

Deloitte & Touche

CONSUMERS ENERGY COMPANY
Depreciation Study as of December 31, 2002
Salvage and Cost of Removal Analysis

Underground Storage

Account 352.4 - Well Equipment

BAND	PRIOR			CURRENT		
	Salvage %	COR %	Net Salvage %	Salvage %	COR %	Net Salvage %
5-Year	<u>5</u>	<u>77</u>	<u>(72)</u>	<u>2</u>	<u>73</u>	<u>(71)</u>
10-Year	<u>5</u>	<u>86</u>	<u>(61)</u>	<u>6</u>	<u>83</u>	<u>(77)</u>
Full () ()	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Other () ()	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Selection	<u>10</u>	<u>120</u>	<u>(110)</u>	<u>0</u>	<u>65</u>	<u>(65)</u>
Balance	<u>\$11,289,394</u>			<u>\$16,388,907</u>		

Notes: Some salvage recorded, but has declined over the years.
Cost of Removal is expected and will exceed salvage.
Selection is based on calculation for plugging a well.

Use: 0% Salvage
 65% COR

9-19-2003

Case No. U-12999
 Exhibit No. A- (TLS-7)
 Witness: TLSimonsen
 Date: February 2004
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DELOITTE & TOUCHE LLP

STUDY AS OF DECEMBER 31, 2002

CONSUMERS ENERGY COMPANY
 ACCOUNT NO.: 23524000
 Well Equipment

YEAR	ADDITIONS	RETIREMENTS	REIMBURSEMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
			AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REMB. W/O REMB.	
1993	0.	76001.	0.	0.4	9556.	13.4	54656.	72.4	-59.4	
1994	0.	15204.	0.	0.4	0.	0.4	5208.	34.4	-34.4	
1995	0.	2815.	0.	0.4	200.	7.4	0.	0.4	7.4	
1996	0.	0.	0.	0.4	21550.	0.4	92815.	0.4	0.4	
1997	0.	81276.	0.	0.4	-3.	0.4	43540.	54.4	-54.4	
1998	0.	196793.	0.	0.4	5598.	3.4	61248.	31.4	-28.4	
1999	0.	52249.	0.	0.4	0.	0.4	132456.	254.4	-254.4	
2000	0.	236181.	0.	0.4	4365.	2.4	107271.	45.4	-44.4	
2001	0.	0.	0.	0.4	0.	0.4	34638.	0.4	0.4	
2002	0.	26236.	0.	0.4	368.	1.4	39099.	149.4	-148.4	
	0.	686755.	0.	0.4	41634.	6.4	570931.	83.4	-77.4	

3YR-BANDS		RETIREMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
YEAR	ADDITIONS	RETIREMENTS	AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REMB. W/O REMB.
1993-1995	0.	94020.	0.	0.4	9756.	10.4	59864.	64.4	-53.4
1994-1996	0.	18019.	0.	0.4	21750.	121.4	98023.	544.4	-423.4
1995-1997	0.	84091.	0.	0.4	21747.	26.4	136355.	162.4	-136.4
1996-1998	0.	278069.	0.	0.4	27145.	10.4	197603.	71.4	-61.4
1997-1999	0.	330318.	0.	0.4	5595.	2.4	237244.	72.4	-70.4
1998-2000	0.	485223.	0.	0.4	9863.	2.4	300975.	62.4	-60.4
1999-2001	0.	288430.	0.	0.4	4365.	2.4	274365.	95.4	-94.4
2000-2002	0.	262417.	0.	0.4	4733.	2.4	181008.	69.4	-67.4

SHRINKING BAND		RETIREMENTS		SALVAGE		COST OF REMOVAL		NET SALVAGE	
YEAR	ADDITIONS	RETIREMENTS	AMOUNT	RATIO	AMOUNT	RATIO	AMOUNT	RATIO	W/REMB. W/O REMB.
1993-2002	0.	686755.	0.	0.4	41634.	6.4	570931.	83.4	-77.4
1994-2002	0.	610754.	0.	0.4	32078.	5.4	516275.	85.4	-79.4
1995-2002	0.	595550.	0.	0.4	32078.	5.4	511067.	86.4	-80.4
1996-2002	0.	592735.	0.	0.4	31878.	5.4	511067.	86.4	-81.4
1997-2002	0.	592735.	0.	0.4	10328.	2.4	418252.	71.4	-69.4
1998-2002	0.	511459.	0.	0.4	10331.	2.4	374712.	73.4	-71.4
1999-2002	0.	314666.	0.	0.4	4733.	2.4	313464.	100.4	-98.4
2000-2002	0.	262417.	0.	0.4	4733.	2.4	181008.	69.4	-67.4
2001-2002	0.	26236.	0.	0.4	368.	1.4	73737.	281.4	-280.4
2002	0.	26236.	0.	0.4	368.	1.4	39099.	149.4	-148.4

USE
 2000
 2002

10
 120
 65
 (110)
 (65)

014:

CONSUMERS ENERGY COMPANY
Gas Utility Plant Depreciation Study
As of December 31, 2002

Underground Storage Plant
 Account 352.3, Well Construction
 Account 352.4, Well Equipment

ESTIMATED NET SALVAGE:

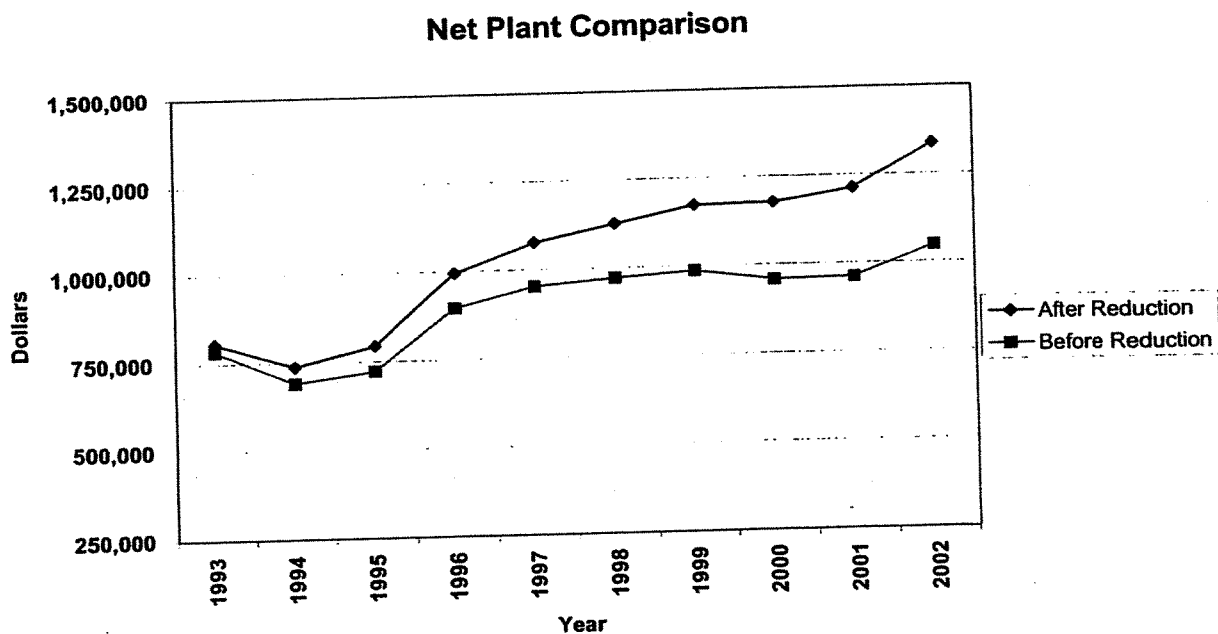
Plant Balance	49,363,813
No. of Wells	<u>1,018</u>
Average Well Cost	<u>48,491</u>

PLUGGING COSTS

Marion Area	20,000	560	11,200,000
Northville Area	60,000	47	2,820,000
St. Clair Area	60,000	139	8,340,000
Overisel Area	35,000	272	9,520,000
		1,018	<u>31,880,000</u>
			64.6%

USE 65%

CONSUMERS ENERGY COMPANY
Comparison of 1993 to 2002 Net Plant
Before and After a Staff Proposed 35% Depreciation Expense Reduction



CONSUMERS ENERGY COMPANY
Comparison of Net Plant Before and After
A Depreciation Expense Reduction

<u>Year</u>	<u>Gas Plant In Service</u>	<u>Depreciation Reserve</u>	<u>Net Plant</u>	<u>Depreciation Expense</u>
Balances reported in MPSC Form p-522:				
1993	1,604,328	820,289	784,039	64,997
1994	1,703,377	1,011,486	691,891	67,477
1995	1,792,382	1,069,896	722,486	73,690
1996	1,881,293	985,793	895,500	75,890
1997	1,995,310	1,043,179	952,131	78,829
1998	2,078,555	1,107,494	971,061	82,748
1999	2,171,042	1,184,307	986,735	90,434
2000	2,205,332	1,247,587	957,745	93,916
2001	2,286,327	1,325,245	961,082	98,027
2002	2,522,390	1,474,946	1,047,444	103,515

Depreciation reduction based on December 31, 2002 plant balances:

Existing	107,995,903	U-11509
MPSC Staff	<u>70,504,869</u>	Exhibit S-____(WGA-1)
Difference	<u><u>37,491,034</u></u>	
Percent Reduction	34.72%	

Adjusted balances after MPSC Staff depreciation reduction:

1993	1,604,328	797,722	806,606	42,430
1994	1,703,377	965,491	737,886	44,049
1995	1,792,382	998,316	794,066	48,105
1996	1,881,293	887,864	993,429	49,541
1997	1,995,310	917,881	1,077,429	51,460
1998	2,078,555	953,466	1,125,089	54,018
1999	2,171,042	998,880	1,172,162	59,035
2000	2,205,332	1,029,552	1,175,780	61,308
2001	2,286,327	1,073,175	1,213,152	63,992
2002	2,522,390	1,186,936	1,335,454	67,575

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the Matter of the Application of)
CONSUMERS ENERGY COMPANY)
for Accounting and Ratemaking Approval)
of Depreciation Rates for Gas Utility Plant)

Case No. U-12999

PROOF OF SERVICE

STATE OF MICHIGAN)
) SS
COUNTY OF JACKSON)

Margaret Hillman, being first duly sworn, deposes and says that she is employed in the Legal Department of Consumers Energy Company; that on February 27, 2004 she served an electronic copy of the rebuttal testimony and exhibits of Donald S. Roff and Thomas L. Simonsen upon the persons listed in Attachment 1 hereto, at the e-mail addresses listed therein. She further states that she also served a hard copy of the same document to the addresses listed in Attachment 1 by depositing the same in the United States mail in the City of Jackson, Michigan with first-class postage thereon fully paid.



Signature
Valid

Margaret Hillman

Digitally signed
by Margaret
Hillman
Date:
2004.02.27
13:11:59 -05'00'

Margaret Hillman

Subscribed and sworn to before me this 27th day of February, 2004.



Signature
Valid

Sammie B Dalton

Digitally signed
by Sammie B.
Dalton
Date:
2004.02.27
13:12:28 -05'00'

Sammie B. Dalton
Notary Public, Jackson County, Michigan
My Commission Expires: 01/04/08

ATTACHMENT 1 – TO CASE NO. U-12999

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TAHoffman, Lansing
JLHolyfield, EP8-218
TPKohlitz, EP10-407
SHunley, EP10-345
DCMarshall, EP12-466
PJMcAndrews, EP10-409
RJRasmussen, EP12-478
TLSimonsen, EP10-233
JLTimmerman, EP9-250
MATorrey, EP12-447
JETyslenko, EP10-236
DSRoff, Deloitte & Touche
JRRobinson, EP11-224
HRChambers, EP11-223
MKPolack, EP11-238
SBDalton, EP11-227
CHSeekell, EP11-460H
CABodenmiller, EP11-260E (3)

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the Matter of the Application of)
CONSUMERS ENERGY COMPANY)
for Accounting and Ratemaking Approval of)
Depreciation Rates for Gas Utility Plant.)

Case No. U-12999

DIRECT TESTIMONY
OF
DONALD S. ROFF
ON
BEHALF OF
CONSUMERS ENERGY COMPANY

December 8, 2003

ROFF - DIRECT

1 Q. Please state your name, employer and business address.

2 A. Donald S. Roff, Deloitte & Touche LLP, 2200 Ross Avenue, Dallas, Texas 75201.

3

4 Q. In what capacity are you employed?

5 A. I am a Director in the firm of Deloitte & Touche LLP. Deloitte is one of the largest
6 international public accounting firms in the world, serving organizations in all major segments
7 of the economy; government, public utilities, transportation, manufacturing, commerce,
8 insurance, colleges and universities, hospitals, and service organizations.

9

10 Q. Please describe your educational background and business and professional experience.

11 A. During my professional career, I have had increasing degrees of responsibility for depreciation
12 studies, valuation studies, unitization of utility property and other studies concerned with the
13 inspection and appraisal of utility property, as well as fixed asset accounting issues. I have
14 participated in or directed depreciation studies for electric, gas, water and steam utilities,
15 pipelines, railroads and telecommunications companies in over 30 states and several Canadian
16 provinces. My educational background and business and professional experience is set forth in
17 more detail in Appendix A of this testimony.

18

19 Q. Have you previously testified before this or any other regulatory body?

20 A. Yes. A list of my regulatory appearances is set forth in Appendix B of this testimony.

21

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

23 A. The purpose of my testimony is to present the results of the updated Gas Utility Plant
24 depreciation study I performed for Consumers Energy Company (Consumers Energy or
25 Company) for MPSC Case No. U-12999. The revised depreciation rates determined by this
26 study update and replace those in the Company's original filing made on June 29, 2001.

ROFF - DIRECT

1 Q. Why did you prepare an updated study?

2 A. The original depreciation study filed on June 29, 2001 was based on December 31, 2000 plant
3 balances and historical data up to that date. Given that over two years had passed since the
4 original depreciation study, the study needed to be updated to include December 31, 2002 plant
5 balances and two years of additional historical data. Also, since the original filing Consumers
6 Energy has consolidated its Michigan Gas Storage Company subsidiary into the parent
7 company and the original depreciation study needed to be updated to reflect this event.

8

9 Q. Please identify the exhibits that you are sponsoring.

10 A. I am sponsoring the following exhibits:

11 Exhibit A-____(DSR-1R), "Comparison of Existing and Proposed Depreciation Rates."

12 Exhibit A-____(DSR-2R), "Gas Utility Plant Depreciation Report."

13

14 Q. Were these exhibits prepared by you or under your direction and supervision?

15 A. Yes, they were.

16

17 Q. What revisions to the depreciation rates do you recommend?

18 A. I recommend that the Commission adopt for accounting and ratemaking purposes the proposed
19 depreciation rates shown on Exhibit A-____(DSR-1R). This exhibit also shows the currently
20 effective depreciation rates as authorized by the Commission in Case No. U-11509. The
21 proposed depreciation rates are designed to provide full recovery of invested capital and the net
22 salvage (salvage less cost of removal) expected to be realized at the time facilities are retired.

23

24 Q. What effect will the proposed depreciation rates have on annual depreciation expense?

25 A. The proposed depreciation rates will result in an annual increase of approximately \$12,000,000,
26 in depreciation expense, based on depreciable plant balances at December 31, 2002.

ROFF - DIRECT

1 Q. Please describe the basis for your conclusion that changes in the depreciation rates are needed.

2 A. At the request of Consumers Energy I conducted a book depreciation study of its gas properties.

3 This study consisted of four steps as follows:

4 1. Life Analysis;

5 2. Salvage and Cost of Removal Analysis;

6 3. Evaluation of Analysis Results and Determination of Mortality Characteristics; and

7 4. Calculation of Applicable Depreciation Rates.

8 The study recognized addition and retirement experience through December 31, 2002 and the
9 consolidation of Michigan Gas Storage Company into Consumers Energy. The rates were
10 calculated and comparisons made based on depreciable plant balances as of December 31,
11 2002. My conclusion that changes in depreciation rates are needed is one result of my
12 depreciation study. The depreciation study indicates that revisions are required to reflect
13 changes in net salvage factors and mortality characteristics used to develop the depreciation
14 rates. Mortality characteristics encompass average service life, retirement dispersion pattern
15 and net salvage factor. I am proposing the use of the Equal Life Group ("ELG") procedure in
16 this proceeding.

17

18 Q. How were the existing depreciation rates calculated?

19 A. The existing depreciation rates were calculated using the Average Life Group ("ALG")
20 procedure and the remaining life technique.

21

22 Q. What is the difference between the ALG and the ELG procedure?

23 A. The ELG procedure recognizes that assets within a group have different lives. The ALG
24 procedure essentially assumes that all assets have the same life – the average service life.

25

ROFF - DIRECT

1 Q. Can you provide an example that illustrates this difference?

2

3 A. Yes. Assume that we have a category containing two assets, both installed in the same year and
4 each costing \$10. Further assume that Asset A has a life of two years and Asset B has a life of
5 eight years. For the time being, let us ignore the impact of net salvage. Clearly the average
6 service life of this group is five years. The following Table illustrates the difference between
7 the ALG and the ELG procedures:

8

	<u>Annual Accrual</u>		<u>End of Year Reserve</u>		
<u>Period</u>	<u>Asset "A"</u>	<u>Asset "B"</u>	<u>Asset "A"</u>	<u>Asset "B"</u>	<u>Total</u>
Average Life Group					
1	2	2	2	2	4
2	2	2	-6	4	-2
3	0	2	-6	6	0
4	0	2	-6	8	2
5	0	2	-6	10	4
6	0	2	-6	12	6
7	0	2	-6	14	8
8	0	2	-6	6	0
Equal Life Group					
1	5	1.25	5	1.25	6.25
2	5	1.25	0	2.50	2.75
3	0	1.25	0	3.75	3.75
4	0	1.25	0	5.00	5.00
5	0	1.25	0	6.25	6.25
6	0	1.25	0	7.50	7.50
7	0	1.25	0	8.75	8.75
8	0	1.25	0	0.00	0.00

Note: End Of Year Reserve means end-of-year accumulated depreciation balance.

9 Q. What does this table illustrate?

10 A. This Table illustrates a number of features of both the ALG and ELG procedures. First, there is
11 the retirement dispersion, where each asset has a different life and is retired at a different age.
12 Second, neither of the assets has a life equivalent to the average service life. Third, both

ROFF - DIRECT

1 procedures provide for full recovery of the \$20 investment. Fourth, and most importantly, there
2 is a deferral of recovery utilizing the ALG procedure.

3

4 Q. Please explain.

5 A. Notice the EOY Reserve Column for the ALG procedure at the end of Period 2: it is negative!

6

7 Q. What does this mean?

8 A. This means that one must over-accrue depreciation for the long-lived asset (eight years) to
9 make up for the under-accrual for the short-lived asset (two years) under the ALG procedure.

10 The ELG procedure provides the proper matching between asset consumption and depreciation.

11 In effect, the ELG procedure depreciates each asset correctly over its expected life.

12

13 Q. What is the pattern of depreciation rates for the two procedures?

14 A. For the ALG procedure, the depreciation is always 20.00% regardless of which assets are in
15 service. For the ELG procedure, the depreciation rate is 31.25% for the first two years
16 (6.25/20) and 12.50% for the remaining six years (1.25/10).

17

18 Q. Is the ELG procedure a form of accelerated depreciation?

19 A. No. Clearly, these are the correct depreciation rates and are equivalent to what the combination
20 of depreciation rates would be if each asset were to be depreciated separately. The ALG
21 procedure is actually deferred relative to the ELG procedure. There is no acceleration of
22 depreciation. The ELG procedure is, in my opinion, a superior procedure.

23

24 Q. Please explain the purpose of depreciation accounting.

25 A. The purpose of book depreciation accounting is to recognize in financial statements the
26 consumption of physical assets in the process of providing a service or a product. For example,
27 if gas customers are not charged a proportional share of the consumption of the assets, the
28 assets will eventually be worn out, and the utility will have not recovered its investment.
29 However, it should be remembered that book depreciation is for the recovery of the investment

ROFF - DIRECT

1 in assets, not for providing for their replacement. Thus, book depreciation is often referred to
2 as capital recovery.

3
4 A widely recognized accounting definition of depreciation is that of the American Institute of
5 Certified Public Accountants (AICPA) shown below:

6
7 Depreciation accounting is a system of accounting which aims to
8 distribute cost or other basic value of tangible capital assets, less salvage
9 (if any), over the estimated useful life of the unit (which may be a group of
10 assets) in a systematic and rational manner. It is a process of allocation, not of
11 valuation. Depreciation for the year is the portion of the total charge under
12 such a system that is allocated to the year. Although the allocation may
13 properly take into account occurrences during the year, it is not intended to be
14 a measurement of the effect of all such occurrences.

15
16 Several aspects of the definition are particularly important:

- 17 1. Salvage (net salvage) is to be recognized,
18 2. The allocation of cost is to be over life,
19 3. The assets being depreciated may be a group of assets,
20 4. Depreciation accounting is a process of allocation, not valuation,
21 5. The allocation of cost is not intended to be a measurement of the effect of all
22 occurrences during the year, and
23 6. The allocation must be both systematic and rational.

24
25 Depreciation accounting should, to the extent possible, reflect the consumption of physical
26 assets or the pattern of revenues derived from the assets. Matching of expenses with either the
27 consumption of the assets or the revenues produced by use of the assets ensures that financial
28 statements reflect the results of operations and changes in financial position as accurately as
29 possible. The matching principle is often referred to as the cause-and-effect principle. Thus,
30 both the cause and the effect are required to be recognized for financial accounting purposes.

ROFF - DIRECT

1

2 The matching principle is also an essential element of the regulatory philosophy, which has
3 become known as "intergenerational customer equity." Intergenerational equity means the
4 costs are borne by the generation of customers that caused them to be incurred and not by some
5 earlier or later generation. This matching is required to ensure that charges to customers reflect
6 the actual cost of providing service.

7

8 Q. What is the purpose of a book depreciation study?

9 A. The purpose of a depreciation study is to accurately measure the mortality characteristics that
10 are applicable to the surviving property and to use them to calculate appropriate rates for the
11 determination of depreciation provisions.

12

13 Since utility revenues have been determined through regulation, and for this proceeding, it is
14 assumed that regulation will continue, asset consumption is not automatically reflected in
15 revenues. Therefore, the consumption of utility assets must be measured by conducting a book
16 depreciation study.

17

18 To implement the matching concept, the asset's productive life, salvage value, and cost of
19 removal must be identified. The determination of an asset's actual mortality characteristics is
20 made through conducting a depreciation study that includes the use of these characteristics to
21 calculate depreciation rates or provisions. For accounting purposes, it is commonly assumed
22 that consumption occurs evenly over the productive life, that is, on a straight-line basis.

23

ROFF - DIRECT

1 Q. Please describe the concept of depreciation for capital recovery that is inherent in the
2 Commission's accounting rules.

3 A. The Uniform System of Accounts prescribed for gas utilities by the Michigan Public Service
4 Commission, contains several definitions related to depreciation accounting that are of
5 significance to the study. These definitions are quoted on pages 4 and 5 of Exhibit
6 A-____(DSR-2R). Causes of depreciation listed under the definition of depreciation include
7 both physical and non-physical factors that are recognized in the mortality characteristics used
8 to calculate depreciation rates.

9
10 Under these definitions, the salvage that will actually be received and the cost of removal that
11 will actually be incurred is required to be recognized in the depreciation rates. Implementation
12 of these depreciation accounting definitions results in the recovery of invested capital after
13 expenditure, credit for salvage before receipt, and recovery of cost of removal before
14 expenditure. Thus, the accrual method of accounting is required and utilized.

15
16 Q. In your study to determine the proposed depreciation rates for approval by the Commission,
17 does the term "depreciation" have the same meaning you have described?

18 A. Yes, it does.

19

20 Q. Please describe the life analysis portion of the study.

21 A. The life analysis concerns the determination of average service life and retirement dispersion
22 identified by standard patterns. Iowa-type standard patterns were used for underground storage,
23 transmission, distribution, and general plant. The analysis consisted of an historical analysis of
24 the relationship between amounts retired and surviving. Retirement experience through
25 December 31, 2002, was analyzed using the actuarial method of life analysis that is described
26 on pages 6 and 7 of Exhibit A-____(DSR-2R).

ROFF - DIRECT

1 Q. What are Iowa-type standard patterns?

2 A. The Iowa-type curves are a series of frequency distributions, which are useful for describing the
3 mortality of physical property, and are more fully described on page 7 of Exhibit

4 A-____(DSR-2R).
5

6 Q. Please describe the salvage and cost of removal analysis portion of the study.

7 A. The Salvage and Cost of Removal Analysis concerns the determination of net salvage factors.

8 The analysis consisted of a study of annual salvage and cost of removal experience for the
9 period 1993 through 2002, which is described on page 8 of Exhibit A-____(DSR-2R).
10

11 Q. Why is net salvage required to be included in the calculation of depreciation rates?

12 A. The appropriateness of including net salvage in the calculation of depreciation has long been
13 recognized. The accounting rules adopted by the Commission require net salvage to be
14 included in the calculation of depreciation rates. This is consistent with general depreciation
15 accounting concepts. The reason for this approach is discussed in the 1968 publication Public
16 Utility Depreciation Practices, compiled and edited by the Depreciation Subcommittee of the
17 NARUC Committee on Engineering, Depreciation, and Valuation of the National Association
18 of Regulatory Utility Commissioners (NARUC), which, at page 24, states:

19
20 Under presently accepted concepts, the amount of depreciation to be
21 accrued over the life of an asset is its original cost less net salvage. Net
22 salvage, as the name implies, is the difference between the gross salvage
23 that will be obtained when the asset is disposed of and the cost of
24 removing it. Positive net salvage occurs when gross salvage exceeds
25 cost of removal, and negative net salvage occurs when cost of removal
26 exceeds gross salvage. Thus the intent of the present concept is to
27 allocate the net cost of an asset to annual accounting periods, making due
28 allowance for the net salvage, positive or negative, that will be obtained
29 when the asset is retired. This concept carries with it the thought that
30 ownership of property entails the responsibility for its ultimate
31 abandonment or removal. Hence if current users of the property benefit
32 from its use, they should pay their pro rata share of the costs involved in
33 the abandonment or removal of the property.

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This treatment of salvage is in harmony with generally accepted accounting practices and trends to remove from the income statement fluctuations caused by erratic, although necessary, abandonment and uneconomical removal operations. It also has the advantage that current consumers pay a fair share, even though estimated, of the costs associated with the property devoted to their service.

Q. Please explain why evaluation of results is necessary.

A. The historical mortality experience indicated by the life and the salvage and cost of removal analyses must be evaluated to ensure that the mortality characteristics used to calculate the rates are applicable to surviving property, thus reflecting terminal conditions. The evaluation is required to ensure the validity of the recommended depreciation rates and is discussed on pages 8 and 9 of Exhibit A-____(DSR-2R).

Q. How were the recommended depreciation rates calculated?

A. A straight-line remaining life rate for each depreciable property group was calculated using the following formulas:

$$\text{Annual Accrual} = \frac{\text{Plant Balance} \times (100\% - \text{Net Salvage}(\%)) - \text{Book Reserve}}{\text{Average Remaining Life (Years)}}$$

$$\text{Rate}(\%) = \frac{\text{Annual Accrual} \times 100\%}{\text{Plant Balance}}$$

These formulas and the procedures I used to calculate the rates are described on pages 9 and 10 of Exhibit A-____(DSR-2R). If the Net Salvage percentage is negative, the total amount of recoverable depreciation is increased to collect the excess of cost of removal greater than salvage.

Q. Why did you use the remaining life technique?

A. Remaining life rates provide for full recording and cost allocation over the remaining life of surviving property, thus improving the match between actual property consumption and the

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1 recording of depreciation. The remaining life technique compensates for any past over- or
2 under-accruals of depreciation and plant and reserves transactions different from those
3 anticipated by the mortality characteristics used to calculate the existing rates. The remaining
4 life technique also limits depreciation to the utility's investment, net of expected salvage and
5 cost of removal – no more and no less.

6

7 Q. Please explain the results of the study for Consumers Energy's gas properties.

8 A. Exhibit A-___(DSR-2R) show the appropriate mortality characteristics for each account,
9 describe how those characteristics were determined, how the mortality characteristics were used
10 to calculate depreciation rates, and show the results of the rate calculations. While average
11 service lives and net salvage factors increase as well as decrease, on average, lives increase and
12 net salvage factors decrease (become less positive or more negative). While individual property
13 groups present unique circumstances, in general, the 10-year and older experience bands were
14 emphasized in the evaluation of the Life Analysis, and 10-year and more recent experience
15 bands were emphasized in the evaluation of the Salvage and Cost of Removal Analysis.

16

17 Q. Are you proposing any changes to the general plant amortization accounting methodology?

18 A. No. I am recommending a continuation of the amortization accounting methodology, approved
19 in Case No. U-10380 and again authorized in Case No. U-11509. The only change I am
20 recommending is a revision to the amortization periods to better reflect the expected lives of the
21 current mix of surviving assets.

22

23 Q. To which accounts is the general plant amortization accounting methodology applied?

24 A. The amortization accounting methodology is applied to the following accounts:

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1		
2		
3	<u>Account</u>	<u>Description</u>
4	391.0	Office Furniture and Equipment
5	391.2	Computer Equipment
6	393.0	Stores Equipment
7	394.0	Tools, Shop and Garage Equipment
8	395.0	Laboratory Equipment
9	397.0	Communication Equipment
	398.0	Miscellaneous Equipment

10 Q. Why is continuation of amortization accounting methodology for these accounts appropriate?

11 A. Reasons this practice should be continued include the following: First, these accounts continue
 12 to represent items of small dollar unit prices, with similar mortality characteristics. Second, the
 13 percentage of total plant represented by these accounts is minimal, less than one and one-half of
 14 a percent of total depreciable plant balances. Third, continuation of this amortization method of
 15 accounting will eliminate the individual recording and tracking by Property Accounting of
 16 thousands of items. Finally, Consumers Energy has utilized this methodology for the past nine
 17 years, and it would be extremely difficult to return to depreciation accounting.

18

19 Q. Please explain the amortization accounting methodology?

20 A. The Company uses a vintage accounting methodology to record assets in these accounts. Under
 21 this method of accounting, amounts recorded as additions to utility plant are recorded in the
 22 Continuing Property Records (CPR) of the Company at a vintage account level only. These
 23 vintage amounts are then be amortized over their average service life, as determined in this
 24 depreciation study. When each vintage amount reaches its average service life, the original cost
 25 in that vintage amount is retired from utility plant in service. Net salvage is charged to the
 26 provision for accumulated depreciation as approved in Case No. U-11509.

27

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1 Q. Are there any exceptions to this accounting methodology?

2 A. Fixed or stationary and unique high cost items of property included in these accounts would
3 continue to be recorded in the CPR at an individual item level and will be removed from the
4 CPR when retirements are reported.
5

6 Q. When should these revised depreciation rates be implemented?

7 A. In order to avoid a mismatch between depreciation expense and rate recovery, I recommend that
8 the revised depreciation rates be implemented for accounting and ratemaking purposes for
9 Consumers Energy as of the effective date of an order in a gas rate proceeding, granting rate
10 relief which recognizes the changes to depreciation expense resulting from the Order in this
11 case in the calculation of revenue requirements.
12

13 Q. When would you recommend that the Company file a new gas depreciation study?

14 A. I recommend that a new depreciation rate study be filed on or before September 1, 2010, and
15 that the depreciation study use plant balances as of December 31 of the preceding year. The
16 rates would not become effective, however, until they are incorporated into revenue
17 requirements in a gas rate case.
18

19 Q. Please summarize the major changes recognized in your depreciation study.

20 A. Accounts that have a change in annual accrual of more than \$250,000 are summarized in the
21 "Results" section of Exhibit A-___(DSR-2R). The overall increase or decrease for each of the
22 accounts is shown in column 8 of Schedule 1.
23

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1 Q. What factor has the largest impact in these changes?

2 A. There are two primary elements that influence the results of my depreciation study: average
3 service life changes and cost of removal changes. The two primary accounts are impacted are
4 Account 367, Transmission Mains and Account 380, Distribution Services.

5 Q. Please describe the change in net salvage for Account 367, Transmission Mains.

6 A. Recent experience reveals that cost of removal for Transmission Mains is quite consistent with
7 the cost of removal experience for Distribution Mains. Therefore, my recommended net
8 salvage allowance for this account is the same as that recommended for Account 376, which is
9 more consistent with the recent experience for Account 367.

10

11 Q. Please describe the change in net salvage for Account 380, Distribution Services.

12 A. The results for Account 380 are consistent with prior trends, as the Company continues to incur
13 considerable removal costs for retiring services, although the percentage net salvage has
14 become less negative. I have relied upon the full historical experience and the recent trend in
15 developing my recommendation of a negative 200% net salvage allowance for Account 380.
16 This percentage is a reduction from the 220% authorized in Case No. U-11509.

17

18 Q. Please summarize your testimony.

19 A. My depreciation study indicates that revisions should be made to the depreciation rates
20 currently in use. A decrease in depreciation expense is developed by application of my
21 recommended depreciation rates to December 31, 2002, depreciable balance. The depreciation
22 rates shown on Exhibit A-____(DSR-1R) are reasonable and appropriate, and should be
23 approved by this Commission for use by Consumers Energy. The overall composite
24 depreciation rate increases from 4.48% to 4.98% if the rates on Exhibit A-____(DSR-1R) are
25 used.

26

ROFF - DIRECT

- 1 Q. Does this complete your prepared direct testimony?
- 2 A. Yes, it does.

Appendix A

APPENDIX A

Academic Background

Donald S. Roff graduated from Rensselaer Polytechnic Institute with a Bachelor of Science degree in Management Engineering in 1972.

Mr. Roff has also received specialized training in the area of depreciation from Western Michigan University's Institute of Technological Studies. This training involved three forty-hour seminars on depreciation entitled "Fundamentals of Depreciation", "Fundamentals of Service Life Forecasting" and "Making a Depreciation Study" and included such topics as accounting for depreciation, estimating service life, and estimating salvage and cost of removal.

Employment and Professional Experience

Following graduation, Mr. Roff was employed for eleven and one-half years by Gilbert Associates, Inc., as an engineer in the Management Consulting Division. In this capacity, he held positions of increasing responsibility related to the conduct and preparation of various capital recovery and valuation assignments.

In 1984, Mr. Roff was employed by Ernst & Whinney and was involved in several depreciation rate studies and utility consulting assignments.

In 1985, Mr. Roff joined Deloitte Haskins & Sells (DH&S), which, in 1989, merged with Touche Ross & Co. to form Deloitte & Touche. In 1995, Mr. Roff was appointed as a Director with Deloitte & Touche.

During his tenure with Gilbert Associates, Inc., Ernst & Whinney, DH&S and Deloitte & Touche, Mr. Roff has participated in or directed depreciation studies for electric, gas, water and steam heat utilities, pipelines, railroad and telecommunication companies in over 30 states, several Canadian provinces and Puerto Rico. This work requires an in-depth knowledge of depreciation accounting and regulatory principles, mortality analysis techniques and financial practices. At these firms, Mr. Roff has had varying degrees of responsibility for valuation studies, development of depreciation accrual rates, consultation on the unitization of property records, and other studies concerned with the inspection and appraisals of utility property, preparation of rate case testimony and support exhibits, data responses and rebuttal testimony, in addition to appearing as an expert witness.

Industry and Technical Affiliations

Mr. Roff is a registered Professional Engineer in Pennsylvania (by examination).

Mr. Roff is a member of the Society of Depreciation Professionals and a Certified Depreciation Professional, and a Technical Associate of the American Gas Association (A.G.A.) Depreciation Committee. He currently serves as the lead instructor for the A.G.A.'s Principles of Depreciation Course.

Appendix B

DONALD S. ROFF

TESTIMONY EXPERIENCE

<u>CASE NO.</u>	<u>DATE</u>	<u>COMPANY</u>	<u>JURISDICTION</u>	<u>SUBJECT</u>
Docket No. 93-3005	July 1993	Southwest Gas Corporation	Nevada	Gas Depreciation Rates
Docket No. 93-3025	July 1993	Southwest Gas Corporation	Nevada	Gas Depreciation Rates
Docket No. 12820	June 1994	Central Power and Light Company	Texas	Electric Depreciation Rates
Case No. U-10380	Dec 1994	Consumers Power Company	Michigan	Gas Depreciation Rates and Accounting
Cause No. 39938	April 1995	Indianapolis Power & Light Company	Indiana	Electric Depreciation Rates
Case No. U-10764	July 1995	Consumers Power Company	Michigan	Electric Depreciation Rates and Accounting
Docket No. 13369	Aug 1995	West Texas Utilities Company	Texas	Electric Depreciation Rates
Docket No. 95-02116	Sept 1995	Chattanooga Gas Company	Tennessee	Gas Depreciation Rates
Docket No. 95-715-G	Oct 1995	Piedmont Natural Gas Company	South Carolina	Gas Depreciation Rates
Docket No. 14965	Dec 1995	Central Power and Light Company	Texas	Electric Depreciation Rates
Cause No. 40395 (I)	Feb 1996	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
GD NO. 8664	Oct 1996	Lone Star Pipeline Company	Texas	Gas Depreciation Rates
Docket No. 96-360-U	Nov 1996	Entergy Arkansas Inc.	Arkansas	Electric Depreciation Rates
Docket No. 16705	Nov 1996	Entergy Gulf States Inc.	Texas	Electric Depreciation Rates/Competitive Issu
Docket No. ER-97-394	Mar 1997	Missouri Public Service	Missouri	Electric Depreciation Rates/Competitive Issu
Docket No. U-22092	Mar 1997	Entergy Gulf States Inc.	Louisiana	Electric Depreciation Rates/Competitive Issu
Docket No. 97-00982	May 1997	Chattanooga Gas Company	Tennessee	Gas Depreciation Rates
Cause No. 40395 (II)	June 1997	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
Case No. U-11509	Sept 1997	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Docket No. ER98-11	Sept 1997	Long Island Lighting Company	FERC	Electric Depreciation Rates and Accounting
Docket No. 8390-U	Dec 1997	Atlanta Gas Light Company	Georgia	Electric Depreciation Rates
Cause No. 41118	Mar 1998	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
Case No. U-11722	Oct 1998	Detroit Edison Company	Michigan	Electric Depreciation Rates
Docket No. 98-2035-03	Nov 1998	PacifiCorp	Utah	Electric Depreciation Rates
Docket No. 99-4006	April 1999	Nevada Power Company	Nevada	Gas Depreciation Rates and Accounting
GUD Docket No. 9030	March 2000	Atmos Energy Corporation	Texas	Gas Depreciation Rates
GUD Docket No. 9145	April 2000	TXU Gas Distribution	Texas	Gas Depreciation Rates
City of Tyler	Dec 2000	Reliant Energy Entex	Texas	Electric Depreciation Rates
Docket No. U-24993	March 2001	Entergy Gulf States Inc.	Louisiana	Electric Depreciation Rates and Accounting
Docket Nos. GR01050328/GR0105029	May 2001	Public Service Electric & Gas	New Jersey	Gas Depreciation Rates and Accounting
Case No. U-12999	July 2001	Consumers Energy Company	Michigan	Gas Depreciation Rates and Accounting
Docket No. 01-10002	Oct 2001	Nevada Power Company	Nevada	Electric Depreciation Rates
Docket No. 14618-U	Nov 2001	Savannah Electric and Power Company	Georgia	Electric Depreciation Rates
Docket No. 01-11031	Dec 2001	Sierra Pacific Power Company	Nevada	Electric Depreciation Rates
Docket No. 010949-EL	Jan 2002	Gulf Power Company	Florida	Electric Depreciation Rates
Docket No. 14311-U	Jan 2002	Atlanta Gas Light Company	Georgia	Gas Depreciation Rates and Accounting
Docket No. UD-00-2	March 2002	Entergy New Orleans, Inc.	New Orleans	Electric Depreciation Accounting
Cause No. PUD200200166	May 2002	Reliant Energy Entex	Oklahoma	Gas Depreciation Rates and Accounting
Docket No. 01-243-U	June 2002	Reliant Energy Entex	Arkansas	Gas Depreciation Rates and Accounting
Docket No. 02-035-12	Oct 2002	PacifiCorp	Utah	Electric Depreciation Rates
Docket No. 20000-ER-2-192	Oct 2002	PacifiCorp	Wyoming	Electric Depreciation Rates
Docket No. UE-021271	Oct 2002	PacifiCorp	Washington	Electric Depreciation Rates
Docket No. UM-1064	Oct 2002	PacifiCorp	Oregon	Electric Depreciation Rates
Docket No. PAC-E-02-5	Oct 2002	PacifiCorp	Idaho	Electric Depreciation Rates
Docket No. 02-0391	Oct 2002	Hawaiian Electric Company, Inc	Hawaii	Electric Depreciation Rates and Accounting
Cause No. 42458	Nov 2003	Wabash Valley Power Association, Inc.	Indiana	Electric Depreciation Rates
Docket No. 03-ATMG-1036-RTS	Nov 2003	Atmos Energy Corporation	Kansas	Gas Depreciation Rates and Accounting

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the Matter of the Application of)
CONSUMERS ENERGY COMPANY)
for Accounting and Ratemaking Approval of)
Depreciation Rates for Gas Utility Plant.)

Case No. U-12999

EXHIBITS
OF
DONALD S. ROFF

December 8, 2003

Case No. U-12999
 Exhibit A-____(DSR-1R)
 Witness D S Roff
 Page 1 of 2
 Date 8-Dec-03

CONSUMERS ENERGY COMPANY
 Comparison of Existing and Proposed
 Annual Depreciation Accrual Rates

Acct. No.	Description	Existing U-11509	Proposed
<u>Underground Storage Plant:</u>			
350.2	Rights of Way	1.72%	1.81%
351.2	Compressor Station Structures	2.34%	2.62%
351.3	Measuring & Regulating Station Structs	1.73%	3.07%
351.4	Other Storage Structures	2.87%	2.81%
352.1	Leaseholds & Rights	1.72%	1.76%
352.3	Well Construction	1.74%	3.60%
352.4	Well Equipment	4.08%	3.72%
353.0	Lines	2.88%	3.94%
354.0	Compressor Station Equipment	2.65%	3.21%
355.0	Measuring & Regulating Equipment	2.84%	3.01%
356.0	Purification Equipment	3.04%	3.88%
357.0	Other Storage Equipment	4.05%	4.11%
<u>Transmission Plant:</u>			
365.2	Rights of Way	1.22%	1.56%
366.0	Structures and Improvements	1.93%	2.16%
367.0	Mains	1.56%	3.55%
368.0	Compressor Station Equipment	2.01%	3.16%
369.0	Measuring & Regulating Equipment	1.99%	2.94%
370.0	Communication Equipment	6.01%	8.35%
371.0	Other Equipment	3.62%	4.39%
<u>Distribution Plant:</u>			
374.2	Rights of Way	1.54%	1.53%
375.0	Structures and Improvements	1.98%	2.74%
376.1	Mains - Bare	3.46%	3.65%
376.2	Mains - C & W	3.16%	3.45%
376.3	Mains - Cast Iron	3.90%	4.66%
376.4	Mains - Copper	3.05%	4.57%
376.5	Mains - Plastic	3.72%	4.31%
378.0	Measuring & Regulating Equipment	2.75%	3.44%
380.1	Services - Bare	10.29%	6.25%
380.2	Services - C & W	6.49%	5.66%
380.4	Services - Copper	9.26%	5.95%
380.5	Services - Plastic	9.61%	9.24%
381.0	Meters	2.82%	2.76%
382.0	Meter Installations	3.68%	4.30%
383.0	House Regulators	2.38%	2.43%
<u>General Plant:</u>			
389.2	Rights of Way	-	2.74%
390.0	Structures and Improvements	2.97%	2.48%
391.0	Office Furniture and Equipment	7.61%	16.63%
391.2	Computer Equipment	9.37%	4.06%
393.0	Stores Equipment	30.18%	10.60%
394.0	Tools, Shop and Garage Equipment	4.49%	8.52%
395.0	Laboratory Equipment	2.26%	16.92%
396.0	Power Operated Equipment	8.72%	22.32%
397.0	Communication Equipment	4.51%	11.34%
398.0	Miscellaneous Equipment	5.77%	17.18%

**CONSUMERS ENERGY COMPANY
Gas Utility Plant
Administration of Depreciation**

Calculation of Annual Depreciation Expense:

Consumers shall calculate annual depreciation expense utilizing the one-half year convention for those accounts depreciated using a remaining life rate where average annual net additions to gas utility plant are estimated in advance and corrected to actual in the following year.

Fully Accrued Accounts:

Depreciation expense shall cease to be recorded for all accounts that are fully accrued. An account is fully accrued when the accumulated provision for that account equals the plant balance times one minus the net salvage percentage for that account. If equipment is added to a fully accrued account, a depreciation accrual rate of 5% shall be used for that equipment.

Significant Changes In Plant Balances:

For major additions or retirements to gas utility plant, which will increase or decrease annual depreciation accrual by more than \$1,000,000, Consumers will accrue depreciation during the year based on the number of months of the year that such plant is in service.

Revision to Approved Depreciation Formulas and Accrual Rates:

The depreciation accrual rates set forth in the Commission's Order in this case may be revised after the effective date, either upon the Commission's own motion and after notice and opportunity for hearing or upon petition by any party to this proceeding if:

- a. There are significant changes in the service lives, amortization periods, net salvage percentages or plant balances;
- b. There are major property additions for which the depreciation accrual rates are not appropriate; or
- c. There are new plant account categories for which depreciation accrual rates have not been established.

Application for Revised Depreciation Formulas and Accrual Rates:

An application for new depreciation accrual rates for gas utility plant shall be filed on or before October 1, 2010 and the application shall be supported by a depreciation study using plant balances as of December 31 of the preceding year.

Case No.
Exhibit
Witness
Date

U-
A- (DSR-2)
D S Roff
December 8, 2003

CONSUMERS ENERGY COMPANY

Gas Utility Plant Depreciation Report

Prepared by

Deloitte & Touche

Consumers Energy Company

*Book Depreciation Study
of Gas Utility Plant
as of December 31, 2002*

**Book Depreciation Study of Gas Utility Plan
as of December 31, 2002**

prepared for

Consumers Energy Company

prepared by

Deloitte & Touche LLP

APPROVAL

Director

Donald S. Roff
Donald S. Roff

December 2003

EXECUTIVE SUMMARY

Deloitte & Touche has conducted a book depreciation study of the gas properties of Consumers Energy Company (Consumers Energy or the Company) to determine the continued appropriateness of the existing depreciation rates and to recommend any changes determined to be needed. The study recognized addition and retirement experience through December 31, 2002, and the depreciation rates were calculated and the comparisons presented herein are based on depreciable plant balances as of December 31, 2002.

Schedule 1 shows Consumer Energy's annual depreciation provisions for the existing and recommended rates and the differences. As shown in Column 8, based on December 31, 2002 depreciable balances, the recommended rates will result in an increase in annual depreciation expense of \$11.9 million, or about 11%. Utilization of these recommended rates will result in straight-line depreciation over life measured by time for the property. Schedule 2 shows the mortality characteristics (average service life, retirement dispersion and net salvage) for the existing rates and those determined by this study. Schedule 3 shows the calculation of the account rates for each depreciable property group. The recommended rates were calculated using the Equal Life Group procedure and the remaining life technique to better match the recording of depreciation with asset consumption.

The following sections of this report describe the methods of analysis used, the bases for the conclusions reached and recommendations for future actions by the Company. For certain accounts within the General Plant function, an amortization rate has again been calculated.

PURPOSE OF DEPRECIATION ACCOUNTING

Book depreciation accounting is the recognition in financial statements that property is consumed in the process of providing a service or product. For accounting purposes, consumption is usually assumed to occur at a constant rate. Because regulation, not the marketplace, controls revenues for regulated entities, the key to the validity of the utility book depreciation accounting process lies in the accurate measurement of property consumption through the determination of its mortality characteristics.

Depreciation accounting is an allocation process. Depreciation expenses should provide for the full recovery of invested capital, adjusted for the net salvage (salvage less cost of removal) expected to be realized at the time facilities are retired. Recovery implies a revenue component for depreciation provisions. Thus, for utilities, the recording of depreciation is but a step toward recovery. Accounting theory requires that the allocation of cost be over the expected life of the facilities constructed with the invested capital. Pricing theory suggests that recovery be from those customers served by the facilities.

Generally accepted depreciation accounting principles require that the recording of depreciation provisions be systematic and rational. Inherent in the terms “systematic” and “rational” is the concept that depreciation will match the consumption of facilities or the pattern of revenues to the extent possible. The matching of expenses (consumption) and revenues is required by accounting theory to ensure that financial statements reflect the results of operations and changes in financial position as accurately as possible.

For accounting purposes, it is commonly assumed that consumption of the asset occurs evenly over the productive life, that is, on a straight-line basis. Productive life can be measured by the number of units that can be produced by an asset or by the time span during which an asset produces. For certain types of assets producing in a distinctive pattern, such as natural gas fields, productive life is best defined by the pattern of production rather than by the time span of productive life. For all the property that is part of this study, productive life is defined by time.

The matching concept is also an essential element of basic regulatory philosophy known as “intergenerational customer equity.” Intergenerational customer equity means the costs are borne by the generation of customers that caused them to be incurred, not by some earlier or later generation. This matching is required to ensure that charges to customers reflect the actual costs of providing service.

DEPRECIATION DEFINITIONS

The Uniform System of Accounts prescribed for gas utilities by the Michigan Public Service Commission and followed by the Company provides the following depreciation-related definitions:

“Depreciation,” as applied to depreciable gas plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of gas plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities and, in the case of natural gas companies, the exhaustion of natural resources. This commission has the authority to revise, approve or disapprove the depreciation rates for all depreciable plant accounts.

“Service value” means the difference between original cost and net salvage value of gas plant.

“Original cost,” as applied to gas plant, means the cost of such property to the person first devoting it to public service.

“Net salvage value” means the salvage value of property retired less the cost of removal.

“Salvage value” means the amount received for property retired, less any expenses incurred in connection with the sale or in preparing the property for sale, or, if retained, the amount at which the material is chargeable to materials and supplies, or other appropriate account.

“Cost of removal” means the cost of demolishing, dismantling, tearing down or otherwise removing gas plant, including the cost of transportation and handling incidental thereto.

“Service life” means the time between the date gas plant is includible in gas plant in service or gas plant leased to others and the date of its retirement. If depreciation is accounted for on a production basis rather than on a time basis, then service life should be measured in terms of the appropriate unit of production.

Thus, it is the salvage that will actually be received and the cost of removal that will actually be incurred, both measured at the price level at the time of receipt or incurrence, that is required to be recognized by the Company through capital recovery. Implementation of these depreciation accounting definitions

results in recovery of invested capital after expenditure, credit for salvage before receipt and recovery of cost of removal before expenditure. Thus, the accrual method of accounting is required.

These definitions are consistent with the purpose of depreciation accounting, and the study reported here was conducted in a manner consistent with both.

THE BOOK DEPRECIATION STUDY

Implementation of a policy toward book depreciation that recognizes the purpose of depreciation accounting requires accurate determination of the mortality characteristics that are applicable to surviving property. The purpose of the depreciation study reported herein was to accurately measure those mortality characteristics and to use the characteristics to determine appropriate rates for accrual of depreciation provisions.

The major effort of the study was the determination of the appropriate mortality characteristics. The remainder of this report describes how those characteristics were determined, describes how the mortality characteristics have been used to calculate rates and presents the results of the rate calculations.

The study involved the following steps:

Step One of the study was a Life Analysis consisting of a study of historical retirement experience.

Step Two was a Salvage and Cost of Removal Analysis consisting of a study of salvage value and cost of removal experience.

Step Three consisted of an evaluation of the applicability of the experience analyzed in Steps One and Two to surviving property and selection of average service lives, of retirement dispersion patterns identified by Iowa-type curves and of net salvage factors applicable to surviving property.

Step Four was the determination of the depreciation rate applicable to each depreciable property group, recognizing the results of the work in Steps One through Three.

LIFE ANALYSIS

Life Analysis concerns the determination of average service life and retirement dispersion identified by standard curve types. A statistical analysis of historical retirement activity, suitably tempered by informed judgment as to the future applicability of such activity to surviving property, formed the basis for determination of average service lives and dispersion patterns. The actuarial method was used because the age of retired and surviving property is known. Retirement experience through December 31, 2002 was analyzed using the actuarial method of Life Analysis. The results of the Life Analysis are summarized on Schedule 2. Column 8 shows the average service lives and Column 9 shows the dispersion pattern for each account.

The actuarial method determines actual survivor curves for selected periods of retirement experience. In order to recognize trends in life characteristics and to ensure that the information in the curves is available to the analyst, actual survivor curves were calculated by computer using several different periods of retirement experience. The average service lives and retirement dispersion patterns indicated by these actual survivor curves were identified by fitting Iowa-type standard curves to the actual curves. The actuarial method measures terminal conditions (i.e., average service life).

It is important to discern trends in historical mortality experience. In order to determine trends, the periods (year bands) of retirement experience analyzed for the actuarial method were the past five years, the past 10 years, the past 15 years, the past 20 years and the full history band. The actual survivor curves for each of these year bands were plotted, and the standard curves were evaluated to ensure that the significant amount of data contained in the actual curves is available to the analyst and that the analyst does not allow computer calculations to be the sole determinant of study results.

The Iowa-type curves were devised empirically over 60 years ago by the Engineering Research Institute of Iowa State University to provide a set of standard definitions of retirement dispersion. Standard dispersion patterns are useful because they make calculations of the remaining life of existing property possible and allow life characteristics to be compared.

The Engineering Research Institute collected dated retirement information on many types of industrial and utility property and devised empirical curves that matched the range of patterns found. A total of 18 curves were defined. There were six left-skewed, seven symmetrical and five right-skewed curves, varying from wide to narrow dispersion patterns. The Iowa curve-naming convention allows the analyst to relate easily to the patterns. The left-skewed curves are known as the "L series," the symmetrical as the "S series" and the right-skewed as the "R series." The range of dispersion is identified by a number. A low number represents a wide pattern and a high number a narrow pattern. The combination of one letter and one number defines a unique dispersion pattern.

SALVAGE AND COST OF REMOVAL ANALYSIS

Company gross salvage and cost of removal experience for the period 1993 through 2002 was the basis for determining the net salvage factors shown in Column 12 of Schedule 2. The analysis was done in a manner that allows separate salvage and cost of removal factors to be selected for most depreciable property groups. The salvage and cost of removal factors were calculated for each property group by dividing the salvage amounts received and the cost of removal amounts incurred by the original cost of the retired property that produced the salvage and cost of removal. Thus, both the cause (retirement) and effect (salvage and/or cost of removal) are appropriately related. Factors were calculated for annual, rolling bands and shrinking bands of retirement experience. This analysis procedure measures terminal conditions only if the age of property retired is about equal to the selected average service lives.

EVALUATION OF ACTUAL EXPERIENCE

The analysis process used involves historical retirement experience. Since the depreciation rates are to be applied to surviving property, the historical mortality experience indicated by the Life and the Salvage and Cost of Removal Analyses must be evaluated to ensure that the mortality characteristics used to calculate the rates are applicable to surviving property, thus reflecting terminal conditions. The evaluation is required to ensure the validity of the recommended depreciation rates.

The evaluation process requires knowledge of the type of property surviving; the type of property retired; the reasons for changing life, dispersion, salvage and cost of removal characteristics; and the effect of present and future plans on mortality characteristics. The evaluation included discussions with Company accounting, engineering and operating personnel; determination of the type of property carried in each account; and special analyses of retirements to identify the types of property retired and reasons for retirements, and to determine if the Salvage and Cost of Removal Analysis measured terminal conditions.

Certain analysis results were not considered to be an adequate indication of the future because the current character of some property groups has not yet been reflected in retirements, and future activity of some property groups is expected to be unlike past activity.

Remaining life depreciation rates require the use of future net salvage in their calculation. Historical analysis provides a measurement of past experience, which was found to be different from the future net salvage required for rate calculations. This situation was adjusted to only a limited extent by basing conclusions on the most recent experience.

CALCULATION OF RECOMMENDED DEPRECIATION RATES

The straight-line rate calculation procedure is Equal Life Group (ELG). ELG is straight-line over actual life. The ELG procedure and remaining life technique were used to calculate the recommended depreciation rates.

A straight-line remaining life rate for each depreciable property group was calculated using the following formulas:

$$\text{Annual Accrual} = \frac{\text{Plant Balance} \times (100\% - \text{Net Salvage (\%)}) - \text{Book Reserve}}{\text{Average Remaining Life (Years)}}$$

$$\text{Rate (\%)} = \frac{\text{Annual Accrual} \times 100\%}{\text{Plant Balance}}$$

The depreciable plant balance for each property group is from the Company accounting records. The net salvage factors used by this formula were determined by the study. The average remaining lives were determined from the average service lives and dispersion patterns determined by the study and from the investment age distribution of each surviving property group. The age distributions were determined from Company property records. The book reserve balance for each property group was determined from the functional reserve balance from Company accounting records by allocating that balance to the property groups within that functional group. The allocations were made using the theoretical reserves,

which were calculated from the mortality characteristics determined by the study and the age distributions of surviving investment at December 31, 2002. These calculations are shown on Schedule 3.

The ELG procedure was selected because it provides a better matching of the recording of depreciation with the consumption of the associated asset.

An amortization rate was again calculated for the following accounts:

391.0	Office furniture and equipment
391.2	Computer equipment
393.0	Stores equipment
394.0	Tools, shop and garage equipment
395.0	Laboratory equipment
397.0	Communication equipment
398.0	Miscellaneous equipment

Because of the small dollar amounts contained in these accounts, continued use of an amortization accounting process is recommended. Cost of removal and salvage, if any, will be treated as a current-period item and charged to the accumulated depreciation reserve.

ACCOMPLISHMENT OF ACCOUNTING AND REGULATORY PRINCIPLES

Depreciation is a group concept, and depreciation rates are based on the recognition that a group has an average service life. However, very little of the property is "average." The average concept carries with it recognition that most property will be retired at an age either less than or greater than the average service life. The study recognized the existence of this variation through the identification of Iowa-type retirement dispersion patterns. "Average" is the result of a calculation, and there may not be any average property. Once the mortality characteristics have been determined, they are useful for calculating depreciation rates.

Remaining life rates are recommended because such rates provide for full recovery over the remaining life of the surviving property, thus improving the match between actual property consumption and the recording of depreciation, and are consistent with past practice.

This amortization rate assumes all property vintages that exceed the amortization period (i.e., average service life) are fully depreciated. A remaining life accrual was computed for each vintage within each account and totaled. This amount divided by the current balance produces the amortization rate.

RESULTS

The depreciation rates developed in Schedule 3 of this study have been calculated using the mortality characteristics shown in Columns 8, 9 and 12 of Schedule 2. The mortality characteristics for the existing rates are shown in Columns 3, 4 and 7.

As shown on Schedule 1, the individual account rates in each functional group both increase and decrease. While average service lives and net salvage allowances increase as well as decrease, on average, the net salvage increases, along with the increases in average service lives, essentially offset. The decrease is attributed to the reserve position.

Based upon the magnitude of the change in annual accrual (more than a \$250,000 change in accrual), the most significant changes to mortality characteristics are as follows:

Underground Storage Plant

<u>Account</u>	<u>Change</u>
Account 352.3, Well Construction	Decrease in net salvage from 0% to negative 65%.
Account 354, Compressor Station Equipment	Decrease in net salvage from negative 10% to negative 15%.

Transmission Plant

<u>Account</u>	<u>Change</u>
Account 367.0, Mains (All)	Increase in average service life from 68 years to 75 years and decrease in net salvage from negative 28% to negative 125%.
Account 368, Compressor Station Equipment	Increase in net salvage from negative 10% to a negative 5%.

Distribution Plant

<u>Account</u>	<u>Change</u>
Account 376.2, Coated and Wrapped Steel Mains	Increase in average service life from 68 years to 75 years and decrease in net salvage from negative 100% to negative 125%.
Account 376.5, Plastic Mains	Increase in average service life from 55 years to 60 years and decrease in net salvage from negative 100% to negative 125%.
Account 380.2, Coated and Wrapped Steel Services	Increase in average service life from 52 years to 56 years and an increase in net salvage from negative 220% to negative 200%.
Account 380.4, Copper Services	Increase in average service life from 40 years to 53 years and an increase in negative net salvage from negative 220% to negative 200%.
Account 380.5, Plastic Services	Increase in average service life from 35 years to 40 years and an increase in negative net salvage from negative 220% to negative 200%.
Account 382.0, Meter Installations	Increase in average service life from 48 years to 52 years and decrease in net salvage from negative 70% to negative 90%.

General Plant

<u>Account</u>	<u>Change</u>
Account 391.2, Computer Equipment	No change in parameters but affected by reserve position.
Account 397, Communication Equipment	Decrease in average service life from 21 years to 15 years.

ADEQUACY OF THE BOOK RESERVE

A comparison of the accumulated provision for depreciation with the calculated theoretical reserve as of December 31, 2002 is not meaningful since remaining life rates are recommended. The only way a reserve difference can exist is by use of whole life rates, and the development of the calculated theoretical reserve assumes the use of whole life rates. The only use of the theoretical reserve was to allocate the functional book reserves to each property group so that remaining life rates could be calculated at the account level.

RECOMMENDATIONS

Our recommendations in regard to book depreciation are as follows:

1. The depreciation rate for each property group shown in Column 6 of Schedule 1 applies to surviving property of Consumers Energy, and they are recommended for adoption when authorized by the Michigan Public Service Commission (MPSC).
2. Because of variation of life and net salvage experience with time and the potential for changed circumstances to affect mortality characteristics, the continued validity of the rates recommended herein should be reviewed in a depreciation study, as ordered by the MPSC.

CONSUMERS ENERGY COMPANY
Comparison of Depreciation Rates and Annual Amounts
Gas Book Depreciation Study as of December 31, 2002

SCHEDULE 1

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Account Number	Description	12/31/2002 Balance \$	Existing Rate %	Annual Amount \$	Study Rate %	Annual Amount \$	Increase or (Decrease) \$
<u>UNDERGROUND STORAGE</u>							
350.2	Rights of Way	1,321,117	1.72	22,723	1.81	23,912	1,189
351.2	Compressor Station Structures	7,676,757	2.34	179,636	2.62	201,131	21,495
351.3	M&R Station Structures	4,607	1.73	80	3.07	141	62
351.4	Other Storage Structures	3,337,803	2.87	95,795	2.81	93,792	(2,003)
352.1	Leaseholds and Rights	5,336,673	1.72	91,791	1.76	93,925	2,135
352.3	Well Construction	32,974,906	1.74	573,763	3.60	1,187,097	613,333
352.4	Well Equipment	16,388,907	4.08	668,667	3.72	609,667	(59,000)
353.0	Lines	22,020,895	2.88	634,202	3.94	867,623	233,421
354.0	Compressor Station Equipment	78,065,203	2.65	2,068,728	3.21	2,505,893	437,165
355.0	M&R Station Equipment	2,083,799	2.84	59,180	3.01	62,722	3,542
356.0	Purification Equipment	13,376,874	3.04	406,657	3.88	519,023	112,366
357.0	Other Storage Equipment	3,153,829	4.05	127,730	4.11	129,622	1,892
	Total Underground Storage	185,741,370	2.65	4,928,952	3.39	6,294,550	1,365,598
<u>TRANSMISSION PLANT</u>							
365.2	Rights of Way	15,624,024	1.22	190,613	1.56	243,735	53,122
366.0	Structures and Improvements	10,063,270	1.93	194,221	2.16	217,367	23,146
367.0	Mains	183,611,384	1.56	2,864,338	3.55	6,518,204	3,653,867
368.0	Compressor Station Equipment	35,038,304	2.01	704,270	3.16	1,107,210	402,940
369.0	M&R Station Equipment	23,684,196	1.99	471,316	2.94	696,315	225,000
370.0	Communication Equipment	7,579,322	6.01	455,517	8.35	632,873	177,356
371.0	Other Equipment	3,445,240	3.62	124,718	4.39	151,246	26,528
	Total Transmission Plant	279,045,740	1.79	5,004,992	3.43	9,566,951	4,561,959
<u>DISTRIBUTION PLANT</u>							
374.2	Rights of Way	6,960,315	1.54	107,189	1.53	106,493	(696)
375.0	Structures and Improvements	4,242,886	1.98	84,009	2.74	116,255	32,246
376.1	Bare Steel Mains	4,327,469	3.46	149,730	3.65	157,953	8,222
376.2	Coated and Wrapped Steel Mains	350,910,853	3.16	11,088,783	3.45	12,106,424	1,017,641
376.3	Cast Iron Mains	9,358,955	3.90	364,999	4.66	436,127	71,128
376.4	Copper Mains	16,968	3.05	518	4.57	775	258
376.5	Plastic Mains	541,424,815	3.72	20,141,003	4.31	23,335,410	3,194,406
378.0	M&R Station Equipment	32,498,406	2.75	893,706	3.44	1,117,945	224,239
380.1	Bare Steel Services	224,036	10.29	23,053	6.25	14,002	(9,051)
380.2	Coated and Wrapped Steel Services	72,006,386	6.49	4,673,214	5.66	4,075,561	(597,653)
380.4	Copper Services	27,245,781	9.29	2,531,133	5.95	1,621,124	(910,009)
380.5	Plastic Services	392,981,530	9.61	37,765,525	9.24	36,311,493	(1,454,032)
380.5	Plastic Services [Risers from C&W]	109,424,669	6.49	7,101,661	9.24	10,110,839	3,009,178
381.0	Meters	174,926,601	2.82	4,932,930	2.76	4,827,974	(104,956)
382.0	Meter Installations	151,913,431	3.68	5,590,414	4.30	6,532,278	941,863
383.0	House Regulators	18,415,248	2.38	438,283	2.43	447,491	9,208
	Total Distribution Plant	1,896,878,349	5.05	95,886,152	5.34	101,318,145	5,431,993

CONSUMERS ENERGY COMPANY
Comparison of Depreciation Rates and Annual Amounts
Gas Book Depreciation Study as of December 31, 2002

SCHEDULE 1

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Account Number	Description	12/31/2002 Balance \$	Existing Rate %	Annual Amount \$	Study Rate %	Annual Amount \$	Increase or (Decrease) \$
<u>GENERAL PLANT</u>							
389.2	Rights of Way	1,516	0.00	0	2.74	42	42
390.0	Structures and Improvements	23,627,457	2.97	701,735	2.48	585,961	(115,775)
391.0	Office Furniture and Equipment	1,717,346	7.61	130,690	16.63	285,595	154,905
391.2	Computer Equipment	7,356,574	9.37	689,311	4.06	298,677	(390,634)
393.0	Stores Equipment	53,713	30.18	16,211	10.60	5,694	(10,517)
394.0	Tools, Shop and Garage Equipment	4,900,534	4.49	220,034	8.52	417,525	197,492
395.0	Laboratory Equipment	1,006,055	2.26	22,737	16.92	170,225	147,488
396.0	Power Operated Equipment	119,819	8.72	10,448	22.32	26,744	16,295
397.0	Communication Equipment	8,194,971	4.51	369,593	11.34	929,310	559,717
398.0	Miscellaneous Equipment	260,787	5.77	15,047	17.18	44,803	29,756
	Total General Plant	47,238,772	4.61	2,175,807	5.85	2,764,574	588,767
	Total Depreciable Plant	2,408,904,231	4.48	107,995,903	4.98	119,944,220	11,948,317
	St. Clair Unit of Production	3,393,226					
	So. Michigan Unit of Production	12,346,496					
	Kalkaska Unit of Production	16,816,513					
	Other Amort or Depr.	21,664,648					
	Non-Depreciable	39,884,637					
	Total Gas Plant	2,503,009,751					

CONSUMERS ENERGY COMPANY
Comparison of Mortality Characteristics
Gas Book Depreciation Study as of December 31, 2002

SCHEDULE 2

[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Account Number	Description	EXISTING					STUDY				
		ASL yrs.	Iowa Curve	Salvage %	Cost of Removal %	Net Salvage %	ASL yrs.	Iowa Curve	Salvage %	Cost of Removal %	Net Salvage %
<u>UNDERGROUND STORAGE</u>											
350.2	Rights of Way	55	R2	0	0	0	65	S2	0	0	0
351.2	Compressor Station Structures	45	R3	10	20	(10)	45	R3	0	5	(5)
351.3	M&R Station Structures	45	R3	10	20	(10)	45	R3	0	5	(5)
351.4	Other Storage Structures	40	R4	0	25	(25)	50	R4	0	25	(25)
352.1	Leaseholds and Rights	50	R4	0	0	0	65	S2	0	0	0
352.3	Well Construction	50	R4	0	0	0	50	R4	0	65	(65)
352.4	Well Equipment	50	R4	10	130	(120)	50	R2.5	0	65	(65)
353.0	Lines	55	R2	0	66	(66)	65	S2	0	125	(125)
354.0	Compressor Station Equipment	40	S1	0	10	(10)	40	R3	0	15	(15)
355.0	M&R Station Equipment	40	R1	0	20	(20)	45	R2.5	0	20	(20)
356.0	Purification Equipment	35	R5	0	10	(10)	35	R5	0	25	(25)
357.0	Other Storage Equipment	25	R2	3	8	(5)	30	R3	0	10	(10)
<u>TRANSMISSION PLANT</u>											
365.2	Rights of Way	68	R3	0	0	0	75	R3	0	0	0
366.0	Structures and Improvements	50	R3	10	20	(10)	60	R3	10	20	(10)
367.0	Mains	68	R3	5	33	(28)	75	R3	0	125	(125)
368.0	Compressor Station Equipment	40	R3	5	15	(10)	40	R4	5	10	(5)
369.0	M&R Station Equipment	55	S1	0	20	(20)	55	R2	0	30	(30)
370.0	Communication Equipment	15	S2	0	5	(5)	15	R4	0	5	(5)
371.0	Other Equipment	25	R2	5	5	0	30	L2	0	5	(5)
<u>DISTRIBUTION PLANT</u>											
374.2	Rights of Way	68	R3	0	0	0	75	R3	0	0	0
375.0	Structures and Improvements	60	S3	10	20	(10)	50	S1	0	20	(20)
376.1	Bare Steel Mains	70	R2	0	100	(100)	70	R2	0	125	(125)
376.2	Coated and Wrapped Steel Mains	68	R3	0	100	(100)	75	R3	0	125	(125)
376.3	Cast Iron Mains	61	S1	0	100	(100)	65	S3	0	125	(125)
376.4	Copper Mains	70	R2	0	100	(100)	60	R5	0	125	(125)
376.5	Plastic Mains	55	R4	0	100	(100)	60	R3	0	125	(125)
378.0	M&R Station Equipment	45	S-.5	0	20	(20)	50	L0.5	0	30	(30)
380.1	Bare Steel Services	40	L2	10	230	(220)	42	L0	0	200	(200)
380.2	Coated and Wrapped Steel Services	52	R1.5	10	230	(220)	56	R0.5	0	200	(200)
380.4	Copper Services	40	R1.5	10	230	(220)	53	R1	0	200	(200)
380.5	Plastic Services	35	R3	10	230	(220)	40	R1.5	0	200	(200)
381.0	Meters	37	S2	2	0	2	42	S2	0	0	0
382.0	Meter Installations	48	R2	0	70	(70)	52	R2.5	0	90	(90)
383.0	House Regulators	40	L0	13	3	10	55	R1	0	5	(5)
<u>GENERAL PLANT</u>											
389.2	Rights of Way	-	-	-	-	-	50	R3	0	0	0
390.0	Structures and Improvements	45	R4	0	25	(25)	50	R3	0	30	(30)
391.0	Office Furniture and Equipment	33	SQ	0	0	0	15	SQ	0	0	0
391.2	Computer Equipment	7	SQ	0	0	0	7	SQ	0	0	0
393.0	Stores Equipment	40	SQ	0	0	0	20	SQ	0	0	0
394.0	Tools, Shop and Garage Equipment	24	SQ	0	0	0	20	SQ	0	0	0
395.0	Laboratory Equipment	20	SQ	0	0	0	15	SQ	0	0	0
396.0	Power Operated Equipment	10	L1	20	0	20	10	L1	0	0	0
397.0	Communication Equipment	21	SQ	0	0	0	15	SQ	0	0	0
398.0	Miscellaneous Equipment	20	SQ	0	0	0	15	SQ	0	0	0

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EQUAL LIFE GROUP METHOD REMAINING LIFE RATE

ACCOUNT NUMBER	SURVIVING BALANCE DECEMBER 31 2002	ASL & CURVE	% NET SLVG	WHOLE LIFE RATE	THEORETICAL RESERVE W/SALVAGE	BOOK RESERVE ALLOCATED	AVERAGE REMAINING LIFE	REMAINING TO ACCRUE	ANNUAL ACCRUAL	REMAINING LIFE ACCUAL RATE
23502000	1321117.	65.082.0	0.0	1.61	649023.	567074.	31.59	755450.	23912.	1.81
23512000	7676757.	45.0R3.0	-5.0	2.34	3941253.	3443608.	22.93	4612245.	201131.	2.62
23513000	4607.	45.0R3.0	-5.0	2.02	3895.	3403.	10.14	1434.	141.	3.07
23514000	3337803.	50.0R4.0	-25.0	2.50	2085269.	1821971.	25.03	2347294.	93792.	2.81
23521000	5336673.	65.082.0	0.0	1.57	2590462.	2263376.	32.81	3082011.	93925.	1.76
23523000	32974906.	50.0R4.0	-65.0	3.35	20274478.	17714508.	30.92	36702546.	1187097.	3.60
23524000	16388907.	50.0R2.5	-65.0	3.30	13498737.	11794310.	25.04	15264890.	609657.	3.72
23530000	22020895.	65.082.0	-125.0	3.75	14236557.	12438969.	42.72	37067253.	867623.	3.94
23540000	78065203.	40.0R3.0	-15.0	2.91	40373220.	35275469.	21.75	54492677.	2505893.	3.21
23550000	2083799.	45.0R2.5	-20.0	2.54	1481181.	1294159.	19.24	1206868.	62722.	3.01
23560000	13376874.	35.0R5.0	-25.0	3.62	6055704.	5291077.	22.02	11427085.	519023.	3.88
23570000	3153829.	30.0R3.0	-10.0	3.82	1313326.	1147498.	17.92	2322191.	129622.	4.11
	185741371.				106503106.	93055421.		169281944.	6294550.	3.39

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EQUAL LIFE GROUP METHOD REMAINING LIFE RATE

ACCOUNT NUMBER	SURVIVING BALANCE DECEMBER 31 2002	ASL & CURVE	% NET SLVG	WHOLE LIFE RATE	THEORETICAL RESERVE W/SALVAGE	BOOK RESERVE ALLOCATED	AVERAGE RESERVE REMAINING LIFE	REMAINING TO ACCRUE	ANNUAL ACCRUAL	REMAINING LIFE ACCRUAL RATE
23652000	15624024.	75.0R3.0	0.0	1.44	4616075.	3668030.	48.97	11935969.	243735.	1.56
23660000	10063270.	60.0R3.0	-10.0	1.93	3989548.	3170179.	36.36	7903329.	217367.	2.16
23670000	183611384.	75.0R3.0	-125.0	3.17	152484880.	121167676.	44.74	291602981.	6518204.	3.55
23680000	35038304.	40.0R4.0	-5.0	2.53	20187370.	16041307.	18.71	20718767.	1107210.	3.16
23690000	23684196.	55.0R2.0	-30.0	2.72	8697467.	6911189.	34.24	23841701.	696315.	2.94
23700000	7579322.	15.0R4.0	-5.0	7.03	3804275.	3022957.	7.80	4933303.	632873.	8.35
23710000	3445240.	30.0I2.0	-5.0	3.91	1348281.	1071372.	16.83	2545837.	151246.	4.39
	279045740.				195127897.	155052709.		363481888.	9566951.	3.43

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EQUAL LIFE GROUP METHOD REMAINING LIFE RATE

ACCOUNT NUMBER	SURVIVING BALANCE DECEMBER 31 2002	ASL & CURVE	% NET SLVG	WHOLE LIFE RATE	THEORETICAL RESERVE W/SALVAGE	BOOK RESERVE ALLOCATED	AVERAGE REMAINING LIFE	REMAINING TO ACCRUE	ANNUAL ACCRUAL	REMAINING LIFE ACCUAL RATE
23742000	6960315.	75. OR3.0	0.0	1.45	1833377.	1579378.	50.67	5395722.	106493.	1.53
23750000	4242886.	50. OR1.0	-20.0	2.42	2459660.	2118895.	25.60	2975744.	116255.	2.74
23761000	4327469.	70. OR2.0	-125.0	2.77	6802025.	5859663.	24.52	3873767.	157953.	3.65
23762000	350910853.	75. OR3.0	-125.0	3.14	327180096.	281852090.	41.99	508356725.	12106424.	3.45
23763000	9358955.	65. OR3.0	-125.0	3.15	16326368.	14064489.	16.05	6997871.	436127.	4.66
23764000	16968.	60. OR5.0	-125.0	3.81	22470.	19357.	24.28	18827.	775.	4.57
23765000	541424815.	60. OR3.0	-125.0	4.19	210264432.	181134092.	44.47	1037656879.	23335410.	4.31
23780000	32498406.	50. OR1.5	-30.0	3.22	13890685.	11968249.	27.10	30299161.	1117945.	3.44
23801000	224036.	42. OR1.0	-200.0	4.58	486997.	419528.	18.05	252765.	14002.	6.25
23802000	72006386.	56. OR.5	-200.0	4.66	131274528.	113087564.	25.26	1029322616.	4075561.	5.66
23804000	27245781.	53. OR1.0	-200.0	4.92	49241220.	42419270.	24.26	39328663.	1621124.	5.95
23805000	502406199.	40. OR1.5	-200.0	8.73	447921856.	385866111.	24.15	1121348073.	46422333.	9.24
23810000	174926601.	42. OR2.0	0.0	2.52	71285392.	61409410.	23.54	113670509.	4827974.	2.76
23820000	151913431.	52. OR2.5	-90.0	4.09	78738336.	67829812.	33.81	220865109.	6532278.	4.30
23830000	18415248.	55. OR1.0	-5.0	2.25	7001378.	6031397.	29.79	13329303.	447491.	2.43
	1896878349.				1364728822.	1175657307.		3207201734.	101318145.	5.34

DELOITTE & TOUCHE LLP

DEPRECIATION SYSTEM - DSELG04 RELEASE 7.0

STUDY AS OF DECEMBER 31 , 2002

PAGE 1

CONSUMERS ENERGY COMPANY

12- 1-2003

EQUAL LIFE GROUP METHOD REMAINING LIFE RATE

ACCOUNT NUMBER	SURVIVING BALANCE DECEMBER 31 2002	ASL & CURVE	% NET SLVG RATE	WHOLE LIFE	THEORETICAL RESERVE W/SALVAGE	BOOK RESERVE BY GROUP	AVERAGE REMAINING LIFE	REMAINING TO ACCRUE	ANNUAL ACCRUAL	REMAINING LIFE ACCRUAL RATE
23892000	1516.	50.0R3.0	0.0	2.22	287.	0.	36.49	1516.	42.	2.74
23900000	23627457.	50.0R3.0	-30.0	2.67	13416156.	14640678.	27.45	16075015.	585689.	2.48
23910000	1717346.	15.0SQ	0.0	6.23	1016608.	-151827.	6.55	1869173.	285568.	16.63
23912000	7356574.	7.0SQ	0.0	12.09	3834516.	6173947.	3.96	1182627.	298540.	4.06
23930000	53713.	20.0SQ	0.0	4.73	26903.	-6329.	10.55	60042.	5693.	10.60
23940000	4900534.	20.0SQ	0.0	4.87	1848080.	-434768.	12.78	5335302.	417316.	8.52
23950000	1006055.	15.0SQ	0.0	6.48	569397.	-133953.	6.70	1140008.	170248.	16.92
23960000	119819.	10.0L1.0	0.0	6.09	81901.	-19268.	5.20	139087.	26746.	22.32
23970000	8194971.	15.0SQ	0.0	6.57	3033808.	-713715.	9.59	8908686.	929309.	11.34
23980000	260787.	15.0SQ	0.0	6.46	149464.	-35162.	6.61	295949.	44805.	17.18
	47238772.				23977121.	19319603.		35007406.	2763956.	5.85

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION



In the Matter of the Application of
CONSUMERS ENERGY COMPANY
for Accounting and Ratemaking Approval of
Depreciation Rates for Gas Utility Plant.

Case No. U-12999

DIRECT TESTIMONY
OF
THOMAS L. SIMONSEN
ON
BEHALF OF
CONSUMERS ENERGY COMPANY

December 8, 2003

SIMONSEN – DIRECT

1 Q. Please state your name, employer and business address.

2 A. Thomas L. Simonsen, Consumers Energy Company (Consumers Energy or Company),
3 One Energy Plaza, Jackson, Michigan 49201.

4
5 Q. What is your position at the Company?

6 A. I am a Corporate Tax Manager in the Corporate Tax Department.
7

8 Q. Please describe your educational background and work experience.

9 A. My educational background and work experience is set forth in my Curriculum Vitae,
10 which is attached as Appendix A of this testimony.
11

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

13 A. The purpose of my testimony is to address what the effect would be on the calculation
14 of the Company's Gas Utility Plant depreciation rates if a modified version of the net
15 salvage methodology approved by the MPSC for SEMCO Energy Gas Company in
16 Case No. U-13496 were used instead of the traditional methodology
17

18 Q. What net salvage methodology was used in Case No. U-13496?

19 A. In SEMCO Energy Gas Company's Settlement Agreement (Settlement Agreement) a
20 five-year average of annual total cost of removal and salvage was used to calculate net
21 salvage percentages that were then used in the calculation of depreciation rates. This
22 Settlement Agreement was approved by the Commission in its May 2, 2003 Order,
23 "Order Approving Settlement Agreement", in the SEMCO Energy Gas Company
24 depreciation rate case, Case No. U-13496.
25

26 Q. Please identify the exhibits you are sponsoring.

27 A. I am sponsoring the following exhibits:

SIMONSEN - DIRECT

1 Exhibit A-____(TLS-1), "Consumers Energy's depreciation rates calculated using ELG
2 and a five average of net salvage by function."

3 Exhibit A-____(TLS-2), "Consumers Energy's depreciation rates calculated using ALG
4 and a five average of net salvage by function."

5 Exhibit A-____(TLS-3), "Consumers Energy's five history of net salvage as reported
6 in Form P-522 for years 1998 through 2002."

7
8 Q. Were these exhibits prepared by you or under your direction and supervision?

9 A. Yes, they were.
10

11 Q. How does the five-year average methodology differ from the way depreciation rates
12 are normally calculated?

13 A. The basic difference relates to how the net salvage percentages are calculated for each
14 individual plant accounts for use in the depreciation rate calculation. In a traditional
15 depreciation study, the net salvage data for each individual plant account is analyzed to
16 determine a specific net salvage percentage for each account. In the SEMCO case, a
17 five-year average percentage of total net salvage was calculated from the data
18 presented by the SEMCO Energy Gas Company in its annual MPSC Form P-522
19 filings. This average percentage was then multiplied by total depreciable plant to
20 determine a total future net salvage amount that was then allocated to individual plant
21 accounts based on the traditional net salvage.
22

23 Q. Do you have any concerns with use of this five-year average methodology?

24 A. Yes. The five-year average approach described above relies on total Company net
25 salvage experience instead of individual depreciable plant account experience and does
26 not take into consideration events that impact functional class of plant and individual
27 accounts. Use of this alternative for Consumers Energy would understate annual

SIMONSEN – DIRECT

1 depreciation expense and result in an intergenerational customer equity problem
2 because the lower depreciation rates that result will have the effect of pushing more of
3 the net salvage to future customers.

4
5 Q. Are there any modifications that could be made to the five-year average approach that
6 would mitigate these concerns?

7 A. Yes. The five-year average approach uses a simplifying assumption that calculates
8 total net salvage that is then allocated to all accounts. This assumption is not correct.
9 In order to take into consideration some of the events that impact individual accounts,
10 the five-year average net salvage factor, if used, should be calculated by functional
11 class of plant. This will help avoid the problems caused by allocating a total net
12 salvage across to all of the individual depreciable plant accounts. Use of data by
13 functional class would be preferable, and more accurate, if a five-year average
14 approach is used.

15
16 Q. Have you calculated the effect of using a five-year average of net salvage by functional
17 class of plant on depreciation rates in this case?

18 A. Yes I have calculated the effect on depreciation rates using both the Equal Life Group
19 (ELG) procedure that the Company recommends be used and the Average Life Group
20 (ALG) procedure that was used in developing existing rates.

21
22 Q. Please describe the effect on depreciation expense that your calculation of depreciation
23 rates has when both the ELG procedure and a five-year average of net salvage by
24 functional class of plant are used.

25 A. Page 1 of Exhibit A-____(TLS-1) shows a comparison of the currently effective
26 depreciation rates to depreciation rates calculated using both the ELG procedure and a
27 five-year average of net salvage by functional class of plant. This calculation results in

SIMONSEN - DIRECT

1 an annual depreciation expense decrease of approximately of \$6 million below the
2 result calculated using the existing depreciation rates and December 31, 2002 plant
3 balances. The remaining pages show additional detail regarding the calculation of
4 depreciation rates using the alternative approach.
5

6 Q. Please describe the effect on depreciation expense that your calculation of depreciation
7 rates has when both the ALG procedure and a five-year average of net salvage by
8 functional class of plant are used.

9 A. Page 1 of Exhibit A-____(TLS-2) shows a comparison of the currently effective
10 depreciation rates to depreciation rates calculated using both the ALG procedure and a
11 five-year average of net salvage by functional class of plant. This calculation results in
12 an annual depreciation expense decrease of approximately of \$22 million below the
13 result calculated using the existing depreciation rates and December 31, 2002 plant
14 balances. The remaining pages show additional detail regarding the calculation of
15 depreciation rates using the alternative approach.
16

17 Q. In calculating this alternative approach, how have you determined the depreciation
18 factors you have used?

19 A. With exception of the net salvage factors, all the depreciation factors I have used are
20 taken directly from Mr. Roff's exhibits. The net salvage information is taken directly
21 from the data reported by Consumers Energy's in its annual MPSC Form P-522 and is
22 shown on Exhibit A-____(TLS-3). The functional data is taken from the Company's
23 books and records used in calculating the data that is summarized on page 219 of the
24 Form P-522.
25

SIMONSEN – DIRECT

1 Q. Are you recommending use of a five-year average approach?

2 A. I believe that using the traditional approach of calculating net salvage by plant account
3 would be preferable and more accurate.
4

5 Q. What impact would the Statement of Position (SOP) by the Accounting Standards
6 Executive Committee of the American Institute of Certified Public Accountants on
7 Accounting for Certain Costs and Activities Related to Property, Plant, and Equipment
8 have on depreciation if adopted?

9 A. The SOP would impact financial accounting for depreciation in two ways as currently
10 drafted. First, the SOP will require component depreciation for each asset and second
11 the SOP will require that cost of removal be expensed as incurred. The SOP will
12 require the Company to establish a new set of books for depreciation accounting for
13 financial accounting purposes.
14

15 Q. Does the ELG procedure conform to component depreciation advocated in the SOP?

16 A. Yes it does. As described in Mr. Roff's testimony, the ELG procedure does simulate
17 component depreciation and is within the requirements of the Uniform System of
18 Accounts.
19

20 Q. If the Financial Accounting Standards Board (FASB) approves the SOP, what
21 accounting changes would the Company need?

22 A. If the FASB approves the SOP, the Company would need MPSC approval to set up
23 regulatory assets and regulatory liabilities to account for the timing differences related
24 to the SOP. The Company requests the Commission grant such approval as part of this
25 case.
26

SIMONSEN - DIRECT

1 Q. What are the requirements of Statement of Financial Accounting Standard (SFAS) No.
2 143, Accounting for Asset Retirement Obligations (ARO)?

3 A. SFAS No. 143 provides that any legal obligations to incur expenditures after the useful
4 life of a long-lived tangible asset be recorded as a liability, at its present value. These
5 liabilities may be the result of enacted law, statute, ordinance or written or oral contract.
6

7 Q. Does the Company have any legal liabilities as it relates to its gas business?

8 A. Yes. At a minimum, the Company has two such obligations. 1) The Company has
9 committed in MPSC Case No. U-13156 to moving any gas meters, regulators and risers
10 that remain inside of customer's homes to the exterior, also known as the Meter Move
11 Out Program and 2) a commitment to the Michigan Department of Environmental
12 Quality to seal wells at the Northville Trenton Storage Field that is scheduled to be
13 abandoned.
14

15 Q. What is the Company proposing as it relates to the accounting and ratemaking for
16 SFAS 143?

17 A. In Case No. 13730, the Company has requested regulatory asset and regulatory liability
18 treatment for any timing differences related to this standard. The requested accounting
19 treatment is outlined in Mr. Barba's testimony in Case No. 13730. If the Commission
20 has not yet granted such authority at the time it issues an order in this case, then the
21 Company requests such authority be granted in this case.
22

23 Q. Does this complete your testimony?

24 A. Yes, it does.
25

Appendix A

<p>CURRICULUM VITAE THOMAS L. SIMONSEN</p>
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ACADEMIC BACKGROUND

Thomas L. Simonsen graduated from Lawrence Institute of Technology with a Bachelor of Science Degree in Electrical Engineering in 1969. In addition, Mr. Simonsen graduated from Michigan State University in 1975 with a Master's Degree in Business Administration, majoring in Accounting. Mr. Simonsen was elected to the Phi Kappa Phi and Beta Gamma Sigma honorary societies.

Mr. Simonsen has also received specialized training in the area of depreciation from Western Michigan University's Institute of Technological Studies. This training involved four 40-hour seminars on depreciation entitled "Fundamentals of Depreciation," "Fundamentals of Service Life Forecasting," "Dynamics of Life Estimation" and "Making a Depreciation Study," and included such topics as accounting for depreciation, estimating service life, and estimating salvage and cost of removal.

Also, Mr. Simonsen has completed a course in "Depreciation for Managers and Regulators of Public Utilities" at George Washington University and attended the Annual Regulatory Conference at Iowa State University.

EMPLOYMENT AND PROFESSIONAL EXPERIENCE

Upon graduation from Lawrence Institute of Technology, Mr. Simonsen was employed by National Steel Corporation as an electric maintenance foreman. In this capacity, he was responsible for repairs and maintenance of electric equipment, instruments and cranes used in a steel mill.

In 1975, after receiving his master's degree at Michigan State University, Mr. Simonsen joined Consumers Energy Company as a General Accountant. He has held increasingly responsible positions as an Accounting Analyst, Supervisory Accountant, Corporate Tax Supervisor, Senior Corporate Tax Supervisor and Corporate Tax Manager. Throughout his career, he has been involved in all aspects of book and tax depreciation.

As a Corporate Tax Manager, Mr. Simonsen is responsible for the preparation and control of depreciation accounting records and systems for both book and tax depreciation.

INDUSTRY AND TECHNICAL ASSOCIATION AFFILIATIONS

Since 1976, Mr. Simonsen has held memberships and various officer positions in the American Gas Association's Depreciation Committee, the Edison Electric Institute's Property Accounting & Valuation Committee, and the Institute of Electrical and Electronics Engineers, Inc. Mr. Simonsen is also a member of the Society of Depreciation Professionals.

APPEARANCES

Mr. Simonsen has filed testimony and/or testified before the Michigan Public Service Commission in the following cases:

U-6041 (Reopened) - (Campbell No. 3) Accounting and Ratemaking Approval of Depreciation Practices for Electric and Common Utility Plant (1982)

U-7564 - Discontinuance of Service in Areas of the City of Holland (1983)

U-9197 - Accounting and Ratemaking Approval of Depreciation Practices for Gas Utility Plant (1989)

U-9493 - Accounting and Ratemaking Approval of Depreciation Practices for Electric and Common Utility Plant (1990)

U-9668 - Adjustment of Surcharges for Nuclear Power Plant Decommissioning (1991)

U-10342 - Accounting and Ratemaking Approval of Depreciation Practices for the Ludington Pump Storage Plant (1993) (This case was resolved by settlement prior to my testifying)

U-10800 - Adjustment of Surcharges for Nuclear Power Plant Decommissioning (1995)

U-11662 - Adjustment of Surcharges for Nuclear Power Plant Decommissioning (1999)

U-13000 – To increase its rates for the distribution of natural gas and for other relief (2002)

Mr. Simonsen has also filed testimony and testified before the Federal Energy Regulatory Commission:

Docket No. ER89-256-000 - Palisades Generating Company, on the subject of Nuclear Power Plant Decommissioning (1991).