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**BEFORE THE CORPORATION COMMISSION
OF THE STATE OF OKLAHOMA**

COURT CLERK'S OFFICE - OKC
CORPORATION COMMISSION
OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF)
OKLAHOMA GAS AND ELECTRIC COMPANY)
FOR AN ORDER OF THE COMMISSION)
APPROVING A RECOVERY MECHANISM FOR)
EXPENDITURES RELATED TO THE)
OKLAHOMA GRID ENHANCEMENT PLAN)

Cause No. PUD 202 000021

Direct Testimony

of

Andrea Dennis

on behalf of

Oklahoma Gas and Electric Company

February 24, 2020

I. Introduction

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

3 A. My name is Andrea Dennis. I am the Vice President of Transmission and Distribution
4 Operations for Oklahoma Gas and Electric Company ("OG&E"). My business address is
5 321 N. Harvey, Oklahoma City, Oklahoma, 73102.
6

7 Q. **Please state your educational qualifications and employment history.**

8 A. I earned a Bachelor of Science degree in Engineering Management from Missouri
9 University of Science and Technology and a Master of Science Degree in Engineering and
10 Global Operations Management from Clarkson University. I joined OG&E in 2009 and
11 have held several roles including Business Performance Improvement Performance
12 Consultant, Manager of Business Performance Improvement, Manager of Distribution
13 Operations, Director of System Operations, and Managing Director T&D Operations. I
14 have been the Chair of the Association of Edison Illuminating Companies Power Delivery
15 Distributed Energy Resources ("DER") Subcommittee for the last two years and the first
16 Vice Chair the two years prior to being chair. Prior to joining OG&E, I worked for ten
17 years at Xerox Corporation in packaging and process operations engineering, IT
18 management, and Six Sigma roles.
19

20 Q. **Please describe your current role and responsibilities.**

21 A. As the Vice President of Transmission and Distribution ("T&D") Operations, I lead a
22 diverse team and have responsibility over the following areas: Construction and
23 Operations, System Operations, Distribution Engineering, Resource Planning &
24 Coordination, and Incident Command System ("ICS"). These teams are comprised of the
25 crews used to build and maintain the Distribution and Transmission grid, the control rooms
26 that monitor the Transmission and Distribution grids, engineering support of the control
27 rooms and substation engineering and maintenance. In addition, the engineers that design
28 the distribution network and the Geographical Information System ("GIS") that supports

1 those engineers, as well as, resource planners and coordinators that forecast, plan, and
2 coordinate field crews associated with Transmission and Distribution Operations. Lastly,
3 I am responsible for the ICS, which is the emergency preparedness function that is activated
4 during a significant outage event.

5
6 Q. **Have you previously testified before the Oklahoma Corporation Commission or any**
7 **other Regulatory Commissions?**

8 A. No, I ask that the Commission accept my credentials.
9

10 **II. Purpose of Testimony**

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

12 A. The purpose of my testimony is to support the improvements in the Oklahoma Grid
13 Enhancement Plan (“OGE Plan”) investments. To do so, I provide:

- 14 • An overview of the operational goals of the OGE Plan and OG&E’s plan to achieve
15 the goals;
- 16 • An explanation of the four categories of improvements (1) Grid Resiliency (2) Grid
17 Automation (3) Communications and (4) Technology, including examples of specific
18 improvements within each category; and
- 19 • A description of how each specific improvement will work and how it will provide
20 operational benefits that align with the plan objectives to benefit customers.

21 22 **III. Overview of the OGE Plan**

23 Q. **What are the operational goals that will be gained from the OGE Plan?**

24 A. The OGE plan will apply technology and automation together with proactive and
25 accelerated replacement of aging and outdated infrastructure to modernize the capabilities
26 of the electric infrastructure to achieve the following operational goals:

- 27 • Improved reliability and resiliency

- The ability for the grid to withstand adverse weather events with minimal damage and minimal impact to customers.
- Improved visibility and control
 - The control system and operators will locate the outage and more efficiently respond by automatically locating and isolating the fault.
 - Real-time situational awareness, visibility of all steady-state grid conditions, and visibility of critical issues requiring attention enables early detection and quick response to grid trouble which controls the escalation of the issue into a larger safety or reliability problem.
- Streamlined operations
 - Data and information from devices that improves visibility and control also enables quick and efficient dispatch of field crews.
- Increased customer satisfaction
 - The same data and information that enables us to efficiently dispatch the right crew to the right location also enables us to provide status information to customers.

Together, all these operational benefits align with and support the overall objectives of the Plan: additional affordability, improved reliability, greater resilience, enhanced flexibility, increased efficiency, and expanded customer benefits.

Q. How does the OGE Plan achieve these goals?

A. OG&E's plan will be achieved through the strategic deployment of the investments discussed below. More specifically, OG&E has two main ways to achieve its goals. First, OG&E's plan is to be proactive and accelerate the replacement of deteriorated and outdated equipment. There are two benefits to making proactive versus reactive investment. First, the cost of replacement is less because the replacement can be planned and worked in higher volumes and during normal business hours. Second, the extent of outages will be less with equipment replaced proactively.

Second, the plan includes installation of technology at key locations to provide data and information, as well as more remote and automated control. This data and information about how power is being delivered enables us to better monitor the status of the system and respond to events more efficiently. Remote and automated control enables the Company to isolate problems and minimize impact to our customers and the system. It also allows the Company to move more of the initial troubleshooting to our control systems and control center so that we can more efficiently focus field resources on repairs.

IV. OGE Plan Investment

Q. What are the categories of investment for the OGE Plan?

A. As discussed in the testimony of Witness Gladhill, the enhancement efforts are being carried out through four main categories of investments. They are: Grid Resiliency, Grid Automation, Communication Systems, and Technology Platforms and Applications.

Grid Resiliency

Q. What is Grid Resiliency?

A. The United States Department of Energy's Sandia National Labs defines Grid Resiliency as the electric grid's ability to minimize the consequences of extreme weather or malicious physical or cyber-attacks.¹ EEI's Board of Directors Chairman defines grid resilience as "the ability to prepare, adapt, withstand, and rapidly recover from difficult and challenging conditions".² Further, he goes on to discuss that resilience for the utility industry leads to increased customer satisfaction, more resilient communities, and economic prosperity in the communities we serve and the nation as a whole.³ The OGE Plan focuses on investments to achieve the results stated by both the DOE and the EEI.

¹ <https://energy.sandia.gov/programs/electric-grid/resilient-electric-infrastructures/>

² Crane, Christopher M. *Securing the Energy Grid Takes Policies and People*, EP: Electric Perspectives EEI January/February 2020, p. 28-29.

³ *Ibid.*

1 Q. **Please describe the Grid Resiliency investments.**

2 A. OG&E has identified the following specific investments that will impact Grid Resiliency:
3 Storm Reinforcement, Conductor Upgrades, Equipment Upgrades, Capacity
4 Reinforcement, and Animal Protection. OG&E will accelerate the pace of change for this
5 equipment, because these are foundational investments that create immediate reliability
6 and resiliency benefits and can also be built upon in the future to enhance the efficiency of
7 operations and meet customer needs, such as rooftop solar or electric vehicles.
8

9 Q. **What is Storm Reinforcement?**

10 A. Storm Reinforcement will address the durability of the grid. The key component is Line
11 Reliability investments. These investments are made on circuits with poor reliability with
12 identified circuits surveyed by field personnel. The survey will identify and prioritize
13 needed investments to bolster the circuits' ability to sustain storm damage. The most
14 common investments are replacement of deteriorated poles, transformers, and faulty or
15 outdated lightning protection. The visual survey is important to identify items that do not
16 show in OG&E analytics. For example, while the transformer load management ("TLM")
17 investments (discussed below) allow OG&E to identify overloaded transformers, it will
18 not identify transformers that have physically deteriorated. A physically deteriorated
19 transformer could be rusted, leaking, or sustained other damage for a variety of reasons.
20

21 Q. **What are the benefits of Storm Reinforcement?**

22 A. While it is impossible to completely remove the risk of storm damage, this program will
23 increase the circuits' ability to sustain damage and reduce the probability of a customer
24 experiencing an outage. A typical scenario would be a deteriorated pole that can be
25 identified and replaced to survive a subsequent storm. In this case the pole could
26 potentially fail in the next mild storm because it is structurally compromised. A fallen pole
27 constitutes a public safety hazard, customers see sustained outages, and a crew must be
28 dispatched day or night to restore power (which is not the most cost-effective way to work).

1 Additionally, the failure of one pole can cause other sound poles to fail as well, like a row
2 of dominoes. In this case, one pole failure can have a much larger impact increasing costs
3 and outage duration.
4

5 **Q. What are Conductor Upgrades?**

6 A. Another Grid Resiliency investment is obsolete overhead conductor and underground cable
7 that have been a source of outages in the past. These Conductor Upgrades will proactively
8 identify troubled segments and replace with modern equivalents.
9

10 **Q. What are the benefits of Conductor Upgrades?**

11 A. Outdated conductor is more susceptible to causing outages. OG&E has identified areas
12 that need replacing, based on the number of outages seen in those areas. When conductor
13 is run to failure, the interruption to the customer and cost to replace is higher. Proactively
14 upgrading the conductor will reduce the customer impact and cost. While underground
15 cable is more resistant to outages, the downside is the difficulty to identify faults and repair
16 cable. The time to diagnose and repair faults underground is significantly more than
17 overhead conductors. When these underground cables fail, the customer will see a lengthy
18 outage, typically longer than overhead conductor.
19

20 **Q. What are Equipment Upgrades?**

21 A. Equipment Upgrades investments are TLM, Lightning Outage Reduction, Substation
22 Breaker Replacement, Substation Transformer Replacement, and Wood Pole Substations.
23

24 **Q. What is Transformer Load Management?**

25 A. The TLM Program uses analytics to proactively identify distribution transformers that are
26 at risk of failure. OG&E has made advancements in this traditional program by leveraging
27 past investments in digital meters to better target failing transformers. By adding the usage
28 of attached meters (or houses), OG&E can understand the loading of a distribution
29 transformer. While transformers are built to sustain some overloading, the new analytics

1 allow OG&E to understand not only if a transformer has been overloaded, but by how
2 much and for how long. Overload percentage and duration are two key components to
3 premature failure. Comparing that information to manufacture specifications and
4 engineering guidelines allows OG&E to target these devices for proactive replacement.
5

6 **Q. What are the benefits of a Transformer Load Management Program?**

7 A. The proactive replacement of transformers prior to failure reduces the outage times
8 customers experience and the cost of replacement. The cost of making these investments
9 prior to failure is lessened because the work can be planned. The larger volume of work
10 enables OG&E to get better pricing on materials, plan time for normal business hours
11 versus expensive off-hours, and leverage efficiency gain due to the repetitive nature of the
12 program.
13

14 **Q. Please describe Capacity Reinforcement and its benefits.**

15 A. Capacity Reinforcement provides cost effective tools to acquire flexibility by investing in
16 mobile substations, distribution level generators and storage. These investments help with
17 the quick recovery and survivability of the grid. They provide the ability to switch and
18 restore power to customers while portions of the grid are being repaired.
19

20 **Q. Please describe Animal Protection.**

21 A. As with all utilities, OG&E has certain vulnerabilities to animal infiltration that can cause
22 customer outages. When an animal causes a fault at the substation, every customer on that
23 circuit experiences an outage. The duration of the outage can range from a momentary to
24 a sustained outage with significant damage to equipment. The animal protection plan
25 includes solutions that work best for various environments, such as special fencing to
26 prevent animals from entering a substation, which OG&E has had success with in the past.

Grid Automation

1 Q. **What is Grid Automation?**

2 A. OG&E identifies Grid Automation investments as a combination of devices and
3 algorithms. Devices provide information and take actions, while algorithms utilize the
4 information and provide actions to be taken. OG&E's Grid Automation is intended to do
5 the following:

- 6 1. Isolate the impact of an outage to the fewest number of customers;
- 7 2. React with minimal manual intervention.
- 8 3. Provide situational awareness as to the location of the cause of the outage;
- 9 and,
- 10 4. Provide OG&E the ability to control devices remotely.

11
12 Q. **Can you provide an example of how Grid Automation will work?**

13 A. Yes. Currently when a tree falls and knocks down a power line, there will be a sustained
14 outage over the entire circuit. Phone calls come into OG&E's call center and field
15 personnel are dispatched to the substation. The crews drive along the circuit to identify
16 the cause of an outage. Once identified, the construction crew is called to repair the line.
17 With Grid Automation, when a tree falls and knocks down a power line, the next device
18 will automatically open. Then it closes in on the fault to determine if it is temporary or
19 sustained. If it is sustained, a series of other switches can be opened or closed to reduce
20 the size of the outage by isolating the impacted areas and picking up load on other
21 circuits. Now that the outage is isolated, the additional sensors from the smart field
22 devices can be used to locate the fault. Understanding the location of the fault does two
23 things: the crew saves drive time, and, in the future, the crew knows what type of
24 equipment is at or near that location and can be prepared with the correct materials.

1 Q. **Please describe the Grid Automation investments.**

2 A. Some of the devices that OG&E intends to use are:

- 3 • Communicating capacitor stations, regulator stations, and sensors,
- 4 • Communicating switches,
- 5 • Automated lateral switches, and
- 6 • Remote Fault Location and Faulted Circuit Indicators

7 There are many kinds of smart field devices. The commonality among the devices is that
8 they sense what is happening on the grid and communicate actions taken or accept
9 instructions on the course of action. Many of the devices OG&E has on the grid are smart,
10 however they are not communicating. Part of the Smart Field Devices program is to bring
11 that information back to the utility by adding communications. The other part will be to
12 deploy new sensors on the grid.

13
14 Q. **Please explain Communicating Switches.**

15 A. Communicating Switches will provide OG&E the ability to remotely operate switches.
16 Instead of dispatching field personnel to operate the switch, OG&E will be able to control
17 the switch remotely reducing the time to isolate outages and thereby reducing customer
18 outage time. In addition to controlling the switch remotely, the switch will operate
19 automatically to isolate outages to the smallest number of customers. This is accomplished
20 by several switches working together to isolate the section of line that has a fault.

21
22 Q. **What are the benefits of Communicating Switches?**

23 A. Previously, the outage or fault would occur and the substation switch would open creating
24 an outage for all customers on the circuit. With communicating switches working together,
25 the fault will cause the first switch to open reducing the number of customers in the outage.
26 Then OG&E's Distribution Management System ("DMS") will devise a switching plan
27 and operate the switches remotely to further reduce the number of customers in the outage.

1 Cost savings are also achieved by removing the need for field personnel to operate non-
2 communicating switches.

3
4 **Q. What are Automated Lateral Switches?**

5 A. Like Communicating Switches, Automated Lateral Switches help reduce the number of
6 customers that experience either momentary (lights flashing) or sustained (power out for a
7 period) outages. A lateral is a line that comes off the main backbone of the circuit. It can
8 be single or multi-phase (meaning one or more lines). Historically, the distribution network
9 will have fuses at the laterals. The utility typically employs one of two strategies: “fuse
10 blowing” or “fuse saving.”

11 “Fuse Saving” results in momentary outages for a larger number of customers while
12 a switch operates to determine if a fault is temporary (i.e. tree limbs blowing against a line)
13 or permanent (a tree limb fallen across the lines). If temporary, the customers will see a
14 momentary outage. If permanent, the switch will stay open until the line is cleared, then
15 the switch will close restoring power.

16 “Fuse Blowing” strategy results in more blown fuses. The customers will not see
17 the momentary outage as the switch upstream operates and the outage will be limited to
18 the customers downstream of the fuse.

19 Both are good outcomes; however, the utility will have to dispatch field personnel
20 to clear the line in the event of a permanent outage and replace the fuse. In the event of a
21 temporary outage, the fuse will be weakened and fail sooner during the next fault. At the
22 end of the day, the fuse saving strategy reduces the number of costly truck rolls, however,
23 the customers incur more momentary outages. The fuse blowing strategy results in the
24 customer not incurring the momentary outages as the system diagnoses the issue, but there
25 will be costly truck rolls.

26
27 **Q. What are the benefits to Automated Lateral Switches?**

28 A. The Automated Lateral Switches will take the best of both fuse strategies. The switch will
29 operate at the lateral to try and clear the fault. The customers on the main backbone will

1 not incur a momentary outage as the problem is diagnosed. In addition, because there is a
2 switch, the number of truck rolls to replace fuses will be reduced. This approach will
3 reduce outages for customers and cost.
4

5 **Q. Please describe Remote Fault Location.**

6 **A.** Remote Fault Location is the ability to determine the location of the source of an outage or
7 fault. The information required to determine the fault location remotely has two sources:
8 substation equipment and smart fault indicators on the distribution network. Traditionally,
9 OG&E has had the substation information. The process to use that information was manual
10 and time consuming and was used sparingly. However, with the implementation of the
11 Advanced Distribution Management System (“ADMS”), the substation information can be
12 analyzed automatically. In addition, only substations with Supervisory Control and Data
13 Acquisition (“SCADA”) communications will be able to send the information.
14 This project updates the substations with SCADA to send back the fault information. Using
15 the ADMS and fault information, OG&E can have a good estimate as to where the fault
16 occurred. To improve the accuracy, OG&E will also deploy smart fault indicators, devices
17 placed on the distribution circuit in strategic locations to maximize the accuracy of the
18 location of the fault.
19

20 **Q. What is the benefit to Remote Fault Location?**

21 **A.** Improving the accuracy of locating the cause of an outage or fault, will reduce the duration
22 of the outage customers experience by sending field personnel directly to the spot of the
23 fault, where previously they had to survey the circuit to find the fault. Surveying the circuit
24 involved starting at the substation and driving down the circuit visually inspecting the lines.
25

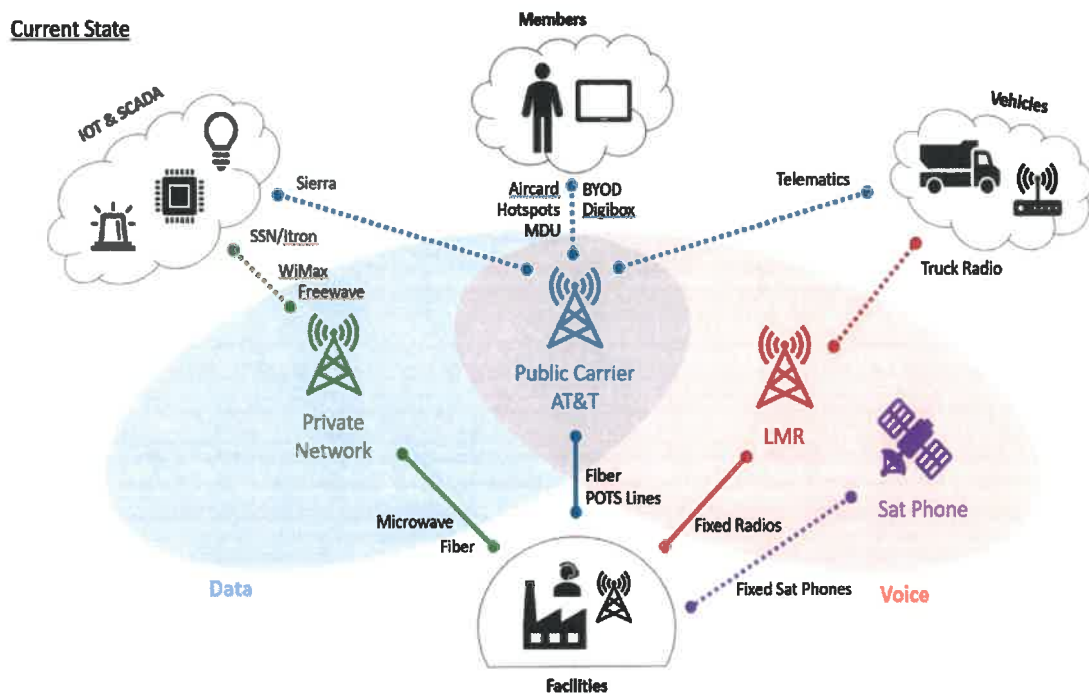
26 **Communication Systems**

27 **Q. What are Communication Systems?**

28 **A.** The Communication System allows OG&E to communicate to the following devices:
29 digital meters, substations, distribution and transmission devices. This allows OG&E to

control and monitor substation, distribution, and transmission equipment. In addition, the communication network is used by OG&E to communicate between office locations, for example, between the control centers and backup control centers. Table 1 below is representative of OG&E's current telecommunication system.

Table 1: OG&E's Current Telecommunication System



Today OG&E's Communication Systems (also known as Field Area Network) consist of microwave, WiMAX, freewave, and mesh networks. There are several challenges with the current Communications Systems:

1. The radio frequency that the microwave network operates on is at risk of being opened to unlicensed public use. This will cause interference from less sophisticated communication systems, resulting in poor telecommunication connection.

1 2. The devices on the microwave network are also nearing end of life and are
2 becoming obsolete.

3 3. The freewave wireless network is no longer a supported product and parts are not
4 available to repair failing components of the network.

5 Q. **How is OG&E assessing the current Communication System?**

6 A. The communications program looks at the different levels of the Communication System
7 for bandwidth and latency requirements. For example, the highest layer is called the
8 backbone or Wide Area Network. This network accumulates all the traffic from the lower
9 levels; thus, it requires high bandwidth and low latency. Bandwidth is the amount of data
10 that can be sent over a specific communication channel (size of the pipe). Latency is how
11 fast data moves across the communication channel. SCADA and distribution automation
12 require low latency while meter interval data and firmware updates require high bandwidth.
13 The current communication system has multiple layers to support the various needs. Other
14 layers are still effective in meeting current and future needs. The program looks at the
15 current challenges and future requirements and design a system that will alleviate the
16 obsolescence issues and provide for the future needs of the company.

18 **Technology Platforms and Applications**

19 Q. **What are Technology Platforms and Applications?**

20 A. Technology platforms and application are tools used to consume data and transform it into
21 actionable information. Many of the programs that are part of the OGE Plan provide
22 additional data to OG&E about the health of the system. The investments OG&E
23 anticipates making to upgrade the platforms and applications are: Geographical
24 Information System (“GIS”) upgrades, Advanced Applications in the Distribution
25 Management System, Work Management Systems, Grid Planning tools, Operational
26 Analytics, and Distributed Energy Resources Management Systems.

1 Q. **What are the benefits to Technology Platforms and Applications?**

2 A. Technology Platforms and Applications allow OG&E to make proactive changes to
3 prevent outages or reduce the time to restore power. The technology applications will need
4 to utilize that data and either take or recommend actions. The investments we have
5 discussed thus far in this testimony will not be effective without the correct technology
6 platforms to leverage that data to the benefit of the customer and OG&E.

7
8 Q. **What is a Work Management System?**

9 A. A Work Management System's two main functions are scheduling and dispatching work.
10 Additionally, the Work Management System collects information from the field when the
11 work is completed. As mentioned earlier the Work Management System will have to meet
12 the ever-changing needs of the field personnel. For example, the new field devices will
13 require specialized skillsets, the Work Management System will have to identify the correct
14 skillset for the device and match that skill set with the appropriate field personnel.
15 Historically, most field personnel could be interchanged with some exceptions and this is
16 the goal for the future as well. OG&E is providing training on the specialized skillsets to
17 make sure the right person is working the right issue.

18 In addition to the scheduling and dispatch of new skillsets, the field personnel will
19 have to collect more information while working on smart field devices. Previously the
20 field personnel communicated that a device was installed at a specific location and was in
21 good working order when they left the job site. Now, they must collect information about
22 the device (Serial Number) and radio (IP Address), information about what device is with
23 what radio, validate communications with OG&E systems, program settings in the device,
24 and location of the device. To accurately capture that information the field personnel will
25 need to be able to scan bar codes, wirelessly connect to devices from the bottom of a pole,
26 etc. The field personnel will need sophisticated devices to do all this work in one piece of
27 equipment versus carrying many devices around.

1 Q. **What are the benefits of a Work Management System?**

2 A. A modern Work Management System will allow OG&E to schedule work utilizing a
3 variety of factors such as: field personnel skill set, outage priority, geographical
4 considerations, urgent new work (i.e. outages), etc. A scheduler that takes these into
5 account will allow work to be efficiently completed, which will reduce the time and cost
6 of outages.

7 Additionally, capture of data when work is completed is important to the successful
8 deployment of smart devices. Errors in this data will result in costly visits to the field for
9 corrections, which will increase cost.

10
11 Q. **What are Grid Planning Tools?**

12 A. Grid Planning tools will aid in planning the future needs of the electric grid by providing
13 the following capabilities: enhanced forecasting of future load, power flow, automation of
14 studies, and integration of additional data streams. Modern design and planning tools will
15 allow OG&E to take advantage of additional data (meter loading data, voltage information
16 from line devices, etc.) to determine the impacts of DER, as well as other demands on the
17 distribution network.

18
19 Q. **What are the benefits of Grid Planning Tools?**

20 A. Modern Planning Tools will allow OG&E to efficiently assess the impact of changes on
21 the distribution network. These impacts come from a variety of activities including large
22 load additions, customer sited generation, load growth, etc. OG&E will be able to respond
23 to customer's requests for facility changes (i.e. large equipment, generation, etc.) quickly
24 and efficiently. Additionally, these tools will leverage additional data streams from
25 communicating devices (digital meters, SCADA, etc.) that can increase the accuracy of the
26 outcome of the planning.

1 Q. **What is a GIS upgrade?**

2 A. The GIS is the system that contains the network model. OG&E will need to model all the
3 devices in the GIS system. This includes DERs, which are the newest and come in a variety
4 of types. In addition, in the past OG&E has not modeled certain parts (i.e. secondary
5 network and substations) of the network in the GIS. These decisions will have to be
6 reevaluated, in part or in whole, to meet the increasing demands of efficiency and
7 situational awareness. There are investments into the data and functionality of GIS to meet
8 these new demands.
9

10 Q. **What are the benefits to upgrading the GIS?**

11 A. Many of the projects we have discussed rely on a solid network model and without that
12 network model many of the investments will not provide the full benefits. Accurate GIS
13 data is required for Remote Fault Location, DER Planning Tools, Work Management
14 Systems, Automated Switching, etc.
15

16 Q. **What is Operational Analytics?**

17 A. With all the additional data, humans interacting with the system will require help
18 identifying what action is required. Operational Analytics makes sense of all the data and
19 turns it into information that can be acted upon. It does this by taking data from the separate
20 systems monitoring and controlling the grid and bringing them into one view. Operational
21 analytics will look for patterns and allow for the management of exceptions to the normal.
22

23 Q. **What are the benefits of Operational Analytics?**

24 A. Operational Analytics will provide:

- 25 1. Enhanced situational awareness to allow OG&E to be proactive, and if not, react
26 quickly and efficiently;
- 27 2. Allow operations to focus on the exceptions to the normal operations. Thus, providing
28 for efficient use of resources; and

1 3. Enhance asset management capabilities to proactive identify potential equipment
2 failure.

3
4 Q. **Do you have any concluding remarks?**

5 A. Yes. The OGE Plan will allow the Company to improve reliability and resiliency, improve
6 visibility and control, streamline operations, and increase customer satisfaction. The
7 projects outlined will also lay a foundation for building additional capabilities in the future
8 to meet the changing needs of our customers, such as rooftop solar, electric vehicles, and
9 increasing information requirements. At the same time OG&E will maintain affordability
10 and expand customer benefits.

11
12 Q. **Does this conclude your Direct Testimony?**

13 A. Yes