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IN THE TENNESSEE PUBLIC UTILITY COMMISSION
AT NASHVILLE, TENNESSEE

IN RE:	**)**	
	)	
ATMOS ENERGY CORPORATION	**)**	
TENNESSEE DIRECT, KENTUCKY/MID-	**)**	**DOCKET NO. 23-00050**
STATES DIVISION, AND SHARED	**)**	
SERVICES UNIT DEPRECIATION STUDY	**)**	

TESTIMONY OF

MICHAEL J. MAJOROS, JR

September 22, 2023

Majoros Testimony

I. Introduction

Q1. Please state your name and summarize your position and qualifications.

A1. My name is Michael J. Majoros, Jr. I am president of Snavely King Majoros & Associates, Inc. ("Snavely King Majoros or SKM"). SKM is an economic consulting firm specializing in public utility and telecommunications costs and rates. Appendix A is a brief description of my qualifications and experience. It also contains a listing of my appearances before state and federal regulatory bodies. I am submitting this testimony on behalf of the Consumer Advocate Division of the Office of The Tennessee Attorney General ("CAD").

II. Subject of Testimony

Q2. What is the subject of your testimony?

A2. My testimony responds to the Atmos Energy Corporation's ("Atmos" or the "Company") "Tennessee Direct Depreciation Study."

Q3. Do you have any experience in the field of public utility depreciation?

A3. Yes, SKM specializes in the field of public utility depreciation among other areas. Our clients have ranged from consumer organizations such as the CAD to regulatory commissions such as the PSC and to large companies such as AT&T. We have appeared as expert depreciation witnesses before the regulatory commissions of more than half the states in the country. I have testified in over one hundred proceedings about public utility depreciation.

III. Brief Summary of Positions

Q4. Please summarize the Company's position in this proceeding.

A4. Mr. Allis states that his study "results in an increase of approximately $823,000 in depreciation expense for the Tennessee Direct Property" and that the increase is primarily the result of changes in service life and net salvage estimates that result from the Depreciation Study.[1]

Q5. What is your position, Mr. Majoros?

A5. Exhibit___(MJM-1), page 2 demonstrates that my recommendations reduce Mr. Allis's $823,000 increase to a $4,167,909 decrease.[2] Two primary adjustments account for the difference.

1. First, I am recommending five service lives which are longer than the lives Mr. Allis proposes. My recommended service lives better align the depreciation rates for these accounts with the actual results of the study.

2. Second, I recommend a discontinuance of the Company's unnecessary allocation of arbitrary portions of actual replacement plant additions to the cost of removal. The Company should only charge cost of removal associated with final unreplaced retirements to cost of removal. Replacement cost additions should contain the total cost of the replacement including the removal of the existing item.

Subsequent to its last (2014) depreciation study, the Company implemented recommendations from two special allocation studies conducted by Alliance Consulting. These Alliance Studies highlighted the need for the change I am recommending. The Alliance Studies drove the higher cost of removal ("COR") ratios Mr. Allis is proposing for its major accounts. The Alliance Studies also enhanced my understanding of the overall impropriety of allocating replacement costs to COR.

As a result, I am recommending much lower COR ratios for ten accounts where Mr. Allis is proposing to add excessive cost of removal to his proposed depreciation rates. My

[1] Direct Testimony of Ned W. Allis, at 4, TPUC Docket No. 23-00050 (June 29, 2023).
[2] *See* Exhibit___(MJM-1.)

recommendations better comply with the FERC Uniform System Requirements for replacement cost accounting. My cost of removal correction accounts for a majority of the difference between Mr. Allis and me.

IV. Depreciation from the Ratepayers' Perspective

Q6. What is depreciation from the ratepayers' perspective?

A6. Public utility rates are based on a utility's costs. The higher the cost, the higher the resulting rates. Depreciation is an estimated expense included in a public utility's cost of service/revenue requirement. From a regulator's perspective, the objective of public utility depreciation requests is straight-line capital recovery which utilities accomplish by distributing the original cost of their assets to expense over the assets' lives through the application of depreciation rates to plant balances. From the ratepayers' perspective, depreciation is an increase to their monthly utility bill. Depreciation expense is one of the largest cost drivers of public utility revenue requirements because utilities are capital intensive, in other words, their depreciable plant is their largest asset.

Depreciation involves complex analytical procedures, calculations, and a substantial amount of *unnecessary personal* judgment given the available analytical tools. Therefore, the measurement of depreciation and the calculation of the expense warrant careful regulatory consideration and scrutiny because an excessive depreciation rate can unreasonably increase a utility's revenue requirement and the resulting charges to its customers. In summary:

Depreciation Is Important Because:

1. Depreciation is a big expense.
2. Depreciation is an estimated non-cash expense involving a substantial amount of unnecessary personal judgment.

3. The ratemaking process passes depreciation dollar-for-dollar through to a utility's ratepayers.

Q7. Do your recommendations permit full capital recovery to Atmos?

A7. Yes, all my recommendations will provide full capital recovery to Atmos. Full capital recovery means a return on (through rate of return) and a return of capital (through depreciation.)

V. Plant Additions/Replacements, Retirements and Balances

Q8. Please provide an overview of the definitions of depreciation terms used in your testimony.

A8. Public utilities record their plant cost activity in the individual plant accounts set forth in the Federal Energy Regulatory Commission's ("FERC") Uniform System of Accounts ("USoA"). Additions, retirements, and balances refer to individual plant accounts.

The first complicator is that the USoA refers to additions as "retirement units" ("RU").

> USoA Definition ("DEF") 34. states: "*Retirement units* means those items of gas plant which when retired, with or without replacement, are accounted for by crediting the book cost thereof to the gas plant account in which included." RUs are to be recorded at original cost, which means the cost when initially placed in service even if previously owned or the original cost incurred by the utility."

> USoA DEF 6. defines book cost as: "*Book cost* means the amount at which property is recorded in these accounts without deduction of related provisions for accrued depreciation, depletion, amortization, or for other purposes."

> USoA DEF 9. defines cost as: "*Cost* means the amount of money actually paid for property or services..."

> USoA DEF 26. defines original cost as: "*Original cost*, as applied to gas plant, means the cost of such property to the person first devoting it to public service."

> USoA DEF 32. defines replacement as: "*Replacing* or *replacemen*t, when not otherwise indicated in the context, means the construction or installation of gas plant in place of property retired, *together with the removal of the property retired.*" (emphasis added).

USoA Gas Plant Instruction ("GPI") 2.A. states: "*Gas plant to be recorded at cost.* … All amounts … acquired as operating unit or system … shall be stated at the cost incurred by the person who first devoted the property service. All other gas plant shall be included in the accounts at the cost incurred by the utility."

GPI 10.A states: "*Additions and retirements of gas plant*. … all property shall be considered as consisting of (1) retirement units [additions] and (2) minor items of property."

GPI 10B. (1) states: "The addition and retirement of retirement units shall be accounted for as follows (1) When a retirement unit is added to gas plant, the cost thereof shall be added to the appropriate gas plant account…."

GPI 10.B.(2) states: "When a retirement unit is retired with or without replacement, the book cost thereof shall be credited to the gas plant account in which it is included…"

GPI 10.D. states: "The book cost of gas plant retired shall be the amount at which such property is included in the gas plant accounts, including *all* components of construction costs."

GPI 10.F. states: "The book cost less net salvage of depreciable gas plant retired shall be charged in its entirety to account 108, Accumulated Provision for Depreciation of Gas Plant in Service."

Q9. Will you please provide an example of all this?

A9. Yes. A FERC plant account is like a personal checkbook. It is a record of the activity occurring in that account over time. For example, gas distribution plant Account-375 Structures and Improvements includes buildings. Assume the beginning balance of Account-375 is $500 which is the original cost of a building installed in prior years. An annual addition RU includes the original cost of a new building added to the account (deposited) during the current year. The new building could either replace an old building or not replace an old building.

If the new building replaces an old building, the old building is retired (e.g. withdrawn). The annual retirement is the original cost of the old building included in Account-375, which the Company removes from service during the year. The ending plant balance of Account-375 is the original cost of the new building that remains in service at the end of the current year.

Table 1
Example of a Replacement of a Building
Account-375 Structures and Improvements

Description	Plant Amount
Beginning Plant Balance (old building)	$500
Add New Building	1,000
Retire Old Building	(500)
Ending Plant Balance	$1,000

Q10. What happens to the retired building in the books?

A10. As one can see above, the $500 retired building is removed (credited) from Plant Account-375 and because of double-entry utility bookkeeping, the retired building is simultaneously debited to (removed from) Account-108 Accumulated Provision for Depreciation. The retirement reduces both the asset account and the accumulated depreciation account in the same amount.

VI. Accumulated Depreciation Account

Q11. What is the Accumulated Depreciation account?

A11. Utilities depreciate the cost of the items recorded in their plant accounts while those items (the buildings above for example) are in service. Utilities charge annual depreciation expense which reduces a year's income, and the other side of that entry is an increase to the accumulated depreciation account which serves as a record of the depreciation charged to date. As explained above utilities simultaneously remove the cost of the old building from both plant in service and accumulated depreciation when it is retired. Assume the "old building" in the example above had fully depreciated and retired at the beginning of the current year. The example would now be:

Table 2
Example of a Replacement of a Building
Account-375 Structures and Improvements

Description	Plant Amount	Accumulated Depreciation	Rate Base
Beginning Plant Balance (old building)	$500	$(500)	$0
Add New Building	1,000		1,000
Retire Old Building	(500)	500	$0
Ending Plant Balance	$1,000	$0	$1,000

VII. Depreciation Rates

Q12. What is a depreciation rate?

A12. A depreciation rate is an annual ratio applied to a plant balance to distribute its cost to expense over its life.

Q13. How are depreciation rates calculated?

A13. There are a multitude of methods to compute annual depreciation rates. Mr. Allis used the straight-line remaining life approach to calculate his proposed depreciation rates. To understand, it is useful to start with straight-line whole-life depreciation rates. Straight-line meaning equally over the life and whole-life as opposed to remaining life.

Whole-Life Depreciation Rates

The following calculation shows a straight-line whole-life depreciation rate for a $500 building with a 10-year average service life.

Table 3
Straight-Line Whole-Life Depreciation Rate
Assuming Building With 10-Year Life

Amount	$500/10 yrs. = $50
Percent	100%/10 yrs. = 10.0%

Each year the Company would apply the 10.0% depreciation rate to the $500 plant balance in Account-375 to produce $50 annual depreciation expense. All things equal, at the end of 10 years, the Company will have charged $500 to accumulated depreciation, also called aka “depreciation

reserve," and will retire the $500 plant balance and simultaneously remove it from accumulated depreciation as demonstrated in Table 2.

Q14. What are net salvage costs?

A14. Net salvage is the difference between gross salvage value ("GS") which reduces depreciation rates and the cost of removal ("COR") which increases depreciation rates. GS is the theoretical value of plant items once they are removed from service, while COR measures the estimated costs incurred by the utility in physically removing the plant from service.

Q15. Do utilities include this net salvage component within the determination of depreciation rates?

A15. Some, but not all, utilities include net salvage in the depreciation rate calculation. COR, which drives net salvage to be negative when it exceeds GS, is a central issue in this case. I will, therefore, use the term "Net COR" in my examples.

Net COR *is the incremental (additional) cost* incurred when a building is retired – demolition for example. One key concept to remember is *incremental cost*. Assuming the utility is legally obligated to incur some incremental additional costs to remove a building when it is retired. In those circumstances, the utility may decide to add an estimated amount to its annual depreciation expense to charge that amount to its income during the building's life. For example, if the utility is obligated to incur an incremental or additional 5 % of the building's cost to demolish it when it is retired, it would add a negative five percent (-5%) Net COR ratio to the original cost of the building. The whole-life depreciation rate with a value for 5% Net COR is as follows:

Table 4
Straight-Line Whole-Life Depreciation Rate
Assuming Building With 10-Year Life and -5% Net COR Obligation

(100%-(-5%))/10 yrs. = 10.5%

Net COR *increases* the resulting whole-life depreciation rate from 10.0 % to 10.5 %. This happens because Net COR is, in effect, added to the original cost of the plant. Instead of 100 % (which

represents the original cost of assets), the numerator becomes 105 % in the depreciation rate calculation. This is equivalent to capitalizing or adding the estimated cost of removal to the original cost of the asset.

At the end of the building's life under this scenario the plant balance will be 100% but the reserve will be 105%. In other words, unlike the "zero COR scenario" in Table 3, when Net COR is included in a depreciation rate, there will not be an equality of plant and reserve at the end of an asset's life because the Company will have charged more depreciation than it paid for the original cost of the asset. Under these circumstances, equality will only be achieved if the Company spends the additional money at the end of the asset's life. In my examples so far, I have assumed the utility had an actual obligation to spend and in fact did spend the 5 % to remove the building when it is retired. If it does spend the additional 5%, the expenditure is debited to accumulated depreciation and equality is achieved.

Remaining Life Depreciation Rates

The remaining life technique starts with the whole-life technique, but it incorporates accumulated depreciation into the numerator of the equation and the denominator becomes the remaining life rather than the whole life of the asset.

If the building with a 10-year life is 3 years old, its remaining life would be 7 years (10 – 3 = 7). The accumulated depreciation account would be 31.5 % of the original cost because the utility would have applied the 10.5 % depreciation rate from Table 4 for three years (3 x 10.5% = 31.5%). The remaining life depreciation rate follows:

Table 5
Straight-Line Remaining Depreciation Life Rate
Assuming a 3-Year Old Building With a 7-year Remaining Life
And -5% Net COR

(100%- (-5%) – 31.5%)/7 yrs. = 10.5%

In the examples shown in Tables 4 and 5, the remaining life depreciation rate and the whole-life depreciation rates are the same (10.5 %), because I have assumed that the accumulated depreciation account is in balance. In other words, based on a continuation of the fundamental parameters, i.e., the 10-year service life and the negative 5 % Net COR ratio, exactly the right amount of depreciation (31.5 %) has been charged and recorded in the accumulated depreciation account.

If either the service life estimate or the Net COR parameter changes during the life of the plant, the accumulated depreciation account will be out of balance, and the remaining life rate will be either higher or lower than whole-life rate depending on the direction of the imbalance. That is because the Company will have collected either too much depreciation or not enough depreciation in the past, given the current estimates of lives or future net salvage, which may be different than the initial estimates.

The difference between the actual amount recorded in accumulated depreciation and a theoretical estimate of what should be in accumulated depreciation is called a "reserve imbalance." The remaining life technique is designed to deal with such reserve imbalances.

The remaining life technique has been accepted and used in many jurisdictions. Its primary failing is that if there is a reserve imbalance, positive or negative, it results in the application of an incorrect rate to new plant additions. In other words, the remaining life technique perpetuates the same imbalances it attempts to cure.

Impacts of Life and Net COR Estimation

Utilities own thousands of assets, represented by millions of dollars of investment. Given the capital intensity of the industry, it is difficult to track and depreciate every *single* asset that a

utility owns. Public utility depreciation is, therefore, based on a group concept, which relies on averages of the service lives and remaining lives of the assets within a specific group.

These factors are necessarily estimates of the average service lives and average remaining lives of groups of assets which are in turn based on complex analytical procedures involving not only the age of existing and retired assets, but also retirement dispersion patterns called "Iowa curves." It is important to remember that service life, average age and Iowa curves are all used in the estimation of an average service life and average remaining life of a group of assets and are ultimately used to calculate the depreciation rate for that group of assets.

In depreciation analysis it is axiomatic that the shorter the life, the higher the resulting depreciation rate. If the utility's depreciation rates are based on understated lives the depreciation rates will be too high. What if the 10-year life in the earlier examples really should have been 30 years? For example, assume that a depreciation study supports a 30-year life, but the witness proposes a 10-year life. The 10.0-year life is too short, and the resulting 10 percent rate is too high, it *is excessive*. The following table shows the impact of continuing to use a shorter life.

Table 6
Whole-Life
Impact of Reducing a Life From 30 Years to 10 Years

30 year life = 100%/30 yrs. = 3.3%

10 year life = 100%/10 yrs. = 10.0%

If the life *should have been* 30 years, the rate should have been 3.3 percent rather than the 10 percent depreciation rate based on a 10 year life. *The shorter the life, the higher the rate*. As I

will explain below, several of Mr. Allis's proposed lives are too short thus resulting *in excessive depreciation rates.*

Also as demonstrated above, the estimation of future Net COR has an impact on depreciation rates. Many of the Company's proposed depreciation rates contain negative Net COR factors which charge too much for future cost of removal because they are too high. Again, they result in *excessive depreciation rates*.[3] Table 7 shows the impact of increasing the cost of removal ratio.

Table 7
Impact of Increasing Cost of Removal Ratio

-5% ratio = 100 %-(-5)/30 yrs. = 3.5 %

-50% ratio = 100 %-(-50)/30 yrs. = 5.0 %

Increasing the cost of removal ratio from -5% (as assumed in Tables 4 and 5) to -50% increases the depreciation rate from 3.5% to 5.0%. If the estimated -50% cost of removal ratio is not supportable, obviously, the resulting 5.0% depreciation rate is excessive. The combination of these two factors, i.e., understated lives and overstated cost of removal ratios, compounds the excessive depreciation rate problem.[4]

Q16. Can you summarize the importance of your explanations of depreciation rate calculations?

A16. It is important to remember that while the calculations may be complicated, utilities charge depreciation expenses to their ratepayers. Cash comes out of ratepayers' pockets to pay utilities for this large, estimated expense. The higher the calculated depreciation rates the more the cash

[3] *See* Exhibit___(MJM-7) which addresses the SCOTUS discussion of excessive depreciation in *Lindheimer v. Illinois Bell Telephone Company*, 292 U.S. 151, 168-170, 54 S.Ct. 658, 665-666 (1934). (Emphasis added; footnote deleted.)

[4] *Id*.

that comes out of ratepayers' pockets and the cash goes into the utility's pockets without any corresponding cash outlay. Depreciation is free cash flow to a public utility. Excessive depreciation causes harm to ratepayers.[5]

VIII. Company Filing and Proposal

Q17. Please summarize the Company's proposals.

A17. The Company filed the testimony and exhibits of Ned W. Allis to support its requests. Mr. Allis prepared depreciation studies of Atmos' Tennessee Direct Property and Atmos' Kentucky Mid-States General Office. He also filed a third study of the Company's Shared Services Unit conducted by Alliance Consulting Group. As noted above, CAD asked me to focus on Mr. Allis's Tennessee Direct Study.

Mr. Allis conducted his study as of September 30, 2022, because that is the end of the Company's fiscal year.[6] He says his service life estimates are based on his judgment that incorporates *actuaria*l life analysis and his net salvage estimates are based on widely used methods. His proposals increase Tennessee Direct expense by $823,000.[7]

IX. Current Depreciation Rates

Q18. Please describe the origin of the Companies' current depreciation rates.

A18. The current depreciation rates are based on a September 20, 2014, Depreciation Study conducted by the Alliance Consulting Group.[8]

X. Mass Property Accounts

Q19. What are mass property accounts?

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5 *Id*.
6 Company's Response to CA DR1-4.
7 *Direct Testimony of Ned W. Allis*, 3-4, TPUC Docket No. 23-00050 (June 29, 2023)
8 Company's Response to CA DR2-2.

A19. The NARUC Manual defines mass property accounts as "An account consisting of large numbers of similar units, the life of any one of which is not, in general, dependent upon the life of any of the other units. For such classes of plant, *the retirement of the group occurs gradually until the last unit is retired. The retirements and additions to the account occur more or less continuously and systematically*."[9]

Q20. Which plant accounts are the mass property accounts?

A20. The mass property accounts are contained in the following plant function groups.

Table 8
Mass Property Accounts

Transmission Plant
Distribution Plant
General Plant (certain accounts.)

XI. Mass Property Service Lives

Q21. Does Mr. Allis recommend service lives for these mass property accounts?

A21. Yes.

Q22. How did Mr. Allis conduct his mass property service life studies?

A22. Mr. Allis used the "retirement rate method" which is a sophisticated approach in which Mr. Allis created original life tables ("OLTs") from the Company's aged addition and retirement data. Mr. Allis smoothed and extended these OLTs by fitting them to a family of pre-determined curves developed at the Iowa State University – the so-called Iowa Curves. Mr. Allis fit these curves with

[9] NARUC Manual, p. 322 (emphasis added).

varying life assumptions to the OLT's to find the best fits using the proprietary Gannett Fleming depreciation software he developed and manages.[10]

Q23. What is the objective of the proprietary Gannett Fleming comparisons of the original survivor curves to the Iowa Curves?

A23. The objective of the comparisons is to find the statistically best fitting Iowa curve and life combination for each OLT. The statistical best fit is determined by a residual measure which is a variant of the least sum of the squared differences approach to statistical fitting. The lower the residual measure the better the fit.

Q24. Did Mr. Allis include in his study the statistical fit summaries from the curve matching process?

A24. No. Mr. Allis did not provide the curve matching results in his study. Instead, Mr. Allis provided the mathematical curve matching results in his workpapers which he in turn provided in response to CAD DR1-07.

Q25. Did Mr. Allis use the results of his retirement rate analyses to compute his recommended depreciation rates?

A25. Mr. Allis states "For many of the plant accounts and subaccounts for which survivor curves were estimated, the statistical analyses using the retirement rate method contributed significantly towards the recommended survivor curves."[11]

Table 9
Accounts Where Statistical Results Contributed Significantly
Towards Mr. Allis's Proposal[12]

[10] *Direct Testimony of Ned W. Allis*, 2, TPUC Docket No. 23-00050 (June 29, 2023).

[11] Exhibit NWA-1 to *Direct Testimony of Ned W. Allis*, III-2, TPUC Docket No. 23-00050 (June 29, 2023).

[12] *Id*. at III-2 to III-3.

376.01	Mains-Steel
376.02	Mains-Plastic
378.00	Measuring and Regulating Station Equipment
380.00	Services
381.00	Meters
382.00	Meter Installations
383.00	House Regulators
392.00	Transportation Equipment
396.00	Power Operated Equipment

Q26. Did you review Mr. Allis's mass property service life recommendations?

A26. Yes, I reviewed the statistical results as well as the graphical curve comparisons which Mr. Allis did, in fact, include in his studies. Exhibit___(MJM-2) is my review of the life studies and well as Mr. Allis's life proposals. I noted that five of Mr. Allis's proposed lives are shorter than the lives his statistical studies support.

Table 10
Accounts for Which Mr. Allis Proposes Understated Lives

Account		Allis Proposal
367.01	Transmission Mains – Steel	60R3
369.00	Transmission Measuring & Regulating Equipment	45R3
378.00	Distribution Measuring & Regulating Equipment	45R3
379.00	Dist. Measuring & Regulating-City Gate	45R3
385.00	Industrial Measuring & Regulating Equipment	40R3

Q27. Please explain why you believe Mr. Allis's proposes understated lives for these accounts compared to what you recommend.

A27. I will explain by account.

Account 367.01 Transmission Mains – Steel. Mr. Allis proposes a 60R3 life and curve for this account. However, the account data is sparse and, in fact, the best fit to the data is a 138-O4 life and curve. I recommend a 70R3 life and curve which is the statistical best fit for the much larger account 376-Distribution Mains – Steel.

Account 369.00 Transmission Measuring and Regulating Station Equipment. Mr. Allis did not conduct a statistical fit analysis for this account. Instead, Mr. Allis is proposing a 45R3 which he is also proposing for account 378.00 Transmission Measuring and Regulating Station Equipment with which I disagree as explained below. I recommend an 84L1.0 life and curve for this account consistent with my recommendation for account 378 which I explain below.

Account 378.00 Distribution Measuring and Regulating Station Equipment. Mr. Allis conducted a statistical fitting analysis for this account and obtained a good 84L1.0 result. However, Mr. Allis ignored the statistical result and instead arbitrarily proposes an unsupported 45R3 life and curve without any explanation, notwithstanding the fact that he identifies account 378 as one of the accounts where the statistical results contributed significantly towards his proposal. I recommend the 84L1.0 best fit result for account 378.

Account 379.00 Distribution Measuring and Regulating Station Equipment – City Gate. Mr. Allis did not conduct a statistical fitting analysis for this account. Instead he proposes the same unsupported 45R3 life and curve he is proposing for account 378.00. Likewise, I propose the same 84L1.0 I am recommending for account 387.00.

Account 385.00 Industrial Measuring and Regulating Station Equipment. Mr. Allis is proposing a 40R3 life and curve for this account. Again, he did not conduct a statistical curve fitting analysis for the account. I recommend an 84L1.0 life and curve consistent with my recommendations for accounts 369, 378 and 379.

XII. Mass Property Net Cost of Removal

Q28. How did Mr. Allis calculate his future Net COR estimates for the Companies mass property accounts?

A28. Mr. Allis conducted Net COR studies comparing recorded cost of removal to annual retirements and then using unsupported judgment adjusted those results.

Q29. What is your opinion regarding Mr. Allis's approach to Net COR estimation?

A29. Mr. Allis' approach is flawed for at least two primary reasons. First, on their face, his studies inappropriately compare cost of removal in expressed current dollars to retirements expressed in old historic dollars. Consequently, Mr. Allis's studies mismatch the cost of removal and retirements due to the inflation that has occurred during the time the retired assets were in service. Second, and most important in this case, Mr. Allis's mismatch unjustly compounds the harm to ratepayers by relying on and not correcting for Atmos' arbitrary, unnecessary, and inappropriate accounting for replacements.

Q30. Why do you say the costs of removal are arbitrary and unnecessary?

A30. The costs are arbitrary because they stem largely from replacement costs of new plant. The Company *allocate*s a percentage of the "replacement cost" to "cost of removal" when it should merely record the total cost of replacement projects as a new addition. The Company's Power Plant system forces an allocation of costs between construction and cost of removal for plant

replacement additions. These allocated costs, which Mr. Allis' includes in his studies, are arbitrary and unnecessary.[13]

Q31. Why do you say the Company's accounting for replacements is inappropriate?

A31. As noted above, FERC USOA definition states, "*Replacing* or *replacemen*t, when not otherwise indicated in the context, means the construction or installation of gas plant in place of property retired*, together with the removal of the property retired*" (emphasis added.) That means that the original cost of a replacement addition is one hundred percent of the total project cost which includes the cost of removing the existing item. That is the amount the Company is supposed to treat as a RU and add to plant in service when it replaces an existing asset. It is an annual addition, but the Company's accounting does not comply with this requirement.

Q32. Why is the Company's accounting non-compliant with the required replacement accounting rule?

A32. The Company's accounting is non-compliant with the required replacement accounting rule because instead of recording one hundred percent of the replacement cost as an RU addition, it allocates an arbitrary and unnecessary portion of the original cost to accumulated depreciation calling it cost of removal. It is arbitrary because all allocations are arbitrary. The allocation is unnecessary because due to the working of the FERC double-entry system of accounting, rate base remains the same after the allocation as it was before the allocation and because the remaining life technique keeps the depreciation rate the same before and after the allocation. Hence, the allocation is unnecessary. The only purpose the allocation serves is to feed cost of removal amounts into studies such as Mr. Allis' Net COR studies, so that the Company can then charge inflated cost of removal ratios to ratepayers.

[13] Company's Response CA to DR1-34.

Q33. Does Mr. Allis acknowledge mismatch cost of removal and retirement in his studies?

A33. Yes, at his study page IV-2 Mr. Allis states: "Cost of removal and gross salvage were expressed as percents of the original cost of plant retired … The estimates of future net salvage are expressed as percentages of surviving plant in service, that is all future retirements."[14]

In response to CAD DR1-40, Mr. Allis alleges that his ratios do not extrapolate inflation into the future but states,

> To the extent future inflation could be construed to be incorporated into cost of removal estimates, it is typically at a lower rate than has occurred historically. This is because normally there is a difference between the average age of retirements in the historical net salvage analysis and the average age of future retirements as defined by the survivor curve estimates, which causes this difference.[15]

Q34. Can you provide a simplifying example of the Atmos/Allis COR process?

A34. Yes. Assume Atmos placed a $100 asset in service 50 years ago and that the Company has properly charged $100 to depreciation expense over those years. Now Atmos replaces the original $100 asset with a new asset that costs $1,000 in today's dollars due to past inflation. Atmos records 95 percent or $950 of the total replacement cost as a new addition and allocates 5 percent or $50 of the total replacement cost to COR. Mr. Allis then compares the allocated $50 of COR to the 50-year old original $100 asset which is retired. Mr. Allis calculates a 50 percent Net COR ratio, i.e., $50/$100 = 50%. Finally, Mr. Allis applies the 50 percent ratio to the new $950 addition to calculate future cost of removal of $950 * 50% = $475. Mr. Allis adds the $475 to the $950 net plant addition "future accruals" in his remaining life depreciation rate calculation. The result is that ratepayers are charged $1,425 for an asset that only costs $1,000. To add insult to injury, Mr. Allis applies the 50 COR ratio to 100 percent of plant in service.

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[14] Exhibit NWA-1 to *Direct Testimony of Ned W. Allis*, IV-2, TPUC Docket No. 23-00050 (June 29, 2023).

[15] Company's Response to CA DR1-40.

Q35. Is Mr. Allis aware of alternatives to the mismatch?

A35. Yes, Mr. Allis is aware of alternatives to the mismatch. In Pennsylvania, his home state, the Commission does not allow utilities to include future net salvage ratios in depreciation rates because of the mismatch. Instead, the Pennsylvania Commission allows utilities only to include a 5-year average net salvage allowance based on actual dollars to their expense. The New Jersey Board of Public Utilities requires the same approach for utilities in that state.

Q36. Are there other alternatives?

A36. Yes, because of the mismatch, the Maryland Commission requires utilities to discount their future net salvage estimates to their present value based on a particular interest rate.

Q37. Would either Pennsylvania or Maryland approaches eliminate the problems you have identified for Atmos?

A37. They would only eliminate the problems I have identified if those Commissions have also addressed the arbitrary, unnecessary, and inappropriate accounting for replacements I have identified here.

Q38. Are the Company and Mr. Allis aware of its inappropriate, arbitrary, and unnecessary replacement accounting?

A38. Yes. On page 12 of his testimony Mr. Allis discusses accounting changes that could impact net salvage. He states,

> Cost of removal for many assets occurs when the assets are replaced with a new asset (or assets). As a result, the costs incurred for many projects include the costs of new assets as well as the cost of removal. The Company performed studies [hereafter referred to as Alliance Studies][16] of the time involved with each activity on projects with gas mains in 2014 and with measuring and regulating equipment in 2016. Based on these [Alliance] studies, the Company has updated its process for some accounts for determining which portion of project costs are recorded as cost of removal. For gas mains and services, these changes were effective in

[16] Studies were conducted by Alliance Consulting Group.

> October 2015 and for measuring and regulating equipment these changes were effective in November 2016.[17]

Q39. Did you ask Mr. Allis to elaborate on the Alliance Studies he discusses on page 12 of his testimony?

A39. Yes, CAD DR1-42 asked Mr. Allis to provide a numeric example of these changes and their impact on depreciation studies. Mr. Allis responded that his,

> Testimony, on page 12 discusses an accounting change related to cost of removal but does not discuss any change related to salvage or retirements. Please see the response to Consumer Advocate 1-34 [the Alliance Studies and the 95/5 split discussion] for further explanation of these changes. Generally, the accounting changes resulted in lower cost of removal, all else being equal.[18]

Q40. Did the Company provide copies of these Alliance Studies?

A40. Yes, Exhibit___(MJM-3) contains copies of the Alliance Studies as well as other responses to dealing with this subject.

Q41. Did these Alliance Studies have an impact on Mr. Allis's Net COR studies?

A41. Yes, Mr. Allis's Net COR studies demonstrate that the intent of the Alliance Studies was to pass more cost of removal into Mr. Allis's net salvage studies. Exhibit___(MJM-4) consists of copies of his studies for mains, services, and measuring and regulating equipment. They reveal substantial increases to cost or removal starting after the Alliance Studies were issued.

Q42. Did the Alliance Studies enable Mr. Allis to propose higher COR ratios?

A42. Yes. The following table compares the existing Net COR ratios for Mains, Services and Measuring Equipment to Mr. Allis's current proposals.

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[17] *Direct Testimony of Ned W. Allis*, 12, TPUC Docket No. 23-00050 (June 29, 2023).

[18] Company's Response to CA DR1-42.

Table 11
Comparison of Existing Net COR Ratios
To Allis's Proposed Net COR Ratios

Account	Existing	Allis Proposal
376.01 Mains – Steel	(23)%	(40)%
376.02 Mains – Plastic	(23)%	(40)%
376.00 Meas. & Reg. Eqpt.	(4)%	(25)%
376.00 Meas. & Reg. Eqpt. CityGate	(4)%	(5)%
380.00 Services	(5)%	(10)%

Q43. Do the Alliance Studies confirm that the Company's accounting approach is arbitrary and unnecessary?

A43. Yes. The Alliance study of Mains and Services states:

> Atmos Energy contracted with Alliance Consulting Group in 2014 to conduct a study to determine the percentages of labor costs related to replacement projects for Mains and Services. *The study results would be used to allocate to removal cost for various capital replacement-related activities*.[19] (Emphasis added).

> "[T]he Company in this study has decided to move to the more conservative incremental approach to *allocating removal costs for replacement projects*."[20] (Emphasis added).

And the Alliance Study of Measuring and Regulating Equipment makes it even more clear:

> Atmos Energy asked Alliance Consulting Group in 2016 to conduct a study to determine the allocation of labor costs to removal activities for replacing Measuring and Regulating assets. *These allocation factors would be used to charge a portion of the overall labor cost to removal cost for various capital replacement-related activities*.[21] (Emphasis added).

Q44. What allocation factors and process resulted from the Alliance Studies?

---

19 Company's Response to CA DR1-34, Attachment 1, page 3.
20 *Id*. at 5.
21 Company's Response to CA DR1-34, Attachment 2, page 3.

A44. According to the Company,

> When a project is being set up, estimated materials and Company labor cost are split between install/removal and entered into Power Plant. Similarly, all material invoices and Company labor charged to the project follow this percentage split. If the replacement project is *cost of removal (COR) eligible*, then the install/removal split for contractor labor, contractor services, and Company labor *defaults to* ***95%/5%,*** *regardless of the split entered into Power Plant.* Please see Attachments 1 and 2 for the time and motion studies [the Alliance Studies] that support the use of the 95%/5% split. Salvage value represents third party insurance recoveries or sale of assets that are recorded to the accumulated provision for depreciation account.[22] (Emphasis added).

Q45. Is this response consistent with the October 1, 2018, Atmos Energy Corporation Capitalization Manual?

A45. Yes, but instead of specifying the specific 95/5 split, the October 1, 2018, Atmos Energy Corporation Capitalization Manual says,

> *A systematic split between CWIP and Cost of Removal* will be applied to capital projects for Mains and Services that include both additions and retirements. [23] (Emphasis added).

The Company's response to DR1-23e. states that these words from the Capitalization Manual are referring to the process described in response to DR 1-34, i.e. the 95/5 split and the Alliance Studies.[24]

Q46. What portion of the Company's annual additions are replacements?

A46. The Company's response to DR2-12 states,

> Projects are determined on a year-to-year basis as determined by system need, growth opportunities, etc. and that there is no defined ratio as a target. The ratio of new (growth) versus replacement (system integrity and system improvement) was 22% vs 78% in FY22 and 26% vs 74% in FY23.[25]

Q47. What is the significance of this statement?

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22 Company's Response to CA DR1-34 (emphasis added).
23 Company's Response to CA DR1-23, Attachment 1, page 15.
24 Company's Response to CA DR1-23e.
25 Company's Response to CA DR2-12.

A47. The Company's response to DR2-12 demonstrates exactly why Mr. Allis's net salvage proposals vastly overstate cost of removal charges to ratepayers. Remember that Mr. Allis said:

> The estimates of future net salvage are expressed as percentages of surviving plant in service, *that is all future retirements*.[26] (Emphasis added.)

He applied his inflated cost of removal ratios to 100 percent of plant, even though between 74% to 78% or 76% on average of that plant will be replaced, and those replacements are not "COR eligible" according to FERC Definition No. 32.

Q48. What is the proper depreciation approach to the Company's cost of removal?

A48. I have used the 76% average of the FY22 and FY23 replacement plant percentages to limit the amount of future net salvage included in the depreciation rates to the portion of the plant that will not be replaced i.e., "retirements without replacement." (*See* USOA Def 34, and GPI 10B (2) and 10F above.) My approach assumes that 24 percent (100% - 76%=24%) of *future plant retirements will not be replaced, and thus are cost of removal eligible.* Next, I applied the Alliance Studies 5% allocation ratio to the 24 percent portion of future retirements that are cost of removal eligible. The calculated ratio is shown below and in Exhibit___(MJM-5).

Table 12

Cost of Removal Ratio for Legitimate Cost of Removal Eligible Plant

1. Estimated cost of removable eligible plant FY22	22%
2. Estimated cost of removable eligible plant FY23	26%
3. Average FY22 and FY23	24%
4. COR factor	5%
5. COR estimate for depreciation study L3 x L4	1.2%

[26] Exhibit NWA-1 to *Direct Testimony of Ned W. Allis*, IV-2, TPUC Docket No. 23-00050 (June 29, 2023).

Q49. Have you used the 1.2% Net COR ratio to calculate your recommended depreciation rates?

A49. Yes, they are shown in Exhibit___(MJM-1).

Q50. Please summarize your testimony.

A50. As one can understand from above, the process for calculating depreciation rates is long and complicated. Utilities can use this complexity to disguise approaches to manipulate depreciation rates and convince regulators to increase charges to ratepayers unnecessarily. In this testimony I have attempted to highlight and correct several such manipulations with understated lives, mismatched net salvage ratios and unnecessary, arbitrary, and inappropriate allocations of replacement costs.

Q51. Does this conclude your testimony?

A51. Yes, it does.

IN THE TENNESSEE PUBLIC UTILITY COMMISSION
AT NASHVILLE, TENNESSEE

IN RE:	)	
	)	
ATMOS ENERGY CORPORATION	)	
TENNESSEE DIRECT,	)	**DOCKET NO. 23-00050**
KENTUCKY/MID-STATES DIVISION,	)	
AND SHARED SERVICES UNIT	)	
DEPRECIATION STUDY	)	

AFFIDAVIT

I, Michael J. Majoros, Jr., on behalf of the Consumer Advocate Division of the Attorney General's Office hereby certify that the attached Testimony represents my opinion in the above-referenced case and the opinion of the Consumer Advocate Division.

MICHAEL J. MAJOROS, JR

Sworn to and subscribed before me

This 22nd day of September, 2023.

TERRA ALLEN
STATE OF TENNESSEE NOTARY PUBLIC
HICKMAN COUNTY
My Commission Expires JAN 31 2027

NOTARY PUBLIC

My Commission Expires: January 31, 2027

Experience

Analytica94, Inc.
Chairman and Founder (2013 to present)

A94 is a chartable non-profit organization founded in 2013 to provide independent research, economic models, and training to evaluate the effectiveness of economic regulation of U.S. industries.

Snavely King Majoros & Associates, Inc.
President (2010 to present)
Vice President and Treasurer (1988 to 2010)
Senior Consultant (1981-1987)

Mr. Majoros provides consultation specializing in accounting, financial, and management issues. He has testified as an expert witness or negotiated on behalf` of clients in more than one hundred thirty regulatory federal and state regulatory proceedings involving telephone, electric, gas, water, and sewerage companies. His testimony has encompassed a wide array of complex issues including taxation, divestiture accounting, prudency, revenue requirements, rate base, nuclear decommissioning, plant lives, and capital recovery. Mr. Majoros has also provided consultation to the U.S. Department of Justice and appeared before the U.S. EPA and the Maryland State Legislature on matters regarding the accounting and plant life effects of electric plant modifications and the financial capacity of public utilities to finance environmental controls. He has estimated economic damages suffered by black farmers in discrimination suits.

Van Scoyoc & Wiskup, Inc*., Consultant (1978-1981)*

Mr. Majoros conducted and assisted in various management and regulatory consulting projects in the public utility field, including preparation of electric system load projections for a group of municipally and cooperatively owned electric systems; preparation of a system of accounts and reporting of gas and oil pipelines to be used by a state regulatory commission; accounting system analysis and design for rate proceedings involving electric, gas, and telephone utilities. Mr. Majoros provided onsite management accounting and controllership assistance to a municipal electric and water utility. Mr. Majoros also assisted in an antitrust proceeding involving a major electric utility. He submitted expert testimony in FERC Docket No. RP79-12 (El Paso Natural Gas Company), and he co-authored a study entitled Analysis of Staff Study on Comprehensive Tax Normalization that was submitted to FERC in Docket No. RM 80-42.

Handling Equipment Sales Company, Inc.
Controller/Treasurer (1976-1978)

Mr. Majoros' responsibilities included financial management, general accounting and reporting, and income taxes.

Ernst & Ernst, *Auditor (1973-1976)*

Mr. Majoros was a member of the audit staff where his responsibilities included auditing, supervision, business systems analysis, report preparation, and corporate income taxes.

University of Baltimore - *(1971-1973)*

Mr. Majoros was a full-time student in the School of Business.

During this period Mr. Majoros worked consistently on a part-time basis in the following positions: Assistant Legislative Auditor – State of Maryland, Staff Accountant – Robert M. Carney & Co., CPA's, Staff Accountant – Naron & Wegad, CPA's, Credit Clerk – Montgomery Wards.

Central Savings Bank, *(1969-1971)*

Mr. Majoros was an Assistant Branch Manager at the time he left the bank to attend college as a full-time student. During his tenure at the bank, Mr. Majoros gained experience in each department of the bank. In addition, he attended night school at the University of Baltimore.

Education
University of Baltimore, School of Business, B.S. – Concentration in Accounting

Professional Affiliations
American Institute of Certified Public Accountants
Maryland Association of C.P.A.s
Society of Depreciation Professionals

Publications, Papers, and Panels

"Analysis of Staff Study on Comprehensive Tax Normalization," FERC Docket No. RM 80-42, 1980.

"Telephone Company Deferred Taxes and Investment Tax Credits – A Capital Loss for Ratepayers," Public Utility Fortnightly, September 27, 1984.

"The Use of Customer Discount Rates in Revenue Requirement Comparisons," Proceedings of the 25th Annual Iowa State Regulatory Conference, 1986

"The Regulatory Dilemma Created By Emerging Revenue Streams of Independent Telephone Companies," Proceedings of NARUC 101st Annual Convention and Regulatory Symposium, 1989.

"BOC Depreciation Issues in the States," National Association of State Utility Consumer Advocates, 1990 Mid-Year Meeting, 1990.

"Current Issues in Capital Recovery" 30th Annual Iowa State Regulatory Conference, 1991.

"Impaired Assets Under SFAS No. 121," National Association of State Utility Consumer Advocates, 1996 Mid-Year Meeting, 1996.

"What's 'Sunk' Ain't Stranded: Why Excessive Utility Depreciation is Avoidable," with James Campbell, Public Utilities Fortnightly, April 1, 1999.

"Local Exchange Carrier Depreciation Reserve Percents," with Richard B. Lee, Journal of the Society of Depreciation Professionals, Volume 10, Number 1, 2000-2001

"Rolling Over Ratepayers," Public Utilities Fortnightly, Volume 143, Number 11, November, 2005.

"Asset Management – What is it ?" American Water Works Association, Pre-Conference Workshop, March 25, 2008.

"Main Street Gold Mine," with Dr. K. Pavlovic and J. Legieza, Public Utilities Fortnightly, October, 2010

Michael J. Majoros, Jr.

Date	Jurisdiction / Agency	Docket	Utility
		Federal Courts	
2005	US District Court, Northern District of AL, Northwestern Division 55/56/57/	CV 01-B-403-NW	Tennessee Valley Authority
		State Legislatures	
2006	Maryland General Assembly 61/	SB154	Maryland Healthy Air Act
2006	Maryland House of Delegates 62/	HB189	Maryland Healthy Air Act
		Federal Regulatory Agencies	
1979	FERC-US 19/	RP79-12	El Paso Natural Gas Co.
1980	FERC-US 19/	RM80-42	Generic Tax Normalization
1996	CRTC-Canada 30/	97-9	All Canadian Telecoms
1997	CRTC-Canada 31/	97-11	All Canadian Telecoms
1999	FCC 32/	98-137 (Ex Parte)	All LECs
1999	FCC 32/	98-91 (Ex Parte)	All LECs
1999	FCC 32/	98-177 (Ex Parte)	All LECs
1999	FCC 32/	98-45 (Ex Parte)	All LECs
2000	EPA 35/	CAA-00-6	Tennessee Valley Authority
2003	FERC 48/	RM02-7	All Utilities
2003	FCC 52/	03-173	All LECs
2003	FERC 53/	ER03-409-000, ER03-666-000	Pacific Gas and Electric Co.
2017	FERC 53/	ER16-2320-002	Pacific Gas and Electric Company
		State Regulatory Agencies	
1982	Massachusetts 17/	DPU 557/558	Western Mass Elec. Co.
1982	Illinois 16/	ICC81-8115	Illinois Bell Telephone Co.
1983	Maryland 8/	7574-Direct	Baltimore Gas & Electric Co.
1983	Maryland 8/	7574-Surrebuttal	Baltimore Gas & Electric Co.
1983	Connecticut 15/	810911	Woodlake Water Co.
1983	New Jersey 1/	815-458	New Jersey Bell Tel. Co.
1983	New Jersey 14/	8011-827	Atlantic City Sewerage Co.
1984	Dist. Of Columbia 7/	785	Potomac Electric Power Co.
1984	Maryland 8/	7689	Washington Gas Light Co.

Michael J. Majoros, Jr.

1984	Dist. Of Columbia 7/	798	C&P Tel. Co.
1984	Pennsylvania 13/	R-832316	Bell Telephone Co. of PA
1984	New Mexico 12/	1032	Mt. States Tel. & Telegraph
1984	Idaho 18/	U-1000-70	Mt. States Tel. & Telegraph
1984	Colorado 11/	1655	Mt. States Tel. & Telegraph
1984	Dist. Of Columbia 7/	813	Potomac Electric Power Co.
1984	Pennsylvania 3/	R842621-R842625	Western Pa. Water Co.
1985	Maryland 8/	7743	Potomac Edison Co.
1985	New Jersey 1/	848-856	New Jersey Bell Tel. Co.
1985	Maryland 8/	7851	C&P Tel. Co.
1985	California 10/	I-85-03-78	Pacific Bell Telephone Co.
1985	Pennsylvania 3/	R-850174	Phila. Suburban Water Co.
1985	Pennsylvania 3/	R850178	Pennsylvania Gas & Water Co.
1985	Pennsylvania 3/	R-850299	General Tel. Co. of PA
1986	Maryland 8/	7899	Delmarva Power & Light Co.
1986	Maryland 8/	7754	Chesapeake Utilities Corp.
1986	Pennsylvania 3/	R-850268	York Water Co.
1986	Maryland 8/	7953	Southern Md. Electric Corp.
1986	Idaho 9/	U-1002-59	General Tel. Of the Northwest
1986	Maryland 8/	7973	Baltimore Gas & Electric Co.
1987	Pennsylvania 3/	R-860350	Dauphin Cons. Water Supply
1987	Pennsylvania 3/	C-860923	Bell Telephone Co. of PA
1987	Iowa 6/	DPU-86-2	Northwestern Bell Tel. Co.
1987	Dist. Of Columbia 7/	842	Washington Gas Light Co.
1988	Florida 4/	880069-TL	Southern Bell Telephone
1988	Iowa 6/	RPU-87-3	Iowa Public Service Company
1988	Iowa 6/	RPU-87-6	Northwestern Bell Tel. Co.
1988	Dist. Of Columbia 7/	869	Potomac Electric Power Co.
1989	Iowa 6/	RPU-88-6	Northwestern Bell Tel. Co.
1990	New Jersey 1/	1487-88	Morris City Transfer Station
1990	New Jersey 5/	WR 88-80967	Toms River Water Company
1990	Florida 4/	890256-TL	Southern Bell Company
1990	New Jersey 1/	ER89110912J	Jersey Central Power & Light
1990	New Jersey 1/	WR90050497J	Elizabethtown Water Co.
1991	Pennsylvania 3/	P900465	United Tel. Co. of Pa.
1991	West Virginia 2/	90-564-T-D	C&P Telephone Co.
1991	New Jersey 1/	90080792J	Hackensack Water Co.
1991	New Jersey 1/	WR90080884J	Middlesex Water Co.
1991	Pennsylvania 3/	R-911892	Phil. Suburban Water Co.
1991	Kansas 20/	176, 716-U	Kansas Power & Light Co.
1991	Indiana 29/	39017	Indiana Bell Telephone

Michael J. Majoros, Jr.

1991	Nevada 21/	91-5054	Central Tele. Co. – Nevada
1992	New Jersey 1/	EE91081428	Public Service Electric & Gas
1992	Maryland 8/	8462	C&P Telephone Co.
1992	West Virginia 2/	91-1037-E-D	Appalachian Power Co.
1993	Maryland 8/	8464	Potomac Electric Power Co.
1993	South Carolina 22/	92-227-C	Southern Bell Telephone
1993	Maryland 8/	8485	Baltimore Gas & Electric Co.
1993	Georgia 23/	4451-U	Atlanta Gas Light Co.
1993	New Jersey 1/	GR93040114	New Jersey Natural Gas. Co.
1994	Iowa 6/	RPU-93-9	U.S. West – Iowa
1994	Iowa 6/	RPU-94-3	Midwest Gas
1995	Delaware 24/	94-149	Wilm. Suburban Water Corp.
1995	Connecticut 25/	94-10-03	So. New England Telephone
1995	Connecticut 25/	95-03-01	So. New England Telephone
1995	Pennsylvania 3/	R-00953300	Citizens Utilities Company
1995	Georgia 23/	5503-0	Southern Bell
1996	Maryland 8/	8715	Bell Atlantic
1996	Arizona 26/	E-1032-95-417	Citizens Utilities Company
1996	New Hampshire 27/	DE 96-252	New England Telephone
1997	Iowa 6/	DPU-96-1	U S West – Iowa
1997	Ohio 28/	96-922-TP-UNC	Ameritech – Ohio
1997	Michigan 28/	U-11280	Ameritech – Michigan
1997	Michigan 28/	U-112 81	GTE North
1997	Wyoming 27/	7000-ztr-96-323	US West – Wyoming
1997	Iowa 6/	RPU-96-9	US West – Iowa
1997	Illinois 28/	96-0486-0569	Ameritech – Illinois
1997	Indiana 28/	40611	Ameritech – Indiana
1997	Indiana 27/	40734	GTE North
1997	Utah 27/	97-049-08	US West – Utah
1997	Georgia 28/	7061-U	BellSouth – Georgia
1997	Connecticut 25/	96-04-07	So. New England Telephone
1998	Florida 28/	960833-TP et. al.	BellSouth – Florida
1998	Illinois 27/	97-0355	GTE North/South
1998	Michigan 33/	U-11726	Detroit Edison
1999	Maryland 8/	8794	Baltimore Gas & Electric Co.
1999	Maryland 8/	8795	Delmarva Power & Light Co.
1999	Maryland 8/	8797	Potomac Edison Company
1999	West Virginia 2/	98-0452-E-GI	Electric Restructuring
1999	Delaware 24/	98-98	United Water Company
1999	Pennsylvania 3/	R-00994638	Pennsylvania American Water
1999	West Virginia 2/	98-0985-W-D	West Virginia American Water

Michael J. Majoros, Jr.

1999	Michigan 33/	U-11495	Detroit Edison
2000	Delaware 24/	99-466	Tidewater Utilities
2000	New Mexico 34/	3008	US WEST Communications, Inc.
2000	Florida 28/	990649-TP	BellSouth -Florida
2000	New Jersey 1/	WR30174	Consumer New Jersey Water
2000	Pennsylvania 3/	R-00994868	Philadelphia Suburban Water
2000	Pennsylvania 3/	R-0005212	Pennsylvania American Sewerage
2000	Connecticut 25/	00-07-17	Southern New England Telephone
2001	Kentucky 36/	2000-373	Jackson Energy Cooperative
2001	Kansas 38/39/40/	01-WSRE-436-RTS	Western Resources
2001	South Carolina 22/	2001-93-E	Carolina Power & Light Co.
2001	North Dakota 37/	PU-400-00-521	Northern States Power/Xcel Energy
2001	Indiana 29/41/	41746	Northern Indiana Power Company
2001	New Jersey 1/	GR01050328	Public Service Electric and Gas
2001	Pennsylvania 3/	R-00016236	York Water Company
2001	Pennsylvania 3/	R-00016339	Pennsylvania America Water
2001	Pennsylvania 3/	R-00016356	Wellsboro Electric Coop.
2001	Florida 4/	010949-EL	Gulf Power Company
2001	Hawaii 42/	00-309	The Gas Company
2002	Pennsylvania 3/	R-00016750	Philadelphia Suburban
2002	Nevada 43/	01-10001 &10002	Nevada Power Company
2002	Kentucky 36/	2001-244	Fleming Mason Electric Coop.
2002	Nevada 43/	01-11031	Sierra Pacific Power Company
2002	Georgia 27/	14361-U	BellSouth-Georgia
2002	Alaska 44/	U-01-34,82-87,66	Alaska Communications Systems
2002	Wisconsin 45/	2055-TR-102	CenturyTel
2002	Wisconsin 45/	5846-TR-102	TelUSA
2002	Vermont 46/	6596	Citizen's Energy Services
2002	North Dakota 37/	PU-399-02-183	Montana Dakota Utilities
2002	Kansas 40/	02-MDWG-922-RTS	Midwest Energy
2002	Kentucky 36/	2002-00145	Columbia Gas
2002	Oklahoma 47/	200200166	Reliant Energy ARKLA
2002	New Jersey 1/	GR02040245	Elizabethtown Gas Company
2003	New Jersey 1/	ER02050303	Public Service Electric and Gas Co.
2003	Hawaii 42/	01-0255	Young Brothers Tug & Barge
2003	New Jersey 1/	ER02080506	Jersey Central Power & Light
2003	New Jersey 1/	ER02100724	Rockland Electric Co.
2003	Pennsylvania 3/	R-00027975	The York Water Co.
2003	Pennsylvania 3/	R-00038304	Pennsylvania-American Water Co.
2003	Kansas 20/ 40/	03-KGSG-602-RTS	Kansas Gas Service
2003	Nova Scotia, CN 49/	EMO NSPI	Nova Scotia Power, Inc.

Michael J. Majoros, Jr.

2003	Kentucky 36/	2003-00252	Union Light Heat & Power
2003	Alaska 44/	U-96-89	ACS Communications, Inc.
2003	Indiana 29/	42359	PSI Energy, Inc.
2003	Kansas 20/ 40/	03-ATMG-1036-RTS	Atmos Energy
2003	Florida 50/	030001-E1	Tampa Electric Company
2003	Maryland 51/	8960	Washington Gas Light
2003	Hawaii 42/	02-0391	Hawaiian Electric Company
2003	Illinois 28/	02-0864	SBC Illinois
2003	Indiana 28/	42393	SBC Indiana
2004	New Jersey 1/	ER03020110	Atlantic City Electric Co.
2004	Arizona 26/	E-01345A-03-0437	Arizona Public Service Company
2004	Michigan 27/	U-13531	SBC Michigan
2004	New Jersey 1/	GR03080683	South Jersey Gas Company
2004	Kentucky 36/	2003-00434,00433	Kentucky Utilities, Louisville Gas & Electric
2004	Florida 50/ 54/	031033-EI	Tampa Electric Company
2004	Kentucky 36/	2004-00067	Delta Natural Gas Company
2004	Georgia 23/	18300, 15392, 15393	Georgia Power Company
2004	Vermont 46/	6946, 6988	Central Vermont Public Service Corporation
2004	Delaware 24/	04-288	Delaware Electric Cooperative
2004	Missouri 58/	ER-2004-0570	Empire District Electric Company
2005	Florida 50/	041272-EI	Progress Energy Florida, Inc.
2005	Florida 50/	041291-EI	Florida Power & Light Company
2005	California 59/	A.04-12-014	Southern California Edison Co.
2005	Kentucky 36/	2005-00042	Union Light Heat & Power
2005	Florida 50/	050045 & 050188-EI	Florida Power & Light Co.
2005	Kansas 38/ 40/	05-WSEE-981-RTS	Westar Energy, Inc.
2006	Delaware 24/	05-304	Delmarva Power & Light Company
2006	California 59/	A.05-12-002	Pacific Gas & Electric Co.
2006	New Jersey 1/	GR05100845	Public Service Electric and Gas Co.
2006	Colorado 60/	06S-234EG	Public Service Co. of Colorado
2006	Kentucky 36/	2006-00172	Union Light, Heat & Power
2006	Kansas 40/	06-KGSG-1209-RTS	Kansas Gas Service
2006	West Virginia 2/	06-0960-E-42T, 06-1426-E-D	Allegheny Power
2006	West Virginia 2/	05-1120-G-30C, 06-0441-G-PC, et al.	Hope Gas, Inc. and Equitable Resources, Inc.
2007	Delaware 24/	06-284	Delmarva Power & Light Company
2007	Kentucky 36/	2006-00464	Atmos Energy Corporation
2007	Colorado 60/	06S-656G	Public Service Co. of Colorado

Michael J. Majoros, Jr.

2007	California 59/	A.06-12-009, A.06-12-010	San Diego Gas & Electric Co., and Southern California Gas Co.
2007	Kentucky 36/	2007-00143	Kentucky-American Water Co.
2007	Kentucky 36/	2007-00089	Delta Natural Gas Co.
2007	Maine 71/	2007-00215	Central Maine Power
2008	Kansas 40/	08-ATMG-280-RTS	Atmos Energy Corporation
2008	New Jersey 1/	GR07110889	New Jersey Natural Gas Co.
2008	North Dakota 37/	PU-07-776	Northern States Power/Xcel Energy
2008	Pennsylvania 3/	A-2008-2034045 et al	UGI Utilities, Inc. / PPL Gas Utilities Corp.
2008	Washington 63/	UE-072300, UG-072301	Puget Sound Energy
2008	Pennsylvania 3/	R-2008-2032689	Pennsylvania-American Water Co. - Coatesville
2008	New Jersey 1/	WR08010020	NJ American Water Co.
2008	Washington 63/ 64/	UE-080416, UG-080417	Avista Corporation
2008	Texas 65/	473-08-3681, 35717	Oncor Electric Delivery Co.
2008	Tennessee 66/	08-00039	Tennessee-American Water Co.
2008	Kansas	08-WSEE-1041-RTS	Westar Energy, Inc.
2009	Kentucky 36/	2008-00409	East Kentucky Power Coop.
2009	Indiana 29/	43501	Duke Energy Indiana
2009	Indiana 29/	43526	Northern Indiana Public Service Co.
2009	Michigan 33/	U-15611	Consumers Energy Company
2009	Kentucky 36/	2009-00141	Columbia Gas of Kentucky
2009	New Jersey 1/	GR00903015	Elizabethtown Gas Company
2009	District of Columbia 7/	FC 1076	Potomac Electric Power
2009	New Jersey 1/	GR09050422	Public Service Gas & Electric Co.
2009	Kentucky 36/	2009-00202	Duke Energy Kentucky Co.
2010	Kentucky 36/	2009-00549	Louisville Gas and Electric Co.
2010	Kentucky 36/	2009-00548	Kentucky Utilities Co.
2010	New Jersey 1/	GR10010035	Southern New Jersey Gas Co.
2010	Hawaii 42/	2009-0286	Maui Electric Co.
2010	Hawaii 42/	2009-0321	Hawaii Electric Light Co.
2010	Hawaii 42/	2010-0053	Hawaiian Electric Co.
2010	Lancaster 3/	R-2010-2179103	Lancaster Water Fund
2011	Kansas 40/	11-KCPE-581-PRE	Kansas City Power and Light Co.
2011	Delaware 24/	11-207	Artesian
2012	Kentucky 36/	2012-00221	Kentucky Utilities Company
2012	Kentucky 36/	2012-00222	Louisville Gas and Electric

Michael J. Majoros, Jr.

			Company
2012	Massachusetts 67/	DPU 12-25	Bay State Gas Company
2012	District of Columbia 7/	FC 1093	Washington Gas Light Company
2012	New Jersey 1/	WR11070460	New Jersey American Water
2012	New Jersey 1/	ER11080469	Atlantic City Electric Company
2013	Michigan 33/	U-16769	Michigan Consolidated Gas
2013	New Jersey 1/	ER12111052	Jersey Central Power & Light
2013	Alberta 68/	2322	ATCO Pipelines
2013	North Dakota 37/	PU-12-813	Northern States Power
2013	Massachusetts 67/	D.P.U 13-07	New England Gas Company
2013	Wyoming 69/	20000-427-EA-13	Rocky Mountain Power
2013	New York 70/	13-E-0030	Consolidated Edison
2013	Maine 71/	2013-00168	Central Maine Power
2014	Alberta 68/	2739	Enmax Power Company
2014	West Virginia 2/	14-0701-E-D	Monongahela Power Company
2014	West Virginia 2/	14-1151-E-D	APCO
2015	Maryland 8/	9319	Potomac Edison
2015	Maryland 8/	9385	PEPCO
2015	West Virginia 2/	15-0674-WS-D	WV American Water Company
2016	Pennsylvania 3/	R2016-2529660	Columbia Gas of Pa.
2017	Hawaii 42/	2016-0431	Hawaiian Electric
2018	New Jersey 1/	14251-20175	New Jersey American Water
2019	North Dakota 37/	PU-18-403	NSPS Prudence of Cap Adds
2019	Arizona 72/	E-01933A-19-0028	Tucson Electric Production Plant

PARTICIPATION AS NEGOTIATOR IN FCC TELEPHONE DEPRECIATION RATE REPRESCRIPTION CONFERENCES

COMPANY	**YEARS**	**CLIENT**
Diamond State Telephone Co. 24/	1985 + 1988	Delaware Public Service Comm
Bell Telephone of Pennsylvania 3/	1986 + 1989	PA Consumer Advocate
Chesapeake & Potomac Telephone Co. - Md. 8/	1986	Maryland People's Counsel
Southwestern Bell Telephone – Kansas 20/	1986	Kansas Corp. Commission
Southern Bell – Florida 4/	1986	Florida Consumer Advocate
Chesapeake & Potomac Telephone Co.-W.Va. 2/	1987 + 1990	West VA Consumer Advocate
New Jersey Bell Telephone Co. 1/	1985 + 1988	New Jersey Rate Counsel
Southern Bell - South Carolina 22/	1986 + 1989 + 1992	S. Carolina Consumer Advocate

Michael J. Majoros, Jr.

GTE-North – Pennsylvania 3/	1989	PA Consumer Advocate

Michael J. Majoros, Jr.

PARTICIPATION IN PROCEEDINGS WHICH WERE SETTLED BEFORE TESTIMONY WAS SUBMITTED

STATE	DOCKET NO.	UTILITY
Maryland 8/	7878	Potomac Edison
Nevada 21/	88-728	Southwest Gas
New Jersey 1/	WR90090950J	New Jersey American Water
New Jersey 1/	WR900050497J	Elizabethtown Water
New Jersey 1/	WR91091483	Garden State Water
West Virginia 2/	91-1037-E	Appalachian Power Co.
Nevada 21/	92-7002	Central Telephone - Nevada
Pennsylvania 3/	R-00932873	Blue Mountain Water
West Virginia 2/	93-1165-E-D	Potomac Edison
West Virginia 2/	94-0013-E-D	Monongahela Power
New Jersey 1/	WR94030059	New Jersey American Water
New Jersey 1/	WR95080346	Elizabethtown Water
New Jersey 1/	WR95050219	Toms River Water Co.
Maryland 8/	8796	Potomac Electric Power Co.
South Carolina 22/	1999-077-E	Carolina Power & Light Co.
South Carolina 22/	1999-072-E	Carolina Power & Light Co.
Kentucky 36/	2001-104 & 141	Kentucky Utilities, Louisville Gas and Electric
Kentucky 36/	2002-485	Jackson Purchase Energy Corporation
Kentucky 36/	2009-00202	Duke Energy Kentucky
New Jersey 1/	ER09080664	Atlantic City Electric Co.
New Jersey 1/	ER09080668	Rockland Electric Co.

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Clients

1/ New Jersey Rate Counsel/Advocate	36/ Kentucky Attorney General
2/ West Virginia Consumer Advocate	37/ North Dakota Public Service Commission
3/ Pennsylvania OCA	38/ Kansas Industrial Group
4/ Florida Office of Public Advocate	39/ City of Witchita
5/ Toms River Fire Commissioner's	40/ Kansas Citizens' Utility Rate Board
6/ Iowa Office of Consumer Advocate	41/ NIPSCO Industrial Group
7/ D.C. People's Counsel	42/ Hawaii Division of Consumer Advocacy
8/ Maryland's People's Counsel	43/ Nevada Bureau of Consumer Protection
9/ Idaho Public Service Commission	44/ GCI
10/ Western Burglar and Fire Alarm	45/ Wisc. Citizens' Utility Rate Board
11/ U.S. Dept. of Defense	46/ Vermont Department of Public Service
12/ N.M. State Corporation Comm.	47/ Oklahoma Corporation Commission
13/ City of Philadelphia	48/ National Assn. of State Utility Consumer Advocates
14/ Resorts International	49/ Nova Scotia Utility and Review Board
15/ Woodlake Condominium Association	50/ Florida Office of Public Counsel
16/ Illinois Attorney General	51/ Maryland Public Service Commission
17/ Mass Coalition of Municipalities	52/ MCI
18/ U.S. Department of Energy	53/ Transmission Agency of Northern California
19/ Arizona Electric Power Corp.	54/ Florida Industrial Power Users Group
20/ Kansas Corporation Commission	55/ Sierra Club
21/ Public Service Comm. – Nevada	56/ Our Children's Earth Foundation
22/ SC Dept. of Consumer Affairs	57/ National Parks Conservation Association, Inc.
23/ Georgia Public Service Comm.	58/ Missouri Office of the Public Counsel
24/ Delaware Public Service Comm.	59/ The Utility Reform Network
25/ Conn. Ofc. Of Consumer Counsel	60/ Colorado Office of Consumer Counsel
26/ Arizona Corp. Commission	61/ MD State Senator Paul G. Pinsky
27/ AT&T	62/ MD Speaker of the House Michael Busch
28/ AT&T/MCI	63/ Washington Office of Public Counsel
29/ IN Office of Utility Consumer Counselor	64/ Industrial Customers of Northwestern Utilities
30/ Unitel (AT&T – Canada)	65/ Steering Committee of Cities
31/ Public Interest Advocacy Centre	66/ City of Chattanooga
32/ U.S. General Services Administration	67/ Massachusetts Attorney General
33/ Michigan Attorney General	68/ Alberta Office of the Utilities Consumer Advocate
34/ New Mexico Attorney General	69/ Wyoming Industrial Energy Consumers
35/ Environmental Protection Agency Enforcement Staff	70/ New York State Department
	71/ Maine Office of Public Advocate
	72/ Western Resource Advocates

Michael J. Majoros, Jr.

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
SNAVELY KING MAJOROS & ASSOCIATES, INC. PROPOSALS
SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION RATES RELATED TO GAS PLANT AS OF SEPTEMBER 30, 2022

	ACCOUNT		SKM PROPOSED SURVIVOR CURVE	SKM SALVAGE PERCENT		ORIGINAL COST AS OF SEPTEMBER 30, 2022	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE	
	(1)		(2)	(3)		(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)	
	TRANSMISSION PLANT											
365.20	RIGHTS OF WAY		70 - R4	0.0		348,971	97,151	251,820	5,269	1.51	47.8	
366.00	STRUCTURES AND IMPROVEMENTS		30 - R3	0.0		2,679	2,015	664	72	2.69	9.2	
367.00	MAINS - CATHODIC PROTECTION		25 - R4	0.0		91,687	35,352	56,335	3,781	4.12	14.9	
367.01	MAINS - STEEL	1/	70 - R3	1.2	2/	11,734,621	6,297,983	5,295,822	199,842	1.70	26.5	3/
369.00	MEASURING AND REGULATING STATION EQUIPMENT	1/	84 - R3	1.2	2/	1,690,856	1,476,875	193,891	7,317	0.43	26.5	3/
	TOTAL TRANSMISSION PLANT					**13,868,815**	**7,909,176**	**5,798,533**	**216,281**	**1.56**		
	DISTRIBUTION PLANT											
374.02	LAND RIGHTS		70 - R4	0.0		5,167,861	462,594	4,705,267	73,225	1.42	64.3	
375.00	STRUCTURES AND IMPROVEMENTS		45 - R4	0.0		344,535	63,123	281,412	7,685	2.23	36.6	
376.00	MAINS - CATHODIC PROTECTION		25 - R4	0.0		1,938,059	615,129	1,322,930	65,338	3.37	20.2	
376.01	MAINS - STEEL		70 - R3	1.2	2/	120,220,044	31,814,342	86,963,061	1,507,159	1.25	57.7	
376.02	MAINS - PLASTIC		70 - R4	1.2	2/	307,453,801	97,768,807	205,995,548	3,671,935	1.19	56.1	
376.03	MAINS - ANODES		20 - SQ	0.0		1,314,524	529,272	785,252	65,755	5.00	11.9	
376.04	MAINS - LEAK CLAMPS		20 - SQ	0.0		3,732,998	2,523,276	1,209,722	186,788	5.00	6.5	
378.00	MEASURING AND REGULATING STATION EQUIPMENT	1/	84 - L1	0.0	2/	25,036,675	6,302,858	18,733,817	289,997	1.16	64.6	3/
379.00	MEASURING AND REGULATING STATION EQUIPMENT - CITY GAT	1/	84 - L1	1.2	2/	16,507,221	1,846,479	14,460,656	203,385	1.23	71.1	3/
380.00	SERVICES		50 - R1.5	1.2	2/	174,194,279	43,159,631	128,944,317	3,402,225	1.95	37.9	
381.00	METERS		30 - R2	1.2	2/	52,101,972	13,054,519	38,422,229	1,574,682	3.02	24.4	
382.00	METER INSTALLATIONS		35 - R3	1.2	2/	32,818,992	18,370,423	14,054,742	702,737	2.14	20.0	
383.00	HOUSE REGULATORS		35 - R3	1.2	2/	11,368,908	3,527,516	7,704,965	280,181	2.46	27.5	
385.00	INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMEN	1/	84 - L1	1.2	2/	774,923	255,925	509,899	8,221	1.06	62.0	3/
	TOTAL DISTRIBUTION PLANT					**752,974,792**	**220,295,894**	**524,093,617**	**12,039,311**	**1.60**		
	GENERAL PLANT											
390.00	STRUCTURES AND IMPROVEMENTS		35 - R3	10.0		7,911,346	3,797,330	3,322,881	109,129	1.38	30.4	
390.09	STRUCTURES AND IMPROVEMENTS - IMPROVEMENTS - LEASED		25 - SQ	0.0		304,906	181,250	123,656	12,194	4.00	10.1	
391.00	OFFICE FURNITURE AND EQUIPMENT		20 - SQ	0.0		460,929	84,839	376,090	23,047	5.00	16.3	
392.00	TRANSPORTATION EQUIPMENT		8 - L3	20.0		801,525	529,461	111,759	19,335	2.41	5.8	
393.00	STORES EQUIPMENT		25 - SQ	0.0		3,271	3,271	0	0	-	-	
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT		15 - SQ	0.0		4,944,332	1,627,500	3,316,832	329,880	6.67	10.1	
396.00	POWER OPERATED EQUIPMENT		9 - L2.5	5.0		4,321	3,149	955	273	6.32	3.5	
396.03	POWER OPERATED EQUIPMENT - DITCHERS		9 - L2.5	5.0		19,946	12,798	6,151	2,143	10.74	2.9	
397.00	COMMUNICATION EQUIPMENT		15 - SQ	0.0		124,208	64,239	59,969	8,280	6.67	7.2	
398.00	MISCELLANEOUS EQUIPMENT		15 - SQ	0.0		1,418,784	877,000	541,784	94,638	6.67	5.7	
399.01	OTHER TANGIBLE PROPERTY - SERVERS		7 - SQ	0.0		61,459	35,175	26,284	8,784	14.29	3.0	
399.06	OTHER TANGIBLE PROPERTY - PC HARDWARE		5 - SQ	0.0		892,000	403,250	488,750	178,432	20.00	2.7	
	TOTAL GENERAL PLANT					**16,947,027**	**7,619,262**	**8,375,111**	**788,135**	**4.64**		
	TOTAL DEPRECIABLE PLANT					**783,790,634**	**235,824,332**	**536,267,261**	**13,041,727**	**1.66**		
	NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED											
302.00	FRANCHISES AND CONSENTS					241,284	241,284					
365.10	LAND AND LAND RIGHTS					729,629						
374.00	LAND AND LAND RIGHTS					6,559,337						
389.00	LAND AND LAND RIGHTS					2,238,965						
	TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED					**9,769,214**	**241,284**					
	TOTAL GAS PLANT					**793,559,849**	**236,065,616**					

1/ FROM EXHIBIT___(MJM-2). Life changes reduce GF increase by approximately $585,000.

2/ From Exhibit___(MJM-6)

3/ From Exhibit___(MJM-3)

Yellow highlighting indicates differences between Mr. Allis and SKM.

ATMOS ENERGY CORPORATION
TENNESSEE ASSETS
GAS PLANT
COMPARISON OF ALLIS AND SKM
ANNUAL DEPRECIATION ACCRUAL RATES AND ACCRUALS AS OF SEPTEMBER 30, 2022

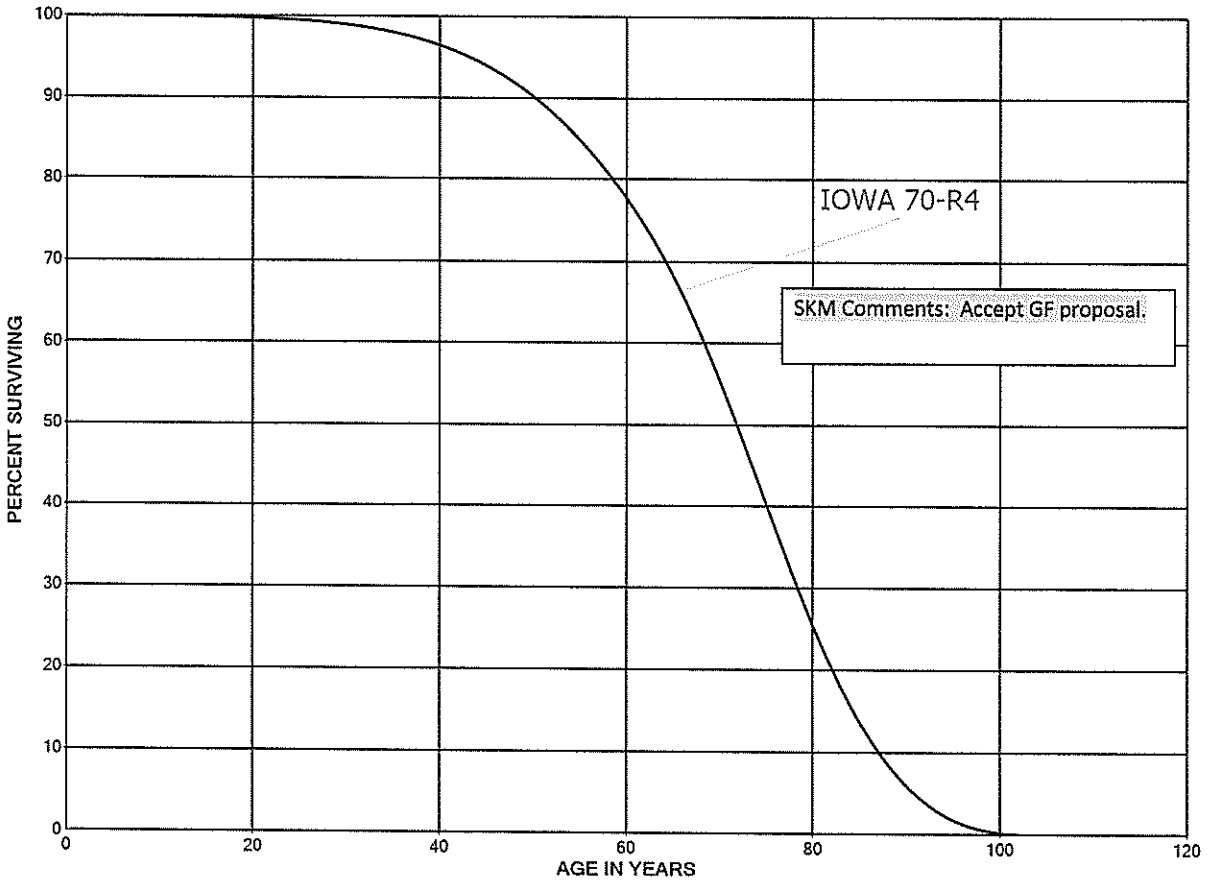
				EXISTING RATES		ALLIS PROPOSED ESTIMATES					SKM PROPOSED ESTIMATES				
				CALCULATED ANNUAL ACCRUAL				CALCULATED ANNUAL ACCRUAL					CALCULATED ANNUAL ACCRUAL		
	ACCOUNT	ORIGINAL COST	BOOK DEPRECIATION RESERVE	RATE	AMOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	RATE	AMOUNT	INCREASE/ (DECREASE)	SURVIVOR CURVE	NET SALVAGE PERCENT	RATE	AMOUNT	INCREASE/ (DECREASE)
	(1)	(2)	(3)	(4)	(5)=(2)x(4)	(8)	(9)	(10)	(11)	(12) = (11) - (7)	(8)	(9)	(10)	(11)	(12) = (11) - (7)
	TRANSMISSION PLANT														
365.20	RIGHTS OF WAY	348,971	97,151	1.52	5,304	70 R4	0	1.51	5,269	(35)	70 - R4	0.0	5,269	1.51	(35)
366.00	STRUCTURES AND IMPROVEMENTS	2,679	2,015	4.34	116	30 R3	0	2.69	72	(44)	30 - R3	0.0	72	2.69	(44)
367.00	MAINS - CATHODIC PROTECTION	91,687	35,352	4.08	3,741	25 R4	0	4.12	3,781	40	25 - R4	0.0	3,781	4.12	40
367.01	MAINS - STEEL	11,734,621	6,297,983	2.37	278,111	60 R3	(10)	2.48	291,246	13,135	70 - R3	1.2	199,842	1.70	(78,268)
369.00	MEASURING AND REGULATING STATION EQUIPMENT	1,690,856	1,476,675	4.28	72,369	45 R3	(5)	1.24	21,024	(51,345)	84 - R3	1.2	7,317	0.43	(65,052)
	TOTAL TRANSMISSION PLANT	**13,868,815**	**7,909,176**	**2.59**	**359,641**			**2.32**	**321,392**	**(38,249)**			**216,281**	**1.56**	**(143,360)**
	DISTRIBUTION PLANT														
374.02	LAND RIGHTS	5,167,861	462,594	1.37	70,800	70 R4	0	1.42	73,225	2,425	70 - R4	0.0	73,225	1.42	2,425
375.00	STRUCTURES AND IMPROVEMENTS	344,535	63,123	2.09	7,201	45 R4	0	2.23	7,685	484	45 - R4	0.0	7,685	2.23	484
376.00	MAINS - CATHODIC PROTECTION	1,938,059	615,129	3.86	74,809	25 R4	0	3.37	65,338	(9,471)	25 - R4	0.0	65,338	3.37	(9,471)
376.01	MAINS - STEEL	120,220,044	31,814,342	1.92	2,308,225	70 R3	(40)	1.97	2,365,040	56,815	70 - R3	1.2	1,507,159	1.25	(801,066)
376.02	MAINS - PLASTIC	307,453,801	97,768,807	1.91	5,872,368	70 R4	(40)	1.93	5,928,603	56,235	70 - R4	1.2	3,671,935	1.19	(2,200,433)
376.03	MAINS - ANODES	1,314,524	529,272	5.00	65,726	20 SQ	0	5.00	65,755	29	20 - SQ	0.0	65,755	5.00	29
376.04	MAINS - LEAK CLAMPS	3,732,998	2,523,276	5.00	186,650	20 SQ	0	5.00	186,788	138	20 - SQ	0.0	186,788	5.00	138
378.00	MEASURING AND REGULATING STATION EQUIPMENT	25,036,675	6,302,858	2.31	578,347	45 R3	(25)	2.89	722,347	144,000	84 - L1	0.0	289,997	1.16	(288,350)
379.00	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	16,507,221	1,848,479	2.13	351,604	45 R3	(5)	2.46	406,865	55,261	84 - L1	1.2	203,385	1.23	(148,219)
380.00	SERVICES	174,194,279	43,159,631	1.85	3,222,594	50 R1.5	(10)	2.25	3,921,642	699,048	50 - R1.5	1.2	3,402,225	1.95	179,631
381.00	METERS	52,101,972	13,054,519	3.37	1,755,836	30 R2	(5)	3.27	1,705,180	(50,656)	30 - R2	1.2	1,574,682	3.02	(181,155)
382.00	METER INSTALLATIONS	32,818,992	18,370,423	3.07	1,007,543	35 R3	(25)	3.45	1,132,328	124,785	35 - R3	1.2	702,737	2.14	(304,806)
383.00	HOUSE REGULATORS	11,368,908	3,527,516	2.73	310,371	35 R3	(10)	2.88	326,955	16,584	35 - R3	1.2	280,181	2.46	(30,191)
385.00	INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT	774,923	255,925	2.50	19,373	40 R3	0	2.27	17,587	(1,786)	84 - L1	1.2	8,221	1.06	(11,152)
	TOTAL DISTRIBUTION PLANT	**762,974,792**	**220,295,894**	**2.10**	**15,831,447**			**2.25**	**16,925,338**	**1,093,891**			**12,039,311**	**1.60**	**(3,792,136)**
	GENERAL PLANT														
390.00	STRUCTURES AND IMPROVEMENTS	7,911,346	3,797,330	2.59	204,904	35 R3	10	1.38	109,129	(95,775)	35 - R3	10.0	109,129	1.38	(95,775)
390.09	STRUCTURES AND IMPROVEMENTS - IMPROVEMENTS - LEASED	304,906	181,250	4.93	15,032	25 SQ	0	4.00	12,194	(2,838)	25 - SQ	0.0	12,194	4.00	(2,838)
391.00	OFFICE FURNITURE AND EQUIPMENT	460,929	84,839	5.88	27,103	20 SQ	0	5.00	23,047	(4,056)	20 - SQ	0.0	23,047	5.00	(4,056)
392.00	TRANSPORTATION EQUIPMENT	801,525	529,461	14.74	118,145	8 L3	20	2.41	19,335	(98,810)	8 - L3	20.0	19,335	2.41	(98,810)
393.00	STORES EQUIPMENT	3,271	3,271	2.50	82	25 SQ	0	-	0	(82)	25 - SQ	0.0	-	0.00	(82)
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	4,944,332	1,627,500	7.14	353,025	15 SQ	0	6.67	329,880	(23,145)	15 - SQ	0.0	329,880	6.67	(23,145)
396.00	POWER OPERATED EQUIPMENT	4,321	3,149	6.53	282	9 L2.5	5	6.32	273	(9)	9 - L2.5	5.0	273	6.32	(9)
396.03	POWER OPERATED EQUIPMENT - DITCHERS	19,946	12,798	6.53	1,302	9 L2.5	5	10.74	2,143	841	9 - L2.5	5.0	2,143	10.74	841
397.00	COMMUNICATION EQUIPMENT	124,208	64,239	9.09	11,290	15 SQ	0	6.67	8,280	(3,010)	15 - SQ	0.0	8,280	6.67	(3,010)
398.00	MISCELLANEOUS EQUIPMENT	1,418,784	877,000	7.14	101,301	15 SQ	0	6.67	94,638	(6,663)	15 - SQ	0.0	94,638	6.67	(6,663)
399.01	OTHER TANGIBLE PROPERTY - SERVERS	61,459	35,175	12.50	7,682	7 SQ	0	14.29	8,784	1,102	7 - SQ	0.0	8,784	14.29	1,102
399.06	OTHER TANGIBLE PROPERTY - PC HARDWARE	892,000	403,250	20.00	178,400	5 SQ	0	20.00	178,432	32	5 - SQ	0.0	178,432	20.00	32
	TOTAL GENERAL PLANT	**16,947,027**	**7,619,262**	**6.01**	**1,018,549**			**4.64**	**786,135**	**(232,414)**			**786,135**	**4.64**	**(232,414)**
	TOTAL DEPRECIABLE PLANT	**783,790,634**	**235,824,332**	**2.20**	**17,209,637**			**2.30**	**18,032,865**	**823,228**			**13,041,727**	**1.66**	**(4,167,909)**
	NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED														
302.00	FRANCHISES AND CONSENTS	241,284	241,284												
365.10	LAND AND LAND RIGHTS	729,629													
374.00	LAND AND LAND RIGHTS	6,559,337													
389.00	LAND AND LAND RIGHTS	2,238,965													
	TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED	**9,769,214**	**241,284**												
	TOTAL GAS PLANT	**793,559,849**	**236,065,616**												

* NEW ADDITIONS TO THIS ACCOUNT WILL UTILIZE A DEPRECIATION RATE OF 4.00%

EXHIBIT___(MJM-2)

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
SNAVELY KING MAJOROS & ASSOCIATES, INC.
SERVICE LIFE REVIEW AND RECOMMENDATIONS

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 365.20 RIGHTS OF WAY
SMOOTH SURVIVOR CURVE



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 365.20 RIGHTS OF WAY

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

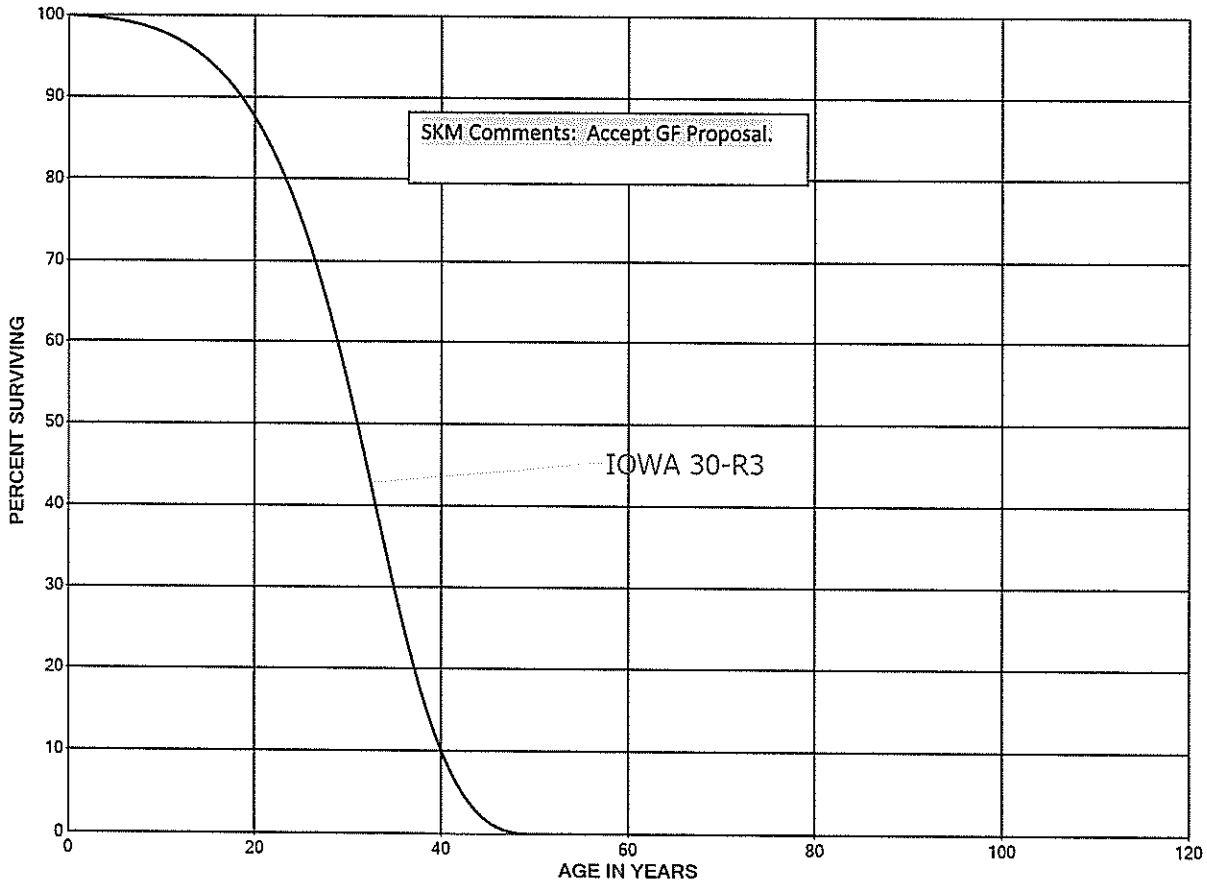
PLACEMENT BAND 1993-2000 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*

NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 366.00 STRUCTURES AND IMPROVEMENTS
SMOOTH SURVIVOR CURVE



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 366.00 STRUCTURES AND IMPROVEMENTS

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

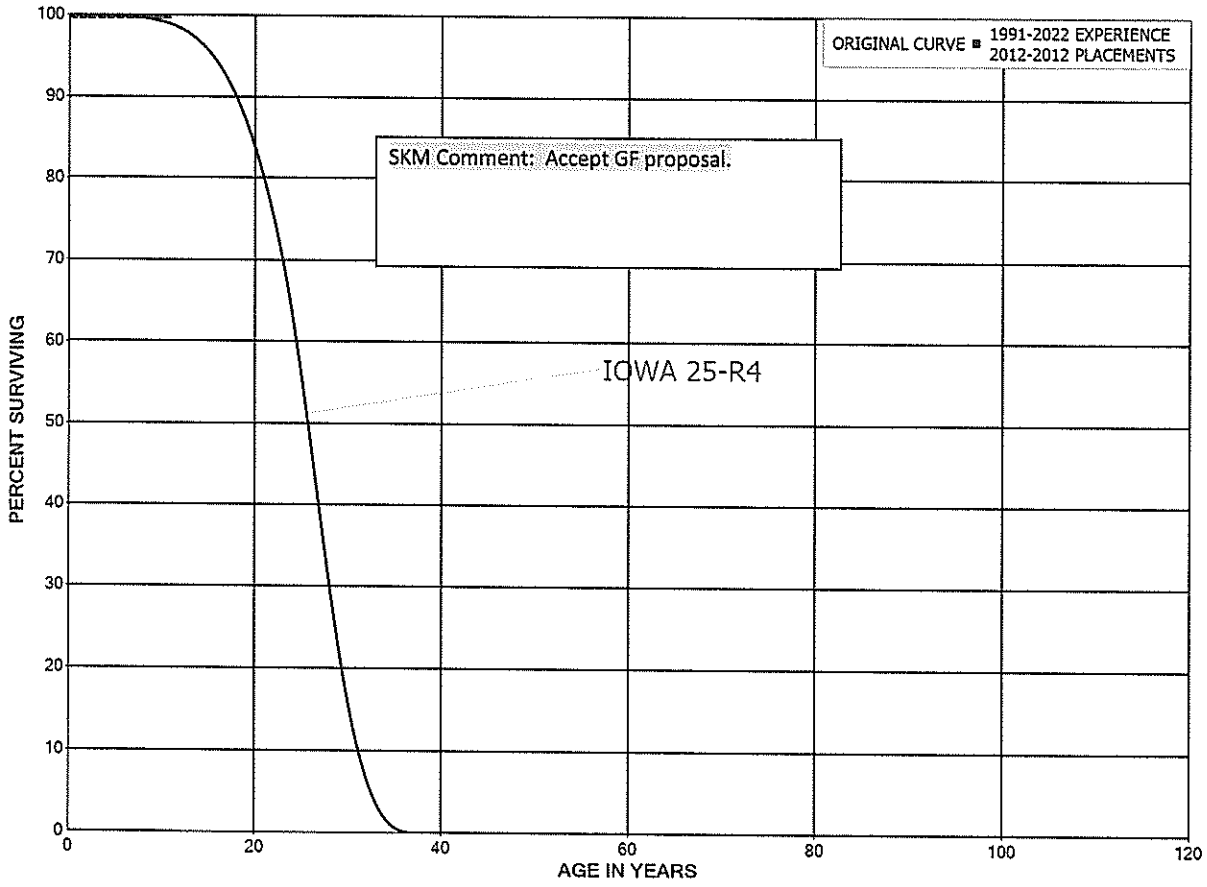
PLACEMENT BAND 1998-1998 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*

NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 367.00 MAINS - CATHODIC PROTECTION
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 367.00 MAINS - CATHODIC PROTECTION

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

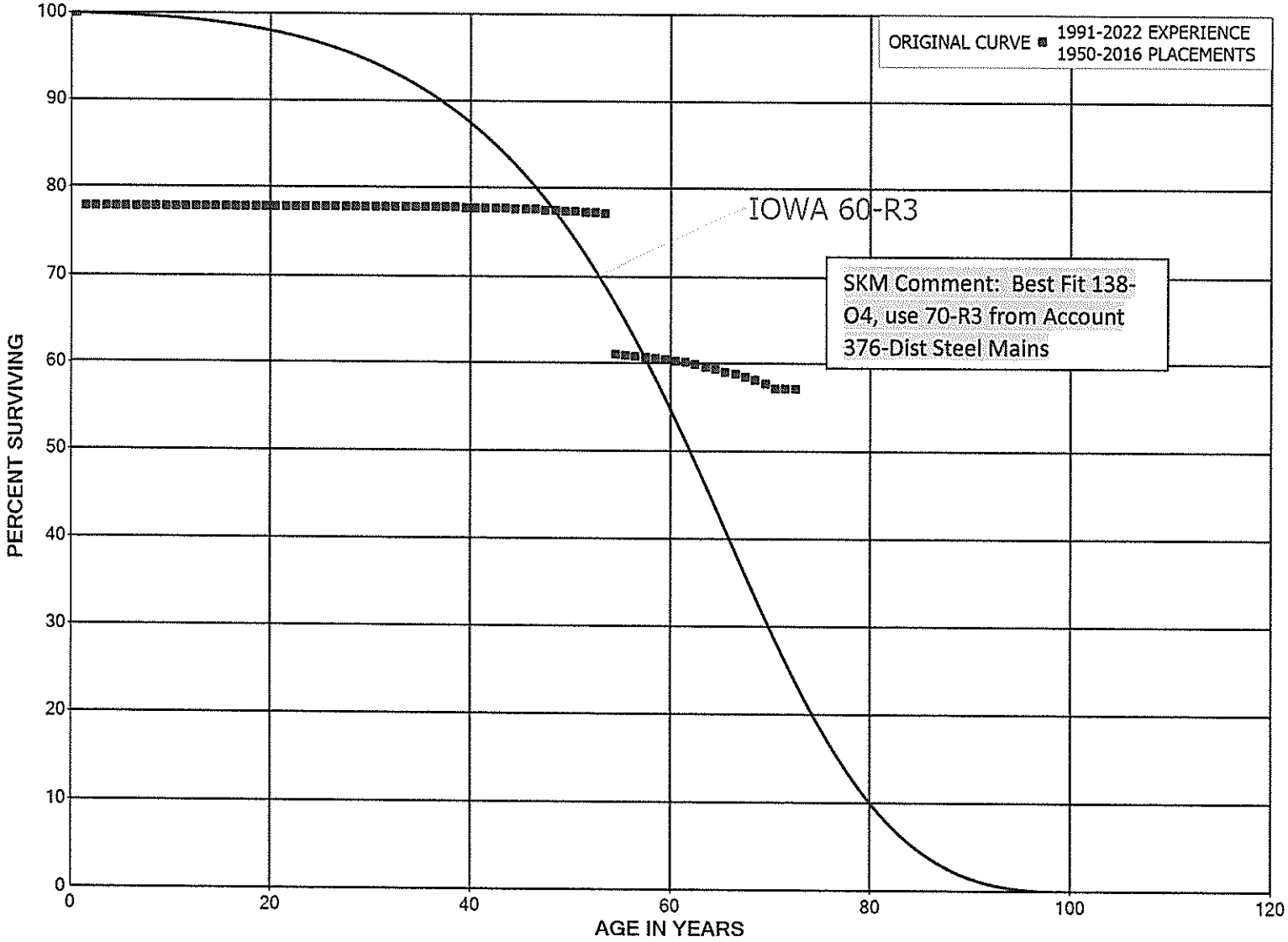
PLACEMENT BAND 2012-2012 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*

NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 367.01 MAINS - STEEL
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 367.01 MAINS - STEEL

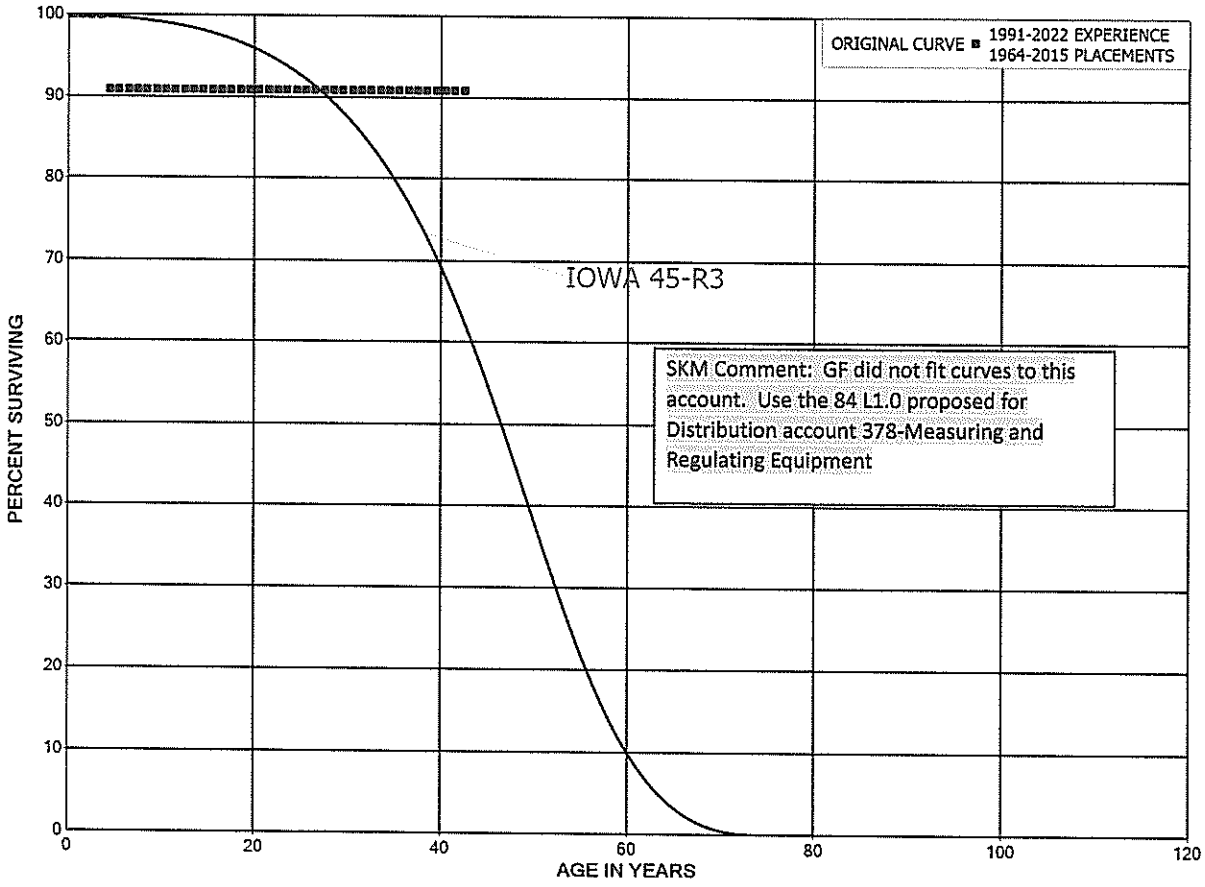
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2016 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
59.3-S0	14.05	0 - 72		NOT FITTED	
57.4-S0.5	15.63	0 - 72		NOT FITTED	
55.9-S1	17.46	0 - 72		NOT FITTED	
54.9-S1.5	19.12	0 - 72		NOT FITTED	
62.2-R0.5	11.20	0 - 72		NOT FITTED	
58.2-R1	12.86	0 - 72		NOT FITTED	
56.2-R1.5	14.81	0 - 72		NOT FITTED	
54.7-R2	17.13	0 - 72		NOT FITTED	
70.2-L0	11.96	0 - 72		NOT FITTED	
65.8-L0.5	13.23	0 - 72		NOT FITTED	
62.3-L1	14.81	0 - 72		NOT FITTED	
59.9-L1.5	16.44	0 - 72		NOT FITTED	
67.9-O1	10.22	0 - 72		NOT FITTED	
76.4-O2	10.22	0 - 72		NOT FITTED	
105.1-O3	9.86	0 - 72		NOT FITTED	
138.0-O4	9.70	0 - 72		NOT FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 369.00 MEASURING AND REGULATING STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 369.00 MEASURING AND REGULATING STATION EQUIPMENT

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

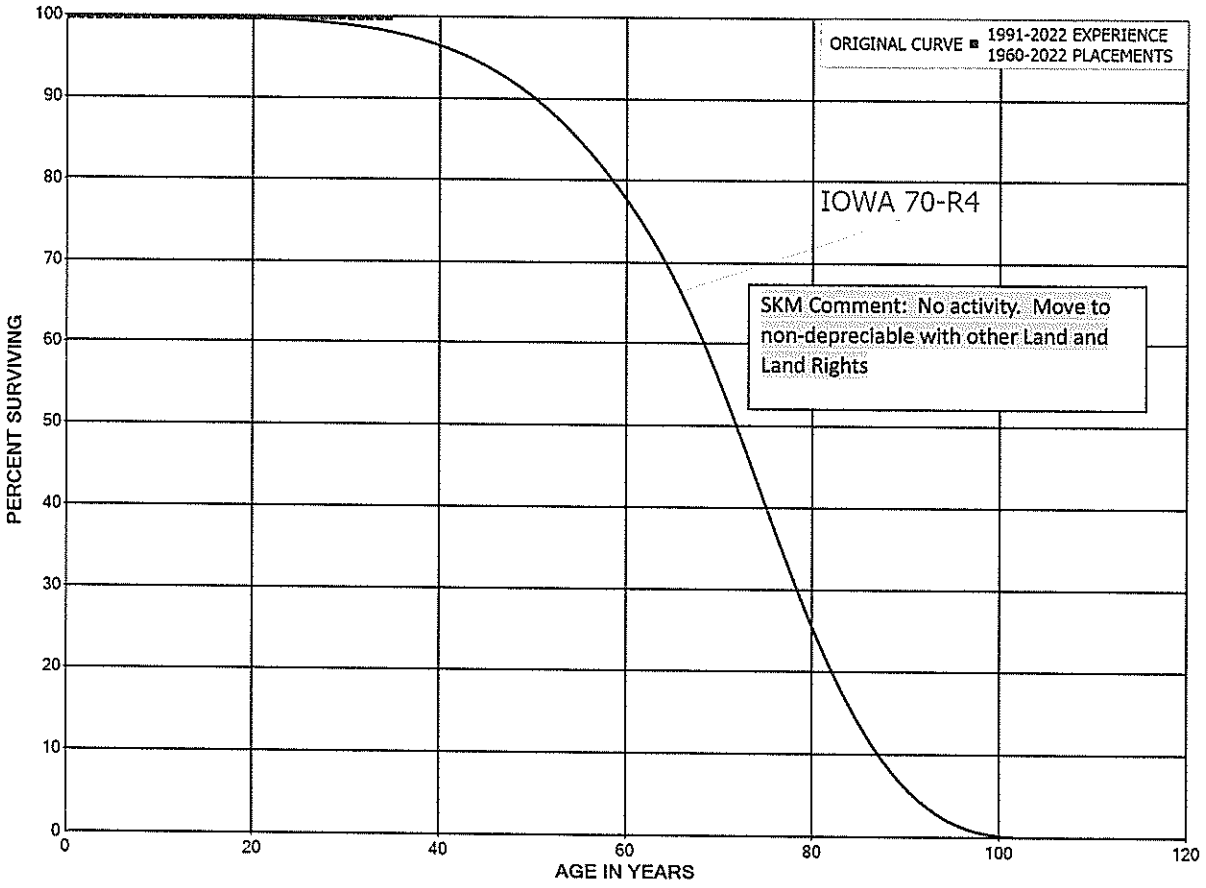
PLACEMENT BAND 1964-2015 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*

NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 374.02 LAND RIGHTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 374.02 LAND RIGHTS

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

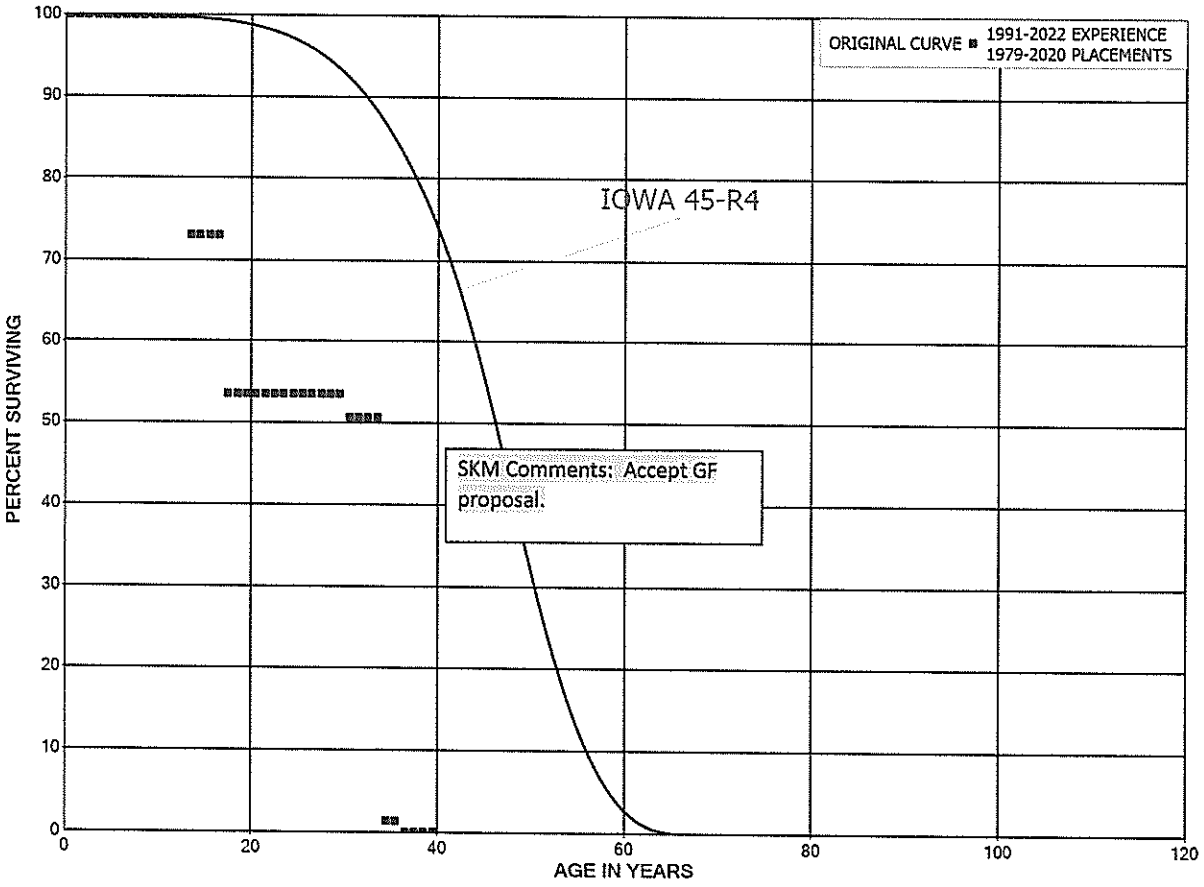
PLACEMENT BAND 1960-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*

NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 375.00 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 375.00 STRUCTURES AND IMPROVEMENTS

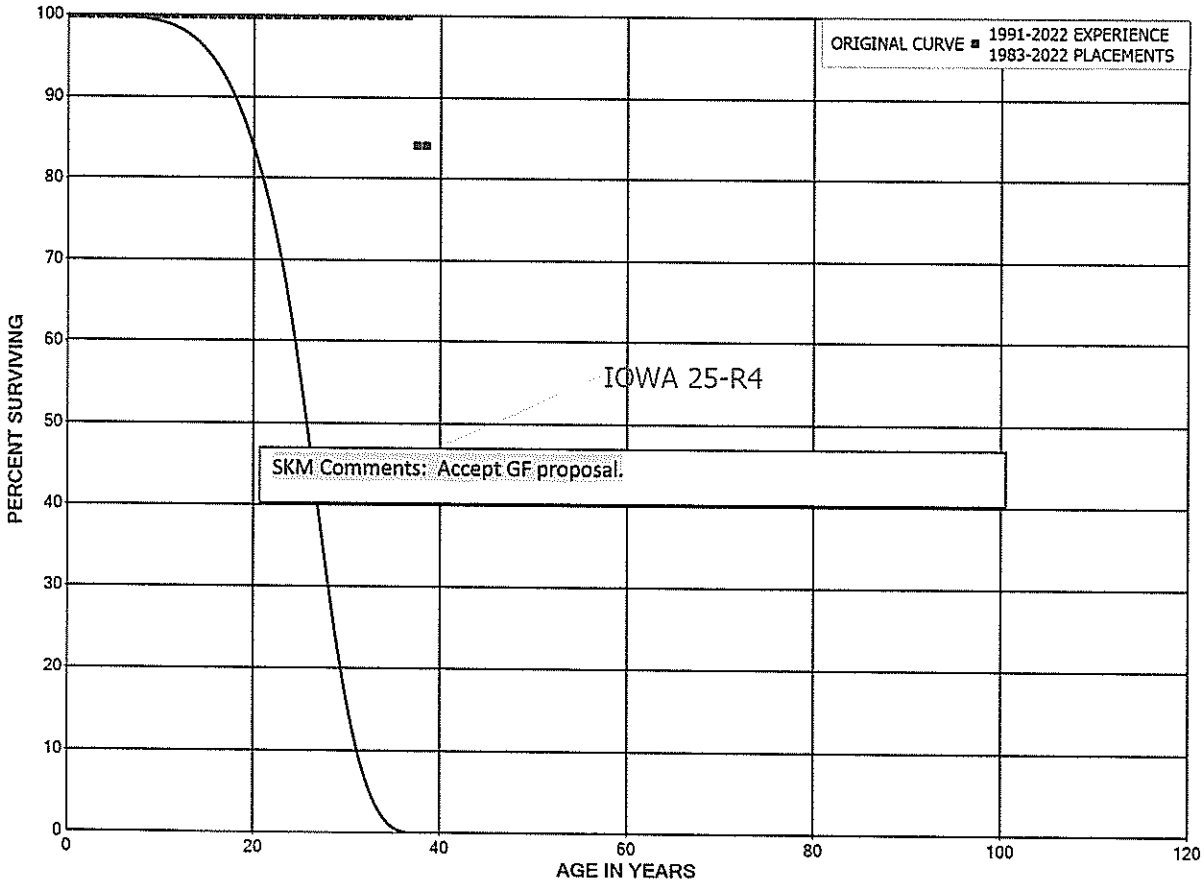
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1979-2020 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
26.3-S0	12.07	0 - 37		NOT FITTED	
25.9-S0.5	12.18	0 - 37		NOT FITTED	
25.5-S1	12.77	0 - 37		NOT FITTED	
25.3-S1.5	13.99	0 - 37		NOT FITTED	
26.9-R0.5	12.99	0 - 37		NOT FITTED	
25.9-R1	12.40	0 - 37		NOT FITTED	
25.5-R1.5	12.73	0 - 37		NOT FITTED	
25.2-R2	13.72	0 - 37		NOT FITTED	
29.9-L0	13.17	0 - 37		NOT FITTED	
28.6-L0.5	12.44	0 - 37		NOT FITTED	
27.5-L1	11.97	0 - 37		NOT FITTED	
26.8-L1.5	12.30	0 - 37		NOT FITTED	
26.3-L2	13.09	0 - 37		NOT FITTED	
28.4-O1	14.14	0 - 37		NOT FITTED	
31.9-O2	14.20	0 - 37		NOT FITTED	
42.3-O3	15.27	0 - 37		NOT FITTED	
54.5-O4	15.82	0 - 37		NOT FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 376.00 MAINS - CATHODIC PROTECTION
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 376.00 MAINS - CATHODIC PROTECTION

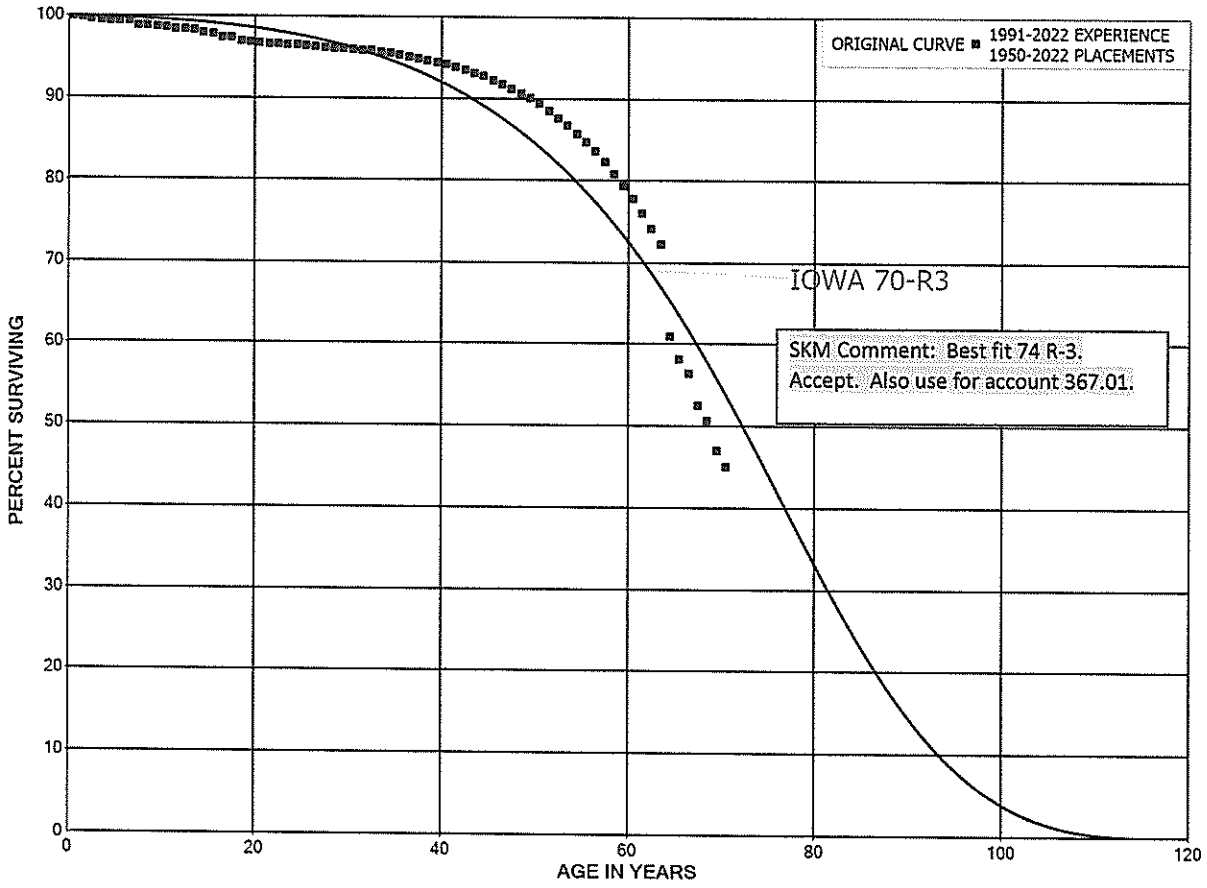
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1983-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
200.2-S0	1.37	0 - 34		NOT FITTED	
200.2-S0.5	0.82	0 - 34		NOT FITTED	
200.2-S1	0.27	0 - 34		NOT FITTED	
200.2-S1.5	0.14	0 - 34		NOT FITTED	
200.2-S2	0.02	0 - 34		NOT FITTED	
200.2-S2.5	0.01	0 - 34		NOT FITTED	
200.2-S3	0.00	0 - 34		NOT FITTED	
200.2-R0.5	3.82	0 - 34		NOT FITTED	
200.2-R1	2.74	0 - 34		NOT FITTED	
200.2-R1.5	1.94	0 - 34		NOT FITTED	
200.2-R2	1.14	0 - 34		NOT FITTED	
200.2-R2.5	0.70	0 - 34		NOT FITTED	
200.2-R3	0.26	0 - 34		NOT FITTED	
200.2-R4	0.02	0 - 34		NOT FITTED	
200.2-L0	3.11	0 - 34		NOT FITTED	
200.2-L0.5	2.10	0 - 34		NOT FITTED	
200.2-L1	1.08	0 - 34		NOT FITTED	
200.2-L1.5	0.64	0 - 34		NOT FITTED	
200.2-L2	0.19	0 - 34		NOT FITTED	
200.2-L2.5	0.10	0 - 34		NOT FITTED	
200.2-L3	0.01	0 - 34		NOT FITTED	
200.2-O1	4.90	0 - 34		NOT FITTED	
200.2-O2	5.51	0 - 34		NOT FITTED	
200.2-O3	8.05	0 - 34		NOT FITTED	
200.2-O4	10.83	0 - 34		NOT FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 376.01 MAINS - STEEL
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 376.01 MAINS - STEEL

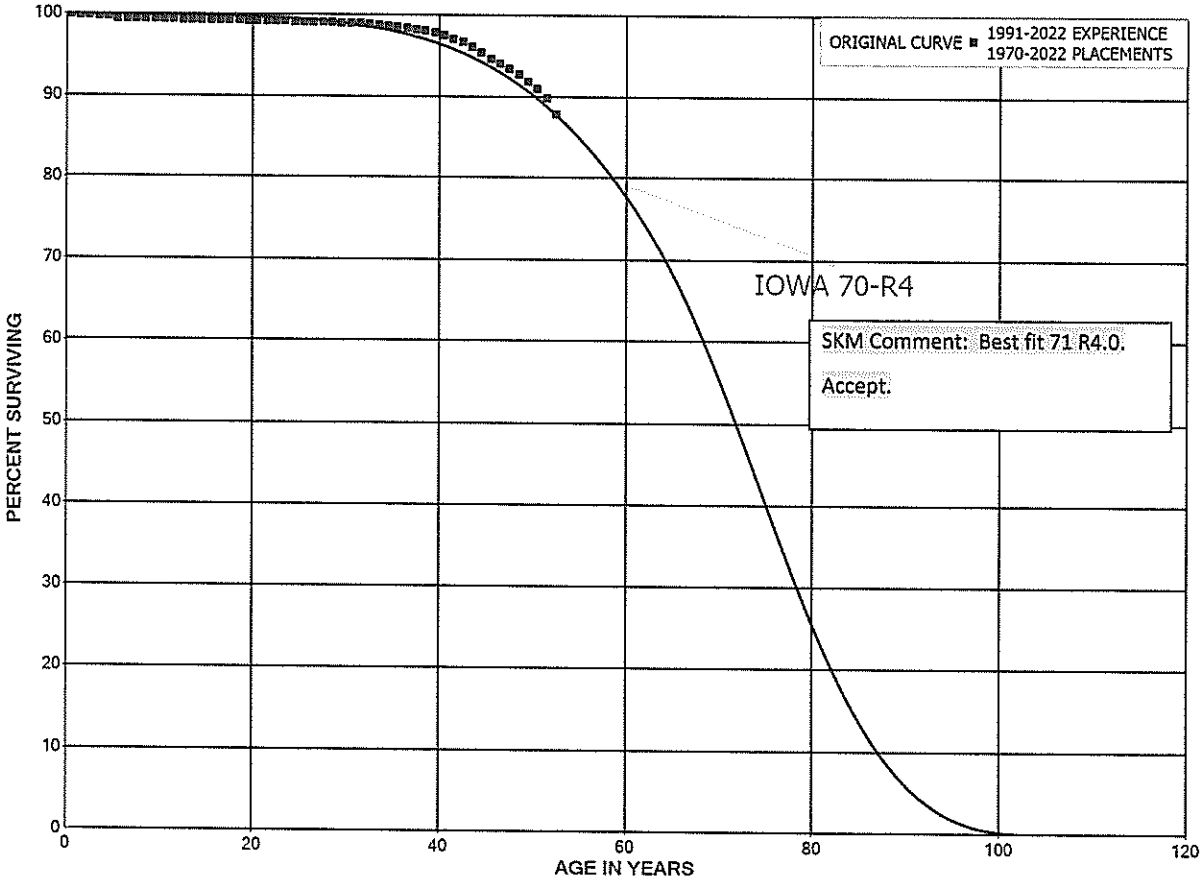
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
118.4-S0	4.30	0 - 66		NOT FITTED	
102.8-S0.5	3.82	0 - 66		NOT FITTED	
90.7-S1	3.27	0 - 66		NOT FITTED	
83.1-S1.5	2.91	0 - 66		NOT FITTED	
76.9-S2	2.87	0 - 66		NOT FITTED	
73.0-S2.5	2.94	0 - 66		NOT FITTED	
69.7-S3	3.59	0 - 66		NOT FITTED	
168.2-R0.5	5.48	0 - 66		NOT FITTED	
132.4-R1	5.18	0 - 66		NOT FITTED	
108.9-R1.5	4.71	0 - 66		NOT FITTED	
91.4-R2	3.87	0 - 66		NOT FITTED	
81.2-R2.5	3.12	0 - 66		NOT FITTED	
73.7-R3	2.43	0 - 66		NOT FITTED	
66.4-R4	3.12	0 - 66		NOT FITTED	
62.6-R5	6.72	0 - 66		NOT FITTED	
169.3-L0	4.86	0 - 66		NOT FITTED	
139.3-L0.5	4.44	0 - 66		NOT FITTED	
116.5-L1	3.75	0 - 66		NOT FITTED	
101.6-L1.5	3.30	0 - 66		NOT FITTED	
89.8-L2	2.78	0 - 66		NOT FITTED	
82.3-L2.5	2.62	0 - 66		NOT FITTED	
76.1-L3	2.96	0 - 66		NOT FITTED	
67.8-L4	4.25	0 - 66		NOT FITTED	
200.2-O1	5.53	0 - 66		NOT FITTED	
200.2-O2	5.45	0 - 66		NOT FITTED	
200.2-O3	7.43	0 - 66		NOT FITTED	
200.2-O4	11.40	0 - 66		NOT FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 376.02 MAINS - PLASTIC
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 376.02 MAINS - PLASTIC

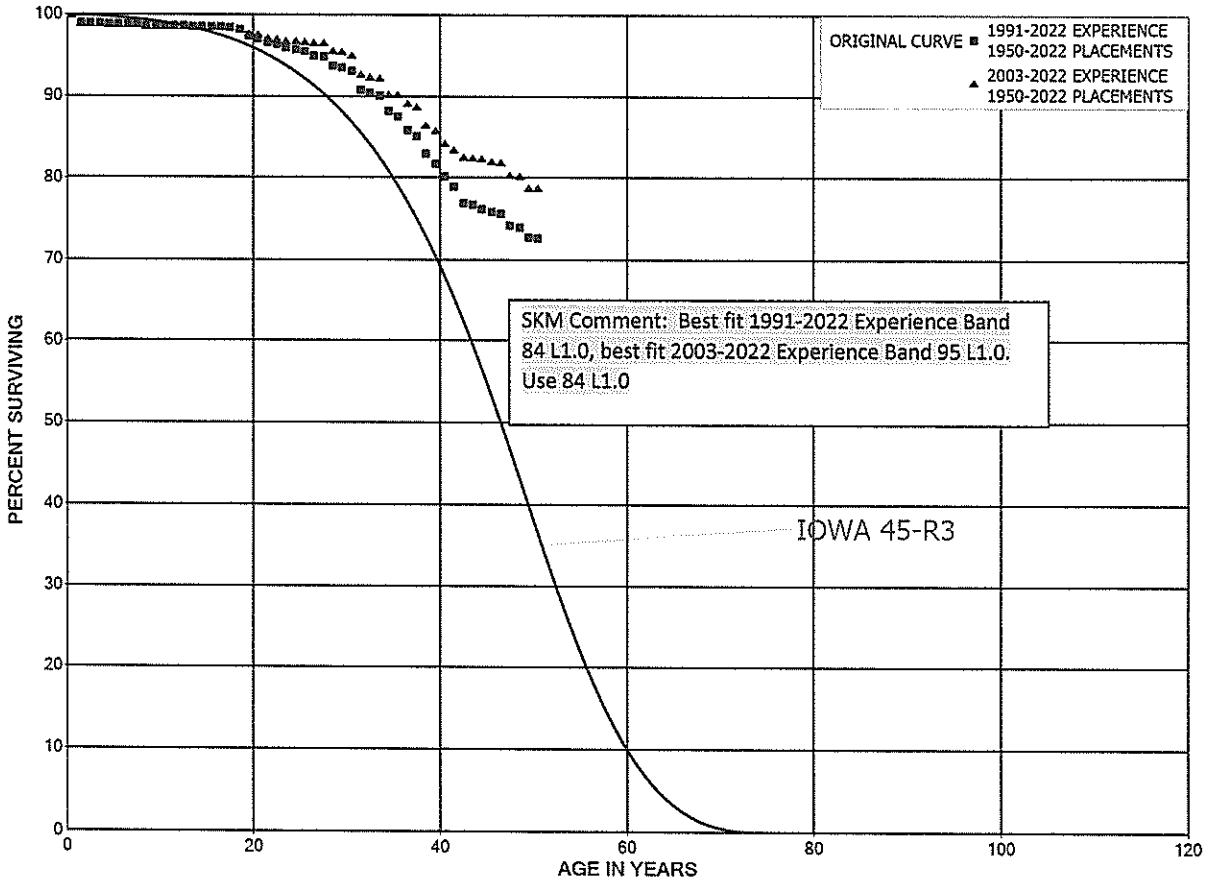
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1970-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
200.2-S0	1.26	0 - 52		NOT FITTED	
164.5-S0.5	1.19	0 - 52		NOT FITTED	
124.0-S1	0.92	0 - 52		NOT FITTED	
106.0-S1.5	0.81	0 - 52		NOT FITTED	
89.0-S2	0.66	0 - 52		NOT FITTED	
80.7-S2.5	0.63	0 - 52		NOT FITTED	
72.6-S3	0.87	0 - 52		NOT FITTED	
61.9-S4	1.71	0 - 52		NOT FITTED	
200.2-R0.5	3.60	0 - 52		NOT FITTED	
200.2-R1	2.26	0 - 52		NOT FITTED	
200.2-R1.5	1.58	0 - 52		NOT FITTED	
171.5-R2	1.46	0 - 52		NOT FITTED	
128.7-R2.5	1.30	0 - 52		NOT FITTED	
95.4-R3	0.92	0 - 52		NOT FITTED	
71.0-R4	0.57	0 - 52		NOT FITTED	
58.5-R5	1.80	0 - 52		NOT FITTED	
200.2-L0	3.12	0 - 52		NOT FITTED	
200.2-L0.5	1.74	0 - 52		NOT FITTED	
186.9-L1	1.22	0 - 52		NOT FITTED	
149.1-L1.5	1.09	0 - 52		NOT FITTED	
113.6-L2	0.86	0 - 52		NOT FITTED	
98.8-L2.5	0.73	0 - 52		NOT FITTED	
83.7-L3	0.61	0 - 52		NOT FITTED	
68.4-L4	0.95	0 - 52		NOT FITTED	
59.6-L5	1.89	0 - 52		NOT FITTED	
200.2-O1	5.07	0 - 52		NOT FITTED	
200.2-O2	5.96	0 - 52		NOT FITTED	
200.2-O3	9.68	0 - 52		NOT FITTED	
200.2-O4	13.69	0 - 52		NOT FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 378.00 MEASURING AND REGULATING STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 378.00 MEASURING AND REGULATING STATION EQUIPMENT

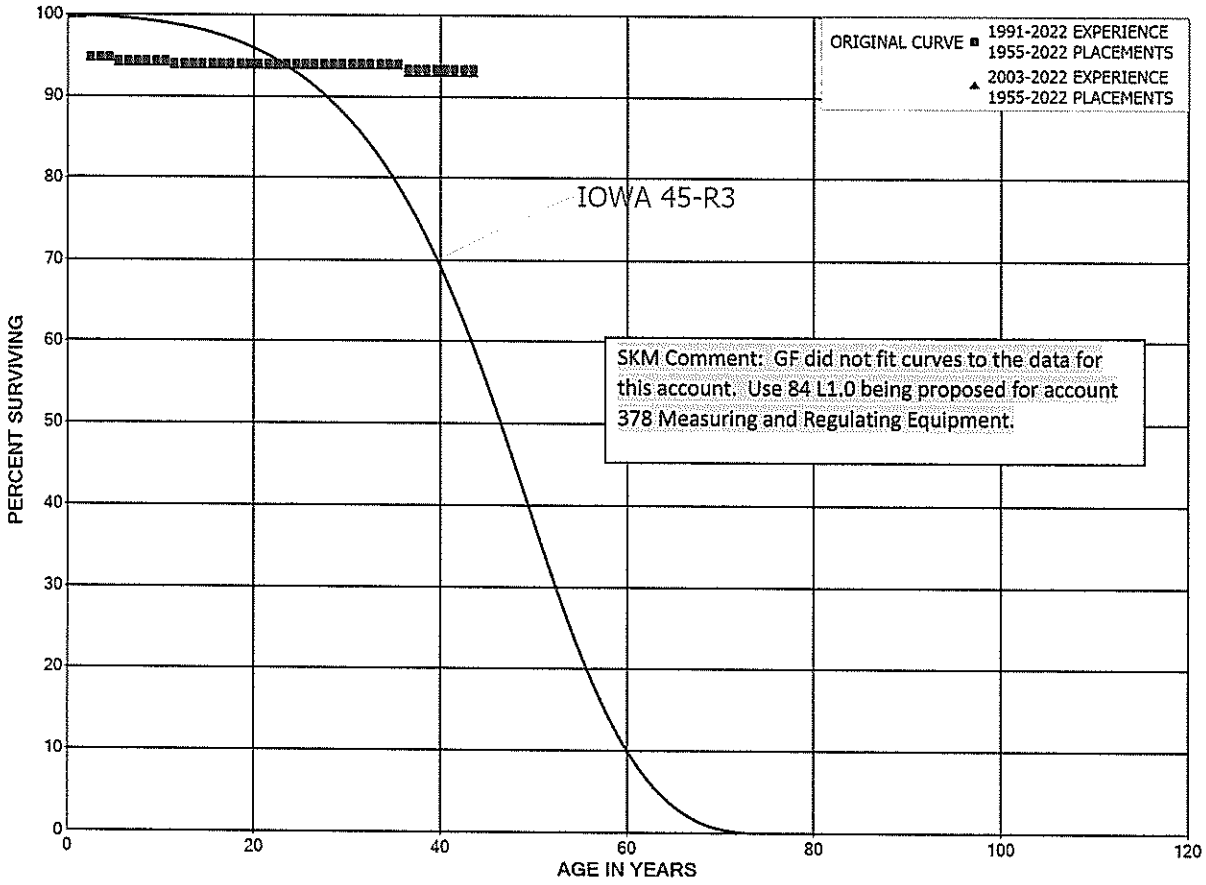
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
82.6-S0	2.51	0 - 58	NOT FITTED		
74.2-S0.5	1.95	0 - 58	NOT FITTED		
67.7-S1	2.04	0 - 58	NOT FITTED		
63.4-S1.5	2.92	0 - 58	NOT FITTED		
104.3-R0.5	4.55	0 - 58	NOT FITTED		
85.9-R1	3.92	0 - 58	NOT FITTED		
74.4-R1.5	3.12	0 - 58	NOT FITTED		
66.1-R2	2.32	0 - 58	NOT FITTED		
61.0-R2.5	2.71	0 - 58	NOT FITTED		
57.3-R3	4.25	0 - 58	NOT FITTED		
112.2-L0	3.51	0 - 58	NOT FITTED		
96.0-L0.5	2.76	0 - 58	NOT FITTED		
84.0-L1	1.82	0 - 58	NOT FITTED		
75.3-L1.5	1.92	0 - 58	NOT FITTED		
68.7-L2	3.03	0 - 58	NOT FITTED		
126.7-O1	4.86	0 - 58	NOT FITTED		
142.4-O2	4.85	0 - 58	NOT FITTED		
200.2-O3	4.81	0 - 58	NOT FITTED		
200.2-O4	5.68	0 - 58	NOT FITTED		

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 379.00 MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 378.00 MEASURING AND REGULATING STATION EQUIPMENT

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2022 002 EXPERIENCE BAND 2003-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
95.0-S0	1.80	0 - 58		NOT FITTED	
83.6-S0.5	1.43	0 - 58		NOT FITTED	
74.8-S1	1.72	0 - 58		NOT FITTED	
69.1-S1.5	2.50	0 - 58		NOT FITTED	
128.7-R0.5	3.47	0 - 58		NOT FITTED	
102.9-R1	3.03	0 - 58		NOT FITTED	
86.3-R1.5	2.44	0 - 58		NOT FITTED	
74.2-R2	1.70	0 - 58		NOT FITTED	
67.0-R2.5	1.89	0 - 58		NOT FITTED	
61.7-R3	3.20	0 - 58		NOT FITTED	
133.2-L0	2.56	0 - 58		NOT FITTED	
111.3-L0.5	2.03	0 - 58		NOT FITTED	
94.8-L1	1.35	0 - 58		NOT FITTED	
83.5-L1.5	1.58	0 - 58		NOT FITTED	
74.8-L2	2.72	0 - 58		NOT FITTED	
158.8-O1	3.67	0 - 58		NOT FITTED	
178.5-O2	3.66	0 - 58		NOT FITTED	
200.2-O3	3.96	0 - 58		NOT FITTED	
200.2-O4	7.23	0 - 58		NOT FITTED	

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 379.00 MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

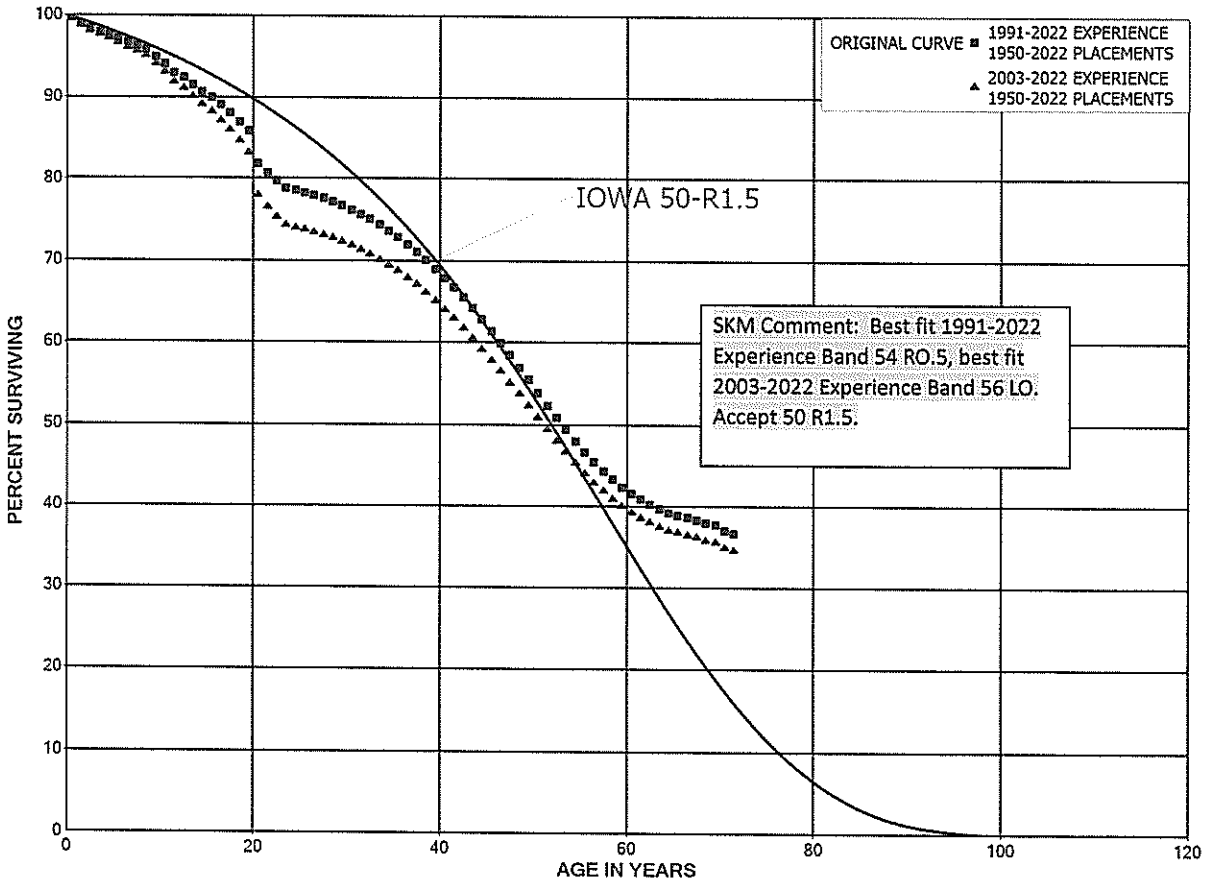
PLACEMENT BAND 1955-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*

NOT FITTED

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 380.00 SERVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 380.00 SERVICES

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
52.1-S0	3.24	0 - 68	52.9-S0	3.23	20 - 68
50.9-S0.5	5.25	0 - 68	52.0-S0.5	5.17	20 - 68
49.9-S1	7.51	0 - 68	51.2-S1	7.43	20 - 68
49.2-S1.5	9.72	0 - 68	50.6-S1.5	9.85	20 - 68
54.0-R0.5	1.76	0 - 68	53.4-R0.5	1.84	20 - 68
51.2-R1	2.89	0 - 68	51.4-R1	3.32	20 - 68
50.0-R1.5	5.43	0 - 68	50.5-R1.5	5.96	20 - 68
49.0-R2	8.27	0 - 68	49.8-R2	8.86	20 - 68
60.5-L0	2.16	0 - 68	60.5-L0	2.55	20 - 68
57.3-L0.5	2.37	0 - 68	58.0-L0.5	2.52	20 - 68
54.7-L1	3.89	0 - 68	55.9-L1	3.68	20 - 68
53.0-L1.5	5.92	0 - 68	54.5-L1.5	5.73	20 - 68
57.9-O1	3.32	0 - 68	56.5-O1	3.23	20 - 68
65.1-O2	3.34	0 - 68	63.5-O2	3.25	20 - 68
88.2-O3	4.63	0 - 68	84.8-O3	4.75	20 - 68
114.9-O4	5.26	0 - 68	109.5-O4	5.48	20 - 68

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 380.00 SERVICES

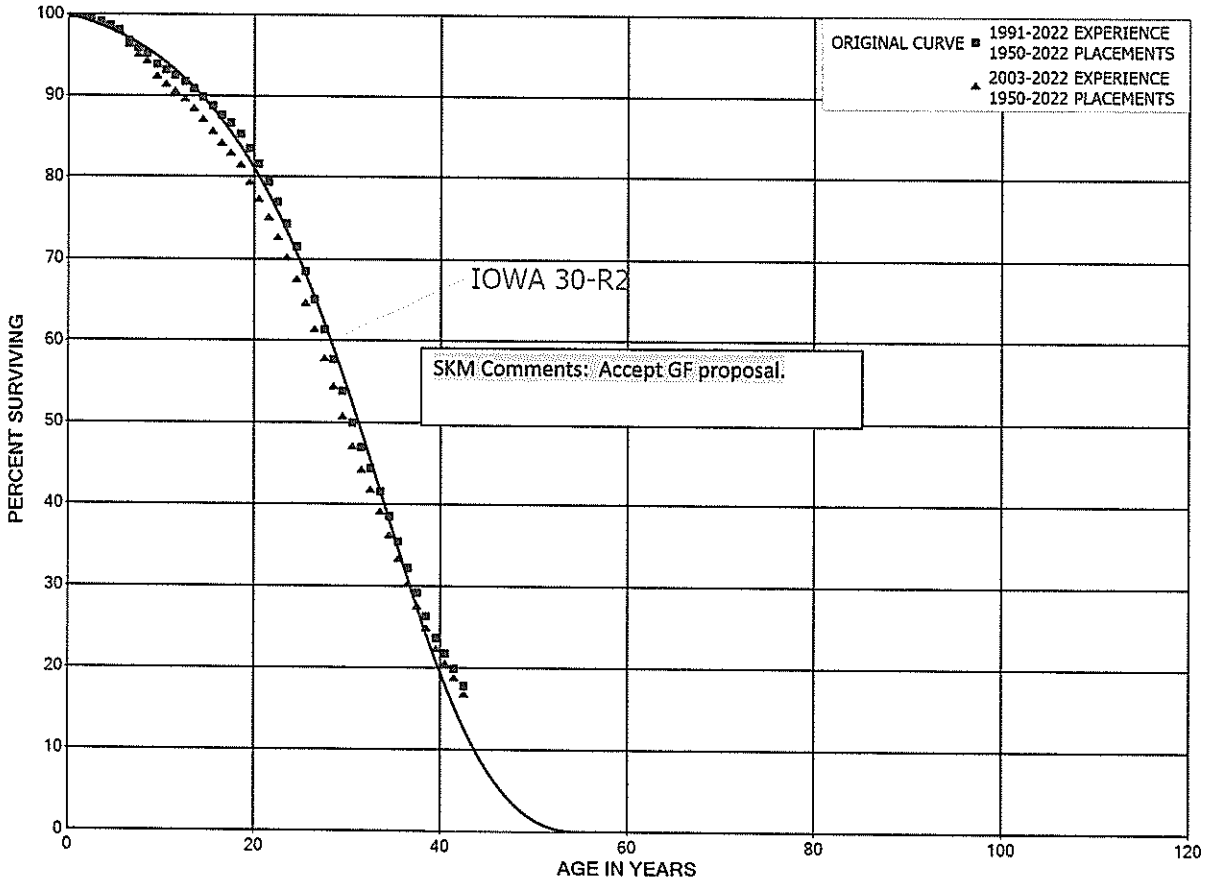
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2022 002 EXPERIENCE BAND 2003-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
49.1-S0	4.94	0 - 69	49.8-S0	5.18	18 - 69
48.2-S0.5	7.23	0 - 69	49.2-S0.5	7.46	18 - 69
47.6-S1	9.54	0 - 69	48.7-S1	9.87	18 - 69
47.2-S1.5	11.76	0 - 69	48.4-S1.5	12.32	18 - 69
50.3-R0.5	2.50	0 - 69	50.0-R0.5	2.94	18 - 69
48.4-R1	5.02	0 - 69	48.6-R1	5.68	18 - 69
47.6-R1.5	7.79	0 - 69	48.1-R1.5	8.58	18 - 69
47.0-R2	10.65	0 - 69	47.8-R2	11.49	18 - 69
55.8-L0	2.12	0 - 69	55.9-L0	2.44	18 - 69
53.3-L0.5	3.40	0 - 69	53.9-L0.5	3.62	18 - 69
51.3-L1	5.26	0 - 69	52.4-L1	5.30	18 - 69
50.1-L1.5	7.51	0 - 69	51.3-L1.5	7.72	18 - 69
52.9-O1	2.33	0 - 69	52.0-O1	2.14	18 - 69
59.5-O2	2.36	0 - 69	58.4-O2	2.16	18 - 69
78.9-O3	3.78	0 - 69	76.5-O3	3.71	18 - 69
101.8-O4	4.57	0 - 69	97.7-O4	4.60	18 - 69

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 381.00 METERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 381.00 METERS

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
32.6-S0	5.36	0 - 40	31.5-S0	5.98	19 - 40
31.6-S0.5	3.37	0 - 40	31.3-S0.5	4.11	19 - 40
30.8-S1	1.97	0 - 40	31.1-S1	2.24	19 - 40
30.3-S1.5	2.27	0 - 40	30.9-S1.5	0.63	19 - 40
29.9-S2	4.13	0 - 40	30.8-S2	2.48	19 - 40
34.1-R0.5	8.25	0 - 40	31.2-R0.5	7.43	19 - 40
32.0-R1	5.68	0 - 40	30.5-R1	5.06	19 - 40
30.9-R1.5	3.01	0 - 40	30.3-R1.5	2.77	19 - 40
30.1-R2	1.13	0 - 40	30.1-R2	1.44	19 - 40
29.8-R2.5	3.12	0 - 40	30.1-R2.5	3.51	19 - 40
29.4-R3	6.03	0 - 40	30.1-R3	6.34	19 - 40
38.5-L0	8.49	0 - 40	35.2-L0	9.02	19 - 40
36.1-L0.5	6.80	0 - 40	34.3-L0.5	7.76	19 - 40
34.2-L1	5.22	0 - 40	33.5-L1	6.49	19 - 40
33.0-L1.5	3.32	0 - 40	33.1-L1.5	4.37	19 - 40
32.0-L2	2.68	0 - 40	32.7-L2	2.41	19 - 40
31.2-L2.5	3.28	0 - 40	32.1-L2.5	1.33	19 - 40
30.5-L3	5.28	0 - 40	31.7-L3	3.68	19 - 40
37.2-O1	10.29	0 - 40	32.3-O1	9.69	19 - 40
41.8-O2	10.29	0 - 40	36.3-O2	9.74	19 - 40
57.4-O3	11.38	0 - 40	47.5-O3	11.51	19 - 40
75.3-O4	11.89	0 - 40	NOT FITTED		

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 381.00 METERS

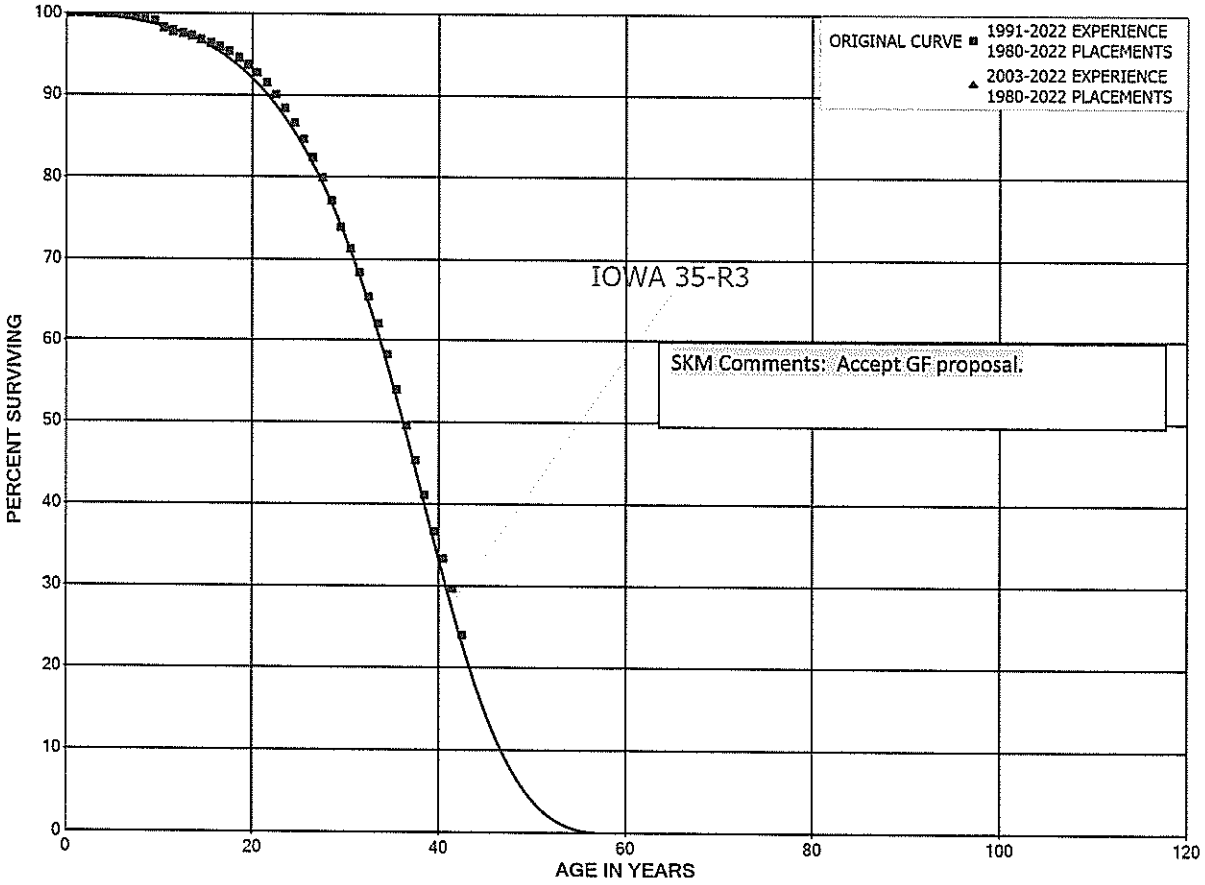
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1950-2022 002 EXPERIENCE BAND 2003-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
30.7-S0	3.83	0 - 40	30.3-S0	4.54	16 - 40
29.9-S0.5	1.94	0 - 40	30.1-S0.5	2.48	16 - 40
29.3-S1	2.06	0 - 40	29.9-S1	0.82	16 - 40
29.0-S1.5	3.67	0 - 40	29.7-S1.5	2.38	16 - 40
31.8-R0.5	6.68	0 - 40	30.1-R0.5	6.26	16 - 40
30.2-R1	3.90	0 - 40	29.4-R1	3.58	16 - 40
29.4-R1.5	1.29	0 - 40	29.2-R1.5	1.25	16 - 40
28.8-R2	2.29	0 - 40	29.1-R2	2.31	16 - 40
28.6-R2.5	5.01	0 - 40	29.1-R2.5	5.23	16 - 40
35.6-L0	7.24	0 - 40	33.9-L0	8.05	16 - 40
33.7-L0.5	5.53	0 - 40	32.9-L0.5	6.56	16 - 40
32.2-L1	4.04	0 - 40	32.2-L1	5.14	16 - 40
31.2-L1.5	2.61	0 - 40	31.6-L1.5	2.97	16 - 40
30.4-L2	3.25	0 - 40	31.2-L2	1.98	16 - 40
29.8-L2.5	4.61	0 - 40	30.7-L2.5	3.33	16 - 40
34.1-O1	9.00	0 - 40	31.2-O1	8.84	16 - 40
38.4-O2	9.04	0 - 40	35.1-O2	8.93	16 - 40
52.0-O3	10.44	0 - 40	45.8-O3	10.93	16 - 40
67.7-O4	11.10	0 - 40	58.3-O4	11.85	16 - 40

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 382.00 METER INSTALLATIONS
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 382.00 METER INSTALLATIONS

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1980-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
44.0-S0	8.72	0 - 42	39.0-S0	8.89	25 - 42
41.3-S0.5	7.08	0 - 42	38.2-S0.5	7.50	25 - 42
39.2-S1	5.24	0 - 42	37.6-S1	6.09	25 - 42
37.8-S1.5	3.48	0 - 42	37.1-S1.5	4.37	25 - 42
36.7-S2	1.82	0 - 42	36.7-S2	2.64	25 - 42
35.9-S2.5	1.28	0 - 42	36.3-S2.5	0.90	25 - 42
35.3-S3	2.84	0 - 42	36.0-S3	1.99	25 - 42
34.5-S4	7.47	0 - 42	35.5-S4	8.32	25 - 42
49.1-R0.5	11.55	0 - 42	38.9-R0.5	10.08	25 - 42
43.5-R1	9.92	0 - 42	37.2-R1	8.37	25 - 42
40.2-R1.5	7.91	0 - 42	36.5-R1.5	6.58	25 - 42
37.9-R2	5.51	0 - 42	35.9-R2	4.66	25 - 42
36.5-R2.5	3.07	0 - 42	35.6-R2.5	2.32	25 - 42
35.5-R3	0.63	0 - 42	35.3-R3	0.53	25 - 42
34.6-R4	4.67	0 - 42	35.1-R4	5.69	25 - 42
34.3-R5	10.47	0 - 42	35.1-R5	13.48	25 - 42
55.5-L0	10.78	0 - 42	NOT FITTED		
50.1-L0.5	9.40	0 - 42	43.1-L0.5	9.93	25 - 42
46.0-L1	7.86	0 - 42	41.7-L1	9.00	25 - 42
43.0-L1.5	6.04	0 - 42	40.6-L1.5	7.29	25 - 42
40.7-L2	4.08	0 - 42	39.8-L2	5.64	25 - 42
38.9-L2.5	2.34	0 - 42	38.7-L2.5	3.50	25 - 42
37.5-L3	1.70	0 - 42	37.9-L3	1.87	25 - 42
35.4-L4	4.99	0 - 42	36.2-L4	5.47	25 - 42
34.6-L5	9.33	0 - 42	35.6-L5	11.57	25 - 42
56.8-O1	12.52	0 - 42	NOT FITTED		
63.8-O2	12.50	0 - 42	NOT FITTED		
90.8-O3	12.86	0 - 42	NOT FITTED		
121.4-O4	13.04	0 - 42	NOT FITTED		

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 382.00 METER INSTALLATIONS

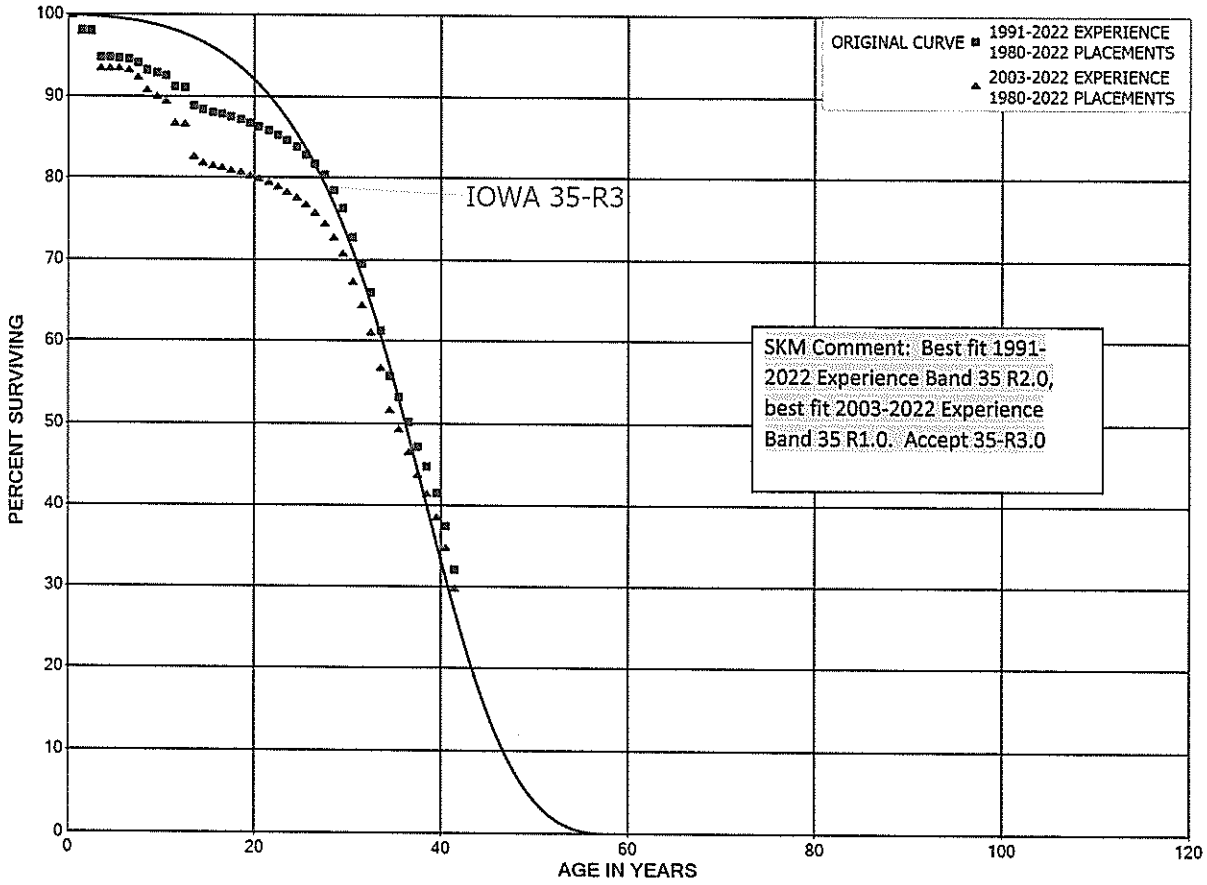
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1980-2022 002 EXPERIENCE BAND 2003-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
43.8-S0	8.60	0 - 42	38.8-S0	8.79	25 - 42
41.1-S0.5	6.94	0 - 42	38.1-S0.5	7.42	25 - 42
39.0-S1	5.09	0 - 42	37.5-S1	6.01	25 - 42
37.6-S1.5	3.33	0 - 42	37.0-S1.5	4.27	25 - 42
36.5-S2	1.78	0 - 42	36.6-S2	2.55	25 - 42
35.8-S2.5	1.45	0 - 42	36.3-S2.5	0.90	25 - 42
35.2-S3	3.05	0 - 42	36.0-S3	2.04	25 - 42
34.4-S4	7.69	0 - 42	35.4-S4	8.50	25 - 42
48.7-R0.5	11.40	0 - 42	38.8-R0.5	10.00	25 - 42
43.2-R1	9.75	0 - 42	37.1-R1	8.29	25 - 42
40.0-R1.5	7.74	0 - 42	36.4-R1.5	6.48	25 - 42
37.8-R2	5.37	0 - 42	35.8-R2	4.54	25 - 42
36.4-R2.5	2.90	0 - 42	35.5-R2.5	2.18	25 - 42
35.4-R3	0.53	0 - 42	35.3-R3	0.54	25 - 42
34.5-R4	4.89	0 - 42	35.1-R4	5.73	25 - 42
34.2-R5	10.69	0 - 42	35.1-R5	13.52	25 - 42
55.1-L0	10.67	0 - 42	NOT FITTED		
49.8-L0.5	9.28	0 - 42	43.0-L0.5	9.87	25 - 42
45.7-L1	7.73	0 - 42	41.6-L1	8.94	25 - 42
42.7-L1.5	5.89	0 - 42	40.5-L1.5	7.23	25 - 42
40.5-L2	3.98	0 - 42	39.7-L2	5.58	25 - 42
38.7-L2.5	2.29	0 - 42	38.7-L2.5	3.45	25 - 42
37.4-L3	1.83	0 - 42	37.9-L3	1.85	25 - 42
35.3-L4	5.18	0 - 42	36.2-L4	5.52	25 - 42
34.5-L5	9.53	0 - 42	35.6-L5	11.61	25 - 42
56.2-O1	12.38	0 - 42	NOT FITTED		
63.2-O2	12.38	0 - 42	NOT FITTED		
89.9-O3	12.75	0 - 42	NOT FITTED		
120.1-O4	12.93	0 - 42	NOT FITTED		

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 383.00 HOUSE REGULATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 383.00 HOUSE REGULATORS

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1980-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
40.0-S0	5.81	0 - 42	40.3-S0	8.09	23 - 42
38.0-S0.5	4.97	0 - 42	39.2-S0.5	6.64	23 - 42
36.5-S1	4.89	0 - 42	38.3-S1	5.14	23 - 42
35.4-S1.5	5.26	0 - 42	37.6-S1.5	3.44	23 - 42
34.6-S2	6.40	0 - 42	37.0-S2	1.99	23 - 42
43.3-R0.5	7.51	0 - 42	40.7-R0.5	9.54	23 - 42
39.2-R1	5.81	0 - 42	38.4-R1	7.80	23 - 42
37.0-R1.5	4.19	0 - 42	37.3-R1.5	5.95	23 - 42
35.4-R2	3.47	0 - 42	36.5-R2	4.02	23 - 42
34.4-R2.5	4.26	0 - 42	36.0-R2.5	1.98	23 - 42
33.7-R3	6.35	0 - 42	35.6-R3	1.97	23 - 42
49.2-L0	7.47	0 - 42	47.2-L0	10.08	23 - 42
45.1-L0.5	6.49	0 - 42	44.9-L0.5	9.05	23 - 42
41.9-L1	5.89	0 - 42	43.1-L1	8.01	23 - 42
39.7-L1.5	5.18	0 - 42	41.5-L1.5	6.17	23 - 42
37.9-L2	5.64	0 - 42	40.4-L2	4.43	23 - 42
36.5-L2.5	6.17	0 - 42	39.1-L2.5	2.52	23 - 42
49.0-O1	8.69	0 - 42	44.1-O1	10.91	23 - 42
55.1-O2	8.69	0 - 42	49.6-O2	10.91	23 - 42
77.6-O3	9.21	0 - 42	NOT FITTED		
103.2-O4	9.46	0 - 42	NOT FITTED		

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 383.00 HOUSE REGULATORS

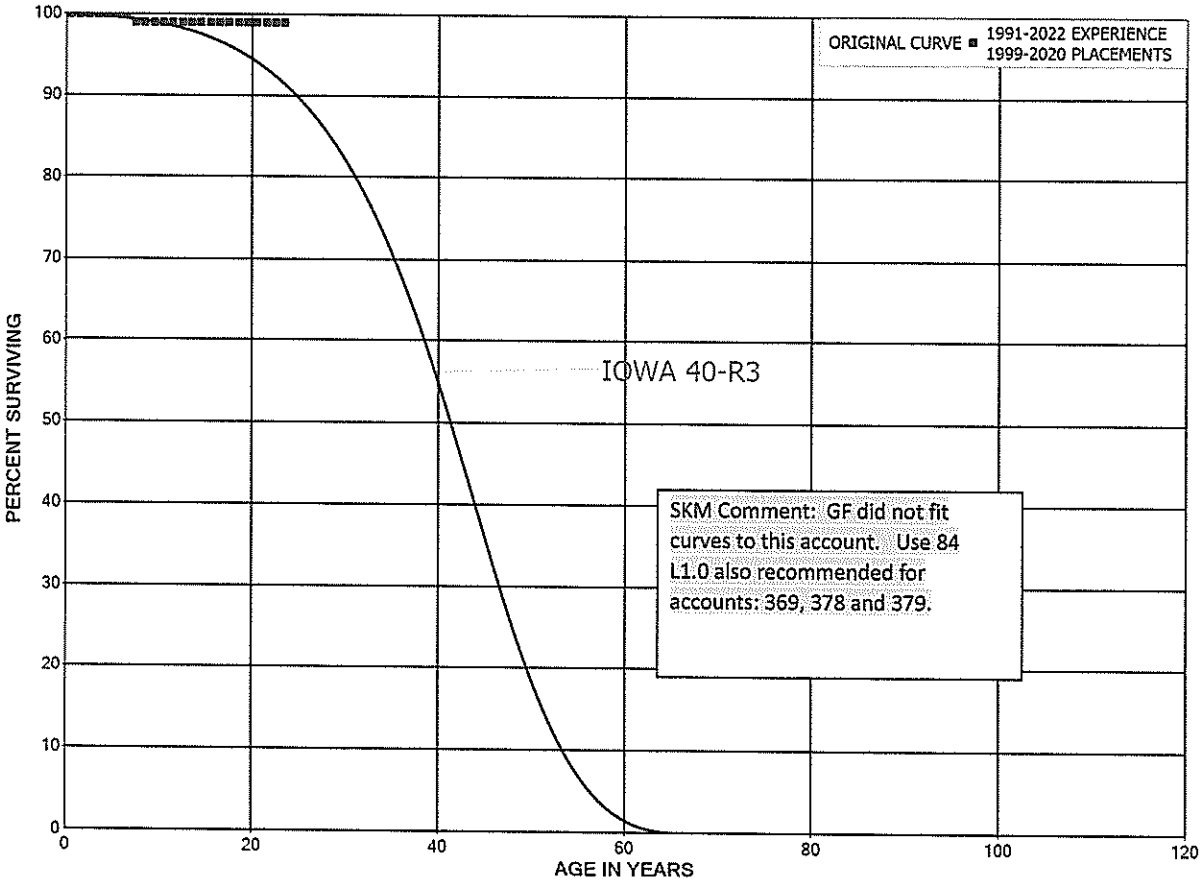
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1980-2022 002 EXPERIENCE BAND 2003-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
35.3-S0	5.00	0 - 42	36.4-S0	5.26	13 - 42
34.1-S0.5	5.46	0 - 42	35.3-S0.5	4.96	13 - 42
33.1-S1	6.82	0 - 42	34.5-S1	5.64	13 - 42
32.5-S1.5	8.22	0 - 42	33.8-S1.5	6.95	13 - 42
37.1-R0.5	5.11	0 - 42	37.3-R0.5	6.15	13 - 42
34.6-R1	3.91	0 - 42	35.1-R1	4.51	13 - 42
33.3-R1.5	4.13	0 - 42	34.1-R1.5	3.88	13 - 42
32.3-R2	5.99	0 - 42	33.3-R2	5.01	13 - 42
42.0-L0	5.85	0 - 42	42.8-L0	6.95	13 - 42
39.3-L0.5	5.46	0 - 42	40.4-L0.5	6.14	13 - 42
37.1-L1	5.83	0 - 42	38.5-L1	5.83	13 - 42
35.6-L1.5	6.50	0 - 42	37.1-L1.5	5.82	13 - 42
40.8-O1	6.56	0 - 42	40.5-O1	7.80	13 - 42
45.9-O2	6.57	0 - 42	45.6-O2	7.81	13 - 42
63.4-O3	7.41	0 - 42	62.4-O3	8.78	13 - 42
83.4-O4	7.80	0 - 42	81.7-O4	9.23	13 - 42

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 385.00 INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 385.00 INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT

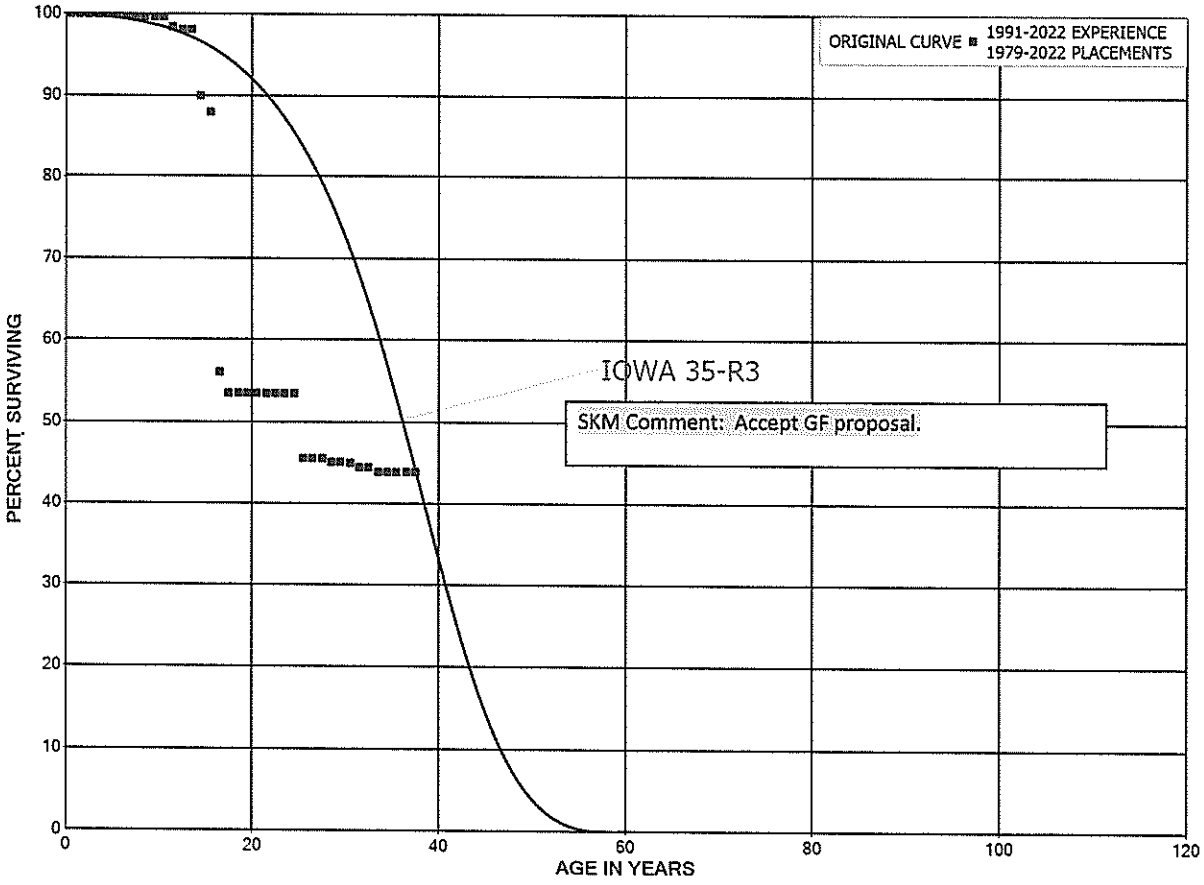
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1999-2020 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
NOT FITTED					

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 390.00 STRUCTURES AND IMPROVEMENTS

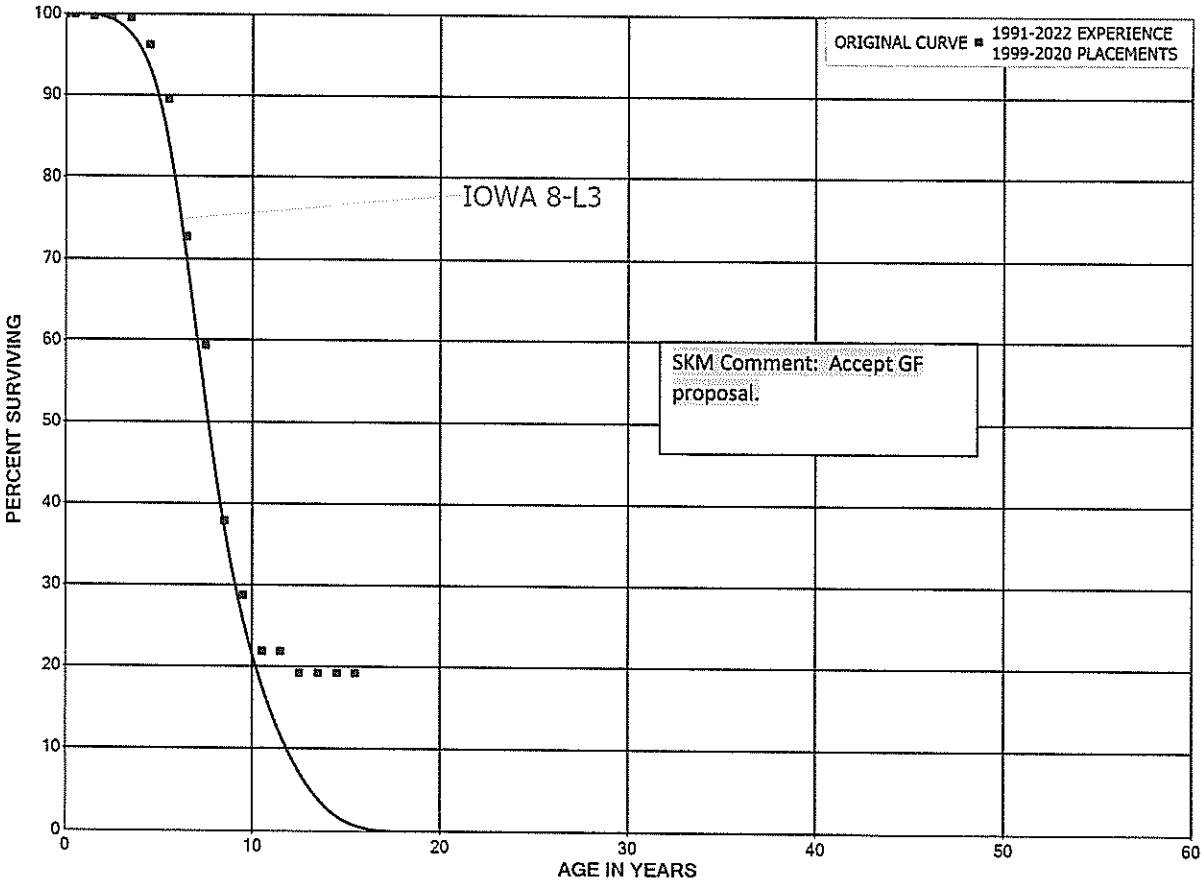
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1979-2022 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
28.2-S0	10.48	0 - 38	NOT FITTED		
27.6-S0.5	11.30	0 - 38	NOT FITTED		
27.2-S1	12.48	0 - 38	NOT FITTED		
26.9-S1.5	14.19	0 - 38	NOT FITTED		
29.1-R0.5	11.10	0 - 38	NOT FITTED		
27.8-R1	11.59	0 - 38	NOT FITTED		
27.2-R1.5	12.78	0 - 38	NOT FITTED		
26.7-R2	14.47	0 - 38	NOT FITTED		
32.5-L0	10.13	0 - 38	NOT FITTED		
30.9-L0.5	9.75	0 - 38	NOT FITTED		
29.6-L1	9.69	0 - 38	NOT FITTED		
28.8-L1.5	10.64	0 - 38	NOT FITTED		
28.1-L2	11.92	0 - 38	NOT FITTED		
31.0-O1	11.24	0 - 38	NOT FITTED		
34.8-O2	11.22	0 - 38	NOT FITTED		
46.8-O3	11.54	0 - 38	NOT FITTED		
60.7-O4	11.81	0 - 38	NOT FITTED		

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 392.00 TRANSPORTATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 392.00 TRANSPORTATION EQUIPMENT

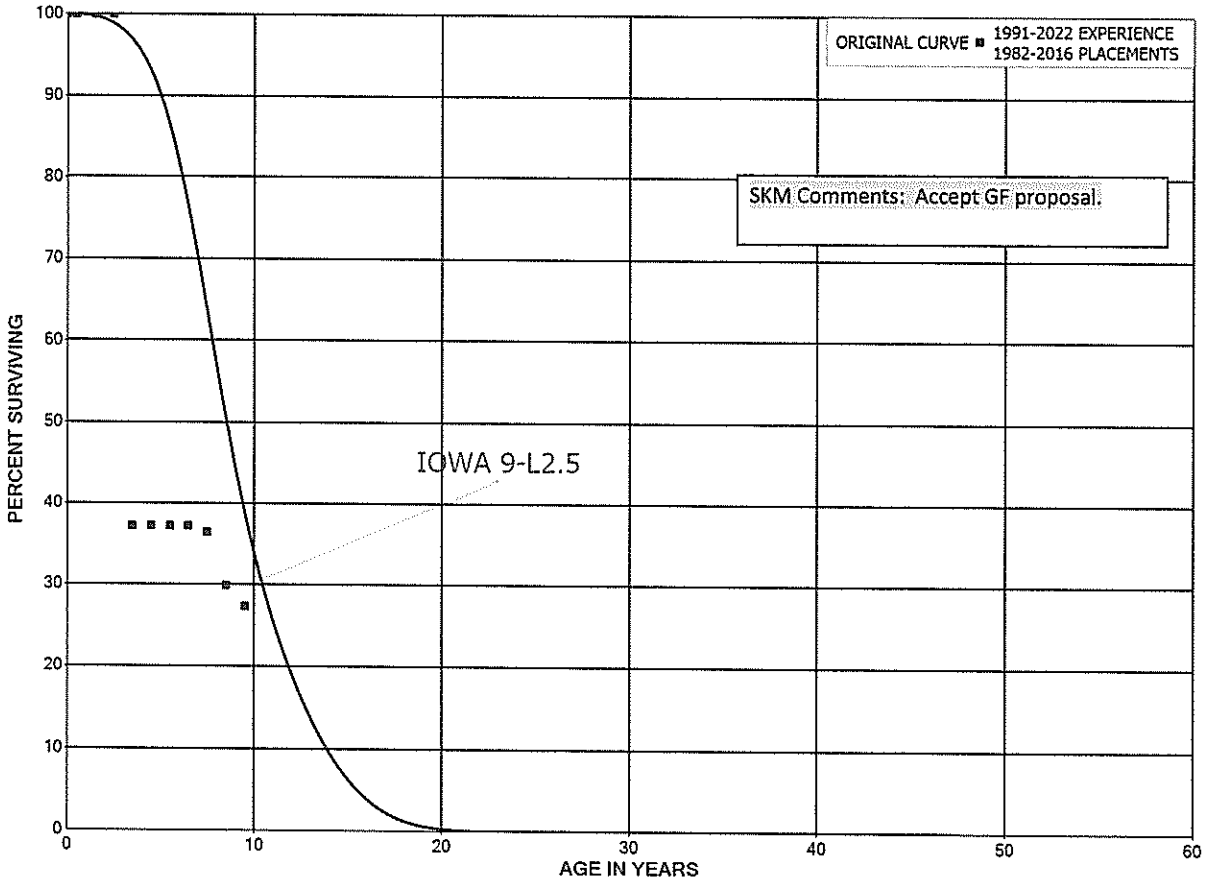
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1999-2020 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
9.1-S0	10.51	0 - 16	8.5-S0	9.84	6 - 16
9.1-S0.5	9.84	0 - 16	8.7-S0.5	10.20	6 - 16
9.0-S1	9.50	0 - 16	8.8-S1	10.93	6 - 16
9.0-S1.5	9.66	0 - 16	8.9-S1.5	11.74	6 - 16
9.0-S2	10.30	0 - 16	9.0-S2	13.00	6 - 16
9.1-R0.5	12.27	0 - 16	8.3-R0.5	9.91	6 - 16
9.1-R1	11.73	0 - 16	8.5-R1	11.12	6 - 16
9.0-R1.5	11.16	0 - 16	8.6-R1.5	11.75	6 - 16
9.0-R2	11.46	0 - 16	8.8-R2	13.32	6 - 16
9.0-R2.5	11.86	0 - 16	8.9-R2.5	14.45	6 - 16
9.7-L0	12.20	0 - 16	8.5-L0	8.08	6 - 16
9.5-L0.5	10.69	0 - 16	8.6-L0.5	7.86	6 - 16
9.3-L1	9.35	0 - 16	8.7-L1	7.89	6 - 16
9.2-L1.5	7.88	0 - 16	8.8-L1.5	7.58	6 - 16
9.2-L2	7.06	0 - 16	8.9-L2	7.68	6 - 16
9.1-L2.5	7.07	0 - 16	9.0-L2.5	8.53	6 - 16
9.1-L3	8.02	0 - 16	9.1-L3	10.13	6 - 16
9.2-O1	13.74	0 - 16	8.1-O1	9.97	6 - 16
10.1-O2	13.58	0 - 16	8.6-O2	7.95	6 - 16
12.4-O3	15.88	0 - 16	9.4-O3	10.05	6 - 16
15.3-O4	17.34	0 - 16	10.3-O4	11.89	6 - 16

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 396.00 POWER OPERATED EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 396.00 POWER OPERATED EQUIPMENT

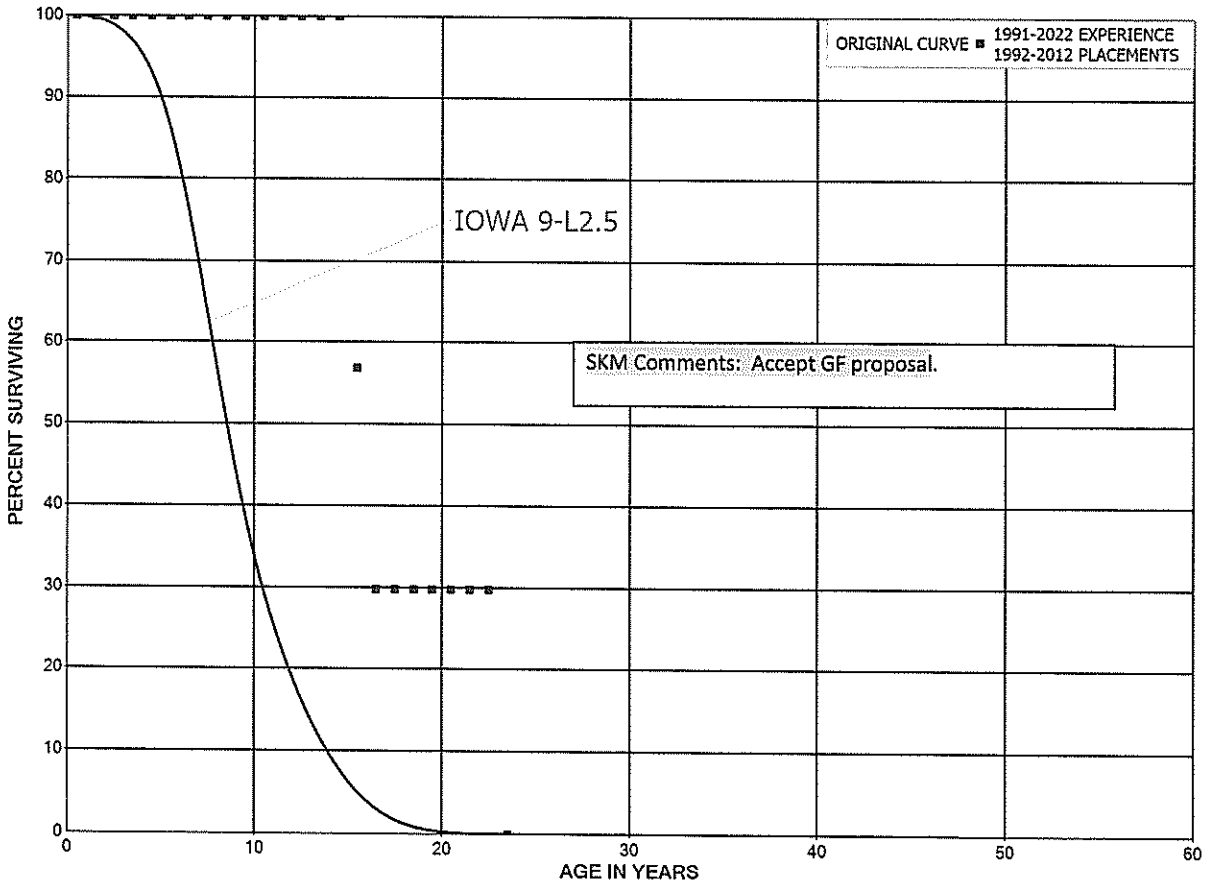
SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1982-2016 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
6.9-S0	12.56	0 - 34	5.7-S0	19.53	3 - 13
6.9-S0.5	13.35	0 - 34	5.8-S0.5	21.17	3 - 13
6.9-S1	14.24	0 - 34	5.8-S1	22.85	3 - 13
6.9-S1.5	15.18	0 - 34	5.9-S1.5	24.66	3 - 13
6.9-R0.5	12.16	0 - 34	5.6-R0.5	18.41	3 - 13
6.9-R1	13.28	0 - 34	5.7-R1	20.94	3 - 13
6.9-R1.5	14.21	0 - 34	5.7-R1.5	22.84	3 - 13
6.9-R2	15.27	0 - 34	5.8-R2	24.94	3 - 13
6.9-L0	9.93	0 - 34	5.6-L0	13.85	3 - 13
6.9-L0.5	10.58	0 - 34	5.7-L0.5	15.43	3 - 13
6.9-L1	11.36	0 - 34	5.8-L1	17.08	3 - 13
6.9-L1.5	12.36	0 - 34	5.8-L1.5	18.96	3 - 13
6.9-O1	11.31	0 - 34	5.5-O1	16.13	3 - 13
7.0-O2	9.62	0 - 34	5.6-O2	12.83	3 - 13
7.1-O3	8.17	0 - 34	6.0-O3	7.99	3 - 13
6.9-O4	9.00	0 - 34	6.4-O4	5.95	3 - 13

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
ACCOUNT 396.03 POWER OPERATED EQUIPMENT - DITCHERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 396.03 POWER OPERATED EQUIPMENT - DITCHERS

SUMMARY OF CURVE FITTING RESULTS - PCT SURV BALANCED AREAS

PLACEMENT BAND 1992-2012 001 EXPERIENCE BAND 1991-2022

SURVIVOR CURVE	RESID MEAS	RANGE OF FIT	SURVIVOR CURVE	RESID MEAS	RANGE OF FIT*
19.8-S0	19.36	0 - 24	NOT FITTED		
19.2-S0.5	17.74	0 - 24	NOT FITTED		
18.6-S1	16.04	0 - 24	NOT FITTED		
18.3-S1.5	14.61	0 - 24	NOT FITTED		
18.1-S2	13.40	0 - 24	NOT FITTED		
17.9-S2.5	12.44	0 - 24	NOT FITTED		
17.8-S3	11.85	0 - 24	NOT FITTED		
17.7-S4	12.24	0 - 24	NOT FITTED		
17.7-S5	14.76	0 - 24	NOT FITTED		
20.7-R0.5	21.80	0 - 24	NOT FITTED		
19.4-R1	19.80	0 - 24	NOT FITTED		
18.7-R1.5	17.80	0 - 24	NOT FITTED		
18.2-R2	15.93	0 - 24	NOT FITTED		
18.0-R2.5	14.55	0 - 24	NOT FITTED		
17.8-R3	13.50	0 - 24	NOT FITTED		
17.7-R4	13.44	0 - 24	NOT FITTED		
17.7-R5	14.91	0 - 24	NOT FITTED		
23.4-L0	21.86	0 - 24	NOT FITTED		
22.0-L0.5	20.43	0 - 24	NOT FITTED		
20.8-L1	18.95	0 - 24	NOT FITTED		
20.0-L1.5	17.07	0 - 24	NOT FITTED		
19.4-L2	15.28	0 - 24	NOT FITTED		
18.9-L2.5	13.69	0 - 24	NOT FITTED		
18.5-L3	12.19	0 - 24	NOT FITTED		
17.9-L4	11.13	0 - 24	NOT FITTED		
17.7-L5	12.44	0 - 24	NOT FITTED		
22.7-O1	23.45	0 - 24	NOT FITTED		
25.5-O2	23.45	0 - 24	NOT FITTED		
35.1-O3	24.31	0 - 24	NOT FITTED		
46.1-O4	24.73	0 - 24	NOT FITTED		

* SEGMENT BETWEEN 85.0 AND 15.0 PERCENT SURVIVING

Exhibit___(MJM-3)

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
SNAVELY KING MAJOROS & ASSOCIATES, INC.
REMAINING LIVES

ACCOUNT (1)		GANNETT FLEMING				SKM		
		CURVE (2)	SERVICE LIFE (3)	REMAINING LIFE (4)	REM.LIFE RATIO (5)=(4)/(3)	CURVE (6)	SERVICE LIFE (7)	REMAINING LIFE (8)=(7)*(5)
367.01	MAINS - STEEL	R3	60.00	22.70	0.3783333	R3	70.00	26.50
369.00	MEASURING AND REGULATING STATION EQUIPMENT	R3	45.00	14.20	0.3155556	R3	84.00	26.50
378.00	MEASURING AND REGULATING STATION EQUIPMENT	R4	45.00	34.60	0.7688889	L1	84.00	64.60
379.00	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	R4	45.00	38.10	0.8466667	L1	84.00	71.10
385.00	INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT	R4	40.00	29.50	0.7375000	L1	84.00	62.00

Note: CAD DR1-50 requested the Company and Mr. Allis for the best fit remaining lives but they declined to provide them.

Specifically, Mr. Allis and the Company said:
"Response 47: Mr. Allis did not perform the requested calculations. Please see the response to Consumer Advocate 1-46."

"Response 46: Mr. Allis did not prepare the requested graphs. Further, the 'best fit' is a function of variables such as the experience band, placement band, and range of data points including in the curve fitting routine. There could, therefore, be many curves considered 'best fits' depending on these variables and other judgments. Mr. Allis has provided his analyses and data in the response to Consumer Advocate 1-07, which can allow for the graphing of various life-curve combinations."

Exhibit___(MJM-4)

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
SNAVELY KING MAJOROS & ASSOCIATES, INC.
DATA RESPONSES ADDRESSING REPLACEMENT COST ALLOCATION

Mr. Allis's testimony at page 12 addresses "Accounting g Changes That Could Impact Net Salvage for the Company's Assets." The Company's responses to the following CAD data requests address that issue. Attached are copies of the responses. In certain instances where the attachments to the responses are bulky, only the relevant pages are included herein.

Company Responses to CAD Data Request numbers:

DR1-23

DR1-34

DR1-35

DR1-36

DR1-42

DR2-11

DR2-12

DR2-13

DR2-14

DR2-15

DR2-16

REQUEST:

Provide a copy of Company's current capitalization policy. If the policy has changed at all since 2012, provide a copy of all prior policies in effect during any portion of the period since 2012 and explain the impacts of these changes on the depreciation rates proposed in this proceeding.

RESPONSE:

Please see Attachment 1 for the Company's capitalization manual.

ATTACHMENT:

CAD_1-23_Att1 - Capitalization Manual.pdf

ATMOS ENERGY CORPORATION
CAPITALIZATION MANUAL
OCTOBER 1, 2018

Table of Contents

Introduction

The primary purpose of the capitalization manual is to provide guidance for coding direct capital project costs and to describe the methods used to capitalize overhead costs and division operating expenses that support the capital activities of the Company. Direct capital project costs represent costs easily associated with the acquisition, development, and/or construction of a capital project. Capital overhead costs represent indirect costs that cannot be directly associated with any particular asset or group of assets but relate to the support of capital activities. Operating expenses that support capital activities, including but not limited to vehicles, heavy equipment and insurance also have a portion of their costs capitalized. The below sections of this manual describe the capitalization of direct project costs, overhead costs and operating expenses in further detail.

As a publicly traded utility company, Atmos Energy's capitalization policy should conform to both GAAP and the FERC Uniform System of Accounts (USOA). Under GAAP, there is no specific authoritative guidance governing the accounting for project costs except as it relates to SOP 98-1 Costs of Computer Software Developed or Obtained for Internal Use (now ASC 350-40). However, consistent with other entities, Atmos Energy analogizes to the guidance in Statement of Financial Accounting Standards (SFAS) No. 67, *Accounting for Costs and Initial Rental Operations of Real Estate Projects* (now ASC 970). For regulatory purposes, the Company's regulators require the utilization of the USOA in all its jurisdictions. The USOA Gas Plant Instructions 3 and 4 provide the relevant guidance concerning project costs. The USOA is also applicable to Atmos Energy for GAAP purposes since, as a public utility company, Atmos Energy is subject to the requirements of SFAS 71, *Accounting for the Effects of Certain Types of Regulations* (now ASC 980).

It should be noted that some work activities can be considered either capital or expense depending on the nature of the activity performed. These occurrences have been identified in the capital activities section of this policy and the proper FERC account has been provided for activities that should be charged to O&M expense. A more comprehensive listing of O&M activities and related FERC accounts has been included in the Account Coding Matrix section of the Account Coding Manual.

The examples of the work activities described in this manual and how they are coded should be a reference tool for employees engaged in these activities. However, it should be noted that there may be instances where the employee must use their professional judgment to determine whether certain costs should be capitalized or expensed. If unsure, the employee should always consult their manager or the Manager of Plant Accounting before coding the invoice and associated labor. Below are some examples of activities that may be considered capital or expense depending on their nature:

- An invoice is received for the mowing of grass around the division general office. As the mowing does not relate to a capital activity it is charged to expense. Another example is for the mowing of grass related to the first clearing and grading of land for a right-of-way. As the mowing relates to the first clearing and grading of the right-of-way it is capitalized (Gas Plant Instruction 7A).

- A customer meter is painted for the first time upon installation. As the painting is associated with the installation of the meter the related charges are capitalized. If the meter is painted subsequent times then the related charges are expensed as they are not associated with the installation of the meter.

- Welds are tested on newly installed pipe. As the testing of welds is associated with new pipe installation the related charges are capitalized. If the testing of welds is associated with existing pipe, then the related charges are expensed.

Labor Activities

Replace/Retire Existing Main

Definition: replace and retire existing distribution main

Examples:

- installation/removal and fusion of pipe
- completion of required paperwork

Notes:

- A systematic split between CWIP and Cost of Removal will be applied to capital projects for Mains and Services only that include both additions and retirements. The systematic split will be applied to the charge types Labor, Contractor Labor, and Contractor Services from the AP and Payroll sources.
- For most divisions replacement of 5-250 feet of pipe is completed under a functional. Replacement of over 250 feet of pipe is completed with a specific project.
- APT: All replacements, regardless of length, are completed on a specific project.
- Louisiana: 5-100 feet of pipe is completed under a functional. Replacement of over 100 feet of pipe is completed with a specific project.

Labor Coding

Project – functional or specific project number

Task – CAPITAL

All labor associated with the replacement/retirement of main under 5' in length:

Expense account – 8870 (Maintenance of Mains)

Sub-account – 01000 (Default)

Invoice coding for contract labor, material, easements, etc.

Project – functional or specific project

Task – CAPITAL

Expenditure type–type that best describes the charges being coded

Cost center – the cost center of the project

All invoices associated with the replacement/retirement of main under 5' in length:

Company – three digit company number

Cost center – four digit cost center where work is being completed

Account – 8870 (Maintenance of Mains)

Sub-account – sub-account that best describes the charges being coded

Service area – six digit service area where work is being completed

Labor Activities

Replace/Retire Service Line

Definition: replace and retire existing service line

Examples:
- installation/removal and fusion of pipe
- completion of required paperwork
- any other activities necessary to successfully replace/retire service

Notes:
- A systematic split between CWIP and Cost of Removal will be applied to capital projects for Mains and Services only that include both additions and retirements. The systematic split will be applied to the charge types Labor, Contractor Labor, and Contractor Services from the AP and Payroll sources.

Labor Coding

- **All labor associated with the replacement/retirement of existing service line if more than half of the total distance (including riser length) or greater than 5ft. On alley sets, replacement of the riser would typically cover greater than half the service; thus it would be capitalized.**

  Project – non-growth functional
  Task - CAPITAL

- **All labor associated with the replacement/retirement of less than 5ft unless more than half the distance of existing service line is replaced (including riser length).**

  Account - 8920 (Maintenance of Services)
  Sub-account – 01000 (Default)

Invoice coding for contract labor, material, easements, etc.

All invoices associated with the replacement/retirement of existing service line if more than half of the total distance (including riser length) or greater than 5ft.

Project – non-growth functional

Task - CAPITAL

Expenditure type–type that best describes the charges being coded

Cost center – the cost center of the project

All invoices associated with the replacement/retirement of less than 5ft unless more than half the distance of existing service line is replaced (including riser length).

Company – three digit company number

Cost center – four digit cost center where work is being completed

Account – 8920 (Maintenance of Services)

Sub-account – sub-account that best describes the charges being coded

Service area – six digit service area where work is being completed

Labor Activities

Sample/Periodic Meters (Testing)

Definition: the testing or removal/replacement of meters for testing

Examples:

- testing of periodic meters
- removal/replacement of meter for testing (if meter loop is replaced, refer to instructions for replace/retire meter set)
- completion of required paperwork
- any other activities necessary for successful completion

Labor Coding

For the testing and/or removal of meters for testing when the meter is retired:

Project: non-growth functional

Task: CAPITAL

Note: If the entire meter loop is replaced and retired at the same time as the meter removal for testing, time should be charged as provided in the preceding guideline, Replace/Retire Meter Set. Also, if a meter can be returned to service, the testing should be expensed.

Invoice coding for material, etc.

Invoice coding for material, etc. when the meter is retired:

Project – non-growth functional

Task – CAPITAL

Expenditure type – type that best describes the charges being coded

Cost center – the cost center of the project

REQUEST:

Identify and explain all financial, operating, and maintenance changes since the last depreciation study that have affected depreciation lives, retirement patterns, or net salvage characteristics.

RESPONSE:

The current depreciation study incorporates additional historical data when compared to the previous study, which provides information on the impacts on service lives and net salvage due to the listed factors since the last study. Additional information obtained for the current study has been provided in Mr. Allis's testimony, the study and in the response to Consumer Advocate 1-19.

REQUEST:

Explain the Company's procedures for gross salvage and cost of removal for each plant account. In addition, explain how the Company allocates the cost of removal relating to replacements between cost of removal and new additions. Provide copies of actual source documents showing this allocation.

RESPONSE:

When a project is being set up, estimated materials and Company labor cost are split between install/removal and entered into Power Plant. Similarly, all material invoices and Company labor charged to the project follow this percentage split. If the replacement project is cost of removal (COR) eligible, then the install/removal split for contractor labor, contractor services, and Company labor defaults to 95%/5%, regardless of the split entered into Power Plant. Please see Attachments 1 and 2 for the time and motion studies that support the use of the 95%/5% split. Salvage value represents third party insurance recoveries or sale of assets that are recorded to the accumulated provision for depreciation account.

Removal Cost
Dr. Removal Cost (108)
Cr. Cash/AP

Dr. Accumulated Depreciation (108)
Cr. Removal Cost (108)

Salvage
Dr. Cash
Cr. Salvage (108)

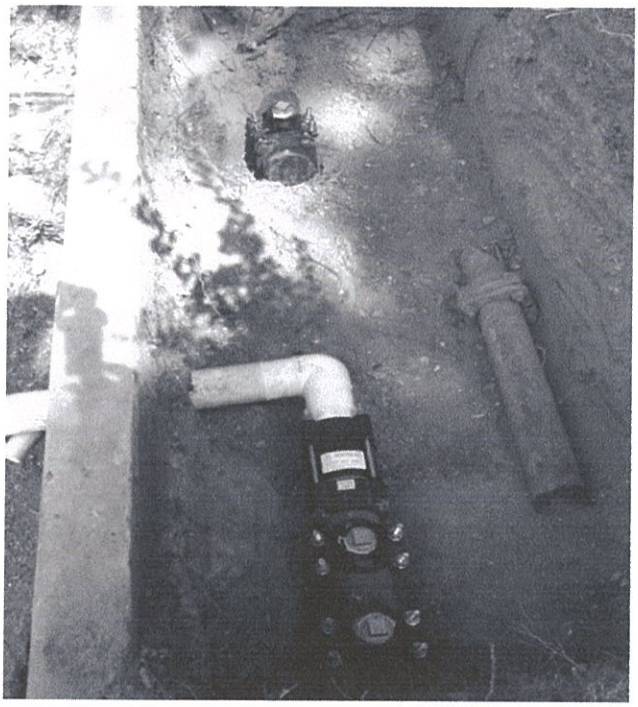
Dr. Salvage (108)
Cr. Accumulated Depreciation (108)

ATTACHMENTS:

CAD_1-34_Att1 - Mains and Services Time and Motion Study.pdf
CAD_1-34_Att2 - Meters and M&R Time and Motion Study.pdf

This address "Replacement Projects"

Atmos Energy
2014 Removal Cost Study



ALLIANCE
CONSULTING GROUP

Atmos Energy
2014 Removal Cost Study
Table of Contents

Introduction

Atmos Energy contracted with Alliance Consulting Group in 2014 to conduct a study to determine the percentages of labor costs related to replacement projects for Mains and Services. The study results would be used to allocate to removal cost for various capital replacement-related activities. Prior to this study, costs of activities solely related to the removal of old assets in replacement projects were generally estimated on a project by project basis and charged to a Removal Task associated with each project. The estimation of the removal effort varied based on, among other things, the type of project and the assumptions made by the estimator. Activities such as purging, cutting, capping, bypassing the existing gas flow and removal of the risers were applied at 100% to removal costs. Other costs related to common activities such as excavation, surface repairs, and backfilling were, in many cases, allocated between construction and removal cost. In this study, Alliance Consulting Group and Atmos Energy considered the various approaches to calculating the removal cost percentages and agreed to the exclusion of common activities from removal cost. A primary thought in moving to this approach is to create more consistency between the capitalization of the first installation of an asset and the replacement capitalization of the asset by attributing all activities necessary to the installation to the capitalized installation cost.

Study Methodology

In this study, the methodology of sharing common costs and a more conservative approach of only applying the cost of "incremental" activities that were specifically driven by the retirement of the old asset in replacement project were considered.

In the common cost sharing methodology, 50% (or some portion) of the costs of common activities are allocated to removal cost. These costs would be incurred whether solely constructing a new asset or solely retiring an asset. From this perspective, it is logical to assume the sharing costs of activities such as excavation, backfilling and surface repair between construction and removal. For example, records are not kept to determine or estimate the amount of excavation that would be required for the addition of the new pipe versus the removal of the old pipe. A joint allocation of costs is reasonable under this approach.

Under the incremental approach, the common costs for replacement projects are allocated solely to the installation of the construction project. The rationale for this approach is also compelling. When the first asset is constructed, the total cost of activities (including costs which would later be common activities in replacement projects such as mobilization, excavation, and street repair) would be charged to the installation of the asset. To consistently apply the same costs to the replacement asset on the same basis as the original asset, these

common activities should be charged to the installation of the new asset. Only those activities that would not have been necessary in the first installation would be charged as removal costs. These activities include the isolation of the pipe, cutting and capping the pipe and purging/foaming the pipe. These incremental activities would not normally be required in connecting to the end of an existing pipe.

Given the compelling logic of the incremental approach, the Company in this study has decided to move to the more conservative incremental approach to allocating removal costs for replacement projects.

Study Results

The following table shows the existing and recommended removal cost percentages for use in allocating labor for replacement projects to removal cost. No material is allocated to removal.

Project Type	Current Removal Cost Percentage	2015 Removal Cost Percentage
Mains	Various	5.00%
Services	Various	5.00%

Projects whose scope is solely the removal of an asset would still allocate 100% of labor costs to removal cost

Project Type	Current Removal Cost Percentage	2015 Removal Cost Percentage
Mains Removal Only	100%	100%
Services Removal Only	100%	100%

Atmos Energy
Measuring and Regulating
Time and Motion Study

ALLIANCE
CONSULTING GROUP

Atmos Energy
Measuring and Regulating
Time and Motion Study
Table of Contents

Introduction

Atmos Energy asked Alliance Consulting Group in 2016 to conduct a study to determine the allocation of labor costs to removal activities for replacing Measuring and Regulating assets. These allocation factors would be used to charge a portion of the overall labor cost to removal cost for various capital replacement-related activities. Prior to this study, costs of activities solely related to the removal of old assets in replacement projects were generally estimated on a project by project basis and charged to a Removal Task associated with each project. The estimation of the removal effort varied based on, among other things, the type of project and the assumptions made by the estimator. The results of this study will provide a framework to consistently and accurately allocate the appropriate charges to both construction and removal cost.

Read Purpose "to charge a portion of the overall labor cost to removal cost for various capital replacement projects."

Study Methodology

This study focused on assets related to measurement and regulation of gas as it is moved through distribution mains to the end user. The work flows related to the replacement of measurement assets and regulation assets are different and are addressed separately in this report. The methodology consistently used in this study is a conservative approach of only categorizing the cost of incremental activities that were specifically driven by the retirement of the old asset in replacement projects as removal activities.

Under the incremental approach, the common costs for replacement projects are allocated solely to the installation of the construction project. The rationale for this approach is compelling. When the first asset is constructed, the total cost of activities (including costs which would later be common activities in replacement projects such as mobilization and bringing the site back to its original condition) would be charged to the installation of the asset. To consistently apply the same costs to the replacement asset on the same basis as the original asset, these common activities should be charged to the installation of the new asset. Only those activities that would not have been necessary in the first installation would be charged as removal costs. This methodology is consistent with that used in the Mains and Services removal cost study.

Study Results

The following table shows the recommended removal cost percentages for use in allocating labor for replacement projects to removal cost. No material is allocated to removal.

Project Type	Current Removal Cost Percentage	Proposed Removal Cost Percentage
Meters, house regulators and meter loops	Various	5.00%
Regulator Stations (District and City Gate)	Various	5.00%

Projects where the scope is solely the removal of assets would still allocate 100% of labor costs to removal cost

Project Type	Current Removal Cost Percentage	Proposed Removal Cost Percentage
Meters, House Regulators and Meter Loop Removal Only	100%	100%
Regulator Stations (District and City Gate) Removal Only	100%	100%

REQUEST:

State whether the Company agrees that, in the case of a replacement, they control the portion of the replacement cost assigned to the retirement as cost of removal, and the portion capitalized to plant-in-service. Explain the answer fully.

RESPONSE:

The cost assigned is determined by the work performed. Please see the response to Consumer Advocate 1-34.

REQUEST:

Provide all manuals, guidelines, memoranda, or other documentation that deals with the Company's policies on the assignment of capital costs and net salvage regarding the replacement of retired plant. Also, provide a sample workorder for a replacement project, showing these cost assignments.

RESPONSE:

The Company maintains its books and records in accordance with the Federal Energy Regulatory Commission's (FERC) Uniform System of Accounts (USOA) and Generally Accepted Accounting Principles (GAAP). The USOA is the prescribed methodology for maintaining utility records in all of the state jurisdictions which regulate the Company's natural gas utility operations, which currently include Colorado, Kansas, Kentucky, Louisiana, Mississippi, Tennessee, Texas, Virginia.

Please see Attachment 1 for the Company's account coding manual.

Assets are retired at historic cost plus any applicable net cost of removal

Please see Attachment 2 for a sample work order.

ATTACHMENTS:

CAD_1-36_Att 1 - Account Code Manual.pdf
CAD_1-36_Att2 - Sample Work Order.pdf

Work Order Authorization Information

***** Dollar Estimate in USD *****

Estimate Charge Type	Additions	Retirements	Expense	Jobbing	Total
zAFUDC Equity	$4,394.34	$0.00	$0.00	$0.00	$4,394.34
zBenefits	$2,764.80	$386.39	$0.00	$0.00	$3,151.19
zDiv O/H Applied	$22,120.87	$177.38	$0.00	$0.00	$22,298.25
zLabor - Overhead NSC	$0.00	$0.00	$0.00	$0.00	$0.00
zSSU O/H Applied	$13,040.31	$104.57	$0.00	$0.00	$13,144.88
zState O/H Applied	$18,875.66	$151.36	$0.00	$0.00	$19,027.02
zStores Overhead	$461.80	$0.00	$0.00	$0.00	$461.80
Regular Charge	$363,373.85	$3,663.91	$0.00	$0.00	$367,037.76
Total Estimated Costs:	$363,373.85	$3,663.91	$0.00	$0.00	$367,037.76

***** Unit Estimate *****

Asset Location / Utility Account / Retirement Unit	Addition Dollars	Retirement Dollars	Add Qty	Retire Qty
62002: WILLIAMSON, FRANKLIN, INSIDE				
37602-Mains - Plastic				
DIS-37602-Main, PE, 4 in.	$370,643.50	$2,518.39	1,909	129
Total Location:	**$370,643.50**	**$2,518.39**	**1,909**	**129**
Total Unit Estimate:	**$370,643.50**	**$2,518.39**	**1,909**	**129**

***** Class Codes *****

Class Code	Value
Activity Code	8209-At Risk Pipe
COR Derivation Eligibility	Yes
GIS Config ID	105817175
GIS Revision Number	1
OPA Project Template ID	T.050.093.D.Sys Imp
Project Category	Capital
Project Type	Non Functional

***** Forecast Summary *****

Dollars shown in (000s)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2023	$0	$0	$0	$17	$102	$103	$103	$42	$0	$0	$0	$0	$367

Prior Years:	$0
Future Years:	$0
Total All Years:	$367

REQUEST:

Refer to page 12 of Mr. Allis's Direct Testimony. Mr. Allis discusses accounting changes relating to salvage, cost of removal, retirement, and additions. Provide a numeric example of these changes and their impact upon depreciation studies. Also, explain the accounting for these items prior to these accounting changes.

RESPONSE:

Mr. Allis's testimony on page 12 discusses an accounting change related to cost of removal but does not discuss any change related to salvage or retirements. Please see the response to Consumer Advocate 1-34 for further explanation of these changes. Generally, the accounting changes resulted in lower cost of removal, all else equal.

REQUEST:

Refer to the response to Consumer Advocate DR No. 1-23:

a. Identify the USoA accounts to which the attachment <CAD_1-23_Att1-Capitalization Manual> applies.
b. Provide a copy of or link to the "Account Coding Manual" discussed in the Capitalization Manual.
c. How does the Capitalization Manual treat installation of new versus replacement?
d. Provide a flow chart demonstrating how new installation flows into a plant account versus a replacement. Identify and explain any different procedures.
e. Explain the following note at page 15 and elsewhere in the Capitalization Manual: "A systematic split between CWIP and Cost of Removal will be applied to capital projects for Mains and Services only that include both additions and retirements. The systematic split will be applied to the charge types Labor, Contractor Labor, and Contractor Services from the AP and Payroll sources."
f. Explain the "systematic split."
g. Explain why the "systematic split" only applied to Mains and Services.
h. Explain what ratios are applied to implement the "systematic split."
i. Provide example work orders or other documents by another name demonstrating the systematic split for example projects for the following accounts: 367.01; 376.00; 376.01; 376.02; 376.03; 378.00; 379.00; 380.00; 381.00.00.

RESPONSE:

a. The capitalization manual applies to all FERC accounts.

b. Please see Attachment 1 in response to Consumer Advocate 1-36.

c. Installation of a new asset is capitalized at the original cost. Please see the response to Consumer Advocate 1-34 for the procedure regarding a replacement project.

d. Please see the response to subpart (c).

e. The note is referencing the process described in response to Consumer Advocate 1-34.

f. Please see the response to Consumer Advocate 1-34.

g. The Company's first Time and Motion study was conducted for only Mains and Services, which was implemented in October 2015. The Company's Measuring and Regulating Time and Motion Study became effective in November 2016. Therefore, there was only about a year where the systematic split applied to only to the Mains and Services accounts.

h. Please see the response to Consumer Advocate 1-34.

i. Please see Attachment 1 for an example of the cor eligibility on a replacement project. This example is representative of other replacement work orders in other accounts.

ATTACHMENT:

CAD_2-11_Att1 - COR Eligibility.xlsx

DOCKET NO. 23-00050
ATTACHMENT 1
TO CONSUMER ADVOCATE DR NO. 2-11

UA 37602

Sum of Amount	Account				
Expenditure Type	1070	1080	Grand Total	Install	Removal
AFUDC - DEBT	5.97		5.97		
AFUDC - EQUITY	23.87		23.87		
BUSINESS UNIT A&G	554.18	0.06	554.24		
CONTRACTOR - LABOR	8,906.95	468.79	9,375.74	95%	5%
CORPORATE A&G	445.09	0.05	445.14		
HEAVY EQUIPMENT	158.43	8.34	166.77		
LABOR - OVERHEAD	224.23	11.73	235.96	95%	5%
LABOR - OVERHEAD NSC	(80.54)		(80.54)		
LABOR - REGULAR	592.69	31.19	623.88	95%	5%
RENT	56.16	2.96	59.12		
STATE A&G	907.50	0.10	907.60		
TELECOM	15.92	0.84	16.76		
TRANSPORTATION - CAPITALIZED	75.54	3.98	79.52		
UTILITIES	65.45	3.45	68.90		
Grand Total	11,951.44	531.49	12,482.93		

Project Estimate Details

Project	050.61167	Constr	$25,465.99	Retirements	$0.00	Credits	
Revision	1	Expense	$0.00	Removal	$3.67	Jobbing	

Estimates — Blue = Already used in unitization — Green = 'Open' Estimate (not for unitization)

Additions & Retirements | Cost of Removal & Salvage | Expense & Jobbing | Summary

Expenditure Type	Business Segment	Utility Account	Property Group	Retirement Unit	Asset Location	Charge Type	Quantity	Amount
Additions	093 - Tenne	37602-Mains - Plastic	37602-Mains	DIS-37602-Main, PE, 2 in.	62301: BEDFOR	Direct Costs	355	$26,155.01
							355	$26,155.01

Project Estimate Details

Project	050.61167	Constr	$25,465.99	Retirements	$0.00	Credits	
Revision	1	Expense	$0.00	Removal	$3.67	Jobbing	

Estimates — Blue = Already used in unitization — Green = 'Open' Estimate (not for unitization)

Additions & Retirements | Cost of Removal & Salvage | Expense & Jobbing | Summary

Type	String	Description	Percent	Company	Cost Center	Account
Account Derivation	050050.61167COMPANY LABOR	COR Eligible Split	95.000000003%	*	*	1070
Account Derivation	050050.61167COMPANY LABOR	COR Eligible Split	5.000000003%	*	*	1080
Account Derivation	050050.61167EXPENSES	Generated from CORP dollar estimat	99.66777400%	*	*	1070
Account Derivation	050050.61167EXPENSES	Generated from CORP dollar estimat	0.33222600%	*	*	1080
Account Derivation	050050.61167LABOR-CONTRACTOR	COR Eligible Split	95.000000003%	*	*	1070
Account Derivation	050050.61167LABOR-CONTRACTOR	COR Eligible Split	5.000000003%	*	*	1080
Account Derivation	050050.611670VERHEAD	Generated from WO dollar estimate	99.98887308%	*	*	1070
Account Derivation	050050.611670VERHEAD	Generated from WO dollar estimate	0.01112700%	*	*	1080

REQUEST:

Explain what the normal annual ratios of new vs. replacement additions to each Main and Service account are.

RESPONSE:

Projects are determined on a year-to-year basis as determined by system need, growth opportunities, etc. and that there is no defined ratio that is a target. The ratio of new (growth) versus replacement (system integrity and system improvement) was 22% vs 78% in FY22 and 26% vs 74% in FY23.

REQUEST:

Explain if there are any portions of Plastic Main additions allocated to Steel Mains cost of removal or vice versa.

RESPONSE:

The Company does not allocate portions of Plastic Main additions to Steel Main cost of removal or vise versa.

REQUEST:

Explain what the normal replacement for Steel Mains is.

RESPONSE:

Atmos Energy replaces aged steel mains with new steel mains or high-density polyethylene (plastic) mains. The replacement process includes excavation, installation of the new main, pressure testing of new main, connection to existing main, purging and abandoning in place of main to be retired, and restoration of pavement or non-paved surfaces. A pipe prioritization tool is one method used to determine candidates for replacement based on factors including age, material, and operating history.

REQUEST:

Explain what the normal replacement for Plastic Mains is.

RESPONSE:

Atmos Energy replaces aged or difficult to locate plastic mains with new high-density polyethylene mains. The replacement process includes excavation, installation of the new main, pressure testing of new main, connection to existing main, purging and abandoning in place of main to be retired, and restoration of pavement or non-paved surfaces. A pipe prioritization tool is one method used to determine candidates for replacement based on factors including age, material, and operating history.

REQUEST:

The response to Consumer Advocate DR No. 1-34 states "labor costs are split between install/removal and entered into Power Plant... all material invoices and Company labor charged to the project follow this percentage split. If the replacement project is cost of removal eligible, then the install/removal split for contractor labor, contractor services, and Company labor defaults to 95%/5%, regardless of the split entered into Power Plant. Please see Attachments 1 and 2 for the time and motion studies that supports the use of the 95%/5% split."

a. Confirm this process is tantamount to allocating 5% of the final cost of a replacement addition to cost of removal. If not, explain why not.
b. Define "Cost of removal eligible."
c. Refer to Mr. Allis's net salvage proposals for accounts 376.01, 376.02, 378.00, 380.00, and 382.00. Explain how the 5% percent allocation resulted in such high negative net salvage ratios for these accounts.
d. The time and motion study to which the response cites states in the first paragraph: "this study, the methodology of sharing common costs and a more conservative approach of only applying the cost of "incremental" activities that were specifically driven by the retirement of the old asset in replacement project were considered." Explain why a removal such as capping and old pipe is "incremental" instead of an embedded element of a replacement project.
e. Explain why the Company's approach is not tantamount to adding an incremental 5% layer on top of the original cost of a replacement project and then allocating that 5% to Cost of Removal for use in depreciation studies.

RESPONSE:

a. This process allocates 5% of the total labor cost of a replacement project to COR.

b. Cost of removal eligible refers to replacement and retirement only projects.

c. Mr. Allis does not agree with the characterization of the net salvage estimates for these accounts as "high." These estimates incorporate the net salvage analyses shown in Part VII of the depreciation study. The 5% cited above is a percentage of the total project labor cost in which both the cost of removal and original cost of new assets are recorded at the same time. The Company's current assets are not all zero years of age and future retirements will occur at older ages than historical retirements. Because of these factors, one would not expect negative 5% net salvage estimates for these accounts even if 5% of project labor costs are recorded to cost of removal.

d. Although removal activities are conducted as part of replacement projects, the term "incremental" in the time and motion study is describing the methodology being utilized to determine on where to apply the costs of those activities that are common to both the retirement and to the new addition. Such activities are mobilization, excavation, backfilling, etc. Please see the third paragraph of that same page in the time and motion study which describes the incremental methodology.

e. As noted in subpart (a) above, this process does not add an incremental layer on top of the original cost of a replacement project, but allocates 5% of the total labor cost of a cost of removal eligible project to cost of removal. The Company's Time and Motion studies provided in response to Consumer Advocate DR No. 1-34 indicate that 5% of the total activities performed in a replacement or retirement project related to costs associated with removing the asset, which would not be incurred in a non-replacement or non-retirement project.

Exhibit___(MJM-5)

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
SNAVELY KING MAJOROS & ASSOCIATES, INC.
EXAMPLES OF GANNETT FLEMING COST OF REMOVAL STUDUES

ACCOUNTS INCLUDED

ACCOUNT 376.01 MAINS - STEEL

ACCOUNT 376.02 MAINS – PLASTIC

ACCOUNT 378.00 MEASURING AND REGULATING EQUIPMENT

ACCOUNT 380.00 SERVICES

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 376.01 MAINS - STEEL

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2005	23,039	17,284	75		0	17,284-	75-
2006	299,871	337,333	112	36	0	337,297-	112-
2007	319,252	60,228	19		0	60,228-	19-
2008	219,258	38,969	18		0	38,969-	18-
2009	18,433	28,676	156		0	28,676-	156-
2010		11,035				11,035-	
2011							
2012							
2013	73,417	36,398	50		0	36,398-	50-
2014	214,637	62,078	29		0	62,078-	29-
2015	611,132	215,814	35		0	215,814-	35-
2016	283,885	201,936	71	32	0	201,904-	71-
2017	645,236	324,383	50		0	324,383-	50-
2018	258,916	178,477	69		0	178,477-	69-
2019	191,556	404,196	211		0	404,196-	211-
2020	410,348	710,128	173		0	710,128-	173-
2021	296,700	358,706	121		0	358,706-	121-
2022	714,050	374,058	52		0	374,058-	52-
TOTAL	4,579,729	3,359,698	73	68	0	3,359,630-	73-
THREE-YEAR MOVING AVERAGES							
05-07	214,054	138,282	65	12	0	138,270-	65-
06-08	279,460	145,510	52	12	0	145,498-	52-
07-09	185,647	42,624	23		0	42,624-	23-
08-10	79,230	26,227	33		0	26,227-	33-
09-11	6,144	13,237	215		0	13,237-	215-
10-12		3,678				3,678-	
11-13	24,472	12,133	50		0	12,133-	50-
12-14	96,018	32,825	34		0	32,825-	34-
13-15	299,729	104,763	35		0	104,763-	35-
14-16	369,884	159,943	43	11	0	159,932-	43-
15-17	513,418	247,378	48	11	0	247,367-	48-
16-18	396,013	234,932	59	11	0	234,921-	59-
17-19	365,236	302,352	83		0	302,352-	83-
18-20	286,940	430,934	150		0	430,934-	150-

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 376.02 MAINS - PLASTIC

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2005	9,371	1,005	11		0	1,005-	11-
2006	11,927	690	6	197	2	493-	4-
2007	20,214	6,063	30		0	6,063-	30-
2008	19,181	9,431	49		0	9,431-	49-
2009							
2010							
2011							
2012							
2013	590	10,266			0	10,266-	
2014							
2015	470,199	65,212	14		0	65,212-	14-
2016	84,488	143,005	169		0	143,005-	169-
2017	219,240	101,999	47		0	101,999-	47-
2018	150,867	94,283	62		0	94,283-	62-
2019	283,661	130,479	46		0	130,479-	46-
2020	234,172	320,453	137		0	320,453-	137-
2021	225,620	237,345	105		0	237,345-	105-
2022	1,784,348	223,935	13		0	223,935-	13-
TOTAL	3,513,878	1,344,164	38	197	0	1,343,967-	38-
THREE-YEAR MOVING AVERAGES							
05-07	13,837	2,586	19	66	0	2,520-	18-
06-08	17,107	5,394	32	66	0	5,329-	31-
07-09	13,131	5,164	39		0	5,164-	39-
08-10	6,394	3,144	49		0	3,144-	49-
09-11							
10-12							
11-13	197	3,422			0	3,422-	
12-14	197	3,422			0	3,422-	
13-15	156,930	25,159	16		0	25,159-	16-
14-16	184,896	69,406	38		0	69,406-	38-
15-17	257,976	103,405	40		0	103,405-	40-
16-18	151,532	113,096	75		0	113,096-	75-
17-19	217,923	108,920	50		0	108,920-	50-
18-20	222,900	181,738	82		0	181,738-	82-

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 378.00 MEASURING AND REGULATING STATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2009	619		0		0		0
2010	11,093		0		0		0
2011	18,752	1,184	6		0	1,184-	6-
2012	13,924	445	3		0	445-	3-
2013	4,407	182	4		0	182-	4-
2014	27,335	1,294	5		0	1,294-	5-
2015	12,332	1,119	9		0	1,119-	9-
2016	27,517	3,902	14		0	3,902-	14-
2017	58,238	5,400	9		0	5,400-	9-
2018	77,665	62,537	81		0	62,537-	81-
2019	15,777	64,962	412		0	64,962-	412-
2020	19,079	54,535	286		0	54,535-	286-
2021	353,811	19,194	5		0	19,194-	5-
2022	24,641	119,306	484		0	119,306-	484-
TOTAL	665,189	334,059	50		0	334,059-	50-
THREE-YEAR MOVING AVERAGES							
09-11	10,155	395	4		0	395-	4-
10-12	14,589	543	4		0	543-	4-
11-13	12,361	604	5		0	604-	5-
12-14	15,222	640	4		0	640-	4-
13-15	14,692	865	6		0	865-	6-
14-16	22,395	2,105	9		0	2,105-	9-
15-17	32,696	3,474	11		0	3,474-	11-
16-18	54,473	23,946	44		0	23,946-	44-
17-19	50,560	44,300	88		0	44,300-	88-
18-20	37,507	60,678	162		0	60,678-	162-
19-21	129,555	46,230	36		0	46,230-	36-
20-22	132,510	64,345	49		0	64,345-	49-
FIVE-YEAR AVERAGE							
18-22	98,194	64,107	65		0	64,107-	65-

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY

ACCOUNT 380.00 SERVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT	PCT	GROSS SALVAGE AMOUNT	PCT	NET SALVAGE AMOUNT	PCT
2001	417,372	61,056	15		0	61,056-	15-
2002	180,772	85,954	48		0	85,954-	48-
2003	217,455	77,128	35		0	77,128-	35-
2004	193,210	42,696	22	40	0	42,656-	22-
2005	275,890	19,179	7	50	0	19,129-	7-
2006	372,314	63,798	17	44	0	63,753-	17-
2007	190,612	32,250	17	222-	0	32,473-	17-
2008	207,015	239,269	116		0	239,269-	116-
2009	678,630		0		0		0
2010	353,004	180,648	51		0	180,648-	51-
2011	423,401	347,706	82		0	347,706-	82-
2012	558,051	407,166	73		0	407,166-	73-
2013	1,749,371	262,004	15		0	262,004-	15-
2014	1,984,649	488,837	25		0	488,837-	25-
2015	1,190,608	260,128	22		0	260,128-	22-
2016	939,530	528,310	56	375	0	527,935-	56-
2017	1,228,905	98,306	8		0	98,306-	8-
2018	1,298,425	110,343	8		0	110,343-	8-
2019	3,371,688	333,867	10		0	333,867-	10-
2020	1,745,636	297,209	17		0	297,209-	17-
2021	1,269,869	297,247	23		0	297,247-	23-
2022	6,950,623	369,954	5		0	369,954-	5-
TOTAL	25,797,029	4,603,054	18	287	0	4,602,767-	18-
THREE-YEAR MOVING AVERAGES							
01-03	271,866	74,713	27		0	74,713-	27-
02-04	197,146	68,593	35	13	0	68,579-	35-
03-05	228,852	46,334	20	30	0	46,304-	20-
04-06	280,472	41,891	15	45	0	41,846-	15-
05-07	279,606	38,409	14	43-	0	38,452-	14-
06-08	256,647	111,772	44	59-	0	111,832-	44-
07-09	358,752	90,507	25	74-	0	90,581-	25-
08-10	412,883	139,973	34		0	139,973-	34-
09-11	485,011	176,118	36		0	176,118-	36-
10-12	444,818	311,840	70		0	311,840-	70-
11-13	910,274	338,959	37		0	338,959-	37-
12-14	1,430,690	386,002	27		0	386,002-	27-
13-15	1,641,543	336,989	21		0	336,989-	21-
14-16	1,371,596	425,758	31	125	0	425,633-	31-
15-17	1,119,681	295,581	26	125	0	295,456-	26-

Exhibit___(MJM-6)

ATMOS ENERGY CORPORATION
TENNESSEE DIRECT PROPERTY
SNAVELY KING MAJOROS & ASSOCIATES, INC.
COST OF REMOVAL RATIO
for COST OF REMOVAL ELIGIBLE PLANT

LINE NO.	DESCRIPTION	AMOUNT
1	ESTIMATED COST OF REMOVABLE ELIGIBLE PLANT FY22	22% 1/
2	ESTIMATED COST OF REMOVABLE ELIGIBLE PLANT FY23	26% 1/
3	AVERAGE FY22 AND FY23	24%
4	COR FACTOR	5% 2/
5	COR FACTOR FOR DEPRECIATION STUDY L3 x L4	1.2%

1/ Response to DR2-12.
2/ Response to DR1-34.

Excessive Depreciation

An excessive depreciation rate is one that produces depreciation expense which is more than necessary to return a company's capital investment over the life of the asset. The concept of excessive depreciation is not new, and in fact was explained by the U.S. Supreme Court in a landmark 1934 decision, Lindheimer v. Illinois Bell Telephone Company, as follows:

> If the predictions of service life were entirely accurate and retirements were made when and as these predictions were precisely fulfilled, the depreciation reserve would represent the consumption of capital, on a cost basis, according to the method which spreads that loss over the respective service periods. But if the amounts charged to operating expenses and credited to the account for depreciation reserve are excessive, to that extent subscribers for the telephone service are required to provide, in effect, capital contributions, not to make good losses incurred by the utility in the service rendered and thus to keep its investment unimpaired, but to secure additional plant and equipment upon which the utility expects a return.
>
> Confiscation being the issue, the company has the burden of making a convincing showing that the amounts it has charged to operating expenses for depreciation have not been excessive. That burden is not sustained by proof that its general accounting system has been correct. The calculations are mathematical, but the predictions underlying them are essentially matters of opinion. They proceed from studies

> of the "behavior of large groups" of items. These studies are beset with a host of perplexing problems. Their determination involves the examination of many variable elements and opportunities for excessive allowances, even under a correct system of accounting, are always present. The necessity of checking the results is not questioned. The predictions must meet the controlling test of experience.[1]

Excessive depreciation rates produce excessive depreciation expense. In other words, if an excessive depreciation rate is applied to the plant balance, it results in excessive depreciation expense. Since depreciation expense flows dollar-for-dollar into the revenue requirement, excessive depreciation expense results in an excessive revenue requirement.

Excessive depreciation also flows dollar-for-dollar into the accumulated depreciation reserve account. This can result in a depreciation reserve actually exceeding the gross plant balance. That is because the depreciation rate is excessive; it is more than necessary to fully depreciate the plant. This is what the Court was talking about in Lindheimer. Therefore, at the end of its life, this results in an accumulated depreciation account which *exceeds* the original cost in the plant account.

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[1] Lindheimer v. Illinois Bell Telephone Company, 292 U.S. 151, 168-170, 54 S.Ct. 658, 665-666 (1934). (Emphasis added; footnote deleted.)

The public accounting profession, through the Financial Accounting Standards Board ("FASB") has also addressed accumulated reserve excesses in its SFAS No. 143.[2] Paragraph B22 says the following:

> B22. Paragraph 37 of Statement 19 states that "estimated dismantlement, restoration, and abandonment costs…shall be taken into account in determining amortization and depreciation rates." Application of that paragraph has the effect of accruing an expense irrespective of the requirements for liability recognition in the FASB Concepts Statements. In doing so, it results in recognition of accumulated depreciation that can exceed the historical cost of a long-lived asset. The Board concluded that an entity should be precluded from including an amount for an asset retirement obligation in the depreciable base of a long-lived asset unless that amount also meets the recognition criteria in this Statement. When an entity recognizes a liability for an asset retirement obligation, it also will recognize an increase in the carrying amount of the related long-lived asset. Consequently, depreciation of that asset will not result in the recognition of accumulated depreciation in excess of the historical cost of a long-lived asset.[3]

As one can see from the above, as recently as 2002, the public accounting profession does not approve of depreciating an asset beyond its original cost. It actually used the word "excess," and it is obvious that it frowns upon accumulated depreciation balances that exceed the original cost of plant.

[2] Statement of Financial Accounting Standards No. 143 ("SFAS No. 143") – Accounting for Asset Retirement Obligations.

[3] SFAS No. 143, paragraph B22 (emphasis added).

GAAP does not control ratemaking, but the rationale described above is both informative and makes sense.

Ultimately, ratepayers pay for excessive depreciation rates. As the U.S. Supreme Court said, the result is the extraction of capital contributions from ratepayers, which the Court decided was inappropriate. Current GAAP accounting rules highlight these amounts associated with negative net salvage and require that they be reported as Regulatory Liabilities (“amounts owed”) to ratepayers.