rate Plan*, Case No. 14-E-0318, June 17, 2015, p. 57, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={FBCE2FF2-61D7-47A9-9956-773EFC20944A}>.

C. Consolidated Edison Company^D New York, New York Public Service Commission

Consolidated Edison's ("ConEd") fixed charges are designed to recover costs including overhead and underground service connections, metering equipment, meter reading and maintenance, meter installations, customer service, customer accounting, uncollectibles, and minimum system costs which include a portion of fixed costs for transformers and secondary distribution lines. ConEd estimates fixed customer costs using embedded costs and the utility uses the same ECOSS for class revenue allocation and rate design. Revenue allocation in the ECOSS is developed using service classifications defined in ConEd's tariffs with subcategories in certain service classifications. ConEd indicates that costs are assigned to customer classes by allocating the costs of various functions as follows: transmission costs are allocated based on coincident peak, high tension costs are allocated based on non-coincident peak, low tension costs are allocated based on a combination of non-coincident peak and individual customer maximum demands, and customer-related costs are allocated based on the number of customers. ConEd indicates that there have been no issues in recovering fixed charges from customers subject to the revenue decoupling mechanism ("RDM"). Fixed costs for residential and small non-residential customers are recovered through fixed charges. ConEd functionalizes joint costs such as common plant based on labor.²¹ ConEd states that once these costs are part of any functional category in the ECOSS, they are allocated to service classes based on each function's respective allocator. Residential customers are subject to a tiered rate mechanism in the summer months; however, fixed charges do not reduce tier 1 rates exclusively.

Customer charges differ between the TOU and non-TOU residential schedules. Additionally, low-income customers receive a discount on their fixed customer charge. General residential customers have a fixed charge of \$15.76/month, TOU residential customers of \$19.87/month, and low-income customers of \$6.26/month.²² The general service residential customer charge recovers 77 percent of residential fixed customer costs. ConEd's last rate case, decided in February 2014, did not result in any changes in residential fixed charges with the exception of an increased discount for low-income customers of \$9.50/month applied to the fixed customer charge.²³ ConEd filed a new rate case on January 29, 2016.²⁴ The associated Demand Analysis and

²¹ Common Plant includes vehicles, furniture, computer equipment, and other similar fixtures.

²² "Service Classification No. 1," Consolidated Edison Company of New York, effective January 1, 2015, Leafs 387-295, <http://www.coned.com/documents/elecPSC10/SCs.pdf>.

²³ New York Public Service Commission, *Order Approving Electric, Gas and Steam Rate Plans in Accord with Joint Proposal*, Case No. 13-E-0030, February 21, 2014, p. 51,

Cost of Service (“DAC”) Panel testimony states that the utility has reevaluated their cost of service methodologies.²⁵ In particular, ConEd has introduced a “customer component of the High Tension Primary Distribution system” into their customer costs in the ECOSS.²⁶ Previously, components of the high tension primary distribution system were classified as demand-related.²⁷ The high tension primary distribution system includes poles, towers, fixtures, overhead conductors, underground conduit, underground conductors, and line transformers.²⁸ The utility also indicated that the NYPSC has adopted the proposed requirement that NYSEG and RG&E classify distribution plant fifty-fifty as demand- and customer-related in their next rate cases.²⁹ ConEd’s testimony explains that “the Company is paralleling its methodology applied to secondary distribution assets and is also recognizing the increased emphasis on fixed-cost recovery.”³⁰ ConEd did not propose an increase in residential fixed charges in their pending rate case, due in part to the most recent NYPSC decision for Central Hudson regarding the upcoming rate re-examination as part of the REV.³¹

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<http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={1714A09D-088F-4343-BF91-8DEA3685A614}>.

²⁴ “Con Edison 2016 Electric Rate Case Filing,” Con Edison, accessed March 3, 2016,

<https://www.coned.com/2016-rate-filing/2016-rate-filings.asp>.

²⁵ Consolidated Edison Company on New York, Inc., *Demand Analysis and Cost of Service Panel Direct Testimony*, January 29, 2016, pp. 17-18, <https://www.coned.com/2016-rate-filing/pdf/testimony-exhibits-electric/17-dac-panel-testimony-final.pdf>.

²⁶ *Id.*, p. 17.

²⁷ *Ibid.*

²⁸ Consolidated Edison Company on New York, Inc., *Demand Analysis and Cost of Service Panel Direct Testimony – Exhibit (DAC-1) Schedule 1*, January 29, 2016, pp. 21-23, <https://www.coned.com/2016-rate-filing/pdf/testimony-exhibits-electric/16-dac-panel-exhibits-dac-1-dac-3.pdf>.

²⁹ Consolidated Edison Company on New York, Inc., *Demand Analysis and Cost of Service Panel Direct Testimony*, January 29, 2016, p. 18, <https://www.coned.com/2016-rate-filing/pdf/testimony-exhibits-electric/17-dac-panel-testimony-final.pdf>.

³⁰ *Ibid.*

³¹ Consolidated Edison Company of New York, Inc., *Direct Testimony – Electric Rate Panel*, January 29, 2016, pp. 24-26, <https://www.coned.com/2016-rate-filing/pdf/testimony-exhibits-electric/17-dac-panel-testimony-final.pdf>.

D. Rochester Gas and Electric ^{DM}
New York State Electric Gas Corporation ^{DM}
New York, New York Public Service Commission
Central Maine Power ^{DM}
Maine, Maine Public Utilities Commission

The three utilities, Rochester Gas & Electric (“RG&E”), New York State Electric Gas Corporation (“NYSEG”), and Central Maine Power (“CMP”), collectively serve customers in both New York and Maine. Their fixed charges are designed to collect customer-related costs and local distribution facilities costs. The utilities indicate that the local distribution facilities costs are based on the expected design load of the customer. Even with the inclusion of local distribution facilities costs in fixed charges, the current monthly fixed charges are lower than what the cost of service study suggests are the fixed costs for most customer classes. NYSEG, RG&E, and CMP own transmission and distribution plants and systems but do not own any generation facilities.³²

The utilities use marginal cost of service studies (“MCOSS”) to support residential fixed charges. The studies identify costs in three categories: customer-related costs, design-demand related costs, and load-related distribution costs. The utilities define customer-related costs as costs that vary with the number of customers on the system. These costs include meters, service drop, meter reading and billing. Design-demand related costs include local facilities costs such as line transformers, secondary lines, and local primary lines. Load-related distribution costs include the distribution substation and trunkline feeder costs, upstream line and substation costs, and marginal transmission costs. Customer-related costs and design-demand-related costs are included in fixed costs associated with the fixed charge, as discussed above. The three utilities have fixed charges for both residential and non-residential customers.

At RG&E and NYSEG, ECOSS are used to guide class allocation of revenue, while MCOSS are used for rate design. At CMP, MCOSS are used for both class revenue allocation and rate design. If marginal costs are used for revenue allocation purposes, then an Equal Percentage Marginal Costs (“EPMC”) model is used to scale to the total revenue requirement. The customer classes for

³² “NYSEG and RG&E Play Vital Role in the Developing New Power Generation Sources, Including Renewables,” RG&E new release, 2011, accessed February 20, 2016, <http://www.rge.com/OurCompany/News/2011/interconnections12011.html>; “CMP Transmission Service,” Central Maine Power, accessed February 20, 2016, <http://www.cmpco.com/SuppliersAndPartners/TransmissionServices/CMPTransmissionSvc/default.html>; “System Information Overview,” Central Maine Power, accessed February 20, 2016, <http://www.cmpco.com/SuppliersAndPartners/TransmissionServices/CMPTransmissionSvc/CMPSystemInfo.html>.

revenue allocation are defined in the utilities' tariffs. The fixed costs are determined on a per-customer basis, using forward-looking costs to determine the marginal cost associated with serving an additional customer added to the system. The utilities do not follow the methodology of deriving fixed charges solely from customer-related costs. Since smart meters are not in place and because of the desire to keep rates simple, the utility combines both customer-related and design-demand-related costs in the fixed charges. The utilities have used this approach in rate design and rate cases for many years. The utilities have made consistent proposals aimed at increasing fixed and demand charges and reducing energy charges for delivery service.

Decoupling exists in both Maine and New York and is set by total service class revenue so there are no specific issues with respect to collecting fixed charges. Regarding annualized costs, the utilities' investments are annualized using an economic carrying charge which produces a stream of payments³³ and yields the total present value of all costs over the life of the investment.

The current residential fixed charges for NYSEG are \$15.11/month for residential service, \$17.40/month for residential day/night service,³⁴ and \$24.11/month for residential TOU service.³⁵ There is also an additional fixed Bill Issuance Charge of \$0.81/month for each of the residential service classes.³⁶ RG&E has a residential fixed charge of \$21.38 and two TOU residential fixed charges of either \$21.38 (<24,750 kwh/year) or \$24.86 (>24,750 kwh/year).³⁷ There is also an additional fixed Bill Issuance Charge of \$0.72/month for each of the residential service classes.³⁸ CMP has a residential fixed charge of \$12.88/month for the first 50 kWh or less³⁹ and a

³³ These payments increase at the rate of inflation net technical progress.

³⁴ Residential day/night service is applicable to customers who use at least 1,000 kWh of electricity per month with 20 percent of the energy usage occurring during nighttime service hours. During nighttime service hours, 11:30pm to 7am, NYSEG sells electricity at a lower price to residential customers. "Day-Night Service Rate," NYSEG, accessed October 24, 2016, <http://www.nyseg.com/yourhome/pricingandrates/daynightrate.html>.

³⁵ "Electric Rates Summary," NYSEG, effective September 1, 2016, <http://www.nyseg.com/MediaLibrary/2/5/Content%20Management/NYSEG/SuppliersPartners/PDFs%20and%20Docs/N%20Electric%20Rate%20Summary.pdf>.

³⁶ *Ibid.*

³⁷ "Electric Rates Summary," RG&E, Effective July 1, 2016, <https://www.rge.com/MediaLibrary/2/5/Content%20Management/RGE/SuppliersPartners/PDFs%20and%20Docs/RGE%20Electric%20Rate%20Summary.pdf>.

³⁸ *Ibid.*

³⁹ "Rate A Residential Service Electric Delivery Rate Schedule," Central Maine Power Company, effective July 1, 2016,

residential TOU fixed charge of \$10.00/month.⁴⁰ The utilities state that they propose fixed charges closer to what is suggested by the MCOSS, but do not propose moving fixed charges to the full amount due to the expected bill impacts on small customers. For standard service residential classes, CMP collects 23 percent of fixed costs through residential fixed charges, NYSEG collects 39 percent, and RG&E collects 47 percent.

In a prior rate case involving NYSEG and RG&E, the NYSPC issued a decision on September 21, 2010 which approved a three-year, four-month rate plan for the two utilities.⁴¹ This rate plan included an increase in residential fixed charges for both of the utilities of \$2.00/month in the first year with no other increase in the two remaining years of the plan.⁴² This increase was approximately one quarter of the amount the utilities originally proposed.⁴³ According to NYSPC Staff, the increased customer charge “provide[s] reasonable movement toward the minimum cost to serve.”⁴⁴ Additionally, as mentioned in the section discussing ConEd, the NYSPC indicated that in the next rate case, the ECOSS for the utilities will classify distribution plant costs fifty-fifty between customer-related and demand-related costs.⁴⁵

The utilities filed a new rate case in May 2015 with a proposal to increase the standard residential fixed charges to \$18.89/month for NYSEG and to \$26.73/month for RG&E.⁴⁶ Subsequent to

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<https://www.cmpco.com/MediaLibrary/3/6/Content%20Management/Suppliers%20And%20Partners/PDFs%20and%20Doc/a.pdf>.

⁴⁰ “Rate A-TOU Residential Service – Time-of-Use Electric Delivery Rate Schedule,” Central Maine Power Company, effective July 1, 2016,

<https://www.cmpco.com/MediaLibrary/3/6/Content%20Management/Suppliers%20And%20Partners/PDFs%20and%20Doc/atou.pdf>.

⁴¹ New York Public Service Commission, *Order Establishing Rate Plan*, Case No. 09-E-0715, September 21, 2010, <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={4CF18507-1968-4E38-9DB6-FD33FAF8426F}>.

⁴² *Id.*, pp. 47-48.

⁴³ *Id.*, p. 47.

⁴⁴ *Id.*, p. 47.

⁴⁵ *Id.*, pp. 45-47.

⁴⁶ New York Public Service Commission, *Direct Testimony - Revenue Allocation Rate Design Economic Development and Tariff Panel Exhibits*, Case Nos. 15-E-0285 and 15-G-0286, May 20, 2015, Exhibit_(RARDEDT-10), Schedule 1, p. 1, Schedule 2, p. 1,

<http://www.rge.com/MediaLibrary/2/5/Content%20Management/Shared/SuppliersPartners/2015%20R>

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settlement discussions, on June 15, 2016, the NYSPC filed an order in accord with a joint proposal in which the Commission approved a three-year electric rate plan for NYSEG and RG&E effective July 1, 2016 to April 30, 2019.⁴⁷ Under this rate plan the utilities' residential fixed charges will remain at current levels for the entirety of the rate plan.⁴⁸ This decision to maintain flat rates was based on the then pending REV order regarding the adoption of a ratemaking and utility revenue model policy framework.⁴⁹

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[ate%20Case/Revenue%20Allocation%20Rate%20Design%20Economic%20Development%20and%20Tariff%20Panel%20Exhibits%20-%20Final%205202015.pdf](#).

⁴⁷ New York Public Service Commission, *Order Approving Electric and Gas Rate Plans in Accord with Joint Proposal*, Case 15-E-0283, 15-G-0284, 15-E-0285, and 15-G-0286, June 15, 2016, pp. 1-2, 45, <https://www.nyseg.com/investplan/ratefiling2015.html>.

⁴⁸ *Id.*, p. 21.

⁴⁹ New York Public Service Commission, *Order Adopting a Ratemaking and Utility Revenue Model Policy Framework*, Case No. 14-M-0101, May 19, 2016.

E. Eversource Energy ^D

Connecticut, Connecticut Public Utilities Regulatory Authority
Massachusetts, Massachusetts Department of Public Utilities
New Hampshire, New Hampshire Public Utilities Commission

Eversource provides service to customers in three different states as Connecticut Light & Power (“CL&P”), Public Service Company of New Hampshire (“PSNH”), and Western Massachusetts Electric Company (“WMECO”). WMECO’s fixed residential charge seeks to recover the fixed costs of meters and services, meter reading, customer records and collection, customer service, and additional overhead expenses that may be allocated and included in customer-related costs. The fixed costs for PSNH and CL&P are the same as WEMCO, except that they additionally include minimum system cost components such as service transformers, lines, and poles.

Eversource uses embedded costs to estimate fixed cost and the utility’s ECOSS are used for both class revenue allocation and rate design. Customer classes in the ECOSS are defined based on the rate classes of customers served. Eversource states that in some cases, rate classes are combined when identical service characteristics and rate alternatives exist. Additional studies are performed, including those of uncollectible costs, meter weights, and service transform rates, to develop cost allocation factors in order to align the cost of providing distribution service with the actual service provided to customers in each class. At CL&P, Eversource recently applied an EPMC in developing rates for street lighting service, but otherwise does not employ marginal costs in rate design or revenue allocation. The fixed charges in each of the states tend to recover less than the fixed costs determined by Eversource’s cost of service analysis. Residential fixed customer charges tend to be less aligned with cost of service than fixed customer charges for commercial and industrial customers as more fixed cost recovery for residential customers occurs through energy charges.

Decoupling is used at both WMECO and CL&P on a total company level and is applied on a uniform per-kWh basis across all customer classes. PSNH does not use decoupling. The utility points out that this methodology may affect the extent to which fixed cost recovery can be accomplished through increases to the fixed monthly charge. Further, it notes that decoupling has been seen by some to place less emphasis on rate design. Eversource does have tiered and block rate structures in place in some of its companies; however, fixed charges are not exclusively used to reduce tier 1 rates in these cases.

At CL&P, the monthly fixed charge for the residential (non-heating) electric service class and residential TOU electric service class is \$19.25/month.⁵⁰ The fixed charge is \$23.75/month for the residential electric heating service class.⁵¹ The Connecticut Public Utilities Regulatory Authority (“PURA”) submitted a decision on December 17, 2014 requiring that CL&P submit a rate plan including an increase in the residential electric and residential electric heating fixed customer charges stated above. These were increased from \$16.00/month and \$20.25/month, respectively.⁵² The PURA stated that it “generally prefers an approach that moves rates toward increased fixed cost recovery” and is “against lowering the customer charges from current levels, or eliminating the customer charges all together.”⁵³

As of March 2016, PSNH had a general residential fixed charge of \$12.75/month and a residential TOD fixed charge of \$29.61/month.⁵⁴ Eversource states that the fixed charges for PSNH has stayed at approximately the same level since 2010 and that there have been no recent rate cases addressing fixed charges in PSNH. WMECO has four residential classes split by heating and non-heating and also by residential classes that receive a low-income discount of 32 percent off their total bill.⁵⁵ The residential fixed charge for all of the classes is currently \$6.00/month.⁵⁶ In 2011, WMECO proposed a fixed customer charge increase from \$8.53/month to \$9.00/month for the

⁵⁰ “Residential Electric Service,” Connecticut Light and Power Company, DBA Eversource Energy, effective July 1, 2016, <https://www.eversource.com/Content/docs/default-source/rates-tariffs/rate1.pdf?sfvrsn=10>; “Residential Time-of-Day Electric Service,” Connecticut Light and Power Company, DBA Eversource Energy, effective July 1, 2016, <https://www.eversource.com/Content/docs/default-source/rates-tariffs/rate7.pdf?sfvrsn=10>.

⁵¹ “Residential Electric Heating Service,” Connecticut Light and Power Company, DBA Eversource Energy effective, January 1, 2016, <https://www.eversource.com/Content/docs/default-source/rates-tariffs/rate5.pdf?sfvrsn=10>.

⁵² Connecticut Public Utility Regulatory Authority, *Decision*, Docket No. 14-05-06, December 17, 2014, p. 190, <http://www.dpuc.state.ct.us/FINALDEC.NSF/0d1e102026cb64d98525644800691cfe/8ae5dacf2e5c72a685257dc6004b8034?OpenDocument&Highlight=0,13-01-19>.

⁵³ *Id.*, pp. 187-188.

⁵⁴ “2016 Summary of Electric Rates,” Eversource - NH, updated January 1, 2016, <https://www.eversource.com/Content/docs/default-source/rates-tariffs/2015-nh-electric-rates.pdf?sfvrsn=2>.

⁵⁵ “Residential – Low Income Schedule R-2,” Western Massachusetts Electric Company, effective February 1, 2011, <https://www.eversource.com/Content/docs/default-source/rates-tariffs/1034.pdf?sfvrsn=2>.

⁵⁶ “Summary of Electric Delivery Service Rates,” Western Massachusetts Electric Company, DBA Eversource Energy, effective February 1, 2016, <https://www.eversource.com/Content/docs/default-source/rates-tariffs/1052.pdf?sfvrsn=20>.

residential non-heating customer class and from \$8.53/month to \$9.50/month for the residential heating customer class.⁵⁷ The proposal was rejected by the Massachusetts Department of Public Utilities (“MDPU”) due to its potential for adversely affecting bills for low-use low-income customers as “the rates for low-income customers [were] set at the same level as non-low-income customers as a result of [the] proceeding.”⁵⁸ The MDPU directed WEMCO to file for a residential fixed customer charge of \$6.00/month for both standard and low-income residential customers, resulting in the current value of the fixed charge.⁵⁹ There is currently no legal limit on the magnitudes of fixed charges for PSNH or WMECO, but legislation passed in Connecticut, effective July 1, 2015, calls for re-examination of the residential fixed charges in each electric distribution utility’s next rate case.⁶⁰ The intent of the legislation is to limit fixed charges “to recover only the fixed costs and operation and maintenance expenses directly related to metering, billing, service connections and the provision of customer service.”⁶¹

⁵⁷ Massachusetts Department of Public Utilities, *Final Order*, D.P.U 10-7, January 31, 2011, pp. 329- 330. <https://www.eversource.com/Content/docs/default-source/Investors/wmeco-dpu-final.pdf?sfvrsn=0>.

⁵⁸ *Id.*, pp. 320, 331.

⁵⁹ *Id.*, p. 331.

⁶⁰ State of Connecticut General Assembly, *June Special Session, Public Act No. 15-5*, Senate Bill No. 1502, June 2015, pp. 149-150, <https://www.cga.ct.gov/2015/act/pa/pdf/2015PA-00005-R00SB-01502SS1-PA.pdf>.

⁶¹ *Id.*, p. 150.

F. United Illuminating Company^D
Connecticut, Connecticut Public Utilities Regulatory Authority

United Illuminating (“UI”) includes the fixed costs of metering, billing, customer care, service lines, transformers, and a portion of allocated poles and wires in their fixed charges. The portion of allocated poles and wires comes from UI’s minimum system cost allocation approach, which classifies a portion of poles and wires as customer-related and the other portion as demand-related. The utility uses embedded costs to estimate fixed charges as Connecticut does not require a MCOSS. UI states that they regulate cost-based rates only for distribution as evidenced by the minimum system cost allocation approach. UI’s ECOSS are used for both class revenue allocation and rate design. The classes for revenue allocation are those defined in the utility’s tariffs. UI defines differences in cost of service for specific customer groups mostly by electric heat and non-heat customers. The utility’s cost allocation to customer classes is derived from the NARUC Electric Utility Cost Allocation Manual, which suggests using direct assignment whenever possible, and then using the distribution cost of service study allocation.⁶² According to the utility, PURA endorses a minimum system cost allocation method when classifying joint costs. A majority of UI’s customer classes have fixed charges that recover nearly all of the costs of serving the customer; however, the residential customer class typically has a fixed charge that recovers less than the cost of service.

UI has decoupled its revenues from its sales of electricity. When defining annualized costs, UI includes carrying costs as part of the revenue requirement calculation that is based on a forward looking rate year. The rate base in this calculation is based on an average of beginning and ending period depreciated values. There is no difference in the application of carrying charges for fixed or demand costs. The utility has fixed charges for residential and non-residential customers. Historically, UI has applied fixed charges for two purposes: for equitable cost recovery among and within rate classes and for adequate recovery of allowed revenue requirements unrelated to volume or demand. UI indicates that with decoupling, the recovery of revenue requirements through the fixed charge is much less of a concern.

Over the last ten years, the utility’s fixed charges have been moving closer to the level determined by the cost of service studies. The current residential fixed customer charge is

⁶² National Association of Regulatory Commissioners, *Electric Utility Cost Allocation Manual*, January 1992, pp. 75, 83, 86-99.

\$17.25/month for both standard and TOU residential customers.⁶³ There are no low-income discounts in Connecticut. In UI's last rate case, the utility submitted proposed tariffs for its two-year rate plan.⁶⁴ The utility states that there was no dramatic change in fixed charges and that fixed charges were simply updated using the PURA approved cost of service study. The utility also points out that, in general, PURA supports gradual rate movement toward the cost of service study results. PURA ordered that UI perform new cost of service studies for both years of the rate plan using specifications indicated by the authority in the August 2013 final decision.⁶⁵

Connecticut legislation passed in 2015, as discussed above in the section regarding Eversource CL&P, limits the fixed charge to be no greater than the cost of serving the customer.⁶⁶ UI states that this will likely result in a residential customer charge that does not include the customer-allocated portion of poles and wires in the next rate case. On July 1, 2016, UI filed a rate request with PURA in which the utility proposed to maintain residential fixed charges at current levels.⁶⁷ The utility addressed the changes under the residential fixed charge legislation mentioned above stating that the proposed fixed charge “is *less* than the residential customer fixed charge that would be allowed under the statute” which UI calculated as \$22.64/month in 2017 increasing to \$25.42/month in 2019.⁶⁸

⁶³ “Residential Rate R,” United Illuminating Company, effective January 1, 2016, http://www.uinet.com/wps/wcm/connect/0cc7658041384518ac0fec7a239a91d1/821_Rate+Residential+Rate+R.pdf?MOD=AJPERES&CACHEID=0cc7658041384518ac0fec7a239a91d1; “Residential Time-of-Day Rate RT,” United Illuminating Company, effective January 1, 2016, http://www.uinet.com/wps/wcm/connect/19e4548041384518ac12ec7a239a91d1/822_Rate+Residential+RT.pdf?MOD=AJPERES&CACHEID=19e4548041384518ac12ec7a239a91d1.

⁶⁴ Connecticut Public Utility Regulatory Authority, *Decision*, Docket No. 13-01-19, August 14, 2013, <http://www.dpuc.state.ct.us/FINALDEC.NSF/0d1e102026cb64d98525644800691cfe/6b22a81f9e695f5685257bc800656220?OpenDocument&Highlight=0,13-01-19>.

⁶⁵ *Id.*, pp. 153-154.

⁶⁶ State of Connecticut General Assembly, *June Special Session, Public Act No. 15-5*, Senate Bill No. 1502, June 30, 2015, pp. 149-150, <https://www.cga.ct.gov/2015/act/pa/pdf/2015PA-00005-R00SB-01502SS1-PA.pdf>.

⁶⁷ Connecticut Public Utility Regulatory Authority, *Brief of the United Illuminating Company*, Docket No. 16-06-04, October 17, 2016, p. 133.

⁶⁸ *Id.*, pp. 132-133.

II. MIDWEST AND SOUTH

A. Commonwealth Edison

Illinois, Illinois Commerce Commission

Commonwealth Edison (“ComEd”) aggregates total fixed costs into customer-related services, metering services, and distribution costs.⁶⁹ ComEd’s costs applying to the fixed charge include services, customer installations, billing, indirect uncollectibles, customer information, and revenue-related customer costs. The utility uses embedded costs to estimate fixed costs through an ECOSS. The ECOSS is also used to develop ComEd’s rate design.⁷⁰ The utility has fixed charges for both residential and non-residential customers.⁷¹ Regarding the issue of joint costs, ComEd includes the Illinois Electricity Distribution Tax under distribution costs, which is fixed, although the tax varies with kWh. Due in part to the utility’s last rate case, discussed below, ComEd’s fixed charge application and methodology are consistent with the practice of limiting fixed charges to customer-related costs. However, ComEd’s position is that in addition to customer-related costs, distribution facilities costs are fixed costs that should also be recovered through a fixed charge.

There are four residential service classes including single- and multi-family with and without space heat.⁷² The residential customer charges range from \$7.00/month for multi-family without electric space heat to \$11.31/month for single-family with electric space heat⁷³ plus an added Incremental Distribution Uncollectible Cost Factors (“IDUF”)⁷⁴ cost which is approximately

⁶⁹ Illinois Commerce Commission, *Exhibit 7.01 - Embedded Cost of Service Study Pro Forma Test-Year Ended December 2014*, Docket No. 15-0287, April 15, 2015, pp. 76-79, <https://www.icc.illinois.gov/docket/files.aspx?no=15-0287&docId=228074>.

⁷⁰ Illinois Commerce Commission, *Exhibit 7.03 - Commonwealth Edison Company Update Rate Design*, Docket No. 15-0287, April 15, 2015, <https://www.icc.illinois.gov/docket/files.aspx?no=15-0287&docId=228074>.

⁷¹ *Ibid.*

⁷² *Ibid.*

⁷³ “Electricity Delivery Service Charges - Supplement to Rate DSPP,” Commonwealth Edison Company, effective December 14, 2015, Sheet No. 24, <https://www.comed.com/SiteCollectionDocuments/MyAccount/MyBillUsage/CurrentRates/Ratebook.pdf>.

⁷⁴ The IDUF is calculated as described in the Ride UF - Uncollectible Factors schedule. “Electricity Rider UF – Uncollectible Factors,” Schedule of Rates for Electric Service, Commonwealth Edison Company effective February 27, 2012, Sheet No. 267.4,

\$1.01 for all residential customer classes effective September 2016 through May 2017.⁷⁵ There is also an additional standard metering service charge which is \$4.33/month plus IDUF for all residential customers.⁷⁶ The utility does not offer income-based discounts. As of April 2015, ComEd's fixed charges recover 40 percent of ComEd's fixed costs.⁷⁷

ComEd conducts a Rate Design Investigation every three years. In ComEd's 2010 general rate case, the Illinois Commerce Commission ("ICC") approved a modified residential rate design that would result in a 50 percent recovery of fixed costs through fixed charges.⁷⁸ The ICC stated in their final order that "the Commission has recognized the importance of recovering fixed costs predominantly through fixed charges and the Commission finds that one of the most important steps in bringing ComEd's rate design in line with its costs is to properly align costs ComEd incurs to provide delivery service."⁷⁹ The Commission goes on to state that rate designs should reflect cost causation. While there is no limitation on ComEd's residential fixed charges, they must be approved by the Illinois Commerce Commission ("ICC") and the utility must submit an annual filing which includes a reconciliation of the revenue requirement for the prior year.

In ComEd's most recent rate case, the ICC issued a decision on December 13, 2013, approving ComEd's rate design proposal for the multi-family/heating fixed customer charge but rejected the

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<https://www.comed.com/SiteCollectionDocuments/MyAccount/MyBillUsage/CurrentRates/Ratebook.pdf>.

⁷⁵ "Electricity Incremental Uncollectible Cost Factors – Supplement to Rider UF(1)," Commonwealth Edison Company, effective December 14, 2015, Sheet No. 20,

https://www.comed.com/SiteCollectionDocuments/MyAccount/MyBillUsage/CurrentRates/53_Incremental_Uncollectibles.pdf.

⁷⁶ "Electricity Delivery Service Charges - Supplement to Rate DSPP," Commonwealth Edison Company, effective December 14, 2015, Sheet No. 24,

<https://www.comed.com/SiteCollectionDocuments/MyAccount/MyBillUsage/CurrentRates/Ratebook.pdf>.

⁷⁷ Commonwealth Edison uses the ECOSS to develop rates. Illinois Commerce Commission, *Exhibit 7.03 - Commonwealth Edison Company Update Rate Design*, Docket No. 15-0287, April 15, 2015, <https://www.icc.illinois.gov/docket/files.aspx?no=15-0287&docId=228074>. See also Commonwealth Edison uses the ECOSS to develop rates. *Ibid*, see also Illinois Commerce Commission, *Exhibit 7.00 - Direct Testimony of John L. Leick*, Docket No. 15-0287, April 15, 2015, <https://www.icc.illinois.gov/docket/files.aspx?no=15-0287&docId=228074>.

⁷⁸ Illinois Commerce Commission, *Order*, Docket No. 10-0467, May 24, 2011, p. 232,

<https://www.icc.illinois.gov/docket/files.aspx?no=10-0467&docId=166950>.

⁷⁹ *Ibid*.

utility's other residential fixed customer charge proposals.⁸⁰ Instead, the Commission ordered a decrease in the fixed customer charge for single family residential classes and an increase in the fixed customer charge for the multi-family, no-heating class as proposed by the Attorney State General of Illinois ("AG"). This decision effectively reversed the 50 percent fixed charge recovery rate, as the Commission pointed out that ComEd's previously approved rate design resulted in "charges substantially in excess of the cost of service for low-use customers in two residential classes."⁸¹ Additionally, the Commission approved a change in the allocation of combination poles to be 100 percent primary service, excluding them from consideration as customer-related fixed costs.⁸² Proponents of this decision explained that the combination poles are primarily meant to accommodate primary lines and that "attachment of secondary lines is a convenience for secondary service."⁸³

⁸⁰ Illinois Commerce Commission, *Order*, Docket No. 13-0387, December 18, 2013, p. 75, <https://www.icc.illinois.gov/docket/files.aspx?no=13-0387&docId=207265>.

⁸¹ *Id.*, p. 74.

⁸² *Id.*, p. 25.

⁸³ *Ibid.*

B. DTE Energy

Michigan, Michigan Public Service Commission

DTE Energy's ("DTE") fixed costs, as defined by the Michigan Public Service Commission ("MPSC"), include metering, overhead and underground services, customer records and collection, and customer service expenses.⁸⁴ While the MPSC determines the limitations of the customer-related fixed costs using marginal cost methodology, DTE uses embedded costs to estimate the MPSC-defined fixed costs. The utility uses ECOSS in the development of rate design and for allocation of revenue. The overall customer class costs match the ECOSS; however, the customer, demand, and energy components may not exactly match that of the study. DTE indicates that rates are designed to recover the power supply and distribution deficiencies assigned to each respective class by the cost of service study. DTE defines customer classes as distribution customer classes and power supply classes. Distribution customer classes are determined by voltage level, where secondary voltage is split into residential and commercial, and street lighting is considered separate due to the unique characteristics of the class. The power supply classes include residential, residential space heating, general service, secondary schools, large general service, primary, primary schools, interruptible supply, metal melting and process heat, and lighting. Costs are allocated by measuring the demands at each voltage level and allocating the costs associated with that portion of the system to the class using it.

Fixed customer charges and rate structures vary across the different customer classes, but do not vary by residential rate schedule. A majority of the residential rates are in the same power supply class in the ECOSS with the exception of the residential whole-house space heating class. For the distribution class, which dictates the monthly fixed charge, all residential rates are in the same cost of service class. All residential customers with the same voltage have the same fixed customer charge. While the most common residential class has a tiered structure, the fixed charge does not depend on whether or not the class has a tiered structure. DTE follows the practice of limiting fixed costs to customer-related costs when deriving the fixed customer charge.

When defining annualized costs, DTE performs a revenue requirement calculation of customer-related costs that serves as the basis for the utility's customer charge. DTE states that the carrying

⁸⁴ Further details on the stance of the MPSC on fixed costs used to estimate fixed charges is referred to in DTE's rate case information later on in this section.

costs associated with the fixed costs elements within the rate base are calculated by multiplying the rate base by the pre-tax weighted average cost of capital.⁸⁵

Currently, all residential customers pay a fixed service charge of \$6.00/month.⁸⁶ The \$6.00/month fixed charge was originally recommended by the MPSC Staff in DTE Energy's 2008 rate case, who stated that "certain costs do not vary with the amount of energy a customer uses and the company should be able to collect a portion of these fixed costs."⁸⁷ DTE offers low-income discounts delivered through monthly bill credits. The current residential fixed charge covers less than 25 percent of customer-related costs.

In the utility's most recent rate case, DTE proposed increasing customer fixed charges gradually from \$6.00/month to \$10.00/month using the minimum distribution method,⁸⁸ which is described in the NARUC Electric Utility Cost Allocation Manual.⁸⁹ On December 11, 2015, the MPSC rejected this proposal. Although agreeing that the costs included in DTE's cost of service study were customer-related, the MPSC argued that some of these costs do not "vary with the number of customers on the system."⁹⁰ The MPSC determined that the customer charge should reflect the marginal cost of connecting a customer to the system, which excludes some costs associated with the minimum distribution system.⁹¹

⁸⁵ The rate base is the net plant plus construction work in progress ("CWIP"). Other elements included in the revenue requirement are Depreciation Expense, Property Taxes, Operating and Maintenance Expenses, General and Intangible Plant, Employee Pensions and Benefits, Administrative and General Expense, and Employment Taxes.

⁸⁶ "Electric Rate Book," DTE Energy, effective March 1, 2016, Sheet No. D-1.00-17.00, <http://www.dleg.state.mi.us/mpsc/electric/ratebooks/dtee/dtee1curd1throughend.pdf>.

⁸⁷ Michigan Public Service Commission, *Opinion and Order*, Case No. U-15244, December 23, 2008, p. 92, <http://efile.mpsc.state.mi.us/efile/docs/15244/0567.pdf>.

⁸⁸ Michigan Public Service Commission, *Order*, Case No. U-17767, December 11, 2015, p. 116, <http://efile.mpsc.state.mi.us/efile/docs/17767/0485.pdf>.

⁸⁹ National Association of Regulatory Commissioners, *Electric Utility Cost Allocation Manual*, January 1992, pp. 138-142.

⁹⁰ Michigan Public Service Commission, *Order*, Case No. U-17767, December 11, 2015, p. 119, <http://efile.mpsc.state.mi.us/efile/docs/17767/0485.pdf>.

⁹¹ *Ibid.*

C. Indiana Michigan Power Company

Indiana, Indiana Utility Regulatory Commission
Michigan, Michigan Public Service Commission

Fixed costs that Indiana Michigan Power Company (“I&M”) collects through the residential fixed charge include distribution costs such as metering costs, customer account and service expenses, general and administrative expenses, depreciation, and taxes. Historically and currently, the utility’s fixed charges are designed to collect customer-related fixed costs. Demand-related fixed costs such as production and transmission plant costs and costs of distribution poles and lines are not included in I&M’s residential fixed charge. The MPSC mandates that distribution pertaining exclusively to a given customer be classified as customer-related while other distribution costs be classified as demand-related.⁹² The Indiana Utility Regulatory Commission (“IURC”) does not provide specific customer-related fixed cost definitions. The utility has fixed charges for nearly all of its customer classes.⁹³

I&M uses embedded costs for ECOSS conducted in both states. These studies are used for both revenue allocation and rate design. I&M indicates that the first step in the utility’s residential service rate design is to determine the full cost of service for the class then to propose a charge which covers the full cost, if reasonable. The ECOSS are conducted using a standard Functionalize, Classify and Allocate/Assign methodology to allocate costs to customer classes. Classes used for revenue allocation are the same as defined in the utility’s tariff classes. To address joint costs, I&M uses ECOSS to allocate and assign costs as either demand- or energy-related cost where most demand-related costs are considered fixed costs. I&M occasionally determines annualized costs for meters or lighting fixtures for rate design purposes. The utility calculates annual investment carrying charges for various investment lives in years and uses the appropriate factor for the expected life of the investment.

I&M Indiana’s current standard residential service charge is \$7.30/month.⁹⁴ This collects 100 percent of Indiana’s customer-related fixed costs. The utility also has a residential TOU rate

⁹² I&M’s demand-related fixed costs are often collected from non-residential customers through demand charges. I&M’s residential customer two-part rates do not include a demand charge. Michigan Public Service Commission, *Opinion and Order Amending Standard Rate Application Filing Forms and Instructions*, Case No. U-4471, May 10, 1976, Attachment A, p. 2.

⁹³ I&M’s Irrigation Service and Fort Wayne Streetlighting – Customer Owned and Maintained System customer classes do not have a monthly fixed charge.

⁹⁴ “Tariff R.S. (Residential Electric Service),” Schedule of Tariffs and Terms and Conditions of Service Governing the Sale of Electricity in the State of Indiana, Indiana Michigan Power Company, effective

schedule which has a fixed charge of \$8.50/month.⁹⁵ In I&M Indiana’s last rate case, decided February 13, 2013, the IURC approved I&M Indiana’s ECOSS.⁹⁶ The IURC indicated that the results from the studies should be used in customer class revenue allocation and in the utility’s electric retail rate design.⁹⁷

I&M Michigan’s current standard residential fixed charge is \$7.25/month.⁹⁸ This collects slightly above the full residential customer-related fixed costs. The utility also has a residential TOU rate, which includes a fixed charge of \$8.45/month.⁹⁹ I&M Michigan’s last rate case ended in a settlement agreement approved by the MPSC on August 14, 2015.¹⁰⁰ The settlement authorized revised rates for I&M Michigan on the basis of the use of the utility’s revenue requirement which was adopted and approved in a prior case.¹⁰¹ I&M Michigan’s original proposal included increasing the general residential fixed charge to \$9.10/month and the residential TOU fixed charge to \$10.30/month;¹⁰² however, the residential fixed charge increases were not present in the final rates agreed upon in the settlement.¹⁰³

Continued from previous page

February 28, 2013, Sheet No. 4,

https://www.indianamichiganpower.com/global/utilities/lib/docs/ratesandtariffs/Indiana/IM_IN_TB_16_09-28-2016.pdf.

⁹⁵ *Id.*, “Tariff R.S. – TOD (Residential Time-of-Day Service),” Sheet No. 6.

⁹⁶ Indiana Utility Regulatory Commission, *Order of the Commission*, Cause No. 44075, February 13, 2013, pp. 115-116.

⁹⁷ *Ibid.*

⁹⁸ “Tariff RS (Residential Electric Schedule),” Schedule of Tariffs Governing the Sale of Electricity, Indiana Michigan Power Company, effective December 2010, Sheet No. D-2.00, https://www.indianamichiganpower.com/global/utilities/lib/docs/ratesandtariffs/Michigan/IM_MI_TB_09-28-2016.pdf.

⁹⁹ *Id.*, “Tariff RS-TOD (Residential Time-of-Day Service),” Sheet No. D-6.00.

¹⁰⁰ Michigan Public Service Commission, *Order Approving Settlement Agreement*, Case No. U-17698, August 14, 2015, <http://efile.mpsc.state.mi.us/efile/docs/17698/0043.pdf>.

¹⁰¹ *Id.*, p. 2.

¹⁰² Michigan Public Service Commission, *Pre-Filed Direct Testimony of Matthew W. Nollenberger*, Case No. U-17698, December 15, 2014, Exhibit IM-4 (MWN-4), pp. 2-3, <http://efile.mpsc.state.mi.us/efile/docs/17698/0010.pdf>.

¹⁰³ Michigan Public Service Commission, *Order Approving Settlement Agreement*, Case No. U-17698, August 14, 2015, p. 2, <http://efile.mpsc.state.mi.us/efile/docs/17698/0043.pdf>.

D. Madison Gas & Electric

Wisconsin, Wisconsin Public Service Commission

Madison Gas and Electric's ("MGE") fixed charge is called the Grid Connection and Customer Service Charge. The Customer Service portion of the charge includes the costs of customer accounts and services, and a portion of allocated administrative and general expenses, general and common plant depreciation and return, and taxes. The Grid Connection portion includes distribution plant depreciation and return, operating and maintenance expenses, and an allocated portion of general and common plant depreciation and return, and taxes. MGE bases the distribution cost component of its fixed costs on the minimum distribution system, which does not vary by customer and is the minimum distribution capacity necessary for all customers to be connected to the grid. In addition to the minimum distribution system, other joint costs allocated to the fixed charge include an allocated portion of administrative and general expenses, general and common plant depreciation and return, and taxes.¹⁰⁴ Costs associated with generation and transmission capacity, as well as the costs for the distribution capacity above the minimum distribution system, are considered demand-related. Thus, they are not included in the fixed charge cost allocation.¹⁰⁵

MGE uses embedded costs to develop the unbundled cost of service components. Customer classes are determined by the rate schedule in the ECOSS used in the utility's last rate case. MGE does not directly use annualized carrying costs in its ECOSS. Instead, MGE explains that it starts with the utility's full forecast test year revenue requirement, which directly includes depreciation, associated operating and maintenance expenses, and allocated taxes. In allocating revenue, the utility has used customer classes defined by MGE's rate schedules in its last ECOSS. In this methodology, general residential service customers would be separate from residential TOU service customers in allocating revenue in the ECOSS. MGE indicates that this methodology has posed some challenges, particularly in the non-residential classes. Consequently, the utility is evaluating whether it should employ broader customer classes in its future ECOSS. All customer class schedules include a fixed charge. Although the most recently approved fixed charges in MGE's last filing were based off of one cost of service study, MGE indicates that they proposed a variety of cost of service studies and additional studies to reflect

¹⁰⁴ Labor allocators are in many cases used to allocate the above costs. Customer accounts and customer service FERC accounts are primarily labor expenses.

¹⁰⁵ However, from an accounting perspective, costs associated with generation and transmission capacity are fixed year-to-year.

the positions of various stakeholders.¹⁰⁶ All of these cost of service studies, as well as those submitted by the PSCW Staff, are considered by the PSCW in rate decisions in Wisconsin.¹⁰⁷

MGE's current residential Customer Service and Grid Connection Charge is approximately \$19.00/month,¹⁰⁸ an increase from the previous level of \$10.44/month.¹⁰⁹ The utility has a general residential rate schedule as well as a residential TOU rate schedule, both of which have the same Customer Service and Grid Connection Charge.¹¹⁰ In 2016, the utility expects to collect 21 percent of fixed costs allocated to residential customers through residential fixed charges compared to the 23 percent estimated in the utility's fully unbundled embedded cost of service study. In MGE's 2015 rate case, the utility had originally proposed two separate fixed charges in which the Customer Charge would recover customer-related costs and the Grid Connection Charge would recover distribution costs associated with serving the customer.¹¹¹ The charges remained separate until the final decision, in which the PSCW stated that two charges may be "confusing for customers" and combined the two charges into a single fixed charge.¹¹² The Commission approved increasing the Customer Service charge component of the residential fixed charge to \$14.97/month and the Grid Connection charge portion to \$4.03/month.¹¹³ MGE states that they had originally proposed a residential Grid Connection charge of \$7.00/month and that the rejection of the Grid Connection component increase has prevented the utility from recovering the costs from the minimum distribution system. The utility's cost of service study from the rate case indicated that the residential allocation of fixed costs is approximately \$21.55/month, indicating that the \$19.00/month combined Customer Service and Grid Connection Charge recovers approximately 88 percent of residential fixed costs.¹¹⁴

¹⁰⁶ Public Service Commission of Wisconsin, *Final Decision*, Docket No. 3270-UR-102, December 23, 2014, pp. 30-33, http://psc.wi.gov/apps35/ERF_search/content/SearchRef.aspx?docid=226563.

¹⁰⁷ *Id.*, p. 7.

¹⁰⁸ "Residential Service Schedule Rg-1," Madison Gas and Electric Company, effective January 1, 2015, <https://www.mge.com/images/PDF/Electric/Rates/E06.pdf>.

¹⁰⁹ Public Service Commission of Wisconsin, *Final Decision*, Docket No. 3270-UR-102, December 23, 2014, p. 2, https://psc.wi.gov/apps35/ERF_search/content/SearchRef.aspx?docid=226563.

¹¹⁰ "Residential Electric Rates," Madison Gas and Electric, accessed October 23, 2016, <https://www.mge.com/customer-service/home/elec-rates-res/>.

¹¹¹ Public Service Commission of Wisconsin, *Final Decision*, Docket No. 3270-UR-102, December 23, 2014, p. 35-49, https://psc.wi.gov/apps35/ERF_search/content/SearchRef.aspx?docid=226563.

¹¹² *Id.*, p. 49.

¹¹³ *Id.*, p. 35, 48.

¹¹⁴ *Id.*, p. 32.

Despite the rejection, the Commission stated that “fixed charges should be increased to more closely reflect the utility’s fixed costs to provide basic service to a customer.”¹¹⁵ MGE has used fixed charges for over 34 years and applies fixed charges to appropriately charge customers for the fixed costs of providing service. This is consistent with the practice of achieving fixed cost recovery through fixed charges. The utility does not seek to increase the residential fixed charge in its 2017 rate case filed in April 2016 in efforts “ensure that all customers benefit from changing technology” under the utility’s Energy 2030 Framework.¹¹⁶

¹¹⁵ *Id.*, p. 48.

¹¹⁶ “MGE Files Rate Changes for 2017,” MGE news release, April 8, 2016, <https://www.mge.com/newsroom/news/Compnews/20160408.htm>. See also “MGE’s Energy 2030 Framework,” MGE, <https://www.mge.com/community-conversations/framework.htm>.

E. Oklahoma Gas & Electric

Oklahoma, Oklahoma Corporation Commission

Oklahoma Gas and Electric's ("OG&E") fixed charge includes recovery of fixed costs related to customer billing, administration, metering, service drop, and a portion of the transformer, lines and poles. OG&E uses a fully allocated ECOSS to estimate fixed costs for fixed charge recovery and uses the same ECOSS for class revenue allocation and rate design. OG&E's ECOSS customer classes are defined by type of customer (e.g., residential, municipal, etc.) and usage characteristics such as annual maximum kW demand and load factor. OG&E bases its allocation methodology and ECOSS on the NARUC Electric Utility Cost Allocation Manual. Specifically, the utility relies on the zero-intercept method to identify the customer-related and demand-related components for certain distribution system costs.¹¹⁷ Other costs are allocated to customer groups based upon demand or customer count. Regarding the recovery of the estimated fixed costs, while the utility collects nearly all of the fixed costs associated with non-residential customers through a fixed charge, OG&E has tended to collect less than the full fixed costs for residential customers through fixed charges.

The current fixed customer charge for general residential service and residential TOU service customers is \$13.00/month.¹¹⁸ OG&E has a block energy rate structure in some of the customer class tariffs, but does not use fixed charges to reduce the initial block prices. Instead, the utility uses the initial block prices to recover any additional fixed charges not covered by the customer charge. OG&E offers a \$10/month credit applied to the customer's bill to low-income residential customers deemed qualified by the Oklahoma Department of Human Services.¹¹⁹ The credit is

¹¹⁷ National Association of Regulatory Commissioners, *Electric Utility Cost Allocation Manual*, January 1992, pp. 92-95.

¹¹⁸ "Standard Pricing Schedule: R-1 Residential Service," Oklahoma Gas and Electric Company, effective August 2, 2012, Sheet No. 3.00, <https://oge.com/wps/wcm/connect/de21b39f-2d52-402f-82e6-a6826999d724/3.00+R-1.pdf?MOD=AJPERES&CACHEID=de21b39f-2d52-402f-82e6-a6826999d724>; "Standard Pricing Schedule: R-TOU Residential Time-of-Use," Oklahoma Gas and Electric Company, effective August 2, 2012, Sheet No. 3.30, <https://oge.com/wps/wcm/connect/fe4b2135-3d11-4f9d-ba8d-109ab630d09b/3.30+R-TOU.pdf?MOD=AJPERES&CACHEID=fe4b2135-3d11-4f9d-ba8d-109ab630d09b>.

¹¹⁹ "Standard Pricing Schedule: LIAP Low Income Assistance Program Rider," Oklahoma Gas and Electric Company," effective August 2, 2012, Sheet No. 50.10, <https://oge.com/wps/wcm/connect/fae1d65e-cf37-49c9-851b-0d8e684fde24/50.10+LIAP.pdf?MOD=AJPERES&CACHEID=fae1d65e-cf37-49c9-851b-0d8e684fde24>.

funded by other retail customers. OG&E's recovery of fixed costs through fixed charges has ranged from 50 percent to 100 percent, varying by customer class and service level.

In its current rate case before the Oklahoma Corporation Commission ("OCC") filed in December 2015,¹²⁰ OG&E is proposing to increase the fixed charge to \$26.50/month.¹²¹ This proposed fixed charge includes some transmission and distribution costs. OG&E indicates that the utility is proposing to collect all of the fixed costs per customer class through a fixed customer charge. As a result, the utility has also proposed eliminating the block energy structure and moving related costs into the customer and energy charges. The utility is currently awaiting a decision by the OCC.

¹²⁰ Oklahoma Corporation Commission, *Application Package Volume 1*, Cause No. PUD 201500273, December 18, 2015, <http://imaging.occeweb.com/AP/CaseFiles/occ5248940.pdf>.

¹²¹ Oklahoma Corporation Commission, *Supplemental Package Volume III*, Cause No. PUD 201500273, December 18, 2015, Sheet No. 3.00, p. 6, <http://imaging.occeweb.com/AP/CaseFiles/occ5249126.pdf>.

F. Omaha Public Power District

Nebraska, Omaha Public Power District Board of Directors

The Omaha Public Power District (“OPPD”) bases its fixed costs on embedded costs. OPPD’s cost of service studies are used for both revenue allocation and rate design. The utility uses a standard cost of service methodology to address joint costs. When defining annualized costs, the utility employs a single-asset life cycle for fixed assets. The exception to this is street lighting, for which OPPD uses a single-asset life with replacement. OPPD does not abide by the practice of limiting fixed charges to the recovery of customer-related costs, as its fixed costs for recovery through fixed charges include distribution system fixed costs.

OPPD has four different classifications of residential customers, including general, conservation, employee, and multi-family of which the general and conservation are the most common. OPPD’s fixed charge for the general residential and residential conservation rate schedules is \$15.00/month.¹²² This rate was increased from \$10.25/month as of June 1, 2016 and going forward, will increase in annual increments of \$5.00/month per year to \$30.00/month by 2019, as approved by the OPPD Board of Directors on December 17, 2015.¹²³ The approved increase was roughly \$5.00 less than what was originally proposed by OPPD.¹²⁴ The rate plan, according to the Board, is intended to “strike a better balance between fixed and variable costs.”¹²⁵ This updated charge currently covers all customer costs and aims to maintain the coverage of costs through 2019. The costs covered by this fixed charge include customer and distribution system fixed costs directly assigned to customers. Along with the fixed charge increase, the OPPD Board approved a decrease in the energy charge and announced the addition of a new Residential Low Usage/Low Income Customer Program, implemented in June 2016,¹²⁶ which applies a bill credit to the

¹²² “Residential Rates,” OPPD, accessed October 23, 2016, <http://www.oppd.com/residential/residential-rates/>. See also “Residential Rates,” OPPD, effective June 1, 2016, <http://www.oppd.com/media/207840/oppd-rate-manual.pdf#nameddest=110>.

¹²³ “OPPD Board Approves Rate Restructuring Plan & 2016 Budget,” OPPD news release, December 17, 2015, <http://www.oppd.com/news-resources/news-releases/2015/december/oppd-board-approves-rate-restructuring-plan-2016-budget/>.

¹²⁴ *Ibid.*

¹²⁵ *Ibid.*

¹²⁶ *Ibid.*

customer's monthly bill.¹²⁷ Notably, OPPD also has a minimum monthly bill for residential customers of \$17.07/month.¹²⁸

¹²⁷ "OPPD Develops Program to Help Low Usage/Low Income Customers," OPPD news release, December 15, 2015, accessed October 24, 2016, <http://www.oppd.com/news-resources/news-releases/2015/december/oppd-develops-program-to-help-low-usagelow-income-customers/>.

¹²⁸ "Residential Rates," OPPD, effective June 1, 2016, <http://www.oppd.com/media/207840/oppd-rate-manual.pdf#nameddest=110>.

G. Westar Energy

Kansas, Kansas Corporation Commission

Westar's fixed costs classified as customer service include meters, billing, meter reading, service lines, and a portion of distribution.¹²⁹ The utility relies on embedded costs to estimate their fixed costs.¹³⁰ Westar's ECOSS are used for both the allocation of revenue as well as rate design.¹³¹ Westar uses FERC depreciation rates authorized by the state, reported in FERC Form 1, for their retail rates and ECOSS.¹³² In order to allocate joint costs and common costs, Westar uses principles of cost causation. The utility uses plant and payroll as allocation factors for costs that are not able to be allocated by external allocation factors such as customer, demand, or energy. The utility's rate classes have been based on class of service (residential, commercial, industrial, etc.), end-use classification (residential regular, residential all-electric), quality of service (firm or interruptible), and type of service (full requirements, partial requirements).¹³³ The utility has fixed charges for non-residential customers as well as residential customers.

Currently, Westar has a standard residential service fixed customer charge of \$14.50/month.¹³⁴ The utility does not offer income-based discounts, as the state has ruled them to be discriminatory. In Westar's 2015 rate case, the utility proposed to increase the monthly fixed charge for residential customers on a phased-in basis of \$3.00/month per year for the following four years.¹³⁵ The rate case ended in a stipulation and agreement on September 24, 2015¹³⁶ in

¹²⁹ Kansas Corporation Commission, *Direct Testimony of H. Edwin Overcast – Westar Energy*, Docket No. 15-WSEE-115-RTS, March 2, 2015, pp. 12, 16-17, <http://estar.kcc.ks.gov/estar/ViewFile.aspx/S20150302135218.pdf?Id=951fb4b5-bea0-4462-baee-e41294e8ed18>.

¹³⁰ *Id.*, Appendix B.

¹³¹ *Id.*, pp. 5-6, Appendix B.

¹³² Information obtained through a follow-up phone call with Westar representatives.

¹³³ Kansas Corporation Commission, *Direct Testimony of H. Edwin Overcast – Westar Energy*, Docket No. 15-WSEE-115-RTS, March 2, 2015, p. 11, <http://estar.kcc.ks.gov/estar/ViewFile.aspx/S20150302135218.pdf?Id=951fb4b5-bea0-4462-baee-e41294e8ed18>.

¹³⁴ "Residential Standard Service," Westar Energy, effective October 28, 2015, https://www.westarenergy.com/Portals/0/Resources/Documents/Tariffs/Residential_Service_1015.pdf.

¹³⁵ Kansas Corporation Commission, *Direct Testimony of Cindy S. Wilson – Westar Energy*, Docket No. 15-WSEE-115-RTS, March 2, 2015, pp. 9-10, <http://estar.kcc.ks.gov/estar/ViewFile.aspx/S20150302134521.pdf?Id=dac36651-3bfb-40bc-a220-1f75add1070d>.

which the Kansas Corporation Commission (“KCC”) approved an increase in the residential fixed charge from \$12.00/month to \$14.50/month which was proposed in a joint motion.¹³⁷ Before the fixed charge increase, 73 percent of Westar’s cost-based residential revenue requirements were fixed and only 11.5 percent of these residential fixed costs were recovered through fixed charges.¹³⁸ While historically Westar’s customer charge has been limited to the collection of customer-related costs, in the latest rate case, the utility attempted to increase fixed charges to recover costs beyond the customer-related cost in the fixed charge. The approved fixed charge of \$14.50/month does not cover costs beyond customer-related costs; however, the fixed charge was renamed “Basic Service Fee” in anticipation of further costs being covered by the fixed charge in the future.¹³⁹

Continued from previous page

¹³⁶ Kansas Corporation Commission, *Order Approving Stipulation and Agreement*, Docket No. 15-WSEE-115-RTS, September 24, 2015, <http://estar.kcc.ks.gov/estar/ViewFile.aspx/20150924104744.pdf?Id=29b7b55e-b40c-4f66-9335-153bfe44a81e>.

¹³⁷ Kansas Corporation Commission, *Joint Motion to Approve Stipulation and Agreement*, Docket No. 15-WSEE-115-RTS, August 6, 2015, p. 9, Appendix B, <http://estar.kcc.ks.gov/estar/ViewFile.aspx/S20150806151046.pdf?Id=06892f1c-caa8-491c-88f3-ea58aba56f61>. See p. 47 of Order in footnote 128 for approval of rates and schedules from the above filing.

¹³⁸ Transmission costs were not included in the calculations to arrive at these percentages. Kansas Corporation Commission, *Direct Testimony of H. Edwin Overcast – Westar Energy*, Docket No. 15-WSEE-115-RTS, March 2, 2015, pp. 5-6, 13, <http://estar.kcc.ks.gov/estar/ViewFile.aspx/S20150302135218.pdf?Id=951fb4b5-bea0-4462-baee-e41294e8ed18>.

¹³⁹ Westar states in its response that customer charges should be based on customer allocation of distribution costs using direct assignment where possible and the minimum system concept to classify costs that have both a demand and customer component. This is explained in Dr. Overcast’s testimonies in Westar’s most recent rate case. Kansas Corporation Commission, *Direct Testimony of H. Edwin Overcast – Westar Energy*, Docket No. 15-WSEE-115-RTS, March 2, 2015, pp. 22-23, <http://estar.kcc.ks.gov/estar/ViewFile.aspx/S20150302135218.pdf?Id=951fb4b5-bea0-4462-baee-e41294e8ed18>.

H. Florida Power & Light

Florida, Florida Public Service Commission

Fixed costs used to estimate Florida Power and Light's ("FPL") fixed charges include customer-related charges such as pull-offs, installations on customer premises, meters, service drops, and customer collections, services, and sales costs. FPL uses embedded costs to estimate fixed costs, as required by the Florida Public Service Commission ("FPSC").¹⁴⁰ The utility uses its ECOSS for rate design, but also relies on factors such as bill impacts and gradualism, in the determination of appropriate rate levels. Classes in the ECOSS are based on FPL's rate schedules, and costs are assigned to the classes based on cost causation. Optional rate schedules are combined with standard schedules in the ECOSS. FPL allocates joint costs based on labor ratios or plant balances. In defining annualized costs, FPL uses a forecast year to assess carrying costs. It does not make pro-forma adjustments to annualize costs.

The utility has a two-tier rate structure, with the first tier applying to the first 1,000 kWh of use and the second tier applying to use greater than 1,000 kWh; however, the fixed customer charge is not intended to reduce tier 1 rates. FPL indicates that the rate design is based on maintaining a one cent spread between the two rate tiers, regardless of the amount of revenue recovered through the fixed customer charge. FPL's application and methodology of limiting fixed costs included in the fixed charge to customer-related costs has not changed over time. FPL has fixed charges for residential, commercial, and industrial customers.

There are two rate schedules for residential customers: the residential service schedule and the TOU residential rider rate schedule. Residential service customers pay a fixed charge of \$7.87/month and customers on the residential TOU rider schedule pay \$12.36/month.¹⁴¹ FPL indicates that the higher TOU fixed charge is meant to cover the incremental cost of the TOU meter. Residential customers pay a portion of fixed costs through the fixed charge with the fixed charge recovering approximately 26 percent of FPL's residential fixed costs. FPL's last major rate

¹⁴⁰ Florida Public Service Commission, *In re: Consideration of PURPA Standards in the following dockets: Peak Load Pricing Declining Block Rates Cost of Service Load Management Decision Making*, Dockets Nos. 780793-EU, 790571-EU, 790593-EU, 790594-EU, 790859-EU, Order No. 10179, August 3, 1981, p. 9.

¹⁴¹ "Residential Rates, Clauses and Storm Factors," FPL, effective September 2016, <https://www.fpl.com/rates/pdf/Sept2016-Residential.pdf>.

case reached settlement in January 2013, approving FPL's proposed fixed charge increase.¹⁴² The residential service fixed charge increased from \$5.90/month to \$7.00/month and the residential TOU rider fixed charge was set at \$11.00/month to replace the original residential TOU schedule.¹⁴³ The rate increase was approved in anticipation of FPL's three new energy centers.¹⁴⁴ In FPL's 2009 rate case, the FPSC approved an increase in residential fixed charges from \$5.69/month to \$5.90/month.¹⁴⁵ The FPSC stated that they agreed with FPL's proposed methodology, which excluded the minimum distribution system in the estimation of fixed charges.¹⁴⁶

¹⁴² Florida Public Service Commission, *Order Approving Revised Stipulation and Settlement*, Docket No. 120015-EI, Order No. PSC-13-0023-S-EI, January 14, 2013, <http://www.psc.state.fl.us/library/filings/13/00264-13/00264-13.pdf>.

¹⁴³ *Id.*, Exhibit B, pp. 31-32. See also Florida Public Service Commission, *Testimony & Exhibits of: Renae B. Deaton*, Docket No. 120015-EI, Summary of Proposed Rates Exhibit RBD-7, p. 1, <http://www.psc.state.fl.us/library/filings/12/01609-12/01609-12.pdf>.

¹⁴⁴ These new energy centers included the Cape Canaveral Clean Energy Center in June 2013, the Riviera Beach Energy Center in June 2014, and the Port Everglades Energy Center in April 2016. Florida Public Service Commission, *Order Approving Revised Stipulation and Settlement*, Docket No. 120015-EI, Order No. PSC-13-0023-S-EI, January 14, 2013, pp. 5-6, <http://www.psc.state.fl.us/library/filings/13/00264-13/00264-13.pdf>.

¹⁴⁵ Florida Public Service Commission, *Order Denying in Part, and Granting in Part, Florida Power & Light Company's Request for a Permanent Rate Increase and Setting Depreciation and Dismantlement Rates and Schedules*, Docket No. 080677-EI, Order No. PSC-10-0153-FOF-EI, March 17, 2010, p. 214, <http://www.psc.state.fl.us/library/filings/10/01885-10/01885-10.pdf>.

¹⁴⁶ *Id.*, p. 175.

I. Georgia Power

Georgia, Georgia Public Service Commission

In calculating customer-related fixed costs, Georgia Power includes costs of metering and billing in addition to cost components of the distribution system using minimum distribution methodology. The minimum distribution system includes poles, overhead conductors, underground conduits, conductors and devices, and line transformers. The utility uses embedded costs to estimate fixed costs and the same ECOSS are used for rate design and revenue allocation. Georgia Power has eight customer rate groups, including one residential class. Costs are allocated to these classes based on function and voltage level of service. Costs are further allocated using number of customers and phases of metering among other factors. While Georgia Power does have a tiered residential rate structure, the fixed charge is not used to reduce tier 1 rates.

The current residential fixed customer charge is \$10.00/month plus applicable recovery tariffs.¹⁴⁷ Georgia Power also offers a low-income senior citizen discount which reduces the customer's utility bill by \$24.00/month, including \$18.00/month for metered service¹⁴⁸ and \$6.00/month for fuel.¹⁴⁹ Georgia Power's fixed charges recover approximately half of the fixed costs. Georgia Power's last major rate case ended with a settlement agreement order by the Georgia Public Service Commission ("GPSC") on December 23, 2013.¹⁵⁰ Georgia Power has updated its tariffs annually, with the approval of the GPSC, based on stipulations of revenue increases for 2015 and 2016 from the 2013 rate case.¹⁵¹ The current fixed charge was increased from \$9.00/month from the 2010 rate case stipulations which stipulated rates, with the approval of the GPSC, through

¹⁴⁷ There are also specific administrative charges for residential pre-pay rate customers which are included in the fixed charge. "Electric Service Tariff: Residential Service Schedule: 'R-22'," Georgia Power, effective January 2016, https://www.georgiapower.com/docs/rates-schedules/residential-rates/2.10_R.pdf.

¹⁴⁸ *Ibid.*

¹⁴⁹ "Electric Service Tariff: Fuel Cost Recovery Schedule: 'FCR-24'," Georgia Power, effective January 2016, https://www.georgiapower.com/docs/rates-schedules/common/10.40_FCR.pdf.

¹⁵⁰ Georgia Public Service Commission, *Order Adopting Settlement Agreement*, Docket No. 36989, December 23, 2013, <http://psc.state.ga.us/factsv2/Document.aspx?documentNumber=151108>.

¹⁵¹ Georgia Public Service Commission, *Order Approving the 2015 Rate Update Stipulation*, Docket No. 36989, February 24, 2015, <http://psc.state.ga.us/factsv2/Document.aspx?documentNumber=157212>; Georgia Public Service Commission, *Order Approving the 2016 Rate Update Tariffs with Modification*, Docket No. 36989, December 22, 2015, <http://psc.state.ga.us/factsv2/Document.aspx?documentNumber=161450>.

2013.¹⁵² The GPSC required that Georgia Power file its next general rate case by July 1, 2016.¹⁵³ However, in April 2016, Georgia Power announced that they would maintain the current electric rates through 2019.¹⁵⁴ This decision was in light of an agreement voted on by the GPSC related to the merger of Southern Company, Georgia Power's parent company, and AGL Resources.

¹⁵² Georgia Public Service Commission, *Order Modifying Demand Side Management Tariffs and Approving Updated Base Tariffs*, Docket No. 31958, December 20, 2012, pp. 1-3, 4-5, <http://www.psc.state.ga.us/factsv2/Document.aspx?documentNumber=145296>; Georgia Public Service Commission, *Compliance Filing*, Docket No. 31958, December 21, 2012, 2.10_R-19.doc, <http://www.psc.state.ga.us/factsv2/Document.aspx?documentNumber=145331>.

¹⁵³ Georgia Public Service Commission, *Order Adopting Settlement Agreement*, Docket No. 36989, December 17, 2013, p. 16, <http://psc.state.ga.us/factsv2/Document.aspx?documentNumber=151108>.

¹⁵⁴ "Georgia Power base electric rates to remain flat through 2019," Georgia Power news release, April 14, 2016, <https://www.georgiapower.com/docs/about-us/news/2016-04/GeorgiaPower-base-electric-rates.pdf>.

III. WEST OTHER THAN CALIFORNIA

A. PacifiCorp^M

California, California Public Utility Commission
Idaho, Idaho Public Utility Commission
Oregon, Oregon Public Utility Commission
Utah, Utah Public Service Commission
Washington, Washington Utilities and Transportation Commission
Wyoming, Wyoming Public Service Commission

PacifiCorp provides service to customers in six different states through the following operating companies: Rocky Mountain Power in Utah (“RMP-U”), Wyoming (“RMP-W”), and Idaho (“RMP-I”) and Pacific Power & Light in Washington (“PP&L-W”), Oregon (“PP&L-O”), and California (“PP&L-C”).¹⁵⁵ PacifiCorp’s fixed charges are not limited to specific cost categories except in Washington and Utah, where policies limit residential fixed charges to customer-related costs. PacifiCorp often advocates for fixed charges that include customer service and distribution costs. Utah, Wyoming, Washington, and Idaho all use embedded costs to estimate fixed costs while California and Oregon use marginal costs. Marginal costs are estimated for new and existing customers for all categories in Oregon and for all categories except for transformer, meter, and service costs in California. PacifiCorp indicates that per the preference of the California Public Utilities Commission (“CPUC”) and the Office of Ratepayer Advocates (“ORA”), marginal costs of the transformer, meters, and service costs are applicable to new customers only.¹⁵⁶ In Oregon and California, PacifiCorp states that annual economic carrying charges are only applied to fixed costs and are generally only used in the context of a marginal cost of service study.¹⁵⁷ In Oregon and California, where it employs marginal costs, PacifiCorp uses the relative percentages of functionalized marginal cost to allocate embedded revenue requirements by function.

¹⁵⁵ “Company Overview,” PacifiCorp, accessed February 27, 2016, <http://www.pacificorp.com/about/co.html>.

¹⁵⁶ See for example, Division of Ratepayer Advocates, California Public Utilities Commission, *Testimony on San Diego Gas & Electric Company’s 2012 General Rate Case, Phase 2*, Docket A.11-10-002, May 18, 2012, p. 3. “DRA recommends that the Commission adopt marginal customer costs based on ‘New Customer Only’ (‘NCO’) methodology, which the Commission has adopted in nearly all litigated marginal cost decisions since 1992.”

¹⁵⁷ These charges include levelized income and property taxes, are based on the expected life for the equipment in consideration, and include a present value cost or removal at the end of the useful life.

PacifiCorp uses the same cost of service study for both rate design and revenue allocation. However, the final revenue allocation or rate design may not correspond exactly to the costs estimated by the study, as rate impact is also considered. In general, PacifiCorp's uses the cost of service study as a guide for determining rates. In Wyoming, PacificCorp must set proposed rates within 99 to 101 percent of the cost of service for each class.¹⁵⁸ In Oregon, base rates must collect the cost of service; however, a rate mitigation surcharge or surcredit is used to mitigate large bill impacts within a rate case. PacifiCorp uses cost of service studies to assign costs to customer classes. Most of PacifiCorp's costs of service are joint costs. The utility allocates these costs among customer classes based on each class's relative share of measurable cost-defining service characteristics such as kWh, peak demand in kW, or customer count. Most of the residential fixed costs are recovered through energy rates rather than fixed charges, while most of the fixed costs for non-residential customers are recovered through demand or facilities charges. PacifiCorp has fixed charges for residential and non-residential customers. PacificCorp does not fully recover fixed costs through fixed charges in any of the states in which the utility provides service. Additionally, PacifiCorp has fixed charges that are not used to reduce tier 1 rates exclusively.

PacifiCorp does not consider differences in fixed costs within the residential customer class except in Idaho. In Idaho, PacifiCorp has two residential classes: one for customers who have opted into an optional TOU¹⁵⁹ and another that includes all other residential customers. These two residential classes have different fixed charges based on different metering costs and a different number of customers per transformer. Wyoming and Idaho do not provide low-income bill assistance. California provides a low-income discount as a percentage discount off the entire bill. In Washington, a low-income discount is applied November through April to energy usage over 600 kWh.¹⁶⁰ In Oregon, low-income assistance is provided by an outside agency. In Utah, low-income customers are provided a fixed monthly bill credit.

¹⁵⁸ Wyoming Public Service Commission, *Finding of Fact, Conclusions of Law, Decision and Order Nunc Pro Tunc*, Docket No. 20000-446-ER-14, January 23, 2015, p. 42, https://dms.wyo.gov/OpenAttachment.aspx?file=aellio_22677_123201584804AM_20000-446-22677.pdf.

¹⁵⁹ The optional TOU residential class rate primarily benefits larger customers.

¹⁶⁰ The discount is based on the customers' income as a percentage of federal poverty level and is limited to 4,720 customers.

RMP-Utah has a residential fixed charge of \$6.00/month for single-phase and \$12.00/month for three-phase residential customers.¹⁶¹ In Phase 2 of RMP-U's most recent rate case, for which a decision was issued in June 2010, the Utah Public Service Commission ("UPSC") approved an increase in the residential customer charge.¹⁶² RMP-U had proposed an increase of the fixed customer charge to \$4.45/month, from \$3.00/month;¹⁶³ however, the UPSC approved a charge of only \$3.75/month.¹⁶⁴ RMP-U also proposed that the UPSC reconsider costs recovered by the customer charge, suggesting that the UPSC consider residential share of distribution costs and revenue volatility when deriving fixed customer charges.¹⁶⁵ The UPSC declined to change the methodology it uses to classify fixed costs considered in the fixed customer charge.¹⁶⁶ The utility states that all increases to the residential fixed customer charge have been stipulated since the above rate case decision resulting in the current residential fixed charge rates.

PP&L-Washington has a residential fixed charge of \$7.75/month.¹⁶⁷ In PP&L-W's last rate case, both the Washington Utilities and Transportation Commission ("WUTC") Staff and the utility proposed to increase PP&L-W's residential fixed charge from \$7.75/month.¹⁶⁸ PP&L-W proposed an increase to \$14.00/month and WUTC Staff proposed an increase to \$13.00/month "to allow the company more stable revenues and in support of its proposal to add a third volumetric block to encourage conservation and distributed generation."¹⁶⁹ PP&L-W also requested an increase to the low-income assistance program by \$1.00/month, which would increase the fixed charge to

¹⁶¹ "Electric Service Schedule No. 1 Residential Service – State of Utah," Rocky Mountain Power, effective September 1, 2014, https://www.rockymountainpower.net/content/dam/rocky_mountain_power/doc/About_Us/Rates_and_Regulation/Utah/Approved_Tariffs/Rate_Schedules/Residential_Service.pdf.

¹⁶² Utah Public Service Commission, *Report and Order on Rate Design*, Docket No. 09-035-23, June 2, 2010, <http://www.psc.state.ut.us/utilities/electric/elecindx/2006-2009/documents/669350903523ROord.pdf>.

¹⁶³ *Id.*, p. 20.

¹⁶⁴ *Id.*, p. 31.

¹⁶⁵ *Id.*, pp. 29-31

¹⁶⁶ *Ibid.*

¹⁶⁷ "Schedule 16 Residential Service," Pacific Power & Light, effective October 4, 2016, https://www.pacificpower.net/content/dam/pacific_power/doc/About_Us/Rates_Regulation/Washington/Approved_Tariffs/Rate_Schedules/Residential_Service.pdf.

¹⁶⁸ Washington Utilities and Transportation Commission, *Final Order Rejecting Tariff Sheets; Resolving Contested Issues; Authorizing and Requiring Compliance Filings*, Docket No. UE-140762, March 25, 2015, <http://www.utc.wa.gov/docs/Pages/DocketLookup.aspx?FilingID=140762>.

¹⁶⁹ *Id.*, p. 86.

\$8.75/month.¹⁷⁰ The WUTC ultimately rejected the increase in residential fixed customer charges on March 25, 2015, despite the Staff and PP&L-W proposals, stating that it was “not prepared to move away from the long-accepted principle that basic charges should reflect only ‘direct customer costs,’” of which it did not consider the proposed distribution costs to be a part.¹⁷¹ The WUTC also stated that it recognizes decoupling as the preferred approach for residential rate design and suggests that PP&L-W consider decoupling in the future.¹⁷² In the rate case, PP&L-W demonstrated that a residential fixed charge of \$28.00/month could be justified based on the cost of service study indicating that approximately 28 percent of PP&L’s fixed residential costs are recovered through the fixed charge.¹⁷³

RMP-Wyoming has a residential fixed charge of \$20.00/month.¹⁷⁴ On January 23, 2015, the Wyoming Public Service Commission (“WPSC”) rejected RMP-W’s proposed fixed charge increase from \$20.00/month to \$22.00/month, based on opponent testimony.¹⁷⁵ One opponent stated that because “residential energy consumption is declining” and “residential costs remained flat” the request should be denied.¹⁷⁶

RMP-Idaho has a standard residential fixed charge of \$5.00/month¹⁷⁷ and a residential optional TOU fixed charge of \$14.00/month.¹⁷⁸ In RMP-I’s 2011 rate case, the utility proposed to remove

¹⁷⁰ *Ibid.*

¹⁷¹ *Id.*, p. 91.

¹⁷² *Id.*, pp. 92-94.

¹⁷³ Washington Utilities and Transportation Commission, *Direct Testimony of Joelle R. Steward*, Docket No. UE-140762, May 1, 2014, pp. 19, 23
<http://www.utc.wa.gov/docs/Pages/DocketLookup.aspx?FilingID=140762>.

¹⁷⁴ “Residential Service Schedule 2 – P.S.C. Wyoming No. 16,” Rocky Mountain Power, effective January 13, 2016,
https://www.rockymountainpower.net/content/dam/rocky_mountain_power/doc/About_Us/Rates_and_Regulation/Wyoming/Approved_Tariffs/Rate_Schedules/Residential_Service.pdf.

¹⁷⁵ Wyoming Public Service Commission, *Finding of Fact, Conclusions of Law, Decision and Order Nunc Pro Tunc*, Docket No. 20000-446-ER-14, January 23, 2012, p. 42,
https://dms.wyo.gov/OpenAttachment.aspx?file=aellio_22677_123201584804AM_20000-446-22677.pdf.

¹⁷⁶ *Id.*, p. 33.

¹⁷⁷ “Electric Service Schedule No. 1 Residential Service – State of Idaho,” Rocky Mountain Power, effective January 1, 2016,
https://www.rockymountainpower.net/content/dam/rocky_mountain_power/doc/About_Us/Rates_and_Regulation/Idaho/Approved_Tariffs/Rate_Schedules/Residential_Service.pdf.

the minimum charge requirement of \$10.64/month and replace it with a residential fixed charge of \$12.00/month.¹⁷⁹ The Idaho Public Utilities Commission (“IPUC”) Staff supported the replacement of the minimum charge with a fixed charge; however, the Staff recommended a lower fixed charge of \$5.00/month, citing similar approvals for other Idaho utilities.¹⁸⁰ The IPUC approved the replacement of the \$10.64/month minimum bill with the implementation of the \$5.00/month residential fixed charge as well as the retention of the \$14.00/month residential TOU fixed customer charge.¹⁸¹

PP&L-Oregon has a residential fixed charge of \$9.50/month¹⁸² and PP&L-California has a residential fixed charge of \$7.07/month.¹⁸³ The legal limit to the fixed charge in California is \$10.00/month, subject to a CPI adjustment.¹⁸⁴ PacifiCorp indicated that it has not been involved in any recent orders which deliberated fixed charges for PP&L-O or PP&L-C.

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¹⁷⁸ “Electric Service Schedule No. 36 Optional Time of Day – Residential Service – State of Idaho,” Rocky Mountain Power, effective September 15, 2006, https://www.rockymountainpower.net/content/dam/rocky_mountain_power/doc/About_Us/Rates_and_Regulation/Idaho/Approved_Tariffs/Rate_Schedules/Optional_Time_of_Day_Residential_Service.pdf.

¹⁷⁹ Idaho Public Utilities Commission, *Order*, Case No. PAC-E-10-07, Order No. 32196, February 28, 2011, p. 45.

¹⁸⁰ *Id.*, p. 48.

¹⁸¹ *Ibid.*

¹⁸² “Schedule 4 Residential Service Delivery Service – Oregon,” Pacific Power & Light, effective January 1, 2014, https://www.pacificpower.net/content/dam/pacific_power/doc/About_Us/Rates_Regulation/Oregon/Approved_Tariffs/Rate_Schedules/Residential_Service_Delivery_Service.pdf.

¹⁸³ “Schedule No. D Residential Service,” Pacific Power & Light, effective April 24, 2016, https://www.pacificpower.net/content/dam/pacific_power/doc/About_Us/Rates_Regulation/California/Approved_Tariffs/Rate_Schedules/Residential_Service.pdf.

¹⁸⁴ California Legislature, *Legislative Counsel’s Digest*, Assembly Bill No. 327, p. 2, October 7, 2013, http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201320140AB327.

B. Portland General Electric^{DM} Oregon, Oregon Public Utility Commission

Portland General Electric's ("PGE") fixed costs related to fixed charges include customer service costs, uncollectibles, and the customer-related portion of the service lateral and transformer. The utility uses marginal costs to estimate fixed costs and uses the same MCOSS for rate design and revenue allocation. PGE uses EPMC to scale unbundled fixed costs which are estimated for all customers. The utility defines commercial and industrial classes first by size, then, within the size category, by delivery voltage. The utility defines residential classes and some other classes by end-use, for example irrigation, pumping, and outdoor lighting. The utility has fixed charges for residential and non-residential customers. For customers over 200 kW, PGE collects 100 percent of fixed costs through the monthly fixed charge; however, for smaller customers, PGE recovers less than 100 percent.

PGE has decoupling in place for residential customers, which, the utility states, has resulted in significant difficulty in increasing its fixed basic charge. PGE's decoupling is subject to weather normalization, exposing the utility to subsequent risk. In defining annualized costs, PGE uses the assets life cycle for each distribution facility. For operating and maintenance costs, PGE uses the test period costs by FERC account and allocates some of the other operating and maintenance costs. PGE's fixed charge methodology and application is consistent with the practice of limiting fixed costs to customer-related costs. PGE first implemented a residential fixed charge in 1975 with the goal of recovering fixed customer-related costs using a monthly fixed charge.

The current residential basic charge is \$10.50/month as of August 1, 2016.¹⁸⁵ The utility does not provide low-income discounts. The residential fixed basic charge recovers 49 percent of customer-related residential fixed costs. This current rate was increased from \$10.00/month in a settlement approved by the Oregon Public Utility Commission ("OPUC") in November 2015.¹⁸⁶ PGE had originally proposed increasing the residential fixed charge rate to \$11.00/month.¹⁸⁷ OPUC Staff noted that the \$11.00/month proposed fixed charge did not cover PGE's marginal

¹⁸⁵ "Schedule 7 Residential Service," Portland General Electric, effective August 1, 2016, <https://www.portlandgeneral.com/our-company/regulatory-documents/tariff>.

¹⁸⁶ Oregon Public Utility Commission, *Order*, Docket No. UE 294, Order No. 15 356, November 3, 2015, pp. 10-11, <http://apps.puc.state.or.us/orders/2015ords/15-356.pdf>.

¹⁸⁷ *Ibid.*

customer costs and although they recommended a lesser fixed charge increase of \$10.50/month, that this rate should be “contingent on [residential] volumetric prices not decreasing below current volumetric prices as a result of the increase in the basic charge.”¹⁸⁸

¹⁸⁸ Oregon Public Utilities Commission, *Joint Testimony in Support of the Second Partial Stipulation*, Docket No. UE 294, August 28, 2015, pp. 18-19, <http://edocs.puc.state.or.us/efdocs/HAR/ue294har17952.pdf>.

C. Public Service Company of Colorado

Colorado, Colorado Public Utilities Commission

The Public Service Company of Colorado's ("PSCC") fixed costs used to estimate fixed charges include the investment costs of meters and service drops, meter reading, customer service and billing expenses, and some allocated overhead costs. PSCC uses embedded costs to estimate fixed costs. The utility uses the same ECOSS for revenue allocation and rate design; however, rate design is also influenced by marginal costs and other rate-design goals. PSCC's cost of service studies rely on the traditional process of functionalizing, classifying, and allocating costs. For purposes of the cost of service studies, the utility does not identify costs as being joint, common, or separable with the exception of asset costs which are assigned to specific classes including street and traffic signal lighting assets. PSCC considers whether costs are variable or fixed when allocating the costs for cost of service study purposes.

The utility's general fixed charges methodology and application is consistent with the practice of limiting fixed charges to customer-related costs. However, the utility points out that in various proceedings with two-part rates, the collection of 100 percent of capacity-related costs has been problematic when no minimum system is included. PSCC uses two-part tariffs for residential customers in which capacity-related fixed costs are recovered through energy charges. PSCC has fixed charges for both residential and non-residential customers.

The utility has two residential customer rate schedules, general service and demand. The general residential monthly fixed charge is currently \$7.71/month which includes a \$6.75/month base rate scaled up using a General Rate Schedule Adjustment ("GRSA") of 14.9 percent.¹⁸⁹ The residential demand monthly fixed charge includes a base rate of \$12.25/month which is then scaled up by the GRSA.¹⁹⁰ PSCC provides low-income bill assistance through a program financed by all of the utility's customers; however, there is no rate discount included in the program. The utility's fixed charges currently cover all customer-related fixed costs. The utility states that the

¹⁸⁹ The GRSA is an adjustment that PSCC uses to collect more base revenue without a rate-design case. "Colorado – Electric, Electric Tariff Index," Public Service Company of Colorado, effective March 6, 2014 and effective May 8, 2015, Sheet No. 30 and Sheet No. 106, http://www.xcelenergy.com/staticfiles/xcel/Regulatory/Regulatory%20PDFs/rates/CO/psco_elec_entire_tariff.pdf.

¹⁹⁰ *Id.*, effective July 1, 2012, Sheet No. 33.

fixed monthly charges have changed in response to the changing level of customer-related costs. PSCC's customer-related costs are currently declining and the utility expects that the fixed charges will also likely decline.

In PSCC's last rate case, the utility proposed a three-year rate plan for 2015 through 2017, which ended in a settlement agreement approved by the Colorado Public Utilities Commission ("CPUC") on January 23, 2015.¹⁹¹ The settlement resulted in "moderate rate increases in 2015 and 2016 and a small decrease in 2017."¹⁹² PSCC originally proposed increasing the general residential schedule fixed charges to \$8.81/month;¹⁹³ however, the approved tariffs proposed a fixed general residential customer charge of \$6.75/month for all three years in the rate plan, which it is currently.¹⁹⁴ As required by the last rate case, the PSCC submitted a new Phase II electric rate case in January 2016 addressing rate design and pricing structure.¹⁹⁵ In the 2016 rate case, PSCC initially proposed to decrease the standard residential fixed charge to \$5.78/month.¹⁹⁶ This proposed decrease was a result of a new PSCC cost of service study that fulfills one purpose of the Phase II rate case to reallocate among the customer classes the revenue requirement approved by the Phase I rate case.¹⁹⁷ The PSCC is currently awaiting the approval of a settlement with the

¹⁹¹ Colorado Public Utilities Commission, *Settlement Agreement*, Proceeding No. 14AL-0660E, January 23, 2015.

¹⁹² "Colorado 2015-2017 Electric Rate Case: Investing for the Future, Delivering Value Today," Xcel Energy, accessed on February 18, 2016.

¹⁹³ Colorado Public Utilities Commission, *Advice No. 1672 - Electric*, Proceeding No. 14AL-0660E, June 17, 2014, Sheet No. 20, <http://www.xcelenergy.com/staticfiles/xce/Marketing/Files/CO-Regulatory-Advice-Letter-1672.pdf>.

¹⁹⁴ Colorado Public Utilities Commission, *Settlement Agreement*, Proceeding No. 14AL-0660E, January 23, 2015, Attachment B, pp. 47, 50, 53.

¹⁹⁵ "2016 Colorado Phase II Electric Rate Case," Xcel Energy, 2016, accessed February 22, 2016, <http://www.xcelenergy.com/staticfiles/xce/PDF/Regulatory/CO-Rates-Phase2-Elec-Rate-Case-Fact-Sheet.pdf>.

¹⁹⁶ "Electric Rates – Residential General Service Schedule R," Schedule of Rates for Electric Service Available in the Entire Territory Served by Public Service Company of Colorado, Public Service Company of Colorado, effective February 25, 2016, Sheet No. 30, <http://www.xcelenergy.com/staticfiles/xce/PDF/Regulatory/PSCo-Phase-II/Rates-PSCo-Phase-II-2016-Proposed-Tariff-No.8.pdf>.

¹⁹⁷ "Important Notice about Your Energy Prices and Electric Service," Xcel Energy news release, January 25, 2016, <http://www.xcelenergy.com/staticfiles/xce/PDF/Regulatory/PSCo-Phase-II/CO-Rates-Phase2-Customer-Notice.pdf>.

CPUC which would result in a residential fixed charge of \$5.39/month due to the decline in the costs of metering and other expenses.

IV. CALIFORNIA

A. Glendale Water & Power

California, Glendale City Council

Glendale Water and Power (“GWP”) has two different residential customer rates: one standard residential service rate and another optional TOU residential service rate.¹⁹⁸ The standard residential fixed charge is approximately \$11.00/month and the optional TOU residential fixed charge is approximately \$24.00/month.¹⁹⁹ GWP offers qualifying low-income customers a \$13.00 monthly customer bill discount.²⁰⁰ GWP has fixed charges for both residential and non-residential customers.²⁰¹ The current rates are part of a five-year rate plan proposed by GWP and approved by the Glendale City Council on August 13, 2013.²⁰² The first rate increase became effective on September 13, 2013 and successive increases were approved on July 1 of the four subsequent years of the plan.²⁰³ The largest rate increases occur in the first three years of the plan with lower increases in the final two years.²⁰⁴ The residential fixed customer charge remains relatively constant with the increase coming primarily from increased energy charges.²⁰⁵

¹⁹⁸ Glendale Water and Power also has two residential rates for distributed generation customers which offer the same corresponding fixed charges as the standard residential service schedule and TOU residential service schedule. See “Residential Electric Rates,” Glendale Water & Power, accessed October 24, 2016, <http://www.glendaleca.gov/government/departments/glendale-water-and-power/rates/residential-electric-rates>.

¹⁹⁹ “Glendale Care,” Glendale Water & Power, accessed October 24, 2016, <http://www.glendaleca.gov/glendale-care>.

²⁰⁰ “Community Meeting Proposed Electric Rate Presentation,” Glendale Water & Power presentation, p. 33, <http://www.glendaleca.gov/home/showdocument?id=3907>.

²⁰¹ “Rates,” Glendale Water & Power, accessed December 14, 2015, <http://www.glendaleca.gov/government/city-departments/glendale-water-and-power/rates>.

²⁰² “Management Discussion and Analysis – Electric Utility,” Glendale Water & Power, pp. 5-6, <http://www.glendaleca.gov/home/showdocument?id=26152>. See also *Id.*, pp. 21-35.

²⁰³ *Id.*, p. 6.

²⁰⁴ *Ibid.* See also “Community Meeting Proposed Electric Rate Presentation,” Glendale Water & Power presentation, p. 34, <http://www.glendaleca.gov/home/showdocument?id=3907>.

²⁰⁵ *Ibid.*

B. Modesto Irrigation District

California, Modesto Irrigation District Board of Directors

Modesto Irrigation District's ("MID") total fixed costs include transmission and distribution, debt service, customer account expenses, and power plant fixed costs; however, only customer-related expenses are included in the monthly fixed customer charge. MID uses embedded costs to estimate fixed costs and the utility uses the same ECOSS for both rate design and class revenue allocation. The ECOSS allocates joint costs to either fixed or variable costs. For revenue allocation, customer classes are defined based on size and use. Costs for each of the customer classes are determined by allocators such as number of meters, contribution to peak demand, and other allocation factors. When defining annualized costs, MID uses its depreciation schedule as a basis to allocate plant costs.

MID has had fixed charges for over 20 years. Throughout that period, it has utilized the practice of limiting the definition of fixed costs to customer-related costs when calculating fixed charges. The utility has fixed charges for residential and non-residential customers.²⁰⁶ Unlike residential customers, some non-residential customers are subject to demand changes, which contribute to fixed cost recovery.

The residential fixed charge is currently \$20.00/month as of January 1, 2016,²⁰⁷ which was increased from \$12.50/month.²⁰⁸ Low-income customers who enroll in the MID CARES program receive a discount of 60 percent on the monthly fixed charge and a discount of 23.1 percent on the first 850 kWh of electric usage.²⁰⁹ MID's Board Agenda Report, outlining the utility's most recent residential fixed charge, states, "the outline the staff has proposed will help align the rates closer to the cost structure by increasing the monthly fixed charge and reducing the energy

²⁰⁶ "Electric Rate Schedules and Service Rules," Modesto Irrigation District, accessed December 14, 2015, <http://www.mid.org/tariffs/default.html>.

²⁰⁷ "Electric Rate Schedule D Residential Service," Modesto Irrigation District, effective January 1, 2016, http://www.mid.org/tariffs/Rates/D_RESIDENTIAL.pdf.

²⁰⁸ "2016 Rate Workshop," Modesto Irrigation District presentation, October 13, 2015, p. 13, http://www.mid.org/about/newsroom/notices/documents/2016ResidentialRateDesign_10032015.pdf.

²⁰⁹ "Electric Rate Schedule D Residential Service," Modesto Irrigation District, effective January 1, 2016, http://www.mid.org/tariffs/Rates/D_RESIDENTIAL.pdf.

charge.”²¹⁰ MID decreased exclusively first tier rates (500 kWh or less) in order to make the increased residential fixed customer charge revenue-neutral. Before the last rate increase, 60 percent of MID’s costs were fixed and only 20 percent of revenue was collected through fixed charges, with the residential class collecting only 9 percent of revenues through fixed charges.²¹¹

²¹⁰ “Board Agenda Report – Public Hearing: 2016 Electric Retail Rate Restructure,” Modesto Irrigation District, November 17, 2015, p. 1,

http://mid.granicus.com/Viewer.php?view_id=1&clip_id=118&meta_id=9777.

²¹¹ “2016 Rate Workshop,” Modesto Irrigation District presentation, October 13, 2015, p. 3,

http://www.mid.org/about/newsroom/notices/documents/2016ResidentialRateDesign_10032015.pdf.

C. Riverside Public Utilities

California, City Council Board of Public Utilities

Riverside Public Utilities (“RPU”) has two fixed charges, a Customer Charge and a Reliability Charge.²¹² The Customer Charge is designed to recover fixed costs including meter reading, billing, customer service and administration, while the Reliability Charge is designed to recover debt service related costs. The Reliability Charge is “a flat charge assigned to each electric meter that pays for major energy infrastructure projects including transmission and local energy generation.”²¹³

The utility has two different residential class tariffs including a standard domestic service class and a TOU-tiered domestic service class.²¹⁴ The fixed Customer Charge for both residential classes is \$8.06/month.²¹⁵ The Reliability Charge is the same for all of the residential schedules and is based on current: \$10.00/month for current less-than-or-equal-to-200 amps, \$20.00/month for current between-101-and-200 amps, \$40.00/month for current between-201-and-400 amps, and \$60.00/month for current over-400 amps.²¹⁶ Sixty-nine percent of RPU’s costs are fixed,

²¹² “Riverside Public Utilities Finance 101 – City Council Workshop,” Riverside Public Utilities presentation, September 1, 2015, p. 76, <http://www.riversideca.gov/utilities/pdf/2015/Finance-101.pdf>.

²¹³ “Bill Explanations,” Riverside Public Utilities, accessed December 20, 2015, [http://riversideca.gov/utilities/mybill/Front Of Bill Explanations.pdf](http://riversideca.gov/utilities/mybill/Front%20Of%20Bill%20Explanations.pdf).

²¹⁴ RPU also had a residential TOU domestic service class rate schedule which was closed to new customers effective December 14, 2010 and closed existing customers effective January 1, 2016. See “Schedule D-T-O-U Domestic Time-of-Use Service,” Turlock Irrigation District, effective December 14, 2010, <http://www.riversideca.gov/utilities/pdf/2010/Domestic%20TOU%20-%20cc%2012-14-2010-%20Clean-%20effective%2012-14-10.pdf>.

²¹⁵ The standard domestic service Customer Charge was adopted by the Board of Public Utilities on February 15, 2013 and was approved by City Council and became effective March 26, 2013. “Schedule D Domestic Service,” Riverside Public Utilities, effective March 26, 2013, <http://www.riversideca.gov/utilities/pdf/2013/Electric%20Schedule%20D-%20clean%202-1-2013.pdf>; The TOU-tiered domestic service Customer Charge was adopted by the Board of Public Utilities on August 2, 2013 and was approved by City Council and became effective September 10, 2013. “Schedule D Domestic Service,” Riverside Public Utilities, effective September 10, 2013, [http://www.riversideca.gov/utilities/pdf/2013/Schedule D-TOU- Tiered- effective 09-10-13.pdf](http://www.riversideca.gov/utilities/pdf/2013/Schedule%20D-TOU-%20Tiered-%20effective%2009-10-13.pdf).

²¹⁶ *Ibid.*

while only fifteen percent of total revenues are fixed.²¹⁷ The utility indicates that the ideal balance is one in which the percentage of fixed revenues matches that of fixed costs.²¹⁸

²¹⁷ “Utility 2.0 Joint Meeting – Utility 2.0 Plan,” Riverside Public Utilities presentation, August 28, 2015, p. 71, <http://www.riversideca.gov/utilities/pdf/2015/8-28-2015-Complete-Presentation.pdf>.

²¹⁸ *Id.*, p. 70.

D. Sacramento Municipal Utility District^M

California, Sacramento Municipal Utility District Board of Directors

SMUD's fixed charge, called the System Infrastructure Fixed Charge ("SIFC"), is designed to recover fixed costs including the cost of metering, billing, customer services, transformers, poles, wires, other electric equipment used to provide reliable electric service.²¹⁹ SMUD uses marginal costs to estimate fixed costs and uses the same MCOSS for class revenue allocation and rate design. Marginal costs are estimated for all customers.²²⁰ SMUD defines customer classes for revenue allocation by type and capacity size. The types are residential, commercial, lighting, and agriculture with subgroups for different capacity sizes, for example, small commercial (<= 20 kW), small commercial (21-299 kW), and medium commercial (300-499 kW). SMUD uses marginal cost to determine revenue requirement targets by rate class and uses a scaling mechanism to adjust revenue.²²¹ SMUD indicates that the economic carrying charge includes expected useful life of the assets, assuming that distribution and transmission equipment would require period replacement, following the industry-standard survival curves, and also taking into account administrative and general loading. SMUD follows the practice of limiting fixed costs to customer-related costs when designing fixed charges. SMUD has fixed charges for residential and non-residential customers.

SMUD has a single residential customer class. The current residential fixed charge as of January 1, 2016, is \$18.00/month,²²² representing one step in a five-year plan to restructure the residential fixed charge.²²³ The plan includes an annual increase of \$2.00/month from January

²¹⁹ "Addendum to the General Manager's Report and Recommendation on Rates and Services – Addendum No. 2," 2011 General Manager's Report and Recommendation on Rates and Services, Sacramento Municipal Utility District Publication, June 16, 2011, p. 6, <https://www.smud.org/assets/documents/pdf/GM-Rate-Report-Addendum-2-06-16-11.pdf>.

²²⁰ *Id.*, pp. 6-7.

²²¹ SMUD indicates that the utility did not make such an adjustment in Addendum 2 to the 2011 General Manager's report. See footnote 182.

²²² "Residential Service Rate Schedule R," SMUD, effective January 1, 2016, <https://www.smud.org/assets/documents/pdf/1-R.pdf>.

²²³ "Addendum to the General Manager's Report and Recommendation on Rates and Services – Addendum No. 2," 2011 General Manager's Report and Recommendation on Rates and Services, Sacramento Municipal Utility District Publication, June 16, 2011, pp. 6-10, <https://www.smud.org/assets/documents/pdf/GM-Rate-Report-Addendum-2-06-16-11.pdf>.

2013 to January 2017, when the residential fixed charge will reach \$20.00/month.²²⁴ The five-year plan was approved and adopted by the SMUD Board of Directors on August 4, 2011.²²⁵ In addition, SMUD has an energy assistance program²²⁶ in which the residential fixed charge is reduced to \$7.50/month, which was increased from the 2011 rate of \$3.50/month.²²⁷ Before the implementation of the five-year rate plan, the residential fixed charge was \$7.20/month, which recovered less than 30 percent of the residential customer-related fixed costs.²²⁸ The SMUD Staff is currently evaluating TOU rate structures and plans on making a proposal for a default TOU rate structure to the Board in 2018.

²²⁴ *Id.*, p. 6. In addition, the utility notes that SMUD will no longer have a tiered rate structure by the end of the five-year plan in 2017.

²²⁵ “Resolution No. 11-08-06,” Sacramento Municipal Utility District, August 4, 2011, p. 16, https://www.smud.org/assets/documents/pdf/Resolution_11-08-06.pdf.

²²⁶ SMUD’s energy assistance program is for qualifying customers under 200 percent of the federal poverty level.

²²⁷ *Id.*, p. 6. See also, Low-income assistance, SMUD, accessed on February 22, 2016, <https://www.smud.org/en/residential/customer-service/rate-information/low-income-assistance.htm>.

²²⁸ “Addendum to the General Manager’s Report and Recommendation on Rates and Services – Addendum No. 2,” 2011 General Manager’s Report and Recommendation on Rates and Services, Sacramento Municipal Utility District Publication, June 16, 2011, p. 7, <https://www.smud.org/assets/documents/pdf/GM-Rate-Report-Addendum-2-06-16-11.pdf>.

E. Turlock Irrigation District

California, Turlock Irrigation District Board of Directors

TID's fixed charge is based on the fixed costs of billing and collection, meter reading, service drops, final line transformers, general and administrative expenses, and other related expenses.²²⁹ Distribution costs for meters, and customer installations are also included in the fixed customer charge.²³⁰ TID's fixed costs are estimated using embedded costs in an ECOSS. The utility's ECOSS includes the fixed costs of distribution, discussed above, in calculating fixed costs. TID indicates that it does not use annualized carrying costs. The utility defines and allocates costs to customer classes by energy load, demand load, coincident and non-coincident demand, seasonal demand, and number of customers.²³¹ TID has fixed charges for residential and non-residential customers.²³² The utility points out that similar to many publicly-owned utilities, TID has had customer charges for decades.

TID has one residential class and the current residential fixed customer charge is \$17.00/month.²³³ TID also offers assistance to low-income customers which includes a discount of \$11.00/month and an additional discount of 15 percent on the customer's first 800 kWh of energy usage.²³⁴ The increased residential fixed charge was approved by the TID Board of Directors as part of the 2015 budget approval process and became effective January 1, 2015.²³⁵

²²⁹ "Cost of Service," TID Cost of Service 2014.xls, Turlock Irrigation District workpaper, 2014. TID's document, TID Cost of Service 2014.xls, was provided as part of the public information survey request, but is not published online.

²³⁰ *Ibid.*

²³¹ "Allocators," TID Cost of Service 2014.xls, Turlock Irrigation District workpaper, 2014.

²³² "Rates, Rules, and Regulations," Turlock Irrigation District, accessed December 14, 2015, <http://www.tid.org/2015-electric-rates>.

²³³ "Schedule DE Domestic Service," Turlock Irrigation District, effective January 1, 2015, [http://www.tid.org/sites/default/files/documents/tidweb_content/schedule%20de%20\(2015\).pdf](http://www.tid.org/sites/default/files/documents/tidweb_content/schedule%20de%20(2015).pdf).

²³⁴ "Energy Assistance Program," Turlock Irrigation District, effective January 1, 2015, http://www.tid.org/sites/default/files/documents/tidweb_content/Residential%20Service%20Energy%20Assistance%20Program.pdf.

²³⁵ "Minutes of the Board of Directors Meeting of the Turlock Irrigation District," Turlock Irrigation District, December 9, 2014, p. 3, <http://www.tid.com/sites/default/files/documents/news-resources/TID%20Board%20Minutes%20-%20December%209,%202014.pdf>. See <http://www.tid.org/2015-electric-rates> for all electric rates approved by the Resolution No. 2014-104 effective January 1, 2015.

The residential fixed customer charge was increased from \$11.00/month.²³⁶ Subsequently, the Board also approved a reduction in energy charges.²³⁷

²³⁶ “Rate Hearing for 2015 Rate Changes,” Turlock Irrigation District presentation, December 2, 2014, p. 16. See <http://www.tid.org/2015-electric-rates> for all electric rates approved by the Resolution No. 2014-104 effective January 1, 2015.

²³⁷ *Ibid.*

Appendix A: The Survey Instrument

F. Theoretical Support for Residential Fixed Charges

- 1) What cost categories do you include in fixed costs? Typically the following are included: metering, billing, and customer care. Sometimes the line drop and transformer are also included.
- 2) Do you include any capacity or demand-related costs in fixed charges?
- 3) Do you estimate fixed costs based on marginal or embedded costs?

G. Methodology for Calculating Fixed Charges

- 1) Are the same cost studies used for class allocation of revenue and the development of rate designs?
- 2) How do you define customer classes in revenue allocation?
 - a. How do you justify assignment of costs to the customer/customer class?
- 3) If you use marginal costs to determine fixed costs:
 - a. Do you use the Equal Percentage Marginal Costs (EPMC) or some other scaling mechanism to determine fixed charges?
 - b. Are marginal costs only estimated for new customers?
- 4) Is there a difference in the collection of fixed costs from residential versus non-residential customers?
- 5) Are there differences in fixed costs within the residential customer class? If yes:
 - a. What are the typical thresholds for defining a difference in cost of service for a specific customer group (i.e. single/multi-family, amperage of service panel, low income customers)?
 - b. How are income-based discounts delivered, if any?
- 6) Are your revenues and sales decoupled? If they are decoupled, did you encounter difficulties in collecting fixed charges?
- 7) What are the magnitudes of your fixed charges? Have they changed over time? Are you expecting them to change further over time?
 - a. Are there legal limits on these magnitudes?

- i. Do fixed charges recover all fixed costs? If not, what percentage do they recover?
- 8) Do you have fixed charges for non-residential customers?
- 9) If you have a tiered (or block) rate structure, are fixed charges used exclusively to reduce tier 1 rates (*i.e.*, requirement for a composite tier 1)?

H. Follow-Up Questions

- 1) Would you please provide us with the documentation or a link to the most recent Commission Order regarding your fixed charges and any related Testimony or Work Papers?
- 2) What have you done to address the issue of joint costs? (*i.e.*, The identification of assets that fall under fixed costs versus other types of costs)
- 3) Do you use marginal cost as a means of revenue allocation?
- 4) When defining annualized costs, what assumptions do you use in your assessment of carrying costs? For example, single asset life cycle versus perpetuity, replacements within the factor or external, etc. If you use such annualized carrying charges, is there a difference in approach and method when looking at fixed and variable costs?
- 5) Traditional regulatory context tends to suggest that fixed costs, expressed in dollars per month, are typically limited to customer related costs (for example, final line transformers, service drop, meter and related billing costs, etc.). Is this consistent and applicable to your practice of applying fixed charges? Also, for what reason did you apply fixed charges originally?

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