



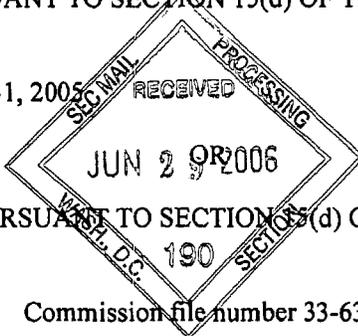
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 11-K

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

For the fiscal year ended December 31, 2005



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

Commission file number 33-6369

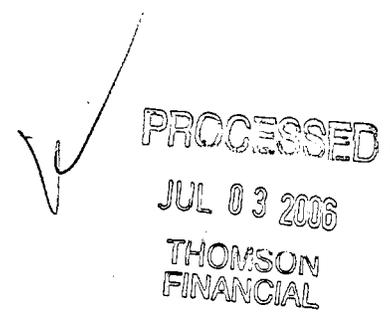
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Full title of the Plan:

**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**



**TOTAL SEQUENTIAL PAGES 33
EXHIBIT INDEX ON SEQUENTIAL PAGE 31**

Odell Hicks & Company LLC
Certified Public Accountants

PEOPLES ENERGY CORPORATION EMPLOYEE
CAPITAL ACCUMULATION AND THRIFT TRUST
AND PARTICIPATING PLANS

FINANCIAL STATEMENTS
AND SUPPLEMENTAL SCHEDULES
TOGETHER WITH INDEPENDENT AUDITOR'S REPORTS
AS OF DECEMBER 31, 2005 AND 2004

TABLE OF CONTENTS

	<u>Page</u>
PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST	
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM.....	1
FINANCIAL STATEMENTS	
Statements of Net Assets and Trust Balances For the Years Ended December 31, 2005 and 2004	2
Statement of Changes in Net Assets and Trust Balances For the Years Ended December 31, 2005 and 2004	3
Notes to Financial Statements	4
SUPPLEMENTAL SCHEDULES TO TRUST FINANCIAL STATEMENTS	
Schedule of Assets Held for Investment Schedule I	9
Schedule of Reportable Transactions Schedule II	10
PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION PLAN	
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	12
FINANCIAL STATEMENTS	
Statements of Net Assets Available for Plan Benefits	13
Statements of Changes in Net Assets Available for Plan Benefits	14
Notes to Financial Statements	15
PEOPLES ENERGY CORPORATION EMPLOYEE THRIFT PLAN	
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	20
FINANCIAL STATEMENTS	
Statements of Net Assets Available for Plan Benefits	21
Statements of Changes in Net Assets Available for Plan Benefits	22
Notes to Financial Statements	23



Odell Hicks & Company LLC
Certified Public Accountants

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Retirement and Benefit
Plans Committee
PEOPLES ENERGY CORPORATION
Chicago, Illinois

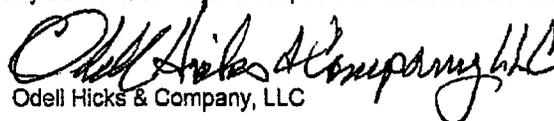
We have audited the accompanying statements of net assets of Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust as of December 31, 2005 and 2004, and the related statements of changes in net assets and trust balances for the years then ended. These financial statements are the 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, 2005 and 2004, and the changes in its net assets and trust balances 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 investment and 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 Plans' 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 6, 2006

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
STATEMENTS OF NET ASSETS AND TRUST BALANCES
FOR THE YEAR ENDED DECEMBER 31, 2005 AND 2004

	<u>2005</u>	<u>2004</u>
<u>ASSETS</u>		
Accounts Receivable:		
Accrued Interest and Dividends	\$ 405,990	\$ 328,628
Investments at Quoted Market Value	<u>226,171,839</u>	<u>229,559,681</u>
Total Assets	<u>226,577,829</u>	<u>229,888,309</u>
<u>LIABILITIES</u>		
Current Liability:		
Accrued Expenses	<u>18,967</u>	<u>9,457</u>
Total Liabilities	<u>18,967</u>	<u>9,457</u>
NET ASSETS	<u><u>\$ 226,558,862</u></u>	<u><u>\$ 229,878,852</u></u>
<u>TRUST BALANCES FOR:</u>		
Peoples Energy Corporation Employee Capital Accumulation Plan	\$ 142,475,774	\$ 146,407,222
Peoples Energy Corporation Employee Thrift Plan	<u>84,083,088</u>	<u>83,471,630</u>
	<u><u>\$ 226,558,862</u></u>	<u><u>\$ 229,878,852</u></u>

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

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
STATEMENTS OF CHANGES IN NET ASSETS AND TRUST BALANCES
FOR THE YEAR ENDED DECEMBER 31, 2005 AND 2004

	<u>2005</u>	<u>2004</u>
ADDITIONS		
Contributions:		
Employee Contributions	\$ 8,451,753	\$ 9,092,147
Employer Contributions	3,659,272	4,008,380
Rollover Contributions	263,407	25,019
Total Contributions	<u>12,374,432</u>	<u>13,125,546</u>
Income from Investments:		
Dividend Income	1,180,189	1,168,090
Interest Income	1,201,113	528,182
Total Income from Investments	<u>2,381,302</u>	<u>1,696,272</u>
Loan Payments:		
Interest	425,605	448,731
Net Gain		
Net Unrealized Appreciation (Depreciation)	(4,191,874)	10,011,424
Net Realized Gains	7,771,284	5,923,127
Total Net Gain	<u>3,579,410</u>	<u>15,934,551</u>
TOTAL ADDITIONS	<u>18,760,749</u>	<u>31,205,100</u>
DEDUCTIONS		
Withdrawals	<u>22,080,739</u>	<u>26,191,941</u>
TOTAL DEDUCTIONS	<u>22,080,739</u>	<u>26,191,941</u>
Net Increase (Decrease) in Assets During the Year	(3,319,990)	5,013,159
Net Assets - Beginning of Year	<u>229,878,852</u>	<u>224,865,693</u>
NET ASSETS - END OF YEAR	<u>\$ 226,558,862</u>	<u>\$ 229,878,852</u>

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

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2005 and 2004

NOTE 1 – ESTABLISHMENT OF THE TRUST

The Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust (the Trust) was established 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). The Northern Trust Company (Northern Trust) serves as Trustee for the Trust.

Peoples Energy Corporation (the Company) has received favorable determination letters for the Plans which entitles the Trust to exemption from Federal income tax liability. The Plans are subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), as amended.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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

a. 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.

b. 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 at the date of the financial statements. Accordingly, actual results could differ from those estimates.

c. Payment of Benefits

Benefits are recorded when paid.

d. Administrative Expenses and Fees

The Plans' participants, through reduced earnings, pay recordkeeping, trustee, and investment management fees. During 2005 and 2004, such fees amounted to \$222,551 and \$330,044 respectively. The Company provides certain accounting and management services to the Plans at no cost. These services include audit fees, legal fees, and time provided by Company employees. Costs borne by the Company have been excluded from the accompanying financial statements since they were not paid from Trust assets. Accrued expenses at December 31, 2005 and 2004 of \$18,967 and \$9,457 respectively relate to the normal monthly invoices charged by the trustee and the recordkeeper.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 2005 and 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

e. Participant Accounts

The underlying assets for each participant's account is maintained at the Trust level. Each participant's record is maintained at the Plan level and is credited with the participant's contributions 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. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

f. Recognition of Investment Gains and Losses

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 the end of the 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.

g. Investments

Investments are included in the accompanying statements of net assets at fair market value as of the financial statement dates. 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 (NTGI) 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. Participant loans are valued at their outstanding balances, which approximate fair value.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2005 AND 2004

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:

	2005		2004	
	MARKET VALUE	NET CHANGE IN APPRECIATION (DEPRECIATION)	MARKET VALUE	NET CHANGE IN APPRECIATION (DEPRECIATION)
NTGI-QM Collv Daily Russell 3000 Equity Index Fund-SL *	\$ 5,427,205	\$ 316,494	\$ 5,679,556	\$ 628,444
NTGI-QM Collv Daily S&P 500 Equity Index Fund-SL *	48,528,612	2,218,994	49,357,155	4,981,534
NTGI Collv Daily S&P 500/Barrs Growth Eqty Indx Fd-SL *	22,082,613	846,675	23,506,954	1,347,034
NTGI Collv Daily S&P 500/Barrs Value Equity Indx Fd-SL *	18,931,958	1,009,667	18,405,588	2,376,192
NTGI-QM Collv Daily Russell 2000 Equity Index Fund-SL *	14,544,017	570,757	15,013,788	2,217,188
NTGI Collv Daily S&P MidCap 400 Equity Indx Fd-SL *	11,788,575	1,150,611	7,970,638	1,085,374
Northern Insl Fds Intl Equity Index Portfolio Class A *	8,520,490	785,429	9,907,331	962,235
NTGI-QM Collv Daily Aggregate Bond Index Fund - SL *	35,204,469	865,597	36,837,039	1,632,494
Northern Trust Collective Short-Term Investment Fund *	36,300,018	-	37,178,866	-
PEOPLES ENERGY CORPORATION COMMON STOCK *	17,536,824	(4,185,014)	20,817,577	896,131
PARTICIPANT NOTES	7,907,158	-	7,888,209	-
TOTAL INVESTMENTS	\$ 226,171,839	\$ 3,579,410	\$ 229,559,681	\$ 16,126,826

Notes: * Party-In-Interest Transactions.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2005 and 2004

NOTE 3 - INVESTMENTS

The fair market value of the Trust's investments at December 31, 2005 and 2004, which represent 5% or more of the Trust's net assets, are summarized as follows:

	<u>Fair Market Value</u> <u>at December 31,</u>	
	<u>2005</u>	<u>2004</u>
NTGI-QM Coltv Daily S&P 500 Equity Index Fund-SL	\$48,528,512	\$49,357,155
Northern Trust Collective Short-Term Investment Fund	36,300,018	37,178,866
NTGI-QM Coltv Daily Aggregate Bond Index Fund-SL	35,204,469	36,837,039
NTGI Coltv Daily S&P 500/Barra Growth Eqty Index Fund-SL	22,082,613	23,506,954
NTGI Coltv Daily S&P 500/Barra Value Eqty Index Fund-SL	18,931,958	18,405,588
Peoples Energy Corporation Common Stock	17,536,824	20,817,577
NTGI-QM Coltv Daily Russell 2000 Equity Index Fund-SL	14,544,017	15,013,768
NTGI Coltv Daily S&P MidCap 400 Equity Index Fund-SL	11,788,575	-

NOTE 4 - RELATED PARTY

Northern Trust is the investment manager utilized by the plan administrator to manage certain investments held by the Trust. These investments consist of shares in Northern Trust's Collective and Institutional Funds. Northern Trust also serves as Trustee and, therefore, qualifies as party-in-interest. At December 31, 2005 and 2004, the fair value of assets held by the Trust that were managed by Northern Trust was \$201,327,857 and \$200,853,895, respectively. Fees paid to Northern Trust in 2005 and 2004 are considered to represent the fair market value of the services performed and are comparable to fees paid to other investment managers. During 2005 and 2004, amounts paid to Northern Trust for fees were \$86,375 and \$142,075 respectively. As of December 31, 2005 and 2004, amounts due to Northern Trust for fees were \$28,354 and \$0, respectively.

NOTE 5 - CURRENT YEAR CHANGES TO THE PLANS

Effective February 7, 2005, the Hewitt Associates, LLC recordkeeping platform servicing the Plans was transferred to its facility at Kalamazoo, MI from Atlanta, GA.

This year's presentation of the Statement of Changes in Net Assets and Trust Balances was modified from last year to exclude Fund Detail deemed not necessary to report.

NOTE 6 - RISKS AND UNCERTAINTIES

The Trust invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that such changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statement of net assets.

**SUPPLEMENTAL SCHEDULES
TO TRUST FINANCIAL STATEMENTS**

**PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
SCHEDULE OF ASSETS HELD FOR INVESTMENT
DECEMBER 31, 2005**

<u>Quantity/ Face Value</u>		<u>COST/ CARRYING VALUE</u>	<u>CURRENT VALUE</u>
<u>COLLECTIVE INVESTMENT FUNDS</u>			
8,184	*NTGI-QM Collv Daily Russell 3000 Equity Index Fund-SL	\$ 4,594,099	\$ 5,427,205
14,636	*NTGI-QM Collv Daily S&P 500 Equity Index Fund-SL	39,295,130	48,528,512
2,552,018	*NTGI Collv Daily S&P 500/Barra Growth Eqty Indx Fd-SL	19,317,971	22,082,613
812,984	*NTGI Collv Daily S&P 500/Barra Value Equity Indx Fd-SL	15,878,705	18,931,958
18,646	*NTGI-QM Collv Daily Russell 2000 Equity Index Fund-SL	11,326,089	14,544,017
466,523	*NTGI Collv Daily S&P MidCap 400 Equity Indx Fd-SL	9,584,422	11,788,575
669,324	*Northern Instl Fds Intl Equity Index Portfolio Class A	7,169,727	8,520,490
108,143	*NTGI-QM Collv Daily Aggregate Bond Index Fund - SL	33,050,211	35,204,469
36,300,018	*Northern Trust Collective Short-Term Investment Fund	36,300,018	36,300,018
<u>COMMON STOCK</u>			
500,052	*PEOPLES ENERGY CORPORATION COMMON STOCK	17,445,823	17,536,824
		<u>7,307,158</u>	<u>7,307,158</u>
PARTICIPANT NOTES			
TOTAL ASSETS HELD FOR INVESTMENT		<u>\$ 201,269,353</u>	<u>\$ 226,171,839</u>

NTGI = Northern Trust Global Investments

SL = security lending

* Party-in-Interest transactions

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST
SCHEDULE OF REPORTABLE TRANSACTIONS
FOR THE YEAR ENDED DECEMBER 31, 2005

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 TRANSACTIONS BY ISSUE IN EXCESS OF 5% OF ASSETS					
Northern Trust Collective Short-Term Investment Fund	453	\$ 62,451,899	-	\$ -	\$ -
NTGI Collv Daily S&P 500/Barra Value Equity Indx Fd-SL	109	\$ 6,857,268	-	\$ -	\$ -
NTGI-QM Collv Daily Aggregate Bond Index Fd-SL	307	\$ 7,403,743	-	\$ -	\$ -
NTGI-QM Collv Daily S&P 500 Equity Indx Fd-SL	105	\$ 9,875,127	-	\$ -	\$ -
Peoples Energy Corporation Common Stock	39	\$ 9,996,832	-	\$ -	\$ -
Northern Trust Collective Short-Term Investment Fund	-	\$ 63,330,674	534	\$ 63,330,674	\$ -
NTGI Collv Daily S&P 500/Barra Value Equity Indx Fd-SL	-	\$ 6,228,432	132	\$ 7,140,765	\$ 912,333
NTGI-QM Collv Daily Aggregate Bond Index Fd-SL	-	\$ 9,424,408	369	\$ 9,901,910	\$ 477,502
NTGI-QM Collv Daily S&P 500 Equity Indx Fd-SL	-	\$ 10,694,452	142	\$ 12,722,764	\$ 2,028,312
Peoples Energy Corporation Common Stock	-	\$ 7,397,262	33	\$ 9,092,669	\$ 1,695,307

**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, 2005 and 2004, 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, 2005 and 2004, 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 6, 2006

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR PLAN BENEFITS
AS OF DECEMBER 31, 2005 AND 2004

<u>ASSETS</u>	<u>2005</u>	<u>2004</u>
PARTICIPANT LOANS	\$ 3,137,238	\$ 3,351,371
PLAN INTEREST IN PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST, AT MARKET VALUE	<u>139,338,536</u>	<u>143,055,851</u>
NET ASSETS AVAILABLE FOR PLAN BENEFITS	<u>\$ 142,475,774</u>	<u>\$ 146,407,222</u>

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

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN
STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR PLAN BENEFITS
FOR THE YEARS ENDED DECEMBER 31, 2005 AND 2004

	<u>2005</u>	<u>2004</u>
ADDITIONS		
Contributions:		
Employee Contributions	\$ 5,501,655	\$ 6,117,201
Employer Contributions	2,246,441	2,570,307
Rollover Contributions	209,251	24,245
Total Contributions	<u>7,957,347</u>	<u>8,711,753</u>
Income from Investments:		
Dividend Income	920,547	680,501
Interest Income	953,879	401,897
Total Income from Investments	<u>1,874,426</u>	<u>1,082,398</u>
Loan Payments:		
Interest	186,985	208,743
Net Gain		
Net Unrealized Appreciation (Depreciation)	(3,269,662)	7,205,180
Net Realized Gains	6,061,602	4,067,604
Total Net Gain	<u>2,791,940</u>	<u>11,272,784</u>
TOTAL ADDITIONS	<u>12,810,698</u>	<u>21,275,678</u>
DEDUCTIONS		
Withdrawals	<u>16,742,146</u>	<u>20,863,440</u>
TOTAL DEDUCTIONS	<u>16,742,146</u>	<u>20,863,440</u>
Net Increase (Decrease) in Assets During the Year	(3,931,448)	412,238
Net Assets - Beginning of Year	<u>146,407,222</u>	<u>145,994,984</u>
NET ASSETS - END OF YEAR	<u>\$ 142,475,774</u>	<u>\$ 146,407,222</u>

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

17

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 2005 and 2004

NOTE 1 - DESCRIPTION OF PLAN

a. General

The following is a brief description of the Peoples Energy Corporation Capital Accumulation Plan (the Plan). More complete information may be found in the plan document.

The Plan is a defined contribution plan and covers those employees of Peoples Energy Corporation and subsidiary companies 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 Corporation, Peoples Energy Services Corporation (PESC) 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.

b. Contributions

Employees are eligible to participate in this plan immediately upon employment. Participants may elect to make contributions and designate such amounts as tax deferred contributions, after tax contributions or a combination of both. For participant contributions of up to 6% of their regular rate of pay, the employer contributes a matching amount equal to 60% (100% for PESC participants) of the employee's regular contributions. The employer matching contributions are invested in the same manner that 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. Participants age 50 years and older are allowed to contribute an additional pre-tax catch-up contribution according to Internal Revenue Service (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 the following eleven investment options: Money Market Fund; 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; and Company Stock Fund.

c. Participant Accounts

Each participant's account is maintained in the Plan and is credited with the participant's contributions 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 PLAN
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2005 and 2004

NOTE 1 - DESCRIPTION OF PLAN (Continued)

d. 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. 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.

e. Vesting

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. 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.

f. Payment of Benefits

For 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 or her 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 2005 and 2004 forfeited non-vested accounts totaled \$120,247 and \$107,532 respectively. These accounts would have been or will be used to reduce employer contributions to the Plan.

19

**PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN**

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 2005 and 2004

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:

a. Basis of Accounting

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

b. Trust Expenses

The cost of recordkeeping, trustee, and investment management services are allocated to Plan participants based upon account balances. Such allocated costs are paid by participants through reduced investment earnings. 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.

c. 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 at the date of the financial statements. Accordingly, actual results could differ from those estimates.

d. 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.

e. 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.

f. Interest in the Trust

Funds received by the Plan are invested by the Trust maintained by Northern Trust. The funds in the Plan are commingled with the funds of the Peoples Energy Corporation Employee Thrift Plan to obtain the economies available when larger amounts are available for investment. Reference is made to the Trust separate statements of net assets and accompanying notes for further information.

PEOPLES ENERGY CORPORATION
EMPLOYEE CAPITAL ACCUMULATION PLAN
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2005 and 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

At December 31, 2005 and 2004, the Plan's interest in the net assets of the Trust was approximately 63% and 64%, respectively.

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 IRS dated June 27, 2002 qualifying the Plan for exemption from income taxes under the Internal Revenue Code, as the Plan was then designed. The Plan has been amended since receiving the determination letter; however, the Company and the Plan's ERISA counsel believe that the Plan is designed and is currently being operated in compliance with applicable regulations of the Internal Revenue Code.

NOTE 5 - RISKS AND UNCERTAINTIES

The Plan invests in various investment securities through its interest in the Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust. Investment securities are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of the Trust investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statement of net assets.

**PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT 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 Thrift Plan as of December 31, 2005 and 2004, 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, 2005 and 2004 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 6, 2006

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR PLAN BENEFITS
AS OF DECEMBER 31, 2005 AND 2004

<u>ASSETS</u>	<u>2005</u>	<u>2004</u>
PARTICIPANT LOANS	\$ 4,169,920	\$ 4,536,838
PLAN INTEREST IN PEOPLES ENERGY CORPORATION EMPLOYEE CAPITAL ACCUMULATION AND THRIFT TRUST, AT MARKET VALUE	<u>79,913,168</u>	<u>78,934,792</u>
NET ASSETS AVAILABLE FOR PLAN BENEFITS	<u>\$ 84,083,088</u>	<u>\$ 83,471,630</u>

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

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN
STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR PLAN BENEFITS
FOR THE YEARS ENDED DECEMBER 31, 2005 AND 2004

	<u>2005</u>	<u>2004</u>
ADDITIONS		
Contributions:		
Employee Contributions	\$ 2,950,098	\$ 2,974,946
Employer Contributions	1,412,831	1,438,073
Rollover Contributions	54,156	774
Total Contributions	<u>4,417,085</u>	<u>4,413,793</u>
Income from Investments:		
Dividend Income	259,642	487,589
Interest Income	247,234	126,285
Total Income from Investments	<u>506,876</u>	<u>613,874</u>
Loan Payments:		
Interest	238,620	239,988
Net Gain		
Net Unrealized Appreciation (Depreciation)	(922,212)	2,806,244
Net Realized Gains	1,709,682	1,855,523
Total Net Gain	<u>787,470</u>	<u>4,661,767</u>
TOTAL ADDITIONS	<u>5,950,051</u>	<u>9,929,422</u>
DEDUCTIONS		
Withdrawals	<u>5,338,593</u>	<u>5,328,501</u>
TOTAL DEDUCTIONS	<u>5,338,593</u>	<u>5,328,501</u>
Net Increase In Assets During the Year	611,458	4,600,921
Net Assets - Beginning of Year	<u>83,471,630</u>	<u>78,870,709</u>
NET ASSETS - END OF YEAR	<u>\$ 84,083,088</u>	<u>\$ 83,471,630</u>

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

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2005 and 2004

NOTE 1 - DESCRIPTION OF PLAN

a. General

The following is a brief description of the Peoples Energy Corporation Employee Thrift Plan (the Plan). More complete information may be found in the plan document.

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.

b. Contributions

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 contributions and designate such amounts as tax deferred contributions, after tax contributions or a combination of both. For participant contributions of up to 6% of their regular rate of pay, the employer contributes a matching amount equal to 60% of the employee's regular contributions. The employer matching contributions are invested in the same manner that 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. Participants age 50 years and older are allowed to contribute an additional pre-tax catch-up contribution according to Internal Revenue Service (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 the following eleven investment options: Money Market Fund; 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; and Company Stock Fund.

c. Participant Accounts

Each participant's account is maintained in the Plan and is credited with the participant's contributions 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 THRIFT PLAN
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2005 and 2004

NOTE 1 - DESCRIPTION OF PLAN (Continued)

d. 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. 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.

e. Vesting

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.

f. Payment of Benefits

For 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 or her 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 2005 and 2004 forfeited non-vested accounts totaled \$8,539 and \$3,732 respectively. These accounts would have been or will be used to reduce employer contributions to the Plan.

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 2005 and 2004

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:

a. Basis of Accounting

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

b. Trust Expenses

The cost of recordkeeping, trustee, and investment management services are allocated to Plan participants based upon account balances. Such allocated costs are paid by participants through reduced investment earnings. 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.

c. 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 at the date of the financial statements. Accordingly, actual results could differ from those estimates.

d. 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.

e. 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.

f. Interest in the Trust

Funds received by the Plan are invested by the Trust maintained by Northern Trust. The funds in the Plan are commingled with the funds of the Peoples Energy Corporation Employee Thrift Plan to obtain the economies available when larger amounts are available for investment. Reference is made to the Trust separate statements of net assets and accompanying notes for further information.

PEOPLES ENERGY CORPORATION
EMPLOYEE THRIFT PLAN
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2005 and 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

At December 31, 2005 and 2004, the Plan's interest in the net assets of the Trust was approximately 37% and 36%, respectively.

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 IRS dated June 27, 2002 qualifying the Plan for exemption from income taxes under the Internal Revenue Code, as the Plan was then designed. The Plan has been amended since receiving the determination letter; however, the Company and the Plan's ERISA counsel believe that the Plan is designed and is currently being operated in compliance with applicable regulations of the Internal Revenue Code.

NOTE 5 - RISKS AND UNCERTAINTIES

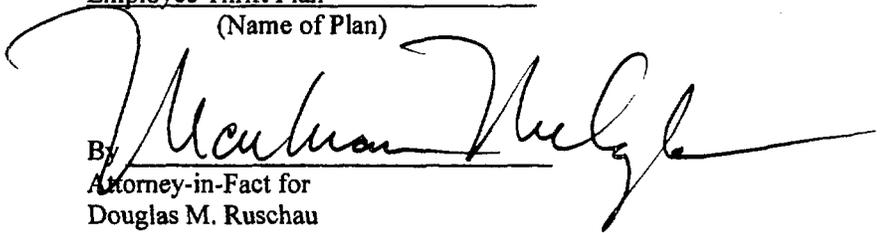
The Plan invests in various investment securities through its interest in the Peoples Energy Corporation Employee Capital Accumulation and Thrift Trust. Investment securities are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of the Trust investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statement of net assets.

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, 2006

By _____
Attorney-in-Fact for
Douglas M. Ruschau
Vice President and Treasurer
Peoples Energy Corporation

EXHIBIT INDEX

The exhibits listed below are filed herewith and made a part hereof.

<u>Exhibit Number</u>		<u>Page</u>
23	Consent of Odell Hicks & Company	32
24	Power of Attorney for Douglas M. Ruschau, Vice President and Treasurer of Peoples Energy Corporation	33

EXHIBIT 23

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference of our report, dated April 6, 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, 2005, into the Company's previously filed Registration Statement File No. 33-6389.


Odell Hicks & Company, LLC

Chicago, Illinois
April 6, 2006

EXHIBIT 24

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that the undersigned, Douglas M. Ruschau, in the undersigned's capacity as Vice President and Treasurer of Peoples Energy Corporation and in the capacity as an authorized representative of the Peoples Energy Corporation Employee Capital Accumulation Plan and Peoples Energy Corporation Employee Thrift Plan (said plans being collectively referred to herein as the "Registrants"), hereby constitutes and appoints MARKIAN MELNYK as the undersigned's true and lawful attorney-in-fact to execute and file with the Securities and Exchange Commission for and on behalf of the undersigned and on behalf of the Registrants the Registrants' Form 11-K for the fiscal year ended December 31, 2005.

The undersigned acknowledges that the foregoing attorney-in-fact, in serving in such capacity at the request of the undersigned, is not assuming any of the responsibilities of the undersigned or of the Registrants to comply with the Securities Exchange Act of 1934, as amended.

This Power of Attorney shall remain in full force and effect for thirty (30) days from the date set forth below, unless earlier revoked by the undersigned in a signed writing delivered to the foregoing attorney-in-fact.

IN WITNESS WHEREOF, the undersigned has executed this Power of Attorney this 29th day of June 2006.



Douglas M. Ruschau
Vice President and Treasurer
Peoples Energy Corporation