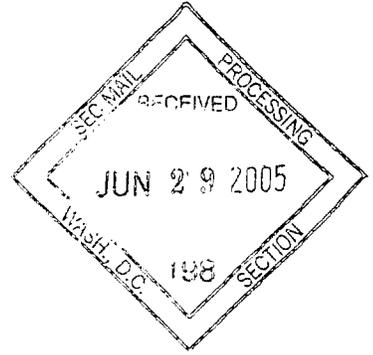


SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549



05048890

FORM 11-K

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2004

OR

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 33-6369 1-5340

Full title of the Plan:

**Peoples Energy Corporation
Employee Capital Accumulation Plan
and
Peoples Energy Corporation
Employee Thrift Plan**

Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

**Peoples Energy Corporation
130 East Randolph Drive
Chicago, Illinois 60601**

PROCESSED

JUL 01 2005

THOMSON
FINANCIAL

TOTAL SEQUENTIAL PAGES 34
EXHIBIT INDEX ON SEQUENTIAL PAGE 33

PEOPLES ENERGY CORPORATION EMPLOYEE
CAPITAL ACCUMULATION AND THRIFT TRUST
AND PARTICIPATING PLANS
REPORT ON AUDITS OF
FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2004 AND 2003

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Retirement and Benefit
Plans Committee
PEOPLES ENERGY CORPORATION
Chicago, Illinois

We have audited the accompanying statements of net assets of Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust as of December 31, 2004 and 2003, and the related statements of changes in net assets and trust balance for the years then ended. These financial statements are the responsibility of the Trust's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets of Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust as of December 31, 2004 and 2003, and the changes in its net assets and trust balance for the years then ended in conformity with U.S. generally accepted accounting principles.

The accompanying statements are those of Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust, which is established under Peoples Energy Corporation Employee Capital Accumulation Plan and Peoples Energy Corporation Employee Thrift Plan; the statements do not purport to present the financial status of Peoples Energy Corporation Employee Capital Accumulation Plan and Peoples Energy Corporation Employee Thrift Plan. The statements do not contain certain information on accumulated plan benefits and other disclosures necessary for a fair presentation of the financial status of Peoples Energy Corporation Employee Capital Accumulation Plan and Peoples Energy Corporation Employee Thrift Plan in conformity with accounting principles generally accepted in the United States of America. Furthermore, these statements do not purport to satisfy the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 relating to the financial statements of employee benefit plans.

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedules of assets held for investments are reportable transactions together referred to as "supplemental information," are presented for the purpose of additional analysis and are not a required part of the basic financial statements but are supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This supplemental information is the responsibility of the Plan's management. The supplemental information has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.


Odell Hicks & Company, LLC

Chicago, Illinois
April 8, 2005

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
STATEMENTS OF NET ASSETS
DECEMBER 31, 2004 AND 2003

	2004	2003
<u>ASSETS</u>		
Accounts Receivable:		
Accrued Interest and Dividends	\$ 328,628	\$ 302,537
Investments at Quoted Market Value	229,559,681	224,593,019
Total Assets	229,888,309	224,895,556
<u>LIABILITIES</u>		
Current Liability:		
Accrued Expenses	9,457	29,863
Total Liabilities	9,457	29,863
NET ASSETS	\$ 229,878,852	\$ 224,865,693
<u>NET ASSETS HELD FOR ACCOUNT OF:</u>		
Peoples Energy Corporation Employee Capital Accumulation Plan	\$ 146,407,222	\$ 145,994,984
Peoples Energy Corporation Employee Thrift Plan	83,471,630	78,870,709
	\$ 229,878,852	\$ 224,865,693

The accompanying notes are an integral part of these financial statements.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
STATEMENT OF CHANGES OF NET ASSETS HELD IN TRUST
FOR THE PLAN YEAR ENDED DECEMBER 31, 2004

	MASTER TOTAL TRUST	LOAN ACCOUNT	INVESTMENT ACCOUNT SUBTOTAL	MONEY MARKET	SHORT TERM BOND FUND	BOND FUND	BALANCED FUND	S & P 500 EQUITY FUND	S & P 500 GROWTH FUND	S & P 500 VALUE FUND	MIDCAP EQUITY FUND	SMALL CAP EQUITY FUND	FOREIGN EQUITY FUND	PEC STOCK FUND
ADDITIONS														
Contributions:														
Employee Contributions	\$ 9,092,147	-	\$ 9,092,147	\$ 829,863	\$ 1,083,317	\$ 566,206	\$ 428,604	\$ 1,930,057	\$ 1,429,433	\$ 776,282	\$ 382,172	\$ 695,635	\$ 289,483	\$ 671,105
Employer Contributions	\$ 4,008,380	-	\$ 4,008,380	382,452	532,909	254,088	174,840	843,142	617,742	316,207	153,282	282,010	118,907	332,801
Rollover Contributions	\$ 26,019	-	\$ 26,019	2,387	1,010	2,384	364	3,676	5,984	3,396	799	611	305	2,331
Total	\$ 13,125,546	-	\$ 13,125,546	1,215,292	1,617,236	821,210	604,008	2,778,875	2,053,039	1,096,445	536,253	978,256	418,695	1,006,237
Income from Investments:														
Dividend Income	\$ 1,168,090	-	\$ 1,168,090	-	-	-	-	-	-	-	-	-	115,374	1,052,716
Interest Income	\$ 528,182	-	\$ 528,182	274,034	247,501	-	1	2	-	-	-	-	6,644	6,644
Total	\$ 1,696,272	-	\$ 1,696,272	274,034	247,501	-	1	2	-	-	-	-	115,374	1,059,360
Loan Payments:														
Principal	\$ -	\$ (3,863,269)	\$ 3,863,269	350,035	714,590	295,713	91,959	700,430	557,510	252,820	25,895	152,225	60,071	448,000
Interest	\$ 448,731	-	\$ 448,731	33,350	80,002	35,487	11,425	92,317	62,310	32,208	13,044	27,912	7,958	52,718
Total	\$ 448,731	\$ (3,863,269)	\$ 4,312,000	402,386	794,592	331,200	93,394	891,747	619,820	285,047	108,940	210,137	74,029	500,718
Net Gain (Loss):														
Net Unrealized Appreciation/ (Depreciation)	\$ 10,011,424	-	\$ 10,011,424	-	725,388	328,372	439,974	3,074,486	960,777	1,862,385	701,991	1,424,780	735,479	(242,208)
Net Realized Gains (Losses)	\$ 5,933,127	-	\$ 5,933,127	-	150,611	201,896	332,451	1,846,559	356,296	493,067	372,637	773,370	219,475	1,176,765
Total	\$ 15,934,551	-	\$ 15,934,551	-	875,999	530,268	772,425	4,921,045	1,317,073	2,355,452	1,074,628	2,198,150	954,954	934,557
TOTAL ADDITIONS	\$ 31,205,100	\$ (3,863,269)	\$ 35,068,369	1,891,712	3,555,316	1,682,678	1,469,828	8,591,669	3,969,952	3,736,944	1,719,821	3,386,543	1,563,052	3,500,872
DEDUCTIONS														
Withdrawals	\$ 26,191,941	-	\$ 26,191,941	5,612,001	5,248,265	1,768,974	1,064,768	5,333,414	1,657,120	1,051,870	785,557	1,491,991	648,045	1,529,936
New Loans	\$ -	(4,012,774)	\$ 4,012,774	389,804	726,102	199,996	102,704	773,123	500,081	241,413	105,862	268,397	105,843	599,449
TOTAL DEDUCTIONS	\$ 26,191,941	\$ (4,012,774)	\$ 30,204,715	6,001,805	5,974,367	1,968,970	1,167,472	6,106,537	2,157,201	1,293,283	891,419	1,760,388	753,888	2,129,385
Net Increase (Decrease) in Assets	\$ 5,013,159	149,505	\$ 4,863,654	(4,110,093)	(2,439,049)	(286,292)	302,356	2,485,132	1,832,751	2,443,661	828,402	1,626,155	809,164	1,371,487
Net Assets Beginning of Year	\$ 224,865,693	7,798,704	\$ 217,126,989	23,173,444	42,167,040	14,038,503	8,586,350	47,997,431	22,836,816	13,430,659	5,958,919	13,040,667	4,422,860	21,474,300
Interfund Transfers	\$ -	-	\$ -	1,197,216	(2,398,697)	(1,438,326)	474,159	(1,127,161)	(1,163,529)	2,530,510	1,182,873	346,293	1,675,049	(1,278,388)
Net Assets End of Year	\$ 229,878,852	\$ 7,868,209	\$ 221,990,643	\$ 20,260,567	\$ 37,329,294	\$ 12,313,885	\$ 9,362,865	\$ 49,355,402	\$ 23,506,019	\$ 18,404,830	\$ 7,970,194	\$ 15,013,115	\$ 6,907,073	\$ 21,567,399

* includes short-term investments held in the Northern Trust Receipts and Disbursement Account

The accompanying notes are an integral part of these financial statements.

**PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
STATEMENT OF CHANGES OF NET ASSETS HELD IN TRUST
FOR THE PLAN YEAR ENDED DECEMBER 31, 2003**

	MASTER TOTAL TRUST	LOAN ACCOUNT	INVESTMENT ACCOUNT SUBTOTAL	MONEY MARKET	SHORT TERM BOND FUND	BOND FUND	BALANCED FUND	S & P 500 EQUITY FUND	S & P 500 GROWTH FUND	S & P 500 VALUE FUND	MIDCAP EQUITY FUND	SMALL CAP EQUITY FUND	FOREIGN EQUITY FUND	PEC - STOCK FUND
ADDITIONS														
Contributions:														
Employer Contributions	\$ 8,994,265	-	\$ 8,994,265	\$ 1,009,661	\$ 1,345,890	\$ 870,971	\$ 362,491	\$ 1,809,542	\$ 1,367,775	\$ 643,658	\$ 183,883	\$ 492,804	\$ 215,197	\$ 692,393
Employer Contributions	\$ 3,919,947	-	\$ 3,919,947	430,537	636,967	381,942	149,487	784,661	589,508	261,914	65,940	199,580	82,700	342,721
Rollover Contributions	\$ 47,250	-	\$ 47,250	2,365	28,280	352	176	594	651	2,095	3,751	3,751	4,659	576
Total	\$ 12,961,462	-	\$ 12,961,462	1,442,563	2,011,127	1,253,265	512,154	2,594,797	1,951,934	907,667	253,574	696,135	302,555	1,035,690
Income from Investments:														
Dividend Income	\$ 1,221,639	-	\$ 1,221,639	-	-	-	-	-	-	-	-	-	155,993	1,065,646
Interest Income	\$ 495,568	-	\$ 495,568	264,494	259,667	3	-	10	-	-	-	-	155,993	(28,006)
Total	\$ 1,717,207	-	\$ 1,717,207	264,494	259,667	3	-	10	-	-	-	-	155,993	1,037,640
Loan Payments:														
Principal	\$ 506,133	\$ (3,177,827)	\$ 3,177,827	297,602	678,563	393,097	104,452	557,696	380,939	150,817	31,932	109,827	40,480	432,422
Interest	\$ 506,133	(3,177,827)	\$ 3,683,960	43,976	108,947	62,303	10,990	98,087	63,443	27,316	5,058	18,307	5,373	62,333
Total	\$ 1,012,266	\$ (3,177,827)	\$ 2,666,133	341,578	787,510	455,400	115,442	655,783	444,382	178,133	36,990	128,134	45,853	494,755
Net Gain (Loss):														
Net Unrealized Appreciation/ (Depreciation)	\$ 25,026,663	-	\$ 25,026,663	-	(2,267,175)	(1,418,472)	1,047,646	14,385,277	4,533,419	3,145,545	955,863	3,203,312	1,016,558	424,690
Net Realized Gains (Losses)	\$ 2,032,928	-	\$ 2,032,928	-	3,129,629	2,044,040	215,530	(4,215,078)	(300,596)	(296,221)	(20,311)	204,027	(78,971)	1,354,879
Total	\$ 27,059,591	-	\$ 27,059,591	-	868,454	625,568	1,263,176	10,170,199	4,232,823	2,849,324	935,552	3,407,339	937,587	1,779,569
TOTAL ADDITIONS	\$ 42,244,393	(3,177,827)	\$ 45,422,220	2,048,635	3,916,758	2,334,236	1,890,772	13,420,789	6,629,139	3,935,124	1,226,116	4,231,608	1,441,989	4,347,054
DEDUCTIONS														
Withdrawals	\$ 13,915,672	-	\$ 13,915,672	4,005,827	3,679,797	1,312,109	648,057	1,731,786	666,759	263,627	69,163	261,886	124,411	1,152,250
New Loans	\$ 3,648,349	(3,648,349)	\$ -	308,085	780,930	429,643	56,335	651,675	496,658	230,552	48,628	137,686	40,316	467,831
TOTAL DEDUCTIONS	\$ 17,564,021	(3,648,349)	\$ 13,915,672	4,313,912	4,460,727	1,741,752	704,392	2,383,461	1,163,417	494,179	117,791	399,582	164,727	1,620,081
Net Increase (Decrease) in Assets	\$ 28,328,721	470,522	\$ 27,858,199	(2,265,277)	(543,969)	592,484	1,186,380	11,037,328	5,465,722	3,440,945	1,108,325	3,832,028	1,277,262	2,726,973
Net Assets Beginning of Year	\$ 196,536,972	7,268,182	\$ 189,268,790	24,885,878	47,112,289	19,193,924	6,170,532	34,952,830	15,962,944	8,335,668	1,424,435	6,463,890	2,575,652	22,190,748
Interfund Transfers	\$ -	-	\$ -	552,843	(4,401,280)	(5,747,905)	1,229,439	2,007,273	1,408,150	1,654,046	3,426,159	2,749,751	569,946	(3,443,421)
Net Assets End of Year	\$ 224,865,693	\$ 7,738,704	\$ 217,126,989	\$ 23,173,444	\$ 42,167,040	\$ 14,038,503	\$ 8,586,350	\$ 47,997,431	\$ 22,836,816	\$ 13,430,659	\$ 5,958,919	\$ 13,040,667	\$ 4,422,860	\$ 21,474,300

* includes short-term investments held in the Northern Trust Receipts and Disbursement Account

The accompanying notes are an integral part of these financial statements.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 1 - PLAN INFORMATION

Description of Trust

The Trust is comprised on two plans. The Peoples Energy Corporation Employee Capital Accumulation Plan covers substantially all employees who are not covered by a collective bargaining agreement and the Peoples Energy Corporation Employee Thrift Plan covers employees who are covered by a collective bargaining agreement. The following description of the Peoples Energy Corporation (Company) Employee Capital Accumulation And Thrift Trust Plan (Plan) provides only general information. Participants should refer to the Plan agreement for a more complete description of the Plan's provisions. The Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust was formed to accumulate contributions and income thereon to be used to provide benefits under the Peoples Energy Corporation Employee Capital Accumulation Plan and the Peoples Energy Corporation Employee Thrift Plan (the Plans).

a. General. The Plan is a defined contribution plan covering all full-time employees of the Company. Participants in the Capital Accumulation Plan are immediately eligible while participants in the Employee Thrift Plan must complete one year of service. They are subject to the provisions of the Employee Retirement Income Security Act (ERISA).

b. Contributions. Each year, participants of the Plans may contribute up to 6 percent of their base compensation, as defined in the Plan, and the Company will contribute an additional 60 percent (100 percent for Peoples Energy Services Corporation participants) to their account. This matching Company contribution is invested in the same allocation as the participant's contribution. Participants may also elect to make additional contributions (supplemental contributions) of up to 10% of their regular rate of pay; these contributions are not matched by the employer. Employees, age 50 years and older, are allowed to contribute an additional pre-tax catch-up contribution according to IRS guidelines and the Economic Growth and Tax Relief Reconciliation Act of 2001 provisions. Participants may also contribute amounts representing rollovers from other qualified defined benefit or defined contribution plans. Participants direct the investment of their contributions into various investment options offered by the Plan. The Plan currently offers eleven investment options from fixed income, equity investment and Company Stock funds.

c. Participant Accounts. Each participant's account is maintained in the Peoples Energy Corporation Employee Capital Accumulation Plan and the Peoples Energy Corporation Employee Thrift Plan and is credited with the participant's contribution and allocations of (a) the Company's contribution and (b) Plan earnings, and charged with an allocation of administrative expenses. Allocations are based on participant earnings or account balances, as defined. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 1 - PLAN INFORMATION – (Cont'd)

d. Vesting. Participants are vested immediately in their contributions plus actual earnings thereon. Vesting in the Company's contribution portion of their accounts is based on years of continuous service. A participant is 100 percent vested after four years (104 biweekly participation periods) of credited service. Participants with less than 104 participation periods completed are deemed to be 25, 50 or 75 percent vested in the employer's contribution account based on the number of completed participation periods.

e. Participant Loans. Active participants are permitted to elect to take up to two loans from their accounts. Participants may borrow from their fund accounts from a minimum of \$500 to a maximum of the lesser of a) \$50,000 less the highest outstanding loan balance for one year preceding such loan or, b) one half of the value of the vested balance in their account as of the last day of the month preceding the loan application date. Loans may be for five years for non-residential loans or up to 15 years for residential loans. Each individual participant loan bears interest equal to the prime rate plus 1 percent on the first day of the month in which the loan was applied for. The loans are secured by the balance in the participant's account. Principal and interest is paid ratably through monthly payroll deductions.

f. Payment of Benefits. On termination of service due to death, disability, or retirement, a participant may elect to receive either a lump-sum amount equal to the value of the participant's vested interest in his or her account, or annual installments over a 15-year period. For termination of service for other reasons, a participant may receive the value of the vested interest in his or her account as a lump-sum distribution.

g. Distributions. Each participant whose employment with all employers is terminated is entitled to a distribution of the entire balance in his account and the vested portion of the employer contribution account within 90 days after termination unless the employee elects to defer the distribution under the terms of the Plan. Active participants are permitted to elect in-service and retirement planning withdrawals under the Plan provisions.

h. Forfeited Accounts. In 2004 forfeited non-vested accounts totaled \$111,264. These accounts would have been or will be used to reduce employer contributions.

i. Administrative Expenses and Fees. The Plan participants, through reduced earnings pay Recordkeeping, Trustee, and Investment Management fees. The Company provides certain accounting and management services to the Plan at no cost. These services include audit fees, legal fees, and time provided by Company employees. Accrued expenses at December 31, 2004 of \$9,457 relate to the normal monthly invoices charged by The Northern Trust Company and Hewitt Associates, LLC.

j. Recordkeeping, Trustee, and Investment Management. The Northern Trust Company is the Plan Trustee and Investment Manager. Northern Trust is utilized by the plan administrator to manage certain investments held by the Trust. These investments consist of shares in Northern Trust's Global Investment Funds. At December 31, 2004 the fair value of assets held by the Trust that were managed by Northern Trust was \$200,853,895. Fees paid to Northern Trust in 2004 are considered to represent the fair market value of the services performed and are comparable to fees paid to the other investment managers. Hewitt Associates, LLC is the Recordkeeper.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A summary of the Trustee's significant accounting policies consistently applied in the preparation of the accompanying financial statements is as follows:

Basis of Accounting

The accompanying statements were prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Payment of Benefits

Benefits are recorded when paid.

Investment Valuation and Income Recognition

The Plan's investments are stated at fair market value. Securities traded on security exchanges are valued at the closing price on the day of valuation, except for such securities included in the Northern Trust Global Investments Collective Fund Investment Trust for Employee Benefit Plans which are valued at the closing net asset value on the day of valuation. Short-term credit investments (corporate notes) are valued at cost, which approximates market.

Purchases and sales of securities are accounted for on a trade-date basis. Dividends are recorded on the ex-dividend date. At the time the investments are sold, the difference between the original cost (computed on an average cost basis) and the proceeds received are recorded as a realized gain or loss in the financial statements. The unrealized appreciation or depreciation of investments held at end of year represents the change in the market value of the investments from the beginning of the Plan year (or date the investments were purchased, if later) to the end of the Plan year.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2004 AND 2003

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (Cont'd)

INVESTMENTS:

Investments in securities and the net appreciation (depreciation), which includes realized as well as unrealized gains or losses at December 31, consisted of the following:

	<u>2004</u>		<u>2003</u>	
	<u>MARKET VALUE</u>	<u>NET CHANGE IN APPRECIATION (DEPRECIATION)</u>	<u>MARKET VALUE</u>	<u>NET CHANGE IN APPRECIATION (DEPRECIATION)</u>
NORTHERN TRUST GLOBAL INVESTMENTS				
NTGI-QM Collv Daily Russell 3000 Equity Index Fund-SL	\$ 5,676,556	\$ 628,444	\$ 5,379,163	\$ 1,174,741
NTGI-QM Collv Daily S&P 500 Equity Index Fund-SL	49,357,155	4,981,534	48,003,330	10,243,914
NTGI Collv Daily S&P 500/Barra Growth Eqty Indx Fd-SL	23,506,954	1,347,034	22,839,702	4,268,022
NTGI Collv Daily S&P 500/Barra Value Equity Indx Fd-SL	18,405,588	2,376,192	13,432,364	2,868,804
NTGI-QM Collv Daily Russell 2000 Equity Index Fund-SL	15,013,768	2,217,188	13,042,321	3,423,834
NTGI Collv Daily S&P MidCap 400 Equity Indx Fd-SL	7,970,638	1,085,374	5,959,665	941,008
Northern Instl Fds Intl Equity Index Portfolio Class A	6,907,331	962,235	4,423,432	943,872
NTGI-QM Collv Daily Aggregate Bond Index Fund - SL	36,837,039	1,632,494	40,429,274	1,713,739
Collective Short-Term Investment Fund	37,178,866	-	42,601,897	-
PEOPLES ENERGY CORPORATION COMMON STOCK *	20,817,577	896,131	20,743,167	1,742,892
PARTICIPANT NOTES	7,888,209	-	7,738,704	-
TOTAL INVESTMENTS	\$ 229,559,681	\$ 16,126,626	\$ 224,593,019	\$ 27,320,826

Notes: * Party-in-Interest Transactions.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 3 - TAX STATUS

The Plan received a favorable determination letter from the Internal Revenue Service dated June 27, 2002 qualifying the Plan for exemption from income taxes under the Internal Revenue Code, as the Plan was then designed. The Company believes that the Plan is designed and is currently being operated in compliance with applicable regulations of the Internal Revenue Code.

NOTE 4 - PREVIOUS YEAR CHANGES TO THE PLANS

On June 15, 2003 Hewitt Associates, LLC acquired the assets of Northern Trust Retirement Consulting, LLC and assumed its recordkeeping duties.

Effective October 1, 2003, Peoples Energy Services Corporation participants began receiving a 100 percent Company match to their regular contributions in the Peoples Energy Corporation Employee Capital Accumulation Plan.

**SUPPLEMENTAL SCHEDULES
TO TRUST FINANCIAL STATEMENTS**

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
SCHEDULE OF ASSETS HELD FOR INVESTMENT
DECEMBER 31, 2004

<u>Quantity/ Face Value</u>		<u>COST/ CARRYING VALUE</u>	<u>CURRENT VALUE</u>
<u>COLLECTIVE INVESTMENT FUNDS</u>			
NORTHERN TRUST GLOBAL INVESTMENTS			
9,092	NTGI-QM Coltv Daily Russell 3000 Equity Index Fund-SL	\$ 4,741,994	\$ 5,676,556
15,622	NTGI-QM Coltv Daily S&P 500 Equity Index Fund-SL	40,314,455	49,357,155
2,825,355	NTGI Coltv Daily S&P 500/Barra Growth Eqty Indx Fd-SL	21,117,644	23,506,954
836,124	NTGI Coltv Daily S&P 500/Barra Value Equity Indx Fd-SL	15,449,869	18,405,588
20,145	NTGI-QM Coltv Daily Russell 2000 Equity Index Fund-SL	11,638,578	15,013,768
355,800	NTGI Coltv Daily S&P MidCap 400 Equity Indx Fd-SL	6,460,580	7,970,638
588,860	Northern Instl Fds Intl Equity Index Portfolio Class A	5,757,996	6,907,331
115,933	NTGI-QM Coltv Daily Aggregate Bond Index Fund - SL	35,070,876	36,837,039
37,178,866	Collective Short-Term Investment Fund	37,178,866	37,178,866
<u>PARTY IN INTEREST</u>			
473,665	PEOPLES ENERGY CORPORATION COMMON STOCK	14,846,254	20,817,577
PARTICIPANT NOTES		<u>7,888,209</u>	<u>7,888,209</u>
TOTAL ASSETS HELD FOR INVESTMENT		<u>\$ 200,465,321</u>	<u>\$ 229,559,681</u>

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
SCHEDULE OF ASSETS HELD FOR INVESTMENT
DECEMBER 31, 2003

<u>Quantity/ Face Value</u>		<u>COST/ CARRYING VALUE</u>	<u>CURRENT VALUE</u>
<u>COLLECTIVE INVESTMENT FUNDS</u>			
NORTHERN TRUST GLOBAL INVESTMENTS			
9,650	NTGI-QM Coltv Daily Russell 3000 Equity Index Fund-SL	\$ 4,788,734	\$ 5,379,163
16,853	NTGI-QM Coltv Daily S&P 500 Equity Index Fund-SL	42,095,606	48,003,330
2,914,714	NTGI Coltv Daily S&P 500/Barra Growth Eqty Indx Fd-SL	21,441,130	22,839,702
705,555	NTGI Coltv Daily S&P 500/Barra Value Equity Indx Fd-SL	12,359,770	13,432,364
20,698	NTGI-QM Coltv Daily Russell 2000 Equity Index Fund-SL	11,110,949	13,042,321
310,367	NTGI Coltv Daily S&P MidCap 400 Equity Indx Fd-SL	5,162,344	5,959,665
448,624	Northern Instl Fds Intl Equity Index Portfolio Class A	4,016,857	4,423,432
132,803	NTGI-QM Coltv Daily Aggregate Bond Index Fund - SL	39,894,958	40,429,274
42,601,897	Collective Short-Term Investment Fund	42,601,897	42,601,897
<u>PARTY IN INTEREST</u>			
493,415	PEOPLES ENERGY CORPORATION COMMON STOCK	14,491,210	20,743,167
PARTICIPANT NOTES		<u>7,738,704</u>	<u>7,738,704</u>
TOTAL ASSETS HELD FOR INVESTMENT		<u>\$ 205,702,159</u>	<u>\$ 224,593,019</u>

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
SCHEDULE OF REPORTABLE TRANSACTIONS
FOR THE PLAN YEAR ENDED DECEMBER 31, 2004

IDENTITY OF PARTY INVOLVED/ Description of Security	Number of Purchases	Dollar Value of Purchases	Number of Sales	Dollar Value of Sales	Net Gain/(Loss) Recognized
SINGLE TRANSACTIONS					
NONE					
SERIES OF SECURITIES OF THE SAME ISSUE					
Northern Trust Global Investments					
Collective Short-Term Investment Fund (ANB)	435	\$ 61,837,816	-	\$ -	\$ -
NTGI Coltv Daily S&P 500/Barra Grwth Equity Indx Fd-SL	120	\$ 6,215,523	-	\$ -	\$ -
NTGI Coltv Daily S&P 500/Barra Value Equity Indx Fd-SL	144	\$ 8,270,903	-	\$ -	\$ -
NTGI-QM Coltv Daily Aggregate Bond Index Fd-SL	326	\$ 8,497,446	-	\$ -	\$ -
NTGI-QM Coltv Daily Russell 2000 Equity Indx Fd-SL	136	\$ 5,564,489	-	\$ -	\$ -
NTGI-QM Coltv Daily S&P 500 Equity Indx Fd-SL	122	\$ 10,546,994	-	\$ -	\$ -
Collective Short-Term Investment Fund (ANB)	-	\$ 67,260,844	455	\$ 67,260,844	\$ -
NTGI Coltv Daily S&P 500/Barra Grwth Equity Indx Fd-SL	-	\$ 6,539,010	130	\$ 6,895,305	\$ 356,295
NTGI Coltv Daily S&P 500/Barra Value Equity Indx Fd-SL	-	\$ 5,180,804	102	\$ 5,673,871	\$ 493,067
NTGI-QM Coltv Daily Aggregate Bond Index Fd-SL	-	\$ 13,321,528	375	\$ 13,722,174	\$ 400,646
NTGI-QM Coltv Daily Russell 2000 Equity Indx Fd-SL	-	\$ 4,905,903	107	\$ 5,679,273	\$ 773,370
NTGI-QM Coltv Daily S&P 500 Equity Indx Fd-SL	-	\$ 12,328,144	127	\$ 14,174,703	\$ 1,846,559

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
SCHEDULE OF REPORTABLE TRANSACTIONS
FOR THE PLAN YEAR ENDED DECEMBER 31, 2003

IDENTITY OF PARTY INVOLVED/ Description of Security	Number of Purchases	Dollar Value of Purchases	Number of Sales	Dollar Value of Sales	Net Gain/(Loss) Recognized
SINGLE TRANSACTIONS					
Northern Trust Global Investments					
NTGI Coltv Daily Aggregate Bond Index Fund - SL	1	\$ 21,208,758	1	\$ 23,808,532	\$ 2,599,774
NTGI Coltv Daily Aggregate Bond Index Fund - SL	1	\$ 14,863,720	1	\$ 16,256,150	\$ 1,392,430
NTGI Coltv Daily S&P 500 Equity Indx Fd-SL	1	\$ 44,816,770	1	\$ 41,216,034	\$ (3,600,736)
NTGI-QM Coltv Daily Aggregate Bond Index Fund - SL	1	\$ 23,808,532	1	\$ 23,808,532	\$ -
NTGI-QM Coltv Daily Aggregate Bond Index Fund - SL	1	\$ 16,256,150	1	\$ 16,256,150	\$ -
NTGI-QM Coltv Daily S&P 500 Equity Indx Fd-SL	1	\$ 41,216,034	1	\$ 41,216,034	\$ -
SERIES OF SECURITIES OF THE SAME ISSUE					
Northern Trust Global Investments					
Collective Short-Term Investment Fund (ANB)	443	\$ 39,237,621	-	\$ -	\$ -
NTGI Coltv Daily Aggregate Bond Index Fd-SL	275	\$ 7,582,001	-	\$ -	\$ -
NTGI Coltv Daily S&P 500 Equity Indx Fd-SL	86	\$ 5,584,035	-	\$ -	\$ -
NTGI Coltv Daily Russell 2000 Equity Indx Fd-SL	74	\$ 1,427,674	-	\$ -	\$ -
NTGI-QM Coltv Daily Aggregate Bond Index Fd-SL	62	\$ 44,165,682	-	\$ -	\$ -
NTGI-QM Coltv Daily Russell 2000 Equity Indx Fd-SL	101	\$ 11,731,954	-	\$ -	\$ -
NTGI-QM Coltv Daily S&P 500 Equity Indx Fd-SL	56	\$ 44,507,455	-	\$ -	\$ -
Collective Short-Term Investment Fund (ANB)	-	\$ 43,027,726	470	\$ 43,027,726	\$ -
NTGI Coltv Daily Aggregate Bond Index Fd-SL	-	\$ 50,898,328	282	\$ 56,340,100	\$ 5,441,772
NTGI Coltv Daily S&P 500 Equity Indx Fd-SL	-	\$ 49,092,860	61	\$ 44,730,071	\$ (4,362,789)
NTGI Coltv Daily Russell 2000 Equity Indx Fd-SL	-	\$ 9,180,905	53	\$ 9,318,619	\$ 137,714
NTGI-QM Coltv Daily Aggregate Bond Index Fd-SL	-	\$ 4,270,724	102	\$ 4,282,653	\$ 11,929
NTGI-QM Coltv Daily Russell 2000 Equity Indx Fd-SL	-	\$ 621,006	29	\$ 687,319	\$ 66,313
NTGI-QM Coltv Daily S&P 500 Equity Indx Fd-SL	-	\$ 2,411,849	41	\$ 2,559,561	\$ 147,712

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN



Odell Hicks & Company LLC

Certified Public Accountants

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Retirement and Benefit
Plans Committee
PEOPLES ENERGY CORPORATION
Chicago, Illinois

We have audited the accompanying statements of net assets available for benefits of Peoples Energy Corporation Employee Capital Accumulation Plan as of December 31, 2004 and 2003, and the related statements of changes in net assets available for benefits for the years then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of Peoples Energy Corporation Employee Capital Accumulation Plan as of December 31, 2004 and 2003, and the changes in its net assets available for benefits for the years then ended in conformity with U.S. generally accepted accounting principles.


Odell Hicks & Company, LLC

Chicago, Illinois
April 8, 2005

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR PLAN BENEFITS
FOR THE YEARS ENDED DECEMBER 31, 2004 AND 2003

<u>ASSETS</u>	<u>2004</u>	<u>2003</u>
NET ASSETS HELD IN THE PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST, AT MARKET VALUE	<u>\$ 146,407,222</u>	<u>\$ 145,994,984</u>
NET ASSETS AVAILABLE FOR PLAN BENEFITS	<u>\$ 146,407,222</u>	<u>\$ 145,994,984</u>

The accompanying notes are an integral part of these financial statements.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN
STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR PLAN BENEFITS
FOR THE YEARS ENDED DECEMBER 31, 2004 AND 2003

	2004	2003
ADDITIONS		
Contributions:		
Employee Contributions	\$ 6,117,201	\$ 6,116,768
Employer Contributions	2,570,307	2,505,082
Rollover Contributions	24,245	47,250
	8,711,753	8,669,100
Income from Investments:		
Dividend Income	680,501	714,590
Interest Income	401,897	385,344
	1,082,398	1,099,934
Loan Payments:		
Interest	208,743	236,827
Net Gain :		
Net Unrealized Appreciation	7,205,180	17,985,027
Net Realized Gains	4,067,604	983,006
	11,272,784	18,968,033
TOTAL ADDITIONS	21,275,678	28,973,894
DEDUCTIONS		
Withdrawals	20,863,440	7,305,328
TOTAL DEDUCTIONS	20,863,440	7,305,328
Net Increase in Assets	412,238	21,668,566
Net Assets - Beginning of Year	145,994,984	124,326,418
NET ASSETS - END OF YEAR	\$ 146,407,222	\$ 145,994,984

The accompanying notes are an integral part of these financial statements.

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 1 - DESCRIPTION OF PLAN

The Peoples Energy Corporation Employee Capital Accumulation Plan (the Plan) is a defined contribution plan and covers those employees of Peoples Energy Corporation and of the subsidiaries of Peoples Energy Corporation who are not covered by a collective bargaining agreement. Subsidiary companies include The Peoples Gas Light and Coke Company, North Shore Gas Company, Peoples Energy Resources, Peoples Energy Services and Peoples Energy Production. The effective date of the Plan is January 1, 1977. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA). The Plan was most recently amended effective January 1, 2002 to incorporate certain benefit enhancements.

Employees are eligible to participate in this plan immediately upon employment. Participants may elect to make regular contributions of up to 6% of their regular rate of pay and may designate such amounts as tax deferred contributions, after tax contributions or a combination of both. Contributions may be invested in any of eleven funds, namely; a Money Market Fund, a Short Term Bond Fund, a Bond Fund, a Balanced Fund, an S&P 500 Equity Fund, an S&P 500 Growth Fund, an S&P 500 Value Fund, a MidCap Equity Fund, a Small Cap Equity Fund, a Foreign Equity Fund and a Company Stock Fund. The employer contributes an amount equal to 60% (100% for Peoples Energy Services Corporation participants) of the employee's regular contributions. The employer matching contributions are invested in the same manner as the employee contributions are invested. Participants may also elect to make additional contributions (supplemental contributions) of up to 10% of their regular rate of pay; these contributions are not matched by the employer.

Active participants are permitted to elect to take up to two loans from their accounts. Participants may borrow from their fund accounts from a minimum of \$500 to a maximum of the lesser of a) \$50,000 less the highest outstanding loan balance for one year preceding such loan or, b) one half of the value of the vested balance in their account as of the last day of the month preceding the loan application date. Loans may be for five years for non-residential loans or up to 15 years for residential loans. The loans are secured by balances in the participant's accounts and bear interest equal to the prime rate on the first day of the month in which the loan was applied for, plus 1 percentage point.

Rollover of other employer sponsored qualified plan distributions are also permitted.

Participants are fully vested in their own contribution account and their rollover account at all times and become fully vested in the employer's contribution account at the earlier of (a) completion of at least 104 participation periods, as defined in the Plan, or (b) termination of service after attaining age 55 or by reason of death, retirement or total disability.

PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION PLAN

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 1 - DESCRIPTION OF PLAN (Cont'd)

Participants with less than 104 participation periods completed are deemed to be 25, 50 or 75 percent vested in the employer's contribution account based on the number of completed participation periods.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A summary of the Plan's significant accounting policies consistently applied in the preparation of the accompanying financial statements is as follows:

Basis of Accounting

The accounts of the Plan and the related Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust (the Trust) are maintained on the accrual basis of accounting. Reference is made to the separate Statements of Net Assets Held in Trust and accompanying notes for further information on the accounting for Trust investments and Trust income.

Peoples Energy Corporation provides certain administrative and accounting services to the Plan at no cost and also pays the cost of services provided to the Plan by the independent auditors. The Plan participants through reduced earnings pay Recordkeeping, Trustee, and Investment Management fees based upon account balances.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Contributions

Employee contributions become payable to the Plan on the pay date on which the contribution is deducted from the employee's pay.

The employer contribution is required to be paid to the Trust during or as soon as possible after the end of each month as is reasonably practicable.

PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION PLAN

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)

Investment Policy and Allocation of Earnings on Investments

Contributions received by the Plan are invested the same day by the Trust maintained by The Northern Trust Company, into each participant's account. Earnings are posted daily to each such account.

Distributions

Each participant whose employment with all employers is terminated is entitled to a distribution of the entire balance in his account and the vested portion of the employer contribution account within 90 days after termination unless the employee elects to defer the distribution under the terms of the Plan. Active participants are permitted to elect in-service and retirement planning withdrawals under the Plan provisions.

NOTE 3 - TERMINATION OF PLAN

The Plan may be terminated at any time by the Company. In event of such termination, the interest of all participants becomes fully vested and no part of any such participant's accounts shall be thereafter forfeited for any reason whatsoever. Presently, there is no intention on the part of the Company to terminate the Plan or to discontinue contributions to the Plan.

NOTE 4 - TAX STATUS

The Plan received a favorable determination letter from the Internal Revenue Service dated June 27, 2002 qualifying the Plan for exemption from income taxes under the Internal Revenue Code, as the Plan was then designed. The Company believes that the Plan is designed and is currently being operated in compliance with applicable regulations of the Internal Revenue Code.

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Retirement and Benefit
Plans Committee
PEOPLES ENERGY CORPORATION
Chicago, Illinois

We have audited the accompanying statements of net assets available for benefits of Peoples Energy Corporation Employee Thrift Plan as of December 31, 2004 and 2003, and the related statements of changes in net assets available for benefits for the years then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of Peoples Energy Corporation Employee Thrift Plan as of December 31, 2004 and 2003 and the changes in its net assets available for benefits for the years then ended in conformity with U.S. generally accepted accounting principles.


Odell Hicks & Company, LLC

Chicago, Illinois
April 8, 2005

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR PLAN BENEFITS
FOR THE YEARS ENDED DECEMBER 31, 2004 AND 2003

<u>ASSETS</u>	<u>2004</u>	<u>2003</u>
NET ASSETS HELD IN THE PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST, AT MARKET VALUE	<u>\$ 83,471,630</u>	<u>\$ 78,870,709</u>
NET ASSETS AVAILABLE FOR PLAN BENEFITS	<u><u>\$ 83,471,630</u></u>	<u><u>\$ 78,870,709</u></u>

The accompanying notes are an integral part of these financial statements.

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN
STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR PLAN BENEFITS
FOR THE YEARS ENDED DECEMBER 31, 2004 AND 2003

	<u>2004</u>	<u>2003</u>
ADDITIONS		
Contributions:		
Employee Contributions	\$ 2,974,946	\$ 2,877,497
Employer Contributions	1,438,073	1,414,865
Rollover Contributions	774	-
	<u>4,413,793</u>	<u>4,292,362</u>
Income from Investments:		
Dividend Income	487,589	507,049
Interest Income	126,285	110,224
	<u>613,874</u>	<u>617,273</u>
Loan Payments:		
Interest	239,988	269,306
Net Gain (Loss):		
Net Unrealized Appreciation	2,806,244	7,041,636
Net Realized Gains	1,855,523	1,049,922
	<u>4,661,767</u>	<u>8,091,558</u>
TOTAL ADDITIONS	<u>9,929,422</u>	<u>13,270,499</u>
DEDUCTIONS		
Withdrawals	<u>5,328,501</u>	<u>6,610,344</u>
TOTAL DEDUCTIONS	<u>5,328,501</u>	<u>6,610,344</u>
Net Increase in Assets	4,600,921	6,660,155
Net Assets - Beginning of Year	<u>78,870,709</u>	<u>72,210,554</u>
NET ASSETS - END OF YEAR	<u>\$ 83,471,630</u>	<u>\$ 78,870,709</u>

The accompanying notes are an integral part of these financial statements.

PEOPLES ENERGY CORPORATION EMPLOYEE THRIFT PLAN

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 1 - DESCRIPTION OF PLAN

The Peoples Energy Corporation Employee Thrift Plan (the Plan) is a defined contribution plan and includes those employees of the subsidiaries of Peoples Energy Corporation who are covered by a collective bargaining agreement which makes the Plan applicable to such employees. Subsidiary companies include The Peoples Gas Light and Coke Company and North Shore Gas Company. The effective date of the Plan is January 1, 1977. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA). The Plan was most recently amended effective January 1, 2002 to incorporate certain benefit enhancements.

All employees who have completed one year of service with an employer, as defined in the Plan and who have worked at least 1,000 hours during the year, are eligible to participate in the Plan. Participants may elect to make regular contributions of up to 6% of their regular rate of pay and may designate such amounts as tax deferred contributions, after tax contributions or a combination of both. Contributions may be invested in any of eleven funds, namely; a Money Market Fund, a Short Term Bond Fund, a Bond Fund, a Balanced Fund, an S&P 500 Equity Fund, an S&P 500 Growth Fund, an S&P 500 Value Fund, a MidCap Equity Fund, a Small Cap Equity Fund, a Foreign Equity Fund and a Company Stock Fund. The employer contributes an amount equal to 60% of the employee's regular contributions. The employer matching contributions are invested in the same manner as the employee contributions are invested. Participants may also elect to make additional contributions (supplemental contributions) of up to 10% of their regular rate of pay; these contributions are not matched by the employer.

Active participants are permitted to elect to take up to two loans from their accounts. Participants may borrow from their fund accounts from a minimum of \$500 to a maximum of the lesser of a) \$50,000 less the highest outstanding loan balance for one year preceding such loan or, b) one half of the value of the vested balance in their account as of the last day of the month preceding the loan application date. Loans may be for five years for non-residential loans or up to 15 years for residential loans. The loans are secured by balances in the participant's accounts and bear interest equal to the prime rate on the first day of the month in which the loan was applied for, plus 1 percentage point.

Rollover of other employer sponsored qualified plan distributions are also permitted.

PEOPLES ENERGY CORPORATION EMPLOYEE THRIFT PLAN

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 1 - DESCRIPTION OF PLAN (Cont'd)

Participants are fully vested in their own contribution account at all times and generally become vested in the employer's contribution account at the earlier of (a) completion of at least 104 participation periods, as defined in the Plan, or (b) termination of service after attaining age 55 or by reason of death, retirement or total disability. Participants with less than 104 participation periods completed are deemed to be 25, 50 or 75 percent vested in the employer's contribution account based on the number of completed participation periods.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A summary of the Plan's significant accounting policies consistently applied in the preparation of the accompanying financial statements is as follows:

Basis of Accounting

The accounts of the Plan and the related Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust (the Trust) are maintained on the accrual basis of accounting. Reference is made to the separate Statements of Net Assets Held in Trust and accompanying notes for further information on the accounting for Trust investments and Trust income.

Peoples Energy Corporation provides certain administrative and accounting services to the Plan at no cost and also pays the cost of services provided to the Plan by the independent auditors. The Plan participants through reduced earnings pay Recordkeeping, Trustee, and Investment Management fees based upon account balances.

Contributions

Employee contributions become payable to the Plan on the pay date on which the contribution is deducted from the employee's pay.

The employer contribution is required to be paid to the Trust during or as soon as possible after the end of each month as is reasonably practicable.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

PEOPLES ENERGY CORPORATION EMPLOYEE THRIFT PLAN

NOTES TO FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2004 and 2003

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)

Investment Policy and Allocation of Earnings on Investments

Contributions received by the Plan are invested the same day by the Trust maintained by The Northern Trust Company, into each participant's account. Earnings are posted daily to each such account.

Distributions

Each participant whose employment with all employers is terminated is entitled to a distribution of the entire balance in his account and the vested portion of the employer contribution account within 90 days after termination unless the employee elects to defer the distribution under the terms of the Plan. Active participants are permitted to elect in-service and retirement planning withdrawals under the Plan provisions.

NOTE 3 - TERMINATION OF PLAN

The Plan may be terminated at any time by the Company. In event of such termination, the interest of all participants becomes fully vested and no part of any such participant's accounts shall be thereafter forfeited for any reason whatsoever. Presently, there is no intention on the part of the Company to terminate the Plan or to discontinue contributions to the Plan.

NOTE 4 - TAX STATUS

The Plan received a favorable determination letter from the Internal Revenue Service dated June 27, 2002 qualifying the Plan for exemption from income taxes under the Internal Revenue Code, as the Plan was then designed. The Company believes that the Plan is designed and is currently being operated in compliance with applicable regulations of the Internal Revenue Code.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Retirement and Benefit Plans Committee of Peoples Energy Corporation, as administrator of the plans designated below, has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

Peoples Energy Corporation
Employee Capital Accumulation Plan
and Peoples Energy Corporation
Employee Thrift Plan
(Name of Plan)

Date: June 28, 2005

By 

Douglas M. Ruschau
Vice President and Treasurer
Peoples Energy Corporation

EXHIBIT INDEX

The exhibit listed below is filed herewith and made a part hereof.

<u>Exhibit Number</u>		<u>Page</u>
23	Consent of Odell Hicks & Company	34

EXHIBIT 23

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference of our report, dated April 8, 2005, which appears in the Peoples Energy Corporation Employee Capital Accumulation Plan and Peoples Energy Corporation Employee Thrift Plan Annual Report on Form 11-K for the plan year ended December 31, 2004, into the Company's previously filed Registration Statement File No. 33-6369.



Odell Hicks & Company, LLC

Chicago, Illinois
April 8, 2005