



President's Letter and Annual Report for the Fiscal Year Ended December 31, 2009

ADA-ES: A Leader in Clean Coal Technology

April 30, 2010

Dear Fellow Shareholders:

We believe that 2009 was a breakthrough and transformative year for ADA-ES. We achieved key milestones on several business fronts advancing our clean coal technology objectives, while pursuing longer-term opportunities evolving from changes in the regulatory landscape and government and industry sponsored funding for clean coal technologies.

Among the accomplishments of 2009 and thus far in 2010:

- Clean Coal Solutions (“CCS”), our 50% joint venture with NexGen Refined Coal, LLC, an affiliate of NexGen Resources Corporation (“NexGen”), permitted, designed, built, installed and put in operation two CyClean Refined Coal facilities at two different power plants, meeting the 2009 year-end placed-in-service requirements for the Section 45 Tax Credits. These two facilities alone could produce net after-tax cash flow for CCS of an estimated \$9 million per year for up to ten years.
- Relating to our joint venture with Energy Capital Partners I, LP and its affiliated funds (“ECP”), ADA Carbon Solutions (“ADA-CS”), and its Activated Carbon (“AC”) efforts, we are proud to have collectively accomplished the following:
 - Completed construction of the interim facility in Natchitoches, Louisiana and shipped the first batches of treated AC to utilities in the second quarter of 2009.
 - Substantially completed construction of the AC manufacturing plant in Coushatta, Louisiana and preparing for launch of commercial operation by the end of May.
 - Received a conditional Loan Guarantee for \$245 million from the Department of Energy (“DOE”), which would provide extremely favorable terms for debt financing of the AC manufacturing plant.
 - Secured eight AC contracts, including ADA-CS’s first two contract wins in Canada.
- Secured contracts for 10 more activated carbon injection (“ACI”) systems, bringing the total number of ACI systems installed or are in the process of being installed to 46.
- Fabricated and installed our first Flue Gas Conditioning (“FGC”) system designed to enhance mercury control. This breakthrough could open up a whole new market for our FGC product line.
- Commissioned our CO₂ capture 1 kW pilot plant at a major utility and began initial field tests.

- Submitted a \$14 million proposal to the DOE for scale-up of our solid-sorbent based carbon capture technology which involved securing co-funding from our customers in the power business.
- Installed and operated our first SO₃ control system in collaboration with Breen Industries to demonstrate alternative SO₃ control technology to meet the demand in the power industry to control acid gas to prevent corrosion and eliminate blue plumes.
- Submitted a \$1 million proposal to evaluate mercury control in the taconite industry. We are seeing strong demand for our mercury control expertise developing outside of utility boilers including metallurgical, cement and industrial boilers.

Refined Coal: Growing Opportunity Driven by Section 45 IRS Tax Credits

The Refined Coal segment appears to be the most promising near-term revenue, profit and cash flow generator for ADA thanks in great part to Section 45 IRS Tax Credits. In late December, CCS successfully installed and commenced initial operations of two CyClean systems thus meeting the year-end placed-in-service requirements for these tax credits established by the 2004 American Jobs Creation Act. This was a well-planned initiative and could only be accomplished by CCS taking the risk to begin design and fabrication of two systems well in advance of when the IRS finally released guidance in December.

Combined, these facilities are designed to produce a total of 6.5 million tons of Refined Coal per year and the Section 45 Tax Credits should generate approximately \$6.20 of operating income per ton for a period of ten years. In the fourth quarter, these two facilities generated revenues of \$2.4 million from the sale of approximately 76,800 tons of Refined Coal.

CCS is preparing the CyClean systems for efficient full-time operation, finalizing contracts with the host utility, and negotiating long-term agreements with monetizers. We expect efficient full-time production of Refined Coal to begin in mid-2010, at which time CCS plans to sell the facilities and start recognizing revenues as the facilities begin ongoing production of Refined Coal for the next decade.

We anticipate the equipment sales and tax credits from these two systems will contribute average after-tax net cash flow for CCS of approximately \$9 million per year for up to ten years. The operating income will be split 50/50 with NexGen, except that NexGen must pay ADA 60% of its share of cash flow up to \$4 million to retain its 50% ownership in the JV. There may be an opportunity to grow this business beyond these first two systems. We are working to get a one year extension of the placed-in-service requirement. This extension is currently included with other tax extenders in a Jobs Bill that has been passed by the Senate and is awaiting approval by the House. We have identified several other utilities that are viable candidates for the CyClean technology which are showing increasing interest now that the technical, contractual, and tax risks have been reduced and CCS's first two systems have been placed in service. We believe that if an extension is granted until the end of this year, CCS could install four or more systems and increase its Refined Coal capacity to as much as 20 to 30 million tons per year.

Mercury Emission Control – Activated Carbon Injection Systems and Activated Carbon Production

The mercury emission control (“MEC”) business is currently being driven by the rules and regulations of 19 states and several Canadian provinces. To serve that market, a key focus for ADA has been on the sale of our ACI systems. We have installed or are in the process of installing 46 systems, including the 10 contracts secured during 2009.

The MEC market is set to expand with new more comprehensive Federal rules. Most notably, the EPA’s draft of the Utility MACT for coal-fired boilers covering 189 Hazardous Air Pollutants, including mercury, is scheduled for release in March 2011 and should be final in November 2011. Since the Clean Air Act requires that all MACT regulations be met within 36 months, we expect that this will create a market demand resulting in an increase in ACI system orders starting late next year as utilities ramp up to become compliant by 2014. That demand could translate into an overall market of 600 to 800 ACI systems from 2011 to 2014.

In addition to the Utility MACT, EPA is also moving forward on two other MACT standards where our ACI equipment should be applicable. The Industrial Boiler MACT and the Cement MACT should be finalized by the end of the year.

ACI systems require approximately one to two million pounds of AC per year to effectively remove up to 95% of mercury emitted from an average sized coal fired power plant. In the second half of 2008, a joint venture, ADA-CS, was established with ECP to build and operate AC production facilities for coal-fired power plants. This partnership was able to secure financing for the first of six potential projects. We are proud to report that the first facility located in Coushatta, Red River Parish, Louisiana, should be in commercial operation by late May. The Red River project will be North America's largest AC production facility and the first line will be capable of producing 150 million pounds of AC per year. Thus far, we have contracted for over 200 million pounds of AC mostly in long-term contracts. As the minority interest partner on the first line, our participation is recorded under the equity method of accounting and in 2010, as was the case in 2009, we will record a pre-tax loss from our stake.

As our long-time shareholders know, building this facility has been a long and detailed process and ECP's expertise has been extremely valuable as we have jointly resolved complex issues related to our engineering contract, off-take agreements, and other aspects of the project. The \$400 million in construction and related costs are being financed with equity and debt, a portion of which is expected to be provided by a \$245 million conditional loan guarantee by the DOE. This conditional commitment was a major win for ADA-CS' subsidiary, Red River Environmental Products, and upon final approval, would result in a long-term loan at below market interest rates through the Federal Financing Bank. Closing is contingent upon DOE completing its due diligence process and customary closing conditions. The proceeds from the loan will be used to take out bridge financing from ECP.

Our role in bringing this plant to fruition with its modern equipment, extensive emission control equipment and energy efficiency has enhanced our reputation and recognition among utilities, coal producers, and other potential industry partners. ADA retains its right to 50% participation in future AC production lines in its joint venture with ECP. In preparation, we have obtained an air permit for a second production line, which likewise would be capable of producing up to an additional 150 million pounds of AC annually. We envision moving forward on this second phase upon the passage of the federal MACT standard.

In the meantime, we have expanded our MEC business through the sale of our ACI systems in response to the market created by existing rules and regulations. The uncompleted portion of outstanding ACI contracts at year-end 2009 totaled \$5.7 million in gross revenue, of which we expect to realize approximately \$3.7 million in 2010 and the balance in 2011. Near term, we expect that the ACI system market will slow down until utilities gear up for MACT compliance beginning in late 2011. However, we have maintained our 30% market share and made ACI systems more profitable to ADA and more attractive to customers through new and improved designs that simplify field installation and reduce system costs.

CO2 Capture Technology: DOE Funding R&D

In April 2009, the EPA issued a proposed finding that CO₂ and five other industrial emissions endanger the health and welfare of current and future generations, the first formal recognition by the U.S. government of the threat posed by climate change. CO₂ capture to reduce greenhouse gases is high global priority and the race is on to develop and commercialize practical and cost-effective technologies that do the job.

Our CO₂ technology, which is designed to capture emissions from flue gas from existing conventional coal-fired boilers, is well under development being backed by \$3.2 million in research and development funding by the DOE and extensive industry support. We are also pursuing funding sources from the \$3.4 billion available under the American Recovery and Reinvestment Act of 2009. In that regard, in December 2009 we submitted a \$14 million proposal for scale-up of solid-sorbent based carbon capture technology, which is now under evaluation.

2009 Financial Results

For 2009, our total revenues rose 24% to \$20.1 million as compared to \$16.2 million in 2008 as we recognized our first revenues associated with the Refined Coal business in the fourth quarter. Our MEC revenues increased slightly due to ACI system sales, offset by lower DOE and industry-supported demonstration contract revenues.

Our gross margin for 2009 was 31% (or 35% if Refined Coal amounts are excluded), compared to 33% for 2008. The improvement, when excluding Refined Coal, was due primarily to cost reductions we achieved in ACI system sales and improved efficiencies in our DOE and other consulting work. We reported an operating loss of \$11.8 million in 2009, much of which was due to litigation costs as well as expenses related to our growth initiatives for Refined Coal. Also, \$3.4 million of the loss, on a before tax basis, was due to ADA's equity share in the loss of ADA-CS. In 2008, ADA-CS's financial results were consolidated with ADA's. For the year, the net loss

attributable to ADA was \$8.7 million, or \$1.26 per diluted share, as compared to \$4.1 million, or \$0.67 per diluted share, for 2008.

Financing Growth Opportunities Ahead

We closed the year with \$2.2 million in working capital, no long-term debt, and shareholders' equity of approximately \$24 million. With several growth opportunities in front of us, we are pursuing additional funding from industry partners, the public equity market, and DOE funding.

In March of 2010, we reached a tentative agreement with Arch Coal to invest \$3.0 million in ADA to fund certain near-term growth opportunities. The first step of the investment was completed on March 23rd with Arch Coal's purchase of 143,885 shares of ADA for \$1.0 million. The remaining \$2.0 million will be for an exclusive license to an ADA breakthrough technology involved in developing a coal with enhanced environmental performance that could be premium priced. We are in the early stages with this technology and will be working together with Arch to advance it toward a commercial product. The license, which is separate from the refined coal technology, is currently being negotiated to provide a mechanism for ADA to profit, along with Arch, from the potential success of the technology.

There is a proposal in the proxy statement Notice of Annual Meeting set for June 16th asking shareholders to approve the issuance of shares enabling us to raise additional capital. The goal is to take advantage of several growth platforms that we are pursuing such as CyClean, the Arch enhanced coal project, CO₂ abatement, expanding ACI systems capacity as needed, and AC production. Our Board recommended this proposal over a more potentially dilutive and more constricting alternative covered under the ECP Securities Purchase Agreement ("SPA") which we terminated in March 2010. Under that agreement, ECP was entitled to purchase 3.6 million convertible preferred shares of ADA at \$6.30 per share with net proceeds of the sale going to ADA-CS. Terminating the SPA eliminated a number of restrictions on our ability to fund growth opportunities, establish business partnerships, and license technologies.

Outlook & Conclusion

2010 looks to be another pivotal year for ADA. As noted earlier, we are working on a number of projects that expand our core clean coal technology expertise into several very promising albeit longer-term business platforms. Near-term, the Section 45 tax credits for Refined Coal have made it a top 2010 priority. With the sales of CyClean systems and the operating income it is expected to produce, we look forward to material top line growth, significant cash flow and a profitable bottom line in 2010. While we expect to book additional ACI system sales and score one or more wins on outstanding proposals in 2010, we entered the new year with approximately \$7.3 million in backlog in our historic MEC business from 2009, \$5.7 million attributable to ACI system sales and \$1.6 million of unearned amount of DOE contracts including cash contributions by other industry partners.

On behalf of our Board of Directors, I extend our deepest appreciation to the 54 goal-oriented members of the ADA team for their dedication, creativity and overall contribution to the success of our Company. We also appreciate the support of our customers, and of course, our shareholders, and our colleagues at ECP and NexGen. We are enthusiastic about our ability to continue to achieve milestones in our Refined Coal and AC plans, and grow revenues and profitability in 2010 and beyond.

Sincerely,



Michael Durham, Ph.D., MBA
President & CEO

EXECUTIVE OFFICERS

Michael D. Durham
President and Chief Executive Officer

Mark H. McKinnies
Senior Vice President, Chief Financial Officer and Secretary

C. Jean Bustard
Chief Operating Officer

Richard L. Miller
Vice President Business Development for Utility Systems

Richard J. Schlager
Vice President Administration

Jonathan S. Barr
Vice President Sales and Marketing

Cameron E. Martin
Vice President Emissions Control

Sharon M. Sjostrom
Vice President Technology

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President and Chief Executive Officer
ADA-ES, Inc.

Mark H. McKinnies
Senior Vice President, Chief Financial Officer and Secretary
ADA-ES, Inc.

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Lawyer
Law Office of Jeffrey C. Smith

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John W. Eaves (6,7)
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Vice President
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Ronald B. Johnson (3,5)
President and owner
Twin-Kem International, Inc.

W. Phillip Marcum (1,6,7)
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MG Advisors, LLC
Director
Key Energy Services, Inc.

Richard J. Swanson (2,6)
Director and audit Committee Chair
Ascent Solar Technologies Inc.

- 1 - Chairman of the Board of Directors
- 2 - Chairman of the Audit Committee
- 3 - Chairman of the Compensation Committee
- 4 - Chairman of the Nominating and Governance Committee
- 5 - Member of the Audit Committee
- 6 - Member of the Compensation Committee
- 7 - Member of the Nominating and Governance Committee

SHAREHOLDER INFORMATION

Shareholder Correspondence:

ADA-ES, Inc.
Attention: Corporate Secretary
8100 SouthPark Way, Unit B
Littleton, CO 80120

Transfer Agent:

Computershare
350 Indiana St, Suite 800
Golden, CO 80401

INVESTOR RELATIONS

Security analysts, investment professionals and shareholders can find investor relations information on the Internet at www.adaes.com.

Written inquiries should be directed to:

ADA-ES, Inc		The Equity Group
Attention: Investor Relations	or	Attention: Melissa Dixon
8100 SouthPark Way, Unit B		800 Third Avenue, 36 th Floor
Littleton, CO 80120		New York, NY 10022

Telephone: (303) 734-1727

Telephone: (212) 836-9613

MARKET INFORMATION FOR COMMON STOCK

ADA-ES, Inc. common stock is listed on the Nasdaq Capital Market under the symbol "ADES."

ANNUAL MEETING OF SHAREHOLDERS

The annual meeting will be held at 9:00 a.m. (local time) on June 16, 2010 at the Company's offices, located at 8100 SouthPark Way, Unit B in Littleton, Colorado. A notice of the meeting, together with a form of Proxy and a Proxy Statement, will be included with this Annual Report and mailed to or otherwise made available to stockholders on or about May 7, 2010, at which time proxies will be solicited by the Board of Directors.

Availability of Proxy Statement and Form 10-K:

The Proxy Statement and the Form 10-K are available on the Internet at www.adaes.com. A copy of the Proxy Statement may be obtained without charge by written request to the Investor Relations Department as listed above.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Ehrhardt Keefe Steiner & Hottman PC
7979 E. Tufts Ave, Ste 400
Denver, CO 80237-2843

NON-INCORPORATION OF FORM 10-K "WRAP"

ADA-ES, Inc.'s 2009 Form 10-K, as filed with the SEC, is included within this Annual Report. Other than the Form 10-K, all other portions of this Annual Report are not "filed" with the SEC and should not be deemed so.

CERTIFICATIONS

The most recent certifications by our Chief Executive Officer and Chief Financial Officer pursuant to sections 302 and 906 of the Sarbanes-Oxley Act of 2002 are filed as exhibits to our Form 10-K.

United States
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2009

Commission File Number: 000-50216

ADA-ES, Inc.

(Name of registrant as specified in its charter)

Colorado (State of incorporation) 84-1457385 (IRS Employer Identification No.)

8100 SouthPark Way, Unit B, Littleton, Colorado 80120-4527
(Address of principal executive offices) (Zip Code)

(Registrant's telephone number, including area code): (303) 734-1727

Securities registered under Section 12(b) of the Exchange Act:

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock, no par value	NASDAQ Capital Market

Securities registered under Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. [] Yes [X] No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. [] Yes [X] No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. [X] Yes [] No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). [] Yes [] No

Indicate by check mark if disclosure of delinquent filers in response to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller Reporting Company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act.) [] Yes [X] No

The aggregate market value of the voting common stock held by non-affiliates as of June 30, 2009 was \$27,770,000.

As of March 25, 2010, there were outstanding 7,404,143 shares of the Registrant's common stock, no par value.

DOCUMENTS INCORPORATED BY REFERENCE:

Portions of the Definitive Proxy Statement to be filed pursuant to Regulation 14A for ADA-ES, Inc.'s annual shareholder meeting for 2010 are incorporated by reference into Part III of this Form 10-K.

PART I

Item 1. Business

Abbreviations We Use in this Report

"ADA-ES," "the Company," "we," "us," or "our" refer to ADA-ES, Inc., a Colorado corporation, and its consolidated subsidiaries. Other abbreviations we use in this Report include:

- AC = activated carbon
- ACI = activated carbon injection
- ADA-249M = our patented slag viscosity modifying compound
- CAMR = Clean Air Mercury Rule
- DOE = United States Department of Energy
- EPA = United States Environmental Protection Agency
- EPRI = the Electric Power Research Institute
- ESP = electrostatic precipitator
- FGC = flue gas conditioning
- MEC = mercury emission control
- NO_x = nitrous oxides
- PRB = Powder River Basin (a particular area of the Western United States)
- SO_x = sulfur oxides

Business Purpose and Strategy

Incorporated in Colorado in 1997, ADA-ES, Inc. develops and implements proprietary environmental technology and provides specialty chemicals that enable coal-fueled power plants to meet emissions regulations, enhance existing air pollution control equipment, maximize capacity and improve operating efficiencies. ADA-ES became a "stand-alone" public company through a "spin-off" from its parent company, Earth Sciences, Inc. in September 2003. We have a wholly-owned subsidiary called ADA Environmental Solutions, LLC and a 50% interest in a Colorado limited liability company called Clean Coal Solutions, LLC ("Clean Coal"). As of December 31, 2009 we had a 33% interest in a Delaware limited liability company called ADA Carbon Solutions, LLC ("Carbon Solutions"). Carbon Solutions has five wholly-owned subsidiaries called Crowfoot Supply Company, LLC ("Crowfoot Supply"), Red River Environmental Products, LLC ("Red River"), Five Forks Mining, LLC, Bowman Environmental Products, LLC, and Underwood Environmental Products, LLC, all Delaware limited liability companies.

Our approach to technology development, implementation and commercialization involves taking technology to full-scale as quickly as we can, and testing and improving the technology under actual power plant operating conditions. The most significant benefit of this method is that we begin working early and closely with power companies to optimize the technology to meet their specific needs. For example, while some other companies develop mercury control technologies in the isolation of a laboratory without feedback from users, we work on full-scale mercury control systems that are installed on plants operated by several of the largest power companies in the United States and Canada. We assist electric utility companies to remain competitive while meeting environmental regulations.

Our major activities include:

- the development and marketing of our refined coal technology for control of NO_x and mercury, which also qualifies for certain tax credits, through our Clean Coal joint venture with NexGen Refined Coal, LLC, an affiliate of NexGen Resources Corporation (“NexGen”),
- the sale of equipment, field testing and services related to mercury emission control for coal-fired boilers used in electric generation,
- the research and development of CO₂ capture technology through a contract supported by the Department of Energy (“DOE”) and industry participants,
- the sale of flue gas conditioning (“FGC”) equipment and chemicals, and other chemicals and technologies for coal-fired boilers, and
- through Carbon Solutions, our joint venture with Energy Capital Partners I, LP and its affiliated funds (“ECP”), the construction and operation of a new “Greenfield” facility in Coushatta, Red River Parish, Louisiana (the “AC Facility”) for the manufacture of AC for mercury control applications and the supply from interim sources of AC to utility customers until such time as the AC Facility is operational.

Financial Information for Industry Segments

We have two reportable segments: mercury emission control, or “MEC,” and “FGC, refined coal and other.” Financial information concerning these reportable segments can be found in the Financial Statements filed as a part of this Report, in Footnotes 1 “Summary of Nature of Operations and Significant Accounting Policies” and 13 “Business Segment Information” and that information is incorporated by reference here.

Our Business in Detail

Market for Our Products and Services

The primary drivers for many of our products and services are environmental regulations impacting the utility industry. Environmental regulations, such as the 1990 Clean Air Act Amendments and various state regulations and permitting requirements for new coal-fired power plants are requiring utilities to reduce emission of pollutants, such as sulfur dioxide (“SO₂”), nitrogen oxides (“NO_x”), mercury and carbon dioxide (“CO₂”). We are a key supplier of equipment and services to the MEC market whose commercial component first began in 2005 when individual states began to enact limits on mercury emissions, with the market subsequently expanding as a result of additional regulations. Through Carbon Solutions, we are attempting to position the AC Facility as a key supplier of AC to that market. We anticipate Carbon Solutions will become a market leader in the AC supply market through likely future expansions in which we expect to have a higher participation rate.

Our business is based upon providing technology for the approximately 1,500 coal-burning plants that produce roughly 50% of electricity in the U.S. (according to a 2008 National Coal Council report) in addition to steam for industrial processes and heating. The DOE Energy Information Administration estimates an additional 24 GW of new capacity between 2008 and 2030. DOE’s latest report, issued in 2009, includes 77 existing and planned new coal-fired power plant projects totaling 44 GW of capacity. A 2007 National Coal Council report estimated that United States reserves will be capable of serving demand for the next 250 years. However, prior to regulations the nation's existing coal-fired power plants emitted approximately 48 tons of mercury per year, or approximately 37% of all human-caused mercury emissions, and other pollutants. Mercury, which is one of the most toxic substances known to humans, eventually finds its way into the water supply and into fish which, when ingested, can cause severe neurological damage and even death, particularly in young children and developing fetuses. Attaining significant reductions in mercury emissions and other pollutants from coal-fired power plants is a critical near-term imperative in order to safely harness the energy afforded by U.S. and foreign supplied coal. Regulations currently exist that require new coal-fired plants to control mercury emissions. There are as many as 30 new coal-fired power plants in the United States under various stages of development, which must comply with these regulations.

The coal-fired power industry has been under increased scrutiny over environmental issues during the last several years, especially related to NO_x, SO_x, and mercury emissions, as well as the impact of CO₂ emissions on climate change. In response to concerns expressed by environmental groups and others, various state officials rejected a number of permits for new coal-fired plants in 2009. These actions have slowed the progress of new coal-fired plants. We expect this adversarial climate to increase the market for our products and services. With new portfolio standards for increased use of renewable energy sources and requirements for reduction of greenhouse gases limiting the permitting of new coal-based plants, the dependence on the existing fleet for base load power increases. To

continue operating as environmental regulations become more stringent, these older plants will likely require the use of retrofit technologies to address conventional pollutants such as SO₂, NO_x, and particulates and now for pollutants such as mercury and emissions such as CO₂. Therefore, the current trend toward cleaner energy has created a growing market for ADA's existing and developing innovative technologies.

A dozen states and several environmental groups had previously sued the EPA alleging that the process that resulted in the relatively lenient Clean Air Mercury Rule ("CAMR") violated the Clean Air Act and that CAMR was therefore invalid. In February 2008, the United States Court of Appeals for the District of Columbia Circuit ruled in favor of the plaintiffs in that case, holding that the EPA violated the Clean Air Act in the process it used to enact CAMR, and that CAMR was therefore invalid. The Court's ruling remanded the matter to the EPA for further proceedings; and the EPA filed an appeal of the ruling with the Court. In May 2008, the District of Columbia Circuit Court rejected the EPA's petition for an en banc rehearing on CAMR. Following that decision, a coalition of consumer and environmental groups including the American Nurses Association brought suit against the EPA seeking to compel it to promulgate final rules setting emissions standards for approximately 180 hazardous air pollutants ("HAPs") based on Maximum Achievable Control Technology ("MACT"). In October 2009, EPA and the plaintiffs in that suit entered into a Consent Decree under which the EPA has agreed to adopt rules reducing HAPs by November 2011 with implementation in 2014. These rules will establish a MACT-based hazardous pollutant regulation, which will include control of mercury from power plants, organics, and volatile metals. The MACT standard will be based upon the best performing 12% of the power plants and will not allow any averaging or trading. We estimate that with the performance of ACI systems recently installed, and the co-benefits achieved from controls for SO₂ and NO_x, the MACT standard for mercury will require between 90 and 95% mercury capture.

In the meantime, a lack of clear mercury emission regulations has generated uncertainty among independent power producers and utilities as to what will be required of them as far as mercury controls, and is adversely impacting their ability to include mercury control costs in their rate bases. The EPA settlement of the American Nurse Association suit mentioned above finally provides some certainty on the timing of implementation of a new MACT-based mercury control rule. It is of course possible that Congress could also enact new legislation requiring stricter mercury emission control within the next year or two, with implementation deadlines over the subsequent two to three years.

In addition to regulations directed to the independent power producers and utilities, EPA has started the process of developing a MACT-based mercury emissions regulation for the Portland cement industry through proposed amendments to the National Emission Standards for Hazardous Air Pollutants ("NESHAP") for the Portland Cement Manufacturing Industry issued in May 2009, for which the EPA accepted public comments through September 4, 2009. The cement MACT final regulation is scheduled to be issued no later than the spring of 2010. This regulation could require ACI systems on up to 110 cement kilns in the U.S. We are discussing a number of testing programs with cement companies to define their emissions and evaluate how ACI equipment and sorbents will work in that industry. Such tests will be designed to evaluate the effectiveness of collecting mercury and organics from cement kiln exhaust gas streams. We believe a cement MACT regulation is likely and that its enactment will increase the market for both ACI systems and AC.

The EPA is also developing a new MACT regulation for coal-fired boilers that provide mostly steam and/or electricity for internal power needs with no less than 25 MW of electricity sold to the grid. A draft regulation is anticipated to be issued in mid April 2010, with a final regulation anticipated to be issued in December 2010, and likely compliance deadlines in late 2013 or early 2014. This regulation could impact over 600 existing coal-fired industrial boilers. We believe a new industrial coal-fired boiler regulation could increase the market for ACI systems by several hundred, and the associated AC by 50 to 100 million pounds per year with the possibility of significantly higher quantities should other non-coal-fired boilers be included in this new regulation.

While federal regulations continue to evolve, the market potential remains strong in 19 states and 6 Canadian provinces that either have passed their own mercury control regulations or have entered agreements with power plants to reduce mercury emission and for new power plants.

Whether operating in a regulated or unregulated environment, power generating companies face competitive challenges requiring them to better control capital spending and operating costs. These cost control drivers increase the need for cost-effective retrofit technologies that can be used to enhance existing plant equipment to meet the more stringent emission limits while burning less expensive coals. We have entered this market with (1) mercury control technology that effectively reduces mercury emissions over a broad range of plant configurations and coal types, (2) our proprietary chemical conditioner that improves the capture of particulate matter emissions by new or

existing equipment and offers both technical and economic advantages over the hazardous chemicals that have been and continue to be in use, (3) products, such as CyClean, our proprietary pre-combustion additive that provide utilities NO_x and mercury emission control and flexibility in choosing the grade of fuel utilities can burn and (4) research and development of technologies aimed at the capture and conversion of CO₂ emissions. We have established ourselves as a leader in the mercury control market, having received 10 new orders for commercial mercury control systems in 2009. We are active in the bid and proposal process and expect to sell several new systems in 2010. Our systems have been demonstrated to be effective in mercury control, even in difficult applications, and have also been shown to be cost effective, in many cases reducing the anticipated costs associated with mercury control.

Clean Coal Solutions

In 2006, we established Clean Coal with an affiliate of NexGen to market our patented refined coal technology that reduces emissions of NO_x and mercury from certain, coals in cyclone boilers. We licensed technology, including certain patents, to Clean Coal upon formation of this joint venture. Clean Coal supplies chemicals, additives, equipment and technical services to cyclone fired boiler users, but its primary purpose is to qualify for Section 45 Tax Credits (a “Section 45 Business”), which amount to \$6.20 per ton of refined coal for a period of ten years. In the Emergency Economic Stabilization Act of 2008, Congress included language modifying Section 45 of the Internal Revenue Code of 1986 (“Code”), which extended the qualification window for the Section 45 Tax Credits to January 1, 2010 and eliminated the increased market value test for refined coal. In December 2009 the IRS issued the anticipated guidance as to the specifics concerning how the emissions reductions are to be measured and certified to demonstrate the continuous compliance necessary to qualify for the tax credits. The U.S. Senate recently passed a bill that included a number of tax extenders, including a year’s extension for Section 45 Refined Coal tax credits to January 1, 2011. We are working with Congress to keep this provision in the bill as it is further negotiated in conference committee. Clean Coal placed two facilities in service prior to January 1, 2010 and demonstrated the required emission reductions for their refined coal product to qualify for the tax credits. Clean Coal is in the process of finalizing necessary contractual agreements with the utility at which the facilities are located, completing modifications to the equipment to handle a broader array of feedstock materials and negotiating with potential monetizers. We expect such modification and negotiations to be finalized and the facilities to be in routine operation in the second quarter of 2010.

In order to maintain our 50% interest in Clean Coal, we are obligated to fund half of its operating costs and capital expenditures. Clean Coal placed two facilities into operation to produce refined coal prior to the January 1, 2010 qualification deadline and is presently making modifications to those facilities for continuous long-term operation. The total capital expenditures for those facilities in 2009 were approximately \$2.3 million, most of which was incurred in the fourth quarter of 2009. The modifications noted above and working capital for the commencement of routine operations are expected to amount to more than \$2 million and will be required primarily in the second quarter of 2010. Clean Coal may pursue additional facilities if the qualification deadline is extended. The two facilities that were placed in service in time to qualify them for Section 45 tax credits are projected to produce average net after-tax cash flow for Clean Coal of an estimated \$9 million per year for up to ten years.

Initially, NexGen had the right to maintain its 50% interest by paying us an additional \$4.0 million in eight quarterly installments of \$500,000 each. As described in greater detail below under “Liquidity and Capital Resources,” on October 26, 2009, we, Clean Coal and NexGen entered into an amendment to the Purchase and Sale Agreement pursuant to which NexGen must make these payments to extend the time by which the payments must be made, and to allow NexGen to make the payments from cash that would otherwise be distributable to NexGen under the Clean Coal Operating Agreement. In addition, on October 26, 2009, NexGen agreed to loan Clean Coal up to \$1.0 million (all of which had been loaned as of December 31, 2009) (the “NexGen Loan”), to fund expenses in connection with constructing and placing in operation its refined coal facilities. We guaranteed 50% of the NexGen Loan and secured our guaranty by pledging our interest in Clean Coal to NexGen and by an agreement to issue up to 250,938 shares of our Common Stock to NexGen if we default on our guaranty. The NexGen Loan is due to be repaid on the earliest to occur of (a) the third day after we receive funds from a sale of our securities (with certain permitted exceptions, including the sale of our common stock to Arch Coal on March 23, 2010), (b) April 30, 2010, or (c) the occurrence of a continuing uncured event of default or a change in control of the Company or Clean Coal.

Lastly, on that same day, we entered into an amendment to the Chemicals, Equipment and Technical Services Supply Agreement with Clean Coal pursuant to which we supply it with certain chemicals, additives, equipment and technical services to facilitate its purposes. Clean Coal pays us stated charges for the chemicals, additives, and technical services we supply to Clean Coal. If we choose to supply equipment to Clean Coal, we have agreed to do so at our cost.

Our net operating loss for 2009 in addition to including the consolidated operations of Clean Coal includes net costs of \$388,000 related to our refined coal efforts and \$703,000 from that joint venture. As noted above, Clean Coal placed two systems in service during December 2009 which produced \$2.4 million in revenue from the sale of approximately 76,800 tons of refined coal produced, generating \$476,000 of related tax credits.

Commercial Mercury Emissions Control

Mercury control regulations have been passed in 19 U.S. states and 6 Canadian provinces. ACI is currently the dominant control technology to address mercury emissions and is being actively deployed to meet these existing state requirements. ACI controls have been thoroughly evaluated by the Department of Energy National Energy Technology Laboratory over the course of its three-phase mercury control field testing program and have been demonstrated to reduce mercury emissions by over 90% in most coal-fired power plants.

During 2009, we signed new contracts for 10 ACI systems for mercury emission control. We believe the eventual outcome of the EPA MACT process and/or legislative action will accelerate and further expand the market for our MEC products and services. We have seen delays in the decision-making process on mercury control as a result of the invalidation of CAMR, which has postponed the award of some near-term projects as independent power producers and utilities revise their long-term plans for compliance. We expect more than eight ACI systems will be awarded in 2010 and 2011, with an increase in 2012 through 2014 in response to anticipated EPA mercury MACT rules in the industrial boiler, cement and utility markets. We recognize revenue on these contracts on the percentage of completion method. The uncompleted portion of outstanding contracts at December 31, 2009 represents \$5.7 million in gross revenue. We expect to complete and recognize about \$3.7 million of this revenue in 2010, with the remainder in 2011. If we are unable to meet certain delivery obligations under the contracts, except for failures to do so beyond our control, we may be liable for liquidated damages. Since the market for commercial systems commenced in 2005, we have met all of the delivery milestones under our contracts, and we expect that we will continue to be able to do so. If a customer elects early termination of an agreement not due to any fault of ours, we are entitled to reimbursement for all costs incurred in performing the agreement through the date of termination, including costs incurred in terminating our performance and costs incurred to any subcontractors.

On March 23, 2010, we entered into a Subscription Agreement with Arch Coal, Inc. (“Arch Coal”) pursuant to which they purchased 143,885 shares of our Common Stock for an aggregate purchase price of \$1.0 million. We are also in the process of negotiating an agreement with Arch Coal (the “Arch Coal License”) to exclusively license to Arch Coal technology relating to additives that may be applied to coal at Arch’s mines to limit HAPs emissions from burning that coal in boilers and enhancing the marketability of such coal, pursuant to which they would pay us a non-refundable initial license fee of \$2.0 million in cash, and additional fees based on sales of coal to which such technology has been applied. We expect to use the net proceeds of the sale of our common stock and, if received, the initial license fee to fund our capital contributions to Clean Coal to repay the NexGen Loan and for Clean Coal’s and our general working capital.

Carbon Solutions’ Development of an AC Manufacturing Facility

We believe that the current supply capacity of AC will be inadequate for the projected demand created by the expanding mercury emissions control market. Without regard to Carbon Solutions’ supply and production capabilities, we projected shortages of the material as early as 2010. In 2006 and 2008, we commissioned market studies from independent third parties and purchased multiple-client market studies to estimate the worldwide production and expected future demand for AC in both the conventional water treatment markets and the developing mercury control market. The studies we commissioned documented that the U.S. market for AC in 2007, which is primarily for water treatment, was approximately 334 million pounds. With regulations in place today to reduce mercury emissions, this could nearly double by the end of 2010, and if a more stringent federal regulation comes into effect, the demand could more than triple by that time.

In 2006, we decided to pursue the design and construction of a new AC manufacturing plant that is expected to have an annual manufacturing capacity of approximately 150 million pounds of AC per product line, sufficient to capture mercury from up to 40 GW of coal-fired power generation. This manufacturing plant is based on a significantly improved technology that is cost-effective, energy efficient, and environmentally sound. The manufacturing facility is being constructed through Red River, a wholly owned subsidiary of our joint venture Carbon Solutions. When completed, the AC Facility will be the largest ever constructed in the U.S.

The plant is expected to achieve partial commercial operation starting in the second quarter of 2010 and full operation by the end of the third quarter of 2010. All-in financing for the first production line and related activities

is estimated at approximately \$400 million. Approximately \$160 million of that amount is expected to come from equity participation from us and our joint venture partner, ECP, while we expect to fund the remainder with debt financing. As of December 31, 2009, the outstanding amount of ECP'S preferred equity totaled \$102 million, and the principal balance of ECP's loans to Red River totaled \$76.3 million. In August 2007, we engaged Credit Suisse Securities, (USA) LLC ("Credit Suisse") to assist us with negotiating the debt financing that will also be needed for the project. Under our agreement with Credit Suisse, it is entitled to reimbursement of expenses incurred in connection with providing us with services, and a customary commission will be payable to Credit Suisse upon closing of the debt financing for the project.

To date, Carbon Solutions has executed AC supply contracts expected to result in sales of over 200 million pounds of AC with U.S. and Canadian utilities seeking to control mercury emissions on existing and new power plants, representing approximately 32% of the plant's planned capacity. Red River expects to be able to sell the majority of its AC output under three-to-five year contracts to owners of coal-fired power plants for the purpose of mercury mitigation but expects that such sales may not occur until 2012.

Government and Industry-Supported Contracts

The United States Department of Energy ("DOE") issues solicitations periodically for various research, development and demonstration ("RD&D") projects. DOE solicitations range in subject matter, and we submit proposals for those solicitations that fit our mission, strategic plan and capabilities. The bids include a proposed statement of work, and cost estimates, and DOE then negotiates a final contract with the successful bidder to perform the specified work. The contracts with the DOE can be Grants or Cooperative Agreements and are considered financial assistance awards. Generally, the agreements cover the development and/or demonstration of air pollution control technologies for coal-fired power generating plants. The work may involve designing and fabricating equipment, installing the equipment at power plants, testing the equipment, preparing economic studies, and preparing various reports. In addition, we assist coal-burning utilities in the variety of problems that may be encountered from new regulations and in switching to lower cost coals. The deliverables required by the agreements include various technical and financial reports that we submit on a prescribed schedule. The agreements require us to perform the negotiated scope of work, which includes testing/demonstrating various air pollution control technologies. The agreements with the DOE provide that any inventions we create as a result of the work become our property and we retain the rights to commercialize any products we develop under the contracts. We are currently participating in one such agreement pursuant to which we are researching and developing a novel process to capture CO₂ from coal-fired power plants and expect the project to last through the end of 2010.

Agreements with the DOE generally require industry cost share, which is considered a key component to the viability of the project and which may take the form of cash contributions and/or in-kind contributions of material and services. The industry cost share percentages on the mercury control projects in which we have participated have ranged from 25% to 50% of the total project costs. Typically, the utility host site for the demonstration project provides a considerable amount of the cost share with other interested industry partners also providing funding, either individually or through the Electric Power Research Institute ("EPRI"). To the extent that the required cost share is not provided by industry partners or EPRI, we provide the balance by providing some cost sharing on our own in one form or another.

Our present contract with DOE and industry participants totals \$3.2 million, of which \$2 million represents the contract directly with DOE. We recognized revenues in 2009 and 2008 from this and other DOE and industry-funded contracts totaling \$3.9 million and \$4.7 million, respectively, which comprised 19% and 29%, of our total revenues for those respective periods. Of these amounts, \$876,000 and \$1.1 million in 2009 and 2008, respectively, were revenues directly from DOE. These contracts are subject to audit and potential adjustment as to amounts already received. Adjustments mandated by government audits have not materially impacted our revenues in the past; however, government audits for the years 2004 through 2009 have not yet been finalized. These contracts are also subject to annual appropriation of funds by Congress, and although continued funding is considered probable, we cannot be certain that the government will continue to approve funding for these contracts in future budgets or at similar levels. We do not expect DOE to fund any new mercury control projects; however, we expect funding from power generators for mercury control evaluation and testing to meet state regulations to continue. We anticipate that DOE may fund other projects related to our business, including projects aimed at CO₂ emissions control. We expect future revenues from our current DOE contracts in progress to amount to \$1.6 million, of which we expect to recognize approximately \$730,000 in 2010.

We are also seeing increased funding for clean coal technology. The American Recovery and Reinvestment Act allocated \$3.4 billion to support development and demonstration of technology to capture and store CO₂ from coal-

fired power plants. In October 2009, DOE released a Funding Opportunity Announcement (“FOA”) for continued funding of our current CO₂ project. This FOA provides the ability to request additional funding for solid sorbent technologies. We submitted a proposal in December 2009 for a \$14 million program in response to this opportunity and expect that DOE will announce awards in April 2010. We have been successful in this arena in the past, with awards totaling approximately \$80 million that supported development of our mercury control work, and we are hopeful that we will be successful in obtaining similar funding in the future.

FGC

We have developed technologies for conditioning flue gas streams from coal-fired combustion sources that allow existing air pollution control devices to operate more efficiently. Through various suppliers and contractors, we manufacture engineered units for each individual application. The units mix, pump and monitor the feed of proprietary chemical blends. The chemical blends are applied to the flue gas streams by a pressurized system of specially designed lances and nozzles. Such treatment of the flue gas stream allows for more effective collection of fly ash particles that would otherwise escape into the atmosphere.

Revenues from sales of chemicals to FGC customers in 2009 and 2008 and other FGC contract work totaled \$324,000 and \$433,000, respectively. In 2009, revenues from FGC-related equipment sales totaled \$405,000 which is included in the MEC segment.

Other Consulting Services

We also offer consulting services to assist utilities in planning and implementing strategies to meet new government emission standards requiring reductions in SO₂, NO_x, particulates and mercury. This includes demonstrations of our commercial products. We receive funding for consulting and a portion of our development and testing activities from industry partners that have a strategic interest in the technology. Total revenues from other consulting services approximated \$1.6 million in both 2009 and 2008, most of which is related to mercury emission control.

Competition

The commercial mercury control market for existing coal-fired electric utilities has emerged as a result of the enactment of state and federal regulations that for the first time in U.S. history are requiring those utilities to control mercury emissions. We estimate that there are approximately 1,500 individual units (several may be located on one site) in excess of 25 megawatts of generating capacity that are and could be impacted by these regulations. Regulations currently exist that require new coal-fired plants to control mercury emissions. There are as many as 30 new coal-fired power plants in the United States under various stages of development, all of which have requirements for mercury emission control. Through 2009, our mercury control technology has been demonstrated at full scale at over 40 plants and 26 commercial ACI systems, generally yielding over 90% mercury control on most applications. In addition, our approach to mercury control is quite cost effective compared to competing technologies that require capital intensive equipment. We add significant value to our base offerings by having complementary products and services. Our expertise in installing full-scale demonstration plants reflects our understanding of the application of mercury control technology that customers find invaluable. In combination with our practice of providing users with performance guaranties and offering both equipment and (through Carbon Solutions) AC, this expertise enhances our competitive position in this market. The capital equipment we provide ranges from approximately \$750,000 to \$1.0 million per coal-fired boiler unit. The AC usage is estimated to range from approximately \$1.0 million to \$2.0 million per year per unit for an average size plant (250-300 MW). We believe Norit Americas, Inc. (“Norit”), Alstom Power, Inc. and Siemens Environmental Systems and Services (f/k/a Wheelabrator Air Pollution Control, Inc.) have responded to requests for commercial bids for ACI systems, and are our principal competitors in this market. Competition for ACI systems is based primarily on price, quality, performance and the ability to meet the requested schedule. Based on the contracts we were awarded since 2005, we believe we are one of the market leaders and that we currently have approximately 33% of the existing market. As this market matures, we expect competition to continue to increase.

Carbon Solutions is focused on the growing North American market for AC used for the control of mercury emissions from coal-fired power plant. Their principal competitors in this market include Norit, Calgon Carbon Corporation (“Calgon”), RWE Power AG (a German company), and Albermarle. However, Albermarle does not produce AC--Albermarle treats and supplies AC produced by others such as Mead/Westvaco Corporation (which, we believe, has a marketing/supply agreement with Albermarle for AC supply) and Chinese imports. Norit and Calgon have announced they are constructing additional facilities or renovating existing facilities to expand their capacity to produce and supply AC.

Asian producers of AC, primarily in China, are also sources of AC to the market, and supply companies that re-sell AC. Other U.S. producers of AC, which currently tend to focus on other AC applications, include Mead/Westvaco Corporation and Siemens Water. Competition in AC supply and services is based on price, quality, expertise and performance.

Our primary competition in the FGC arena is conventional FGC technology using either sulfur trioxide (“SO₃”) or a combination of SO₃ and ammonia. This technology has been available commercially since the 1970's in a variety of forms. Conventional SO₃ FGC has been shown to interfere with the performance of AC which is expected to limit new SO₃ installations after new mercury regulations are promulgated. Preliminary tests indicate that our FGC technology does not interfere with MEC as does SO₃-based FGC. The different products in the industry that aid electrostatic precipitator performance primarily compete on the basis of performance and price. We usually arrange for a full-scale demonstration of our products to potential customers prior to selling our systems and chemicals for use on a continuing basis.

With respect to our refined coal technology, there are no major barriers to entry in this niche market; however, utility companies are generally slow to embrace new technologies when they perceive any potential for disruption in the production of electricity. Potential competition for these products comes from the use of coal blends.

Patents

We have received 9 patents and have an additional 12 patent applications pending or filed relating to different aspects of our technology. Our existing patents have terms of 17 years measured from the application date, the earliest of which was in 1998. Although important as protection for certain aspects of our continuing business, we do not consider any of our patents or pending patents to be critical to the ongoing conduct of our business, with the exception of the patents and intellectual property rights licensed to Clean Coal, as noted above.

Supply of Chemicals for Our Customers

We typically negotiate blending contracts that include secrecy agreements with chemical suppliers located near major FGC and refined coal customers. These arrangements minimize transportation costs while assuring continuous supply of our proprietary chemical blends. We have operated under these arrangements since the spring of 1999. They are generally renewed on an annual basis.

Our joint venture, Carbon Solutions, also supplies utility customers with AC for mercury control needs. In 2008, Carbon Solutions commenced deliveries of this material, procured from foreign suppliers and processed at its facilities for quality and product control.

Raw Materials, Subcontract of Installation and Working Capital Practices

We purchase equipment from a variety of vendors for the engineered ACI systems, components and other equipment we manufacture and/or provide. Such equipment is available from numerous sources; however based on the system requested by the customer, we may determine that some sources are not suitable. We typically subcontract the major portion of the work associated with installation of such equipment from a variety of vendors, usually located near the work site. We purchase our proprietary FGC, refined coal and ADA-249M chemicals through negotiated blending contracts with chemical suppliers generally located near each major customer. The chemicals used are readily available, and there are several chemical suppliers that can provide us with our requirements. We do not provide any extended payment terms to our customers. We typically provide equipment warranties and performance guaranties related to our ACI systems (See “Risk Factors” and Footnote 9 “Commitments and Contingencies” in the Financial Statements filed as a part of this Report).

Seasonality of Activities

The sale of FGC chemicals and expected refined coal operations depend on the operations of the utilities to which such products are provided. Our utility customers routinely schedule maintenance outages in the spring or fall depending upon the operation of the boilers. During the period in which an outage may occur, which may range from one week to over a month, no chemicals or refined coal products are used and purchases from us are correspondingly reduced. The other aspects of our business are not seasonal in any material way.

Dependence on Major Customers

In 2009, we performed work to supply ACI systems to 20 customers. We recognized 15% and 5% of our total revenue from Ameren Energy Generating Company in Missouri and Alstom Power, Inc. in Tennessee, respectively. In 2009, through Clean Coal, we recognized 13% of our total revenue from Associated Electric Cooperative, Inc. in

Missouri. In addition, we recognized 7% of our revenue from services provided as a subcontractor from Wisconsin Energy Corporation in Wisconsin under a U.S. government contract. (See Note 5 to the "Consolidated Financial Statements" included elsewhere in this Report). Our own sales staff markets our technology through trade shows, mailings and direct contact with potential customers.

Backlog Orders

As of December 31, 2009, we had contracts in progress for supply of ACI systems totaling approximately \$5.7 million. We expect to complete and recognize approximately \$3.7 million of this revenue in 2010, with the remainder in 2011. Our current DOE and industry funded R&D contracts in progress, assuming no changes in funding, are expected to result in future revenues of \$1.6 million, of which we expect to recognize approximately \$730,000 in 2010. Contracts in progress for other consulting work totaled approximately \$200,000 at year-end 2009. We expect to complete and realize the revenues for all of our existing consulting work in 2010.

Research and Development Activities

In 2009 we were involved in several R&D contracts funded by DOE and industry groups, primarily directed toward the control of mercury emissions and CO₂ capture. We participate in cost share arrangements in many of those contracts. For 2009 and 2008 our direct cost share for R&D under DOE related contracts approximated \$1,000 and \$30,000, respectively. In addition, we spent approximately \$170,000 and \$948,000 on our own behalf on research and development activities related to further development of our technologies during 2009 and 2008, respectively.

Employees

As of December 31, 2009, we employed a total of 54 full-time and part-time personnel, including eight Company executive officers. Fifty-two people are employed at our offices in Littleton, Colorado, one in Maryland, and one in Pennsylvania.

Copies of Reports

Our periodic and current reports are filed with the SEC pursuant to Section 13(a) of the Securities Exchange Act of 1934 and are available free of charge within 24 hours after the same are filed with or furnished to the SEC at the Company's website at www.adaes.com.

Copies of Corporate Governance Documents

The following Company corporate governance documents are available free of charge at the Company's website at www.adaes.com and such information is available in print to any shareholder who requests it by contacting the Secretary of the Company at 8100 SouthPark Way Unit B, Littleton, CO 80120.

- Audit Committee Charter
- Compensation Committee Charter
- Nominating and Governance Committee Charter
- Code of Conduct

Forward-Looking Statements Found in this Report

This Annual Report contains forward-looking statements within the meaning of Sections 21E of the Securities Exchange Act of 1934 and 27A of the Securities Act of 1933 that involve risks and uncertainties. In particular such forward-looking statements are found in this Part 1 and under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operation." Words or phrases such as "anticipates," "believes," "hopes," "expects," "intends," "plans," the negative expressions of such words, or similar expressions are used in this Report to identify forward-looking statements, and such forward-looking statements include, but are not limited to, statements or expectations regarding:

- (a) the impact of the invalidation of the Clean Air Mercury Rule ("CAMR"), when Maximum Achievable Control Technology ("MACT") based mercury relations will be promulgated and/or mercury control legislation will be enacted and the timing, scope and impact of such regulations or legislation;
- (b) expected long-term growth in the MEC market and changes in the FGC market;
- (c) expected growth in the power industry's interest in and funding for carbon dioxide ("CO₂") capture projects;
- (d) the appropriation of funds by Congress for DOE CO₂ projects;
- (e) the timing of awarding of contracts and their value;
- (f) the proposed Arch Coal License;

- (g) the expected costs, capacity of, funding of and timing for the commencement of operations at the activated carbon facility (“AC”) that is being built by Red River in Coushatta, Red River Parish, Louisiana (the “AC Facility”);
- (h) the willingness and ability of ECP to continue to fund the construction costs of the AC Facility and legal expenses relating to the Norit arbitration through contributions and loans to Carbon Solutions;
- (i) possible changes in the level of our ownership of Carbon Solutions;
- (j) timing and amounts of or changes in future revenues, funding for our business, margins, expenses, cash flow and other financial measures;
- (k) impact of pending legal actions, including the costs thereof and our indemnity obligations to Carbon Solutions and ECP;
- (l) the ability of Clean Coal to monetize its refined coal facilities;
- (m) working capital and liquidity; and
- (n) the materiality of any future adjustments to previously received revenue as a result of DOE audits.

Our expectations are based on certain assumptions, including without limitation, that:

- (a) coal will continue to be a major source of fuel for electrical generation in the United States;
- (b) we will continue as a key supplier of equipment and services to the coal-fired power generation industry as it seeks to implement reduction of mercury emissions;
- (c) contracts we have with the DOE will continue to be funded at expected levels and we will be chosen to participate in additional contracts of a similar nature;
- (d) current environmental laws and regulations requiring reduction of mercury from coal-fired boiler flue gases will be expanded and strengthened as a result of the EPA MACT process and/or by pending federal and state legislation, and such laws and regulations will not be materially weakened or repealed by courts or legislation in the future;
- (e) we will be able to meet any performance guaranties we make with respect to levels of mercury reduction from systems that we install;
- (f) we will continue to be able to meet our other obligations under contracts as required by those contracts;
- (g) we will be able to obtain adequate capital and personnel resources to meet our operating needs and to fund anticipated growth;
- (h) we will be able to establish and retain key business relationships with other companies;
- (i) orders we anticipate receiving will in fact be received;
- (j) governmental audits of our performance under DOE contracts will not result in material adjustments to amounts we have previously received under those contracts;
- (k) we will be able to formulate new chemicals and blends that will be useful to, and accepted by, the coal-fired boiler power generation business;
- (l) we will be able effectively to compete against others;
- (m) Red River will commence operations in its AC Facility on time and within budget;
- (n) we will be able to meet any technical requirements of projects we undertake; and
- (o) Clean Coal will be able to monetize its refined coal facilities.

The forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from the anticipated results we discuss in this Report. Although forward-looking statements provide additional information about us, investors should keep in mind that forward-looking statements are only predictions, at a point in time, and are inherently less reliable than historical information. We do not guarantee future results, levels of activity, performance or achievements and we do not assume responsibility for the accuracy and completeness of these statements. You are cautioned not to place undue reliance on the forward-looking statements made in this Annual Report, and to consult any later filings we may make with the Securities and Exchange Commission for additional risks and uncertainties that may apply to our business and the ownership of our securities. The forward-looking statements contained in this Annual Report on Form 10-K are made and based on information as of the date of this Report. We assume no obligation to update any of these statements based on information after the date of this Report. In evaluating these statements, you should specifically consider the risks discussed in greater detail under the caption “Risk Factors” in Item 1A below. These risk factors may cause our actual results to differ materially from any forward-looking statement.

Item 1A. Risk Factors.

RISKS RELATING TO OUR BUSINESS

The following risks relate to our business as of the date of this Report. This list of risks is not intended to be exhaustive, but reflects what we believe are the material risks inherent in our business and the ownership of our securities as of the date of this Report. A statement to the effect that the happening of a specified event may have a negative impact on our business, results of operations, profitability, financial condition, or the like, is intended to reflect the fact that such an event would be likely to have a negative impact on your investment in the Company. The order in which the following risk factors are presented is not intended as an indication of the relative seriousness of any given risk.

DEMAND FOR OUR PRODUCTS AND SERVICES DEPENDS SIGNIFICANTLY ON ENVIRONMENTAL LAWS AND REGULATIONS; UNCERTAINTY AS TO THE FUTURE OF SUCH LAWS AND REGULATIONS, AS WELL AS CHANGES TO SUCH LAWS, HAS HAD AND WILL LIKELY CONTINUE TO HAVE A MATERIAL EFFECT ON OUR BUSINESS.

A significant market driver for our existing products and services, and those planned in the future, are the environmental laws that limit mercury emissions from coal-fired power plants and other environmental laws. If such laws were rescinded or substantially changed, our business would be adversely affected by declining demand for such products and services. For example:

- the invalidation of CAMR in February 2008 resulted in a “wait and see” approach by our customers, which we have seen in delays in orders and deliveries of previously placed orders, cancellations or delays in planned product demonstrations and decreased sales to coal-fired electric generating utilities. Such uncertainty has also caused delays in purchasing decisions for MEC equipment, especially for those utilities who were considering multi-pollution control solutions.
- In October 2009, the U.S. Environmental Protection Association (“EPA”) agreed to promulgate final rules to reduce hazardous air pollutants (“HAPs”) from coal-fired power plants, based on MACT by November 2011 with implementation in 2014. A lack of definitive mercury (and other HAPs) emission regulations until then will likely continue the uncertainty among independent power producers and utilities as to what will be required of them as far as mercury (and other HAPs) controls, which has adversely impacted their ability to include pollution control costs in their rate bases. This uncertainty is and will likely continue to negatively impact our business, results of operations and financial condition until new federal regulations are finalized, which will then mandate how industry must respond to the new federal regulations or state laws, including those that are presently in various stages of enactment, for pollution control and permitting requirements for new coal-fired plants. We do not expect significant revenue growth in this area unless and until federal or state regulations impact a significant portion of the 1,500 existing boilers.
- Rescission of Canadian or U.S. state mercury control legislation or permitting requirements would likely cause an adverse effect on our business and financial condition.
- Finally, federal, state and local legislation mandating that utility companies serving a state or region purchase a minimum amount of power from renewable energy sources such as wind, hydroelectric, solar and geothermal would reduce demand for our products and services.

WE MAY NOT HAVE SUFFICIENT WORKING CAPITAL TO PURSUE OUR BUSINESSES AND PAY OUTSTANDING OBLIGATIONS, AND WE MAY NOT BE ABLE TO OBTAIN OUTSIDE FINANCING ON ACCEPTABLE TERMS.

Costs to defend and indemnity obligations related to existing legal actions against us have been and are expected to continue to be significant, and taken together, exceed our working capital, and the outcome of the legal actions and satisfaction of our indemnity obligations may have a material adverse effect on our business and financial condition.

Norit Americas, Inc., which is an AC manufacturer with whom we have previously done business, filed a lawsuit against us, Carbon Solutions, certain of Carbon Solutions’ subsidiaries (collectively with Carbon Solutions, the “AC Supply Companies”) and two of Carbon Solutions’ employees (who were former employees of Norit) asserting claims for misappropriation of trade secrets and other claims, and seeking monetary damages and injunctive relief

that seek to prevent us from using what they allege to be Norit trade secrets and other intellectual property involving the manufacture of AC, particularly in connection with the AC Facility. The case, which was originally captioned Norit Americas, Inc. v. ADA-ES, Inc., ADA Environmental Solutions, LLC, John Rectenwald, and Stephen Young, Cause No. 08-0673, was filed in Harrison County, Texas in August 2008 (the "Texas Action"), has been moved by order of the court to binding arbitration in Atlanta, Georgia, and is now scheduled to be heard beginning in October, 2010. In addition, in December 2009, Norit N.V., which is the Dutch parent of Norit, opened a preliminary proceeding in the Almelo District Court, the Netherlands, to take preliminary testimony based on allegations that we violated a confidentiality agreement entered into by us in 2005 with Norit N.V. Responding to Norit's claims, whether or not they are ultimately found to have merit, has been time consuming and very costly, and the ultimate outcome of these matters is unknown. In addition, the litigation could result in substantial damages for which we would be responsible. Finally, pursuant to agreements we have entered into with ECP and the AC Supply Companies, certain liabilities were expressly excluded from the transactions ("Excluded Liabilities"), including liabilities with respect to the Texas Action, and we are obligated to provide indemnity against the reasonable costs, expenses and losses that are incurred as a result of such Excluded Liabilities (the "Indemnity Obligations"). Satisfaction of any Indemnity Obligations to ECP may be made via a decrease in our capital contributions (and corresponding increase in ECP's capital contributions) in Carbon Solutions and adjustment of each party's percentage ownership accordingly. As described above, such amounts are substantial, and, if payment were required, it would likely have a material adverse effect on our business and financial condition, and there may be doubt as to our ability to continue as a going concern.

We may not have sufficient working capital to fund the Indemnity Obligations or other indemnity claims or for our refined coal and other businesses.

Our principal source of liquidity has been our existing working capital. We had a negative operating cash flow for the year ended December 31, 2009 and this trend may continue into 2010, primarily due to legal expenses incurred in connection with the Texas Action. Carbon Solutions has funded, through loans or equity contributions from ECP to Carbon Solutions, a significant portion of the legal expenses related to the Texas Action. As of December 31, 2009, we had recorded a liability to Carbon Solutions of approximately \$6.8 million related to such expenses. We do not currently have any accrued indemnity obligations to ECP, and we are unable to estimate the total amount of any future indemnity obligations to Carbon Solutions or ECP at this time. ECP has notified us that it believes such obligations include any losses it suffers due to its loss of potential customers and diminution in the value of its businesses as well as costs and fees it will incur and any damages it may suffer as a result of a new lawsuit Norit N.V. has filed against ECP in state court in New Jersey. We may also require additional working capital to meet our 50% share of capital expenditures and operating requirements of Clean Coal and to pursue our other businesses. Our ability to generate the financial liquidity required to meet ongoing operational needs and to meet our current and future indemnification obligations to Carbon Solutions and potentially to ECP, will likely depend upon several factors, including ongoing legal expenses incurred by the parties in the Norit matters, timing of satisfaction and ultimate amount of the Indemnity Obligations, insurance coverage with respect to the Norit matter, our ability to finalize negotiations on the Arch Coal License and obtain the initial license fee, our ability to maintain a significant share of the market for mercury control equipment, continuation of FGC chemical sales and Clean Coal's success in monetizing Section 45 tax credits through the sale of facilities to third party investors. Our failure to have sufficient working capital to fund these obligations would likely have a material adverse impact upon our business and financial condition.

The recession has adversely impacted our ability to obtain third party financing for our businesses.

The capital and credit markets have been experiencing extreme volatility and disruption for more than 12 months. In some cases, the markets have exerted downward pressure on stock prices and the ability of many issuers to obtain financing. Our working capital needs and plans for growth require access to the capital and credit markets on favorable terms. If current levels of market disruption and volatility continue or worsen, access to capital and credit markets could be further restricted, causing delays in our ability to obtain the debt or equity financing that we require for our businesses.

In addition to the Indemnity Obligations, we have provided guaranties and undertaken other commitments of approximately \$120 million as of December 31, 2009 related to Carbon Solutions and do not have sufficient working capital to meet such obligations if they were called upon.

We have guaranteed all amounts owed by Red River under the contract for the engineering, procurement and construction of the AC Facility. As of December 31, 2009, the remaining obligations under this contract totaled

approximately \$98 million. Although Red River can terminate this contract for convenience at any time, Red River (and us, based on our guaranty) would then owe the contractor the amount earned through the termination date, cancellation charges to subcontractors, other reasonable termination-related costs incurred by the contractor, costs of demobilization and unreimbursed sales taxes paid by the contractor. We have also guaranteed the payment by Red River of amounts owing under four multi-hearth furnace contracts for the AC Facility. As of December 31, 2009, the remaining obligation under these contracts was approximately \$9.9 million. Red River can terminate these contracts at any time for convenience; however, Red River would then owe the supplier for reimbursable costs and amounts owed for milestone and progress payments, cancellation charges to subcontractors and costs of demobilization. These amounts could be substantial and may not be completely recoverable by us if Red River were to abandon or sell the AC Facility. Finally, we have guaranteed Red River's obligations under three AC sales agreements with a maximum liability of \$12 million. If Red River cannot meet its obligations under these agreements, we may be liable to the customers for significant damages, which would materially adversely affect our financial condition.

Although Red River has agreed to reimburse us if we are required to make payments under our guaranties of its obligations, we have assigned our rights to be reimbursed to ECP and would not be reimbursed unless and until ECP's preferred equity in Carbon Solutions is fully redeemed or converted and all of its loans to Red River are paid in full.

Under terms of agreements with Carbon Solutions, as amended in August, 2009, Red River has agreed to reimburse us and ECP if we or they make payments related to the guaranties provided by ECP and us and has granted a security interest in its assets to ECP and us to secure the reimbursement agreement and any loans ECP makes to Red River. Carbon Solutions has guaranteed the obligations of Red River under a reimbursement and loan agreement and has pledged its equity interest in Red River to ECP and us as security for this guaranty. We have assigned our rights under these agreements to ECP, and any amounts payable to us would be paid directly to ECP until ECP's preferred equity in Carbon Solutions is fully redeemed or converted and all loans to Red River have been paid in full. As of December 31, 2009, the outstanding amount of ECP's preferred equity totaled \$102 million, and as of that date, the principal balance of ECP's loans to Red River totaled \$76.3 million. These amounts have increased between December 31, 2009 and the present, and will likely continue to increase until either the AC Facility is completed or permanent debt financing is in place. ECP's loans to Red River are evidenced by secured demand notes bearing interest at 12% per annum compounded quarterly.

ECP CONTROLS CARBON SOLUTIONS AND MAY DILUTE OUR EQUITY FURTHER SUCH THAT WE WOULD LOSE ADDITIONAL MANAGEMENT RIGHTS, WHICH MAY ADVERSELY AFFECT OUR FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Carbon Solutions is managed by a Board of four Managers, three of which were designated by ECP. Certain major transactions require the written consent of members holding at least 75% of the aggregate Carbon Solutions' membership interests, of which we held 33% as of December 31, 2009. If ECP makes additional ordinary capital contributions to Carbon Solutions or converts its demand loans or preferred equity contributions to ordinary capital contributions, our percentage ownership interest would be diluted. In addition, if we fail to promptly pay our indemnity obligations to ECP, although no dollar amounts have been claimed by ECP, ECP may decrease our capital contributions (and increase ECP's capital contributions) in Carbon Solutions by such amount and adjust each party's percentage ownership accordingly. If our interest in Carbon Solutions is diluted to less than 15%, we would lose our rights to designate our one remaining designee on the Board of Managers, and Carbon Solutions would be managed exclusively by ECP and its designees. If all of ECP's outstanding equity and loans were converted to ordinary capital contributions, our percentage ownership interest would be diluted to less than 15%. Our loss of approval rights may result in ECP's making decisions regarding the AC Facility and AC supply business that adversely affect our business, financial condition and results of operations. Furthermore, under the LLC Agreement of Carbon Solutions, until October 1, 2011, we may not pursue additional investments in carbon lines for the AC Facility or additional investments in AC production projects without ECP's agreement. Accordingly, even if our membership interest in Carbon Solutions were significantly diluted, we could not freely pursue an AC production business prior to October 1, 2011, which would likely adversely impact our ability to compete effectively with other suppliers of ACI systems that have the ability to supply their own AC to their ACI system customers.

WE ARE UNABLE TO PREDICT THE IMPACT OF RECENT (AND CONTINUING) ECONOMIC FACTORS ON OUR BUSINESS.

The United States and global economies are currently experiencing a period of substantial economic uncertainty with wide-ranging effects, including:

- disruption in global financial markets that has reduced the liquidity available to us, our customers and suppliers;
- a substantially weakened banking and financial system with increasing risk and exposure to the impact of non-performance by banks committed to provide financing, hedging counterparties, insurers, customers and suppliers;
- extreme volatility in commodity prices;
- increasing risk that customers and suppliers may liquidate or seek protection under federal bankruptcy laws and reject existing contractual commitments; and
- the inability to predict with any certainty the effectiveness and long-term impact of economic stimulus plans.

We are unable to predict the impact, severity and duration of these events, any of which could have a material adverse impact on our financial position, results of operations and cash flows.

IF WE ARE UNABLE TO COMPETE WITH OTHER INDUSTRY PARTICIPANTS, WE WOULD SUFFER ADVERSE EFFECTS TO OUR BUSINESS AND FINANCIAL CONDITION.

We face competition in all aspects of our operations, including competition from both domestic and foreign suppliers. In North America, our competitors consist of large national and international companies and local and regional companies of varying sizes and financial resources. Certain of our competitors have advantages over us, including substantially greater financial and other resources. We may not be able to successfully compete with them. We have seen our market share for ACI systems decline over the two years due to pricing pressures from increased competition. If we are unable to maintain a significant market share for our systems, our business and financial condition would be adversely affected. In addition, competitors have reduced their prices to attract or retain our customers, which may result in an adverse impact to our margins, revenues and business.

IF THE DOE DISCONTINUES FUNDING OF EXISTING AND PLANNED CLEAN COAL TECHNOLOGY PROGRAMS, OUR BUSINESS WOULD BE HARMED.

For the years 2009 and 2008, 19% and 29%, respectively, of our revenues were derived from or related to DOE programs. The federal budget for fiscal year 2010 does not contain any new funding for the types of mercury control DOE projects in which we have historically participated. If Congress does not appropriate funds consistent with past practice for research and development of clean coal technology programs, our business would be harmed.

WE HAVE AGREEMENTS TO INDEMNIFY THIRD PARTIES AGAINST INTELLECTUAL PROPERTY CLAIMS CONCERNING LICENSED TECHNOLOGY THAT COULD BE SIGNIFICANT.

We have agreed to indemnify Clean Coal and may enter into additional license agreements with others under which we agree to indemnify and hold the licensee harmless from and against losses it may incur as a result of the infringement of third party rights by use of our patents or other intellectual property. Infringement claims, which are at the very least expensive and time-consuming to defend, could have a material adverse effect on our business, operating results and financial condition, even if we are successful in defending ourselves (and indemnified parties) against them.

THE ABILITY OF CLEAN COAL TO MONETIZE THE SECTION 45 TAX CREDITS FROM THE SALE OF REFINED COAL IS NOT YET ASSURED, AND THE INABILITY TO DO SO COULD ADVERSELY AFFECT OUR FUTURE GROWTH AND PROFITABILITY.

Clean Coal placed two refined coal facilities into operation prior to January 1, 2010, the required date for doing so under Internal Revenue Code provisions for Section 45 tax credits for refined coal to be produced by the facilities. Clean Coal plans to sell the facilities and monetize the Section 45 tax credits resulting from the sale of refined coal from these facilities, but does not yet have agreements in place with any third parties to do so. The inability of Clean Coal to successfully sell the facilities and monetize the tax credits would likely have an adverse effect on future growth and profitability.

FAILURE TO PROTECT OUR INTELLECTUAL PROPERTY OR INFRINGEMENT OF OUR INTELLECTUAL PROPERTY BY A THIRD PARTY COULD HAVE AN ADVERSE IMPACT ON OUR FINANCIAL CONDITION.

We rely on a combination of patent, copyright and trademark laws, trade secrets, confidentiality procedures and contractual provisions to protect our proprietary rights. Such means of protecting our proprietary rights may not be adequate because they provide only limited protection. We also enter into confidentiality and non-disclosure of intellectual property agreements with our employees, consultants and many of our vendors and generally control access to and distribution of our proprietary information. Notwithstanding these precautions, it may be possible for a third party to copy or otherwise obtain and use our proprietary information without authorization. We cannot assure you that the steps taken by us will prevent misappropriation of our technology and intellectual property, which could result in injury to our business and financial condition. In addition, we may not have the working capital to fund legal actions to vigorously pursue persons who misappropriate our intellectual property given the costly nature of such actions, and such actions would divert the attention of our management from the operation of our business.

TECHNICAL OR OPERATIONAL PROBLEMS WITH LONG-TERM OPERATION OF ACI SYSTEMS COULD RESULT IN ADDITIONAL COSTS AND DELAYS THAT ADVERSELY AFFECT OUR FINANCIAL CONDITION.

We started to install our ACI systems at coal-fired power plants on a permanent basis for the first time in 2006. We continue to evaluate the likelihood for technical or operational problems with our ACI systems from long-term operations, but cannot be certain that such problems will not arise. Any such problems could result in delays in, or postponement or cancellation of, expected installations at power plants and would likely have a material adverse effect on our business and financial condition.

OUR DEPENDENCE ON THIRD PARTIES FOR MANUFACTURING KEY COMPONENTS MAY CAUSE DELAYS IN ASSEMBLY AND INCREASED COSTS TO US.

We do not have our own manufacturing or assembly facility for our ACI systems or other components that we sell in our business. Like most of our competitors, we rely upon third parties for the manufacture, assembly and some of the testing of key components. Delays and difficulties in the manufacturing or assembly of our products could substantially harm our business and financial condition.

There are limited sources of acceptable supply for some key ACI system components. Business disruptions, financial difficulties of the manufacturers or suppliers of these components or raw material shortages could increase the cost of our goods sold or reduce the availability of these components. If sales accelerate, we may experience a rapid and substantial increase in our need for components. If we are unable to obtain a sufficient supply of required components, we could experience significant delays in manufacturing, which could result in the loss of orders, customers or liability for liquidated damages under delivery contracts. This could materially and adversely affect our business, financial condition and results of operations.

Although we may purchase inventories of strategic components, some parts of the systems (such as silos) may require custom fabrication and may not be amenable to being stocked as part of standard inventory. Alternative sources may be difficult to locate if we experience delays in obtaining them from our usual suppliers. If the cost of components increases, we may not be able to pass on price increases to our customers if we are to remain competitive. The occurrence of any of these difficulties would likely have an adverse effect on our business and financial condition.

OUR PROFITABILITY COULD BE ADVERSELY AFFECTED BY INCREASES IN THE COST OF RAW MATERIALS AND FREIGHT.

The price of commodities that we require in our operations, including steel for silos, is subject to price fluctuations, and the timing of changes in the market prices for these commodities is largely unpredictable. We may not be able to pass on all cost increases to our customers or offset fully the effects of higher costs for raw materials or freight through the use of surcharges and other measures, which may negatively impact profitability. There is also the possibility of potential time lag between increases in prices for raw materials under our purchase contracts and the point when we can implement corresponding increase in price under our sales contracts with customers. As a result,

we may be exposed to fluctuations in raw material prices, including steel, since during the time lag we may have to bear the additional cost of the price increase under our purchase contracts. If these events were to occur, beyond the price validity time period we have obtained from our suppliers, they could have a material adverse effect on our financial position, results of operations and cash flows.

THE EFFECT OF ISSUING PERFORMANCE GUARANTIES FOR COMMERCIAL ACI SYSTEMS IS UNKNOWN AND COULD ADVERSELY AFFECT OUR FINANCIAL CONDITION.

Performance guaranties have been and may likely continue to be an integral part of successful sales of our ACI systems. Such guaranties typically require levels of mercury removal efficiency based on stated injection rates of a specified or approved AC given other operating parameters, including the nature of the coal burned. Provisions of such guaranties generally require us to spend amounts up to the value of the sales contract to “make right” the performance of the ACI system if the guaranteed level of performance is not achieved. Any substantial payments under such guaranties would have an adverse effect on our financial condition and would likely impact our ability to generate future sales.

WE DEPEND ON KEY PERSONNEL.

We depend on the performance of our senior management team, including Jonathan Barr, C. Jean Bustard, Dr. Michael Durham, Cameron Martin, Mark McKinnies, Richard Miller, Richard Schlager and Sharon Sjostrom, and their direct reports and other key employees, particularly highly skilled engineers. Our success depends on our ability to attract, retain and motivate these individuals. We do not have any binding agreements with any of our employees that prevent them from leaving our Company at any time without any restrictions on their competing against us after their employment terminates. We compete heavily for these types of personnel. In addition, although we maintain key person life insurance on certain of our executives, the loss of the services of any of our key employees or our failure to attract, retain and motivate key employees could harm our business.

WE DEPEND SUBSTANTIALLY ON A CONSULTANT FOR OUR CLEAN COAL BUSINESS, AND THE LOSS OF HER SERVICES COULD HAVE AN ADVERSE EFFECT ON THAT BUSINESS.

We have engaged a consultant to assist us with the operation of our refined coal business, Clean Coal. The agreement with this consultant contains provisions that are intended to protect our confidential information and prevents the consultant from competing with us during the term of her agreement. The agreement does not, however, prevent the consultant from competing against us following the termination of her agreement. If we were to lose this consultant, it might be difficult to timely replace her on reasonable terms, and our business could be harmed if the consultant were to engage in activities competitive with one of our businesses or areas of interest.

MATERIAL ADJUSTMENTS PURSUANT TO DOE AUDITS OF OUR PAST PERFORMANCE COULD HAVE A DETRIMENTAL IMPACT ON OUR BUSINESS.

Thirteen of our completed and current contracts awarded by the DOE and related industry participants remain subject to adjustments as a result of future government audits. Our historical experience with these audits has not resulted in significant adverse adjustments to amounts previously received; however the audits for the years 2004 and later have not been finalized. Revenues recognized from 2004 through 2009 that are subject to government audit totaled approximately \$27.3 million. In addition, we had \$1.6 million of remaining unearned amounts under contracts subject to audit as of December 31, 2009. If audits for open years were to require us to repay material amounts, our results of operations and business would likely suffer material adverse impacts.

CHANGES IN TAXATION RULES OR FINANCIAL ACCOUNTING STANDARDS COULD ADVERSELY AFFECT OUR RESULTS OF OPERATIONS OR FINANCIAL CONDITION.

Changes in taxation rules and accounting pronouncements (and changes in interpretations of accounting pronouncements) have occurred and may occur in the future. A change in existing taxation rules or accounting standards could have an adverse effect on our reported results of operations or financial condition.

THE FAILURE OF ANY BANK IN WHICH WE DEPOSIT OUR FUNDS COULD REDUCE THE AMOUNT OF CASH WE HAVE AVAILABLE FOR OPERATIONS AND TO MAKE ADDITIONAL INVESTMENTS IN OUR BUSINESSES.

We have diversified our cash and cash equivalents between a few different banking institutions in an attempt to minimize exposure to any one of these entities. The Federal Deposit Insurance Corporation, or “FDIC,” only insures amounts up to \$250,000 per depositor per insured bank. We currently have cash and cash equivalents and restricted cash deposited in certain financial institutions significantly in excess of federally insured levels. If any of the banking institutions in which we have deposited funds ultimately fails, we may lose our deposits over \$250,000. The loss of our deposits would reduce the amount of cash we have available for operations and would have a material adverse effect on our financial condition.

RISKS RELATING TO OUR COMMON STOCK

A SIGNIFICANT PORTION OF OUR OUTSTANDING SHARES OF COMMON STOCK MAY BE SOLD IN THE PUBLIC MARKET, WHICH COULD LOWER THE MARKET PRICE OF OUR STOCK.

As of March 23, 2010, we had 7,404,143 shares of common stock issued and outstanding, including 143,885 shares issued to Arch Coal on that date that we are required to register for resale under the Securities Act. Sales of our common stock, or the perception that such sales might occur, have had and may continue to have a material adverse effect on our stock price.

THE ISSUANCE OF ADDITIONAL SECURITIES COULD DECREASE THE VALUE OF THE OUTSTANDING SHARES OF OUR COMMON STOCK.

On March 23, 2010, we issued 143,885 shares of our common stock to Arch Coal in a private placement. In connection with our fundraising efforts, we plan to issue additional shares of common stock or possibly convertible securities or debt instruments with preferences and priorities over those of our common stock. Subject to the requirements of our NASDAQ Capital Market listing, our Board of Directors has the authority to offer and sell additional securities without the vote of, or notice to, existing shareholders. The issuance of any additional securities could dilute the percentage interests and per share book value of existing shareholders and have a detrimental impact on the market for our common stock.

THE VOLATILITY OF OUR STOCK PRICE COULD SUBJECT US TO SECURITIES CLASS ACTION LITIGATION.

The market price of our common stock fluctuates significantly. The market price of our common stock is affected by numerous factors, including:

- Actual or anticipated fluctuations in our operating results and financial condition;
- changes in laws or regulations and court rulings;
- developments regarding the AC Facility and AC manufacturing projects announced by our competitors;
- the impact or perceived impact of our ongoing legal actions with Norit, Norit N.V. and Calgon Carbon Corporation on our business;
- changes in government funding of our projects;
- announcements of sales awards;
- conditions and trends in our industry;
- adoption of new accounting standards affecting our industry;
- changes in financial estimates by securities analysts;
- perceptions of the value of corporate transactions; and
- degree of trading liquidity in our common stock and general market conditions.

From December 31, 2008 to December 31, 2009, the closing price of our common stock ranged from \$2.07 to \$6.87 per share. Significant declines in the price of our common stock could impede our ability to obtain additional capital, attract and retain qualified employees and reduce the liquidity of our common stock.

In addition, the stock market has from time to time experienced significant price and volume fluctuations that have particularly affected the market prices for the common stock of similarly staged companies. These broad market fluctuations may adversely affect the market price of our common stock. In the past, following periods of volatility in the market price of a particular company’s securities, shareholders have often brought class action securities litigation against that company. Such litigation could result in substantial costs and a diversion of management’s attention and resources.

LACK OF EXPECTED DIVIDENDS MAY MAKE OUR STOCK LESS ATTRACTIVE AS AN INVESTMENT.

We intend to retain all future earnings for our businesses and do not anticipate paying any cash dividends on our common stock for the foreseeable future. Generally, stocks that pay regular dividends command higher market trading prices, and our stock price may therefore be lower as a result of our dividend policy.

WE ARE EXPOSED TO RISKS RELATING TO EVALUATIONS OF CONTROLS REQUIRED BY SECTION 404 OF THE SARBANES-OXLEY ACT OF 2002.

We are required to comply with Section 404 of the Sarbanes-Oxley Act of 2002. While we concluded that at December 31, 2009, we had no material weaknesses in our internal controls over financial reporting, we cannot assure you that we will not have a material weakness in the future. A “material weakness” is a control deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. If we fail to maintain a system of internal controls over financial reporting that meets the requirements of Section 404, we might be subject to sanctions or investigation by regulatory authorities such as the Securities and Exchange Commission or by the NASDAQ Stock Market. Additionally, failure to comply with Section 404 or the report by us of a material weakness may cause investors to lose confidence in our financial statements and our stock price may be adversely affected. If we fail to remedy any material weakness, our financial statements may be inaccurate, we may be subject to increases in insurance costs, we may not have access to the capital markets, and our stock price may be adversely affected.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Office Leases

We lease all of our office facilities. ADA leases approximately 20,000 square feet of combined office and warehouse space in Littleton, Colorado, a suburb of Denver. The term of the lease runs through August 31, 2010, and the lease agreement has an option to extend the term for five years. In 2008, we cancelled our office lease in Columbia, Maryland. In the near-term, we believe that sufficient space is available at reasonable rates in areas where we do business. Future annual lease costs are expected to amount to approximately \$247,000 through December 31, 2010. We guarantee the lease of Carbon Solutions for 3,100 square feet of combined office and warehouse space in Littleton, Colorado.

Item 3. Legal Proceedings.

Litigation with Norit Americas, Inc. As previously reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2008 and our Quarterly Reports on Form 10-Q for the quarters ended March 31, June 30, and September 30, 2009 (together, the “2009 Reports”) and the Current Report on Form 8-K dated June 8, 2009, Norit Americas, Inc., which is an AC manufacturer with whom we have previously done business, filed a lawsuit against us, ADA Environmental Solutions LLC, Carbon Solutions (formerly known as Crowfoot Development, LLC), Red River, Underwood, Morton and two of our employees (who were former employees of Norit) (collectively the “ADA Defendants”) on August 4, 2008, asserting that the ADA Defendants have misappropriated Norit’s trade secrets related to AC manufacturing, and other claims. Norit is seeking monetary damages under various legal theories, attorney fees, and injunctive relief to prevent us or any related entity or third party from using Norit’s alleged trade secrets or other Norit intellectual property related to AC manufacturing. We are vigorously defending against Norit’s claims, which management believes are without merit. As previously reported, Norit had moved for a Temporary Restraining Order (“TRO”) (which was granted) and a Temporary Injunction. After a hearing on the merits, Norit’s motion for the Temporary Injunction was denied and the TRO expired June 5, 2009, and construction on the AC Facility has continued. Trial of the case was set for September 21, 2009, but was continued until January, 2010 to allow the Court time to rule on pending motions. On August 20, 2009, we, together with the other entity defendants, filed a counterclaim against Norit asking the Court to declare that we are co-owners with Norit of any trade secrets relating to certain technology that Norit alleges constitutes one of several trade secrets we have allegedly misappropriated from it. Norit responded by asserting counterclaims for breach of contract and related causes under the Market Development Agreement (MDA) to which we and Norit were parties from 2001 until

2007. Norit also sought to either compel arbitration of the counterclaims (ours and theirs), or have them determined by the Court as part of the pending case. We, along with the other ADA Defendants, responded by moving for a stay of proceedings in the Court and an order compelling arbitration of all claims in the case pursuant to the arbitration agreement in the MDA. On October 6, 2009, the Court entered an order granting Norit's and the ADA Defendants' motions to compel arbitration as to all claims, and stayed all claims/cause of actions in the case pending notice from the arbitrator listing any non-arbitrable claims/cause of actions. We, together with the other ADA Defendants, have filed for submission of the matter to the American Arbitration Association. Subsequent to the submission of the matter to arbitration Norit and all defendants have agreed that all pending claims will be resolved in the arbitration, eliminating the potential appeal of the Court's order sending the matter to arbitration and the need for the arbitrators to determine if any pending claims are arbitrable. An arbitration panel was recently appointed and the first telephonic conference occurred on March 18, 2010. The panel has established a schedule to hear various pending motions to dismiss and motions for summary judgment made by us and the other ADA Defendants and assuming the matter is not resolved by the motions, the arbitration hearing is scheduled to begin in October, 2010 and continue until the matter is concluded, which will likely be in November, 2010. In December, 2009, Norit N.V., the Dutch parent of Norit Americas, filed a petition in Holland requesting that the court in Holland conduct preliminary witness examinations into possible breaches of a confidentiality agreement the Company signed with Norit N.V. in 2005 as part of due diligence for a potential acquisition. The petition, which is a pre-litigation procedure in Holland designed to determine if there is a basis to bring a claim, does not require any direct response by us and is currently pending before the Dutch court, which has not yet taken any action on the petition. The underlying allegations on the matter filed in Holland have already been raised by Norit in the arbitration pending in the U.S., and we will vigorously defend against such claims when and if Norit N.V. attempts to bring an action against us in Holland. The original case, captioned *Norit Americas, Inc. v. ADA-ES, Inc., ADA Environmental Solutions, LLC, John Rectenwald, Stephen D. Young, Crowfoot Development, LLC, Red River Environmental Products, LLC, Underwood Environmental Products, LLC, Morton Environmental Products, LLC f/k/a Bowman Environmental Products, LLC, Cause No. 08-0673*, was filed in the 71st Judicial District Court for Harrison County, Texas.

Litigation with Calgon Carbon Corporation. As previously reported in the 2009 Reports, on September 29, 2008, Calgon filed a declaratory judgment action against us in the United States District Court for the Western District of Pennsylvania. The case, captioned *Calgon Carbon Corporation v. ADA-ES, Inc.*, concerns a March 20, 2007 Memorandum of Understanding ("MOU") between Calgon and us providing that the parties would jointly market AC to the power industry, with Calgon supplying the AC and the Company leading the sales effort. The MOU provided that Calgon would pay us a commission on all sales of Calgon-produced AC resulting from the joint marketing effort. During the period the MOU was in place, our efforts resulted in Calgon's AC undergoing testing, qualification and acceptance by various customers including Midwest Generation, an Illinois power company, to whom an AC supply bid was submitted. We believe this bid resulted in an award of a \$55 million AC contract for Calgon based on Calgon's announcement of it. The MOU specified that we would receive a 15% commission on sales resulting from the joint marketing effort, which amounts to \$8.25 million, with respect to this contract. In the litigation, Calgon seeks a declaratory judgment that it has no obligation to pay us commissions for the Midwest Generation contract or for any other future sales after August 24, 2007, the date the MOU was terminated by Calgon. We filed a counterclaim against Calgon to recover the \$8.25 million in commissions due from Calgon. On October 19, 2009 a scheduling order was entered setting a jury trial for July 2010. Discovery has been completed and both parties are planning to file summary judgment motions in the case shortly, subject to the court granting permission to do so.

Item 4. (Reserved)

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock currently trades on the NASDAQ Capital Market under the symbol "ADES." The table below sets forth the price range of our common stock for 2008 and 2009:

	2009		2008	
	High	Low	High	Low
1 st Quarter	\$ 5.97	\$ 2.42	\$11.49	\$ 7.44
2 nd Quarter	\$ 5.00	\$ 2.45	\$11.98	\$ 8.16
3 rd Quarter	\$ 4.70	\$ 3.05	\$ 9.90	\$ 7.58
4 th Quarter	\$ 7.45	\$ 2.05	\$ 9.00	\$ 2.41

Holders

The number of record holders of our common stock as of March 8, 2010 was approximately 1,600. The approximate number of beneficial shareholders is estimated at 3,400.

Dividends

We have not paid dividends since inception. We currently have no plans to pay dividends in the foreseeable future.

Securities authorized for issuance under equity compensation plans

The disclosure required by this Item is included under Item 12 of this Report.

Purchases of Equity Securities by the Company and Affiliated Purchasers

Neither we nor any "affiliated purchaser," as defined in SEC Rule 10b-18(a)(3), purchased any of our equity securities during the quarter ended December 31, 2009.

Item 6. Selected Financial Data.

FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA

<i>(Dollars in thousands, except per share data)</i>	<u>Years Ended December 31,</u>				
	<u>2009</u>	<u>2008</u>	<u>2007</u>	<u>2006</u>	<u>2005</u>
<u>Income Statement Data:</u>					
Revenues	\$ 20,061	\$ 16,193	\$ 19,248	\$ 15,488	\$ 11,028
Net income (loss)	\$ (8,771)	\$ (4,106)	\$ 247	\$ 377	\$ 663
Net income (loss), per common share, basic and diluted	\$ (1.26)	\$ (.67)	\$.05	\$.07	\$.13
Dividends declared per common share	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
<u>Balance Sheet Data (at year end):</u>					
		<u>As of December 31,</u>			
Total assets	\$ 40,967	\$ 75,142	\$ 34,906	\$ 31,754	\$ 28,716
Long-term debt	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Stockholders' equity	\$ 24,252	\$ 31,835	\$ 28,404	\$ 27,641	\$ 25,856

See the audited financial statements attached hereto under Item 8 for additional information.

QUARTERLY FINANCIAL DATA – UNAUDITED

<i>(Amounts in thousands except per share data)</i>	<u>2009</u>				<u>2008</u>			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Revenues	\$ 4,971	\$ 4,758	\$ 3,735	\$ 6,597	\$4,003	\$ 3,847	\$ 5,033	\$ 3,310
Gross margin	\$ 2,044	\$ 1,805	\$ 1,199	\$ 1,030	\$ 1,319	\$ 1,454	\$ 1,660	\$ 856
Net income (loss)	\$ (543)	\$ (1,630)	\$ (5,315)	\$ (1,283)	\$ (168)	\$ (138)	\$ (167)	\$ (3,633)

Common Stock Data

Basic and Diluted:

Net income (loss)

per share \$ (.08) \$ (.24) \$ (.76) \$ (.18) \$ (.03) \$ (.02) \$ (.03) \$ (.54)

Average common

shares outstanding:

Basic 6,869 6,929 7,021 7,070 5,687 5,802 6,067 6,741

Diluted 6,869 6,929 7,021 7,070 5,687 5,802 6,067 6,741

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation.

Overview

We develop and implement proprietary environmental technology and provide specialty chemicals to the coal-burning electric utility industry. Revenues are generated through (1) the supply of powdered activated carbon injection (“ACI”) systems, and related services for the growing mercury emission control (“MEC”) market, including projects that are co-funded by government (Department of Energy – “DOE”) and industry and (2) the sale of specialty chemicals and services for flue gas conditioning (“FGC”), refined coal and other applications. We have also begun research and development efforts in CO₂ capture and control from coal-fired boilers, and in 2008, we commenced work on our first significant contract related to CO₂ capture, which is scheduled to continue through the end of 2010 and could be extended into 2011. We are also marketing our refined coal technology through our 50% interest in a joint venture with NexGen Refined Coal, LLC (“NexGen”), an affiliate of NexGen Resources Corporation, called Clean Coal Solutions, LLC (“Clean Coal”). In addition, the ADA Carbon Solutions, LLC (“Carbon Solutions”) joint venture, of which we owned 33% as of December 31, 2009, is constructing an activated carbon (“AC”) manufacturing facility in Coushatta, Red River Parish, Louisiana (the “AC Facility”) primarily for mercury control applications. Carbon Solutions, through a wholly owned subsidiary, is processing and supplying AC to utility customers from interim sources until such time as the AC Facility is operational. References to Carbon Solutions include its wholly-owned subsidiaries of Red River Environmental Products, LLC (“Red River”), Five Forks Mining, LLC, Morton Environmental Products, LLC, Underwood Environmental Products, LLC, and Crowfoot Supply Company, LLC (“Crowfoot Supply”).

Mercury has been identified as a toxic substance and, pursuant to a court order, the EPA issued regulations for its control in March 2005, which were known as the “Clean Air Mercury Rule” or “CAMR.” A dozen states and several environmental groups had previously sued the EPA alleging that the process that resulted in the relatively lenient CAMR violated the Clean Air Act (the “CAA”) and that CAMR was therefore invalid. In February 2008, the United States Court of Appeals for the District of Columbia Circuit ruled in favor of the plaintiffs in that case, holding that the EPA violated the CAA in the process it used to enact CAMR, and that CAMR was therefore invalid. The Court’s ruling remanded the matter to the EPA for further proceedings; the EPA then filed an appeal of the ruling with the Court. In May 2008, the District of Columbia Circuit Court rejected the EPA’s petition for an en banc rehearing on CAMR, and in February 2009, EPA withdrew its appeal of the Circuit Court’s CAMR decision, clearing the way for it to promulgate mercury standards under Section 112 of the CAA, which governs hazardous air pollutants (“HAPs”) from stationary sources. Also in February 2009, the United States Supreme Court refused to hear an appeal of the Circuit Court’s May 2008 decision that had been filed by a coalition of utilities and granted the Obama administration’s request to drop the Bush administration’s appeal of the decision, thereby finalizing the Circuit Court’s May 2008 decision invalidating CAMR. Following the Circuit Court’s May 2008 CAMR decision, a coalition of consumer and environmental groups including the American Nurses Association brought suit against the EPA seeking to compel it to promulgate final rules setting emissions standards for HAP based on Maximum Achievable Control Technology (“MACT”). In October 2009, EPA and the plaintiffs in that suit entered into a Consent Decree under which the EPA has agreed to adopt rules reducing HAP by November 2011 with implementation in 2014. These rules will establish a MACT-based hazardous pollutant regulation, which will

include control of mercury from power plants, organics and volatile metals such as arsenic, selenium and acid gases such as hydrogen chloride (“HCl”). The MACT standard will be based upon the best-performing 12% of the power plants and will not allow any averaging or trading. We estimate that with the performance of ACI systems recently installed, and the co-benefits achieved from controls for sulfur dioxide and nitrogen oxides, the MACT standard for mercury will require between 90 and 95% mercury capture.

In the meantime, a lack of clear mercury emission regulations has generated uncertainty among independent power producers and utilities as to what will be required of them as far as mercury controls, and is adversely impacting their ability to include mercury control costs in their rate bases. The EPA settlement of the American Nurse Association suit mentioned above finally provides some certainty on the timing of implementation of a new MACT-based mercury control rule. It is of course possible that Congress could also enact new legislation requiring stricter mercury emission control within the next year or two, with implementation deadlines over the subsequent two to three years.

In addition to our two key growth areas, mercury control and refined coal, we continue to demonstrate our position as a premier developer of innovative clean energy technologies. Control of CO₂ from coal-fired power plants is currently a topic of discussion in Washington and a significant issue for the coal industry related to the impact of CO₂ emissions on climate change. A number of permits for new coal-fired plants were rejected by various state officials in 2009 in response to protests by environmental groups. We see this as an opportunity and have begun developing technologies to address the needs of our customers through reduction of CO₂ generation, CO₂ capture and beneficial use of CO₂.

In addition to the independent power producers and utilities, EPA has started the process of developing a MACT-based mercury emissions regulation for the Portland cement industry through proposed amendments to the National Emission Standards for Hazardous Air Pollutants (“NESHAP”) for the Portland Cement Manufacturing Industry issued in May 2009, for which the EPA accepted public comments through September 4, 2009. The cement MACT final regulation is scheduled to be issued no later than the spring of 2010. This regulation could require ACI systems on up to 110 cement kilns in the U.S. We are discussing several testing programs with cement companies to define their emissions and evaluate how our ACI equipment and sorbents will work in that industry. The tests are designed to evaluate the effectiveness of collecting mercury and organics from cement kiln exhaust gas streams. We believe a cement MACT regulation is likely and will increase the market for both ACI systems and AC.

The EPA is also developing a new MACT regulation for coal-fired boilers that provide mostly steam and/or electricity for internal power needs with no less than 25 MW of electricity sold to the grid. A draft regulation is anticipated to be issued in mid April 2010, with a final regulation anticipated to be issued in December 2010, with compliance deadlines in late 2013 or early 2014. This regulation could impact over 600 existing coal-fired industrial boilers. We believe a new industrial boiler regulation could increase the market for ACI systems by several hundred and the associated AC by 50 to 100 million pounds per year with the possibility of significantly higher quantities should other non-coal-fired boilers be included in this new regulation.

Although federal regulations continue to evolve, the market potential remains strong in 19 states and 6 Canadian provinces that either have passed their own mercury control regulations or have entered agreements with power plants to reduce mercury emission for new power plants. The DOE Energy Information Administration estimates an additional 24 GW of new capacity between 2008 and 2030. We believe that further substantial long-term growth of the MEC market for the independent power producer and utilities industry will most likely depend on how industry chooses to respond to the pending federal and state regulations. We anticipate this will create an even larger market for our mercury control products beyond 2010. As many as 1,500 existing coal-fired boilers may be affected by such regulations, if and when they are fully implemented. DOE’s latest report, issued in 2009, includes 77 existing and planned new coal-fired power plant projects totaling 44 GW of capacity. Permitting of new coal-fired plants generally requires them to meet more stringent requirements that likely include MEC. For the near-term, our revenues from this market will be dependent on (i) equipment sales of ACI systems and (ii) mercury testing and consulting services. Some state regulations and consent decrees are the largest market drivers for this part of our business. Although we expect this market to be flat and show little growth over the next year, we believe the opportunity for the most significant revenue growth will occur when final federal regulations or legislation impacts a significant portion of previously uncontrolled and existing boilers.

In 2009, we signed new contracts for 10 activated carbon injection (“ACI”) systems to be delivered in 2010 through 2011, bringing the total number of ACI systems that we have installed to date or are in process of installing as of December 31, 2009 to 46. We are active in the bid and proposal process and expect to sell several new systems in

2010. We expect more than eight ACI systems will be awarded in 2010 and 2011. We believe the eventual outcome of the EPA MACT process and/or legislative action will accelerate and further expand the market for our MEC products and services. Because many of our current and potential customers would be affected by new federal regulations replacing CAMR, we are seeing delays in the decision-making process on mercury control as a result of the invalidation of CAMR, which has postponed the award of some near-term projects as independent power producers and utilities revise their long-term plans for compliance. Revenue from ACI system contracts totaled \$10.6 million for the year ended December 31, 2009. We had contracts in progress at year-end for supply of ACI systems totaling approximately \$5.7 million. We expect to complete and realize approximately \$3.7 million of revenue under these contracts in 2010 and the remaining revenue in 2011.

DOE ceased funding mercury control projects in 2009, but is funding other projects related to our business, including projects aimed at CO₂ control, and we expect this to continue. Revenue from DOE and industry supported contracts totaled \$3.9 for the year ended December 31, 2009. We had DOE contracts in progress totaling \$1.6 million as of December 31, 2009. We expect to recognize approximately \$730,000 in revenue from these contracts during 2010 and the remainder in 2011. We anticipate that DOE programs will continue to represent an important segment but a smaller overall percentage of revenues as other revenues increase over the next few years as we focus more on market growth for ACI systems for mercury emission control. In October 2009, DOE released a Funding Opportunity Announcement (“FOA”) for continued funding of our current CO₂ project. This FOA provides the ability to request additional funding for solid sorbent technologies and we submitted a proposal for a \$14 million project in response to that opportunity in December 2009. We expect that DOE will announce awards in April 2010.

The primary purpose of Clean Coal is to sell refined coal and qualify that product for Section 45 tax credits, thereby becoming a “Section 45 Business,” and “monetizing” those Section 45 tax credits through the sale of qualifying facilities to investors. The tax credits amount to \$6.20 per ton of refined coal for a period of ten years. In December 2009 the IRS issued the anticipated guidance as to the specifics concerning how the emissions reductions are to be measured and certified to demonstrate the continuous compliance necessary to qualify for the tax credits. Clean Coal placed two facilities in service prior to January 1, 2010 and demonstrated the required emission reductions for their refined coal product to qualify for the tax credits. Clean Coal is in the process of finalizing necessary contractual agreements with the utility at which the facilities are located, completing modifications for long-term operations and to the equipment to handle a broader array of feedstock materials and negotiating with potential monetizers. We expect such modifications and negotiations to be finalized and the facilities to be in routine operation in the second quarter of 2010.

Clean Coal will likely record a one-time sale of each facility to the monetizer for approximately \$5 million per facility. If however, the agreement with the monetizer includes a variable and fixed note, U.S. generally accepted accounting principles, or GAAP, will likely require the value of the fixed note (estimated to be as much as \$30-50 million per facility) to be recorded as revenue at the time of the sale. We expect, after expenses, to include approximately \$2 per ton in operating income from our efforts related to refined coal. The total annual contribution to our operating income will ultimately depend on the utilities’ use of coal in the generation of electricity, which use will likely fluctuate over the term of the tax credits.

In order to maintain our 50% interest in Clean Coal, we are obligated to fund half of its operating costs and capital expenditures. The total capital expenditures for Clean Coal’s two facilities in 2009 were approximately \$2.3 million, most of which was incurred in the fourth quarter of 2009. The modifications noted above and working capital for the commencement of routine operations are expected to amount to more than \$2 million and will be required primarily in the second quarter of 2010. We hope to fulfill our capital commitment obligations for our share of such costs through cash generated under the Arch Coal License. Clean Coal plans to pursue additional facilities if the Section 45 tax credit qualification deadline is extended. The facilities which were placed in service in 2009 in time to qualify them for Section 45 tax credits are projected to produce average after tax net cash flow for Clean Coal of an estimated \$9 million per year for up to ten years. Our consolidated net operating loss for the year ended December 31, 2009 included revenues of \$2.5 million and net costs of \$1.1 million related to our refined coal efforts.

Initially, NexGen had the right to maintain its 50% interest by paying us an additional \$4.0 million in eight quarterly statements of \$500,000 each. As described in greater detail below under “Liquidity and Capital Resources,” on October 26, 2009, we, Clean Coal and NexGen entered into an amendment to the Purchase and Sale Agreement pursuant to which NexGen must make these payments to extend the time by which the payments must be made, and to allow NexGen to make the payments from cash that would otherwise be distributable to NexGen under the Clean Coal Operating Agreement. In addition, NexGen agreed to loan Clean Coal up to \$1.0 million (all of which had

been loaned as of December 31, 2009) (the “NexGen Loan”), to fund expenses in connection with constructing and placing in operation its refined coal facilities it hopes will qualify for Section 45 tax credits and monetizing those Section 45 tax credits to investors. We guaranteed 50% of the NexGen Loan and secured our guaranty by pledging our interest in Clean Coal to NexGen and by an agreement to issue up to 250,938 shares of our Common Stock to NexGen if we default on our guaranty. The NexGen Loan is due to be repaid on the earliest to occur of (a) the third day after we receive funds from a sale of our securities (with certain permitted exceptions, including the sale of our common stock to Arch Coal on March 23, 2010), (b) April 30, 2010, or (c) upon the occurrence of a continuing uncured event of default or a change in control of the Company or Clean Coal.

Carbon Solutions, our joint venture company with Energy Capital Partners I, LP and its affiliated funds (“ECP”), is constructing the AC Facility through its wholly owned subsidiary Red River, which is scheduled to commence operations in the spring of 2010. The AC Facility is expected to have a capacity of as much as 150 million pounds per year (first production line) of powdered activated carbon for use primarily in coal-fired power plant mercury control applications. Red River has received a conditional commitment for up to \$245 million from the DOE to guarantee a loan related to the construction of the AC Facility.

Crowfoot Supply has developed a larger offsite processing and logistics facility that commenced operations in the second quarter of 2009 and will later operate in conjunction with the AC Facility. Red River is currently selling and processing AC on a continuous basis from this facility to meet delivery obligations under existing supply contracts, which to date total over 160 million pounds. The capacity of this facility is sufficient to meet Red River’s current delivery obligations under its existing off-take agreements. Carbon Solutions continues to negotiate long-term customer off-take contracts for its business. Many of the state mercury regulations already in place require compliance in 2010 and as such there are several utilities and independent power producers engaged in an AC procurement process this year.

Under the terms of the Limited Liability Company Agreement (the “LLC Agreement”) of Carbon Solutions among ECP and ADA, ADA has contributed \$25.6 million in cash and other property and ECP has contributed cash of \$152.6 million, including preferred equity contributions of \$98.5 million, through March 1, 2010. Effective June 30, 2009, ECP converted some of its preferred equity contributions to ordinary capital contributions resulting in a dilution of our ownership percentage to under 50%. In the third quarter of 2009, ECP converted additional preferred equity contributions to ordinary capital contributions resulting in a dilution of our ownership percentage to 33% as of December 31, 2009. We do not have any further capital commitments to Carbon Solutions, and expect that all future funding for the AC Facility will come from ECP and third-party debt financing. Through March 1, 2010, ECP had loaned \$125.7 million to Red River pursuant to secured convertible demand notes. As of December 31, 2009, the principal balances of the notes totaled \$76.3 million. See “Liquidity and Capital Resources” for additional information.

The market for our FGC chemicals and services has been declining over the last couple of years, but this may change when the uncertainty caused by the CAMR ruling has been eliminated. We are responding to inquiries about our product meeting the needs in combination with ACI. In the third quarter of 2009, we received a contract for an FGC system and are in the process of negotiating a chemical contract in conjunction with this new system. With a defined mercury rule or legislation, we believe there will be opportunities to combine FGC with AC, as our FGC does not interfere with AC performance. Margins on these products are typically higher than what we recognize for our present MEC sales and may represent an important contribution to our overall revenue and profit potential. We are currently providing certain services to Carbon Solutions under a Master Service Agreement (“MSA”). Revenues under the MSA are included in the FGC segment.

In the fourth quarter of 2009 and early 2010, we worked with Breen Energy Solutions for a utility customer to demonstrate alternative SO₃ control technology. With a defined mercury rule or legislation, we believe there will be opportunities to combine FGC with AC, as FGC can enhance the performance of AC in specific applications. Margins on these products are typically higher than what we recognize for our present MEC sales and may represent an important contribution to our overall revenue and profit potential.

Results of Operations – 2009 versus 2008

Revenues totaled \$20.1 million for 2009 versus \$16.2 million in 2008, representing an increase of 24%. Revenues in our MEC segment for 2009 increased by \$320,000 (2%) versus 2008, and FGC, refined coal and other activities increased by \$3.5 million from \$433,000 in 2008 to \$3.9 million in 2009.

Revenues in 2009 from the MEC segment were comprised of sales of ACI systems (66%), and government and industry-supported contracts (24%), and consulting services (10%), compared to 60%, 30% and 10%, respectively, in 2008. In 2009, sales of our ACI systems contributed approximately \$10.6 million to MEC revenues recognized for the year, increasing 13% from the 2008 contribution of \$9.4 million. We had contracts in progress at year-end 2009 for supply of ACI systems totaling approximately \$5.7 million. We expect to complete and realize approximately \$3.7 million of revenue under these contracts in 2010 and the remaining revenue in 2011.

Our DOE and industry demonstration contract revenues totaled \$3.9 million in 2009, representing a decrease of 17% from 2008 revenues. The remaining unearned amount of these contracts was \$1.6 million as of December 31, 2009, of which we expect to recognize \$730,000 in 2010 (including cash contributions by other industry partners). During 2008, government funded work for mercury demonstration projects diminished as the market moved into a commercial phase. We expect an increase in DOE and industry funding for CO₂ control technology. We anticipate growth in 2010 in the MEC segment to result primarily from an increase in funding for CO₂ technology from government and industry supported contracts.

Our contracts with the government are subject to audit by the federal government, which could result in adjustment(s) to previously recognized revenue. We believe, however, that we have complied with all requirements of the contracts and future adjustments, if any, will not be material. In addition, the federal government must appropriate funds on an annual basis to support DOE contracts, and funding is always subject to unknown and uncontrollable contingencies. We expect funding from utilities for mercury control evaluation and testing to increase to meet state and local regulations and that DOE may fund other projects related to our business, including CO₂ control.

Revenues from consulting services included in the MEC segment decreased approximately \$56,000, from 2008 to approximately \$1.6 million in 2009. The change for the year resulted from two mercury control programs that commenced in 2008 offset somewhat by increased activity with current and new test programs that commenced during 2009.

FGC, refined coal and other revenues comprised 20% of total revenues in 2009, compared to 3% in 2008. FGC, refined coal and other revenues increased due to the inclusion of Clean Coal and MSA revenues. Sales of our refined coal product in December 2009 (primarily for the tests related to placing Clean Coal's two facilities in service) amounted to approximately \$2.4 million. We do not expect to record the continued sales of refined coal in 2010, but rather expect to recognize revenue from both the sale of the facilities and amounts related to the tax credits expected to be generated from routine operations. We expect an increase in revenues in 2010 from our Clean Coal efforts and, although we expect FGC revenues related solely to flue gas chemical sales to increase in 2010, we expect them to be less significant as a percentage of our total revenues.

Cost of revenues increased by \$3.0 million or 27% in 2009 from 2008 primarily as a result of increased revenues. Gross margins were 31% for the year as compared to 33% in 2008. The decrease primarily reflects the increase in margins for the MEC segment as described below. For the near term, we expect the sales related to Clean Coal to represent an increasing source of revenues, for which the anticipated gross margins are lower than for our specialty chemical sales and DOE demonstration work that involves industry cost sharing. As a result, we expect the gross margin for fiscal year 2010 to be slightly lower than the margin realized in fiscal year 2009.

Cost of revenues for the MEC segment decreased by \$760,000 in 2009 or 7%, as compared to the same period in 2008 primarily due to decreased activity in our DOE and other consulting services, offset by cost saving activities related to our ACI system sales. Gross margins for the MEC segment were 40% in 2009 as compared to 34% in 2008. The increase was primarily due to the increased margins related to our ACI system sales of 52%, as a result of the implementation of our improved modular ACI equipment design, which broadens fabrication and material supply options, simplifies field installation and reduces system costs and increased margins in our emission strategy consulting services as a result of higher utilization of labor on such projects. These gains were slightly offset by small decline in margins from our government and industry supported revenue to 36% down from 42% in 2008. As the mercury control market is maturing, we expect more companies to bid on ACI systems. We expect increased competition in this area which may require us to lower our margins in order to maintain our market share. Looking further ahead, we expect CO₂ demonstration work to positively affect margins.

Cost of revenues for the FGC, refined coal and other segment increased by \$3.7 million, or 841%, in 2009 as compared to 2008 primarily as a result of Clean Coal and the MSA activities with Carbon Solutions. The sales of refined coal noted above were made essentially on a cost basis with no margin. Gross margins for this segment were

(1)% for 2009 as compared to (2)% in 2008. The increase in gross margins from 2008 to 2009 is a result of increased efforts to produce refined coal through our joint venture with Clean Coal and consulting work related to our MSA activities.

General and administrative expenses increased by \$7.6 million or 83% to \$16.7 million in 2009. The dollar increase in 2009 resulted primarily from the increased legal fees due to litigation efforts (approximately \$9.6 million) and increased corporate governance costs \$384,000, offset by savings in personnel costs \$868,000 and occupancy and other general and administrative costs \$733,000. Included in our general and administrative expenses was approximately \$251,000 related to share based compensation. Once our litigation efforts with respect to the Norit and Calgon matters are resolved, we expect that our general and administrative expenses will represent approximately 25% to 30% of revenues for the foreseeable future including increased amounts due to the operating activities of Clean Coal. We have curtailed hiring personnel in response to the current regulatory environment and we expect our staffing to be flat until regulations are issued in response to the MACT agenda.

We incur R&D expenses not only on direct activities we conduct but also by sharing a portion of the costs in the government and industry programs in which we participate. Total R&D expense decreased by \$75,000 or 10% in 2009 as compared to 2008. Our direct cost share for R&D under DOE related contracts decreased from \$30,000 in 2008 to \$1,000 in 2009, reflecting the anticipated decrease in our cost share contribution and the overall decrease in mercury related demonstrations that we carried out during the year. The decrease is somewhat offset by increased activities related to preparing for growth in the delivery of our ACI systems, as well as our refined coal activities. Future consolidated research and development expenses, except for those anticipated to be funded by the DOE contracts and others that may be awarded, are expected to be close to, or slightly lower in 2010 as compared to 2009. We continue to anticipate that our future R&D expenses will grow in direct proportion to DOE funded CO₂ work we perform for the next several years.

After recording a goodwill impairment charge of \$1.6 million in 2008 related to our FGC segment, our analysis of future cash flows related to the FGC segment support the value of goodwill presented in our financial statements and no impairment was recorded for 2009. See Note 3 to the "Consolidated Financial Statements" for additional information.

MEC segment profits increased by \$1.0 million or 27% to \$5.0 million as compared to 2008. The increase was primarily a result of increased MEC segment revenues from our ACI contracts offset by our decline in DOE and industry supported revenues. FGC, refined coal and other segment loss decreased by \$1.2 million or 63% to \$697,000, as compared to a loss of \$1.9 million in 2008. The decrease was primarily the result of increased revenue-generating activities from Clean Coal and MSA consulting work.

We had net interest and other income of \$34,000 in 2009, as compared to \$439,000 for 2008. The interest income was earned from our money market deposits. We anticipated interest income to decline in 2009 due to a combination of lower invested balances and lower interest rates as compared to prior years.

The income tax provision for 2009 represents an effective tax rate benefit of approximately 37%, which is more than the rate of 27% we recognized for 2008. The increase is primarily the result of the change in permanent book and tax differences which included a \$1.6 million goodwill impairment charge to book income in 2008. All other permanent differences were less than 1% for both 2009 and 2008. We adopted the provisions of FASB ACS 740 on January 1, 2007. No unrecognized tax benefits were recorded as of the date of adoption. The primary jurisdictions in which we file income tax returns are the U.S. federal government and State of Colorado. We are no longer subject to U.S. federal examinations by tax authorities for years before 2006 and Colorado state examinations for years before 2005.

In June 2009, our partners in the Carbon Solutions joint venture, ECP, converted a portion of its preferred equity contributions in Carbon Solutions to ordinary capital contributions thereby reducing our ownership interest below 50%. Accordingly, we deconsolidated Carbon Solutions in June 2009 and began to account for our investment in Carbon Solutions under the equity method of accounting. Under the equity method of accounting, we record our equity in the net income or loss of Carbon Solutions as a component of "Other Income (Expense)" in our financial statements. For the year ended December 31, 2009, we recorded a loss of \$3.2 million which represents our share of Carbon Solution's net loss for the same period.

Our operating loss from continuing operations was \$11.8 million in 2009 as compared to a loss of \$6.7 million in 2008, due in large part to the costs associated with our litigation matters involving Norit and Calgon and those related to the Company's growth initiatives for refined coal.

Results of Operations – 2008 versus 2007

Revenues totaled \$16.2 million for 2008 versus \$19.2 million in 2007, representing a decrease of 16%. Revenues in our MEC segment for 2008 decreased by \$2.2 million (12%), and FGC, refined coal and other activities decreased by \$861,000 (67%).

Revenues in 2008 from the MEC segment were comprised of sales of ACI systems (60%), and government and industry-supported contracts (30%), and consulting services (10%), compared to 53%, 40% and 7%, respectively, in 2007. For the year, sales of our ACI systems contributed approximately \$9.4 million to MEC revenues recognized for the year, decreasing 2% from the 2007 contribution to revenue of \$9.6 million. We had contracts in progress at year-end for supply of ACI systems totaling approximately \$6.9 million.

Our DOE and industry demonstration contract revenues totaled \$4.7 million in 2008, representing a decrease of 35% from 2007 revenues. The remaining unearned amount of these contracts was \$3.4 million as of December 31, 2008, of which we expect to recognize \$1.9 million in 2009 (including cash contributions by other industry partners). During 2008, government funded work for mercury demonstration projects diminished as the market has moved into a commercial phase.

Revenues from consulting services included in the MEC segment increased approximately \$392,000, from 2007 to 2008, related to services being performed in Canada, which involved a full-scale test on an ACI system for mercury control.

FGC, refined coal and other revenues comprised 3% of total revenues in 2008, compared to 7% in 2007. FGC and other revenues decreased due to fewer sales of chemical and revenues related to continuing customers.

Cost of revenues decreased by \$2.3 million or 18% in 2008 from 2007 primarily as a result of diminishing government funded projects and fewer chemical sales. Gross margins were 33% for the year as compared to 31% in 2007. The increase primarily reflects the increase in margins for the MEC segment as described below.

Cost of revenues for the MEC segment decreased by \$1.9 million in 2008 or 15%, as compared to the same period in 2007 primarily due to our decreased activity related to our government and industry supported programs. Gross margins for the MEC segment were 34% in 2008 as compared to 31% in 2007. The increase is primarily the result of increased margins related to our ACI system sales of 15%, as a result of the implementation of our improved modular ACI equipment design, which broadens fabrication and material supply options, simplifies field installation and reduces system costs. This increase was offset by a decline in margins from our government and industry supported revenue of 24%, which has historically generated higher margins.

Cost of revenues for the FGC, refined coal and other segment decreased by \$409,000 or 48% in 2008, as compared to 2007 primarily as a result of decreased chemical sales. Gross margins for this segment were (2) % for 2008 as compared to 34% in 2007. The decrease in gross margins from 2007 to 2008 is a result of increased FGC sales of a product we license from ARKAY Technologies, which carries a lower margin than historical FGC sales.

General and administrative expenses increased by \$4.0 million or 76% to \$9.2 million in 2008. The dollar increase in 2008 resulted primarily from the increased number of employees, employee benefits, and other overhead expenses (approximately \$2.1 million), legal fees due to litigation efforts and significant contract negotiations (approximately \$1.1 million) and IT and other consulting fees due to growth (approximately \$344,000). Included in our general and administrative expenses was approximately \$1.0 million related to share based compensation. We expect that our general and administrative expenses will be approximately 25% to 30% of revenues for the foreseeable future. We continue to hire personnel in response to the growth realized and expected, and sufficient resources of skilled labor have been and are expected to be available to meet anticipated needs.

We incur R&D expenses not only on direct activities we conduct but also by sharing a portion of the costs in the government and industry programs in which we participate. Total research and development expense decreased by \$417,000 or 35% in 2008 as compared to 2007. Our direct cost share for R&D under DOE related contracts decreased from \$163,000 in 2007 to \$30,000 in 2008, reflecting the anticipated decrease in our cost share contribution and the overall decrease in mercury related demonstrations that we carried out during the year. The

decrease was somewhat offset by increased activities related to preparing for growth in the delivery of our ACI systems, as well as our refined coal activities.

We recorded a goodwill impairment charge of \$1.6 million in 2008, which related to our FGC segment. The goodwill impairment charge was the result of a reduction in the estimated fair value of our FGC segment due to lower chemical sales and market conditions experienced in 2008 that we expected would continue in the near future. We evaluate the recoverability of goodwill at least annually and any time business conditions indicate a potential change in recoverability. There were no goodwill impairment charges for 2007. See Note 3 to the "Consolidated Financial Statements" for additional information.

MEC segment profits decreased by \$55,000 or 1% to \$3.9 million as compared to 2007. The decrease was primarily a result of decreased MEC segment revenues from our DOE contracts. FGC, refined coal and other segment loss increased by \$1.6 million or nearly 3,000% to \$1.9 million, as compared to a loss of \$54,000 in 2007. The increase was primarily the result of lower margin chemical sales, goodwill impairment and decreasing segment revenues.

We had net interest and other income of \$439,000 in 2008, as compared to \$930,000 for 2007. The interest income consists of \$292,000 earned from our money market deposits and \$139,000 from our investment in corporate and government bonds.

The income tax provision for 2008 represents an effective tax rate benefit of approximately 27%, which is more than the rate of (2) % we recognized for 2007. The increase is primarily the result of the reduction of tax credits available to be utilized in 2008, and impairment of goodwill and investment items, which totaled approximately \$1.6 million, for the year ended December 31, 2008. We adopted the provisions of FIN 48 on January 1, 2007. No unrecognized tax benefits were recorded as of the date of adoption. The primary jurisdictions in which we file income tax returns are the U.S. federal government and State of Colorado.

Upon forming Carbon Solutions approximately \$1.2 million of development costs that had previously been shown on our consolidated balance sheet were expensed in the fourth quarter of 2008. These costs were directly related to Carbon Solutions and no longer had any value relating to our AC supply business.

Our operating loss from continuing operations was \$6.7 million in 2008 as compared to a loss of \$777,000 in 2007, due in large part to continued activities related to the Company's growth strategies which included our activities aimed at vertically integrating into the production of and provision of an interim supply of AC.

Unrealized gain, net of tax, on investments in debt and equity securities amounted to \$31,000 for 2007. We sold all of our investments in debt and equity securities in 2008 and recognized a net gain of \$31,000 which is shown in Interest and other income in our consolidated statements of operations.

Liquidity and Capital Resources

Our principal source of liquidity has been our working capital and net proceeds from sales of our securities. We had cash, cash equivalents and a certificate of deposit on hand totaling \$1.9 million at December 31, 2009 as compared to cash and cash equivalents of \$3.0 million at December 31, 2008 excluding the balances of Carbon Solutions. At December 31, 2009 we had working capital of \$2.2 million as compared to \$4.4 million at December 31, 2008 when the previously consolidated balances of Carbon Solutions are excluded. The decrease in working capital (excluding the previously consolidated Carbon Solutions amounts) resulted primarily from the significant legal expenses we incurred in 2009 relating to the Norit matter and our efforts to place refined coal units in service in our Clean Coal joint venture. We have long-term liabilities recorded for our accrued warranty and other obligations of \$1.1 million and indemnity costs related to involvement in the Norit litigation of \$6.8 million as of December 31, 2009. Our shareholders' equity totaled approximately \$24 million as of December 31, 2009. We had a negative operating cash flow for the year ended December 31, 2009 and this trend may continue into 2010, primarily due to legal expenses being incurred in connection with the Norit matter and continued efforts related to our Clean Coal joint venture.

Carbon Solutions has funded, through loans or equity contributions from ECP to Carbon Solutions, a significant portion of the legal expenses related to the Norit litigation. We do not currently have any accrued indemnity obligations to ECP, and we are unable to estimate the total amount of any future indemnity obligations to Carbon Solutions or ECP at this time. ECP has notified us that it believes such obligations include any losses it suffers due to its loss of potential customers and diminution in the value of its businesses, the costs and fees it will incur, and any damages it may suffer as a result of a new lawsuit Norit N.V. has filed against ECP in state court in New Jersey. Satisfaction of any indemnity obligations to ECP, as discussed above, may be made via a decrease in our capital

contributions (and corresponding increase in ECP's capital contributions) in Carbon Solutions and adjustment of each party's percentage ownership accordingly, although ECP is not obligated to accept our interest in Carbon Solutions in satisfaction of the amounts we ultimately may be found to owe or agree to pay for indemnification. We may also require additional working capital to meet our 50% share of capital expenditures and working capital requirements of Clean Coal and to pursue our other businesses. On March 23, 2010, we entered into a Subscription Agreement with Arch Coal, Inc. pursuant to which they purchased 143,885 shares of our Common Stock for an aggregate purchase price of \$1 million. We are also in the process of negotiating an agreement with Arch Coal to exclusively license to Arch Coal technology relating to additives that may be applied to coal at Arch's mines to limit HAPs emissions from burning that coal in boilers and enhancing the marketability of such coal, pursuant to which they would pay us an in-cash non-refundable initial license fee of \$2 million and additional fees based on sales of coal to which such technology has been applied. We expect to use the net proceeds of the sale of our common stock and, if received, the initial license fee to fund our capital contributions to Clean Coal to repay the NexGen Loan and for Clean Coal's and our general working capital.

Our ability to generate the financial liquidity required to meet ongoing operational needs and to meet our current and future indemnification obligations to Carbon Solutions and potentially to ECP, will likely depend upon several factors, including our ability to negotiate and finalize the license agreement with Arch Coal and receive the contemplated initial license fee, ongoing legal expenses incurred by the parties in the Norit matters, timing of satisfaction and ultimate amount of the Indemnity Obligations and insurance coverage with respect to the Norit matters, our ability to maintain a significant share of the market for mercury control equipment, continuation of FGC chemical sales and Clean Coal's success in monetizing Section 45 tax credits through the sale of facilities to third party investors. Consequently, we may not have sufficient working capital to fund all these obligations in the event we are called upon to do so. We believe we can defer some of the growth initiatives or reduce expenses, or both, if necessary to fund operations through at least December 31, 2010.

Clean Coal Related Items

Clean Coal, our 50% joint venture with NexGen, has placed two facilities to produce refined coal into service. Clean Coal is now modifying the two facilities and expects to have working capital requirements to place the facilities into routine operations. We estimate total capital expenditures and working capital requirements for Clean Coal to be approximately \$2 million in the first half of 2010. Clean Coal is in the process of "monetizing" its portion of the Section 45 tax credits through the sale of the facilities to third parties to recover its related capital expenditures shortly after each facility is put into routine operation. In order to satisfy a portion of the 2009 capital needs of Clean Coal, Clean Coal entered into a Loan Commitment Agreement with NexGen on October 26, 2009, by which NexGen agreed to loan Clean Coal up to \$1.0 million for the primary purpose of funding expenses in connection with constructing and placing into operation facilities qualifying for Section 45 tax credits and monetizing those Section 45 tax credits to investors. The full amount was loaned as of December 31, 2009 and bears interest at 5% per annum, with interest only payable monthly in arrears, and will be repayable in full on the earliest to occur of (a) the third day after we receive funds from a sale of our securities (with certain permitted exceptions, including the sale of our common stock to Arch Coal on March 23, 2010), (b) April 30, 2010, or (c) upon the occurrence of a continuing uncured event of default or a change in control of the Company or Clean Coal.

Contemporaneously with the Loan Commitment Agreement entered into between Clean Coal and NexGen, we entered into a Guarantee and a Security and Pledge Agreement with NexGen pursuant to which we guaranteed 50% of the NexGen Loan. To secure our guaranty, we pledged our interest in Clean Coal to NexGen and have also agreed to issue up to 250,938 shares of our common stock to NexGen if we default on our guaranty. We also granted NexGen rights to have any shares we issue to NexGen in the event of a default registered for resale under the Securities Act of 1933, as amended, as soon as practicable after the issuance of the shares.

On October 26, 2009, we, NexGen and Clean Coal also entered into a First Amendment to Purchase and Sale Agreement to amend the terms pursuant to which NexGen may retain its 50% interest in Clean Coal once Clean Coal qualifies its refined coal product for Section 45 tax credits. Under this First Amendment, NexGen may elect to retain its interest in Clean Coal by paying us up to \$4.0 million (plus any accrued interest under the note described below) as follows: (a) \$0.26 times the projected annual tons of refined coal to be sold by a coal fueled electric power generating station (the "Tonnage Amount"), payable within 10 days after a related monetization, either in cash or by delivery of a two-year promissory note, plus (b) 25% of cash distributions (other than for income taxes) due to NexGen from Clean Coal allocable to all monetizations ("Distributed Cash"), payable within 10 days after it becomes payable to NexGen. Any such promissory note would bear interest at 5% per annum, be payable out of 35% of Distributed Cash and be secured by NexGen's interest in Clean Coal. NexGen is not obligated to make

those payments, but if it does not do so, it will forfeit a part of its interest in Clean Coal in direct proportion to the amount that it elects not to pay (including any election not to pay under any notes issued). Once it fails to make any one payment, it cannot reclaim its interest by making later payments. We are not required to refund any of the cash paid by NexGen.

AC Facility Related Items

As noted above, Carbon Solutions is in the process of constructing an AC Facility, which has an estimated all-in, total cost for one production line capable of producing approximately 150 million pounds of AC per year of including related activities of approximately \$400 million.

Our initial contribution to Carbon Solutions was valued by the parties at \$18.4 million and we contributed an additional \$7.1 million in cash in December 2008. As of March 1, 2010, ECP has contributed \$152.6 million in cash to Carbon Solutions in the form of ordinary and preferred equity and made loans of \$125.7 million in the form of secured demand notes.

In order to address the anticipated capital needs of Carbon Solutions, ECP may fund additional ordinary capital contributions or preferred equity contributions to Carbon Solutions or make loans to Red River, in each case at such times and in such amounts as ECP determines are necessary to satisfy their capital requirements. Neither ADA nor ECP is required to fund additional capital contributions to Carbon Solutions at this time. ECP's preferred equity contributions to date exceed the capital it committed to contribute pending the previously planned sale of Series A and B Convertible Preferred Stock (the "Private Placement") to ECP under the Securities Purchase Agreement dated as of October 1, 2008, as amended (the "SPA"). One-half of ECP's preferred equity bears a preferred return of 12% per annum, and the other half does not bear a preferred return. If we consummated the sale of our Preferred Stock to ECP under the SPA, we would have been required to invest the net proceeds, expected to be \$18.8 million, in Carbon Solutions, and an equal amount of ECP's outstanding preferred equity bearing a 12% preferred return, plus the applicable 12% preferred return, would have been redeemed. At that time a matching amount of ECP's preferred equity that does not bear a preferred return would have been converted into ordinary capital contributions. ECP is entitled to receive priority distributions on its preferred equity until it is redeemed or converted and has the option to convert any such unredeemed preferred equity into ordinary capital contributions. Because we did not close on the sale of our preferred stock to ECP by December 27, 2009, the "Outside Date" under the SPA, either we or ECP had the right to terminate the SPA by written notice to the other at any time and, pursuant to the LLC Agreement an "ADA Triggering Event" has occurred. On March 23, 2010, we terminated the SPA as the pricing terms were no longer favorable to us, and we did not want to remain bound by the significant restrictions the ECP SPA placed on our business. There are no penalties for termination. Because an ADA Triggering Event occurred, ECP had the option to buy our equity interest in Carbon Solutions at a purchase price equal to our capital contributions and the amount of any outstanding guaranties, letters of credit or other credit support obligations we have provided, or alternatively, dissolve or sell Carbon Solutions. Such option expired unexercised on March 27, 2010.

Pursuant to an Amended and Restated Credit and Reimbursement Agreement among Red River, ECP and us dated as of September 2, 2009 and related documents (the "Carbon Solutions' Credit Support Documents"), ECP may make loans to Red River from time to time. As of December 31, 2009, the principal balance of ECP's loans to Red River totaled approximately \$76.3 million. Such loans are evidenced by convertible demand promissory notes bearing interest at 12% per annum compounded quarterly. ECP may convert any outstanding amounts due under such notes to ordinary capital or preferred equity contributions in Carbon Solutions at any time at its option. The outstanding loans are secured by Red River's assets and guaranteed by Carbon Solutions, and Carbon Solutions' guaranty is secured by a pledge of Carbon Solutions' equity in Red River.

As of December 31, 2009, ECP had outstanding preferred equity in Carbon Solutions totaling approximately \$101.8 million, all of which is convertible to ordinary capital contributions. In the second and third quarter of 2009, ECP converted some of its then outstanding preferred equity to ordinary capital contributions, resulting in dilution of our ownership interest in Carbon Solutions to 33% as of December 31, 2009. Because of such dilution, ECP now elects three out of the four managers of the Board of Carbon Solutions and controls decisions of the Board. Through March 1, 2010, ECP had contributed cash of \$152.6 million to Carbon Solutions and had loaned \$125.7 million to Red River. Our ownership interest in Carbon Solutions may be further diluted. We continue to have the right to participate in significant decisions subject to member approval so long as we continue to hold at least a 15% ownership interest. Member approval requires approval of members holding at least 75% of the ownership interests.

In addition to our indemnity obligations described above, we have given guaranties and undertaken other commitments of approximately \$120 million related to Carbon Solutions. No liabilities associated with such guaranties and obligations were recorded on our financial statements as we do not expect the guaranties and commitments to be called upon. Pursuant to the Carbon Solutions' Credit Support Documents, Red River has agreed to reimburse us and ECP in the event we or they are required to make payments related to these guaranties and guaranties provided by ECP. Red River's reimbursement obligations are secured by Red River's assets and guaranteed by Carbon Solutions, and Carbon Solutions' guaranty is secured by a pledge of Carbon Solutions' equity in Red River. We assigned our rights under these agreements to ECP, and any amounts payable to us would be paid directly to ECP until ECP's preferred equity in Carbon Solutions is fully redeemed or converted and all loans to Red River have been paid in full.

Other Liquidity and Capital Resource Items

Our trade receivables balance is comprised of both amounts billed to customers as well as unbilled revenues that have been recognized. As of December 31, 2009 our trade receivables balance was \$5.8 million, which was offset by billings in excess of recognized income of \$1.3 million or a net of \$4.5 million as compared to \$4.3 million at December 31, 2008. Our trade receivables balance was lower at December 31, 2009 as compared to 2008, primarily due to the nature and timing of our billing milestones for our ACI systems contracts.

As discussed above, we incurred approximately \$6.8 million in potential indemnity obligations to ECP related to our Norit litigation. These accrued expenses have resulted in the increase in accrual liabilities in 2009. Our net accrued warranty obligations have increased by \$58,000, related to our increase in related ACI project revenues.

Under our defined contribution and 401(k) pension plan, in 2009 and 2008 we matched up to 7% of salary amounts deferred by employees in the Plan. During 2009 and 2008, we recognized \$267,000 and \$234,000, respectively, of matching expense in both cash and stock. In the past, the Company has also made discretionary contributions to the Plan and employees. In 2009 and 2008, the Company did not make any such discretionary contributions.

We had recorded net current deferred tax assets of \$271,000 and long-term deferred tax assets of \$6.8 million as of December 31, 2009 as compared to net deferred current tax liabilities of \$216,000 and net long-term deferred tax assets of \$1.3 million and as of December 31, 2008. We believe that it is more likely than not that our deferred tax assets will be realized in the future. The change is a result of our loss in 2009, larger impact of R&D tax credits and additional tax benefit from 2008 activities. Such amounts include \$238,000 of Section 45 tax credits related to Clean Coal's production of refined coal in December 2009.

Cash flow used in operations totaled \$1.6 million for 2009 compared to cash flow used in operations of \$4.4 million in 2008. The change in operating cash flow primarily resulted from an increase in deferred revenues and other liabilities of \$7.8 million, an increase in our accounts payable of \$2.6 million and an increase in receivables of \$282,000, which was offset by an increase in our assets held for resale and inventory of \$2.1 million and prepaid and other assets of \$155,000. These changes in our operating assets and liabilities correspond to the nature and timing of our procurement and billing cycle and development activities. In addition, adjustments related to our net loss of \$8.8 million for non-cash operating activities, which included expenses paid with stock and restricted stock of \$1.2 million, depreciation and amortization of \$577,000 and our minority interest in the loss of Carbon Solutions of \$3.2 million, increased our cash flow used in operations for 2009, and were partially offset by an increase in recorded deferred tax benefits of \$5.6 million.

Net cash used by investing activities was \$25.9 million for 2009 compared to \$12.6 million for 2008. The cash used was due to the reclassification of our investment in Carbon Solutions as a result of its deconsolidation in the financial statements. The deconsolidation was due to a decrease in our ownership in Carbon Solutions below 50% after ECP converted a portion of its preferred equity contributions to ordinary capital contributions. That change accounted for \$25.2 million of cash used in investing activities which was held in the now deconsolidated subsidiary. As a result of the deconsolidation of Carbon Solutions in the financial statements, we are accounting for that investment under the equity method. The remaining cash used consisted of investments in short term paper and purchases of equipment. The 2008 cash used of \$17.1 million was primarily used for activities related to formation of Carbon Solutions and related development activities.

Cash provided by financing activities was \$725,000 and \$31.7 million in 2009 and 2008, respectively. The amount for 2009 includes the capital investment in our Clean Coal joint venture and stock issuance costs. In 2008, Carbon

Solutions received cash payments of \$25.4 million from ECP to fund the development of the AC Facility. As mentioned above we expect to require additional financing to support future anticipated growth and our AC supply business. In addition, on August 2008, we entered into Subscription Agreements and privately sold 909,092 shares of our common stock to accredited institutional investors at a price of \$7.70 per share, for a total offering price of \$7.0 million. The net proceeds from the sales were \$6.4 million. Our placement agent received a total cash fee of 4.5% of the gross proceeds of the offering as well as reimbursement for certain offering expenses. We paid an additional 2% commission to two other placement agents.

We had the following contractual commitments as of December 31, 2009:

	Total	Payments due by period			
		2010	2011 and 2012	2013 and 2014	2015 and Beyond
Purchase obligations	\$ 716,000	\$ 716,000	\$ -	\$ -	\$ -
Operating lease obligations	140,000	140,000	-	-	-
Total	\$ 856,000	\$ 856,000	\$ -	\$ -	\$ -

Critical Accounting Policies and Estimates

Revenue Recognition – ADA follows the percentage of completion method of accounting for all significant contracts excluding government contracts and chemical sales. The percentage of completion method of reporting income takes into account the estimated costs to complete and estimated gross margin for contracts in progress. We recognize revenue on government contracts generally based on the time and expenses incurred to date.

Significant estimates are used in preparation of our financial statements and include (1) our allowance for doubtful accounts, which is based on historical experience; (2) our warranty costs; (3) our expectation that it is more likely than not that our deferred tax assets will be realized in the future; and (4) our percentage of completion method of accounting for significant long-term contracts, which is based on estimates of gross margins and of the costs to complete such contracts. In addition, amounts invoiced for government contracts are subject to change based on the results of future audits by the federal government. We have not experienced significant adjustments in the past, and we do not expect significant adjustments will be required in the future. We also use our judgment to support the current fair value of goodwill and other intangible assets of \$664,000 on the consolidated balance sheets. Management believes the fair value of other recorded intangibles is not impaired, although market demand for our products and services could change in the future, which would require a write-down in recorded values. As with all estimates, the amounts described above are subject to change as additional information becomes available, although we are not aware of anything that would cause us to believe that any material changes will be required in the near term.

Under certain contracts we may grant performance guaranties or equipment warranties for a specified period and the achievement of certain plant operating conditions. In the event the equipment fails to perform as specified, we are obligated to correct or replace the equipment. Estimated warranty costs are recorded at the time of sale based on current industry factors. The amount of the warranty liability accrued reflects our best estimate of expected future costs of honoring our obligations under the warranty section of each contract. We believe the accounting estimate related to warranty costs is a critical accounting estimate because changes in it can materially affect net income, it requires us to forecast the amount of equipment that might fail to perform in the future, and it requires a large degree of judgment.

Income taxes are accounted for under the asset and liability approach. Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences of differences between the carrying amounts of assets and liabilities and their respective tax bases using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period when the change is enacted. Deferred tax assets may be reduced by a valuation allowance if and when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. The change in laws can have a material effect on the amount of income tax we are subject to. We are not aware of anything that would cause us to believe that any material changes will be required in the near term.

We follow the guidance in FASB Topic 718 related to share-based payments to recognize all share-based payments, including grants of stock options, restricted stock units and employee stock purchase rights in our financial

statements based upon their respective grant date fair values. Under this standard, the fair value of each employee stock option and employee stock purchase right is estimated on the date of grant using an option pricing model that meets certain requirements. We currently use the Black-Scholes option pricing model to estimate the fair value of our stock options and stock purchase rights. The Black-Scholes model meets the requirements of FASB Topic 718 but the fair values generated by the model may not be indicative of the actual fair values of our equity awards as it does not consider certain factors important to those awards to employees, such as continued employment and periodic vesting requirements. The determination of the fair value of share-based payment awards utilizing the Black-Scholes model is affected by our stock price and a number of assumptions, including expected volatility, expected life and risk-free interest rate. We use a historical volatility rate on our stock options. The fair value of our restricted stock is based on the closing market price of our common stock on the date of grant. If there are any modifications or cancellations of the underlying securities, we may be required to accelerate, increase or cancel any remaining unearned stock-based compensation expense. To the extent that we grant additional equity securities to employees or we assume unvested securities in connection with any acquisitions, our stock-based compensation expense will be increased by the additional unearned compensation resulting from those additional grants or acquisitions.

Consolidation of Subsidiaries – Our equity partner in Carbon Solutions, ECP, contributed equity capital significantly in excess of our contributions during the twelve months ended December 31, 2009. We expect that our ownership percentage may be further diluted below the 33% at December 31, 2009 and that we will continue the recording of our interest under the equity method.

Recently Issued Accounting Policies

In June 2009, the FASB issued Accounting Standards Update (“ASU”) 2009-01. The ASU eliminates the previous US GAAP hierarchy and designates US GAAP into two levels – authoritative and nonauthoritative. It also designates the Codification as the single source of authoritative US GAAP. The ASU is effective for interim and annual periods ending after September 15, 2009.

In May 2009, the FASB updated Topic 855 with respect to subsequent events (issued as SFAS No. 165, “Subsequent Events” prior to the implementation of ASU 2009-01). The update does not require significant changes regarding recognition or disclosure of subsequent events but does require disclosure of the date through which subsequent events have been evaluated for disclosure and recognition. The standard is effective for financial statements issued after June 15, 2009. The implementation of this standard did not have a significant impact on our financial statements.

In June 2008, the FASB updated Topic 260 with respect to share-based payments (issued as Financial Accounting Standards Board Staff Position EITF 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities prior to the implementation of ASU 2009-01). The update provides that unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and shall be included in the computation of earnings per share pursuant to the two-class method in accordance with Topic 260’s calculation of “Earnings per Share”. The update is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those years. Upon adoption, the Company is required to retrospectively adjust its earnings per share data to conform to the provisions in update. Early application of Topic 260 is prohibited. We have not issued dividends or dividend equivalents and, consequently, the update has not had a material impact on our consolidated financial statements.

In April 2008, the FASB updated Topic 350 with respect to intangible assets (issued as FASB Staff Position SFAS No. 142-3, “Determination of the Useful Life of Intangible Assets” prior to the implementation of ASU 2009-01). The update amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset. The intent of this update is to improve the consistency between the useful life of a recognized intangible asset and the period of expected cash flows used to measure the fair value of the asset. This update is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. This update had no material effect on our financial statements.

Effective January 1, 2008, the Company adopted provisions of Topic 820 with respect to recurring fair value measurements (issued as Statement of Financial Accounting Standards No. 157 “Fair Value Measurements” prior to the implementation of ASU 2009-01) which introduced a framework for measuring fair value and expands required

disclosure about fair value measurements of assets and liabilities. Our adoption of this standard did not have a material impact on our financial statements.

In December 2007, the FASB updated Topic 810 with respect to noncontrolling interests in consolidated financial statements (issued as SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements — an amendment of ARB No. 51" prior to the implementation of ASU 2009-01). The update requires the ownership interests in subsidiaries held by parties other than the parent be clearly identified, labeled, and presented in the consolidated balance sheet within equity, but separate from the parent's equity. It also requires the amount of consolidated net income attributable to the parent and to the noncontrolling interest be clearly identified and presented on the face of the consolidated statement of operations. We adopted the update on January 1, 2009 and recharacterized its reportable minority interests as noncontrolling interests and classified these interests as a component of equity in the consolidated financial statements. We deconsolidated Carbon Solutions as of June 30, 2009 and accounts for gains and losses under the equity method of accounting.

In December 2007, the FASB updated Topic 805 with respect to business combinations (issued as SFAS 141R, "Business Combinations", prior to the implementation of ASU 2009-01), which establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, including goodwill, the liabilities assumed and any noncontrolling interest in the acquiree. The update also establishes disclosure requirements to enable users of the financial statements to evaluate the nature and financial effects of the business combination and is effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The impact of the update will depend on the future business combinations we may pursue after its effective date. Under provisions of the update, all acquisition costs are expensed as incurred.

In August 2009, the FASB issued ASU 2009-05 to amend provisions of Topic 820 by providing more guidance in determining fair value of liabilities. This update provides clarification that in circumstances in which a quoted price in an active market for the identical liability is not available, a reporting entity is required to measure fair value using either a quoted price for similar liabilities or valuation techniques consistent with Topic 820 or a combination of methods. The update is effective for the first reporting period after issuance, September 30, 2009, and has not had a material impact on our financial statements.

In September 2009, the FASB issued ASU 2009-08 to amend provisions of Topic 260 to provide technical corrections in the calculation of earnings per share in a reporting period that involves the redemption or induced conversion of preferred stock. The impact of this amendment would be determined if the Company issues any of its authorized preferred stock and subsequently redeems it or induces its conversion. This ASU will not have any impact on our financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Commodity Price Risk

In the normal course of our business, we are exposed to market risk or price fluctuations related to the goods and services we procure related to our revenue-producing activities. Components of ACI systems and consulting services, which are significant to such revenue producing activities, have market prices that fluctuate regularly, but not widely. In most cases we can pass such price fluctuations on to our customers. Based on the estimated 2009 procurement of ACI components and consulting services, a hypothetical 10% increase (or decrease) in the price of ACI components and consulting services, if such fluctuations could not be passed on to our customers, would result in a pretax loss or gain of \$692,000, respectively.

Interest Rate Risk

As of December 31, 2009, approximately \$2.0 million of the cash and cash equivalents and investment in certificate of deposit were invested in interest-bearing accounts. A hypothetical change of 10% in the Company's effective interest rate from the year-end 2009 rate would increase (or decrease) interest income by \$3,000.

Item 8. Financial Statements and Supplementary Data.

Our Financial Statements can be found at pages F-1 through F-23 of this report.

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Report of Independent Registered Public Accounting Firm

Financial Statements:

ADA-ES, Inc. and Subsidiaries

Consolidated Balance Sheets, December 31, 2009 and 2008

Consolidated Statements of Operations, For the Years Ended December 31, 2009 and 2008

Consolidated Statements of Changes in Stockholders' Equity, For the Years Ended December 31, 2009 and 2008

Consolidated Statements of Cash Flows, For the Years Ended December 31, 2009 and 2008

Notes to Consolidated Financial Statements

Item 9. Changes In and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A(T). Controls and Procedures.

We conducted an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission’s rules and forms. Disclosure controls and procedures also include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded as of December 31, 2009 that our disclosure controls and procedures were effective.

Management’s Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) is defined as a process designed by, or under the supervision of, a company’s principal executive and financial officers, or persons performing similar functions, and effected by a company’s board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally acceptable accounting principles and includes those policies and procedures that: (a) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (b) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (c) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company’s assets that could have a material effect on the financial statements.

A material weakness is a control deficiency, or combination of control deficiencies, that result in more than a remote likelihood that a material misstatement of annual or interim financial statements will not be prevented or detected. Our management assessed our internal control over financial reporting as of December 31, 2009. Management based its assessment on criteria set forth in the framework in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our assessments, we believe that, as of December 31, 2009, our internal control over financial reporting is effective based on those criteria.

This annual report does not include an attestation report of the Company’s registered public accounting firm regarding internal control over financial reporting. Management’s report was not subject to attestation by the

Company's registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit the Company to provide only management's report in this annual report.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the most recently completed fiscal quarter that have materially affected, or are likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Transactions with Arch Coal

Private Placement

On March 23, 2010, we entered into a subscription agreement (the "Subscription Agreement") with Arch Coal for the issuance and sale in a private placement of an aggregate of 143,885 shares of our common stock at a purchase price of \$6.95 per share for aggregate proceeds of \$1.0 million. The per-share price for the private placement was the closing sales price of our common stock as listed on the NASDAQ Capital Market on March 22, 2010, the day before we entered into the Subscription Agreement. We intend to use the net proceeds of the private placement to make capital contributions to Clean Coal to fund our 50% share of the repayment by Clean Coal of the NexGen Loan. No placement agent was involved in the transaction.

John Eaves is the President and Chief Operating Officer of Arch Coal and also one of the members of our Board of Directors. Mr. Eaves abstained from voting on the private placement. In addition, as required by our related-party transaction policy, the private placement was approved by our audit committee before being recommended to the Board for approval and was then approved by the disinterested members of the Board.

We issued the shares of common stock in the private placement pursuant to the exemption from registration provided by Rule 506 of Regulation D, promulgated under the U.S. Securities Act of 1933, as amended. Arch Coal is an "accredited investor" as defined in Regulation D. In connection with the private placement, we also entered into a registration rights agreement with Arch Coal that requires us to register the shares issued by us to Arch Coal for resale within certain time periods specified in the agreement. If we fail to have an effective registration statement for the resale of such shares by August 19, 2010 other than due to failure by Arch Coal to provide certain information or a force majeure event, we must pay Arch Coal \$10,000 per month in cash until the registration statement becomes effective, but no more than \$120,000 total. Amounts payable bear interest at a rate equal to the lesser of 18% per annum or the maximum amount allowed by law.

Update and Amendment to Crowfoot Incentive Program

On March 25, 2010, the Compensation Committee of our Board of Directors amended the Project Crowfoot Incentive Program ("Program") under our 2007 Equity Incentive Plan to extend the date for attainment of one of the defined milestones ("Milestones") under the Program. The Program is intended to reward certain of our executive officers (four persons) and a consultant through the award and vesting of up to 172,500 shares of our Common Stock upon attainment of the Milestones related to the AC Facility. The Milestones under the Program are as follows:

- Strategic Partner Plus Promote
- Off-Take Contracts
- Financial Close; and
- Project Schedule – Plant Start Up

We extended the deadline for attaining the Milestone for "Financial Close". The terms of the Program include provisions that reduce the number of shares to be vested upon attainment of a Milestone by five percent (5%) for each full month past the due date that a Milestone remains unsatisfied. The amendments were approved to eliminate the effect of these provisions for the "Financial Close" Milestone owing to the milestone not having been attained by the due date. The due date for this milestone was extended by fifteen and one/half months from the current due date as a result of delays in Red River's attaining project financing that we believe were primarily caused by general economic conditions, which the Compensation Committee decided should not penalize the Program grantees. No other changes were made to the Program.

The Compensation Committee determined that the "Off-Take Contracts" Milestone was attained on November 12, 2009, and all of the shares of Common Stock dedicated to that Milestone (totaling 45,833 shares, including 42,500 shares granted to four of our executive officers) vested on that date. The named executive officers whose shares vested as a result of the attainment of this Milestone are our Chief Executive Officer Dr. Michael Durham (12,500 shares), our Executive Vice President, Secretary and Chief Financial Officer Mr. Mark McKinnies (10,000 shares), our Chief Operating Officer Ms. C. Jean Bustard (10,000 shares) and our Vice President of Business Development of Utility Systems Mr. Richard Miller (10,000 shares). These are in addition to the shares of Common Stock vested in each of these officers (other than Mr. Miller) under the Strategic Partner Plus Promote milestone that was previously met.

A summary description of the Program, as amended, can be found in our proxy statement for our 2010 annual meeting of shareholders, which will be filed with the SEC within 120 days after the end of our fiscal year ended December 31, 2009. We filed copies of the Program documents, as previously amended, with the SEC; see Exhibit 10.57 hereto. These filings can be reviewed on the SEC's EDGAR filing system, which can be accessed on the internet at <http://www.sec.gov>.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance.

The information required by this item is incorporated by reference from the information contained under the captions "Election of Directors," "Corporate Governance—Director Independence," "Corporate Governance—Board Meetings and Committees," "Corporate Governance—Audit Committee," "Corporate Governance—Nominating and Governance Committee," "Executive Officers," and "Executive Compensation - Section 16(a) Beneficial Ownership Reporting Compliance" in our Proxy Statement for the 2010 Annual Meeting of Shareholders ("2010 Proxy Statement") to be filed within 120 days after the end of our fiscal year ended December 31, 2009.

Item 11. Executive Compensation.

The information required by this item is incorporated by reference from the information contained under the captions "Corporate Governance--Compensation Committee," "Executive Compensation," "Director Compensation" and "Stock Incentive Plans" in our 2010 Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item is incorporated by reference from the information contained under the caption "Security Ownership of Principal Shareholders and Management and Related Stockholder Matters" and "Equity Compensation Plan Information" in our 2010 Proxy Statement.

Item 13. Certain Relationships and Related Transactions and Director Independence.

The information required by this item is incorporated by reference from the information contained under the captions "Certain Relationships and Related Transactions," "Election of Directors" and "Director Independence" in our 2010 Proxy Statement.

Item 14. Principal Accountant Fees and Services.

The information required by this item is incorporated by reference from the information contained under the caption "Relationship with Independent Certified Public Accountants" in our 2010 Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

- (a) The following documents are filed as part of this Annual Report on Form 10-K:
- (1) Financial Statements – see Part II, Item 8, which is incorporated herein by this reference;
 - (2) Financial Statement Schedules – None required or applicable; and

(3) Exhibits – as described in the following index.

Index to Exhibits

<u>No.</u>	<u>Description</u>
3.1	Amended and Restated Articles of Incorporation of ADA-ES (1)
3.2	Amended and Restated Bylaws of ADA-ES (2)
4.1	Form of Specimen Common Stock Certificate (3)
4.2	Registration Rights Agreement dated October 21, 2005 (4)
4.3	Registration Rights Agreement between ADA-ES, Inc. and Arch Coal, Inc. dated March 19, 2003 (5)
4.4	Standstill and Registration Rights Agreements dated August 3-6, 2004 (6)
4.5	Registration Rights Agreement among ADA-ES, Inc., Perella Weinberg Partners Oasis Master Fund L.P., Black River Commodity Select Fund and Black River Small Capitalization Fund Ltd. dated August 26, 2008 (7)
4.6	ADA-ES, Inc. Profit Sharing Retirement Plan (8)
4.7	American Funds Distributors, Inc. Nonstandardized 401(K) Plan (9)
4.8	American Funds Distributors, Inc. Defined Contribution Prototype Plan and Trust (10)
4.9	ADA-ES, Inc. Plan Policy Documents (11)
4.10	Employer Stock Addendum to Trust Agreement (12)
10.1	Distribution Agreement dated as of March 17, 2003 between Earth Sciences, Inc. and ADA-ES, Inc. (13)
10.2	2003 ADA-ES, Inc. Stock Option Plan** (14)
10.6	Securities Subscription and Investment Agreement between ADA-ES, Inc. and Arch Coal, Inc. dated July 7, 2003 (13)
10.10	Tax Sharing Agreement between ADA-ES, Inc. and Earth Sciences, Inc. dated March 17, 2003 (14)
10.12	Amendment No. 1 to Distribution Agreement by and between ADA-ES, Inc. and Earth Sciences, Inc. dated August 15, 2003 (15)
10.13	2003 Stock Compensation Plan #1** (16)
10.14	2003 Stock Compensation Plan #2** (17)
10.17	Clean Coal Power Initiative Repayment Agreement between the U.S. Department of Energy and ADA-ES, Inc. dated April 6, 2004 (18)
10.21	ADA-ES, Inc. 2004 Executive Stock Option Plan** (19)
10.23	Employment Agreement dated May 1, 1997 between C. Jean Bustard and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (20)
10.24	Employment Agreement dated May 1, 1997 between Michael D. Durham and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (20)
10.25	Employment Agreement dated January 2, 2000 between Mark H. McKinnies and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (20)
10.26	Employment Agreement dated January 1, 2000 between Richard J. Schlager and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (20)
10.27	2004 Stock Compensation Plan #2 and model stock option agreements** (19)
10.28	2004 Directors Stock Compensation Plan #1** (21)
10.29	2005 Directors' Compensation Plan**(5)
10.30	License Agreement dated as of November 3, 2006 by and between ADA-ES, Inc. and ADA-NexCoal, LLC. (22)
10.31	Chemicals, Equipment, and Technical Engineering Services Supply Agreement dated as of November 3, 2006 by and between ADA-ES, Inc. and ADA-NexCoal, LLC. (23)
10.32	Purchase and Sale Agreement dated as of November 3, 2006 by and among ADA-ES, Inc., NexGen Refined Coal, LLC and ADA-NexCoal, LLC. (24)
10.33	Amended and Restated Operating Agreement of ADA-NexCoal, LLC dated as of November 3, 2006 by and among ADA-ES, Inc., NexGen Refined Coal, LLC and ADA-NexCoal, LLC. (25)
10.34	Employment Agreement dated March 1, 2003 between Sharon M. Sjostrom and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.)** (26)
10.35	Executive Compensation Plan** (27)
10.36	Memorandum of Understanding dated March 20, 2007, between Calgon Carbon Corporation and ADA-ES, Inc. (28)
10.38	2007 Equity Incentive Plan** (29)
10.39	Employment Agreement dated November 28, 2005 between Richard Miller and ADA-ES, Inc.** (30)
10.43	Employment Agreement dated January 1, 2008 between Cameron E. Martin and ADA-ES, Inc.** (30)

- 10.44 Engineering, Procurement and Construction Agreement dated January 29, 2008 between Red River Environmental Products, LLC and BE&K Construction Company, LLC. *** (30)
- 10.46 Agreement for the Purchase of Activated Carbon between Red River Environmental Product, LLC and Southern Company Services, Inc dated June 5, 2008*** (31)
 - (a) Master Agreement for the Purchase of Activated Carbon
 - (b) General Conditions of the Contract for the Purchase of Chemical and/or Gas Products
 - (c) Special Supplemental Conditions Contract
- 10.48 Promissory Note and Account Pledge Agreement for Colorado Business Bank Letter of Credit dated August 15, 2008 (7)
- 10.49 Carbon Supply Agreement between Red River Environmental Products, LLC and Luminant Generation Company, LLC dated September 3, 2008*** (7)
- 10.50 Multiple Hearth Furnace (MHF) Contract between Industrial Furnace Company, Inc and Red River Environmental Products, LLC dated September 5, 2008*** (7)
 - (a) Unit 1- Project No. 65214-RFP No. EFH-101
 - (b) Unit 2- Project No. 65214-RFP No. EFH-101
 - (c) Unit 3- Project No. 65214-RFP No. EFH-101
 - (d) Unit 4- Project No. 65214-RFP No. EFH-101
- 10.51 Amended and Restated Engineering, Procurement and Construction Agreement between Red River Environmental Products, LLC and BE&K Construction Company, LLC dated September 8, 2008*** (7)
- 10.52 Guaranty of ADA-ES, Inc. to BE&K Construction Company, LLC dated September 8, 2008 regarding Amended and Restated Engineering, Procurement and Construction Agreement (7)
- 10.53 Securities Purchase Agreement between ADA-ES, Inc. and Energy Capital Partners I, LP, Energy Capital Partners I-A LP, Energy Capital Partners I-B, LP and Energy Capital Partners I (TEF IP), LP dated October 1, 2008 (7)
- 10.54 Joint Development Agreement between ADA-ES, Inc. and Energy Capital Partners I, LP, Energy Capital Partners I-A LP, Energy Capital Partners I-B IP, LP and Energy Capital Partners I (Crowfoot IP), LP dated October 1, 2008 *** (32)
- 10.55 Limited Liability Company Agreement of Crowfoot Development, LLC dated October 1, 2008*** (7)
- 10.56 Intellectual Property License Agreement between ADA-ES, Inc. and Crowfoot Development, LLC dated October 1, 2008*** (7)
- 10.57 Project Crowfoot Incentive Program, as amended and restated on August 13, 2008 and October 15, 2008**, *** (33)
- 10.58 Amendment to the Master Agreement for the Purchase of Activated Carbon between Red River Environmental Products, LLC and Southern Company Services, Inc dated December 17, 2008 (34).
- 10.59 Site Work Agreement between Red River Environmental Products, LLC and BE&K Construction Company, LLC dated January 23, 2009 (35)
- 10.60 First Amendment to the Securities Purchase Agreement between ADA-ES, Inc. and Energy Capital Partners I, LP, Energy Capital Partners I-A LP, Energy Capital Partners I-B, LP and Energy Capital Partners I (TEF IP), LP dated March 6, 2009 (35)
- 10.61 Second Amendment to ADA Carbon Solutions, LLC Limited Liability Company Agreement dated March 6, 2009 (34)
- 10.62 First Amendment to the Carbon Supply Agreement between Red River Environmental Products, LLC and Luminant Generation Company, LLC dated March 31, 2009*** (35)
- 10.63 Second Amendment to the Agreement for the Purchase of Activated Carbon between Red River Environmental Products, LLC and Southern Company Services, Inc. dated February 26, 2009 (35)
- 10.64* First Amendment to Purchase and Sale Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., NexGen Refined Coal, LLC and ADA-NexCoal, LLC
- 10.65* Loan Commitment Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., NexGen Refined Coal Holding, LLC and Clean Coal Solutions, LLC
- 10.66* First Amendment to Chemicals, Equipment, and Technical Engineering Services Supply Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., and Clean Coal Solutions, LLC
- 10.67* Continuing Unconditional Guaranty dated as of October 26, 2009 by and among ADA-ES, Inc., and NexGen Refined Coal Holdings, LLC
- 10.68* Security and Pledge Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., and NexGen Refined Coal Holdings, LLC
- 10.69* Promissory Notes dated as of October 26, 2009 by and among ADA-ES, Inc., Clean Coal Solutions, LLC and NexGen Refined Coal Holdings, LLC
- 21.1* Subsidiaries of ADA-ES, Inc.

- 23.1* Consent of Ehrhardt Keefe Steiner & Hottman PC
- 31.1* Certification of Chief Executive Officer of ADA-ES, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)
- 31.2* Certification of Chief Financial Officer of ADA-ES, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)
- 32.1* Certification of Chief Executive Officer of ADA-ES, Inc. Pursuant to 18 U.S.C Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2* Certification of Chief Financial Officer of ADA-ES, Inc. Pursuant to 18 U.S.C Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Notes:

- * – Filed herewith.
- ** – Management contract or compensatory plan or arrangement.
- *** – Portions of this exhibit have been omitted pursuant to a request for confidential treatment
- (1) Incorporated by reference to Exhibit 3.1 to the Form 10-QSB for the quarter ended September 30, 2005 filed on November 10, 2005 (File No. 000-50216).
- (2) Incorporated by reference to Exhibit 3.2 to the Form 8-K dated December 1, 2005 filed on December 5, 2005 (File No. 000-50216).
- (3) Incorporated by reference to Exhibit 4.1 to the Form 8-K dated October 21, 2005 filed on October 26, 2005 (File No. 000-50216).
- (4) Incorporated by reference to Exhibit 10.1 to the Form 8-K dated October 21, 2005 filed on October 26, 2005 (File No. 000-50216).
- (5) Incorporated by reference to Exhibit 10.29 to the Form 10-K for the year ended December 31, 2006 filed on March 27, 2007 (File No. 000-50216).
- (6) Incorporated by reference to Exhibit A to Exhibit 10.1 to the Form S-3 filed on October 18, 2004 (File No. 333-119795).
- (7) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended September 30, 2008 filed on November 11, 2008 (File No. 000-50216).
- (8) Incorporated by reference to Exhibit 4.1 to the form 10-Q for the quarter ended June 30, 2009 filed on August 13, 2009 (File No. 000-50216).
- (9) Incorporated by reference to Exhibit 4.2 to the form 10-Q for the quarter ended June 30, 2009 filed on August 13, 2009 (File No. 000-50216).
- (10) Incorporated by reference to Exhibit 4.3 to the form 10-Q for the quarter ended June 30, 2009 filed on August 13, 2009 (File No. 000-50216).
- (11) Incorporated by reference to Exhibit 4.4 to the form 10-Q for the quarter ended June 30, 2009 filed on August 13, 2009 (File No. 000-50216).
- (12) Incorporated by reference to Exhibit 4.5 to the form 10-Q for the quarter ended June 30, 2009 filed on August 13, 2009 (File No. 000-50216).
- (13) Incorporated by reference to the same numbered Exhibit to the Form 10-SB/A-3 filed on July 28, 2003 (File No. 000-50216).
- (14) Incorporated by reference to the same numbered Exhibit to the Form 10-KSB for the year ended December 31, 2005 filed on March 30, 2006 (File No. 000-50216).
- (15) Incorporated by reference to the same numbered Exhibit to the Form 10-SB/A-4 filed on August 24, 2003 (File No. 000-50216).
- (16) Incorporated by reference to Exhibit 99.2 to the Form S-8 filed on November 14, 2003 (File No. 333-110479).
- (17) Incorporated by reference to Exhibit 99.1 to the Form S-8 filed on February 6, 2004 (File No. 333-112587).
- (18) Incorporated by reference to the same numbered Exhibit to the Form 10-QSB for the quarter ended March 31, 2004 filed on May 13, 2004 (File No. 000-50216).
- (19) Incorporated by reference to the same numbered Exhibit to the Form 10-KSB for the year ended December 31, 2005 filed on March 30, 2006 (File No. 000-50216).
- (20) Incorporated by reference to the same numbered Exhibit to the Form 10-KSB for the year ended December 31, 2004 filed on March 30, 2005 (File No. 000-50216).
- (21) Incorporated by reference to Exhibit 99.1 to the Form S-8 filed on April 16, 2004 (File No. 333-114546).
- (22) Incorporated by reference to Exhibit 10.1 to the Form 10-Q for the quarter ended September 30, 2006 filed on November 8, 2006 (File No. 000-50216).
- (23) Incorporated by reference to Exhibit 10.2 to the Form 10-Q for the quarter ended September 30, 2006 filed on November 8, 2006 (File No. 000-50216).
- (24) Incorporated by reference to Exhibit 10.3 to the Form 10-Q for the quarter ended September 30, 2006 filed on November 8, 2006 (File No. 000-50216).

- (25) Incorporated by reference to Exhibit 10.4 to the Form 10-Q for the quarter ended September 30, 2006 filed on November 8, 2006 (File No. 000-50216).
 - (26) Incorporated by reference to Exhibit 10.34 to the Form 10-K for the year ended December 31, 2006 filed on March 27, 2007 (File No. 000-50216).
 - (27) Incorporated by reference to Exhibit 10.35 to the Form 10-K for the year ended December 31, 2006 filed on March 27, 2007 (File No. 000-50216).
 - (28) Incorporated by reference to Exhibit 10.36 to the Form 10-K for the year ended December 31, 2006 filed on March 27, 2007 (File No. 000-50216).
 - (29) Incorporated by reference to Exhibit 10.37 to the Form 10-K for the year ended December 31, 2006 filed on March 27, 2007 (File No. 000-50216).
 - (30) Incorporated by reference to the same numbered Exhibit to the Form 10-K for the year ended December 31, 2007 filed on March 14, 2008 (File No. 000-50216).
 - (31) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended June 30, 2008 filed on August 6, 2008 (File No. 000-50216).
 - (32) Incorporated by reference to the same numbered Exhibit to the Form 10-Q/A for the quarter ended September 30, 2008 filed on December 24, 2008 (File No. 000-50216).
 - (33) Incorporated by reference to Exhibit 10.38 to the Form 10-Q for the quarter ended September 30, 2008 filed on November 11, 2008 (File No. 000-50216).
 - (34) Incorporated by reference to the same numbered Exhibit to Form 10-K for the year ended December 31, 2008 filed on March 27, 2009 (File No. 000-50216).
 - (35) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended March 31, 2009 filed on May 14, 2009 (File No. 000-50216).
- (b) See (a)(3) above.**
- (c) See (a)(2) above.**

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Exchange Act, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ADA-ES, Inc.
(Registrant)

By /s/ Mark H. McKinnies
Mark H. McKinnies, Senior Vice
President and Chief Financial Officer
(Principal Financial and Accounting Officer)

/s/ Michael D. Durham
Michael D. Durham
President (Chief Executive Officer)

Date: March 29, 2010

Date: March 29, 2010

Pursuant to the requirements of the Exchange Act, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

John W. Eaves, Director

/s/ Walter P. Marcum
Walter P. Marcum, Director

Date: _____

Date: March 29, 2010

/s/ Jeffrey C. Smith
Jeffrey C. Smith, Director

/s/ Michael D. Durham
Michael D. Durham, Director

Date: March 29, 2010

Date: March 29, 2010

/s/ Mark H. McKinnies
Mark H. McKinnies, Director

/s/ Ronald B. Johnson
Ronald B. Johnson, Director

Date: March 29, 2010

Date: March 29, 2010

/s/ Robert N. Caruso
Robert N. Caruso, Director

/s/ Richard Swanson
Richard Swanson, Director

Date: March 29, 2010

Date: March 29, 2010

/s/ Derek C. Johnson
Derek C. Johnson, Director

Date: March 29, 2010

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
ADA-ES, Inc. and Subsidiaries
Littleton, Colorado

We have audited the accompanying consolidated balance sheets of ADA-ES, Inc. and subsidiaries as of December 31, 2009 and 2008, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of ADA-ES, Inc. and subsidiaries as of December 31, 2009 and 2008, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

/s/ Ehrhardt Keefe Steiner & Hottman PC

March 29, 2010
Denver, Colorado

ADA-ES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands)

<u>ASSETS</u>	<u>DECEMBER 31,</u>	
	<u>2009</u>	<u>2008</u>
CURRENT ASSETS:		
Cash and cash equivalents	\$ 1,456	\$ 28,201
Trade receivables, net of allowance for doubtful accounts of \$17 and \$17, respectively	5,812	6,017
Investment in securities	400	–
Assets held for resale and inventory	2,059	787
Prepaid expenses and other	1,110	1,164
Total current assets	10,837	36,169
PROPERTY AND EQUIPMENT, at cost		
Less accumulated depreciation and amortization	(2,252)	(1,777)
Net property and equipment	848	35,004
GOODWILL (Note 3)	435	435
INTANGIBLE ASSETS, net of \$61 and \$50 in amortization, respectively	229	256
INVESTMENT IN ADA CARBON SOLUTIONS, LLC	21,776	–
DEVELOPMENT PROJECTS	–	1,878
DEFERRED TAXES AND OTHER ASSETS	6,842	1,400
TOTAL ASSETS	\$ 40,967	\$ 75,142
<u>LIABILITIES AND STOCKHOLDERS' EQUITY</u>		
CURRENT LIABILITIES:		
Accounts payable	\$ 5,312	\$ 14,639
Accrued payroll and related liabilities	578	985
Deferred revenue	1,452	1,875
Accrued expenses	1,306	106
Total current liabilities	8,648	17,605
LONG-TERM LIABILITIES:		
Accrued liabilities	6,822	–
Accrued warranty and other	1,146	550
Total liabilities	16,616	18,155
COMMITMENTS AND CONTINGENCIES (Notes 6, 7 and 9)		
STOCKHOLDERS' EQUITY:		
ADA-ES, Inc. stockholders' equity		
Preferred stock; 50,000,000 shares authorized, none outstanding	–	–
Common stock; no par value, 50,000,000 shares authorized, 7,093,931 and 6,755,932 shares issued and outstanding	37,000	35,812
Accumulated deficit	(12,748)	(3,977)
Total ADA-ES, Inc. stockholders' equity	24,252	31,835
Non-controlling interest	99	25,152
TOTAL STOCKHOLDERS' EQUITY	24,351	56,987
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 40,967	\$ 75,142

See accompanying notes to these consolidated financial statements.

ADA-ES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	FOR THE YEARS ENDED DECEMBER 31,	
	2009	2008
REVENUES:		
Mercury emission control	\$ 16,080	\$ 15,760
Flue gas conditioning, refined coal and other	3,981	433
Total revenues	20,061	16,193
COST OF REVENUES:		
Mercury emission control	9,701	10,461
Flue gas conditioning, refined coal and other	4,169	443
Total cost of revenues	13,870	10,904
GROSS MARGIN	6,191	5,289
OTHER COSTS AND EXPENSES:		
General and administrative	16,745	9,168
Research and development	709	784
Depreciation and amortization	577	488
Goodwill impairment charge	–	1,589
Total expenses	18,031	12,029
OPERATING LOSS	(11,840)	(6,740)
OTHER INCOME (EXPENSE):		
Interest and other income	34	439
Equity in loss in ADA Carbon Solutions, LLC	(3,243)	–
Total other income (expense)	(3,209)	439
LOSS FROM CONTINUING OPERATIONS BEFORE INCOME TAX AND NON-CONTROLLING INTEREST	(15,049)	(6,301)
INCOME TAX BENEFIT	5,546	1,507
NET LOSS BEFORE NON-CONTROLLING INTEREST	(9,503)	(4,794)
NON-CONTROLLING INTEREST	732	688
NET LOSS ATTRIBUTABLE TO ADA-ES, INC.	\$ (8,771)	\$ (4,106)
NET LOSS PER COMMON SHARE BASIC AND DILUTED – ATTRIBUTABLE TO ADA-ES, INC.	\$ (1.26)	\$ (.67)
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING	6,973	6,100
WEIGHTED AVERAGE DILUTED COMMON SHARES OUTSTANDING	6,973	6,100

See accompanying notes to these consolidated financial statements

ADA-ES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2009 AND 2008
(Amounts in thousands, except share data)

	COMMON STOCK		ACCUMULATED	(ACCUMULATED	TOTAL ADA-ES		TOTAL
	SHARES	AMOUNT	OTHER COMPREHENSIVE INCOME	DEFICIT) RETAINED EARNINGS	STOCKHOLDERS' EQUITY	NON-CONTROLLING INTEREST	
BALANCES, December 31, 2007	<u>5,683,689</u>	<u>\$ 28,077</u>	<u>\$ 198</u>	<u>\$ 129</u>	<u>\$ 28,404</u>	<u>\$ 148</u>	<u>\$ 28,552</u>
Stock-based compensation	163,151	1,403	-	-	1,403	-	1,403
Issuance of stock for cash, net	909,092	6,366	-	-	6,366	-	6,366
Tax expense of stock transactions	-	(34)	-	-	(34)	-	(34)
Unrealized holding loss on investments	-	-	(283)	-	(283)	-	(283)
Investment reclassification adjustments to income	-	-	(31)	-	(31)	-	(31)
Income tax effect	-	-	116	-	116	-	116
Capital contributions by non-controlling interest	-	-	-	-	-	25,692	25,692
Net loss	-	-	-	(4,106)	(4,106)	(688)	(4,794)
BALANCES, December 31, 2008	<u>6,755,932</u>	<u>\$ 35,812</u>	<u>\$ -</u>	<u>\$ (3,977)</u>	<u>\$ 31,835</u>	<u>\$ 25,152</u>	<u>\$ 56,987</u>
Stock-based compensation	265,649	997	-	-	997	-	997
Issuance of stock on exercise of options	1,250	4	-	-	4	-	4
Issuance of stock for employee benefits	71,100	204	-	-	204	-	204
Capital contribution by non-controlling interest	-	-	-	-	-	738	738
Deconsolidation of ADA Carbon Solutions, LLC	-	-	-	-	-	(25,059)	(25,059)
Expense of stock registration	-	(17)	-	-	(17)	-	(17)
Net loss	-	-	-	(8,771)	(8,771)	(732)	(9,503)
BALANCES, December 31, 2009	<u>7,093,931</u>	<u>\$ 37,000</u>	<u>\$ -</u>	<u>\$ (12,748)</u>	<u>\$ 24,252</u>	<u>\$ 99</u>	<u>\$ 24,351</u>

See accompanying notes to these consolidated financial statements

ADA-ES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	FOR THE YEARS ENDED DECEMBER 31,	
	2009	2008
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	\$ (8,771)	\$ (4,106)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Depreciation and amortization	577	488
Provision for bad debts	-	12
Loss on asset dispositions and securities	17	211
Expenses paid with stock, restricted stock and stock options	1,201	1,010
Non-controlling interest in loss of consolidated subsidiary	(732)	(688)
Equity in loss in ADA Carbon Solutions, LLC	3,243	-
Impairment of goodwill	-	1,589
Deferred tax benefit	(5,555)	(1,454)
Changes in operating assets and liabilities:		
Trade receivables	282	(1,580)
Assets held for resale and inventory	(2,056)	(787)
Prepaid expenses and other	(155)	(666)
Accounts payable	2,567	118
Accrued expenses	(407)	421
Deferred revenue and other	8,186	1,065
Net cash used in operating activities	(1,603)	(4,367)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Capital expenditures for equipment, patents and development projects	(296)	(17,114)
Investment in securities	(400)	(682)
Cash balance held in deconsolidated entity	(25,171)	-
Proceeds from sale of securities and certificates of deposit	-	5,151
Net cash used in investing activities	(25,867)	(12,645)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Non-controlling interest equity contributions	738	25,363
Issuance of common stock and exercise of stock options	4	7,001
Stock issuance costs	(17)	(633)
Net cash provided by financing activities	725	31,731
(DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS	(26,745)	14,719
CASH AND CASH EQUIVALENTS, beginning of year	28,201	13,482
CASH AND CASH EQUIVALENTS, end of year	\$ 1,456	\$ 28,201
SUPPLEMENTAL SCHEDULE OF CASH FLOW INFORMATION:		
Cash payments for income taxes	\$ -	\$ 104
SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Accrued capital expenditures and development project expenditures	\$ -	\$ 10,236
Stock and restricted stock issued for service	\$ 1,201	\$ 1,403

See accompanying notes to these consolidated financial statements

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES:

Nature of Operations – ADA-ES, Inc. (“ADA”), its wholly-owned subsidiary, ADA Environmental Solutions, LLC (“ADA LLC”) and ADA’s 50% joint venture interest in Clean Coal Solutions, LLC (“Clean Coal”), are collectively referred to as the “Company”. Our Company is principally engaged in providing environmental technologies and specialty chemicals to the coal-burning utility industry. Our Company generates a substantial part of its revenue from the sale of Activated Carbon Injection (“ACI”) systems and contracts co-funded by the government and industry. Our sales occur principally throughout the United States.

Principles of Consolidation – The Company’s consolidated financial statements include the accounts of ADA, ADA LLC and Clean Coal and its wholly owned subsidiaries. All significant intercompany transactions have been eliminated from the consolidated financial statements.

Cash and Cash Equivalents – The Company considers all highly liquid debt instruments with purchased maturities of three months or less to be cash equivalents. The Company maintains the majority of its cash in money market accounts. The amount on deposit at December 31, 2009, was held in two commercial banks and of which deposits in one of the commercial banks was in excess of the insurance limits of the Federal Deposit Insurance Corporation.

Receivables and Credit Policies – Trade receivables are uncollateralized customer obligations due under normal trade terms requiring payment within 30 days from the invoice date. Management reviews trade receivables periodically and reduces the carrying amount by a valuation allowance that reflects management’s best estimate of the amount that may not be collectible. Our December 31, 2009 trade receivables balance is comprised of amounts billed to customers of \$5.1 million as well as unbilled revenues of \$771,000.

Assets Held for Resale and Inventory – Assets held for resale and inventory consisted of chemicals used for the production of refined coal and the refined coal facilities held for sale at December 31, 2009 and activated carbon (“AC”) available for sale to customers and chemicals used in the treatment of AC at December 31, 2008. The Company records inventory at the lower of cost or market as determined on a first-in, first-out basis and consisted of:

	At December 31,	
	2009	2008
	<i>(In thousands)</i>	
Inventory for sale	\$ -	\$ 774
Chemicals and materials	69	10
Equipment for sale	1,987	-
ACI parts	3	3
Total inventory	\$ 2,059	\$ 787

Goodwill – The Company reviews the recoverability of goodwill at least annually as of December 31 and any time business conditions indicate a potential change in recoverability. During 2009 and 2008, we recognized goodwill impairment charges totaling \$-0- and \$1.6 million, respectively, related to the FGC segment. Refer to Note 3. “Goodwill” for more information.

Intangible Assets – Intangible assets principally consist of patents. Patents obtained by the Company directly are being amortized over a 17-year life. Amortization of intangible assets for the years ended December 31, 2009 and 2008, was \$12,000 and \$9,000 respectively. Based on the balance of intangible assets as of December 31, 2009, the Company anticipates amortization expense over the next 5 years to be approximately \$13,000 per year. The weighted average amortization period is 13 years.

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Intangible assets consist of:

	At December 31,	
	2009	2008
Patents:	<i>(In thousands)</i>	
Cost	\$ 290	\$ 306
Less accumulated amortization	(61)	(50)
Total intangible assets, net	\$ 229	\$ 256

Investments – Investments in securities represents a certificate of deposit which is recorded at its fair value.

Investment in Unconsolidated Entity – On October 1, 2008, the Company entered into a Joint Development Agreement (“JDA”) and formed a joint venture with Energy Capital Partners I, LP and its affiliated funds (“ECP”) known as ADA Carbon Solutions, LLC (“Carbon Solutions”). As of December 31, 2009, ADA owns a 33% interest in Carbon Solutions. Carbon Solutions includes its wholly-owned subsidiaries of Red River Environmental Products, LLC (“Red River”), Five Forks Mining, LLC, Morton Environmental Products, LLC, Underwood Environmental Products, LLC, and Crowfoot Supply Company, LLC (“Crowfoot Supply”). Our net investment of \$21.8 million in Carbon Solutions is accounted for under the equity method of accounting. Accordingly, our respective share of Carbon Solutions’ net loss for the period has been recognized in the consolidated statement of operations and comprehensive loss and our investment in Carbon Solutions has been reduced by our respective share of such loss. Carbon Solutions is principally engaged in development activities related to its activated carbon business and construction of an AC manufacturing facility (the “AC Facility”).

At December 31, 2008, the Company owned 50% of, and effectively controlled, Carbon Solutions and consolidated Carbon Solutions with the accounts of the Company in its financial statements. As of June 30, 2009, the Company deconsolidated Carbon Solutions as we no longer held and controlled a 50% interest in Carbon Solutions as our joint venture partner converted a portion of its preferred equity contribution to ordinary capital contributions as of that date. Additional preferred equity contributions have been converted in the third quarter of 2009 and accordingly, our interest has decreased to 33% as of December 31, 2009. After the deconsolidation, the Company accounts for the investment in Carbon Solutions under the equity method.

The Company evaluates these investments annually for other than temporary impairment declines in value. At December 31, 2009, no other than temporary declines existed on such investments.

Construction in Progress – Included in property and equipment as of December 31, 2008 is the cost to construct both Red River’s AC production facility and Crowfoot Supply’s interim AC production facility. Red River capitalized all costs associated with the construction including related consulting, engineering, and construction. The Red River facility is expected to be operational in 2010 and the Crowfoot Supply facility was operational in 2009.

Property and Equipment – Property and equipment is stated at cost. Depreciation on assets is provided using the straight-line method based on estimated useful lives ranging from 3 to 10 years. Maintenance and repairs are charged to operations as incurred. When assets are retired, or otherwise disposed of, the property accounts are relieved of costs and accumulated depreciation and any resulting gain or loss is credited or charged to income.

Leasehold Improvements - Leasehold improvements are recorded at cost and included with property and equipment. Amortization expense is computed using the straight-line method over the shorter of the estimated useful lives of the assets or the period of the related lease.

Capitalization of Development Costs – Prior to the launch of Carbon Solutions in 2008 as discussed in Note 6, the Company capitalized all direct and identifiable incremental costs associated with its development efforts related to the development of the joint venture’s Activated Carbon Supply Business (“AC Supply Business”). Such development costs were generally deferred and either (a) expensed when it was determined they were no longer of future value, or (b) capitalized as part of long-term assets and then subject to future depreciation expense and impairment evaluations.

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Warranty Costs – Under certain ACI Systems contracts, the Company may grant performance guaranties for a specified period and the achievement of a certain plant operating conditions. In the event the equipment fails to perform as specified, the Company is obligated to correct or replace the equipment. Estimated warranty costs are recorded at the time of sale based on current industry factors.

Impairment of Long-Lived Assets (other than Goodwill) – In the event that facts and circumstances indicate that the carrying value of assets or intangible assets may be impaired, an evaluation of recoverability would be performed. Based on the Company's evaluation as of December 31, 2009 and 2008, other than goodwill impairment recorded (Refer to Note 3), no impairment of value existed for long-lived assets.

Fair Value of Financial Instruments – The carrying amounts of financial instruments, including cash, cash equivalents, accounts receivable, accounts payable and accrued expenses approximate fair value due to the short maturity of these instruments. The fair values of investments were estimated based on quoted market prices for those investments.

Revenue Recognition – ADA follows the percentage of completion method of accounting for all significant contracts excluding government contracts and chemical sales. The percentage of completion method of reporting income takes into account the percent of work completed and overall revenue for contracts in progress. The Company recognizes revenue on government contracts based on the time and expenses incurred to date. As of December 31, 2009 and 2008, costs incurred in excess of billings totaled \$659,000 and \$2.4 million, respectively, and are included in accounts receivable, net, in the accompanying consolidated balance sheets. Billings in excess of recognized income totaled \$1.3 million and \$1.9 million as of December 31, 2009 and 2008, respectively, and are included in deferred revenue in the accompanying consolidated balance sheets.

Chemical sales and refined coal sales are recognized when products are shipped to customers. Based upon historical trends no reserve has been established for any returns. Chemical are shipped FOB shipping point and title passes to the customer when the chemicals are shipped. Refined coal products are typically produced by adding proprietary chemicals to coal at the customer's site and title passes to the customer when the production process is complete. The Company's sales agreements for chemicals do not contain a right of inspection or acceptance provision and products are generally received by customers within one day of shipment. The Company has had no significant history of non-acceptance, or of replacing goods damaged or lost in transit.

Consulting revenue is recognized as services are performed and collection is assured.

Cost of Revenues - Costs of revenues include all labor, fringe benefits, subcontract labor, chemical and coal costs, materials, equipment, supplies and travel costs directly related to the Company's production of revenue.

General and Administrative – General and administrative costs include personnel related fringe benefits, sales and administrative staff labor costs, facility costs and other general costs of conducting business.

Penalties and Interest Costs – Under certain circumstance(s), the Company might have a penalty or interest charge that is classified as an expense and is shown in our general and administrative costs. The cost is charged in the period the Company was notified of the charge. For the year ended December 31, 2009 and 2008, the Company recorded penalty and interest charges of \$6,000 and \$4,000, respectively, due to untimely paid tax related to our 2008 and 2007 income tax returns which were filed on extension.

Research and Development Costs – Research and development costs are charged to operations in the period incurred.

Income Taxes – The Company accounts for income taxes under the liability method whereby deferred tax assets and liabilities are determined based on tax rates and laws enacted as of the date of the consolidated balance sheets. A valuation allowance is provided if and when deferred tax assets are not expected to be realized. Carbon Solutions and Clean Coal are flow-through tax entities and therefore the partners are taxed or receive tax benefits on their respective ownership interests.

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Net Income (Loss) Per Share – Basic EPS is calculated by dividing the income or (loss) available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted EPS is calculated using the same numerator as basic EPS and further reflects the potential dilution that could occur if outstanding stock options were exercised. No stock options were included the calculations for 2009 or 2008 as their inclusion would be anti-dilutive due to our net losses for those periods.

Stock-Based Compensation – The Company records equity compensation to employees at estimated fair value. For the years ended December 31, 2009 and 2008, \$1.2 million and \$1.4 million, was charged to expense for stock-based compensation, which amounted to \$720,000 and \$1.0 million, after tax and (\$.11) and (\$0.17) respectively, of basic and diluted earnings (loss) per share.

Use of Estimates – The preparation of the Company’s consolidated financial statements in conformity with generally accepted accounting principles requires the Company’s management to make estimates and assumptions that affect the amounts reported in these financial statements and accompanying notes. Actual results could differ from those estimates. The Company makes significant assumptions concerning: 1) the impairment of and the remaining realizability of its goodwill and intangibles; 2) estimates of certain overhead and other rates on research contracts with the U.S. Government, which are subject to future audits; 3) fair value of stock options; 4) warranty costs; 5) the allowance for doubtful accounts, which is based on historical experience; 6) the percentage of completion method of accounting for significant long-term contracts, which is based on estimates of gross margins and of the costs to complete such contracts; and 7) the deferred tax assets expected to be realized in future periods.

Segment Information – The Company follows established standards on the way that public companies report financial information about operating segments in annual financial statements and requires reporting of selected information about operating segments in interim financial statements issued to the public. It also establishes standards for disclosures regarding products and services, geographic areas, and major customers. These standards defines operating segments as components of a company about which discrete financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing performance. The Company has two reportable segments: mercury emission controls (“MEC”) and flue gas conditioning, refined coal and other (“FGC”).

Reclassification – Certain amounts in the 2008 consolidated financial statements have been reclassified to conform to the 2009 presentation. Such reclassification had no effect on net income.

Recently Issued Accounting Pronouncements – In June 2009, the FASB issued Accounting Standards Update (“ASU”) 2009-01. The ASU eliminates the previous US GAAP hierarchy and designates US GAAP into two levels – authoritative and nonauthoritative. It also designates the Codification as the single source of authoritative US GAAP. The ASU is effective for interim and annual periods ending after September 15, 2009.

In May 2009, the FASB updated Topic 855 with respect to subsequent events (issued as SFAS No. 165, “Subsequent Events” prior to the implementation of ASU 2009-01). The update does not require significant changes regarding recognition or disclosure of subsequent events but does require disclosure of the date through which subsequent events have been evaluated for disclosure and recognition. The standard is effective for financial statements issued after June 15, 2009. The implementation of this standard did not have a significant impact on our financial statements.

In June 2008, the FASB updated Topic 260 with respect to share-based payments (issued as Financial Accounting Standards Board Staff Position EITF 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities prior to the implementation of ASU 2009-01). The update provides that unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and shall be included in the computation of earnings per share pursuant to the two-class method in accordance with Topic 260’s calculation of “Earnings per Share”. The update is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those years. Upon adoption, the Company is required to retrospectively adjust its earnings per share data to

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

conform to the provisions in update. Early application of Topic 260 is prohibited. The Company has not issued dividends or dividend equivalents and, consequently, the update has not had a material impact on our consolidated financial statements.

In April 2008, the FASB updated Topic 350 with respect to intangible assets (issued as FASB Staff Position SFAS No. 142-3, "Determination of the Useful Life of Intangible Assets" prior to the implementation of ASU 2009-01). The update amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset. The intent of this update is to improve the consistency between the useful life of a recognized intangible asset and the period of expected cash flows used to measure the fair value of the asset. This update is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. This update had no material effect on our financial statements.

Effective January 1, 2008, the Company adopted provisions of Topic 820 with respect to recurring fair value measurements (issued as Statement of Financial Accounting Standards No. 157 "Fair Value Measurements" prior to the implementation of ASU 2009-01) which introduced a framework for measuring fair value and expands required disclosure about fair value measurements of assets and liabilities. The Company's adoption of this standard did not have a material impact on our financial statements.

In December 2007, the FASB updated Topic 810 with respect to non-controlling interests in consolidated financial statements (issued as SFAS No. 160, "Non-controlling Interests in Consolidated Financial Statements — an amendment of ARB No. 51" prior to the implementation of ASU 2009-01). The update requires the ownership interests in subsidiaries held by parties other than the parent be clearly identified, labeled, and presented in the consolidated balance sheet within equity, but separate from the parent's equity. It also requires the amount of consolidated net income attributable to the parent and to the non-controlling interest be clearly identified and presented on the face of the consolidated statement of operations. The Company adopted the update on January 1, 2009 and recharacterized its reportable minority interests as non-controlling interests and classified these interests as a component of equity in the consolidated financial statements. The Company deconsolidated Carbon Solutions as of June 30, 2009 and accounts for gains and losses under the equity method of accounting.

In December 2007, the FASB updated Topic 805 with respect to business combinations (issued as SFAS 141R, "Business Combinations", prior to the implementation of ASU 2009-01), which establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, including goodwill, the liabilities assumed and any non-controlling interest in the acquiree. The update also establishes disclosure requirements to enable users of the financial statements to evaluate the nature and financial effects of the business combination and is effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The impact of the update will depend on the future business combinations the Company may pursue after its effective date. Under provisions of the update, all acquisition costs are expensed as incurred.

In August 2009, the FASB issued ASU 2009-05 to amend provisions of Topic 820 by providing more guidance in determining fair value of liabilities. This update provides clarification that in circumstances in which a quoted price in an active market for the identical liability is not available, a reporting entity is required to measure fair value using either a quoted price for similar liabilities or valuation techniques consistent with Topic 820 or a combination of methods. The update is effective for the first reporting period after issuance, September 30, 2009, and has not had a material impact on the financial statements.

In September 2009, the FASB issued ASU 2009-08 to amend provisions of Topic 260 to provide technical corrections in the calculation of earnings per share in a reporting period that involves the redemption or induced conversion of preferred stock. The impact of this amendment will be determined when or if the Company issues its authorized preferred stock and subsequently redeems it or induces its conversion. This ASU will not have any impact on our financial statements.

2. **PROPERTY AND EQUIPMENT:**

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Property and equipment consisted of the following at the dates indicated:

	Life in Years	As of December 31,	
		2009	2008
<i>(In thousands)</i>			
Construction in process	-	\$ -	\$ 32,552
Land	-	-	485
Machinery and equipment	3-10	2,346	2,896
Leasehold improvements	5	504	504
Furniture and fixtures	3-7	250	344
		3,100	36,781
Less accumulated depreciation and amortization		(2,252)	(1,777)
Total property and equipment, net		\$ 848	\$ 35,004

Depreciation and amortization of property and equipment for the years ended December 31, 2009 and 2008 was \$566,000 and \$453,000, respectively.

3. GOODWILL:

The changes in carrying amount of goodwill for the years ended December 31, 2009 and 2008 are as follows:

	2009	2008
	<i>(In thousands)</i>	
Balance at January 1,	\$ 435	\$ 2,024
Impairment charge	-	(1,589)
Balance at December 31,	\$ 435	\$ 435

The Company reviews the recoverability of goodwill annually on December 31, and at any other time when business conditions indicate a potential change in recoverability. In 2008, the deterioration of the FGC, refined coal and other segment financial performance, combined with an unfavorable outlook, were the key indicators for potential impairment. More specifically, during the fourth quarter of 2008, FGC experienced deteriorating financial performance primarily due to significant reductions in equipment rental revenue and chemical sales. This caused previously unanticipated projected revenue and operating income declines. As a result of these changes, long-term projections showed significant declines in discounted future operating cash flows as a result of regulatory uncertainty. These revised estimated cash flows and declining market conditions caused the implied fair values of the FGC, refined coal and other segment to be less than book value. Accordingly, in 2008 the Company recorded a goodwill impairment charge totaling approximately \$1.6 million.

4. INVESTMENTS:

During the year ended December 31, 2008, the Company liquidated all of its remaining investments and transferred the proceeds to its cash and cash equivalent accounts and a certificate of deposit for near term-project needs.

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Realized gains and losses are determined on the basis of specific identification of the security sold. Realized gains and losses are included in interest and other income in the accompanying consolidated statements of operations. During 2008 information on securities sold is as follows:

	2008
	<i>(In thousands)</i>
Carrying amount of securities sold	\$ 5,120
Sale proceeds	\$ 5,151
Gross realized losses	\$ (300)
Gross realized gains	\$ 331

5. GOVERNMENT AND INDUSTRY FUNDED CONTRACTS:

The Company participated in several contracts awarded by the Department of Energy (the “DOE”) that contributed a total of \$3.9 million and \$4.7 million to revenues in 2009 and 2008, respectively. These amounts are included in MEC revenues. The Company typically invoices the DOE and industry cost-share partners monthly for labor and expenditures plus estimated overhead factors, less any cost share amounts. The remaining unearned amount of the contracts was \$1.6 million as of December 31, 2009, of which \$730,000 is expected to be recognized by the Company in 2010 (including cash contributions by other industry partners). The contracts under which the Company has performed are subject to audit and future appropriation of funds by Congress. The Company has not experienced adverse adjustments as a result of government audits, however, the government audits for years ended 2004 through 2009 have not yet been finalized.

6. JOINT VENTURE AND TRANSACTIONS WITH ECP:

In October 2008, the Company entered into the Joint Development Agreement (the “JDA”), a Limited Liability Company Agreement (the “LLC Agreement”) and other related agreements with ECP, for the purposes of funding and constructing the planned activated carbon manufacturing facility in Red River Parish, Louisiana and similar projects.

Also in October 2008, the Company entered into a Securities Purchase Agreement (“SPA”) providing for the potential sale to ECP of 1,800,000 shares of Series A Convertible Preferred Stock and 1,800,000 shares of Series B Convertible Preferred Stock. The Company terminated the SPA on March 23, 2010 (see Note 14).

Under the JDA and the LLC Agreement, the Company transferred the development assets and certain liabilities relating to the production, processing and supply of AC for the control of mercury emissions from coal-fired power plants to the Company’s then wholly-owned subsidiaries Red River, Morton, Underwood and Crowfoot Supply and subsequently transferred the equity in these subsidiaries and certain contracts, goodwill and intellectual property relating to the AC Supply Business to Carbon Solutions as our \$18.4 million initial contribution.

As of June 30, 2009, the Company deconsolidated Carbon Solutions as the Company no longer held a controlling interest in Carbon Solutions as the joint venture partner converted a portion of its preferred equity contribution to ordinary capital contributions as of that date. Additional preferred equity contributions have been converted in the third quarter of 2009 and accordingly, the Company’s interest decreased to 33%. After the deconsolidation, the Company has accounted for the investment in Carbon Solutions under the equity method.

In addition to the JDA and LLC Agreement, the Company has the following related agreements with Carbon Solutions:

Master Services Agreement. Pursuant to a Master Services Agreement (“MSA”), the Company provides certain accounting, administrative, oversight, insurance and other services to Carbon Solutions at agreed-upon rates.

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Service revenue under the MSA totaled \$1.1 million for the year ended December 31, 2009, respectively, which amounts are included in flue gas conditioning, clean coal and other revenues in the accompanying consolidated statement of operations. At December 31, 2009, \$161,000 was due from Carbon Solutions under the MSA, which amount is included in the Company's consolidated balance sheet in trade receivables.

Intellectual Property License. Pursuant to an IP License Agreement, the Company has licensed to Carbon Solutions all intellectual property relating primarily to the manufacture of AC (that was not transferred to Carbon Solutions under the JDA) or any application or use of AC competitive with the control of mercury emissions from coal-fired power plants (the "Field") on an exclusive, perpetual, royalty-free basis and has provided certain rights of first refusal to Carbon Solutions with respect to intellectual property relating to the Field the Company may develop in the future. The Company's intellectual property primarily relating to the manufacture of AC that was transferred to Carbon Solutions and the assets the Company contributed to Carbon Solutions are not part of the license.

Under the terms of the JDA, the Company is required to indemnify ECP and Carbon Solutions for certain damages and expenses they have incurred with respect to the Company's litigation with Norit Americas, Inc. ("Norit") (See Note 9). As of December 31, 2009, the Company has recorded a liability to Carbon Solutions of approximately \$6.8 million related to such damages and expenses paid by Carbon Solutions. These amounts have been classified as non-current liabilities as the Company expects to satisfy the obligation through resources not involving current assets.

Following is unaudited summarized information as to the assets, liabilities and results of operations of Carbon Solutions:

	As of December 31, 2009	As of December 31, 2008
	<i>(In thousands)</i>	
Current assets	\$ 29,029	\$ 26,255
Property, equipment and other long term assets	230,588	35,820
Total assets	\$ 259,617	\$ 62,075
Total liabilities	\$ 95,680	\$ 12,066
	Year Ended December 31, 2009	Year Ended December 31, 2008
	<i>(In thousands)</i>	
Net revenue	\$ 7,482	\$ 95
Net loss	\$ (7,268)	\$ (1,118)

As of December 31, 2009, a demand note payable to ECP for monies advanced in the amount of \$76.3 million is included in Carbon Solutions' liabilities.

7. JOINT VENTURE AND TRANSACTIONS WITH NEXGEN:

In November 2006, the Company sold a 50% interest in its refined coal technology to a joint venture called Clean Coal Solutions, LLC, which was formed in 2006 with NexGen Refined Coal, LLC ("NexGen"), to market refined coal technology. The Operating Agreement requires NexGen and the Company to each pay 50% of the costs of operating Clean Coal and specifies certain duties that both parties are obligated to perform. For the year ended December 31, 2009 and 2008 our share of such cost amounted to \$703,000 and \$129,000, respectively. At present, we are considered the primary beneficiary of this variable interest entity and have consolidated the accounts of Clean Coal. As of December 31, 2009, the primary assets of Clean Coal consist of cash and cash equivalents of

ADA-ES, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

\$250,000, chemical inventory and equipment for resale of \$2.3 million, other current assets of \$48,000, property, plant and equipment, net of depreciation of \$53,000 and patents, net of amortization, of \$60,000. Current liabilities included accounts payable of \$1.8 million and a note payable of \$1.0 million due on the earliest to occur of (a) the third day after we receive funds from a sale of our securities (with certain permitted exceptions, including the sale of our common stock to Arch Coal on March 23, 2010), (b) April 30, 2010, or (c) upon the occurrence of a continuing uncured event of default or a change in control of the Company or Clean Coal.

Clean Coal's function is to supply chemicals, additives, equipment and technical services to cyclone fired boiler users, but Clean Coal's primary purpose is to seek and obtain approval from the United States Internal Revenue Service to qualify for Section 45 Tax Credits. Clean Coal qualified two facilities in 2009 for such purposes and upon monetization of those facilities NexGen has the right to maintain its 50% interest in Clean Coal by paying us an additional \$4.0 million. Under the terms of the original agreement, NexGen was to pay the \$4.0 million over eight quarterly installments of \$500,000. However, under an amendment to the original agreement, the timing of the payment has been extended. NexGen will make payments from cash that would otherwise be distributable to NexGen under the Clean Coal Operating Agreement. NexGen is not obligated to make those payments, but if it does not do so, it will forfeit a part of its interest in Clean Coal in direct proportion to the amount of \$4.0 million that it elects not to pay, if any. If NexGen fails to make any one payment, it cannot reclaim its interest by making later payments. In no event are we required to refund any of the cash payments made to us by NexGen. The U.S. Senate recently passed a bill that included a number of tax extenders, including a year's extension for Section 45 Refined Coal tax credits to January 1, 2011. We are working with Congress to keep this provision in the bill as it is further negotiated in conference committee. Our net operating loss for 2009 and 2008 includes net costs of \$388,000 and \$213,000, respectively, related to our refined coal efforts.

8. STOCKHOLDERS' EQUITY:

Shares and Stock Options Issued for Directors' and Consultant Compensation – In 2009 and 2008, the Company issued shares of its Common Stock for compensation of \$313,000 and \$185,000, respectively, to non-management directors based on the market price of the Common Stock. In 2009 and 2008, the Company recorded \$110,000 and \$84,000, respectively, of expense related to Common Stock issued to consultants.

Sale of Stock, Convertible Debenture and Grant of Option to Arch Coal – In 2003, the Company sold 137,741 shares of Common Stock to Arch Coal for \$1.0 million and sold a convertible debenture for \$300,000, both pursuant to an investment agreement. Of the shares sold, 37,741 were originally placed in escrow of which 19,730 shares were returned to the Company during 2005 since the market price of the Company's shares exceeded a minimum of \$9.08 for a twenty-day continuous period during the one-year period from the date of their issuance. The Debenture was repaid during 2004. As a part of the share purchase Arch Coal was also granted an option to purchase 50,000 shares for \$10.00 per share, which expired in the fourth quarter of 2008.

Sale of Stock 2008 - In September 2008, the Company entered into a Subscription and Investment Agreement and privately sold 909,092 shares of its Common Stock to a limited number of institutional investors at a price of \$7.70 per share. Net proceeds to the Company totaled \$6.4 million. Our placement agent received a total cash fee of 4.5% of the gross proceeds of the offering as well as reimbursement for certain offering expenses. In addition, we paid an additional 2% commission to two other placement agents.

Stock Options – During 2003, the Company adopted the 2003 ADA-ES, Inc. Stock Option Plan (the "2003 Plan") and reserved 400,000 shares of Common Stock for issuance under the plan. In general, all options granted under the plan expire ten years from the date of grant unless otherwise specified by the Board of Directors. The exercise price of an option was determined by the compensation committee of the Board of Directors at the time the option were granted and were equal to 100% of the fair market value of a share of our Common Stock on the date the options were granted. This plan was cancelled and replaced by the 2007 Equity Incentive Plan described below, and as result, 148,506 shares of Common Stock originally reserved for issuance upon exercise of options grantable under the 2003 Plan were removed from the 2003 Plan. In 2008, 13,552 options were forfeited. During 2009, 1,250 options were exercised and 1,291 options were forfeited. As of December 31, 2009, 70,269 options remained outstanding and exercisable under this plan.

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During 2004, the Company adopted the 2004 Executive Stock Option Plan. This plan authorized the grant of 200,000 options to purchase shares of our Common Stock to executive officers, all of which were granted in 2004. The option exercise price of \$8.60 per share was the market price on the date of the grant. The options are exercisable over a ten year period based on a vesting schedule that may be accelerated based on performance of the individual recipients as determined by the Board of Directors. The Board of Directors authorized the vesting of 117,234 options on December 31, 2008 with an estimated fair value of \$236,000. As of December 31, 2009, 166,663 options remain outstanding and exercisable under this plan.

During 2004, the Company also adopted a plan (the "2004 Plan") for the issuance of shares and the grant of options to purchase of Common Stock to our non-management directors. The 2004 Plan provided for the award of stock of 603 shares per individual non-management director or 4,221 shares in total, and the grant of options to purchase 5,000 shares of Common Stock per individual non-management director, or 35,000 in total, all of which were formally granted and issued in 2005 after approval of the 2004 Plan by the stockholders. The option exercise price of \$13.80 per share for the stock options granted on November 4, 2004 was the market price on the date of the grant. The options are exercisable over a period of five years and vest over a three-year period, one-third each year for continued service on the Board. If such service is terminated, the non-vested portion of the option will be forfeited. As of December 31, 2009, 13,333 options remained outstanding and exercisable under the 2004 Plan.

During 2005, the Company adopted the 2005 Directors' Compensation Plan (the "2005 Plan"), which authorized the issuance of shares of Common Stock and the grant of options to purchase shares of Common Stock to non-management directors. The 2005 Plan provides a portion of the annual compensation to non-management directors in the form of awards of shares of Common Stock and options to purchase Common Stock for services performed. Under the 2005 Plan, the award of stock is limited to not more than 1,000 shares per individual per year, and the grant of options is limited to 5,000 per individual in total. The aggregate number of shares of Common Stock reserved for issuance under the 2005 Plan totals 90,000 shares (50,000 in the form of stock awards and 40,000 in the form of options). The exercise price for options granted under the 2005 Plan is the market price on the date of grant, the shares of Common Stock underlying the option vest at a rate of no more than 1,667 shares per annual period per individual, and any unvested options that are outstanding at the date the individual is no longer a Director will be forfeited. The 2005 Plan, if not terminated earlier by the Board, will terminate ten years after the date of its adoption. In April 2008, we issued 5,000 options to a new Board member. In 2008, the Board accelerated the vesting of approximately 100,000 remaining shares of Common Stock resulting in a non-cash charge of approximately \$170,000. As of December 31, 2009, 20,000 options remain outstanding and exercisable under the 2005 Plan.

Following is a table of options activity for the two years ended December 31, 2009:

	Employee and Director Options	Non-Employee Options	Weighted Average Exercise Price
Options Outstanding , December 31, 2007	281,358	59,000	\$ 10.45
Options granted	5,000	-	10.20
Options expired	(13,552)	(50,000)	11.50
Options exercised	-	-	-
Options Outstanding , December 31, 2008	272,806	9,000	10.21
Options granted	-	-	-
Options expired	(1,291)	-	13.80
Options exercised	(1,250)	-	2.80
Options Outstanding , December 31, 2009	270,265	9,000	\$ 10.23

At December 31, 2009, 279,265 options with a weighted average exercise price of \$10.23 were fully vested and exercisable. In 2009, 1,250 options were exercised, compared to none in 2008.

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Following is information related to options outstanding/exercisable at December 31, 2009:

Range	Options Outstanding		Options Exercisable		Weighted Average Contractual Life (in years)
	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price	
\$2.80	10,415	\$ 2.80	10,415	\$ 2.80	3.8
\$8.60 - \$10.20	183,343	8.64	183,343	8.64	5.8
\$13.80 - \$15.20	85,507	14.53	85,507	14.53	3.5
	<u>279,265</u>	<u>\$ 10.23</u>	<u>279,265</u>	<u>\$ 10.23</u>	<u>5.0</u>

The aggregate intrinsic value of options exercised in the years ended December 31, 2009 and 2008, based on an average market price of \$3.70 and \$8.05, respectively, was \$1,000 and \$0, respectively. The aggregate intrinsic value of options exercisable at December 31, 2009 was a negative \$1.2 million based on a market price of \$6.10.

During 2007, the Company adopted the 2007 Equity Incentive Plan (the “2007 Plan”), which replaced the 2003 Plan. The 2007 Plan authorizes the issuance to employees, directors and consultants of up to 711,979 shares of Common Stock, either as restricted stock grants or to underlie options to purchase shares of our Common Stock. Under the 2007 Plan, awards of stock (in the form of restricted stock or shares underlying stock options) are limited to not more than 30,000 shares per individual per year with a maximum of 10,000 shares grantable in any year to non-management directors. In general, all options granted under the 2007 Plan will expire ten years from the date of grant unless otherwise specified by the Board of Directors. The exercise price for options granted under the 2007 Plan will be the market price on the date of grant and the shares of Common Stock underlying the options will vest on the passage of specified times following the date of grant, the occurrence of one of more events, the satisfaction of performance criteria or other conditions specified by the Board of Directors.

During 2008 and 2009, the Board of Directors awarded restricted stock under the 2007 Plan. Under an ongoing program, all non-executive employees and certain officers were entitled to an award of restricted stock under the following conditions: (1) employees that had not received stock options upon commencement of employment received a restricted stock award based on a percentage of their starting salaries; (2) employees that had received stock options upon commencement of employment had the option to exchange any remaining stock options outstanding for a restricted stock award based on their starting salary; and (3) employees with five or more years of service received a restricted stock award based on a percent of their current annual salary. The purchase price for the restricted stock was \$0.01 per share and the restricted stock vests over a five-year period on an annual basis. The stock based compensation related to the restricted stock awards is determined using the fair value of our stock on the date of grant. In December 2008, 123,718 shares of our restricted Common Stock were awarded to new and existing employees and a subcontractor a portion of which were for services with the AC Facility. In addition, 16,010 shares of Common Stock relate to services with the AC Facility. The purchase price of the restricted Common Stock was \$.01 per share and totaled \$1,000. The stock based compensation related to the restricted stock award is based on the fair market value of a share of our Common Stock on the date of the award. In 2009, 62,005 shares of restricted Common Stock (net of a repurchase) were issued to new and five year anniversary employees, 154,506 shares of Common Stock were issued to employees, officers and directors for services rendered and 49,138 shares of Common Stock were issued to consultants. The purchase price of the restricted Common Stock was \$.01 per share and totaled \$1,000. The stock based compensation related to the restricted stock award is based on the fair market value of a share of our Common Stock on the date of the award. During 2009 and 2008, we recognized \$251,000 and \$920,000, respectively, of compensation costs related to the vesting of restricted stock, a portion of which was capitalized as part of development projects in 2008. As of December 31, 2009, 267,232 shares of restricted Common Stock were available for issuance under the 2007 plan.

A summary of the status of the non-vested shares as of December 31, 2009 is presented below:

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Non-vested Shares	Shares	Weighted Average Grant Date Fair Value
Non-vested at December 31, 2007	26,673	\$ 10.62
Granted	128,825	8.53
Vested	(39,605)	8.73
Forfeited	(5,107)	10.47
Non-vested at December 31, 2008	110,786	8.82
Granted	67,689	5.05
Vested	(50,978)	8.81
Forfeited	(11,184)	8.37
Non-vested at December 31, 2009	116,313	\$ 6.65

As of December 31, 2009, there was \$220,000 of total unrecognized cost related to non-vested share-based compensation arrangements granted under our equity incentive plans. This cost is expected to be recognized over a five year period. The total fair value of shares underlying stock options and restricted stock which vested during 2009 and 2008 was \$57,000 and \$38,000, respectively.

In June 2009, the Company revised its ADA-ES, Inc. Profit Sharing Retirement Plan, which is a plan qualified under Section 401(k) of the Internal Revenue Code (the “401(k) Plan”). The revision allows the Company to issue shares of Common Stock to employees to satisfy its obligation to match employee contributions under the terms of the 401(k) Plan in lieu of matching contributions in cash. The Company reserved 300,000 shares of its Common Stock for this purpose. The value of Common Stock issued as matching contributions under the 401(k) Plan is determined based on the per share market value of our Common Stock on the date of issuance. As of December 31, 2009, we issued 71,100 shares of Common Stock under the 401(k) Plan and recognized \$204,000 of expense relating to such issuances. As of December 31, 2009, 228,900 shares of Common Stock were available for issuance under the 401(k) Plan.

9. COMMITMENTS AND CONTINGENCIES

Retirement Plan – The Company assumed a defined contribution and 401(k) plan covering all eligible employees as of January 1, 2003. The Company recognized contribution expense of \$267,000 and \$234,000 for 2009 and 2008, respectively, based on a percentage of the eligible employees’ annual compensation. In 2009, \$63,000 of the matching contribution was made with cash and the remainder was paid by the issuance stock under our 401(k) Plan.

Performance Guarantee on AC Injection Systems – Under certain contracts to supply ACI systems, the Company may guarantee the performance of the associated equipment for a specified period to the owner of the power plant. The Company may also guarantee the achievement of a certain level of mercury removal based upon the injection of a specified quantity of a qualified AC at a specified rate given other plant operating conditions. In the event the equipment fails to perform as specified, the Company may have an obligation to correct or replace the equipment. In the event the level of mercury removal is not achieved, the Company may have a “make right” obligation within the contract limits. The Company assess the risks inherent in each applicable contract and accrue an amount that is based on estimated costs may be incurred over the performance period of the contract. Such costs are included in the Company’s accrued warranty and other liabilities in the accompanying consolidated balance sheets. Any warranty costs paid out in the future will be charged against the accrual. The adequacy of warranty accrual balances is assessed at least quarterly based on current facts and circumstances and adjustments are made as needed. The change in the carrying amount of the Company’s performance guaranties for the years ended December 31, are as follows:

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	2009	2008
	<i>(In thousands)</i>	
Beginning balance	\$ 546	\$ 309
Performance guaranties accrued	138	263
Expenses paid	(80)	(26)
Ending balance	\$ 604	\$ 546

In some cases, a performance bond may be purchased and held for the period of the warranty that can be used to satisfy the obligation. At December 31, 2009, the Company had a standby letter of credit for \$80,000 related to an installation of an ACI system. This commitment was not recorded on the Company's consolidated balance sheet as the Company does not expect the funds to be called upon under the letter of credit.

Purchase Obligations – As of December 31, 2009, the Company expects to pay purchase obligations totaling \$716,000 primarily for the purchase of major components related to the manufacturing of our ACI systems in 2010.

Operating Lease Obligations – The Company leases office facilities under noncancellable operating lease agreements. The term of the leases runs through August 31, 2010, and the lease agreement has an option to extend the term for five years. The current remaining commitment through August 31, 2010 is \$140,000. The Company expects future annual lease costs to amount to approximately \$247,000 through December 31, 2010.

Rent expense totaled \$259,000 and \$299,000 in 2009 and 2008, respectively.

Litigation- The Company is involved in litigation with Norit and Calgon. The Norit suit has been moved to arbitration and no estimate of potential loss can be determined at this time and accordingly, no provision for a loss has been recognized in these financial statements other than the potential indemnity obligations related to Carbon Solutions discussed below. In the Calgon suit, Calgon is asking for a declaratory judgment that no amounts are owed to the Company under an agreement for the marketing of activated carbon. The Company has counterclaimed against Calgon, asking the court to declare that a commission is owed to it under the agreement.

Carbon Solutions - Summaries of the guaranties and obligations related to Carbon Solutions' business as of December 31, 2009 are as follows:

The Company has guaranteed all amounts owed by Red River under its \$243.6 million contract for the "turn-key" engineering, design, construction and other services for the AC Facility. Red River can terminate this contract for convenience at any time but would be liable for (a) the amount earned by the contractor under the contract through the effective date of termination, (b) cancellation charges to the contractor's subcontractors, (c) other reasonable termination-related costs incurred by the contractor, (d) costs of demobilization, and (e) unreimbursed sales taxes paid by the contractor. The remaining obligation under this contract at December 31, 2009 is approximately \$98 million.

In 2008, Red River entered into four contracts with an independent equipment supplier for the purchase of certain equipment. At or prior to the closing of Carbon Solutions' debt financing for its activated carbon facility, Red River will provide the supplier with a "parent guaranty" to guarantee payment and other obligations for which Red River is obligated under the equipment contracts. The parent guaranty is applicable to both the Company and the partner in the joint venture. At December 31, 2009, the remaining obligation under these contracts totaled approximately \$9.9 million. Red River may terminate these contracts for convenience at any time and would be liable for (a) reimbursable costs and amounts owing for achievement of milestones and progress payments to date, (b) reasonable and necessary cancellation charges incurred by the supplier in relation to its subcontractors, and (c) reasonably incurred actual costs of demobilization.

Red River entered into a sales contract with a major utility. The terms of the contract, including amendments, provide for ADA's guarantee of Red River's performance up to a maximum of \$750,000. This guaranty would

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expire upon the earlier of consummation of debt financing for the AC Facility or the date commercial operations commence at the AC Facility.

The Company has also guaranteed the obligations of Red River under a sales contract (which has since been amended) with another major utility. If this customer terminates the agreement because of Red River's default prior to commencement of delivery of AC from its AC Facility, damages can be awarded, up to a maximum of \$10 million, through the first calendar quarter of 2010. Both parties are entitled to require specific performance of the other in limited circumstances when the cover remedies prove inadequate. No later than five business days after the third party debt financing portion for the AC Facility is obtained, each party is obligated to deliver to the other a \$10 million standby, unconditional, irrevocable letter of credit to secure the obligations to the other party in the event of default.

The Company has also guaranteed the obligations of Red River under a sales contract (which has since been amended) with a third major utility. The guaranty is effective until Red River has fulfilled its contractual obligations, which is estimated to occur in the second quarter of 2012, and may be terminated earlier based on Red River's financial position or the credit rating of its debt financing for the AC Facility. In any event, the Company's maximum aggregate liability under the guaranty is capped at \$1 million.

Under terms of agreements with Carbon Solutions, as amended in August, 2009, Red River has agreed to reimburse the Company and ECP in the event they are required to make payments related to these guaranties and guaranties provided by ECP and has granted a secured interest in its assets to ADA and ECP to secure the reimbursement agreement and any loans ECP makes to Red River. Carbon Solutions has guaranteed the obligations of Red River under the reimbursement and loan agreement and has pledged its equity interest in Red River to the Company and ECP as security for this guaranty. The Company has assigned its rights under these agreements to ECP, and any amounts payable to the Company would be paid directly to ECP until ECP's preferred equity in Carbon Solutions is fully redeemed or converted and all loans to Red River have been paid in full. As of December 31, 2009, the outstanding amount of ECP's preferred equity totaled \$98.5 million and the principal balance of ECP's loans to Red River totaled \$76.3 million. ECP's loans to Red River are evidenced by secured demand notes bearing interest at 12% per annum compounded quarterly.

As discussed in Note 6, above, the Company is obligated to indemnify both Carbon Solutions and ECP for certain damages and expenses they incur related to the Norit litigation matter. Estimated costs for legal expenses are accrued as incurred. Future indemnity cost cannot be reasonably estimated and, therefore, no provision for such costs has been recognized on these financial statements.

The Company has also guaranteed the obligation of Carbon Solutions under a noncancellable operating lease agreement. The lease is for approximately 3,100 square foot of combine office and warehouse space in Littleton, Colorado. The guaranty is effective until August 31, 2010. The remaining obligation under this contract at December 31, 2009 is approximately \$25,000.

10. MAJOR CUSTOMERS:

Sales to unaffiliated customers who represent 10% or more of the Company's sales for the years ended December 31, 2009 and 2008 were as follows:

Customer	2009 (%)	2008 (%)
A	15	16
B	13	-
C	7	11
D	5	10

At December 31, 2009 and 2008, approximately 51% and 58% of the Company's trade receivables were from two and four customers, respectively.

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11. INCOME TAXES:

The Company's income tax expense (benefit) from continuing operations consists of the following:

	2009	2008
	<i>(In thousands)</i>	
Current	\$ 9	\$ (186)
Deferred	(5,555)	(1,321)
Income tax expense (benefit)	\$ (5,546)	\$ (1,507)

During 2008, stockholders' equity has been decreased in the amounts of \$34,000 for the income tax effects related to stock based compensation.

During 2008, the Company recognized benefits to other comprehensive income of \$116,000 for the income tax benefit associated with the unrealized gains (losses) on marketable equity securities.

The following lists the Company's deferred tax assets and (liabilities), which are included in Deferred and Other Assets, Accrued Expenses and Long-term Liabilities, respectively, in the accompanying consolidated balance sheets:

	At December 31,	
	2009	2008
	<i>(In thousands)</i>	
Deferred tax assets:		
Deferred compensation, warranty and other	\$ 229	\$ 206
Allowance for doubtful accounts	7	6
Deferred revenues, compensation and other	371	307
Net operating loss carryforward	6,235	902
Tax credits	568	286
Total tax assets	7,410	1,707
Deferred tax liabilities		
Prepaid expenses	107	97
Equity in loss of ADA Carbon Solutions, LLC	187	-
Property and intangible asset differences	23	70
Total tax liabilities	317	167
Net deferred tax assets	\$ 7,093	\$ 1,540

No valuation allowance has been recorded as the Company believes that it is more likely than not that its deferred tax assets will be realized in the future.

A reconciliation of expected federal income taxes on income from operations at statutory rates with the expense (benefit) for income taxes follows:

	At December 31,	
	2009	2008
Expected income tax rate - expense (benefit)	(34)%	(34)%
Permanent differences	<1%	11%
Tax credits	(2)%	<(1)%
State income taxes	(4)%	(3)%
Other	3%	<(1)%
Actual effective income tax rate	(37)%	(27)%

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The Company did not have any unrecognized tax benefits in 2009 and 2008. Major components related to the permanent difference include goodwill impairment, investment items and incentive stock options for the year ended December 31, 2008. Permanent differences for the year ended December 31, 2009 are not considered significant. The primary jurisdictions in which the Company files income tax returns are the U.S. federal government and State of Colorado. The Company is no longer subject to U.S. federal examinations by tax authorities for years before 2006 and Colorado state examinations for years before 2005.

The Company records income tax related penalties and interest as incurred as general and administrative expenses.

The Company has a federal net operating loss carryforward of approximately \$16.5 million that will expire in the years from 2028 to 2029 and state net operating loss carryforward of approximately \$16.9 million that will expire in years ranging from 2015 to 2029.

12. RELATED PARTY TRANSACTIONS:

As discussed above in Note 8, the Company executed a Securities Subscription and Investment Agreement with Arch Coal, Inc. ("Arch") in 2003. Pursuant to the investment agreement, in September 2003, Arch purchased a \$300,000 convertible debenture from the Company, purchased 137,741 shares of the Company's Common Stock and was also granted an option to purchase 50,000 shares. The option to purchase these shares expired in the fourth quarter of 2008. The debenture and accrued interest thereon was repaid in 2004. In addition, the Company cancelled a co-marketing agreement of its ADA-249M product in 2006 and has continued to perform certain testing and research projects under arrangements with Arch. Under such arrangements, the Company has recorded revenue of \$30,000 and \$66,000 in 2009 and 2008, respectively. A designee of Arch has been appointed a seat on the Company's Board of Directors and management of the Company has agreed in the future to nominate and to vote all proxies and other shares of stock in the Company which they are entitled to vote in favor of that designee so long as Arch holds no less than 100,000 shares of the Company's Common Stock. See note 14.

13. BUSINESS SEGMENT INFORMATION

The following information relates to the Company's two reportable segments: MEC and FGC, refined coal and other. All assets are located in the U.S. and are not evaluated by management on a segment basis. All significant customers are U.S. companies.

	Years Ended December 31,	
	2009	2008
	<i>(In thousands)</i>	
Revenue:		
MEC	\$ 16,080	\$ 15,760
FGC	3,981	433
Total	\$ 20,061	\$ 16,193
 Segment profit (loss):		
MEC	\$ 4,987	\$ 3,939
FGC	(697)	(1,888)
Total	\$ 4,290	\$ 2,051

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A reconciliation of the reported total segment profit to net income for the periods shown above is as follows:

	Years Ended December 31,	
	2009	2008
Total segment profit	\$ 4,290	\$ 2,051
Non-allocated general and administrative expenses	(15,548)	(8,303)
Depreciation and amortization	(582)	(488)
Interest income and other income/expenses	34	439
Income tax benefit	5,546	1,507
Equity in loss of Carbon Solutions	(3,243)	-
Net loss attributable to non-controlling interest	732	688
Net loss	<u>\$ (8,771)</u>	<u>\$ (4,106)</u>

Non-allocated general and administrative expenses include costs that benefit the business as a whole and are not directly related to one of our segments. Such costs include but are not limited to accounting and human resources staff, information systems costs, facility costs, audit fees and corporate governance expenses.

14. SUBSEQUENT EVENTS

On March 23, 2010, the Company terminated the SPA agreement with ECP which would have resulted in the sale of 3.6 million shares of the Company's preferred stock to ECP with the proceeds from the sale increasing the Company's investment in Carbon Solutions.

Also on March 23, 2010, the Company entered into a subscription agreement with Arch Coal for the issuance and sale of a private placement of an aggregate of 143,885 shares of the Company's common stock at a purchase price of \$6.95 per share for aggregate proceeds of \$1.0 million which will be used, in part, to fund the Company's share of Clean Coal's note payable due on the earliest to occur of (a) the third day after the Company receives funds from a sale of securities (with certain permitted exceptions, including the sale of its common stock to Arch Coal on March 23, 2010), (b) April 30, 2010, or (c) upon the occurrence of a continuing uncured event of default or a change in control of the Company or Clean Coal.