
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of report (Date of earliest event reported): **April 15, 2011**

Angeion Corporation
(Exact name of registrant as specified in its charter)

Minnesota
(State or other jurisdiction of incorporation)

001-13543
(Commission File Number)

41-1579150
(IRS Employer Identification No.)

350 Oak Grove Parkway
Saint Paul, Minnesota
(Address of principal executive offices)

55127-8599
(Zip Code)

(651) 484-4874
(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Section 8 – Other Events

Item 8.01 Other Events

On April 15, 2011, Angeion Corporation (the “Company”) issued a press release announcing an increase in its stock repurchase program. A copy of the press release is furnished as Exhibit 99.1 to this Form 8-K.

The information provided pursuant to Item 8.01 of this Form 8-K is being furnished and is not “filed” for purposes of Section 18 of the Securities Act of 1934, and may not be deemed incorporated by reference in any filing under the Securities Act of 1933, except as expressly set forth by specific reference in that filing.

Section 9 – Financial Statements and Exhibits

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

The following is furnished as an Exhibit to this Report:

Exhibit No.	Description of Exhibit
99.1	Press release dated April 15, 2011, announcing increase in stock repurchase program.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ANGEION CORPORATION

Dated: April 15, 2011

By /s/ Larry R. Degen
Larry R. Degen
Interim Chief Financial Officer

Angeion Corporation
350 Oak Grove Parkway
St. Paul, MN 55127 USA
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FOR IMMEDIATE RELEASE

***Angeion Corporation Announces Increase in
Stock Repurchase Program***

SAINT PAUL, Minnesota, April 15, 2011 — Angeion Corporation (ANGN) today announced that its Board of Directors has approved an increase in the Company’s stock repurchase program. Under the amended plan, the Company is authorized to purchase up to an additional \$2 million of its outstanding shares of common stock in the open market or in privately negotiated transactions between now and April 30, 2012. During the fiscal year ending October 31, 2010, Angeion repurchased 466,049 shares for approximately \$2 million.

“The Board is resuming the stock repurchase program because it believes repurchasing shares at current prices is an effective use of our capital benefiting both the Company and our shareholders,” said Mark W. Sheffert, Chairman of the Angeion Board of Directors.

As of January 31, 2011, the end of its first fiscal quarter, Angeion had working capital of \$12.7 million including approximately \$10.5 million in cash and short-term investments. “The Company’s operations, while not profitable in recent quarters due to one-time charges, have been generating consistently strong cash flow. The Board has assessed and will continue to periodically assess the Company’s capital position and, if it determines that the Company’s capital exceeds the amount necessary to fund its operating and strategic needs, Angeion will look to use the excess capital to purchase its shares in both open market and privately negotiated transactions,” said Sheffert.

Angeion intends to make its public purchases in compliance with SEC Rule 10b -18. Under that rule, open market purchases are limited in any single day to 25% of the average daily trading volume for the four prior calendar weeks. The average daily trading volume for the four weeks ended April 8, 2011 was 6,347 shares. This would allow Angeion to purchase a total of 1,587 shares per day through open market purchases. Repurchases through privately negotiated transactions are not subject to these restrictions.

The timing and the number of shares repurchased will depend upon a variety of factors, such as price, corporate and regulatory requirements, alternative investment opportunities and other market and economic conditions. Angeion will fund the purchases from its available working capital. This program may be started, extended or terminated at any time, or from time to time at management’s discretion without notice.

About Angeion Corporation

Founded in 1986, Angeion Corporation acquired Medical Graphics Corporation in December 1999. Medical Graphics develops, manufactures and markets non-invasive cardiorespiratory diagnostic systems that are sold under the MedGraphics (www.medgraphics.com) and New Leaf (www.newleaffitness.com) brand and trade names. These cardiorespiratory diagnostic systems have a wide range of applications in healthcare as well as health and fitness. The Company’s products are sold internationally through distributors and in the United States through a direct sales force that targets heart and lung specialists located in hospitals, university-based medical centers, medical clinics and physicians’ offices, pharmaceutical companies, medical device manufacturers, clinical research organizations, health and fitness clubs, personal training studios, and other exercise facilities. For more information about Angeion, visit www.angeion.com.

Forward Looking Statements

The discussion above contains forward-looking statements about Angeion's future financial results and business prospects that by their nature involve substantial risks and uncertainties. You can identify these statements by the use of words such as "anticipate," "believe," "estimate," "expect," "project," "intend," "plan," "will," "target," and other words and terms of similar meaning in connection with any discussion of future operating or financial performance or business plans or prospects. Our actual results may differ materially depending on a variety of factors including: (1) national and worldwide economic and capital market conditions; (2) continuing cost-containment efforts in our hospital, clinics, and office market; (3) any changes in the patterns of medical reimbursement that may result from national healthcare reform; (4) our ability to successfully operate our business, including successfully converting our increasing research and development expenditures into new and improved cardiorespiratory diagnostic products and services and selling these products and services under the MedGraphics and New Leaf brand names into existing and new markets; (5) our ability to complete our software development initiative and migrate our MedGraphics and New Leaf platforms to a next generation technology; (6) our ability to maintain our cost structure at a level that is appropriate to our near to mid-term revenue expectations and that will enable us to increase revenues and profitability as opportunities develop; (7) our ability to achieve constant margins for our products and consistent and predictable operating expenses in light of variable revenues from our clinical research customers; (8) our ability to expand our international revenue through our distribution partners and our Milan, Italy representative branch office; (9) our ability to successfully defend ourselves from product liability claims related to our cardiorespiratory diagnostic products and claims associated with our prior cardiac stimulation products; (10) our ability to defend our existing intellectual property and obtain protection for intellectual property we develop in the future; (11) our ability to develop and maintain an effective system of internal controls and procedures and disclosure controls and procedures; (12) our dependence on third-party vendors and (13) the ability of new members of our senior management to make a successful transition into their new roles and for all members of senior management to ultimately develop and implement a strategic plan. Additional information with respect to the risks and uncertainties faced by the Company may be found in, and the above discussion is qualified in its entirety by, the other risk factors that are described from time to time in the Company's Securities and Exchange Commission reports, including the Annual Report on Form 10-K for the year ended October 31, 2010.

For further information on the Stock Repurchase Program, please contact Angeion Chairman, Mark W. Sheffert at 612-436-2818 or Chief Executive Officer, Philip I. Smith at 651-766-3327.

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