

# Hewitt


Hewitt Associates LLC

## Actuarial Report

Consumers Energy  
Company

Pension Plan for  
Employees of  
Consumers Energy  
Company

As of January 1, 2002

MICHIGAN PUBLIC SERVICE COMMISSION  
FILE U-13715  
EXHIBIT NO. S-53  
DATE 4/24/03  REPORTER

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# Preparation of this Actuarial Valuation

As of January 1, 2002

## Pension Plan for Employees of Consumers Energy Company

This report has been prepared for the plan sponsor and summarizes the results of the funding valuation for the 2002 plan year and the accounting valuation for fiscal 2002. In addition, this material is intended to serve as a source document for information to meet certain accounting or government filing requirements.

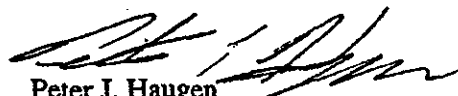
In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by Consumers Energy Company as of the valuation date. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

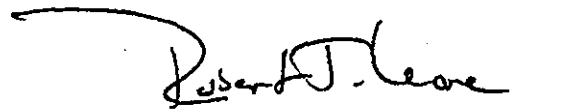
This valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board. In addition, the valuation results are based on our understanding of the applicable laws and regulations under IRC Sections 404 and 412 and the requirements of SFAS Nos. 87 and 88.

The actuarial assumptions and methods used in this valuation are described in the Actuarial Assumptions section of this report. For the funding valuation, the interest rate and mortality table used to measure current liability are prescribed by IRC Section 412. The economic and demographic assumptions used for purposes of compliance with SFAS Nos. 87 and 88 were selected by the plan sponsor. In our opinion, all other actuarial assumptions used represent reasonable expectations of anticipated plan experience.

The undersigned meet the Qualified Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

Hewitt Associates LLC

  
Peter J. Haugen  
Fellow of the Society of Actuaries

  
Robert J. Leone  
Fellow of the Society of Actuaries

January 2003

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## Summary

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This report presents the results of the January 1, 2002 actuarial valuation of the Pension Plan for Employees of Consumers Energy Company. The report summarizes the required funding for the plan year beginning January 1, 2002, and the Company's accounting requirements for the 2002 fiscal year.

### Funding

The contribution requirements for the 2002 plan year are as follows:

Minimum Required Contribution	\$	0
Maximum Deductible Contribution	\$	37,958,986 <sup>1</sup>

The combined contributions to the pension plan and any defined contribution plan must be tested to ensure that they do not exceed 25% of pay.

The Plan's experience since the January 1, 2001 valuation resulted in an actuarial loss of approximately \$51,170,000. The sources of this loss and its calculation are described on page 18.

Effective with the January 1, 2002 funding valuation, the following assumption changes were made to better anticipate expected experience:

- The interest rate was lowered from 8.75% to 8.50%;
- The assumed salary scale was reduced to a flat 4.50%;
- The expected retirement rates were revised. The assumed rates are described on page 52 of this report; and
- 60% of those eligible are now assumed to take benefits in the form of a lump sum.

### Accounting

The Accounting Requirements section of the report begins on page 21. The net expense for 2002 was \$32,588,146.

An allocation of this expense among the different Consumers Energy locations is shown on page 23. The details and components of the expense calculations can be found on page 22.

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<sup>1</sup> The maximum deductible is \$315,458,568 based on low end of current liability interest rate range. However, 2003 quarterly contributions are required if this rate is used.

## Summary (continued)

### Funding Requirements

	1/1/2001	1/1/2002
<b>Contributions</b>		
Minimum Required	\$ 0	\$ 0
Percentage of Compensation	0.00%	0.00%
Maximum Deductible	\$ 174,158,219	\$ 37,958,986 <sup>1</sup>
Percentage of Compensation	34.11%	7.37%
<b>Assets and Liabilities</b>		
Accrued Liability	\$1,036,762,900	\$ 1,074,019,548
Actuarial Value of Assets	<u>1,018,274,314</u>	<u>1,034,348,588</u>
Unfunded Accrued Liability	\$ 18,488,586	\$ 39,670,960
Normal Cost	\$ 28,613,851	\$ 29,412,743
Percentage of Compensation	5.60%	5.71%
Valuation Compensation	\$ 510,571,361	\$ 515,251,207
<b>Number of Funded Employees</b>		
Active	10,208	10,303
Leave of Absence	63	64
Terminated Vested	2,182	2,237
Retired	<u>2,577</u>	<u>2,987</u>
Total	15,030	15,591
<b>Characteristics of Active Funded Employees</b>		
Average Age	45.5	45.6
Average Credited Service	17.2	17.0
Average Compensation	\$ 55,562	\$ 59,950

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<sup>1</sup> The maximum deductible is \$315,458,568 based on low end of current liability interest rate range. However, 2003 quarterly contributions are required if this rate is used.

## Summary (continued)

### Accounting Requirements—SFAS 35 (Accrued Benefit Liabilities)

	1/1/2001	1/1/2002
Present Value of Vested Accrued Benefits	\$ 670,309,911	\$ 720,606,939
Funded Percentage	157.9%	126.2%
Present Value of All Accrued Benefits	\$ 778,964,987	\$ 821,759,409
Funded Percentage	135.9%	110.7%
Market Value of Assets	\$ 1,058,702,052	\$ 909,610,724
Interest Rate	8.75%	8.50%

### Accounting Requirements—SFAS 87

	1/1/2001	1/1/2002
Projected Benefit Obligation	\$ 1,107,369,507	\$ 1,217,763,665
Market-Related Value of Assets	\$ 1,008,987,879	\$ 1,050,831,975
Service Cost	\$ 36,300,319	\$ 40,028,820
Percentage of Compensation	7.11%	7.77%
Pension Expense	\$ 22,823,710	\$ 32,588,146
Assumptions		
Discount Rate	7.75%	7.25%
Expected Rate of Return	9.75%	9.75%

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## Liabilities, Assets, Normal Cost

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### Unfunded Accrued Liability and Normal Cost, January 1, 2002

(1) Accrued Liability	
Active Employees	\$ 756,932,325
Terminated Vested Employees	40,197,750
Retired Employees and Beneficiaries	<u>276,889,473</u>
Total	\$ 1,074,019,548
(2) Actuarial Value of Assets	<u>1,034,348,588</u>
(3) Unfunded Accrued Liability, (1)-(2)	\$ 39,670,960
(4) Normal Cost	\$ 29,412,743

### Number of Employees in Funding

Active Employees (Including Leaves of Absence)	10,367
Terminated Vested Employees	2,237
Retired Employees and Beneficiaries	<u>2,987</u>
Total	15,591

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## Liabilities, Assets, Normal Cost (continued)

### Current Liability, January 1, 2002

	Number of Participants	Vested Current Liability	Total Current Liability
<b>RPA Current Liability (6.85%, 83GAM)</b>			
Retired Employees and Beneficiaries	2,987	\$ 316,245,713	\$ 316,245,713
Terminated Vested Employees	2,237	52,692,265	52,692,265
Active Employees (Including Leaves of Absence)	<u>10,367</u>	<u>529,475,939</u>	<u>644,546,561</u>
<b>Total</b>	<b>15,591</b>	<b>\$ 898,413,917</b>	<b>\$ 1,013,484,539</b>
Actuarial Value of Assets			\$ 1,034,348,588
<b>Unfunded Current Liability</b>			<b>\$ 0</b>
Gateway Current Liability (6.85%, 83GAM)			\$ 1,013,484,539
Gateway Funded Percentage			98.04%
Increase in Current Liability Due to Benefit Accruals			\$ 53,383,405
Expected Benefit Payments During Plan Year			\$ 110,000,000
<b>OBRA Current Liability (6.85%, 83GAM)</b>			<b>\$ 1,013,484,539</b>

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## Liabilities, Assets, Normal Cost (continued)

### Actuarial Value of Assets, January 1, 2002

(1) Actuarial Value of Assets on 1/1/2001	\$ 1,018,274,314
(2) Interest at 8.75% on 1/1/2001 Assets	89,099,002
(3) Contributions Made for 2001 Plan Year	64,000,000
(4) Interest at 8.75% on Contributions Made for 2001 Plan Year	0
(5) 2001 Benefits Paid from Trust	101,403,844
(6) Interest 8.75% on 2001 Benefits	4,436,418
(7) Net Transfer of Assets to Group Annuity Contract After Adjustments	0
(8) Interest on Net Transfer of Assets	<u>0</u>
(9) Assets Based on 8.75% on 12/31/2001, (1)+(2)+(3)+(4)-(5)-(6)+(7)+(8)	\$ 1,065,533,054
(10) Market Value of Assets, 12/31/2001	<u>909,610,724</u>
(11) Difference, (10)-(9)	\$ (155,922,330)
(12) Market Adjustment, 20% of (11)	<u>(31,184,466)</u>
(13) Preliminary Value on 12/31/2001, (9)+(12)	\$ 1,034,348,588
(14) Minimum Value, 80% of (10)	\$ 727,688,579
(15) Maximum Value, 120% of (10)	\$ 1,091,532,869
(16) Actuarial Value of Assets (13) but not less than (14) and not greater than (15)	\$ 1,034,348,588
Investment Return: <sup>1</sup>	
• Actuarial Value of Assets	5.35%
• Market Value of Assets	-10.74%

<sup>1</sup> The investment return is computed based on the required method for reporting on the Form 5500 Schedule B.

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## Contributions

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### Minimum Required Contribution

The minimum contribution is determined under Section 412(b) of the Internal Revenue Code by maintaining a Funding Standard Account (FSA). The minimum contribution required is the amount necessary to make the FSA credits for the plan year equal the FSA charges. Contributions in excess of the minimum create a credit balance, which serves to reduce the minimum contribution requirement for the subsequent plan year. If the FSA credits are less than the FSA charges, a funding deficiency exists which is subject to a nondeductible tax. Page 8 shows the status of the FSA for the plan year ended December 31, 2001, and page 9 indicates the requirements for the plan year ending December 31, 2002.

### Funding Standard Account

In general, the FSA charges for the plan year represent the sum of:

- The normal cost for the plan year.
- 40-year amortization of any unfunded accrued liability as of 1/1/1976.
- 30-year amortization of any increase in the unfunded accrued liability due to plan amendments.
- 10-year amortization of any increase in the unfunded accrued liability due to assumption changes on or after 1/1/1988 (30-year amortization for increases prior to 1/1/1988).
- Interest on the above items to the end of the plan year.

In general, the FSA credits for the plan year are the sum of:

- The prior year's credit balance.
- Employer contributions made for the plan year.
- 30-year amortization of any decrease in the unfunded accrued liability due to plan amendments.
- 10-year amortization of any decrease in the unfunded accrued liability due to assumption changes on or after 1/1/1988 (30-year amortization for decreases prior to 1/1/1988).
- Interest on the above items to the end of the plan year.

Special rules apply for method changes, for plans involved in a spinoff or merger, for poorly funded plans, or for overfunded plans.

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## Contributions (continued)

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### Funding Standard Account Balance, December 31, 2001

Shown below is the calculation of the balance in the Funding Standard Account as of December 31, 2001. Since the credits were equal to the charges, the minimum contribution requirements for the plan year ended December 31, 2001, were satisfied.

(1) Charges

Normal Cost, 1/1/2001	\$ 28,613,851
Amortization Payment, 1/1/2001	7,622,565
Interest on Above at 8.75% to 12/31/2001	<u>3,170,686</u>
Total	\$ 39,407,102

(2) Credits

Credit Balance, 1/1/2001	\$ 52,641,263
Contributions Made for 2001	64,000,000
Amortization Payment, 1/1/2001	0
Interest on Above at 8.75% to 12/31/2001	4,606,111
Full Funding Limitation Credit	<u>0</u>
Total	\$ 121,247,374

(3) Credit Balance, 12/31/2001, (2)-(1) \$ 81,840,272

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## Contributions (continued)

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### Contribution Alternatives for Year Ending December 31, 2002

The following material indicates our understanding of the range of contribution levels allowable under the Internal Revenue Code as amended by the Employee Retirement Income Security Act of 1974 (ERISA). In this section, all of the figures are calculated as payable at the end of the year.

### Minimum Contribution (Funding Standard Account)

The minimum contribution required for the plan year ending December 31, 2002, under the provisions of Section 412(b) of the Internal Revenue Code is shown below:

(1) Charges	
Normal Cost, 1/1/2002	\$ 29,412,743
Amortization Payment on Charges of \$128,250,000, 1/1/2002	20,169,460
Interest on Above at 8.5% to 12/31/2002	<u>4,214,487</u>
Total	\$ 53,796,690
(2) Credits	
Credit Balance, 12/31/2001	\$ 81,840,272
Amortization Payment on Credits of \$6,738,768, 1/1/2002	946,581
Interest on Above at 8.5% to 12/31/2002	7,036,883
Full Funding Limitation Credit	<u>0</u>
Total	\$ 89,823,736
(3) Minimum Required Contribution for 2001 (1)-(2)	\$ 0

There are no quarterly contributions required for 2002.

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## Contributions (continued)

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### Maximum Deductible Contribution

The maximum deductible contribution for the taxable year ending December 31, 2002, has been calculated in accordance with the limits for deductions under Section 404(a)(1) of the Internal Revenue Code, and is based on the paragraph of that section that produces the largest amount. This contribution cannot exceed the Full Funding Limitation under Section 412(c) of the Internal Revenue Code. The maximum deductible contribution under paragraph (i) of Section 404(a)(1)(A) is the minimum contribution required under the Funding Standard Account for the year. The maximum contribution under paragraph (iii) of Section 404(a)(1)(A) is the sum of the normal cost and an amortization payment plus interest to the end of the year. The amortization payment is defined as the "Limit Adjustment," which is the ten-year amortization payment on each "Ten-Year Amortization Base." The Ten-Year Amortization Base represents the initial liability and adjustment amounts resulting from plan changes, experience gains or losses, or changes in actuarial assumptions and methods.

The maximum deductible contribution may be restricted by the Full Funding Limitation as defined in Section 412(c) of the Internal Revenue Code as amended by the Pension Protection Act of 1987 and the Retirement Protection Act of 1994 (RPA). The Full Funding Limitation is the excess at the end of the year, if any, of:

- (1) The lesser of
  - (a) The accrued liability (including normal cost), or
  - (b) 165% of current liabilities; over
- (2) The lesser of
  - (a) The fair market value of assets, or
  - (b) The actuarial value of assets.

The Full Funding Limitation must be at least the excess, if any, of 90% of the RPA definition of current liability over the actuarial value of assets. In addition, under Section 404(a)(1)(D), the maximum deductible contribution shall not be less than the Unfunded Current Liability determined under Section 412(I).

If current liability exceeds assets, additional amounts might be deductible for the year.

The combined contributions to the pension plan and any defined contribution plan must be tested to ensure that they do not exceed 25% of pay.

Contributions in excess of the maximum deductible are subject to a 10% excise tax. The development of the Full Funding Limitation is shown on page 12.

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## Contributions (continued)

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### Maximum Deductible Contribution for the 2002 Fiscal Year (continued)

(1) Deductible Limit

Normal Cost, 1/1/2002	\$ 29,412,743
10-Year Amortization Payment, 1/1/2002	5,572,498
Interest on Above at 8.5% to 12/31/2002	<u>2,973,745</u>
Total, 12/31/2002	\$ 37,958,986
(2) Minimum Required Contribution for the 2002 Plan Year	\$ 0
(3) Full Funding Limitation for the 2002 Plan Year	\$ 210,296,400
(4) (1), But $\geq$ (2) and $\leq$ (3)	\$ 37,958,986
(5) Unfunded Current Liability <sup>1</sup>	
Expected RPA Current Liability, 12/31/2002	\$ 1,036,523,398
Expected Actuarial Value of Assets, 12/31/2002	<u>1,007,593,218</u>
Total, 12/31/2002, But $\geq$ \$0	\$ 28,930,180
(6) Maximum Deductible Contribution for the 2002 Fiscal Year, Greater of (4) or (5)	\$ 37,958,986

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<sup>1</sup> The maximum deductible is \$315,458,568 based on low end of current liability interest rate range. However, 2003 quarterly contributions are required if this rate is used.

## Contributions (continued)

### Full Funding Limitation

The full funding limitation is defined in IRC Section 412(c)(7) as the lesser of the ERISA and OBRA '87 full funding limitations, but not less than the RPA '94 minimum full funding limitation. The ERISA full funding limitation is the excess, if any, of the accrued liability (including the normal cost) over the lesser of the fair market value of assets and the actuarial value of assets.

The OBRA '87 full funding limitations is the excess, if any, of 165% of the OBRA '87 definition of current liability over the lesser of the fair market value of assets and the actuarial value of assets. Finally, RPA '94 requires the full funding limitation to be no smaller than the excess, if any, of 90% of the RPA '94 definition of current liability over the actuarial value of assets.

For determining the ERISA and OBRA '87 full funding limitations for the minimum required contribution, an adjustment is made to reflect the Funding Standard Account Credit Balance.

	ERISA FFL	OBRA '87 FFL	RPA '94 Override
Adjusted Liabilities, 12/31/2002	\$ 1,082,549,036	\$ 1,710,263,607	\$ 932,871,058
Lesser of Market Value of Assets and Actuarial Value of Assets, 12/31/2002	872,252,636	872,252,636	
Actuarial Value of Assets, 12/31/2002			<u>1,007,593,218</u>
Unfunded Liability, 12/31/2002	\$ 210,296,400	\$ 838,010,971	\$ 0
<b>For Determining Maximum</b>			
<b>Deductible Contribution</b>			
Unfunded Liability	\$ 210,296,400	\$ 838,010,971	\$ 0
Contribution Not Yet Deducted With Interest	<u>0</u>	<u>0</u>	<u>0</u>
Preliminary Limit	\$ 210,296,400	\$ 838,010,971	\$ 0
<b>For Determining Minimum</b>			
<b>Required Contribution</b>			
Unfunded Liability	\$ 210,296,400	\$ 838,010,971	\$ 0
FSA Credit Balance With Interest	<u>88,796,695</u>	<u>88,796,695</u>	<u>N/A</u>
Preliminary Limit	\$ 299,093,095	\$ 926,807,666	\$ 0

	For Maximum Deductible Contribution	For Minimum Required Contribution	For PBGC Variable Premium Exemption
Full Funding Limitation, 12/31/2002	\$ 210,296,400	\$ 299,093,095	\$ 210,296,400

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## Contributions (continued)

### Full Funding Limitation

This page develops the end-of-year liabilities and assets for the determination of the full funding limitation.

	Accrued Liability (8.50%, 83GAM)	OBRA Current Liability (6.85%, 83GAM)	RPA Current Liability (6.85%, 83GAM)
Liabilities, 1/1/2002	\$ 1,074,019,548	\$ 1,013,484,539	\$ 1,013,484,539
Normal Cost	29,412,743	53,383,405	53,383,405
Expected Benefit Payments	(110,000,000)	(100,000,000) <sup>1</sup>	(100,000,000) <sup>1</sup>
Interest to 12/31/2002	<u>89,116,745</u>	<u>69,655,454</u>	<u>69,655,454</u>
Expected Liabilities, 12/31/2002	\$ 1,082,549,036	\$ 1,036,523,398	\$ 1,036,523,398
Applicable Percentage Adjustment	<u>100%</u>	<u>165%</u>	<u>90%</u>
Adjusted Liabilities, 12/31/2002	\$ 1,082,549,036	\$ 1,710,263,607	\$ 932,871,058

<sup>1</sup> Expected liability release.

Assets	Market Value	Actuarial Value
Assets, 1/1/2002	\$ 909,610,724	\$ 1,034,348,588
Expected Benefit Payments	(110,000,000)	(110,000,000)
Interest at 8.5% to 12/31/2002	<u>72,641,912</u>	<u>83,244,630</u>
Expected Assets, 12/31/2002	\$ 872,252,636	\$ 1,007,593,218

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## Contributions (continued)

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### Full Funding Limitation Credits for the 2002 Plan Year

(1) Charges	
Normal Cost, 1/1/2002	\$ 29,412,743
Amortization Payment on Charges of \$128,250,000, 1/1/2002	20,169,460
Interest on Above at 8.5% to 12/31/2002	4,214,487
Additional Funding Requirement, 12/31/2002	<u>0</u>
Total, 12/31/2002	\$ 53,796,690
(2) Credits	
Amortization Payment on Credits of \$6,738,768, 1/1/2002	\$ 946,581
Interest on Above at 8.5% to 12/31/2002	<u>80,459</u>
Total, 12/31/2002	\$ 1,027,040
(3) Excess of Charges Over Credits, (1)-(2), But $\geq$ \$0	\$ 52,769,650
(4) Full Funding Limitation Before OBRA for Determining the Credit for the 2002 Plan Year	\$ 299,093,095
(5) Full Funding Limitation Credit Before OBRA for the 2002 Plan Year, (3)-(4), But $\geq$ \$0	\$ 0
(6) OBRA Full Funding Limitation for Determining the Credit	\$ 926,807,666
(7) Full Funding Limitation Credit Based on OBRA for the 2002 Plan Year, (3)-(5)-(6), But $\geq$ \$0	\$ 0

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## Contributions (continued)

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### Additional Funding Requirement for 2002 Plan Year

Section 412(l) of the Code requires that an additional funding charge be added to the funding standard account for certain underfunded plans. The Retirement Protection Act of 1994 exempts plans with funded current liability percentages in excess of 90% from this requirement. To determine the funded current liability percentage for this purpose, current liability is calculated using the maximum permissible interest rate (6.85% as of January 1, 2002) and the 1983 Group Annuity Mortality Table.

This Gateway Percentage is 102.6% for the plan, therefore, there is no additional funding requirement for 2002. The calculation of the percentage is shown below.

(1) Current Liability, 1/1/2002	\$ 1,013,484,539
(2) Actuarial Value of Assets, 1/1/2002	\$ 1,034,348,588
(3) Gateway Percentage (2)÷(1)	102.6%

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Year	Historical Gateway Percentages
2001	92.1%
2000	100.3%
1999	104.4%

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## Contributions (continued)

### Minimum Required Contribution— Schedule of Amortization Payments as of January 1, 2002

	Initial Amount	Years Remaining	Amortization Payment	Present Value 1/1/2002
<b>Charges</b>				
Actuarial Loss Adjusted for RR 81-213 1/1/2001	\$ 459,421	4	\$ 107,560	\$ 382,272
Assumption Change, 1/1/2001	\$ 24,529,374	9	3,448,539	22,895,481
Plan Change, 1/1/2001	\$ 46,141,054	29	3,958,553	45,786,419
Actuarial Loss, 1/1/2002	\$ 51,166,242	5	11,967,041	51,166,242
Plan Change due to EGTRRA, 1/1/2002	\$ 8,019,586	30	687,767	8,019,586
Assumption Change, 1/1/2002	\$ (6,738,768)	10	(946,581)	(6,738,768)
<b>Total Charges</b>			<b>\$ 19,222,879</b>	<b>\$121,511,232</b>
<b>Credits</b>				
<b>Total Credits</b>			<b>\$ 0</b>	<b>\$ 0</b>
<b>Balancing Equation</b>				
<b>Total Charges Less Total Credits</b>			<b>\$ 19,222,879</b>	<b>\$121,511,232</b>
Less: Funding Standard Account Credit Balance, 12/31/2001				\$ 81,840,272
Less: Accumulated Reconciliation Account, 12/31/2001				0
<b>Equals: Unfunded Accrued Liability, 1/1/2002</b>				<b>\$ 39,670,960</b>

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## Contributions (continued)

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### Maximum Deductible Contribution—

#### Schedule of Amortization Payments as of January 1, 2002

In accordance with Regulation 1.404(a)-14 under IRC Section 404, the fresh start alternative has been used to determine the 10-year amortization base and limit adjustment as of January 1, 2001.

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Item	10-Year Amortization Base	Limit Adjustment	Unamortized Balance, 1/1/2002
Fresh Start, 1/1/2001	\$ 39,670,960	\$ 5,572,498	\$ 39,670,960

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The unamortized balance on January 1, 2002, shown above is equal to the unfunded accrued liability as of that date.

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## Experience

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### Actuarial Loss

(1) Expected Unfunded Accrued Liability	
Unfunded Accrued Liability, 1/1/2001	\$ 18,488,586
Normal Cost, 1/1/2001	28,613,851
Contributions Made for 2001 Plan Year	(64,000,000)
Interest on Above at 8.75% to 12/31/2001	<u>4,121,463</u>
Total, 12/31/2001	\$ (12,776,100)
(2) Actual Unfunded Accrued Liability 1/1/2002, Before Changes	<u>38,390,142</u>
(3) Actuarial Loss (Gain), (2)-(1)	\$ 51,166,242

### Plan Experience

The plan's experience is examined before recognizing any plan changes. The actuarial loss of \$51,166,242 represents the combination of all actuarial gains and losses.

Examples of the sources of gains and losses include:

- **Investment Experience:** A loss of approximately \$31,000,000 resulted from the return on the actuarial value of assets. This corresponds to a 5.4% rate of return. On a market value basis the rate of return was ~10.7%.
- **Noninvestment Sources of Gains and Losses:** These included mortality, lump-sum payments to retirees, retirement experience, payroll changes, and turnover. The net actuarial loss from all these sources was approximately \$20,000,000, or 1.9% of the plan's before change accrued liability.

**71500411**

## Accrued Benefit Values

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### Background

This section presents the results of a separate valuation of the plan's obligations based only on service accrued as of the valuation date. Thus, the perspective and the results of this accrued benefit valuation differ from the calculation of ongoing funding requirements presented in the earlier sections of this report, which are based on total projected service. This accrued benefit valuation assumes an ongoing plan and, therefore, differs from a calculation of PBGC termination liabilities which would be based on the benefits and assumptions appropriate for a terminating plan.

### Uses of Accrued Benefit Values

For plan years beginning after December 15, 1980, the required information in the financial statements of a defined benefit pension plan must include the present value of vested benefits and the present value of all accrued benefits determined on an ongoing plan basis, either as of the beginning or as of the end of the plan year. These requirements are set forth in FASB Statement No. 35, "Accounting and Reporting by Defined Benefit Pension Plans."

### Actuarial Basis For Accrued Benefit Values

To provide guidance for consistent actuarial practice in the determination of accrued benefit values on an ongoing plan basis, the American Academy of Actuaries has recommended procedures for calculating the present value of vested benefits (Illustration 1) and the present value of accrued benefits (Illustration 2). The results under both illustrations include the present value as of the valuation date, of the sum of: (a) all benefits expected to be paid to former participants, and their beneficiaries, who have retired or have terminated with vested rights, and (b) benefits expected to be paid at future dates to present active participants, based only on service prior to the date of calculation.

The calculation of the present value of *vested* benefits using Illustration 1 recognizes only the benefits in which an active participant retains a right, independent of continuation of employment beyond the calculation date. It does not include any additional benefits which might arise because of the future death or disability of a participant that become payable only if the participant remains employed until death or disability.

The calculation of the present value of *all accrued* benefits using Illustration 2 recognizes all accrued benefits expected to become payable at future dates, including the accrued portion of disability or preretirement death benefits. Thus, the benefit of an employee not vested as of the valuation date, is included in this calculation to the extent it is expected to become payable upon the occurrence of future events (termination, retirement, etc.).

71500412

## Accrued Benefit Values (continued)

The present values shown on this page represent the single sum values as of January 1, 2002, based on the actuarial assumptions described in this report, including an interest rate of 8.75%.

The basic retirement benefit on which these calculations were made was the estimated benefit accrued to the valuation date for each participant, based on the five-year average compensation as of the valuation date and the date of hire reported by the Company.

### Present Value of Vested Benefits

Retired Employees and Beneficiaries	\$ 276,889,473
Terminated Vested Employees	40,197,750
Active Employees (Including Leaves of Absence)	<u>403,519,716</u>
Total Vested Benefits	\$ 720,606,939

Present Value of Nonvested Benefits 101,152,470

Total Present Value of All Accrued Benefits \$ 821,759,409

### Assets

Actuarial Value	\$ 1,034,348,588
Market Value	\$ 909,610,724

As of January 1, 2002, there were 8,166 active employees who were fully vested.

### Changes in Values

During 2001, the present value of all accrued benefits increased by \$36,999,000. Shown below is a reconciliation of the sources of the increase.

Decrease due to benefit payments	\$ (101,404,000)
Increase due to benefits accrued during the year	40,736,000
Increase due to the passage of time (i.e., interest)	68,159,000
Increase due to assumption changes	5,795,000
Increase due to other experience (e.g., mortality, retirement, salary changes)	<u>29,508,000</u>
Net increase	\$ 42,794,000

**71500413**

## Accounting Requirements

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- \* The Financial Accounting Standards Board issued Statement No. 87, "Employers' Accounting for Pensions" and Statement No. 88, "Employers' Accounting for Settlements and Curtailments of Defined Benefit Pension Plans and for Termination Benefits" in December of 1985.

The expense and disclosure portions of Statement No. 87 are effective for fiscal years beginning after December 15, 1986. The balance sheet and non-U.S. plans portion of Statement No. 87 are effective for fiscal years beginning after December 15, 1988. Statement No. 88 is effective upon adoption of Statement No. 87.

Consumers Energy Company adopted the expense and disclosure portions of Statement No. 87 for the 1986 fiscal year. Pages 22 through 25 contain the results determined under Statement No. 87 and Statement No. 88 for the 2002 fiscal year.

Page 26 summarizes the actuarial assumptions used in determining the results for purposes of the accounting requirements for the plan.

**71500414**

## Accounting Requirements (continued)

### Net Periodic Pension Cost for the 2002 Fiscal Year

	Disclosure, 12/31/2001	Actual, 1/1/2002	2002 Fiscal Year	Projected, 12/31/2002
<b>Financial Position</b>				
Projected Benefit Obligation	\$ (1,194,600,878)	\$ (1,217,763,665)		\$ (1,232,092,851)
Plan Assets at Fair Value	<u>844,650,618</u>	<u>845,610,724<sup>1</sup></u>		<u>902,424,342</u>
Funded Status	\$ (349,950,260)	\$ (372,152,941)		\$ (329,668,509)
Unrecognized Net Transition Obligation (Asset)	0	0		0
Unrecognized Prior Service Cost	68,136,122	71,688,677		59,923,791
Unrecognized Panhandle Adjustment	(7,615,384)	(7,615,384)		(6,923,076)
Unrecognized Net Loss (Gain)	<u>235,124,760</u>	<u>253,774,886</u>		<u>253,774,886</u>
Prepaid (Accrued) Pension Cost	\$ (54,304,762)	\$ (54,304,762)		\$ (22,892,908)
<b>Net Periodic Pension Cost</b>				
Service Cost			\$ 40,028,820	
Interest Cost			84,300,366	
Expected Return on Assets			(102,813,618)	
Amortization of Unrecognized:				
Net Transition Obligation (Asset)			0	
Prior Service Cost			8,212,331	
Panhandle Adjustment			(692,308)	
Net Loss (Gain)			0	
Ad Hoc Retiree Increase			<u>3,552,555</u>	
Net Cost			\$ 32,588,146	
<b>Assumptions and Values</b>				
Discount Rate	7.25%	7.25%	7.25%	
Expected Rate of Return			9.75%	
Date of Data Collection	1/1/2002	1/1/2002		1/1/2002
Expected Contributions				\$ 64,000,000
Expected Benefit Payments				\$ 110,000,000
Market-Related Value of Assets		\$ 1,050,831,975		

<sup>1</sup> Revised asset value provided after disclosure results finalized.

**71500415**

## Accounting Requirements (continued)

### Allocation of 2002 Net Periodic Pension Cost

Location	Net Periodic Pension Cost
Consumers Energy Company	\$ 24,861,609
CMS Antrim Gas	37,790
CMS Business Development LLC	6,828
CMS Dearborn Gen Operating	121,934
CMS Electric & Gas	6,265
CMS Energy	361,529
CMS Enterprises	561,913
CMS Gas Transmission & Storage	76,087
CMS Gen Op—Exeter	76,671
CMS Gen Op—Filer City	59,347
CMS Gen Op—Genesee	37,004
CMS Gen Op—Grayling	44,288
CMS Gen Op—Honey Lake	6,839
CMS Gen Op—Michigan Power	2,132
CMS Generation	205,988
CMS Hydra Co Enterprises	6,487
CMS Hydra—Benton Falls	4,350
CMS Hydra—Craven	55,860
CMS Marysville Gas Liquids	111,382
CMS MS&T	573,586
CMS Oil & Gas	363,922
CMS Resource Development	54,168
CMS Texas LLC	203,095
CMS Viron	530,338
Enerbank USA	56,070
Total CMS	\$ 3,563,873
Total Non-Panhandle	\$ 28,425,482
CMS Field Services	\$ 490,021
Panhandle Eastern Pipe Line	2,567,032
Trunkline Gas	1,105,611
Total Panhandle	\$ 4,162,664
All Total	\$ 32,588,146

71500416

## Accounting Requirements (continued)

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### Experience

The portion of unrecognized net gain or loss that is subject to amortization is first reduced by the portion of asset gain or loss not yet recognized in the market-related value of assets. The adjusted gain or loss is subject to a corridor of 10% of the greater of Projected Benefit Obligation or Market-Related Value of Assets. The corridor test on the amount of gain or loss subject to amortization during fiscal 2002 is shown below.

### Corridor Test

Total Unrecognized (Gain) Loss	\$ 253,774,886
Less Nonadmitted Portion of Asset (Gain) Loss <sup>1</sup>	<u>205,221,251</u>
(Gain) Loss Subject to Corridor	\$ 48,553,635

### Corridor Limit

(1) 10% of Projected Benefit Obligation	\$ 121,776,367
(2) 10% of Market-Related Value of Assets	\$ 105,083,198
(3) Greater of (1) or (2)	\$ 121,776,367
(Gain) Loss Subject to Amortization	\$ 0
Average Remaining Service	12 Years
Amortization Payment	\$ 0

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<sup>1</sup> See page 25.

71500417

## Accounting Requirements (continued)

### Asset (Gain) Loss Admitted into Market-Related Value of Assets

Year	Original Amount	Admitted in Prior Years	(Gain) Loss Admitted 1/1/2002	(Gain) Loss to Be Admitted in Future Years
1/1/1998	(99,309,504)	(79,447,603)	(19,861,901)	0
1/1/1999	(89,505,378)	(53,703,228)	(17,901,076)	(17,901,074)
1/1/2000	(36,072,504)	(14,429,002)	(7,214,501)	(14,429,002)
1/1/2001	115,741,724	23,148,345	23,148,345	69,445,034
1/1/2002	<u>210,132,865</u>	<u>0</u>	<u>42,026,573</u>	<u>168,106,292</u>
Total	\$ 100,987,203	\$ (124,431,488)	\$ 20,197,440	\$ 205,221,251

### Market-Related Value of Assets, January 1, 2002

(1) Market Value of Assets, 1/1/2002	\$ 845,610,724
(2) Nonadmitted Asset (Gain) Loss	<u>205,221,251</u>
(3) Market-Related Assets, 1/1/2002, (1)+(2)	\$ 1,050,831,975

### Amortization Schedule

Source	Outstanding Balance, 1/1/2002	Years Remaining, 1/1/2002	Annual Payment
Prior Service Cost			
1991 and Prior Years	\$ 6,278,241	3	\$ 2,092,746
1992	8,709,677	6	1,451,613
1995	4,096,854	8.875	461,618
1999	375,891	11	34,172
2000	48,675,459	12	4,172,182
2002	<u>3,552,555</u>	1	<u>3,552,555</u>
Total	\$ 71,688,677		\$ 11,764,886
Panhandle Adjustment	\$ (7,615,384)	11	\$ (692,308)

**71500418**

## Accounting Requirements (continued)

### Actuarial Assumptions for Accounting Requirements

	December 31, 2000	December 31, 2001
Discount Rate	7.75%	7.25%
Expected Long-Term Rate of Return	9.75%	9.75%
Salary Increase	5.25% to age 45 and 3.75% per year to assumed retirement age.	
Market-Related Value of Assets (MRV)	Determined as the fair value of assets on the measurement date, adjusted by the asset gains or losses that will not be admitted into MRV until future years. Each year's asset gain or loss will be reflected in MRV in equal amounts over a five-year period beginning on the date the original amount was determined.	
Maximum Annual Benefits	\$160,000 for participants retiring at normal retirement age during 2002. For future years, this amount is increased by 4.0% per year, with the 2011 EGTRRA "sunset" reflected.	
Maximum Compensation	The maximum compensation recognized in 2002 was \$200,000. This amount is assumed to grow 4.0% per year in the future, with the 2011 EGTRRA "sunset" reflected.	
Retirement Age	Probabilities of retirement that vary by age are shown in Table D, page 53 (the new assumption is effective December 31, 2002).	
Salary Increases	7.5% per year to age 40 and 5.5% per year to the assumed retirement age.	
FAS 35 Interest Rate	8.75% per year compounded annually.	
Other Actuarial Assumptions	All other actuarial assumptions are the same as used for purposes of the funding valuation, which are shown on pages 48 through 53 of this report.	

71500419

## Personnel Information

The actuarial valuation was based on personnel information from the Company records as reported to us as of January 1, 2002. Following are some of the pertinent characteristics of the active participant data as of the valuation date. Both age and service have been determined using years and months on the valuation date.

### Consumers Energy Company and Michigan Gas Storage

	Number	Average Age	Average Service	Average Age at Hire
Males	5,556	46.3	19.3	27.0
Females	<u>2,362</u>	44.1	15.8	28.3
Total	7,918	45.6	18.3	27.3

The average compensation for this group of employees was \$56,966; the five-year average compensation used for valuation purposes was \$47,405.

### CMS

	Number	Average Age	Average Service	Average Age at Hire
Males	963	45.3	9.6	35.7
Females	<u>411</u>	41.6	6.9	34.7
Total	1,374	44.2	8.8	35.4

The average compensation for this group of employees was \$76,295; the five-year average compensation used for valuation purposes was \$64,352.

71500420

## Personnel Information (continued)

### Panhandle

	Number	Average Age	Average Service	Average Age at Hire
Males	857	47.2	19.9	27.3
Females	<u>218</u>	44.3	13.4	30.9
Total	1,075	46.6	18.6	28.0

The average compensation for this group of employees was \$61,041; the five-year average compensation used for valuation purposes was \$52,380.

### Total

	Number	Average Age	Average Service	Average Age at Hire
Males	7,376	46.3	18.1	28.2
Females	<u>2,991</u>	43.8	14.4	29.4
Total	10,367	45.6	17.0	28.6

The average compensation for all the employees was \$59,950; the five-year average compensation used for valuation purposes was \$50,167.

In addition, there were 2,987 retired employees and surviving spouses receiving benefits as of January 1, 2002; and 2,237 terminated vested employees who were not receiving benefits.

**71500421**

## Personnel Information (continued)

Following are the personnel characteristics as of January 1, 2001.

### Consumers Energy Company and Michigan Gas Storage

	Number	Average Age	Average Service	Average Age at Hire
Males	5,897	46.2	19.2	27.0
Females	<u>2,372</u>	44.2	15.9	28.3
Total	8,269	45.7	18.2	27.5

The average compensation for this group of employees was \$52,856; the five-year average compensation used for valuation purposes was \$47,190.

### CMS

	Number	Average Age	Average Service	Average Age at Hire
Males	671	44.2	7.0	37.2
Females	<u>317</u>	40.3	5.8	34.5
Total	988	42.9	6.6	36.3

The average compensation for this group of employees was \$71,099; the five-year average compensation used for valuation purposes was \$60,566.

**71500422**

## Personnel Information (continued)

### Panhandle

	Number	Average Age	Average Service	Average Age at Hire
Males	814	47.3	20.4	26.9
Females	<u>200</u>	44.5	13.9	30.6
Total	1,014	46.8	19.1	27.7

The average compensation for this group of employees was \$62,488; the five-year average compensation used for valuation purposes was \$55,241.

### Total

	Number	Average Age	Average Service	Average Age at Hire
Males	7,382	46.2	18.2	28.0
Females	<u>2,889</u>	43.8	14.6	29.2
Total	10,271	45.5	17.2	28.3

The average compensation for all the employees was \$55,562; the five-year average compensation used for valuation purposes was \$49,204.

In addition, there were 2,577 retired employees and surviving spouses receiving benefits as of January 1, 2001, and 2,182 terminated vested employees who were not receiving benefits.

71500423