

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

| | | |
|--|---|--------------------------|
| IN THE MATTER OF THE APPLICATION OF |) | |
| OKLAHOMA GAS AND ELECTRIC COMPANY |) | |
| FOR AN ORDER OF THE COMMISSION |) | CASE NO. PUD 2024-000048 |
| APPROVING THE COMPANY'S 2025 DEMAND |) | |
| PORTFOLIO; AUTHORIZING RECOVERY |) | |
| OF PROGRAM COSTS, LOST NET REVENUES |) | |
| AND INCENTIVES THROUGH THE ENERGY |) | |
| EFFICIENCY PROGRAM RIDER; AND FOR |) | |
| WAIVER OF OAC 165:35-41-4(B)(5), OAC 165:35- |) | |
| 41-4(B)(7), AND OAC 165:35-41-5(D)(2) |) | |

Direct Testimony

of

Jessica A. King

on behalf of

Oklahoma Gas and Electric Company

July 1, 2024

Jessica King
Direct Testimony

QUALIFICATIONS, INTRODUCTION, AND PURPOSE

1 Q. **Please state your name, position, by whom you are employed and business address.**

2 A. My name is Jessica A. King, and I am Senior Manager of Customer Programs and Energy
3 Efficiency and Support for Oklahoma Gas and Electric Company (“OG&E” or
4 “Company”). My business address is 321 N. Harvey Ave., Oklahoma City, Oklahoma
5 73102.
6

7 Q. **What are your responsibilities as Manager of Customer Programs and Energy
8 Efficiency?**

9 A. I have direct oversight of the tracking, reporting and evaluation of all customer and energy
10 efficiency programs in both the Oklahoma and Arkansas jurisdictions. These programs
11 include the Demand Program Portfolio, SmartHours, load reduction, retail, and wholesale
12 wind Renewable Energy Credits (“REC”), OG&E Solar Power, online services, rate
13 programs and customer billing options.
14

15 Q. **Briefly summarize your educational background and professional experience.**

16 A. I hold Bachelor of Science in Management and Ethics from Mid America Christian
17 University and Master of Business Administration degree, with emphasis in Energy
18 Management, from Oklahoma Baptist University. I have been employed by OG&E for 13
19 years, holding various positions in customer operations and customer programs. I began
20 my career with OG&E in 2010 implementing the Smart Grid call center and executing the
21 Smart Study Together Pilot. I was responsible for the staffing, development, and customer
22 support for the program. I also contributed to the design, implementation, and ongoing
23 support of the program. In January 2014, I became the Sr. Program Manager for
24 SmartHours, which expanded my responsibility within the program to include budget,
25 program design and improvements, maintenance, and ongoing support of the program. In
26 October 2015 I was promoted to Supervisor of Customer Programs. This position
27 expanded my responsibility to manage all non-energy efficiency products and programs

1 such as: energy insights on OGE.com, retail and wholesale wind RECs, solar and other rate
2 and billing programs and options. In December 2021, I was promoted to Manager of
3 Customer Programs and Energy Efficiency. I manage a team of six program managers and
4 two analysts, who are responsible for the design, planning, forecasting, budget,
5 implementation, and execution of the Demand Program Portfolio and Customer Programs.
6 I am responsible for the implementation of the 2022 – 2024 Demand Portfolio and the
7 planning activities for the proposed 2025 – 2029 Demand Portfolio that is the subject of
8 this Case.
9

10 **Q. Have you previously testified before the Oklahoma Corporation Commission**
11 **(“Commission”)?**

12 **A.** Yes. I testified before the commission in Cause No. PUD 202100121.
13

14 **Q. Please explain why OG&E is filing this Application.**

15 **A.** Pursuant to the Commission’s Demand Program rules, OG&E is required to propose a
16 demand program portfolio at least once every three years.¹ Per OAC 165:35-41-2, the
17 goals of the Demand Programs are to minimize the long-term cost of utility service, avoid
18 or delay the need for new generation, transmission, and distribution investment, and
19 encourage and enable utility customers to make the most efficient use of utility capacity
20 and energy and reduce wasteful use of energy.

21 OG&E’s current Demand Program Portfolio, approved in Cause No. PUD
22 202100121 for the three years 2022-2024, will end December 31, 2024. OG&E’s proposed
23 Application in this Case will be implemented beginning January 1, 2025, for the years
24 2025-2029.
25

26 **Q. Does the application comply with the requirements set forth in the Commission rules?**

27 **A.** Yes, with the exception of the waivers OG&E is requesting in this Case, OAC 165:35-41-
28 4(a) states that the Application must describe the Demand Program Portfolio and include
29 specific information regarding the portfolio. OG&E has included the required information

¹ OAC 165:35-41-4(a).

1 in its Application, which I sponsor, and as set forth in OG&E Witness Ian Metzger's Direct
2 Exhibit IM-1.

3

4 Q. **What is the purpose of your testimony in this proceeding?**

5 A. My testimony supports OG&E's Application for approval of its 2025-2029 Demand
6 Portfolio, with supporting information contained in Witness Metzger's Direct Exhibit IM-
7 1 along with the Application. I provide an overview of OG&E's prior Demand Portfolio,
8 describe the differences for the programs in the 2025-2029 Demand Portfolio, review
9 portfolio costs, performance, evaluation, cost-effectiveness, and support OG&E's request
10 for funding associated with research and development (Exhibit JAK-1). I also support the
11 request for waivers of the Commission rules being sought by the Company in this Case.

12

13 Q. **Are additional witnesses testifying in support of this Application?**

14 A. Yes. Company witness James Alexander describes the impact to customers from OG&E's
15 Demand Portfolio. Witness Ian Metzger with TRC Companies discusses the Demand
16 Program Plan, how it was developed, and the cost-effectiveness of the program measures.
17 Witness Kelly Marrin with DNV discusses the approaches to Evaluation, Measurement
18 and Verification ("EM&V") for OG&E's Demand Portfolio.

19

20 **OVERVIEW OF DEMAND PROGRAMS AT OG&E**

21 Q. **Has the Commission previously approved demand program portfolios filed by**
22 **OG&E?**

23 A. Yes. Prior to the adoption of Subchapter 41 rules, OG&E filed a Quick Start Program in
24 Cause No. PUD 200800059 which was in effect until December 31, 2009. The Quick Start
25 Program allowed OG&E to quickly begin offering programs for all classes of customers
26 primarily by providing rebates to help increase customer awareness and to help accelerate
27 market transformation of products such as compact fluorescent lamps that reduce energy
28 consumption. OG&E's first comprehensive portfolio of Demand Programs under
29 Subchapter 41 was approved by the Commission in Cause No. PUD 200900200 for
30 implementation in years 2010-2012. OG&E's next Demand Portfolios were approved by

1 the Commission in Cause No. PUD 201200134 for implementation years 2013-2015, PUD
 2 Cause No. 201500247 for implementation years 2016-2018, and PUD 201800074 for
 3 implementation years 2019-2021. OG&E's most recent portfolio Cause No. PUD
 4 202100121 was approved for implementation years 2022-2024.

5
 6 **Q. How have the Demand Programs helped customers?**

7 **A.** The Demand Portfolio has included comprehensive long-term energy efficiency (EE)
 8 programs and an education program targeted across all customer classes. The portfolio has
 9 been designed to provide energy savings and demand reduction for OG&E customers – as
 10 demonstrated by the results from recent Program Years 2022 and 2023, shown in Table 1
 11 – in order to minimize long-term cost of utility service, delay the need for new power
 12 generation, and enable customers to better manage their energy usage and monthly bills.

13
 14 **Table 1: Energy and Demand Savings Achieved in Program Years 2022 and 2023**

| | PY2022 | PY2023 |
|----------------------------|---------------|---------------|
| Net Evaluated Energy (kWh) | 185,050,738 | 179,122,489 |
| Net Evaluated Demand (kW) | 32,209 | 29,388 |

15 These multi-pronged programs have helped OG&E's residential and business
 16 customers reduce energy consumption by implementing EE upgrades. Multiple offerings
 17 have provided residents and businesses with targeted choices to participate, which are
 18 aimed at improving customer engagement, measure adoption, and program savings.

19
 20 **PROPOSED PORTFOLIO FOR 2025-2029**

21 **Q. Explain how the proposed Demand Portfolio was developed.**

22 **A.** OG&E engaged TRC Companies to design the portfolio of programs for the 2025-2029
 23 Demand Portfolio. OG&E worked closely with TRC Companies throughout the portfolio
 24 design process to ensure the Demand Portfolio is structured according to the requirements
 25 in OAC 165:35-41-4. In addition, OG&E contracted with DNV and Applied Energy Group

1 (“AEG”) for a third-party review of the portfolio measures included in the program design
2 and to develop the EM&V protocols for the programs.

3
4 **Q. Please briefly describe the proposed 2025 Demand Portfolio.**

5 A. OG&E is proposing to continue, with some modifications, the Demand Portfolio from the
6 2022-2024 cycle, as well as incorporate the existing SmartHours Program back into the
7 Demand Portfolio with modifications and introduce a new Business Demand Response
8 Program.

9 The proposed Demand Portfolio includes three energy efficiency programs, two
10 demand response programs, and an education program. The proposed 2025-2029 Demand
11 Portfolio consists of the following:

- 12 1. Home Energy Efficiency Program (“HEEP”) which comprises several “channels” to
13 address the needs of residential customers:
 - 14 a. Residential Solutions
 - 15 b. Consumer Products
 - 16 c. Positive Energy – New Home Construction
 - 17 d. Community Outreach
- 18 2. Weatherization Residential Assistance Program (“WRAP”) which is designed for
19 income-qualified customers.
- 20 3. SmartHours which provides price-based demand response for residential and small
21 commercial customers:
 - 22 a. Daily
 - 23 b. Fixed & Overnight
- 24 4. Commercial Energy Efficiency Program (“CEEP”) which comprises several channels
25 and participation pathways to address the needs of commercial customers:
 - 26 a. Commercial and Industrial (C&I) Solutions (CIS)
 - 27 i. Prescriptive
 - 28 ii. Custom
 - 29 iii. Continuous Energy Improvement (CEI)
 - 30 iv. Retro-Commissioning (RCx)

- 1 b. Small Business Solutions (SBS)
- 2 c. Midstream
- 3 5. Business Demand Response (“BDR”) which provides inducements to medium and
- 4 large C&I customers for their capability to curtail load during periods of high wholesale
- 5 market prices and/or system emergencies.
- 6 6. Education Program – Residential & Commercial

7

8 **Q. Is OG&E also seeking to continue with a research and development (“R&D”)**
9 **program?**

10 **A.** Yes. As discussed below, OG&E is also proposing to continue with a R&D program
11 consistent with OAC 165:35-41-4(c)(2). These activities have been foundational in
12 identifying new technologies and methods for improving energy efficiency and demand
13 management offerings to help customers control their bills and support OG&E in avoiding
14 capacity costs through cost-effective investments in demand-side resources.

15

16 **Q. Could you further describe the Home Energy Efficiency Program?**

17 **A.** HEEP consists of four program channels to engage residential customers. The Residential
18 Solutions channel addresses single-family and multi-family homes with efficient home
19 appliances, doors, windows, insulation, and other mechanical system measures, including
20 heating, ventilation, and air conditioning (“HVAC”) tune-ups and replacements. The
21 Consumer Products channel offers rebates on ENERGY STAR® appliances and other
22 household equipment at the point of purchase for residential customers. The Community
23 Outreach (LivingWise™) channel offers educational materials and kits with energy saving
24 measures for students to take home and install. The Positive Energy New Home
25 Construction channel addresses new residential homes constructed with comprehensive
26 energy efficient standards.

27

28 **Q. Are there any modifications to HEEP for this program cycle?**

29 **A.** Yes. OG&E has expanded and refined HEEP to include more options for residential
30 customers and to better integrate the HEEP channels with complementary offerings. The

1 annual *energy* savings anticipated to be achieved through HEEP have been reduced from
2 prior cycles due to the advancement of federal standards for general service lamps and the
3 market transformation success achieved via prior Demand Portfolio cycles – resulting in
4 sustained benefits for residential customers, as well as reduced market opportunity for cost-
5 effective EE savings through LED lighting conversions. Additional information regarding
6 the reduction in planned energy savings derived from lighting measures can be found in
7 Witness Metzger’s Testimony. However, the *demand* savings within the residential sector
8 that are anticipated to be achieved through the 2025-2029 portfolio far exceed prior years,
9 as HEEP evolves toward a focus on EE measures with high peak-coincident savings (*e.g.*,
10 HVAC tune-ups and replacements), and controllable technologies (*e.g.*, smart thermostats)
11 that support customers in better managing their energy consumption to correspond to
12 advanced rate options available to them under SmartHours.

13 The Consumer Products channel will be expanded to give customers the option of
14 both online and in-store point-of-purchase discounts, and the Community Outreach
15 (LivingWise™) channel will pursue opportunities for expansion in terms of both measures
16 offered and audience, as further described in the Direct Exhibit IM-1. The home energy
17 assessments and comprehensive upgrades available through the Residential Solutions
18 channel will be delivered in an integrated approach with WRAP to promote simplicity and
19 consistency in customers’ experience with the programs, along with additional benefits
20 discussed below.

21
22 **Q. Could you further describe Weatherization Residential Assistance Program?**

23 **A.** WRAP is a program designed for income-qualified and hard-to-reach residential customers
24 and consistent with the requirements of OAC 165:35-41-4(b)(10). This program allows
25 participating customers to access a variety of measures that assist in managing their energy
26 consumption and therefore cost. OG&E residential customers are presently eligible to
27 apply for WRAP if they own, rent, or lease their single-family home, duplex, or mobile
28 home and have incomes at or below \$60,000; or are owners of multifamily units whose
29 residential units are 66% occupied by hard-to-reach customers, as defined by OAC 165:35-
30 41-3. These qualification criteria may be revised if deemed advisable to facilitate

1 coordination with other income-qualified home energy rebate programs available in the
2 market or otherwise address a market need.

3 WRAP is designed to improve the thermal envelope of the dwelling, as well as the
4 efficiency of the major energy-consuming systems and appliances within the home, thereby
5 decreasing the amount of energy consumed and improving the comfort and safety of the
6 home.

7
8 **Q. Are there any modifications to WRAP for this program cycle?**

9 **A.** Yes. OG&E has enhanced WRAP to offer more measures and education to qualifying
10 customers and minimize instances in which service of otherwise-qualifying customers
11 would be deferred due to the need for health and safety repairs in the customer's home.
12 Under the 2022-2024 program cycle, OG&E conducted a Repair-to-Qualify
13 (RTQ) Initiative to address WRAP's historical 50% disqualification rate by covering the
14 cost of minor repairs (*e.g.*, flue and roof flashing repairs) in order to qualify more homes
15 for energy efficiency improvements. In 2023, the RTQ Initiative enabled 200 homes –
16 which otherwise would have been deferred – to be served by the program, resulting in an
17 additional 707,653 kWh and 241 kW in evaluated energy and demand savings. As a result
18 of this successful initiative, the program evaluator, AEG, recommended incorporating a
19 RTQ component to WRAP going forward in their Comprehensive Demand Program
20 Portfolio Evaluation for 2023.

21 Accordingly, while WRAP faces similar challenges as HEEP related to the loss of
22 market potential from LED lighting conversions, the proposed WRAP energy and demand
23 savings goals are *increased* for the 2025-2029 program cycle, relative to the prior cycle,
24 largely as a result of the ongoing RTQ Initiative. Whereas RTQ had been funded with
25 research and development (R&D) dollars under the prior portfolio, the positive evaluation
26 results supported the inclusion of the initiative within the WRAP budget. The inclusion of
27 RTQ and the evolving measure mix have affected the cost-effectiveness of the program,
28 resulting in TRC and UCT ratios below 1 for WRAP. However, OAC 165:35-41-4(b)(10)
29 acknowledges that Demand Programs targeted to low-income or hard-to-reach customers
30 may have lower threshold cost-effectiveness results than other Demand Programs; and

1 Section 41-5(a)(3) states that individual programs or individual measures for a specific
2 program “do not have to be cost-effective if their inclusion is expected to provide for
3 greater comprehensiveness, customer or trade ally participation, or address Hard-to Reach
4 Customer participation.” Given the significant benefits offered by the inclusion of a RTQ
5 component of WRAP, OG&E has decided to utilize this flexibility established in the
6 Subchapter 41 rules to provide benefits of these programs to low-income and hard-to-reach
7 customers.

8 Beyond the continuation of the RTQ Initiative and the reduced dependence on
9 energy savings from LED lighting, WRAP has been modified to operate in a more
10 integrated manner with HEEP’s Residential Solutions channel – with a shared selection of
11 qualifying measures (offered at enhanced incentive rates for WRAP-eligible customers)
12 and a shared customer intake portal. In addition to the benefits noted above, this integration
13 is intended to ensure that all income-qualified customers that enroll in energy efficiency
14 receive the enhanced incentives and services for which they are eligible under WRAP; and
15 to streamline and simplify efforts to coordinate with implementers of complementary
16 income-qualified home energy rebate programs, including those from the Oklahoma
17 Department of Commerce. Further, the delivery of WRAP – as well as HEEP – will
18 leverage each customer touchpoint as an opportunity to educate and promote adoption of
19 controllable technologies that enhance customers’ capabilities to manage their energy
20 consumption during peak times and save with the SmartHours program.

21
22 **Q. Could you describe SmartHours, including the history of SmartHours with respect to**
23 **its inclusion in the Demand Portfolio?**

24 **A.** SmartHours is a load management program tailored to residential and small business
25 customers that OG&E introduced in 2010, accompanying the rollout of advanced metering
26 infrastructure. At the time, the program leveraged time-based price signals (*i.e.*, time of
27 use rates) and Company-owned thermostats to achieve peak demand reduction and promote
28 bill savings for participating residents and businesses. In 2012, this Commission granted
29 approval for OG&E to recover costs and lost revenues from the SmartHours Program for
30 the program cycle 2013-2015. During that time, the program realized significant growth

1 in both enrollment and peak demand (kW) impact per participant, with over 13,000 new
2 enrollees in 2015 and an average critical day, peak hour impact of 1.32 kW per customer.
3 However, following the transition of SmartHours implementation outside of the Demand
4 Portfolio in 2015, a decline in customer awareness and education initiatives has resulted in
5 a corresponding decline in enrollments; and many customer devices have aged out of use
6 without programmatic replacement, reducing technology integration, and thereby reducing
7 program impacts per participant. Simultaneously, recent extreme weather years and
8 reduced available generation capacity across the Southwest Power Pool have resulted in
9 increased need (and value) for reliable flexible load resources.

10 In response to these noted trends, OG&E has taken steps in recent years to revive
11 the potential of SmartHours and take advantage of considerable technological evolution
12 that has occurred since the program's inception. In 2019, OG&E introduced a Bring Your
13 Own Thermostat (BYOT) pilot; in 2021, If-This-Then-That (IFTTT) technology for price-
14 to-device communication was made available to all customers; in 2022, marketing efforts
15 for SmartHours were re-initiated; and through R&D efforts over the past Demand Portfolio
16 cycle, OG&E conducted a Managed/Controlled Flexible Load Electric Device Technology
17 Pilot. These efforts have contributed significant findings and insights to support the
18 program's re-development.

19 Under the proposed 2025-2029 Demand Portfolio, OG&E plans to re-incorporate
20 SmartHours into the portfolio and scale its impacts with a meaningful investment in
21 customer awareness and education initiatives, integration with energy efficiency program
22 delivery processes, and continued R&D activities.

23
24 **Q. Why has OG&E proposed to incorporate SmartHours back into the 2025-2029
25 Demand Portfolio?**

26 **A.** Given the Company's capacity position detailed in the 2024 Integrated Resource Plan,
27 OG&E has undertaken a concerted effort to understand and maximize the potential of its
28 demand-side resources to contribute to cost-effective resource adequacy. The SmartHours
29 Program constitutes a significant component of OG&E's demand-side resource portfolio,
30 and its inclusion in the Demand Portfolio will provide the structure required to support the

1 Company's decisions to invest in marketing, education, and adoption of controllable
 2 devices to the fullest extent at which benefits exceed costs. Through integration with the
 3 broader Demand Portfolio, efficiencies in delivery can be realized when implementation
 4 teams conducting assessments of homes and small businesses for energy efficiency
 5 opportunities can also provide education on load management and SmartHours rates.
 6 Further, customers purchasing controllable devices, such as smart thermostats, can receive
 7 SmartHours education in coordination with their energy efficiency rebate. In this way,
 8 energy efficiency and demand response work in concert; and by re-incorporating
 9 SmartHours in the Demand Portfolio, the implementation team can leverage a unified
 10 platform to deliver the best results for our customers. In summary, OG&E proposes to
 11 incorporate SmartHours in the 2025-2029 Demand Portfolio in order to realize efficiencies
 12 in delivery while growing the enrollment and impacts of the program to support cost-
 13 effective maintenance of resource adequacy and deliver co-benefits to participating
 14 customers.

15

16 **Q. How will impacts associated with existing vs. new SmartHours customers be treated?**

17 **A.** Demand impacts associated with behavioral load management measures (such as
 18 customers' reduced energy consumption during peak hours in response to SmartHours
 19 price signals) are considered to have a one-year measure life, because continued
 20 engagement and investment is required each year to maintain impacts. This contrasts with
 21 most energy efficiency measures, for which a one-time intervention (e.g., a rebate for
 22 installation of a high-efficiency home appliance) is expected to "lock in" energy savings
 23 and demand reduction for multiple years without the need for additional program
 24 intervention to maintain savings. Accordingly, all impacts associated with SmartHours
 25 through the calendar year 2024 are incorporated in base rates; and beginning in 2025, all
 26 impacts associated with SmartHours are planned to be accounted for via the Demand
 27 Portfolio, including *both* the impacts driven by customers who are presently on SmartHours
 28 rates at the time of filing, as well as those who enroll in SmartHours after January 1, 2025.

1 Q. **Could you further describe Commercial Energy Efficiency Program?**

2 A. CEEP consists of three channels and various participation pathways designed to promote
3 adoption of energy-saving technologies and practices among commercial and industrial
4 (C&I) customers. The C&I Solutions (“CIS”) channel provides direct technical assistance
5 to qualifying participants to identify and quantify the potential savings and financial
6 metrics associated with EE measures; the channel also offers inducements (on a per-unit
7 and custom \$/kWh basis) to promote measure adoption and supports the development of a
8 capable network of Trade Allies (TAs) to deliver EE technologies and services to OG&E
9 customers. The Small Business Solutions (SBS) channel helps alleviate the market barriers
10 faced by small businesses in making EE upgrades to their establishments. The Midstream
11 channel is designed to achieve scaled impacts by promoting customer awareness of EE
12 technologies and access to discounts at the point-of-purchase for qualifying measures.

13

14 Q. **Are there any modifications to CEEP for this program cycle?**

15 A. Yes. The delivery channels within CEEP have been refined and consolidated to promote
16 a more holistic customer experience. Specifically, HVAC Replacements & Tune-Ups and
17 Network Lighting Controls will no longer be delivered via distinct program delivery
18 channels but will continue to be incentivized as measures offered through the remaining
19 program channels. As the delivery team has gained experience promoting the adoption of
20 these measures, dedicated program delivery channels are no longer required to encourage
21 market uptake. Further, the Retro-Commissioning (RCx) and Continuous Energy
22 Improvement (CEI) channels will be transitioned into program pathways under the robust
23 CEEP – CIS channel in order to eliminate silos within the portfolio and allow more C&I
24 customers to seamlessly couple low- to no-cost operational savings with capital
25 improvements. The former Schools and Government Efficiency (SAGE) channel will
26 likewise retain its impacts under the CIS channel in the form of a dedicated outreach
27 strategy to deliver no-cost assessments and coaching for targeted C&I customer segments,
28 which will include but not be limited to school and government customers. In addition to
29 the benefit of a more integrated customer experience, this transition will enable flexibility

1 over the program cycle to deliver targeted support to additional under-served or hard-to-
2 reach C&I customer segments.

3 As another step to simplify program delivery and expand access to an enhanced
4 degree of EE support, the eligibility criteria for the SBS channel has been expanded from
5 small business customers that have an annual peak demand of 150 kW or less, or that have
6 multiple locations with a combined peak demand of 250 kW or less, to small business
7 customers that have an annual peak demand of 250 kW or less. While this channel will
8 continue to promote the direct installation of EE measures in small businesses through a
9 network of TAs, the channel name has been modified from Small Business Direct Install
10 (SBDI) to SBS to reflect the evolution of the program, which may also drive EE impacts
11 through targeted distribution of EE kits and educational materials, in a similar manner to
12 the HEEP – Community Outreach channel.

13 Across all program channels and participation pathways, the CEEP implementation
14 team will seek to promote adoption of measures with high peak coincidence (*e.g.*, high-
15 efficiency HVAC equipment) and measures that enable load flexibility (*e.g.*, building
16 controls and automation systems) to promote greater demand impacts, alongside energy
17 and customer energy cost savings. Specifically, the CEEP – CIS Custom pathway will
18 transition from a single \$/kWh incentive structure toward a tiered incentive structure that
19 provides a higher \$/kWh incentive rate for end use categories with higher peak coincidence,
20 and a lower \$/kWh incentive rate for end use categories with lower peak coincidence, as is
21 standard practice among other utility C&I EE programs tailored to achieving peak demand
22 (kW) impacts (*e.g.*, Ameren Missouri).

23 The Custom pathway will also deploy – on an as-needed basis to promote goal
24 achievement – targeted opportunities for customers with high demand-reduction potential
25 (and their service providers) to pursue creative and high-impact projects under a reverse
26 auction-style program. Beyond the Custom pathway, CEEP implementation teams and
27 Trade Allies will be educated regarding demand response opportunities and incentivized
28 to promote referral and enrollment through their program processes, with SBS driving
29 participating in SmartHours, and CIS coupled closely with BDR in implementation.

1 Q. **Could you further describe Business Demand Response?**

2 A. The BDR Program is designed to achieve demand savings by providing medium and large
3 C&I customers with the resources necessary to identify and take advantage of DR
4 opportunities. The BDR program implementer will conduct facility assessments to support
5 customers in identifying opportunities to curtail and develop customized load reduction
6 plans. This process will involve referral to/from the CIS program channel to leverage EE
7 inducements for the installation of controllable building technologies. Through BDR,
8 participants will commit to curtailing load during specified events when called upon by
9 OG&E and will receive inducements for their demonstrated load reduction during types of
10 system emergencies and/or high wholesale energy prices. Inducements will be based on
11 participants committed curtailable load and their performance throughout the applicable
12 curtailment season. As SPP's processes and policies for accrediting DR capacity are
13 refined to place greater value on resources with greater availability, incentive structures are
14 likely to evolve to offer enhanced incentive rates to customers with the willingness and
15 capability to curtail more frequently and for longer durations.

16
17 Q. **Why has OG&E proposed to introduce BDR in the 2025-2029 Demand Portfolio?**

18 A. As stated above, a unifying theme in the design of the 2025-2029 Demand Portfolio is the
19 aim to achieve greater peak demand reduction, while expanding the reach of tailored
20 program offerings to more targeted customer segments. Presently, OG&E offers
21 SmartHours to residential and small business customers; and the Company's largest
22 customers are incentivized for their capability to curtail via the Load Reduction Rider. A
23 gap exists for medium to large C&I customers to receive support and financial incentives
24 for their demand response, while offering avoided costs and reliability benefits to the
25 broader customer base. The BDR program is intended to fill this gap.

26
27 Q. **Please describe the Education Program.**

28 A. The goal of the Education Program is to help customers make informed decisions about
29 their long-term EE and demand management and participate in programs that will assist
30 them in managing their energy costs. This goal will be achieved through a variety of

1 initiatives that are anticipated to evolve over the course of the program cycle. While
2 continuing initiatives that have supported engagement with residents, businesses, and
3 communities throughout the OG&E service territory in past program cycles, the 2025-2029
4 Education Program will also incorporate initiatives to enable customers to gain insights
5 into their actual energy usage through data analytics and targeted print and digital
6 messaging, as well as efforts to enhance customer and Trade Ally awareness of other utility,
7 state, and national programs with complimentary goals.

8
9 **Q. Please describe any changes to how the Demand Portfolio will be marketed to**
10 **customers.**

11 A. Building on the strategy deployed in the prior program cycle, OG&E will continue to
12 market the Demand Portfolio to customers with the aim of providing a hyper-personalized
13 experience through data analysis. In the proposed 2025-2029 portfolio, demand response
14 opportunities will be added to the suite of EE recommendations, product offerings, and
15 promotions that are tailored to specific individuals' demographics, energy behaviors, and
16 interactions.

17
18 **Q. What are the program costs for the proposed 2025-2029 Demand Portfolio?**

19 A. The total program cost of the 2025-2029 Demand Portfolio is approximately \$294.6 million,
20 summarized in Table 2 below. Detailed program costs are covered in Witness Metzger's
21 Direct Exhibit IM-1 to his Direct Testimony.

1

Table 2: Portfolio Program Costs

| Portfolio Costs | 2025 | 2026 | 2027 | 2028 | 2029 | Total |
|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| HEEP | \$7,761,882 | \$9,778,120 | \$9,985,140 | \$10,199,933 | \$10,416,799 | \$48,141,874 |
| WRAP | \$10,410,350 | \$10,690,241 | \$10,917,328 | \$11,152,629 | \$11,390,455 | \$54,561,003 |
| SmartHours | \$6,520,977 | \$7,923,690 | \$8,341,487 | \$7,886,607 | \$7,941,549 | \$38,614,311 |
| CEEP | \$17,957,585 | \$21,784,658 | \$22,241,298 | \$22,711,216 | \$23,188,834 | \$107,883,592 |
| Business DR | \$3,263,740 | \$4,117,108 | \$5,455,643 | \$6,344,444 | \$7,156,896 | \$26,337,831 |
| Energy Education | \$800,000 | \$800,000 | \$800,000 | \$800,000 | \$800,000 | \$4,000,000 |
| Planning | \$0 | \$0 | \$100,000 | \$100,000 | \$150,000 | \$350,000 |
| R&D | \$2,458,660 | \$2,899,675 | \$3,044,258 | \$3,115,517 | \$3,212,869 | \$14,730,978 |
| Total | \$49,173,194 | \$57,993,492 | \$60,885,155 | \$62,310,346 | \$64,257,402 | \$294,619,589 |

2 Q. **Does the program cost of the proposed portfolio remain within the residential**
 3 **customer limit established by the Commission rules?**

4 A. No. The rules specify that Program Costs “should not add more than \$2.50 to the
 5 residential sector’s monthly average customer bill unless benefits and rationale for
 6 exceeding the cap can be proven.” OAC 165:35-41-5(d)(2). OG&E is requesting the
 7 Commission allow OG&E to spend up to \$3.50 per month per average residential customer
 8 to achieve the ambitious goals and provide customers with the associated benefits outlined
 9 in its 2025-2029 Demand Portfolio Plan. The justification for this request mirrors that
 10 provided by PSO in Case No. PUD 2024-000013 by Witnesses Jeff Brown and Sarah
 11 Baroiant in their Direct Testimony, namely, that:

- 12 • The increase in funding will ensure that OG&E continues to provide and grow cost-
 13 effective EE and DR programs that deliver savings to customers while delaying the
 14 need for additional capital investment.
- 15 • The price of goods and services has increased considerably since the current, fixed rate
 16 cap of \$2.50 per month for residential customers went into effect in 2016.
- 17 • Increasing the portfolio budget offers economies of scale.
- 18 • Several stakeholders including PSO, the Oklahoma Attorney General, Oklahoma
 19 Sustainability Network, and the South-Central Partnership for Energy Efficiency as a

1 Resource (SPEER) expressed support for either an increase to the cap or removing the
 2 cap all together in Case No. RM2023-000015.

3 Additionally, the residential waiver to increase the cost cap to \$3.50/customer is
 4 also attributed to the inclusion of SmartHours within the Demand Portfolio. Since the
 5 SmartHours program has a Ratepayer Impact Test (RIM) = 1.2, this program will put
 6 downward pressure on rates for all OG&E residential customers. Although the cost cap
 7 will increase to fund this program within the Demand Portfolio, the SmartHours program
 8 produces ratepayer benefits – for participants and non-participants alike – that will exceed
 9 the program costs and result in an estimated net impact of \$7.9M in ratepayer savings over
 10 the life of the portfolio.

11 Table 3 below contains the estimated monthly customer impact for the proposed
 12 Demand Programs by year:

13 **Table 3: 2025-2029 Residential Monthly Bill Impact**

| Year | Annual kWh Sales | Monthly \$/Customer |
|------|------------------|---------------------|
| 2025 | 9,196,812,862 | \$3.27 |
| 2026 | 9,291,326,364 | \$3.45 |
| 2027 | 9,386,811,160 | \$3.45 |
| 2028 | 9,483,277,231 | \$3.42 |
| 2029 | 9,580,734,661 | \$3.44 |

14 Q. **Is OG&E requesting any additional waivers to the Subchapter 41 rules?**

15 A. Yes. In addition to requesting a determination that benefits support exceeding the customer
 16 cap as discussed above based on the additional benefits that can be achieved, OG&E is
 17 seeking two other waivers in its Application. First, OG&E seeks a waiver of OAC 165-
 18 35-41-4(b)(7), which specifies that Demand Portfolios will have an implementation
 19 schedule of no more than three years. A rule change is currently pending that would expand
 20 the maximum length of Demand Portfolios to five years (as being proposed in this Case),
 21 with a proposed effective date of October 1, 2024.² To the extent necessary, OG&E seeks

² See Case RM2023-000015, Amending Chapter 35 Electric Utility Rules adopted Feb. 16, 2024, with a proposed implementation date of Oct. 1, 2024.

1 waiver of the existing rule to allow it to implement a five-year portfolio of programs
2 consistent with the pending rule change.

3
4 **Q. What is the other waiver being sought by OG&E?**

5 A. OG&E is also requesting a limited waiver to Subchapter 41 rules regarding fuel switching.
6 According to OAC 165:35-41-3, “fuel switching” is defined as “changing from natural gas
7 to electricity or from electricity to natural gas for a particular end-use service or installing
8 electric heating devices in new construction where natural gas service is available or can
9 be economically made available.” OAC 165:35-41-4(b)(5) states that the Demand
10 Portfolio shall not include programs or measures that promote fuel switching.

11 OG&E is requesting a limited waiver to this rule, similar to the waiver granted to
12 PSO by the Commission in Case No. PUD 2021-00041 and requested in Case No. PUD
13 2024-000013. However, the purpose of and support for the waiver requested here differs
14 from that of PSO.

15
16 **Q. Why is OG&E requesting this waiver?**

17 A. OG&E seeks this waiver to help serve hard-to-reach customers by allowing the
18 replacement of a limited number of open flame home heating systems (*i.e.*, vent-free gas
19 wall heaters) with electric mini-split HVAC systems, as the most cost-effective and
20 efficient option to improve the health and safety of qualifying customers’ homes. Open
21 flame home heating systems are prevalent in income-qualified homes throughout the
22 OG&E service territory, and more than 100 customers per year are excluded from the
23 WRAP program due to the presence of open flame heating. The weatherization measures
24 installed under WRAP would exacerbate health and safety concerns in homes with open
25 flame heating, as insulation would trap harmful exhaust in the home. In order to provide
26 these customers with cost-saving and comfort-enhancing energy efficient equipment and
27 services, open-flame home heating systems must be replaced. In order to ensure the most
28 prudent allocation of program funds and to maximize bill savings for qualifying customers,
29 replacement of these open flame heating systems with electric mini-split systems is often
30 the optimal choice.

1 While the appropriate HVAC system for a given home depends on many variables,
 2 the most cost-effective option (in terms of both upfront and operational costs) is an electric
 3 mini-split HVAC system in some cases. The table below reflects market pricing gathered
 4 by OG&E's WRAP implementation team in June of 2024.

5
 6 **Table 4: Reference Market Pricing: Oklahoma 2024**

| | |
|--|--------------|
| Electric Mini-Split (Heating & Cooling)* | \$ 6,650.00 |
| Natural Gas Furnace with No Cooling* | \$ 7,900.00 |
| Added window unit cooling comparable to mini-split | \$ 1,250.00 |
| Furnace + Window Unit | \$ 9,150.00 |
| Central HVAC | \$ 12,000.00 |

**30,000 btu system, installed*

7 Supported by this reference data, electric mini-split systems can be more affordable (in
 8 terms of upfront costs) than the furnace + window unit AC alternative by about \$2,500,
 9 and more affordable than the central HVAC option by about \$5,350. On an annual basis,
 10 energy bill savings from efficient electric mini-split systems relative to the alternatives
 11 noted range from \$85-340.

12 Accordingly, in limited cases where the qualified professional installer
 13 recommends replacement of open flame heating with an electric mini split system in a
 14 WRAP-qualified home, OG&E seeks a limited waiver to the fuel-switching rule in order
 15 to enable the replacement and provide the customer with access to additional cost-saving
 16 and comfort-enhancing measures. OG&E's requested waiver would be limited to a
 17 maximum of 100 homes per year, with the expectation that the WRAP budget (including
 18 the dedicated health and safety funds) would only support 75 or fewer replacements per
 19 year.

1 Q. **How does OG&E propose to recover the costs associated with the 2025-2029 Demand**
 2 **Portfolio?**

3 A. OG&E proposes to recover costs through the existing Energy Efficiency Program Rider.
 4 The recovery of costs for the Demand Portfolio is discussed in Company witness James
 5 Alexander’s direct testimony.

6
 7 **PORTFOLIO PERFORMANCE**

8 Q. **What are the planned annual and total savings of the proposed 2025-2029 Portfolio?**

9 A. Table 5, below, contains detailed amounts of projected energy and demand savings.

10 **Table 5: Planned Demand and Energy Savings***

| Program | 2025 | | 2026 | | 2027 | | 2028 | | 2029 | | Total | |
|--------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|
| | MW | MWh | MW | MWh | MW | MWh | MW | MWh | MW | MWh | MW | MWh |
| HEEP | 3.68 | 17,536 | 4.60 | 21,920 | 4.60 | 21,920 | 4.60 | 21,920 | 4.60 | 21,920 | 22.06 | 105,214 |
| WRAP | 2.35 | 8,423 | 2.35 | 8,423 | 2.35 | 8,423 | 2.35 | 8,423 | 2.35 | 8,423 | 11.75 | 42,113 |
| SmartHours | 84.90 | 15,369 | 93.79 | 16,977 | 102.67 | 18,585 | 110.00 | 19,912 | 110.00 | 19,912 | 110.00 | 19,912 |
| CEEP | 16.15 | 99,759 | 19.38 | 119,711 | 19.38 | 119,711 | 19.38 | 119,711 | 19.38 | 119,711 | 93.66 | 578,602 |
| Business DR | 20.00 | - | 40.00 | - | 67.21 | - | 85.00 | - | 100.00 | - | 100.00 | - |
| Total | 127.08 | 141,086 | 160.11 | 167,030 | 196.21 | 168,638 | 221.32 | 169,965 | 236.32 | 169,965 | 337.47 | 745,841 |

**Unlike energy efficiency program savings with multi-year impacts and cumulative totals, SmartHours and Business Demand Response kW and kWh impacts represent 1-year impacts, with the Program Cycle Total aligned with the 1-year impacts achieved in Program Year 2029.

11 Q. **Are utilities responsible for the EM&V of their demand programs?**

12 A. Yes. Pursuant to OAC 165:35-41-6, utilities are “responsible for timely evaluation,
 13 measurement, and verification of their energy efficiency and demand response programs.”
 14 These evaluations are to independently evaluate and verify the resulting demand and
 15 energy savings attributable to the Portfolio. The Direct Testimony of Kelly Marrin with
 16 DNV addresses the approach to EM&V for the proposed Demand Programs. OG&E will
 17 contract with a third-party EM&V consultant to perform the evaluation of the Portfolio.

1 Q. Is OG&E requesting lost net revenues (“LNR”) and utility incentives associated with
2 the 2025-2029 Demand Portfolio?

3 A. Yes. For all programs, the Company is requesting recovery of LNR and utility incentives,
4 as allowed by the Commission rules and as agreed to in Cause Nos. 201800074 and
5 202100121, and further explained in the Direct Testimony of witness James Alexander.
6

7 Q. Is there a portfolio performance requirement for a utility to be eligible for incentives?

8 A. Yes. Pursuant to OAC 165:35-41-8(a), the Company’s Demand Portfolio must achieve: a
9 minimum of 80% of its savings goal; a total resource cost test benefit/cost ratio that is
10 greater than one; and a utility cost test benefit/cost ratio that is greater than 1.2 to qualify
11 for an incentive.
12

13 **EVALUATION OF COST-EFFECTIVENESS**

14 Q. How does OG&E evaluate the cost-effectiveness of the demand programs?

15 A. OG&E uses the five economic tests required by OAC 165:35-41-5(c), commonly referred
16 to as the California Standard Practice Manual tests, to evaluate cost-effectiveness of its
17 proposed Demand Programs. The five economic tests are the Participant Cost Test
18 (“PCT”), the Utility Cost Test (“UCT”), the Total Resource Cost Test (“TRC”), the
19 Societal Cost Test (“SCT”), and the Ratepayer Impact Measure (“RIM”). Table 6 below
20 shows the cost-effectiveness test results for the programs and portfolio. For a more detailed
21 description of the five tests, and why these programs are cost-effective, see Witness
22 Metzger’s testimony.
23

Table 6: Cost-Effectiveness Results

| Program | TRC | UCT | RIM | PCT | SCT |
|--------------|------------|------------|------------|------------|------------|
| HEEP | 1.6 | 1.2 | 0.3 | 6.9 | 5.4 |
| WRAP | 0.6 | 0.5 | 0.2 | 2.8 | 2.6 |
| SmartHours | 1.2 | 1.5 | 1.2 | 1.0 | 1.4 |
| CEEP | 1.5 | 2.0 | 0.3 | 8.2 | 7.8 |
| Business DR | 1.3 | 1.3 | 1.3 | 1.0 | 1.3 |
| Total | 1.3 | 1.4 | 0.3 | 5.5 | 4.9 |

1 Q. **Do each of the proposed programs pass all five tests?**

2 A. No. Programs – especially those targeting low income and hard-to-reach participants – are
3 not required to pass all five economic tests. For example, WRAP does not pass all five
4 economic tests. However, OG&E weighs the result of all five tests to determine the overall
5 cost-effectiveness of the programs. A program will not necessarily be excluded from
6 consideration because it fails one of the five tests. As per the Rules, these tests are to be
7 used in conjunction with one another, and no one test may be used to deem a program
8 lacking in cost effectiveness.³ According to a report for the National Action Plan for
9 Energy Efficiency⁴, “In the vast majority of cases, the RIM is negative since the retail rate
10 is typically higher than the utility’s avoided cost.” The report goes on to state “most
11 jurisdictions do not choose the RIM as the program test; many use it as a secondary
12 consideration, if at all.” The RIM test measures the impact on rates whereas the TRC
13 measures the impact on aggregate bills and is generally viewed as the most relevant of the
14 California Standard Practice Manual tests when considering the cost effectiveness of EE
15 programs as a whole. In addition, the Commission evaluates not only cost effectiveness of
16 individual programs but also for the portfolio as a whole, along with recognizing that
17 individual programs do not have to be cost-effective if “their inclusion is expected to
18 provide for greater comprehensiveness, customer or trade ally participation or address hard
19 to reach customer participation”.⁵ Programs such as WRAP do just that in making the
20 portfolio more comprehensive and are targeted to hard-to-reach customers.

21
22 **FUNDING FOR RESEARCH AND DEVELOPMENT**

23 Q. **Please explain OG&E’s request for research and development funds.**

24 A. R&D activities have been foundational in identifying new technologies and methods for
25 improving EE and demand management offerings and helping customers control their bills,

³ OAC 165:35-41-5(c).

⁴ https://19january2017snapshot.epa.gov/sites/production/files/2015-08/documents/understanding_cost-effectiveness_of_energy_efficiency_programs_best_practices_technical_methods_and_emerging_issues_for_policy-makers.pdf

⁵ OAC 165:35-41-5(a)(3).

1 as supported by the RTQ pilot. Testing and validating new program features is vital to
2 OG&E's continued achievement of its goals – especially given the proposed increase in
3 impacts for the 2025-2029 cycle, as well as evolving customer expectations. The intent of
4 the proposed R&D activities is to develop knowledge and tools related to potential new EE
5 and DR processes, products, or services, or improvements and enhancements to existing
6 ones. Findings from those R&D activities will then be incorporated into existing and
7 proposed programs and future demand portfolio planning.

8 Consistent with OAC 165:35-41-4(c)(2), OG&E is requesting a \$14,730,978 R&D
9 budget in the 2025-2029 Demand Portfolio, roughly \$2.9 million per year. This level of
10 funding does not exceed five percent of the total budget cap for R&D and maintains overall
11 cost-effectiveness for the Demand Portfolio as required by the rules.

12
13 **Q. Please describe the research OG&E is proposing.**

14 **A.** OG&E proposes four (4) R&D initiatives designed to enhance OG&E's ability to provide
15 new or improved EE and demand management measures. The following initiatives will
16 address areas of need for residential, commercial, industrial, and municipal customers:

- 17 1. Mass-Market Load Flexibility
- 18 2. Advanced Energy Management for Large Users
- 19 3. Electric Fleet and Fast-Charging Solutions
- 20 4. Partnerships and Strategic Deployments

21 Each of these initiatives is described in detail in Exhibit JAK-1.

22
23 **PROGRAMS FOR RENTERS AND MULTI-FAMILY HOUSING RESIDENTS**

24 **Q. Did OG&E agree in Cause No. 202100121 to study the feasibility of adding programs**
25 **that may extend access for renters and multi-family housing in this Demand**
26 **Portfolio?**

27 **A.** Yes. In the Joint Stipulation and Settlement Agreement reached in Cause No. PUD
28 202100121 (and approved in Order No. 723207), OG&E agreed to study the feasibility of
29 adding programs that may extend access for renters and multi-family housing in this
30 Demand Portfolio.

1 First, it is worth noting that OG&E continues to provide many energy saving
2 measures for renters through both the HEEP and WRAP programs, including 825 unique
3 multi-family homes served by WRAP in 2023, with a variety of measures, including AC
4 tune-ups, insulation, and duct sealing. Across the HEEP channels in 2023, electric savings
5 achieved in multi-family homes far exceeded those achieved in single family homes, to the
6 extent that the evaluation team paid considerable attention in this program year's M&V
7 process to ensuring that the assumptions underlying the prescriptive measures incentivized
8 through the program are appropriate for multi-family residences, with numerous
9 recommendations from the 2023 Evaluation Report incorporated in the 2025-2029 program
10 design.

11 To build on this success with hard-to-reach customers and comply with the
12 Commission's Order No. 723207, OG&E has undertaken a thorough examination of
13 various program delivery models – with a focus on incorporating financing opportunities
14 – that have the potential to extend access to program services for renters and other hard-
15 to-reach customers. OG&E also reviewed the resources made available by the
16 Environmental Protection Agency and Department of Energy (“DOE”) regarding on-bill
17 financing and repayment programs and examined the results of peer utilities' on-bill
18 financing initiatives, such as Evergy – all showing relatively limited uptake with renters,
19 relative to OG&E's existing portfolio. Also, administration of a financing program as a
20 utility comes with considerable challenges, given that consumer financing is not a core
21 business of electric utilities. OG&E lacks experience in this area, and the Company's
22 customer information and billing systems are not presently designed to support such
23 activities. Substantial costs would be incurred for OG&E to stand up the software, staff,
24 and processes required to assess customers' creditworthiness, establish appropriate
25 financial terms, underwrite loans, understand, and ensure compliance with consumer
26 protection laws, and other required activities. Banks and other businesses are more
27 experienced and better suited to manage consumer financing and servicing of loans.

28 OG&E is committed to continuing to explore opportunities to support its customers
29 in accessing financing for energy efficiency projects, including collaboration with the
30 Oklahoma Department of Commerce in the development and implementation of the

1 Oklahoma Energy Efficiency Co-Lending Fund, to deploy the state's allocation of
2 \$7,592,300 from the DOE, as well as ongoing achievement of energy savings in multi-
3 family homes through HEEP and WRAP.

4

5

CONCLUSION

6 Q. **What are your recommendations to the Commission?**

7 A. OG&E recommends approval of the proposed 2025-2029 Demand Program Portfolio and
8 recovery of the costs associated with implementing the portfolio (including recovery of the
9 lost net revenues and incentives as for provided by rule) through the existing Energy
10 Efficiency Program Rider. OG&E's proposed portfolio is consistent with and has complied
11 with Commission rules, with the exception of the narrow waivers requested herein. This
12 Portfolio has within it a set of programs that are deemed cost effective based upon the
13 California Standard Practice Manual and are comprehensive and designed to reach all
14 customer sectors, including low-income and hard-to-reach customers. These programs will
15 make the required additions to EE and DR that will benefit all customers.

16

17 Q. **Does this conclude your direct testimony?**

18 A. Yes.

DIRECT EXHIBIT JAK-1

OG&E 2025-2029 Research and Development Plan

Per OAC 165:35-41-3, "Research and development" (R&D) means a planned activity aimed at discovering new knowledge with the hope of developing new or improved energy efficiency processes, products, or services and the translation of these research findings into a plan or design for new or improved energy efficiency processes, products, and services.

OG&E proposes to implement the following R&D plan under the 2025-2029 Portfolio in order to identify, test, and develop new and improved customer offerings that achieve cost-effective energy and demand savings and are aligned with evolving grid needs and customer preferences. These R&D activities will inform adjustments to existing programs and support future program planning efforts.

OG&E plans to conduct R&D activities in the following four topic areas over the 2025-2029 portfolio cycle:

1. Mass-Market Load Flexibility
 - a. **Goal:** Scale the impacts of SmartHours on system peak demand while enhancing customer experience and enabling co-benefits.
2. Advanced Energy Management for Large Users
 - a. **Goal:** Better understand the potential and barriers that exist among high-volume energy users to contribute to cost-effective energy and demand savings goals; develop solutions that enable them to do so and that are aligned with their preferences.
3. Electric Fleet & Fast-Charging Solutions
 - a. **Goal:** Enable customers to pursue their goals related to transportation electrification while mitigating system impacts, through proactive engagement and planning, ongoing assessment and integration of market-leading technologies and services, and refinement of customer-facing incentives.
4. Partnerships & Strategic Deployments
 - a. **Goal:** Support and leverage innovative projects initiated by or advocated for by OG&E customers that align with the development of new and improved energy efficiency processes, products, and services and the Company's strategic priorities, and promise transferrable learnings and benefits to the broader customer base.

Additional context, including more specific research topics and anticipated activities within each topic area, are provided in the following sections.

Mass-Market Load Flexibility

OG&E introduced its mass-market load flexibility program, SmartHours, nearly 15 years ago accompanying the rollout of advanced metering infrastructure. The program leveraged time-based price signals and Company-owned thermostats to achieve peak demand reduction and bill savings for participating residents and small businesses.

Since program inception, the design and implementation approach for SmartHours has centered on giving customers the tools and education to be their own energy managers, respecting their preferences to be in control. Accordingly, SmartHours incorporates incentives for load flexibility in participating customers' retail rates, as opposed to providing distinct, programmatic payments or credits for enabling OG&E to dispatch customers' devices directly. To achieve impacts at scale, SmartHours has relied upon: 1) considerable and continuous initiatives to promote customer awareness and education; and 2) technology integration – enabling customers to adopt controllable devices, “set it” (in accordance with their preferences), and then “forget it.”

In the early years of implementation, strong customer education and technology integration resulted in market-leading program impacts, with approximately 20% of eligible customers opting in to participation (corresponding to enrollment rates of over 13,000 customers per year) and demand impacts of 1.45 kW per participant (on average) at the program height. However, following the transition of SmartHours implementation outside of the Demand Portfolio in 2015, a decline in customer awareness and education initiatives has resulted in a corresponding decline in enrollments; and many customer devices have aged out of use without programmatic replacement, reducing technology integration, and thereby reducing program impacts per participant. Simultaneously, recent extreme weather years and reduced available generation capacity across the Southwest Power Pool have resulted in increased need for reliable flexible load resources.

In response to these noted trends, OG&E has taken steps in recent years to revive the potential of SmartHours and take advantage of considerable technological evolution that has occurred since program inception. In 2019, OG&E introduced a Bring Your Own Thermostat (BYOT) pilot; in 2021, If-This-Then-That (IFTTT) technology for price-to-device communication was made available to all customers; in 2022, marketing efforts for SmartHours were re-initiated; and through R&D efforts over the past Demand Portfolio cycle, OG&E conducted a Managed/Controlled Flexible Load Electric Device Technology Pilot.

Under the proposed 2025-2029 Demand Portfolio, OG&E plans to re-incorporate SmartHours into the portfolio and scale its impacts through integration with energy efficiency initiatives and continued R&D activities, in three primary categories:

1. Technology integration

OG&E will build on the learnings from the Managed/Controlled Flexible Load Electric Device Technology Pilot to develop and deepen partnerships with key original equipment manufacturers (OEMs) and automation service providers (ASPs) capable of receiving and enacting automated responses to time-of-use (TOU) and variable peak pricing (VPP) price signals. While focusing initially on distributed energy resources (DERs) with high adoption rates (i.e., smart thermostats), this initiative will incorporate additional mass-market DER types, which may include but will not be limited to: smart electric panels, electric water heaters, battery energy storage systems, and electric vehicle supply equipment.

Beyond OEMs' and ASPs' capabilities to receive price signals and enact automated responses from particular DERs, OG&E seeks to better understand the options that can be made available for customers to customize their preferences for responses of their DERs at different price levels. Further, OG&E will continue to investigate the technology providers' strategies for device orchestration, particularly as they relate to the achievement of sustained demand impacts over

peak windows and optimizing impacts during system peak hour(s) – all while appropriately accounting for customer bill impacts. Beyond understanding the options presently offered by these OEMs and ASPs, we intend to work in partnership with these technology providers to enhance, assess, and scale improvements on current strategies through lab and/or field deployments. In addition to direct, in-territory experimentation, this initiative will pursue cost-effective learning through the monitoring of related market activity, such as the research undertaken by the Lawrence Berkley National Lab (LBNL)'s CalFlexHub.

Further, as customers adopt multiple controllable devices within their homes and businesses (e.g., a smart thermostat and an electric vehicle charger), OG&E will work with technology partners to pilot and evaluate strategies for whole-home/whole-building price responsiveness, as well as with regulatory stakeholders to provide clear definition and education regarding the compatibility of various tariffs and programs that seek to incentivize load management.

2. **Customer experience**

One central point of interest related to customer experience is OEMs' and ASPs' capabilities to provide customers with options to customize their devices' responses to different retail price levels based on their comfort and/or economic preferences, as noted above. In addition to understanding technology providers' capabilities in this space, OG&E also seeks – through this R&D initiative – to better understand customers' preferences related to the tradeoff between simplicity and a high degree of customization. With this learning, we seek – with our technology partners – to develop and implement process flows that provide customers with simple, pre-configured default options (e.g., “max comfort” or “max bill savings”), as well as configurability for prosumer-type customers (e.g., 68 degree thermostat setpoint at Low price levels, 80 degree setpoint at Critical price levels, etc.).

Additionally, as OG&E seeks to scale participation in SmartHours, experimental market engagement strategies will be researched and as appropriate, implemented and evaluated through this initiative. Examples may include but will not be limited to gamification strategies.

Finally, while “customer in control” has remained the central tenant of SmartHours since inception, continued customer research is required to understand evolving preferences related to utility direct load control (DLC) program offerings, given ongoing technological and cultural change. Should findings reveal that a sufficient segment of customers express willingness and interest to participate in a DLC offering, then development of such a program may merit allocation of resources under this initiative.

3. **Enabling co-benefits beyond system peak load management**

SmartHours was launched in 2010 with a focus on peak load management, and the program is the focus of strong renewed interest in this portfolio for the same primary aim. In tandem to the efforts aimed at increasing and optimizing these peak load impacts, under this R&D initiative, OG&E also seeks to explore various co-benefits that SmartHours (and mass-market load flexibility, more generally) can provide. Examples of co-benefits of interest may include but will not be limited to: load management for emissions reduction (i.e., shifting load to better align with times

of day that renewable energy constitutes a higher proportion of available generation) and non-wires alternatives (i.e., utilizing load management to avoid alternative distribution system investments). Over the course of this program cycle, OG&E may conduct research to inform the economic proposition for these alternative use cases and assess the capabilities of technology partners to support their implementation. Where cost-effective and technologically feasible, pilot offerings may be developed and evaluated.

This pilot is estimated to cost approximately \$890,299 annually for the five-year portfolio which represents 1.51% of the total portfolio cost (2025-2029). Costs incurred for R&D activities in this topic area are expected to be weighted toward the earlier years of the portfolio cycle, as the capabilities of technology partners are assessed and integrations pursued, where beneficial.

Advanced Energy Management for Large Users

Per OAC 165:35-41-3, a “high-volume electricity user” means a customer within a utility company’s service territory whose annual consumption is 15 million kWh of electricity or greater regardless of the number of meters or service locations. In administering its Demand Portfolio, OG&E must allow these high-volume electricity users to opt out of some or all of the Company’s Demand Programs. Presently, 72 high-volume customers have chosen to opt out, representing 2,912 individual accounts and 8,675 GWh of electric sales. This equates to 29% of OG&E’s retail sales that sits outside the reach of the Company’s Demand Programs. Given OG&E’s capacity position and the relative cost-effectiveness of large commercial and industrial (C&I) demand-side management programs, this sizable opportunity for cost-effective savings merits attention under OG&E’s 2025-2029 R&D plan.

The American Council for an Energy-Efficient Economy (ACEEE) has conducted research that supports the market potential of cost-effective EE opportunities among opt-out customers. They explain that “Failure to include large customer programs in an energy efficiency portfolio will increase the cost of the resource for all customers and reduce the benefits. ACEEE clarifies that “An alternative may be offering large customers the option of self-directing their energy efficiency program dollars. This option provides a path to include large customer energy efficiency in portfolio of savings at the same time as it encourages utilities to improve program offerings to become more responsive to all customers’ needs.”¹

OAC 165:35-41 contemplates a “self-direct” approach for high-volume electricity users in Oklahoma, defining “customized opportunity” as a Demand Program tailored to an individual electricity user’s needs, including opportunities for high-volume electricity usage customers to self-administer and self-fund their own programs. While OG&E has not historically pursued customized opportunities with high-volume electricity users, ACEEE has developed a national inventory and summary of these self-direct programs among other energy utilities, offering guidance for OG&E in this R&D effort.

Under the proposed 2025-2029 Demand Portfolio, OG&E plans to systematically evaluate the demand-side management potential among high-volume electricity users, as well as their preferences for advanced energy management programs, in order to innovate within existing programs and/or develop customized opportunities that align with these customers’ preferences and enable OG&E to achieve cost-effective demand impacts.

¹ <https://database.aceee.org/state/self-direct>

This initiative will evaluate potential and preferences – among high-volume electricity users who have opted out of the Demand Portfolio, as well as other large energy users – in the following four categories:

1. Commercial & Industrial Solutions (CIS) & Business Demand Response (BDR)

Primarily, OG&E seeks to understand the extent to which high-volume electricity users (both opt-out customers and opt-out-eligible customers who have chosen to participate in the Demand Portfolio) have adopted the measures offered under OG&E's proposed CIS channel that are best suited to their businesses. Further, these customers' capabilities to curtail load within the parameters of the proposed BDR program will be assessed. Site assessments and customer surveys will be the primary activities anticipated to address these research questions. The aim of these investigations will be to develop a sector-wide approximation of demand-side management potential among high-volume users, as well as more in-depth analyses for particular customers who participate in the assessment, to include a business case for DR-only opt-in, full Demand Portfolio opt-in, and a customized opportunity, as applicable. Customized opportunities and potential enhancements to the proposed CIS and BDR programs will be based on findings from the assessment phase, as well as market research conducted by ACEEE and other credible industry sources.

2. Resilience Program

Based on insights gained from OG&E's past market research efforts, as well as input provided by OG&E's Account Executives serving the Company's high-volume electricity users, the primary preferences and interests expressed by these customers center on the topics of reliability and resilience. Accordingly, planning efforts for the 2025-2029 Demand Portfolio included investigation of peer utilities' program offerings for large C&I customers that are designed to address these areas of interest – including Xcel's Empower Resiliency Program and Georgia Power's Resiliency Asset Service (RAS) tariff. Under this R&D initiative – in parallel to the assessment efforts described in the prior section – OG&E seeks to develop a more in-depth understanding of customers' distributed energy resource (DER) ownership and operational preferences, to inform program and/or tariff development. If initial findings support the development of a new or expanded offering, later-stage activities may include: development of guidance regarding compatibility with existing DR programs and tariffs, identification of qualified technology and service providers, network management, monitoring compatible federal funding opportunities, and tracking evolving DER interconnection standards.

3. Market-Based Demand Response (MBDR)

In addition to customers' expressed interest in resiliency solutions, regional regulatory bodies have raised questions² in recent years regarding the extent of customer interest in opportunities to earn revenues for their demand response resources' energy and ancillary services. The Company's retail C&I DR programs – the existing Load Reduction Rider and proposed BDR program – enable OG&E to call the programs for economic (non-emergency) purposes; however, the primary value to OG&E around which these programs have been designed and operated has been the capacity (planning and peak load management) value. As wholesale electric markets have evolved to better enable DR resources to offer and be fairly compensated for energy and ancillary services, many

² AR PSC 09-090-U, MO PSC EW-2021-0267

electric utilities have introduced tariffs that allow their large C&I customers to offer their DR resources into wholesale markets through the utility as the market participant and earn market revenues for energy and ancillary services. Specifically, electric utilities in Missouri, Indiana, Louisiana, and Michigan offer MBDR tariffs – notably, with little-to-no customer uptake, as most are structured to pass along the risk of market penalties to participating customers. Where permitted, third-party aggregators of retail customers (ARCs) have achieved market uptake among C&I customers by offering penalty-free MBDR models. While attractive to certain C&I customers, these models come with challenges including a lack of operational insight for utilities into the management of these resources interconnected to their distribution systems³, as well as the lack of a mechanism to quantify and transfer the capacity value of these resources to load responsible entities such as OG&E. In order to balance the importance of appropriately capturing the capacity value of DR resources on its system for least-cost planning and reliability purposes, along with the desire to provide customers with program offerings that are attractive to them and meet their needs, OG&E seeks to develop an MBDR program offering, with clear pathways and guidance for ARCs to participate on behalf of their customers. To support the development of such an offering, R&D is required to better understand the magnitude of customer capability and interest to provide ancillary services to the SPP Integrated Marketplace, program design best practices, sufficiency of existing systems to facilitate market offer and resource availability updates between the customer, OG&E, and SPP, and more. Anticipated activities to shed light on these research questions include but will not be limited to capability assessments of OG&E's existing platform to facilitate market offers and competitive solutions, and coordination with SPP, ARCs, and DSM/EE stakeholders to establish a framework to enable dual-participation without double-counting, including any corresponding reporting requirements and associated process/data flows.

4. **DSM-Integrated Clean Energy Procurement Solutions**

In addition to resiliency and opportunities to earn wholesale market revenues, OG&E's large C&I customers have demonstrated strong preferences for clean energy procurement options. While green tariffs and other clean energy procurement options are often explored independently from utilities' DSM offerings, recent market trends are revealing important opportunities for alignment. Specifically, as corporate greenhouse gas reporting frameworks evolve and regulatory oversight of related disclosures is anticipated, sophisticated customers are expressing preferences for time- and locational-matching of the energy attribute certificates (EACs, e.g., renewable energy credits or RECs) that they procure with the actual consumption of their facilities throughout the day and year. Even for customers without such advanced preferences, "efficiency first" has long been a rule of thumb for responsible renewable energy procurement – to reduce consumption before sizing systems or contracts to meet load with clean energy resources. Accordingly, OG&E aims to closely align its renewable energy programs with DSM programs going forward. To achieve this alignment, this R&D initiative aims to shed light on: customer preferences related to clean energy procurement, insights and services sought from OG&E and those available through alternative providers, and the capabilities required for EAC tracking, retirement, and reporting. Further, as frameworks emerge in the market for accrediting EACs from DER deployment and operation,

³ Detailed in Kansas Corporation Commission Docket #23-EKCE-588-TAR, specifically the Rebuttal Testimony of Jaymin D. Patel on Behalf of Evergy, filed July 21, 2023.

OG&E will monitor and pursue, as appropriate, opportunities to certify EACs generated by DERs incentivized under the Demand Portfolio.

Altogether, under the Advanced Energy Management for Large Users topic area, OG&E aims to pursue all cost-effective opportunities for DSM with high-volume electricity users by better understanding and addressing their preferences for reliability, sustainability, and monetizing the capability of their distributed energy resources to provide grid services.

This pilot is estimated to cost approximately \$618,632 annually for the five-year portfolio which represents 1.05% of the total portfolio cost (2025-2029). Costs in this topic area are expected to be lower than the annual average in the early years of the portfolio cycle – focused on market research and assessments – with the potential to increase in later years as software or other investments may be required for pilot deployments.

Electric Fleet & Fast-Charging Solutions

In the years leading up to the current Demand Portfolio, OG&E identified an increasingly prevalent desire among its customers to pursue electric transportation options, as well as associated needs for support in navigating complexities and unfamiliar subject matter related to electric vehicle (EV) equipment, charging infrastructure, siting, planning, utility rate structures, interconnection requirements, and total cost of ownership. OG&E understands that proactive engagement in customers' planning efforts sharing of knowledge and resources related to equipment and service providers, and refinement OG&E's customer-facing incentives, are all required to ensure that OG&E does not act as a barrier to interested customers' sustainability goals, and that the system impacts and costs associated with the pursuit of those goals are minimized and born by the appropriate users.

In pursuit of these ends, over the past Demand Portfolio cycle, OG&E has implemented: rebates for ENERGY STAR Level 2 EV chargers, a fleet electrification program to provide planning and technical support to select cohorts of interested customers, as well as an R&D initiative to pilot the deployment of a utility-scale battery to manage EVSE rapid charging loads. Additionally, the Company has introduced EV-TOU rates and steadily expanded the online resources available to customers related to EVs, including tax credit information, a charging station locator, and FAQs. Through these various initiatives, OG&E gained key insights to inform continued customer program development and research, including:

- Recruitment of EV adopters onto the EV-TOU rates has been challenging due to difficulty identifying the best intervention points to reach appropriate customers, as well as the requirement for installation of a separate meter. For these reasons, limited in-territory data is yet available to assess the impacts of these time-based rates on demand associated with EV charging.
- While customer feedback regarding EV educational resources has been positive, opportunity remains within OG&E to better ensure that insights on customers' transportation electrification plans gleaned from these interactions are referred to the appropriate internal channels for end-to-end support.
- Assessment of customers' charging loads within OG&E's territory has revealed significant potential for managed charging to mitigate peak demand impacts corresponding to EV charging. Fleet customers specifically have expressed interest in managed charging, while lacking technical readiness. Existing and potential technology partners' managed charging solutions are rapidly evolving, though remaining in early stages of deployment.

Building on these experiences and insights, several key questions remain to inform continued development of customer offerings for transportation electrification, including: successful approaches for identifying EV adopters before equipment investments are made; benefits and drawbacks of alternatives to the installation of an OG&E meter for EV-TOU customers (e.g., chargers and smart panels offering revenue-grade metering); impacts of EV-TOU rates on customers' charging behavior (with significant participant and temporal samples); industry best practices for sharing of relevant EV planning data across internal functional groups; and key technical differentiators among managed charging solution providers. The R&D activities anticipated to shed light on these remaining questions may include but will not be limited to: continued and expanded support for customers converting to electric fleets; internal stakeholder coordination regarding data tracking and sharing; national comparative analysis of EV-focused tariffs, including implementation strategies and initial impacts, as available; and vendor assessment and pilot deployment of managed charging with customer and/or OG&E light-duty fleet.

This pilot is estimated to cost approximately \$508,632 annually for the five-year portfolio which represents 0.86% of the total portfolio cost (2025-2029). Costs associated with this topic area are expected to be low in the first year of the portfolio cycle, as lessons learned from the presently ongoing EVSE rapid charging pilot are fully documented and reviewed in order to identify and prioritize key remaining research questions and next steps. Based on these findings, costs may then increase in years two and/or three, with expected technology deployments, followed by a decrease in the later years as activities shift toward data collection and analysis.

Partnerships & Strategic Deployments

Finally, while much of the design and planning around the 2025-2029 Demand Portfolio has focused on OG&E's need to procure cost-effective capacity, it is important to ensure that our customers' needs and preferences remain at the center of all that the Company delivers. To that end, we seek to reserve roughly 30% of our R&D funding to support innovative projects that OG&E customers have initiated or advocated for. Over the past year, OG&E has been approached by local school districts, universities, non-profits, and other key stakeholders with innovative project concepts that require OG&E's attention and support to achieve desired outcomes – such as district geothermal system implementation, and comprehensive, community-scale home energy improvements. However, it has proven difficult for OG&E to respond to customers' time-bound inquiries without a dedicated budget available for such purposes. We anticipate that these requests will continue over the planned portfolio period, as customer sophistication and goals related to advanced energy solutions increase, and federal funding for innovative energy projects remains available to the market. While not all customer-led or requested initiatives will prove to be appropriate investments for OG&E, under this R&D initiative, the Company will develop a framework to identify those that: meet the definition of R&D per OAC 165:35-41-3, best align with its strategic priorities, and that promise transferrable learnings and benefits to the broader customer base. This framework will be shared with the broader EE/DSM stakeholder group for review and input. Once developed, incoming requests will then be routed through this centralized process and evaluated for investment priority. R&D funds would then be applied to the highest-qualifying projects, as available. Potential partnerships envisioned for the upcoming planning cycle may include but are not limited to: coordination with the Oklahoma Department of Commerce regarding tools and processes to promote efficient co-delivery of OG&E's programs and the state's Inflation Reduction Act Home Energy Rebate Programs and EE Co-Lending Fund; and engaging with a technology vendor to cost-efficiently meet customers' preferences for a pre-pay billing option – which demonstrated considerable energy and peak demand savings in preliminary studies. In the

absence of qualifying project submissions, budget for strategic deployments will be reallocated among the remaining R&D initiatives, as needed.

This initiative is estimated to cost approximately \$928,632 annually for the five-year portfolio which represents 1.58% of the total portfolio cost (2025-2029). Costs in this topic area are expected to be low in the first year of the portfolio cycle, as the project prioritization framework is developed and vetted by stakeholders, and potential initiatives are evaluated. In year two, costs are expected to stabilize, with some year-over-year variation depending on the scale, volume, and nature of proposed initiatives.

Summary

The over-arching aim of the R&D initiatives outlined in this plan is to identify, test, and develop new and improved customer offerings that achieve cost-effective energy and demand savings and are aligned with evolving grid needs and customer preferences.

OG&E is requesting to allocate an average of \$2.9M annually for R&D in the 2025-2029 Demand Portfolio budget. This level of funding does not exceed five percent of the total budget cap for R&D and maintains the overall cost-effectiveness of the Demand Portfolio. Given the iterative nature of the R&D projects outlined in this plan – with later-stage efforts building on earlier-stage findings – OG&E will have considerable tolerance for revisions in project schedules or specific targets, so long as the key program goals are likely to be achieved and total expenditures do not exceed budgeted costs across the R&D project portfolio. It is possible that certain project components will be discontinued after initial investigations, or that OG&E will identify additional activities necessary to achieve project goals and incorporate such activities into these iterative plans. Additionally, certain project components may be integrated if opportunities for efficiencies in delivery or improvements in customer experience are identified. Preliminary budgets are outlined in Tables 1 and 2. While specific activities that may result in energy and demand savings are not yet sufficiently known and defined to the extent that they can be forecasted, OG&E proposes that any energy and demand savings realized from R&D pilot activities that can be reliability measured and verified count toward the annual goals. These impacts will be reported annually for stakeholder review.

Average Annual Costs of Proposed R&D Plan

| Program Year | Cash Inducements | Non-Cash Inducements | Total Costs |
|--------------|------------------|----------------------|--------------|
| 2025 | \$261,233 | \$2,197,427 | \$2,458,660 |
| 2026 | \$415,922 | \$2,483,753 | \$2,899,675 |
| 2027 | \$422,575 | \$2,621,683 | \$3,044,258 |
| 2028 | \$498,845 | \$2,616,672 | \$3,115,517 |
| 2029 | \$639,324 | \$2,573,545 | \$3,212,869 |
| Total | \$2,237,898 | \$12,493,080 | \$14,730,978 |