

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

ELECTRIC FUEL CORPORATION
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

95-4302784
(I.R.S. Employer
Identification No.)

885 Third Avenue, Suite 2900
New York, New York, 10022-4834
(212) 829-5536

(Address, including zip code, and telephone number, including
area code, of registrant's principal executive offices)

Winthrop G. Minot, Esq.
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One International Place
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(Name, address, including zip code, and telephone number,
including area code, of agent for service)

Please send copies of all communications to:

Jane D. Goldstein, Esq.
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One International Place
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Tel: (617) 951-7000
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Approximate date of commencement of proposed sale to the public: From time
to time after the effective date of the Registration Statement.

If any of the securities being registered on this Form are to be offered
pursuant to dividend or interest reinvestment plans, please check the
following box. []

If any of the securities being registered on this Form are to be offered on
a delayed or continuous basis pursuant to Rule 415 under the Securities Act
of 1933, other than securities offered only in connection with dividend or
interest reinvestment plans, check the following box. [X]

If this Form is filed to register additional securities for an offering
pursuant to Rule 462(b) under the Securities Act, please check the
following box and list the Securities Act registration statement number of
the earlier effective registration statement for the same offering. []

If this Form is a post-effective amendment filed pursuant to Rule 462(c)
under the Securities Act, check the following box and list the Securities
Act registration statement number of the earlier effective registration
statement for the same offering. []

If delivery of the prospectus is expected to be made pursuant to Rule 434,
please check the following box. []

CALCULATION OF REGISTRATION FEE

<TABLE>
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Title of Securities to be of registered registration fee	Amount to be registered	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount
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<S>	<C>	<C>	<C>	<C>
Common Stock, par value	2,850,000 shares (1)	\$9.9688	\$28,411,080.00	
\$7,500.53				
\$0.01 per share				

</TABLE>

- /1./ Includes 1,425,000 shares of common stock issuable upon the exercise of the Registrant's warrants. The number of shares underlying the warrants and being registered on this Registration Statement is subject to adjustment in the event of certain changes to the Registrant's capital structure.
- /2./ Estimated solely for the purpose of computing the amount of the registration fee in accordance with Rule 457(c) of the Securities Act of 1933 based upon the average of the high and low prices for shares of the Common Stock on January 21, 2000 on the Nasdaq National Market.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

 *The information in this preliminary prospectus is not complete and may be *
 changed. These securities may not be sold until the registration statement
 *filed with the Securities and Exchange Commission is effective. This *
 preliminary prospectus is not an offer to sell these securities and we are
 *no seeking offers to buy these securities in any state where the offer or *
 *sale is not permitted. *

Subject to Completion, dated January 25, 2000

 2,850,000 Shares
 Electric Fuel Corporation
 Common Stock

This prospectus relates to the offer and sale of up to 2,850,000 shares of common stock from time to time by certain of our stockholders listed below.

The common stock is listed on the Nasdaq National Market under the symbol "EFCX". The last reported sale price for the common stock on January 21, 2000 as quoted on the Nasdaq National Market was \$11.125 per share.

INVESTING IN THE COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. CONSIDER CAREFULLY THE "RISK FACTORS" BEGINNING ON PAGE 1.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

 The date of this prospectus is _____, 2000

TABLE OF CONTENTS

<TABLE>

<S>	<C>
Risk Factors.....	1
The Company.....	5
Recent Developments.....	6
Use of Proceeds.....	7
Selling Stockholders.....	7
Plan of Distribution.....	8
Legal Matters.....	8
Experts.....	8
Where You Can Find More Information.....	8
Incorporation of Documents by Reference.....	9
Information Regarding Forward-Looking Statements..	9
</TABLE>	

RISK FACTORS

You should consider carefully the following risk factors in addition to the other information in this prospectus before purchasing our common stock. Investing in our common stock involves a high degree of risk. Any of the following risks could seriously harm our business and could result in a complete loss of your investment. See also the section entitled "Information Regarding Forward-Looking Statements" on page 9 below.

WE HAVE HAD A HISTORY OF LOSSES AND MAY INCUR FUTURE LOSSES.

We were incorporated in 1990 and began our operations in 1991. We have funded our operations principally from licensing arrangements; research contracts and supply contracts; funds received under research and development grants from the Government of Israel; sales of Survivor Lights; and funds raised in each of the initial public offering of our common stock in February 1994, the offering of our common stock in February 1996, a private placement of our common stock in October 1996, and recent private placements of our common stock in December 1999 and January 2000. We incurred significant operating losses for the years ended December 31, 1996, 1997 and 1998 and the three quarters ended September 30, 1999, expect that we incurred significant operating losses in the fourth quarter of 1999 and expect to continue to incur significant operating losses in 2000. These losses may increase as we expand our research and development activities and establish production facilities, and these losses may fluctuate from quarter to quarter. There can be no assurance that we will ever achieve profitability or that our business will continue.

WE NEED SIGNIFICANT AMOUNTS OF CAPITAL TO OPERATE AND GROW OUR BUSINESS.

We require substantial funds to conduct the necessary research, development and testing of our products; to establish commercial scale manufacturing facilities; and to market our products. In order to satisfy existing orders of batteries in commercial quantities, we need to implement our automated production line and, in the future, may need to upgrade or expand our automated production line to satisfy future orders. We expect our currently available funds to be sufficient to fund our projected activities into the foreseeable future. We plan to expand both sales and production activities, which will require additional funding. We continue to seek additional funding, including through the issuance of equity or debt securities. However, there can be no assurance that we will obtain any such additional financing in a timely manner and on acceptable terms. If additional funds are raised by issuing equity securities, stockholders may incur further dilution. If additional funding is not secured, we will have to modify, reduce, defer or eliminate parts of our anticipated future commitments and/or programs.

WE CANNOT ASSURE YOU OF MARKET ACCEPTANCE OF OUR PRODUCTS.

In the fourth quarter of 1999, we began small scale commercial deliveries of our cell phone battery products. However, our battery for cell phones has not yet been accepted by the consumer products market for this application. Furthermore, while we have developed batteries for several models of Nokia, Motorola and Ericsson cell phones, we do not have batteries for all models. We cannot assure you that the Electric Fuel cell phone battery will be competitive either in terms of price or performance or that we will be able to sell our cell phone batteries in commercial quantities.

Other than our cell phone battery and a signal light powered by water-activated batteries for use in life jackets and other rescue apparatus, we

currently have no commercial products available for sale. While we expect to increase production to commercial levels in 2000, significant resources will be required to develop our capacity to produce cell phone batteries on a commercial scale. Additional development may also be necessary in order to commercialize our technology and each of the components of the Electric Fuel System for electric vehicles and defense products. We cannot assure you that we will be able to successfully develop, engineer or commercialize our products, technology or system components, or that we will be able to develop products for commercial sale or that, if developed, they can be produced in commercial quantities or at acceptable costs or be successfully marketed. The likelihood of our future success must be considered in light of the risks, expenses, difficulties and delays frequently encountered in connection with the operation and development of a relatively early stage business and with development activities generally.

1

We believe that public pressure and government initiatives are important factors in creating an electric vehicle market. However, there can be no assurance that there will be sufficient public pressure or that further legislation or other governmental initiatives will be enacted, or that current legislation will not be repealed, amended, or have its implementation delayed. In addition, we are subject to the risk that even if an electric fuel vehicle market develops, a different form of zero emission or low emission vehicle will dominate the market. In addition, we cannot assure you that other solutions to the problem of containing emissions created by internal combustion engines will not be invented, developed and produced. Any other solution could achieve greater market acceptance than electric vehicles. The failure of a significant market for electric vehicles to develop would have a material adverse effect on our ability to commercialize this aspect of our technology. Even if a significant market for electric vehicles develops, there can be no assurance that our technology will be commercially competitive within that market.

WE WILL NEED TO DEVELOP THE CAPACITY AND EXPERIENCE TO MANUFACTURE OUR PRODUCTS IN COMMERCIAL QUANTITIES AND AT COMPETITIVE PRICES.

We currently have limited capacity for, or experience in, manufacturing in commercial quantities and have, to date, produced only limited quantities of components of the batteries for electric vehicles and limited amounts of consumer batteries. In order for us to be successful in the commercial market, our products must be manufactured to meet high quality standards in commercial quantities at competitive prices. The development of the necessary manufacturing technology and processes will require extensive lead times and the commitment of significant amounts of our financial and engineering resources. We cannot assure you that we will successfully develop this technology or these processes. Moreover, we cannot assure you that we will be able to successfully implement the quality control measures necessary for commercial manufacturing.

THE PRICE OF OUR COMMON STOCK IS VOLATILE.

The market price of our common stock has been volatile in the past and may change rapidly in the future. The following factors, among others, may cause significant volatility in our stock price:

- . Announcements by us, our competitors or our customers;
- . Announcements of the introduction of new or enhanced products and services by us or our competitors;
- . Rumors relating to our competitors or us;
- . Actual or anticipated fluctuations in our operating results; and
- . General market or economic conditions.

OUR FIELD OF BUSINESS IS HIGHLY COMPETITIVE.

The competition to develop consumer batteries, defense and safety products and electric vehicle battery systems, and to obtain funding for the development of these products is, and is expected to remain, intense. Our technology competes with other battery technologies, as well as other zinc-air technologies. The competition consists of development stage companies, major international companies and consortia of such companies, including battery manufacturers, automobile manufacturers, energy production and transportation companies, consumer goods companies and defense contractors, many of which have financial, technical, marketing, sales, manufacturing, distribution and other resources significantly greater than ours.

Various battery technologies are being considered for use in electric vehicles, consumer batteries and defense and safety products by other manufacturers and developers, including the following: lead-acid, nickel-cadmium, nickel-iron, nickel-zinc, nickel-metal hydride, sodium-sulfur, sodium-nickel chloride, zinc-bromine, lithium-ion, lithium-polymer, lithium-iron sulfide, primary lithium, rechargeable alkaline and zinc-air. Additionally, some manufacturers of primary alkaline batteries offer alkaline battery packs for cell phone users.

SOME OF THE COMPONENTS OF OUR TECHNOLOGY AND OUR PRODUCTS POSE POTENTIAL SAFETY RISKS WHICH COULD CREATE POTENTIAL LIABILITY EXPOSURE FOR US.

Some of the components of our technology contain elements which are known to pose potential safety risks. Also, because electric vehicle batteries contain large amounts of electrical energy, they may cause injuries if not handled properly. In addition to these risks, and although we incorporate safety procedures in our research, development and manufacturing processes, there can be no assurance that accidents in our facilities will not occur. Any accident, whether occasioned by the use of all or any part of our products or technology or by our manufacturing operations, could adversely affect commercial acceptance of our products and could result in significant production delays or claims for damages resulting from injuries. Any of these occurrences would materially adversely affect our operations and financial condition.

FAILURE TO RECEIVE REQUIRED PERMITS FROM OR TO COMPLY WITH THE VARIOUS REGULATORY REGIMES WE ARE SUBJECT TO COULD ADVERSELY AFFECT OUR BUSINESS.

Regulations in Europe, Israel, the United States and other countries impose various controls and requirements relating to various components of our technology. While we believe that our current and contemplated operations conform to those regulations we cannot assure you that we will not be found to be in non-compliance. We have applied for, and received, the necessary permits under the 1993 Israeli Dangerous Substances Law required for the use of potassium hydroxide and zinc metal. However, there can be no assurance that changes in regulations will not impose costly compliance requirements on us or otherwise subject us to future liabilities.

OUR BUSINESS IS DEPENDENT ON PATENTS AND PROPRIETARY RIGHTS WHICH MAY BE DIFFICULT TO PROTECT AND COULD AFFECT OUR ABILITY TO COMPETE EFFECTIVELY.

Our ability to compete effectively will depend on our ability to maintain the proprietary nature of our technology and manufacturing processes through a combination of patent and trade secret protection, non-disclosure agreements and licensing arrangements. We hold patents, or patent applications, covering elements of our technology in the United States and in Europe. In addition, we have patent applications pending in the United States and in foreign countries, including the European Community, Israel and Japan. We intend to continue to file patent applications covering important features of our technology. We cannot assure you, however, that patents will issue from any of these pending applications or, if patents issue, that the claims allowed will be sufficiently broad to protect our technology. In addition, we cannot assure you that any of our patents will not be challenged or invalidated or that any of our issued patents will afford protection against a competitor.

Litigation, or participation in administrative proceedings, may be necessary to protect our patent position. This type of litigation can be costly and time consuming and this could harm us even if we were to be successful in the litigation. The invalidation of patents owned by or licensed to us could have a material adverse effect on our business. In addition, patent applications filed in foreign countries are subject to laws, rules and procedures that differ from those of the United States. Therefore, there can be no assurance that foreign patent applications related to patents issued in the United States will be granted. Furthermore, even if these patent applications are granted, some foreign countries provide significantly less patent protection than the United States. In the absence of patent protection, and despite our reliance upon our proprietary confidential information, our competitors may be able to use innovations similar to those used by us to design and manufacture products directly competitive with our products. In addition, no assurance can be given that others will not obtain patents that we will need to license or design around. To the extent any of our products are covered by third-party patents, we could require a license under such patents to develop and market our patents.

Despite our efforts to safeguard and maintain our proprietary rights, we may not be successful in doing so. In addition, competition is intense, and there can be no assurance that our competitors will not independently develop or patent technologies that are substantially equivalent or superior to our technology. Moreover, in the event of patent litigation, we cannot assure you that a court would determine that we were the first creator of inventions covered by our issued patents or pending patent applications or that we were the first to file patent applications for those inventions. If existing or future third-party patents containing broad claims were upheld by the courts or if we were found to infringe third party patents, we may not be able to obtain the required licenses from the holders of such patents on acceptable terms, if at all. Failure to obtain these licenses could cause delays in the introduction of our products or necessitate costly attempts to design around such patents, or could foreclose the development, manufacture or sale of our products. We could also incur substantial costs in defending ourselves in patent infringement suits brought by others and in prosecuting patent infringement suits against infringers.

We also rely on trade secrets and proprietary know-how that we seek to protect, in part, through non-disclosure and confidentiality agreements with our customers, employees, consultants, strategic partners and potential strategic partners. We cannot assure you that these agreements will not be breached, that we would have adequate remedies for any breach or that our trade secrets will not otherwise become known or be independently developed by competitors.

WE ARE DEPENDENT ON KEY PERSONNEL AND OUR BUSINESS WOULD SUFFER IF WE FAIL TO RETAIN THEM.

We are highly dependent on certain members of our management and engineering staff and the loss of the services of one or more of these persons could adversely affect us. We are especially dependent on the services of our President and Chief Executive Officer, Yehuda Harats, and our Chairman of the Board of Directors and Chief Financial Officer, Robert S. Ehrlich. The loss of either of these persons could have a material adverse effect on us. We are party to employment agreements with Messrs. Harats and Ehrlich, each of which agreements expires in 2000. We do not have key-man life insurance.

WE ARE SUBJECT TO SIGNIFICANT INFLUENCE BY SOME STOCKHOLDERS THAT MAY HAVE THE EFFECT OF DELAYING OR PREVENTING A CHANGE IN CONTROL.

As of January 20, 2000, our directors, executive officers and principal stockholders and their affiliates collectively owned approximately 48% of the outstanding shares of common stock. As a result, these stockholders are able to exercise significant influence over matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or prevent a change in control.

IF WE ARE UNABLE TO MANAGE OUR GROWTH, OUR OPERATING RESULTS WILL BE IMPAIRED.

We are currently experiencing a period of development activity which could place a significant strain on our personnel and resources. Our activity has resulted in increased levels of responsibility for both existing and new management personnel. Many of our management personnel have had limited or no experience in managing growing companies. We have sought to manage our current and anticipated growth through the recruitment of additional management and technical personnel and the implementation of internal systems and controls. However, our failure to manage growth effectively could adversely affect our results of operations.

WE MAY BE SUBJECT TO INCREASED UNITED STATES TAXATION.

We believe that EFC and EFL will be treated as personal holding companies for purposes of the personal holding company ("PHC") rules of the Internal Revenue Code of 1986. Under the PHC rules, a PHC is subject to a special 39.6% tax on its "undistributed PHC income", in addition to regular income tax. We believe that EFC and EFL have not had any material undistributed PHC income. However, no assurance can be given that EFC and EFL will not have undistributed PHC income in the future.

Approximately 42.3% of the stock of EFL was owned (directly or indirectly by application of certain attribution rules) as of January 20, 2000 by five United States citizens. If 50% of the shares of the Company is ever acquired or deemed to be acquired by five or fewer individuals (including, if applicable, those individuals who currently own an aggregate of 42.3% of the Company) who are United States citizens or residents, EFL would satisfy the foreign personal holding company ("FPHC") stock ownership test under the Internal Revenue Code, and the Company could be subject to additional U.S. taxes (including PHC tax) on any "undistributed FPHC income" of EFL. We believe that EFL has not had any material undistributed FPHC income. However, no assurance can be given that EFL will not become a FPHC and have undistributed FPHC income in the future.

A SIGNIFICANT PORTION OF OUR OPERATIONS TAKES PLACE IN ISRAEL.

The offices and facilities of our principal subsidiary are located in Israel. Although we expect that most of our sales will be made to customers outside Israel, we are nonetheless directly affected by economic, political and military conditions in that country. Accordingly, any major hostilities involving Israel or the interruption or curtailment of trade between Israel and its present trading partners could have a material adverse effect on our operations. Since the establishment of the State of Israel in 1948, a state of hostility has existed, varying in degree and intensity, between Israel and the Arab countries. Historically, Arab states have boycotted any direct trade with Israel and to varying degrees have imposed a secondary boycott on any company carrying on trade with or doing business in Israel. Although in October

1994, the states comprising the Gulf Cooperation Council (Saudi Arabia, the United Arab Emirates, Kuwait, Dubai, Bahrain and Oman) announced that they would no longer adhere to the secondary boycott against Israel, and Israel has entered

into certain agreements with Egypt, Jordan and the Palestine Liberation Organization, no prediction can be made as to whether a full resolution of these problems will be achieved or as to the nature of any such resolution.

Many of our employees are currently obligated to perform annual reserve duty in the Israel Defense Forces and are subject to being called for active military duty at any time. No assessment can be made of the full impact of such requirements on us in the future, particularly if emergency circumstances occur, and no prediction can be made as to the effect on the Company of any expansion of these obligations.

ANY FAILURE TO OBTAIN THE TAX BENEFITS FROM THE STATE OF ISRAEL THAT WE EXPECT TO RECEIVE COULD NEGATIVELY IMPACT OUR PLANS AND PROSPECTS.

We benefit from various Israeli government programs, grants and tax benefits, particularly as a result of the "approved enterprise" status of a substantial portion of our existing facilities and the receipt of grants from the Office of the Chief Scientist of the Israeli Ministry of Industry and Trade. To be eligible for some of these programs, grants and tax benefits, we must continue to meet certain conditions, including producing in Israel and making specified investments in fixed assets. If we fail to meet such conditions in the future, we could be required to refund grants already received, adjusted for inflation and interest. From time to time, the government of Israel has discussed reducing or eliminating the benefits available under approved enterprise programs. We cannot assure you that these programs and tax benefits will be continued in the future at their current levels or at all. The Government of Israel has announced that programs which received approved enterprise status in 1996 and thereafter will be entitled to a lower level of government grants than was previously available. The termination or reduction of certain programs and tax benefits (particularly benefits available to us as a result of the approved enterprise status of a substantial portion of our existing facilities and approved programs and as a recipient of grants from the office of the Chief Scientist) could have a material adverse effect on our business, results of operations and financial condition. In addition, our Israeli subsidiary has granted a floating charge over all of its assets as a security to the State of Israel to secure its obligations under the approved enterprise programs.

EXCHANGE RATE FLUCTUATIONS BETWEEN THE DOLLAR AND THE NIS MAY NEGATIVELY AFFECT OUR EARNINGS.

Although a substantial majority of our revenues and a substantial portion of our expenses are denominated in U.S. dollars, a significant portion of our costs, including personnel and facilities-related expenses, is incurred in New Israeli Shekels (NIS). Inflation in Israel will have the effect of increasing the dollar cost of our operations in Israel, unless it is offset on a timely basis by a devaluation of the NIS relative to the dollar.

THE COMPANY

We design and develop our proprietary zinc-air technology for a number of electronic products that have a high demand for energy and power from batteries. We design and develop applications for our zinc-air technology principally for portable consumer electronic devices, as well as electric vehicles and defense and safety applications. To date, we have developed and brought to market batteries for use in several different models of cell phones and certain defense and safety applications. We are also participating in a U.S. federally-funded program in Nevada to demonstrate the ability of our Electric Fuel battery system to power buses.

Our technology has grown out of an intensive eight-year research and development program in zinc-air technologies. Through these efforts, we have sought to position ourselves as a leader in the application of zinc-air technology to innovative, primary and refuelable battery systems.

Our high-energy, high-power zinc-air battery is composed of a zinc-anode and an air (oxygen reduction) cathode. During discharge, oxygen from the air is electrochemically reduced to hydroxide ions at the cathode, and zinc at the anode is consumed by conversion to zinc oxide. While zinc-air technology has been in use for over a century, we have developed unique technology that provides our batteries with enhanced performance in both power and energy at a low manufacturing cost.

To fully utilize our zinc-air battery technology for a wide selection of applications, since 1998, we have operated our business in three segments: Consumer Batteries, Electric Vehicles, and Defense and Safety Products.

The Consumer Batteries division focuses on the primary, single use battery as a substitute for the current lower performance, more expensive, rechargeable batteries in consumer products. Our first product was a cell phone battery, which became available for sale to consumers in the fourth quarter of 1999. Based on our testing, our zinc-air electric fuel cell phone batteries provide significantly more talk and standby time than conventional rechargeable

batteries. Our batteries are ready to use on purchase without charging. We offer our batteries for many models of Nokia, Ericsson and Motorola cell phones. We are also seeking to develop batteries, employing our zinc-air technology, for other portable consumer electronic devices. We are establishing and enlarging our sales and marketing in this area.

The Electric Vehicle division is continuing to focus on fleet applications of the zinc-air battery system with our partners in Europe and the United States. In May 1998, we successfully completed a field test managed by the German postal service of vehicles powered by our Electric Fuel battery. In a program funded by the U.S. Department of Transportation, we are also developing an all-electric transit bus in Las Vegas, Nevada. This bus will utilize an all-electric battery/battery hybrid we are jointly developing with funding from the Israeli-U.S. Bi-National Industrial Research and Development Foundation.

The Defense and Safety Products division focuses on the sale of our water-activated, battery-powered survivor locator light products for the airline and marine markets.

Our R&D and production activities are primarily carried out by our Israeli subsidiary at its facility in Beit Shemesh, Israel. We also have a battery research and development facility in Auburn, Alabama, near Auburn University. This facility builds and tests prototype cells and batteries.

We were incorporated in Delaware in 1990. Unless the context requires otherwise, all references to "us," "we," "our" and "Electric Fuel" refer collectively to Electric Fuel Corporation; our wholly-owned subsidiary Electric Fuel (E.F.L.) Limited, incorporated under the laws of Israel; Electric Fuel GmbH, a German wholly-owned subsidiary of Electric Fuel (E.F.L.) Limited; and other direct and indirect subsidiaries of ours. Our executive offices are located at 885 Third Avenue, New York, New York 10022, and our telephone number is (212) 829-5536. We maintain a website at www.electricfuel.com. This reference

to our website address does not constitute incorporation by reference of the information contained on our website.

RECENT DEVELOPMENTS

On December 20, 1999, we announced that Telefonica de Argentina ordered 25,000 ZincAir disposable batteries for Nokia cell phones. Telefonica de Argentina is a leading private Argentinian telecommunications operator. We expect to deliver these batteries in January 2000.

On December 28, 1999, we announced that pursuant to a Securities Purchase Agreement, dated December 28, 1999, which we entered into with a group of private investors, including Mr. Leon S. Gross, a director of Electric Fuel and one of our existing shareholders, we issued 1,425,000 shares of common stock to the investors at a price of \$2.00 per share, for a total purchase price of \$2,850,000. We also issued warrants to purchase an additional 1,425,000 shares of our common stock to the investors. Of these, warrants to purchase 950,000 shares of common stock have an exercise price of \$1.25 per share and are exercisable for a period of six months, and warrants to purchase 475,000 shares have an exercise price of \$4.50 per share and are exercisable for a period of one year. The shares sold in this private placement, and the shares issuable upon exercise of the warrants, are being registered for resale pursuant to the Registration Statement of which this prospectus is a part.

On January 5, 2000, we entered into a Common Stock Purchase Agreement with a separate group of private investors. Pursuant to this agreement, on January 10, 2000 we issued 385,000 shares of common stock to the investors at a price of \$2.50 per share, for a total purchase price of \$962,000. The shares sold in this private placement will be registered for resale pursuant to the Common Stock Purchase Agreement.

On January 18, 2000, we announced that we have agreed to participate in a cooperative all-electric hybrid vehicle development and demonstration program in Germany. The program will be implemented by a consortium comprising German industrial firms such as Daimler Chrysler AG and Varta Batterie AG. During the course of the four-year program, the German firms and academic institutions will develop and demonstrate a hybrid vehicle design based on Daimler Chrysler cargo vans. The vans will be powered by our refuelable zinc-air batteries as the main energy storage, together with high-power booster batteries provided by Varta and ultracapacitors under development by Dornier GmbH (a division of Daimler Chrysler Aerospace) and by EPOC AG (formerly Siemens Matsushita Components).

6

USE OF PROCEEDS

All net proceeds from the sale of the shares of common stock offered hereunder will go to the stockholders who offer and sell them. We will not receive any of the proceeds from this offering.

SELLING STOCKHOLDERS

The following table sets forth information known to us about the beneficial ownership of each selling stockholder as of January 15, 2000, as to: (a) the number of shares of common stock that are beneficially held by each selling stockholder (giving effect to conversion of all warrants purchased in the December 1999 offering) prior to the offering; (b) the maximum number of shares that may be offered by each selling shareholder in this prospectus; and (c) the number of shares of common stock that will be held by each selling shareholder if he or she sells all of the shares that can be sold under this prospectus. Other than Mr. Gross, no selling shareholder will hold over 1% of our outstanding shares of common stock after this offering (assuming each shareholder sells all of the shares that can be sold under this prospectus).

We can provide no assurance as to the number of shares that will be held by each of the selling stockholders after this offering because each of the selling stockholders may offer all or some part of the shares which he or she holds pursuant to the offering contemplated by this prospectus, and because this offering is not underwritten on a firm commitment basis.

<TABLE>
<CAPTION>

SELLING STOCKHOLDER	SHARES BENEFICIALLY OWNED prior to this offering	SHARES BEING offered hereby	SHARES BENEFICIALLY OWNED AFTER THIS OFFERING
Gal Erez	480,000	480,000	0
Gadi Regev	180,000	180,000	0
Federman Holdings	300,000	300,000	0
Apax Mutavim	300,000	300,000	0
Leader Holdings and Investments Ltd.	180,000	180,000	0
Suny Electronics	180,000	180,000	0
Yosef Strogo	90,000	90,000	0
Dvir Katchman	90,000	90,000	0
Joe Nahumi	90,000	90,000	0
Dalia Pkornik	60,000	60,000	0
Shlomo Shefi	30,000	30,000	0
Shuki Hershkovitch	30,000	30,000	0
Uri Akerman	30,000	30,000	0
Moshe Nehoray	30,000	30,000	0
Volter Rozental	30,000	30,000	0
Leon Grossl	4,276,004	750,000	3,526,004

1 Mr. Gross has been a member of our Board of Directors since March 1997. Pursuant to a Voting Rights Agreement entered into in September 1996 with Electric Fuel Corporation and Robert Ehrlich and Yehuda Harats, our Chairman and President, respectively, Mr. Gross has the right to appoint one director to our Board of Directors in addition to his right to serve on the Board of Directors. Mr. Gross purchased 375,000 shares of common stock in our December 1999 private placement, along with warrants to purchase an additional 375,000 shares. If these warrants are exercised in full, resulting in an issuance of 375,000 shares, and if those shares are sold by Mr. Gross together with the 375,000 shares Mr. Gross purchased directly from us, Mr. Gross's holdings will total 3,526,004 shares, comprising 22% of our outstanding common stock (excluding from our outstanding common stock the shares issuable under the warrants sold to the other investors in the December 1999 transaction).

PLAN OF DISTRIBUTION

The shares offered for sale hereby may be sold from time to time by the selling stockholders in one or more transactions on the Nasdaq National Market, in the over-the-counter market, in negotiated transactions or in a combination of these methods. These shares may be sold at fixed prices, at market prices prevailing at the time of sale, at prices relating to prevailing market prices or at negotiated prices. The selling stockholders may make sales directly to purchasers or to or through broker-dealers which may act as agents or principals. Broker-dealers may receive compensation in the form of underwriting discounts, concessions or commissions from the selling stockholders. This compensation, as to a particular broker-dealer, may be more or less than customary commissions. In addition, any shares covered by this prospectus that qualify for sale under Rule 144 of the Securities Act may be sold under Rule 144 rather than by means of this prospectus.

If necessary to comply with the securities laws of any state, the shares will be sold only through brokers or dealers. In addition, in some states, the shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification is available and is complied with.

Any broker-dealers who participate in a sale of the shares may be deemed to be "underwriters" within the meaning of Sections 11 and 12 of the Securities Act and Rule 10b-5 of the Securities Exchange Act of 1934 ("Exchange Act"), and any commissions received by them, and proceeds of any sales by broker-dealers as principals, may be deemed to be underwriting discounts and commissions under the Securities Act. If any of the selling stockholders are deemed to be acting as an underwriter, they may be subject to statutory liabilities of the Securities Act.

In addition, the selling stockholders and any other person participating in the sale or distribution of the shares offered under this prospectus will be subject to the Exchange Act and its rules and regulations, including, without limitation, Rules 10b-5 and Regulation M. These provisions may limit the timing of purchases and sales of any of the shares. In addition, any person engaged in a distribution of the shares may not simultaneously engage in market-making activities during the period beginning when he or she becomes a distribution participant and ending upon his or her completion of participation in a distribution. All of these factors may affect the marketability of the shares and the ability of any person or entity to engage in market-making activities.

Electric Fuel has agreed to pay all expenses of the offering.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Ropes & Gray, Boston, Massachusetts.

EXPERTS

Kesselman & Kesselman, independent certified public accountants and a member firm of PriceWaterhouseCoopers International, have audited our consolidated financial statements included in our annual report on Form 10-K, as amended, for the fiscal year ended December 31, 1998, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the Registration Statement. Our financial statements are incorporated by reference in reliance on Kesselman & Kesselman's report, given on their authority as experts in accounting and auditing. Effective as of January 12, 2000, Kost Forer & Gabbay, a member of Ernst & Young International, have been engaged as the Company's new principal independent accountants.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act, and file annual and quarterly reports, proxy and information statements and other information with the Securities and Exchange Commission. These documents can be inspected and copied at the public reference facilities maintained by the Commission at its office at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549, and at its regional offices at Northwestern Atrium Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661 and 7 World Trade Center, Suite 1300, New York, New York 10048. Copies of these materials can be obtained from the Public Reference section of the Commission at Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549, at prescribed rates. In addition, reports, proxy statements and other information that we electronically file with the Commission are contained in the Commission's Internet Web site which is <http://www.sec.gov>.

8

We have filed with the Commission a Registration Statement on Form S-3 relating to the common stock offered in this prospectus. This prospectus does not contain all of the information in the Registration Statement and its exhibits. The Registration Statement, its exhibits and the documents incorporated by reference in this prospectus and their exhibits, all contain information that is material to the offering of the common stock. Whenever a reference is made in this prospectus to any of our contracts or other documents, the reference may not be complete. You should refer to the exhibits that are a part of the Registration Statement in order to review a copy of the contract or documents.

INCORPORATION OF DOCUMENTS BY REFERENCE

The Commission allows us to incorporate by reference many of the documents that we file. This permits us to disclose important information to you by referencing these filed documents. Any information referenced in this way is considered part of this prospectus. We are incorporating by reference in this prospectus the following documents which we have filed with the Commission, together with the filings that have amended them:

- (a) Our Annual Report on Form 10-K for the fiscal year ended December 31, 1998;
- (b) Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 1999;
- (c) Our Quarterly Report on Form 10-Q for the first fiscal quarter ended June 30, 1999;
- (d) Our Quarterly Report on Form 10-Q for the fiscal quarter ended

September 30, 1999;

- (e) Our Current Report on Form 8-K dated January 7, 2000;
- (f) Our Current Report on Form 8-K dated January 18, 2000;
- (g) Our Current Report on Form 8-K dated January 24, 2000; and
- (h) The description of our common stock contained in our Registration Statement on Form 8-A filed with the Securities and Exchange Commission on February 2, 1994.

All reports and other documents that we will file with the Commission under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus but before the termination of the offering of the common stock hereunder will also be considered to be incorporated by reference into this prospectus from the date of the filing of these reports and documents, and will supersede the information herein. We undertake to provide without charge to each person who receives a copy of this prospectus, upon written or oral request, a copy of all of the preceding documents that are incorporated by reference (other than exhibits, unless the exhibits are specifically incorporated by reference into these documents). You may request a copy of these materials, at no cost, by writing or telephoning us at the following address: Electric Fuel Corporation, Attention: Robert S. Ehrlich, 885 Third Avenue, Suite 2900, New York, New York 10022, (212) 829-5536.

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

When used in this prospectus, the words "expects," "anticipates," "estimates" and similar expressions identify forward-looking statements. We believe that these statements are "forward-looking" statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These statements, which include statements under the caption "Risk Factors" and elsewhere in this prospectus, refer to the stage of development of our products, the uncertainty of the market for disposable cell phone batteries, significant future capital requirements and our plans to implement our growth strategy, continue our research and development, expand our manufacturing capacity, develop strategic relationships for marketing and other purposes and carefully manage our growth. The forward-looking statements also include our expectations concerning factors affecting the markets for our products.

These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from the results that we anticipate. These risks and uncertainties include, but are not limited to, those risks discussed in this prospectus and in the documents incorporated by reference in this prospectus.

We assume no obligation to update these forward-looking statements or to update the reasons actual results could differ materially from the results anticipated in the forward-looking statements.

You should rely only on the information in this prospectus and the additional information described under the heading "Where You Can Find More Information." We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely upon it. Neither we or any of the selling stockholders are making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information in this prospectus was accurate on the date of the front cover of this prospectus only. Our business, financial condition, results of operations and prospects may have changed since that date.

9

2,850,000 Shares

Electric Fuel Corporation

Common Stock

Prospectus

2000

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

We have agreed to bear the expenses of registering the shares for the

selling stockholders under the federal and state securities laws. The following table sets forth the costs and expenses payable by Electric Fuel in connection with the sale of common stock being registered. All amounts are estimates except the SEC registration fee.

SEC registration fee.....	\$5,690.03
Legal fees and expenses*.....	
Miscellaneous expenses*.....	_____
Total*.....	\$

*To be completed by amendment.

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Electric Fuel Corporation is a Delaware corporation. Section 102(b)(7) of the Delaware General Corporation Law (the "DGCL") enables a corporation in its original certificate of incorporation or an amendment thereto to eliminate or limit the personal liability of a director to the corporation or its stockholders for monetary damages for violations of the director's fiduciary duty, except (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the DGCL (providing for liability of directors for unlawful payment of dividends or unlawful stock purchases or redemptions) or (iv) for any transaction from which a director derived an improper personal benefit. The Company's Amended and Restated Certificate of Incorporation ("Certificate of Incorporation") and By-Laws contain provisions eliminating the liability of directors to the extent permitted by the DGCL.

Section 145 of the DGCL provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with such action, suit or proceeding if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. Section 145 further provides that a corporation similarly may indemnify any such person serving in any such capacity who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor, against expenses actually and reasonably incurred in connection with the defense or settlement of such action or suit if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Delaware Court of Chancery or such other court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Article 10 of the Company's Certificate of Incorporation provides that, to the fullest extent permitted by the DGCL, the Company's directors shall not be liable to the Company or its stockholders for monetary damages for any breach of fiduciary duty as a director.

II-1

Article 11 of the Company's Certificate of Incorporation provides that the Company shall, to the maximum extent permitted under the DGCL, indemnify any person who was or is made a party or is threatened to be made a party to any threatened, pending or completed action, suit, proceeding or claim, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was or has agreed to be a director or officer of the Company or while a director or officer is or was serving at the request of the Company as a director, officer, partner, trustee, employee, or agent of any corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorney's fees), judgments, fines, penalties and amounts paid in settlement incurred in connection with the investigation, preparation to defend or defense of such action, suit, proceeding or claim.

The Company also maintains directors and officers' insurance.

For the undertaking with respect to indemnification, see Item 17 herein.

ITEM 16. EXHIBITS

NUMBER DESCRIPTION

- 4.3(1) Specimen Certificates for shares of the Registrant's common stock.
- 4.4* Description of Capital Stock contained in the Registrant's Amended and Restated Certificate of Incorporation.
- 4.4.1* Amendment to Registrant's Restated Certificate of Incorporation.
- 5.1* Legal Opinion of Ropes & Gray.
- 10.1(2) Securities Purchase Agreement, dated December 28, 1999, by and among Electric Fuel Corporation and the Purchasers listed on Exhibit A thereto.
- 23.1* Consent of Kesselman & Kesselman.
- 23.2* Consent of Ropes & Gray (contained in the opinion filed as Exhibit 5.1).
- 24.1* Power of Attorney (included as part of the signature page filed herewith).

* Filed herewith.

- (1) Incorporated by reference to Form S-1, File No. 33-73256, which became effective on February 23, 1994.
- (2) Filed as Exhibit 4a to the Company's Current Report on Form 8-K, filed January 7, 2000, and incorporated by reference hereto.

ITEM 17. UNDERTAKINGS

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

II-2

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) above shall not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act

may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions set forth in Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

II-3

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-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on this 25th day of January, 2000.

ELECTRIC FUEL

By: /s/ Yehuda Harats

 Yehuda Harats
 President and CEO

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Yehuda Harats and Robert Ehrlich, and each of them, each with full power to act without the other, his true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for such person and in his name, place and stead, in any and all capacities, to sign any amendments to this Registration Statement, and to sign any registration statement for the same offering covered by this Registration Statement, including post-effective amendments, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming that each of said such attorneys-in-fact and agents or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons on this 25th day of January, 2000 in the capacities indicated.

NAME AND SIGNATURES	TITLE	DATE
/s/ Yehuda Harats ----- Yehuda Harats	President, Chief Executive Officer and Director	January 25, 2000
/s/ Robert S. Ehrlich ----- Robert S. Ehrlich	Chairman and Chief Financial Officer	January 25, 2000
/s/ Dr. Jay M. Eastman ----- Dr. Jay M. Eastman	Director	January 25, 2000
/s/ Leon S. Gross ----- Leon S. Gross	Director	January 25, 2000
/s/ Lawrence M. Miller ----- Lawrence M. Miller	Director	January 25, 2000
/s/ Jack E. Rosenfeld ----- Jack E. Rosenfeld	Director	January 25, 2000

II-4

EXHIBIT INDEX

<TABLE>
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Exhibit - ----- Number - -----	Title of Exhibit -----	Page ---- Number -----
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- <S> <C>
- 4.3 Specimen Certificate for shares of the Registrant's Common Stock
(incorporated by reference to Form S-1, File No. 33-73256, which became effective on February 23, 1994).
 - 4.4 Description of Capital Stock contained in the Registrant's Amended and Restated Certificate of Incorporation.
 - 4.4.1 Amendment to Registrant's Restated Certificate of Incorporation.
 - 5.1 Legal Opinion of Ropes & Gray.
 - 10.1 Securities Purchase Agreement, dated December 28, 1999, by and among Electric Fuel Corporation and the Purchasers listed on Exhibit A thereto (incorporated by reference to Exhibit 4a to the Registrant's Current Report on Form 8-K filed January 7, 2000).
 - 23.1 Consent of Kesselman & Kesselman.
 - 23.2 Consent of Ropes & Gray (contained in the opinion filed as Exhibit 5.1).
 - 24.1 Power of Attorney (included as part of the signature page filed herewith).

</TABLE>

AMENDED AND RESTATED CERTIFICATE
OF INCORPORATION
OF
ELECTRIC FUEL CORPORATION

Electric Fuel Corporation, a corporation duly organized and existing under the laws of the State of Delaware, hereby certifies as follows:

1. The name of this corporation is Electric Fuel Corporation. Electric Fuel Corporation was originally incorporated under the name of Luz Electric Fuel, Inc. The date of the filing of its original Certificate of Incorporation with the Secretary of State was December 20, 1990.

2. This Amended and Restated Certificate of Incorporation restates and integrates and further amends the provisions of the corporation's Certificate of Incorporation as amended and supplemented. This Amended and Restated Certificate of Incorporation has been adopted by the Board of Directors and the stockholders of the Company in accordance with Sections 245(b) and 242 of the Delaware Corporation Law.

3. The text of the Amended and Restated Certificate of Incorporation is amended to read in its entirety as follows:

AMENDED AND
RESTATED CERTIFICATE OF INCORPORATION
OF
ELECTRIC FUEL CORPORATION

ONE: The name of this corporation is Electric Fuel Corporation.

TWO: The address of its registered office in the State of Delaware is 1013

Centre Road, Wilmington, County of New Castle. The name of its registered agent at such address is Corporation Service Company.

THREE: The nature of the business or purpose to be conducted or promoted is

to engage in any lawful act or activity for which corporations may be organized under the Delaware General Corporation Law ("DGCL").

FOUR: The total number of shares of all classes of stock which the

corporation shall have authority to issue is Fifteen Million (15,000,000) consisting of two classes of shares designated as follows:

A. Fourteen Million (14,000,000) shares of Common Stock, \$.01 par value, (the "Common Stock"); and

B. One Million (1,000,000) shares of Preferred Stock, \$.01 par value, (the "Preferred Stock").

FIVE: The rights, preferences, privileges and restrictions granted to or

imposed upon the respective classes of shares or the holders thereof are as follows:

A. Preferred Stock.

1. The Preferred Stock may be issued from time to time in one or more series. All shares of any one series of Preferred Stock shall be identical in all respects, except that shares of any one series issued on different dates may differ as to dates, if any, from which dividends thereon are to cumulate.

2. The Board of Directors of the corporation is expressly granted the authority, at any time and from time to time by the adoption of a resolution or resolutions not inconsistent with the provisions of the Amended and Restated Certificate of Incorporation, to authorize the issuance by this corporation of one or more series of Preferred Stock and to fix and determine with respect to each such series all the designations, preferences, powers and relative, participating, optional or

other special rights, and the qualifications, limitations or restrictions thereof, to the full extent now or hereafter permitted by law, and including, but without limiting the generality of the foregoing, the following:

(a) the number of shares of such series, which may subsequently be

increased (except as otherwise provided by the resolution or resolutions of the Board of Directors providing for the issuance of such series) or decrease (to a number not less than the number of shares then outstanding) by resolution or designations thereof;

(b) the dividend rights of such series, the preferences, if any, over any other class or series of stock, or of any other class or series of stock over such series, as to dividends, the extent, if any, to which shares of such series shall be entitled to participate in dividends with shares of any other class of stock, whether dividends on shares of such series shall be fully, partially or conditionally cumulative, or a combination thereof, and any limitations, restrictions or conditions on the payment of such dividends;

(c) the rights of such series, and the preferences, if any, over any other class or series of stock, or of any other class or series of stock over such series, in the event of any voluntary or involuntary liquidation, dissolution or winding up of this corporation and the extent, if any, to which shares of any such series shall be entitled to participate in such event with any other series or class of stock;

(d) whether or not the shares of such series shall be redeemable, and, if redeemable, the date or dates upon or after which they shall become redeemable, the amount per share payable thereon in the case of the redemption thereof, which amount may vary at different redemption dates;

(e) the terms of any purchase, retirement or sinking fund which may be provided for the shares of such series;

(f) the right, if any, of holders of shares of such series to convert the same into, or exchange the same for Common Stock, and the terms and conditions of such conversion or exchange, as well as provisions for adjustment of the conversion rate in such events as the Board of Directors shall determine;

(g) the voting powers, if any, of such series in addition to the voting powers by law.

3. In the event of any liquidation, dissolution, or winding up of this corporation, whether voluntary or involuntary, the holders of the Preferred Stock of each series shall be entitled to receive only such amount or amounts as shall have been fixed by the Amended and Restated Certificate of Incorporation or by the resolution or resolutions of the Board of Directors providing for the issuance of such series.

B. Common Stock.

1. The holders of Common Stock shall be entitled to one vote for each share of Common Stock registered in the name of such holders.

2. The holders of Common Stock shall be entitled to receive dividends on their shares of stock when and as declared by this corporation's Board of Directors. All dividends declared on the Common Stock shall be declared and paid at the same rate per share on all shares of Common Stock.

3. In the event of the liquidation, dissolution or winding up of the affairs of the corporation, the holders of the Common Stock shall be entitled to share pro rata in the net assets available for distribution to holders of Common Stock after satisfaction of the prior claims of the holders of Preferred Stock of any series or any shares of any other class of capital stock ranking senior to the Common Stock as to assets, in accordance with this Amended and Restated Certificate of Incorporation, as amended from time to time, or of resolutions of the Board of Directors adopted pursuant to the authority herein contained.

SIX: The provisions of Section 203 of the DGCL shall not apply to this

Corporation.

SEVEN: The following provisions are inserted for the management of the

business and the conduct of the affairs of the corporation, and for further definition, limitation and regulation of the powers of the corporation and of its directors and stockholders:

A. The business and affairs of the corporation shall be managed by or under the direction of the Board of Directors. In addition to the powers and authority expressly conferred upon them by the GGCL or by this Amended and Restated Certificate of Incorporation or the Bylaws of the corporation, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the corporation.

B. Except as otherwise provided in this Amended and Restated Certificate of Incorporation, or the Bylaws of the Corporation relating to the rights of the holders of any class or series of Preferred Stock, voting separately by class or

series, to elect additional directors under specified circumstances, the number of directors of the Corporation shall be fixed from time to time by or pursuant to the Bylaws of the Corporation. The election of directors need not be by ballot unless the by-laws shall so require. The directors, other than those who may be elected by the holders of any class or series of Preferred Stock voting separately by class or series, shall be classified, with respect to the time for which they severally hold office, into three classes, Class I, Class II and Class III, which shall be as nearly equal in number as possible. Each director holding office as of the date of adoption of this Amended and Restated Certificate of Incorporation (each an "Initial Director"), classified in Class I shall hold office for a term expiring at the 1994 annual meeting of stockholders; each Initial Director in Class II shall hold office for a term expiring at the 1995 annual meeting of stockholders; and each Initial Director in Class III shall hold office for a term expiring at the 1996 annual meeting of stockholders. Notwithstanding the foregoing provision of this paragraph B, each director shall serve until his successor is duly elected and qualified or until his earlier death, resignation or removal. At each annual meeting of stockholders following the 1993 annual meeting, the successors to the class of directors whose term expires at that meeting shall be elected to hold office for a term expiring at the annual meeting of stockholders held in the third year following the year of their election and until their successors have been duly elected and qualified or until their earlier death, resignation or removal.

C. Except as otherwise provided pursuant to the provisions of this Amended and Restated Certificate of Incorporation or the By-laws of the Corporation relating to the rights of the holders of any class or series of Preferred Stock, voting separately by class or series, to elect directors under specified circumstances, any director or directors may be removed from office at any time, but only for cause, by the affirmative vote, at any regular meeting or special meeting of the stockholders, of not less than 85% of the total number of votes of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, and only if notice of such proposal was contained in the notice of such meeting. Any vacancy in the Board of Directors resulting from any such removal may be filled by vote of a majority of the directors then in office, although less than a quorum, and any director or directors so chosen shall hold office until the next election of the class for which such directors shall have been chosen and until their successors shall be elected and qualified or until their earlier death, resignation or removal.

D. Notwithstanding any other provision of this Amended and Restated Certificate of Incorporation or the By-laws of the Corporation (and notwithstanding the fact that a lesser percentage may be specified by law, this Amended and Restated Certificate of Incorporation or the By-laws of the Corporation), the affirmative vote, at any regular meeting or special meeting of the stockholders, of not less than 85% of the total number of votes of the then outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to amend or repeal, or to adopt any provision inconsistent with the purpose or intent of, this paragraph SEVEN. Notice of such proposed alteration or amendment must be contained in the notice of such meeting.

E. In the event of any increase or decrease in the authorized number of directors, the newly created or eliminated directorship resulting from such increase or decrease shall be allotted by the Board of Directors among the three classes of directors so as to maintain such classes as nearly equally as possible. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

F. Notwithstanding the foregoing, whenever the holders of any one or more classes or series of Preferred Stock issued by the Corporation shall have the right, voting separately by class or series, to elect directors at any annual or special meeting of stockholders, the election, term of office, filling of vacancies and other features of such directorships shall be governed by the terms of this Amended and Restated Certificate of Incorporation applicable thereto, and such directors so elected shall not be divided into classes pursuant to paragraph B unless expressly provided for by the terms of the instrument establishing the right to vote separately as a class or series for the purpose of electing directors.

3

EIGHT: A director of the corporation in exercising his duties as such,

including without limitation, evaluating a tender offer or exchange offer for any equity security of the corporation or any merger or consolidation of the Corporation, any sale, lease, exchange or transfer of all or any substantial part of the assets of the Corporation, the issuance of any securities of the Corporation, the acquisition of any securities of a third party or any reclassification, recapitalization or reorganization of the Corporation or any of its securities, may consider the following factors as the Board of Directors determines to be relevant, including, without limitation: (i) the interests of the corporation's stockholders; (ii) whether the proposed transaction may violate federal or state laws; (iii) not only the consideration being offered in the proposed transaction, in relation to the then current market price for the

outstanding capital stock of the Corporation, but also the market price for the capital stock of the Corporation over a period of years, the estimated price that might be achieved in a negotiated sale of the Corporation as a whole or in part or through orderly liquidation, the premiums over market price for the securities of other corporations in similar transactions, current political, economic and other factors bearing on securities prices and the Corporation's financial condition and future prospects; and (iv) the interests of the Corporation's employees, suppliers, creditors and customers, the economy of the state, region and nation, community and societal considerations, and the long-term and short-term interests of the corporation and its stockholders, including the possibility that these interests may best be served by the continued independence of the Corporation. In connection with any such evaluation, the Board of Directors is authorized to conduct such investigations and to engage in such legal proceedings as the Board of Directors may determine.

NINE: The officers of the Corporation shall be chosen in such a manner, shall

hold their offices for such terms and shall carry out such duties as are determined solely by the Board of Directors, subject to the right of the Board of Directors to remove any officer or officers at any time with or without cause.

TEN: No director of the Corporation shall be personally liable to the

Corporation or its stockholders for monetary damages for any breach of fiduciary duty by such a director as a director. Notwithstanding the foregoing sentence, a director shall be liable to the extent provided by applicable law (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the DGCL or (iv) for any transaction from which such director derived an improper personal benefit. No amendment to or repeal of this Article TEN shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with; respect to any acts or omissions of such director occurring prior to such amendment or repeal. If the DGCL is amended hereafter to further to further eliminate or limit the personal liability of directors, the liability of a director of this Corporation shall be limited or eliminated to the fullest extent permitted by the DGCL, as amended.

ELEVEN: This corporation shall, to the maximum extent permitted from time to

time under the DGCL, indemnify and upon request shall advance expenses to any person who is or was a party or is threatened to be made a party to any threatened, pending or completed action, suit, proceeding or claim, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was or has agreed to be a director or officer of this Corporation or while a director or officer is or was serving at the request of this Corporation as a director, officer, partner, trustee, employee or agent of any corporation, partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, against expenses (including attorney's fees and expenses), judgments, fines, penalties and amounts paid in settlement incurred in connection with the investigation, preparation to defend or defense of such action, suit, proceeding or claim; provided, however, that the foregoing shall not require this Corporation to indemnify or advance expenses to any person in connection with any action, suit, proceeding, claim or counterclaim initiated by or on behalf of such person. Such indemnification shall not be exclusive of other indemnification rights arising under any by-law, agreement, vote of directors of stockholders or otherwise and shall inure to the benefit of the heirs and legal representatives of such person. Any person seeking indemnification under this paragraph ELEVEN shall be deemed to have met the standard of conduct required for such indemnification unless the contrary shall be established. Any repeal or modification of the foregoing provisions of this paragraph ELEVEN shall not adversely affect any right or protection of a director or officer of this Corporation with respect to any acts or omissions of such director or officer occurring prior to such repeal or modification.

TWELVE: The books of this Corporation may (subject to any statutory

requirements) be kept outside the State of Delaware as may be designated by the Board of Directors or in the By-Laws of this Corporation.

4

THIRTEEN: The Corporation reserves the right to repeal, alter, amend, or

rescind any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred on stockholders herein are granted subject to this reservation.

5

CERTIFICATE OF AMENDMENT
TO THE RESTATED CERTIFICATE OF INCORPORATION

of

ELECTRIC FUEL CORPORATION

Electric Fuel Corporation, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, DOES HEREBY CERTIFY:

FIRST: That in a unanimous written consent of the Board of Directors of this corporation a resolution was duly adopted setting forth a proposed amendment to the Amended and Restated Certificate of Incorporation of said corporation, declaring said amendment to be advisable and calling for the presentation of said amendment at the annual meeting of the stockholders of said corporation for consideration thereof. The resolution setting forth the proposed amendment is as follows:

RESOLVED: That Article Four of the Corporation's Amended and Restated Certificate of Incorporation be amended to read in its entirety as follows:

"FOUR: The total number of shares of all classes of stock which the

corporation shall have authority to issue is Twenty-nine Million (29,000,000) consisting of two classes of shares designated as follows:

A. Twenty-eight Million (28,000,000) shares of Common Stock, \$.01 par value (the "Common Stock"), and

B. One Million (1,000,000) shares of Preferred Stock, \$.01 par value (the "Preferred Stock")."

and that such amendment is attached hereto as Exhibit A.

SECOND: That thereafter pursuant to resolution of its Board of Directors the Annual Meeting of the Stockholders of said corporation was duly called and held, upon notice in accordance with Section 222 of the General Corporation Law of the State of Delaware, at which meeting a majority of the outstanding stock of the corporation entitled to vote thereon was voted in favor of the amendments.

THIRD: That said amendments were duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

Ropes & Gray
One International Place
Boston, Massachusetts 02110-2624
(617) 951-7000

January 25, 2000

Electric Fuel Corporation
885 Third Avenue
New York, New York 10022

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to you in connection with a registration statement on Form S-3 (the "Registration Statement") to be filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended, covering the offering and possible future sale by certain holders of 2,850,000 shares (of which 1,425,000 shares are issuable upon the exercise of warrants) of Common Stock, \$.01 par value (the "Shares"), of Electric Fuel Corporation, a Delaware corporation (the "Company").

We have acted as counsel to the Company in connection with the preparation and filing of the Registration Statement. For purposes of this opinion, we have examined and relied upon such documents, records, certificates and other instruments as we have deemed necessary.

We express no opinion as to the applicability of, compliance with, or effect of the law of any jurisdiction other than The Commonwealth of Massachusetts and the Delaware General Corporation Law.

Based upon the foregoing, we are of the opinion that the Shares have been duly authorized and validly issued and are fully paid and nonassessable.

We understand that this opinion is to be used in connection with the Registration Statement and we hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the use of our name therein and in the related prospectus under the caption "Legal Matters."

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Very truly yours,

/s/ Ropes & Gray

Ropes & Gray

CONSENT OF INDEPENDENT AUDITORS

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 of Electric Fuel Corporation of our report dated February 26, 1999 relating to the financial statements, which appear in the December 31, 1998 Annual Report on Form 10-K of Electric Fuel Corporation.

/s/ Kesselman & Kesselman

Kesselman & Kesselman
Certified Public Accountants (Israel)

Jerusalem, Israel
January 25, 2000