

McKenna Thomas A  
 Form 4  
 December 31, 2009

**FORM 4**

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

OMB APPROVAL

OMB Number: 3235-0287  
 Expires: January 31, 2005  
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**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 \*  
 McKenna Thomas A

2. Issuer Name and Ticker or Trading Symbol  
 UNISOURCE ENERGY CORP  
 [UNS]

5. Relationship of Reporting Person(s) to Issuer  
 (Check all applicable)

(Last) (First) (Middle)  
 1 S. CHURCH AVENUE, SUITE  
 201  
 (Street)

3. Date of Earliest Transaction  
 (Month/Day/Year)  
 12/29/2009

\_\_\_\_ Director  
 Officer (give title below)  
 \_\_\_\_ 10% Owner  
 \_\_\_\_ Other (specify below)  
 Vice President

TUCSON, AZ 85701

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

(City) (State) (Zip)

**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 Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)		
				(A) or (D)	Code	V	Amount	(D)	Price

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

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SEC 1474 (9-02)

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

1. Title of Derivative	2. Conversion	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if	4. Transaction	5. Number of	6. Date Exercisable and Expiration Date	7. Title and Amount of Underlying Securities	8. Price of Derivative
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Security (Instr. 3)	or Exercise Price of Derivative Security	any (Month/Day/Year)	Code (Instr. 8)	Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	(Month/Day/Year)	(Instr. 3 and 4)	Security (Instr. 5)
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Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	
						Common Stock	0.11	\$ 33
Phantom Stock Units <sup>(1)</sup>		\$ 0 <sup>(3)</sup>		12/29/2009				
			A		<u>(1)(2)</u>			
					<u>(2)</u>			

**Reporting Owners**

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
McKenna Thomas A 1 S. CHURCH AVENUE SUITE 201 TUCSON, AZ 85701			Vice President	

**Signatures**

Amy J, Welander, Attorney in Fact	12/31/2009
<small>**Signature of Reporting Person</small>	<small>Date</small>

**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) Credited as fully-vested dividend equivalents under the UniSource Energy Corporation Management and Directors Deferred Compensation Plan (the "DCP") with respect to dividends declared by the Issuer on its Common Stock.
- (2) Payable at the time or times elected by the reporting person under the DCP and subject to earlier payment in accordance with the DCP.
- (3) Converts to common stock on a 1-for-1 basis.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.