

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Schedule 13D/A

Under the Securities Exchange Act of 1934
(Amendment No. 15)*

Electric Fuel Corporation

(Name of Issuer)

Common Stock \$0.01 Par Value

(Title of Class of Securities)

284871-10-0

(CUSIP Number)

Steven M. Plon, Esquire, Jerry S. Goldman & Associates, P.C.
1601 Market Street, Suite 2400, Philadelphia, PA 19103, (215) 569-4500

(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

December 31, 2001

(Date of Event which Requires Filing
of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(b)(3) or (4), check the following box / /.

Check the following box if a fee is being paid with the statement / /. (A fee is not required only if the reporting person: (1) has a previous statement on file reporting beneficial ownership of more than five percent of the claim of securities described in Item 1; and (2) has filed no amendment subsequent thereto reporting beneficial ownership of five percent or less of such class.) (See Rule 13d-7.)

Note: Six copies of this statement, including all exhibits, should be filed with the Commission. See Rule 13d1(a) for other parties to whom copies are to be sent.

*The remainder of this coverage page shall be filed out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that action of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(Continued on following page(s))

CUSIP No. 284871-10-0

1. NAME OF REPORTING PERSONS
S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS
Leon S. Gross S.S. No. ###-##-####

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a)

(b)

3. SEC USE ONLY

4. SOURCE OF FUNDS*

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED
PURSUANT TO ITEM 2(d) or 2(e)

6. CITIZENSHIP OR PLACE OF ORGANIZATION
United States of America

7. SOLE VOTING POWER
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH 3,697,870 [includes 35,000 options to purchase common stock]

8. SHARED VOTING POWER
463,165

9. SOLE DISPOSITIVE POWER
35,000 [which represents options to purchase common stock]

10. SHARED DISPOSITIVE POWER
4,126,035 [3,462,870 are held in a margin accounts, 200,000 are pledged to Wilmington Trust of Pennsylvania and 463,165 are held jointly as a Co-Trustee of the Rose Gross Charitable Foundation]

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
4,161,035 [includes 35,000 warrants to purchase common stock]

12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)
14.4% of the issued and outstanding stock (1)

14. TYPE OF REPORTING PERSON*
IN

(1) Based upon 28,802,910 shares of common stock outstanding as reported in Electric Fuel Corporation's Current Report filed on Form 8-K, which was filed on December 4, 2001, and assuming exercise of options to purchase 35,000 Shares held by Mr. Gross.

*SEE INSTRUCTIONS BEFORE FILLING OUT

AMENDMENT NO. 15 TO SCHEDULE 13D

This Amendment No. 15 to the Schedule 13D originally dated February 23, 1996, as amended by the First Amendment to Schedule 13D dated April 30, 1996, the Second Amendment to Schedule 13D dated September 1, 1996, the Third Amendment to Schedule 13D dated October 11, 1996, the Fourth Amendment to Schedule 13D dated December 27, 1996, the Fifth Amendment to Schedule 13D dated May 12, 1997, the Sixth Amendment to Schedule D dated December 3, 1997, the Seventh Amendment to Schedule 13D dated September 28, 1998, the Eighth Amendment to Schedule 13D dated October 14, 1999, the Ninth Amendment to Schedule 13D dated October 28, 1999, the Tenth Amendment to Schedule 13D dated January 12, 2000, the Eleventh Amendment to Schedule 13D dated June 26, 2000, the Twelfth Amendment to Schedule 13D dated October 20, 2000, the Thirteenth Amendment to Schedule 13D dated January 16, 2001, and the Fourteenth Amendment to Schedule 13D dated April 3, 2001 (the "Existing Schedule 13D"), is being filed by the undersigned in accordance with Rule 13d-2(a) of the general rules and regulations under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and amends the Existing Schedule 13D to the extent set forth below. Terms defined in the Existing Schedule 13D are used herein as so defined.

Item 5. Interest in Securities of the Issuer.

The third paragraph of Items 5(a) and (b) of the Existing Schedule 13D is hereby amended to read as follows:

Mr. Gross beneficially owns 4,161,035 Shares, or 14.4% of the Common Stock (based upon 28,802,910 shares of common stock outstanding as reported in Electric Fuel Corporation's Current Report filed on Form 8-K which was filed on December 4, 2001 and assuming the exercise of options to purchase 35,000 Shares held by Mr. Gross). Of the 4,161,035 Shares beneficially owned by him, Mr. Gross has the sole power to vote 3,697,870 Shares, assuming the exercise of options to purchase 35,000 Shares. The remaining 463,165 Shares are held jointly by Mr. Gross and Lawrence M. Miller in their capacities as Co-Trustees of the Rose Gross Charitable Foundation (the "Foundation"), a charitable foundation founded by Mr. Gross by Agreement of Trust dated May 28, 1997. Mr. Gross has sole power to dispose of all Shares beneficially owned by him, except for (i) the 463,165 Shares owned by the Foundation, (ii) 2,095,204 Shares which are held in a margin account with Salomon Smith Barney, (iii) 94,204 Shares which are held in a margin account with Donaldson, Lufkin & Jenrette, (iv) 345,000 Shares which are held in a margin account with Merrill Lynch, (v) 928,204 Shares which are held in a margin account with Morgan Stanley Dean Witter and (vi) 200,000 Shares which have been pledged to Wilmington Trust of Pennsylvania. To the best of Mr. Gross' knowledge, except as expressly set forth herein, no other person has the right to receive or the power to direct the receipt of dividends from, or proceeds of the sale of, the Shares held by him.

Item 5 (c) of the Existing Schedule 13D is hereby amended by the addition of the following paragraph:

On December 31, 2001, Mr. Gross made a gift of 320,000 Shares to the Foundation.

Page 4 of 4

Item 6. Contracts, Arrangements, Understanding or Relationship with Respect to Securities of the Issuer.

Item 6 of the Existing Schedule 13D is hereby amended by adding the following paragraphs:

(b) Since the filing of the Existing Schedule 13D, Mr. Gross has added to and moved Shares among the margin accounts he has with the following Brokerage Firms. As of December 31, 2001, Mr. Gross' Shares are pledged to the Brokerage Firms as follows:

Brokerage Firm	Number of Shares
Donaldson, Lufkin & Jenrette	94,204
Merrill Lynch	345,000
Solomon Smith Barney	2,095,204
Morgan Stanley Dean Witter	928,204

In addition, Mr. Gross has pledged 200,000 Shares to Wilmington Trust of Pennsylvania as partial collateral for a line of credit.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

January 14, 2002

Date

/s/ Leon S. Gross

Leon S. Gross