

**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	)	
AUTHORIZING APPLICANT TO MODIFY ITS	)	CASE NO. PUD 2023-000087
RATES, CHARGES, AND TARIFFS FOR RETAIL	)	
ELECTRIC SERVICE IN OKLAHOMA	)	

Rebuttal Testimony

of

Ryan Einer

on behalf of

Oklahoma Gas and Electric Company

May 17, 2024



**ACTUAL SERVICE LIVES OF SMART METERS**

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Q. Please describe the type of meters contained in FERC account 370.

A. The meters contained in FERC account 370 include Smart Meters.

Q. Please explain the typical life expectancy for the items in FERC account 370?

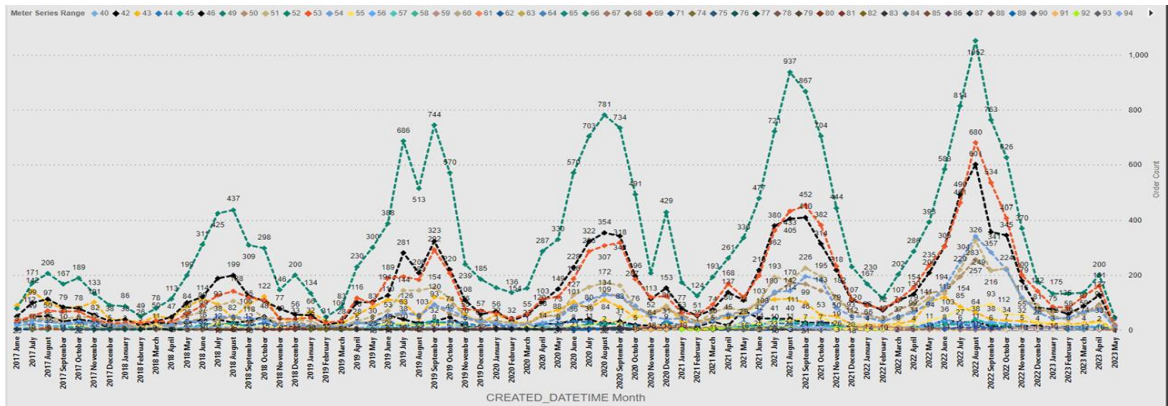
A. For OG&E the average age at replacement for smart meters has been 10.01 years. OG&E began to deploy smart meters in 2010. Smart Meters contain both digital metrology as well as a wireless network card. As with any new technology, there was no real-world data to estimate life expectancy. Smart meters are designed by the manufacturer for a 15-year life and provide a warranty of 5 years. Within several years of the initial deployment, the Company began to observe higher than expected failure rates among several series of meters manufactured from 2011-2012. From 2017 to present, this trend has continued to see large annual increases in the failure rate of these meters. From these replacements the calculated average age at replacement is 10.01 years as can be seen in Table 1 below

**Table 1: OG&E Meter Replacements**

Year	Meters Replaced	Percent Increase	Age at Replacement
2018	8,275		7
2019	11,706	41%	8
2020	14,148	21%	9
2021	17,083	21%	10
2022	20,318	19%	11
2023	21,655	7%	12
<b>Grand Total</b>	<b>93,185</b>		
<b>Average Age at Failure</b>		<b>10.01</b>	<b>Years</b>

15 As the installed meters approached 10 years of life, the remaining initial population of  
16 meters also experienced an increase in failures, although it has not been as dramatic as the  
17 previously identified populations. See below in Table 2 the data related to work orders  
18 issued to replace each of the respective smart meter series. This plot is a clear indicator of  
19 the accelerated failure rate, year to year.

**Table 2: OG&E Meters Accelerated Failure Rates**



1 It is important to understand that this older meter population installed from 2010-2012 are  
 2 the majority of meters installed and still in service. For context, the meters purchased from  
 3 2010-2012 are 75 percent of all meters purchased by the Company from 2010-2024. The  
 4 series of meters with the most dramatic increase in failure rates make up 23 percent of  
 5 active meters. Therefore, an accelerated failure rate of this series of meters will drive the  
 6 average life of failure for the entire population.

7  
 8 **Q. Would it be reasonable to use a 20-year life for FERC account 370?**

9 **A.** No. If the Commission ordered OG&E to use a 20-year life for this account customers  
 10 would end up paying for assets that are no longer in use, long after they have been replaced.  
 11 Smart meters are designed by the manufacturer for a 15-year life. After identifying the  
 12 higher-than-expected failure rates within the smart meter population since 2011, the  
 13 Company worked with a manufacturer to identify the possible root cause at the component  
 14 level. Unfortunately, current manufacturing does not facilitate component level  
 15 replacement for repair. Without the possibility of repair, the meters have been left in  
 16 service and are replaced at failure. With an average age of replacement at 10.01 years, this  
 17 results in a substantial population of assets that are no longer in use yet remain in the  
 18 account continuing to depreciate years past the useful life.

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**RECOMMENDATIONS**

Q. **Please summarize your recommendations to the Commission.**

A. I recommend the Commission utilize a 15-year life for the meters in FERC account 370.  
A 15-year life accurately captures the true lives of the meters contained in this account.

Q. **Does this conclude your Rebuttal Testimony?**

A. Yes.