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SONEX RESEARCH INC  
Form 8-K  
December 07, 2004

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 8-K

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

Date of Report (Date of earliest event reported): December 7, 2004

SONEX RESEARCH, INC.  
(Exact name of registrant as specified in Charter)

Maryland	000-14465	52-1188993
(State or other	(Commision file	(IRS employer
jurisdiction of	number)	identification no.)
incorporation)		

23 Hudson Street, Annapolis, MD 21401  
(Address of principal executive offices)

(410) 266-5556  
(Registrant's telephone number, including area code)

N/A  
(Former name or former address, if changed since last report)

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

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 8.01 - OTHER EVENTS

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On December 7, 2004, the Registrant posted the "Shareholder Update - November 2004", presented here as Exhibit 1, on its website ([www.sonexresearch.com](http://www.sonexresearch.com)) and delivered it with the proxy materials for its 2004 Annual Meeting of Shareholders to be held on Monday, December 20, 2004 at 10:00 a.m. at the Hampton Inn & Suites in Annapolis, Maryland.

### SIGNATURES

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

December 7, 2004

SONEX RESEARCH, INC.  
Registrant

/s/ George E. Ponticas  
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George E. Ponticas  
Chief Financial Officer and Secretary

EXHIBIT 1

SONEX RESEARCH, INC.  
23 Hudson Street  
Annapolis, MD 21401  
Tel: 410-266-5556; Fax: 410-266-5653  
E-mail: [info@sonex-na.com](mailto:info@sonex-na.com)  
Website: [www.sonexresearch.com](http://www.sonexresearch.com)

### SHAREHOLDER UPDATE

November 2004

Dear Fellow Shareholders:

Sonex Research, Inc. (OTCBB: SONX) will hold its 2004 Annual Meeting of Shareholders in Annapolis on Monday, December 20, 2004. This Shareholder Update is being provided with the proxy materials for the Annual Meeting. The accompanying Annual Report on Form 10-KSB for the year ended December 31, 2003 provides a comprehensive explanation of the Company's business initiatives and finances as of April 2004 when the Form 10-KSB was filed with the SEC. This Shareholder Update brings us forward to the present, including a brief financial overview derived from our September 30, 2004 Quarterly Report on Form 10-QSB. The complete Annual Report, Quarterly Report, and Proxy Statement as filed with the SEC are available by following the link to SEC Filings provided in the Investor Relations section of our website [www.sonexresearch.com](http://www.sonexresearch.com). The documents on the SEC's website are in plain text format and do not contain most standard document formatting features. You can request formatted versions directly from the Company, either in electronic format or in hard copy.

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### CURRENT ENGINE PROGRAMS

In July 2004 the Company received a follow-on task from the Defense Advanced Research Projects Agency (DARPA) to continue development of a multi-cylinder "heavy fuel" engine (HFE) combustion process for potential Department of Defense (DoD) applications such as unmanned aerial vehicles (UAVs). Under the existing contract, Sonex has adapted a lightweight gasoline automotive engine to a Sonex Combustion System (SCS) unthrottled, direct fuel injection combustion process based on the Sonex Controlled Auto-Ignition (SCAI) technology to run on JP5, military kerosene-based heavy fuel. The SCAI process is enabled by a proprietary piston technology that achieves in-cylinder chemical kinetics at a moderate compression ratio for auto ignition of the JP5. The laboratory HFE features the proprietary Sonex pistons, electronically controlled common rail fuel injection system and extensive instrumentation.

The DARPA contract was extended to add a task to: enhance the 6-cylinder HFE for higher power output; achieve boosted HFE combustion optimization; perform data collection-analyses; and provide a technical readiness demonstration. This project is sponsored by DARPA as a technology feasibility demonstration of a means for lightweight piston engines to comply with a DoD policy directive that mandates kerosene-based "heavy" fuel for all engines. Gasoline engines are typically 25% to 30% lighter than diesel engines; thus, fully qualified, adapted gasoline engine designs that could burn low cetane (hard to ignite, diesel type) heavy fuel would address DoD performance, logistics and safety requirements.

Achievement of the technical readiness demonstration is expected to form the basis for in-depth discussions with the major DoD prime contractor which is building a UAV for DARPA that requires such a high-powered HFE. In addition, outcomes from the DARPA program could validate the sparkless SCAI process for in-cylinder control of ignition and combustion that could be applied later to a gasoline powered version for use in automobiles to achieve better fuel economy. Sonex also believes the availability of the resultant multi-cylinder, four-stroke HFE from a successful outcome of the DARPA project could lead to use in other military engine programs, as well as having potential for use in the commercial marine market. During 2004 the Company expanded the range of lightweight, spark-ignited, two-stroke, gasoline engines it has converted successfully to heavy fuel operation through application of its SCS starting system and modified combustion chamber. The Company seeks to capitalize on the success to date with SCS HFES by participation in new DoD programs, particularly for smaller UAVs, whose sponsors are obliged to make an effort to comply with the directive on the elimination of gasoline as a battlefield fuel.

Under a Department of Energy (DOE) subcontract awarded late in 2002 by DOE prime contractor Compact Membrane Systems, Inc. (CMS), Sonex undertook an evaluation of the diesel engine emissions reduction potential of combining the SCS and the CMS polymer membrane technology for the addition of nitrogen enriched air (NEA) to the combustion process. Sonex conducted the testing on an advanced, research, three-cylinder, common rail direct injected, turbo-charged, automotive diesel engine developed by a major international vehicle manufacturer in the joint U.S. government and automotive industry funded PNGV (Partnership for a New Generation Vehicle) program. Initial testing focused on the emissions reduction capabilities of the SCS Low Soot Diesel Design (LSDD) pistons without the NEA membrane.

The Company was not able to achieve the LSDD performance achieved in other engines with conventional injection systems. Sonex encountered difficulty in controlling the characteristics of the common rail injection system and matching its requirements with the design requirements of the SCS pistons, which must be compatible with the fuel injection system and computer control. Achieving this synergy proved to be very challenging since many critical parameters of the engine baseline and electronic engine control unit (ECU) were not made available

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to Sonex. In addition, initial testing with the NEA membrane demonstrated the limited viability for commercialization of the CMS membranes in this automotive size application. During the first quarter of 2004, CMS suspended further work on the program. Sonex developed and presented in April 2004 to the DOE program sponsor a plan to understand the difference between the common rail system and earlier injection systems when used with LSDD pistons; however, the DOE did not reinstate the funding to Sonex.

Sonex will utilize the automotive diesel engine as a laboratory asset and as an LSDD demonstrator. To overcome the difficulties encountered with the ECU provided, Sonex has replaced it with a commercial ECU and now has full control of the common rail fuel injection system. This will allow demonstrating the full capabilities of the LSDD in this engine and thereby provide SCS in-cylinder emissions reduction data on a modern multi-cylinder diesel engine for engine manufacturers to evaluate the potential for SCS designs to reduce the cost and complexity of future exhaust aftertreatment systems.

### ORGANIZATIONAL CHANGES

During 2004 the Company experienced a number of significant organizational changes. In February following the resignation of its three outside directors, who cited other business responsibilities as the reason for resignation, the Board was reconstituted and a new president was hired to fill the position that had been vacant. The Company's new president, who was also named chief executive officer in July 2004, was brought on to develop, raise capital for, and implement an updated business plan, the primary goal of which was to transition Sonex from a research and development company into a technology and manufacturing enterprise. The Company, however, has been unable to date to raise sufficient capital to complete and implement this updated business plan. In October 2004 the Company's new president and chief executive officer resigned, and I took over those roles.

As a result of other recent changes in its membership, the Company's Board of Directors now consists of our chief financial officer, George Ponticas, and myself. Our intention is to add to the Board one or more qualified individuals who have no current affiliation with the Company towards a goal of constituting a Board with a majority of independent directors. In addition, we hope to determine the proper course of action to move Sonex forward. The Company is pursuing new opportunities for revenue as development work continues on the current engine projects and is attempting to secure relationships with companies which have technologies complementary to the Sonex processes.

### FINANCIAL CONDITION AND RESULTS OF OPERATIONS

From the second half of 2002 through 2003, Sonex saw substantial growth in revenue, but we have been unable to maintain that momentum in 2004. We continue to minimize disbursements through the voluntary deferral of current compensation by Company officers, flexible payment arrangements with consultants, and the securing of short-term loans from shareholders. The Company's long-term viability, however, is dependent upon its ability to enter into significant funded contracts for the further development of its technology, establish joint ventures or strategic partnerships with major industrial concerns, or secure a major capital infusion. There is no assurance that we will be able to achieve these objectives. In the event sufficient funding is not available, the Company would have to substantially reduce the level of its operations. Such a reduction could have a material adverse effect on the Company's relationships with government funding sources, strategic partners and potential customers.

The following are summary figures for, and a brief discussion of, results of

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operations for the nine-month periods ended September 30, 2004 and 2003.

	Nine months ended September 30,	
	2004	2003
Revenue	\$ 249,907	\$ 603,648
Cost of revenue	388,104	403,931
Research & development	33,488	180,901
General & administrative	1,027,305	298,974
Interest expense, net of interest income	11,949	7,330
	1,460,846	891,136
Net loss	\$ (1,210,939)	\$ (287,488)

Revenue decreased 59% from the first nine months of 2003 to the comparable period in 2004, as work wound down in 2004 on the two major government projects discussed previously which were awarded to the Company during the second half of 2002. Combined revenue from these two projects decreased from \$547,948 in the first nine months of 2003 to \$178,991 in the current period. With respect to the first project, in July 2004 the Company received a \$192,932 follow-on task from DARPA. To date, \$88,591 of this total has been billed and received, while an additional \$104,341 remains to be billed for work to be performed through the completion of the task. Further funding for the second project, the DOE subcontract, has been discontinued.

Total costs and expenses increased 64% from the first nine months of 2003 to the comparable period in 2004. A significant portion of the increase in costs and expenses resulted from the organizational changes undergone by the Company in 2004.

Cost of revenue primarily consists of direct labor charges and other direct expenditures, including those for technical consulting services, attributable to funded programs, as well as allocated fringe benefits, payroll taxes, and labor overhead charges. While cost of revenue during the first nine months of 2003 was 67% of revenue, in the first nine months of 2004 cost of revenue substantially exceeded revenue, primarily due to significant, unanticipated project cost overruns during the first and second quarters of 2004 and a higher labor overhead rate in 2004 versus 2003.

General and administrative (G&A) expenses consisted of the following amounts:

	Nine months ended September 30,	
	2004	2003
Employee compensation, taxes & benefits	\$ 358,376	\$ 118,614
Consulting fees	433,309	99,860
Professional fees	157,046	29,082

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Other expenses	78,574	51,418
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Total G&A expenses	\$ 1,027,305	\$ 298,974
	=====	=====

Total G&A expenses for the first nine months of 2004 more than tripled from the comparable period in the prior year, largely due to substantial charges resulting from the hiring of a new president in February 2004. Employee compensation increased by \$239,762 from 2003 to 2004, as charges for the compensation of the new president, who was also named chief executive officer in July 2004, totaled \$220,052. This figure includes amounts related to stock and stock option compensation, the award of a cash bonus for which payment is being deferred until 2006, and salary, nearly 50% of which has been deferred. In October 2004 the Company's new president and chief executive officer resigned.

Consulting fees increased by \$333,449 from 2003 to 2004. Charges for 2004 include \$262,500 associated with a consulting agreement effective in February 2004 for services to assist in the transition of the Company into a technology and manufacturing enterprise under the updated business plan being developed. Such charges consist of \$195,000 for the value of common stock issuable and \$67,500 for the estimated fair value of warrants to purchase common stock. Other charges in 2004 totaling \$92,500, including \$33,600 payable in common stock, represent fees for various business advisory services from individuals engaged by the Company's new president.

The increase in professional fees of \$127,964 from 2003 to 2004 is almost entirely due to a charge in the first quarter of 2004 for a non-refundable retainer payable in stock valued at \$120,000 to the Company's new securities legal counsel in March 2004. This firm subsequently invoiced the Company an additional \$102,000 for services rendered through June 30, 2004. Sonex has disputed the firm's entitlement to the fees claimed and is presently represented by another attorney on a pro bono basis in connection with this matter. The Company has requested, but has not received, an explanation of, and the billing support for, the amounts invoiced by this firm. While the outcome of this dispute is uncertain and may have an adverse effect on the Company's financial condition, we believe that the Company has a defensible position.

Closing

My belief in the SCS technology and the Company remains steadfast. I extend my gratitude to my fellow shareholders for their continued support and to our employees and consultants for their dedication and commitment. I look forward to seeing many of you at the 2004 Annual Meeting of Shareholders in Annapolis on Monday, December 20, 2004.

Sincerely,

Andrew A. Pouring, D.Eng.  
 Chairman of the Board of Directors  
 Chief Executive Officer and President

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

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"Forward-looking" statements contained in this report, as well as all publicly disseminated material about the Company, are made pursuant to the "safe harbor" provisions of the Private Securities Litigation Act. Such statements are based on current expectations, estimates, projections and assumptions by management with respect to matters such as commercial acceptance of the SCS technology, the impact of competition, and the Company's financial condition or results of operations. Readers are cautioned that such statements are not guarantees of future performance and involve risks and uncertainties that could cause actual results to differ materially from those expressed in any such forward-looking statements. Additional information regarding the risks faced by Sonex is provided in the Company's periodic filings with the Securities and Exchange Commission (SEC) under the heading "Risk Factors". Such filings are available upon request from the Company or online in the SEC's EDGAR database at [www.sec.gov](http://www.sec.gov).