

Fleming James C
 Form 4
 May 17, 2011

FORM 4

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549**

OMB APPROVAL

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Fleming James C

2. Issuer Name and Ticker or Trading Symbol
 WISCONSIN ENERGY CORP
 [WEC]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)
 231 W. MICHIGAN STREET
 (Street)

3. Date of Earliest Transaction (Month/Day/Year)
 05/13/2011

____ Director _____ 10% Owner
 Officer (give title below) _____ Other (specify below)
 Executive VP & General Counsel

MILWAUKEE,, WI 53203

(City) (State) (Zip)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price
Common Stock	05/13/2011		M		123,000	A	\$ 23.8775
Common Stock	05/13/2011		S		123,000	D	\$ 31.6
Common Stock						I	1,629.56 ⁽¹⁾ ₍₂₎

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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number.

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)		
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount of Number of Shares
Stock Option (right to buy)	\$ 23.8775 (3)	05/13/2011		M	123,000	01/03/2010	01/03/2017	Common Stock	123,000

Reporting Owners

Reporting Owner Name / Address

Relationships

Director 10% Owner Officer Other

Fleming James C
231 W. MICHIGAN STREET
MILWAUKEE,, WI 53203

Executive VP & General Counsel

Signatures

/s/ Joshua M. Erickson, as
Attorney-in-fact

05/17/2011

__Signature of Reporting Person

Date

Explanation of Responses:

* If the form is filed by more than one reporting person, see Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) On March 1, 2011, the common stock of Wisconsin Energy Corporation split 2-for-1, resulting in the reporting person's ownership of 2,717 additional shares of directly held common stock and 815,197 additional shares of common stock indirectly held in Wisconsin Energy Corporation's Employee Retirement Savings Plan (ERSP).

(2) Includes shares acquired under the ERSP in transactions exempt from Section 16(b) pursuant to Rule 16b-3(c) and exempt from reporting pursuant to Rule 16a-3(f)(1)(i)(B). The number of shares in the ERSP attributable to any one participant varies with the price of the Common Stock. The information in this report is based on a plan statement dated as of April 30, 2011.

(3) This option was previously reported as covering 61,500 shares at an exercise price of \$47.755 per share, but was adjusted to reflect the 2-for-1 stock split that occurred on March 1, 2011.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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