As filed with the Securities and Exchange Commission on February 11, 2013

Registration No. 33–39737

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 1

то

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

1990 STOCK OPTION 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 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 deregister certain securities originally registered by the Registrant (then named ESCO Electronics Corporation) pursuant to Registration Statement No. 33-39737 filed with the Securities and Exchange Commission on April 2, 1991.

The securities originally registered consisted of 1,600,000 shares of the Registrant's Common Stock Trust Receipts and the underlying shares of Common Stock, par value \$0.01 per share, to be offered under the Registrant's 1990 Stock Option Plan (the "Plan"), together with ancillary Preferred Stock Purchase Rights. Upon the termination of the Deposit and Trust Agreement covering the Trust Receipts in 1999, all outstanding Trust Receipts were exchanged for the underlying shares of Common Stock. 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.

The Plan and all awards granted thereunder have terminated. Accordingly, the Registrant hereby deregisters the registered securities remaining unsold at the termination of the Plan and the awards thereunder, consisting of 71,867 shares of the Registrant's Common Stock.

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

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	Title	Date
<u>/s/ V.L. Richey, Jr.</u> V.L. Richey, Jr.	President, Chief Executive Officer and Director (Principal Executive Officer)	February 6, 2013
<u>/s/ G.E. Muenster</u> G.E. Muenster	Executive Vice President and Chief Financial Officer and Director (Principal Financial Officer)	February 6, 2013
<u>/s/ J.M. McConnell</u> J.M. McConnell	Director	February 6, 2013
<u>/s/ L.W. Solley</u> L.W. Solley	Director	February 6, 2013
<u>/s/ J.M. Stolze</u> J.M. Stolze	Director	February 6, 2013
<u>/s/ D.C. Trauscht</u> D.C. Trauscht	Director	February 6, 2013

J.D. Woods

_____, 2013

_