UNITED STATES

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1

TO

FORM S-8

REGISTRATION STATEMENT

UNDER THE SECURITIES ACT OF 1933

ESCO TECHNOLOGIES INC.

(Exact name of registrant as specified in its charter)

Missouri (State or other jurisdiction of incorporation or organization)

43-1554045 (I.R.S. Employer Identification No.)

9900A Clayton Road St. Louis, Missouri 63124 (Address of principal executive offices, including zip code)

ESCO ELECTRONICS CORPORATION

EMPLOYEE STOCK PURCHASE PLAN

(Full title of the plan)

Alyson S. Barclay, Esq.
Senior Vice President, Secretary and General Counsel
9900A Clayton Road
St. Louis, Missouri 63124
(314) 213-7200

(Name, address and telephone number, including area code, of agent for services)

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12-b-2 of the Exchange Act.

Large accelerated filer T

Accelerated filer £

Non-accelerated filer £ (do not check if a smaller reporting company

Smaller reporting company £

EXPLANATORY NOTE

ESCO Technologies Inc. (the "Registrant") is filing this Post-Effective Amendment No. 1 to Registration Statement on Form S-8 to report the sale of all securities registered by the Registrant (then named ESCO Electronics Corporation) pursuant to Registration Statement No. 33-47916 filed with the Securities and Exchange Commission on May 14, 1992.

The securities originally registered consisted of 500,000 shares of the Registrant's Common Stock, par value \$0.01 per share, to be offered under the Registrant's Employee Stock Purchase Plan (the "Plan"), together with ancillary Preferred Stock Purchase Rights. Pursuant to anti-dilution provisions in the Plan, the registered number of shares of Common Stock was adjusted as a result of the Company's 2:1 stock split effected in the form of a 100% stock dividend paid on September 23, 2005. All Preferred Stock Purchase Rights associated with the Common Stock expired in 2010.

All shares subject to the Registration Statement have been sold. However, the Plan continues in existence, and additional shares were registered for sale under the Plan pursuant to Form S-8 Registration Statement No. 333-77887 filed with the Commission on May 6, 1999.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Post-Effective Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Oxnard, State of California, on February 6, 2013.

ESCO TECHNOLOGIES INC.

By: <u>/s/ Alyson S. Barclay</u>
Alyson S. Barclay
Senior Vice President, General Counsel and Secretary

Date

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby severally constitutes and appoints G.E. Muenster, Alyson S. Barclay and Jeffrey D. Fisher, and each of them, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with The Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each said attorneys-in-fact and agents or any of them or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature

Signature	11tte	February 6, 2013	
- /s/ V.L. Richey, Jr. V.L. Richey, Jr.	President, Chief Executive Officer and Director (Principal Executive Officer)		
- /s/ G.E. Muenster G.E. Muenster	Executive Vice President and Chief Financial Officer and Director (Principal Financial Officer)	February 6, 2013	
/s/ J.M. McConnell J.M. McConnell	_ Director	February 6, 2013	
/s/ L.W. Solley L.W. Solley	Director	February 6, 2013	
- /s/ J.M. Stolze J.M. Stolze	Director	February 6, 2013	
/s/ D.C. Trauscht D.C. Trauscht	Director	February 6, 2013	
J.D. Woods	Director	, 2013	