
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, 2010

OR

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

For the transition period from _____ to _____

Commission File Number 001-11337

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

Integrys Energy Group, Inc. Deferred Compensation Plan

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

INTEGRYS ENERGY GROUP, INC.
(A Wisconsin Corporation)
130 East Randolph Street
Chicago, Illinois 60601-6207

**INTEGRYS ENERGY GROUP, INC.
DEFERRED COMPENSATION PLAN**

**STATEMENTS OF FINANCIAL CONDITION
DECEMBER 31, 2010 AND 2009**

(Thousands)	2010	2009
ASSETS:		
Receivable from Integrys Energy Group, Inc.	<u>\$69,605</u>	<u>\$60,779</u>
 PLAN EQUITY	 <u>\$69,605</u>	 <u>\$60,779</u>

See notes to financial statements.

**INTEGRYS ENERGY GROUP, INC.
DEFERRED COMPENSATION PLAN**

**STATEMENTS OF INCOME AND CHANGES IN PLAN EQUITY
YEARS ENDED DECEMBER 31, 2010, 2009 and 2008**

(Thousands)	2010	2009	2008
INCOME:			
Employer contribution credits	\$ 109	\$ 80	\$ 132
Participant deferred compensation	4,232	4,549	5,029
Deemed interest and dividend credits	2,789	3,085	3,022
Deemed net unrealized appreciation (depreciation) of investments	6,766	2,301	(8,259)
	13,896	10,015	(76)
TRANSFER from Peoples Energy Corporation Plans	-	-	3,848
Total additions	13,896	10,015	3,772
DEDUCTIONS:			
Benefits paid to participants	5,036	4,809	3,135
Forfeitures	34	37	75
Total deductions	5,070	4,846	3,210
NET INCREASE IN PLAN EQUITY	8,826	5,169	562
PLAN EQUITY, BEGINNING OF YEAR	60,779	55,610	55,048
PLAN EQUITY, END OF YEAR	\$69,605	\$60,779	\$55,610

See notes to financial statements.

**INTEGRYS ENERGY GROUP, INC.
DEFERRED COMPENSATION PLAN**

**NOTES TO FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 2010, 2009 AND 2008
(DOLLARS IN THOUSANDS)**

1. DESCRIPTION OF THE PLAN

General – Integrys Energy Group, Inc. (the “Company”) sponsors the Integrys Energy Group, Inc. Deferred Compensation Plan as amended and restated effective April 1, 2008 (the “Plan”). The Plan supersedes previous deferred compensation plans dating back to 1987. The following brief description of the Plan provides only general information. Participants should refer to the Plan document for a more complete description of the Plan’s provisions.

The Plan is a non-qualified, deferred compensation plan. The Plan is an employee pension benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), although, as discussed in more detail below, the Plan is exempt from many of ERISA’s substantive requirements.

Administration – The Plan is administered by the Compensation Committee of the Board of Directors. The Committee administers and interprets the Plan and supervises preparation of the various forms and elections required pursuant to the Plan. Participant accounts are maintained by Clark Consulting, a third party administrator.

Plan Amendment – The Company merged with Peoples Energy Corporation on February 21, 2007. Peoples Energy Corporation was merged into Peoples Energy, LLC (“PELLC”) on February, 28, 2011. PELLC had several deferred compensation plans. These plans were merged with the Integrys Energy Group, Inc. Plan, effective April 1, 2008. At the time the plans merged, the Company’s deferred compensation plan was amended and restated. The investment options available to participants were expanded to generally mirror the investment funds provided by the Wisconsin Public Service Corporation 401(k) plans. Matching contribution credits that prior to January 1, 2008 were credited to participant accounts in the form of locked stock units can now be credited to their accounts in accordance with investment elections made by the participants. The additional 5% premium for the annual bonus payments that had been given to participants who chose deferrals prior to April 1, 2008 into the Integrys stock unit account was eliminated. In addition, effective April 1, 2008, no additional employee deferral amounts may be allocated to Reserve Account B. A participant may transfer amounts from Reserve Account B to another available investment option, but once transferred, the amounts cannot be allocated back to Reserve Account B.

Grantor Trusts – Wisconsin Public Service Corporation, a wholly owned subsidiary of the Company, established a revocable Grantor (“Rabbi”) Trust in July 1988. The Integrys Energy Group, Inc. Trust was most recently amended and restated in January 2010. The Integrys Energy Group, Inc. Deferred Compensation Trust was governed by and subject to the terms of a trust agreement entered into between the Company, as Grantor, and State Street Bank and Trust Company, the Trustee, through January 4, 2010. Effective January 4, 2010, The Northern Trust Company became the Trustee.

PELLC, a wholly owned subsidiary of the Company, established an irrevocable Grantor (“Rabbi”) Trust in September 1995. The PELLC Trust was most recently amended and restated in July 2006. The PELLC Trust is governed by and subject to the terms of a trust agreement entered into between the Company, as Grantor, and The Northern Trust Company, the Trustee.

Although the Company maintains two Grantor Trusts and may use the Trusts at its discretion to accumulate certain assets to assist the Company in meeting its obligations under the Plan, the Plan has no investments of its own. The sole asset of the Plan is a receivable from the Company in an amount equal to the value of all participant accounts. Obligations in excess of assets held by the Grantor Trusts are paid through the assets of the Company.

Participation – The Plan is open to a number of members of the Company’s Board of Directors and a select group of management and highly compensated employees of the Company, its subsidiaries, and affiliates. An employee may participate in the Plan only if designated for participation by the Compensation Committee of the Board of Directors. Once nominated, participation in the plan is entirely voluntary.

Participant Accounts – Individual accounts are maintained for each Plan participant. Each participant’s account is credited with the participant’s deferrals, applicable employer contribution credits and deemed investment gains, and charged with benefit distributions and forfeitures, if applicable, and allocations of deemed investment losses. The deemed investment gains and losses are determined based upon the hypothetical investment options elected by the Plan participants.

Participant Deferrals – A participant can defer up to 100% of his or her base compensation, in increments of 1%. In addition, each participant can defer up to 100% of his or her annual incentive award, and up to 100% of any long-term incentive plan performance share awards and any restricted stock awards, in increments of 1%.

Employer Contribution Credits – If deferral of base compensation and/or annual incentive award under this Plan results in a reduced 401(k)/ESOP match under the Company sponsored qualified plans, participants will receive credit for the “lost” match in this plan.

The Compensation Committee of the Board of Directors specifically selects participants to receive a Defined Contribution SERP credit and designates the percentage of the participant’s base compensation and annual incentive award that is to be credited to the participant’s account. If the Committee does not affirmatively designate the applicable

percentage, the applicable percentage shall be 12% until the Committee affirmatively designates a different percentage.

Eligible participants receive an Age and Service Points Contribution Credit. This credit to the account of eligible participants is the difference between the age/service contribution received in the 401(k) plan and the amount that would have been received excluding limitations because of Internal Revenue Code Section 401(a)(17) or 415. For purposes of this calculation, deferrals of base compensation and annual incentive awards are treated as if they had been paid in cash.

Vesting and Forfeitures – Participants are immediately and fully vested in all contributions and earnings, except for the deferral of restricted stock awards, Defined Contribution SERP credit, and the Age and Service Points Contribution Credit. Prior to February 2009, participants were not able to defer the first 25% of the restricted stock awards granted. The remaining 75%, if deferred, vested at a rate of 33% on the second anniversary of the grant date, 33% on the third anniversary of the grant date, and 34% on the fourth anniversary of the grant date. Beginning with the February 2009 grant, restricted stock awards vest at 25% per year. The Defined Contribution SERP credit together with all related deemed investment gains or losses vests after completing five years of service. The Age and Service Points Contribution Credit together with all related deemed investment gains and losses vests after completing three years of service. Participants who terminate employment prior to becoming 100% vested in the deferred portion of their restricted stock award, Defined Contribution SERP credit, or Age and Service Points Contribution Credit forfeit the unvested portion. Vesting agreements vary by grant. During the year ended December 31, 2010, \$34,331 (in dollars) was forfeited.

Distributions –Distribution of a participant’s account will commence within 60 days following the calendar year during which the six-month anniversary of the date on which the participant terminates employment or service from the Company occurs, unless the participant has selected a later commencement date. Distributions will be made in 1 to 15 annual installments, as elected by the participant. Participants who retired or terminated prior to 2001 receive their distributions according to the plan in existence when they separated from service. In order to comply with Internal Revenue Code Section 409A, all participants had to make a distribution election by December 31, 2008. If no distribution election was made, the default is a lump sum payment.

Investments - Investments represent hypothetical investments that are maintained for record keeping purposes only. Participants direct their cash deferrals into various investment fund equivalents offered by the Plan. The investment fund equivalents currently offered by the Plan to participants include Integrys common stock, mutual funds, and collective trust funds.

Prior to April 1, 2008, participants were able to defer into Reserve Account B while participating in the Integrys Energy Group, Inc. Deferred Compensation Plan. Reserve Account B provides for an interest equivalent credit of 70% of the Company's consolidated return on common equity or a minimum return established by the Plan. Prior to January 1, 1996, participants were able to defer into Reserve Account A. Reserve Account A provides

for an interest equivalent credit of 100% of the Company's consolidated return on common equity.

As of December 31, 2010, 2009 and 2008, vested hypothetical investments in Integrys common stock were \$35,769, \$30,096, and \$29,214, respectively. Of those amounts, \$30,342, \$26,524, and \$26,438, respectively, are required to be distributed to participants in shares of Integrys common stock.

The following is a summary of the deemed net unrealized appreciation/(depreciation) of investments for the years ended December 31, 2010, 2009 and 2008:

	2010	2009	2008
Integrys common stock	\$ 5,273	\$ 120	\$ (5,359)
Mutual funds	<u>1,493</u>	<u>2,181</u>	<u>(2,900)</u>
Deemed net unrealized appreciation/ (depreciation) of investments	<u>\$ 6,766</u>	<u>\$ 2,301</u>	<u>\$ (8,259)</u>

Plan Termination – Although it has not expressed any intent to do so, the Company's Board of Directors has the right to amend or terminate the Plan provided that no amendment or termination may reduce or eliminate any account balance accrued to the date of such amendment or termination.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting – The accompanying financial statements have been prepared 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 the Plan administrator to make estimates and assumptions that affect the reported amounts of assets, income, deductions, and changes in Plan equity. Actual results could differ from those estimates.

Receivable from the Company – As explained in Note 3 the Plan is unfunded with benefits paid solely out of the general assets of the Company. The Plan records a receivable from the Company equal to the sum of all participant account balances.

Administrative Expenses – Costs of establishing and administering the Plan are paid by the Company and not recorded within the financial statements of the Plan.

3. INCOME TAX STATUS

Because the Plan is unfunded with benefits paid solely out of the general assets of the Company, no provision for federal income taxes has been made in the accompanying financial statements. The Plan is not required to maintain its assets in a trust. The plan is an unfunded employee pension benefit plan which is maintained by the Company for the purpose of providing deferred compensation for a select group of management or highly compensated employees; and the Plan is, therefore, exempt from Parts 2, 3 and 4 of Subtitle B of Title I of ERISA, which pertain to participation, vesting, funding and fiduciary responsibilities. Pursuant to regulations issued by the Secretary of Labor in 29 CFR 2520.104-23, the Plan is exempt from the reporting and disclosure provisions of Part 1 of Subtitle B of Title I of ERISA, except for the requirement to file a brief "registration statement" with the Department of Labor (which has been done) and except for the requirement to provide Plan documents to the Secretary of Labor upon request. Title IV of ERISA, relating to plan termination insurance, does not apply to the Plan. The Plan is a nonqualified plan for federal income tax purposes and is not subject to the qualification requirements of Section 401 of the Internal Revenue Code of 1986, as amended.

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SIGNATURES

The Plan. Pursuant to the requirements of the Securities Exchange Act of 1934, the Plan Administrator of the Integrys Energy Group, Inc. Deferred Compensation Plan has duly caused this Annual Report to be signed on its behalf by the undersigned hereunto duly authorized, in the City of Chicago and the State of Illinois this 23rd day of June, 2011.

INTEGRYS ENERGY GROUP, INC.
DEFERRED COMPENSATION PLAN

By: /s/ Joseph P. O'Leary
Joseph P. O'Leary
Senior Vice President and Chief Financial Officer on behalf
of Integrys Energy Group, Inc. which administers the
Integrys Energy Group, Inc. Deferred Compensation Plan

EXHIBIT INDEX

**INTEGRYS ENERGY GROUP, INC.
DEFERRED COMPENSATION PLAN**

FORM 11-K

Exhibit No.

None