

ADA-ES INC  
Form 10-K  
March 27, 2009

**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, 2008**

**Commission File Number: 000-50216**

**ADA-ES, Inc.**

(Name of registrant as specified in its charter)

**Colorado**  
(State of incorporation)

**8100 SouthPark Way, Unit B, Littleton, Colorado**  
(Address of principal executive offices)

**84-1457385**  
(IRS Employer Identification No.)

**80120-4527**  
(Zip Code)

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

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

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

**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  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  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.  Yes  No

Indicate by check mark if disclosure of delinquent filers in response to Item 405 of Regulation S-K is not contained here, 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.  Yes  No

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.

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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  No

The aggregate market value of the voting common stock held by non-affiliates as of June 30, 2008 was \$52,221,000.

As of March 23, 2009, there were outstanding 6,893,877 shares of the 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 2009 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 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

PRB = Powder River Basin (a particular area of the Western United States)

**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 enhance existing air pollution control equipment, maximize capacity and improve operating efficiencies. We currently serve the emerging market for mercury emission controls through the supply of powdered activated carbon injection ( ACI ) systems, activated carbon ( AC ), mercury measurements and related services. ADA-ES became a stand-alone public company through a

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spin-off from its parent company, Earth Sciences, Inc. in September 2003. We have a wholly-owned subsidiary called ADA Environmental Solutions, LLC, a 50% interest in a Delaware limited liability company called ADA Carbon Solutions, LLC ( Carbon Solutions ), and a 50% interest in a Colorado limited liability company called Clean Coal Solutions, LLC ( Clean Coal ). 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 ( Five Forks ), 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 sale of equipment, field testing and services related to emission control for coal-fired boilers used in electric generation,

construction of a new Greenfield facility in Coushatta, Red River Parish, Louisiana ( AC Facility ) for the process and manufacture of AC for mercury control applications and the development of interim sources of AC to supply to utility customers until such time as our AC Facility is operational, through Carbon Solutions, our joint venture with Energy Capital Partners I, LP and its affiliated funds ( ECP ),

development and marketing of our refined coal technology through our Clean Coal joint venture with NexGen Refined Coal, LLC, an affiliate of NexGen Resources Corporation ( NexGen ), and

the sale of flue gas conditioning equipment and chemicals, and other chemicals and technologies for coal-fired boilers.

### Financial Information for Industry Segments

We have two reportable segments: MEC and FGC 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 (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), mercury and carbon dioxide (CO<sub>2</sub>). We are a key supplier of equipment and services to the market that first began in 2005 when individual states enacted limits on mercury emissions with the market subsequently expanding as a result of additional regulations. We are attempting to position ourselves to also become a key supplier of AC to that market.

Our business plan is based upon providing technologies for existing coal-fired power plants, as many as 1,100, that provide 325 GWs of electricity, or roughly 50% of the U.S. demand, according to a 2007 National Coal Council report. The DOE Energy Information Administration (EIA) estimates an additional 46 GW of new capacity between 2007 and 2030. A 2007 National Coal Council report estimated that United States reserves will be capable of serving demand for the next 250 years. However, the nation's existing coal-fired power plants emit approximately 48 tons of mercury per year, or approximately 37% of all human-caused mercury emissions. 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 from power plants is a critical near-term imperative in order to safely harness the energy afforded by U.S. coal. In 1999, a DOE study predicted that the estimated cost to control these emissions will be \$2 billion to \$6 billion annually. Regulations currently exist that require new coal-fired plants to control mercury emissions. There are as many as 48 new coal-fired power plants in the United States under various stages of development, all of which have requirements for mercury emission control.

The coal-fired power industry has been under increased scrutiny over environmental issues during the last year, especially related to mercury emissions, as well as the impact of CO<sub>2</sub> 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 2008. 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 even as environmental regulations become more stringent, these older plants will likely require the use of retrofit technologies to address conventional pollutants such as SO<sub>2</sub>, NO<sub>x</sub>, and particulates and now for pollutants such as mercury and CO<sub>2</sub>. 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. In February 2009, the EPA withdrew its appeal of the CAMR ruling, clearing the way to promulgate mercury standards under Section 112 of the Clean Air Act, which governs hazardous air pollutants from stationary sources, but has yet to set any defined timeline for such actions. In the interim, the lack of clear regulations has generated some short-term uncertainty among utilities as to what they will be required to do to reduce mercury emissions and is impacting their ability to include mercury control costs in their rate bases. We believe that the likely result will be that the EPA will develop a maximum achievable control technology (MACT) based mercury regulation and/or Congress will enact new legislation requiring stricter mercury emission control within the next year or two with implementation deadlines over the subsequent two to three years.

While federal regulation remains uncertain, the market remains strong in 16 states that have passed their own mercury control regulations for new power plants and several Canadian provinces. We believe that the long-term growth of the MEC market for the electric utility industry will most likely depend on how industry chooses to respond to federal and state regulations. We anticipate this will create an even larger market for our mercury control products beyond 2010. As many as 1,100 existing coal-fired boilers may be affected by such regulations, if and when they are fully implemented. DOE's latest report issued in 2008 includes 95 existing and planned plant projects totaling 58 GW of capacity. Permitting of new coal-fired plants generally requires them to meet more stringent requirements that likely include MEC.

The complex regulatory issues surrounding mercury control have created confusion for suppliers to the electric utility industry because of the complicated patchwork of state regulations, separate rules for new plants, and the constant flux of federal regulation. Although a straightforward single-regulation-driven market may make the investment decision more clear for utilities, the complexity of the different requirements has actually been a strategic advantage for us. Unlike other suppliers of AC, we have been extensively involved in the policy process at national and state levels for the past nine years and we have intimate connections with our coal-fired power customers gained from over 30 years of serving this market. This knowledge and understanding of the regulatory process enabled us to accurately predict that this market was going to develop and make early decisions to position the Company to take advantage of these events.

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 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 flexibility in choosing the grade of fuel they can burn and (4) research and development of technologies aimed at the capture and conversion of CO<sub>2</sub> emissions. We have established ourselves as a leader in the mercury control market, having received seven new orders for commercial mercury control systems in 2008 and three new orders so far in 2009, one of which has an option for an additional system to be purchased. 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.

#### **Government and Industry-Supported Contracts**

The United States Department of Energy (DOE) issues solicitations periodically for various development and research demonstration projects. DOE solicitations range in subject matter, and we submit bids for those solicitations that fit our mission, strategic plan and capabilities. The bids include a proposed statement of work, 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 a participant in five such agreements and are involved with two other DOE projects as a subcontractor. For one of these agreements, we are researching and developing a novel process to capture CO<sub>2</sub> from coal-fired power plants and we expect the project to last for approximately two years. The remaining four agreements relate to mercury emissions and are expected to be completed in 2009.

The agreements with 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 are involved range from 25% to 45% 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 EPRI (the Electric Power Research Institute). To the extent that the required cost share is not provided by industry partners or EPRI, we provide the balance by reducing the revenues we would otherwise recognize on the work performed.

We currently participate in DOE and industry contracts totaling \$27.6 million, of which \$18.1 million represents contracts directly with DOE. We recognized revenues in 2008 and 2007 from these DOE and industry-funded contracts totaling \$4.7 million and \$7.2 million, respectively, which comprised 29% and 37%, of our total revenues for those respective periods. Of these amounts, \$1.1 million and \$3.3 million in 2008 and 2007, 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 2002 through 2008 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 increase to meet state regulations. We anticipate that DOE may fund other projects related to our business, including projects aimed at CO<sub>2</sub> emissions control. We expect future revenues from current DOE contracts in progress to amount to \$3.4 million, of which we expect to recognize approximately \$1.9 million in 2009.

We are also seeing increased funding for clean coal technology. The newly enacted American Recovery and Reinvestment Act allocated \$3.4 billion to support development and demonstration of technology to capture and store CO<sub>2</sub> from coal-fired power plants. Although we currently have funding from DOE and power generators on a \$3.2 million project to support testing of our solid sorbent-based carbon capture technology, funding on the order of \$50 to \$100 million will be required to perform a scale-up of the technology. We expect that funding for larger-scale demonstrations of our technology will soon be made available from the federal stimulus bill through competitive DOE procurement activity. 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.

#### **Commercial Mercury Emissions Control**

Mercury control regulations have been passed in 16 U.S. states and several 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 ( NETL ) over the course of its three-phase mercury control field testing program and have been demonstrated to consistently reduce mercury emissions by over 90% in most coal-fired power plants.

During 2008, we signed additional contracts for seven ACI systems for mercury emission control. We expect a total of approximately 30 ACI systems to be awarded in 2009 and 2010. We recognize revenue on these agreements on the percentage of completion method. The uncompleted portion of outstanding contracts at December 31, 2008, represents \$6.9 million in gross revenue. We expect to complete and recognize about \$5.9 million of this revenue in 2009, with the remainder in 2010. 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.

#### **Development of an AC Manufacturing Facility**

We believe that the current supply capacity of AC will be inadequate for the demand created by the developing mercury emissions control market. We project 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 more than double by 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. If completed, our AC Facility will be the largest ever constructed in the U.S.

In 2008, we accomplished the following key project milestones:

In May 2008, State and Federal environmental agencies approved the final air permits for two production lines capable of producing up to a total of 350 million pounds of AC per year for the AC Facility.

In July 2008, we purchased the land for the AC Facility and in August 2008, site preparation work commenced.

On September 5, 2008, Red River entered into four separate Multiple Hearth Furnace Contracts ( MHF Contracts ) with Industrial Furnace Company, Inc. ( IFCO ).

On September 8, 2008, Red River entered into an Amended and Restated Engineering, Procurement and Construction Contract ( EPC Contract ) with BE&K Construction Company, LLC ( BE&K ).

On October 1, 2008, ADA entered into a Joint Development Agreement (the JDA ) and a Limited Liability Company Agreement for Carbon Solutions (the LLC Agreement ) with ECP and related agreements for the purposes of funding and constructing the AC Facility and similar projects. Pursuant to the JDA, we transferred the development assets and certain liabilities relating to our production, processing and supply of AC for the control of mercury emissions from coal-fired power plants (the AC Supply Business ) to certain wholly-owned subsidiaries of ours and then transferred the equity in those subsidiaries and certain contracts, goodwill and intellectual property relating to the AC Supply Business to Carbon Solutions. We provide certain accounting, administrative, oversight, insurance and other services to Carbon Solutions at agreed-upon rates and license to Carbon Solutions intellectual property that relates primarily to the AC Supply Business.

ADA and ECP made equity contributions under the first three tranches of funding provided for in the LLC Agreement of approximately \$88 million, which includes contributions made in February 2009.

Also on October 1, 2008, ADA entered into a Securities Purchase Agreement (the SPA ) providing for the 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 (together, the Preferred Stock ). Assuming the closing of the SPA, which is subject to certain conditions including obtaining debt financing for the AC Facility, we will invest the expected \$18.8 million of net proceeds into Carbon Solutions.

In November 2008, Carbon Solutions formed Five Forks in connection with mining and supplying of coal for the operations of our AC Facility.

We expect 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 is estimated at approximately \$363 million. Approximately \$140 million of that amount is expected to come from equity participation from us and our joint venture partner, ECP, while we expect to secure the remainder with debt financing. In August 2007, we engaged Credit Suisse Securities, (USA) LLC 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 \$160 million in revenues with U.S. utilities seeking to control mercury emissions on existing and new power plants, representing approximately 32% of the plant's planned capacity. Many of the state mercury regulations already in place begin in 2010 and as such there are several utilities and independent power producers engaged in an AC

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procurement process this year. We are currently bidding on many requests for proposals for AC with a total contract value on the order of \$500 million. We expect that most of these contracts will be awarded during 2009. Given the current tight AC supply/demand situation in the U.S., we expect to be able to sell the majority of our AC output under three-to-five year contracts to owners of coal-fired power plants for the purpose of mercury mitigation.

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### Near-Term AC Supply

In addition to construction of the AC Facility, Carbon Solutions through its subsidiary Crowfoot Supply implemented a near-term (interim) plan to supply AC to meet the growing demand in the mercury control market for coal burning power plants. Market forecasts predict AC demand for the mercury control market will increase to over 80 million pounds per year beginning this year for contract values of \$100-\$150 million per year based on current prices. In order to supply early and interim quantities of AC to the utility mercury control market, we acquired from Winfield Industries, Inc. ( Winfield ) the assets of an AC processing facility and entered into a take or pay Carbon Supply Agreement with Winfield to purchase AC beginning in 2008, with annual quantities expected to increase to over 20 million pounds during 2009 with additional amounts available for 2010. From this facility, we produced our first batch of treated AC and performed a full scale power plant test that achieved greater than 90% mercury removal. A number of additional tests are under way and others are scheduled to allow clients to evaluate this product. Red River is currently selling AC on a continuous basis from this facility to meet delivery obligations under our existing off-take agreements and expect to offer such supply to potential long-term customers who may become parties to off-take contracts for AC to be supplied from the AC Facility. Crowfoot Supply is also developing a larger offsite processing and storage facility in Natchitoches Parish, Louisiana that is expected to commence operations in the second quarter of 2009 and later operate in conjunction with the AC Facility. Crowfoot Supply is currently procuring additional AC processing equipment to enable it to expand capacity to over 30 million pounds of AC per year.

### 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 nitrogen oxides and mercury from certain, treated coals. We licensed technology, including certain patents, to Clean Coal upon formation of this joint venture. Clean Coal's primary opportunity is based on certain tax credits that are available under Section 45 of the Internal Revenue Code ( Section 45 Tax Credits ), as it was amended by the American Jobs Creation Act of 2004 (the 2004 Act ), the Emergency Economic Stabilization Act of 2008 and the American Recovery and Reinvestment Act of 2009 for qualifying refined coal. NexGen's affiliates have extensive experience and expertise with Section 29 Tax Credits, which applied to the development of syn-fuels, and we anticipate that NexGen's experience and expertise in this area will serve as a template for monetization of Section 45 Tax Credits in the refined coal area. Our refined coal technology is applicable to a target market of approximately 20 million tons of coal per year, which would amount to a market potential to Clean Coal of approximately \$20 to \$25 million a year.

We expect Clean Coal to supply chemicals, additives, equipment and technical services to cyclone fired boiler users, but its primary purpose is to seek and obtain approval from the United States Internal Revenue Service to qualify for Section 45 Tax Credits (a Section 45 Business ). In the Emergency Economic Stabilization Act of 2008, Congress included language modifying Section 45, 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. We expect this legislation to positively impact Clean Coal's efforts to obtain approval for the Section 45 Tax Credits. The ability of Clean Coal to sell its planned refined coal product and qualify for the expected Section 45 Tax Credits depends on several conditions, including meeting the emission control requirements, finalizing necessary contractual agreements, and completing and making operational such facilities prior to January 1, 2010. If Clean Coal obtains that approval and becomes a Section 45 Business, NexGen has the right to maintain its 50% interest by paying us an additional \$4.0 million, in eight quarterly payments of \$500,000 each, beginning in the quarter Clean Coal becomes a Section 45 Business. 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 the \$4.0 million that it elects not to pay. 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 payments made by NexGen. The agreement requires NexGen and us to each pay 50% of the costs of operating Clean Coal, and specifies certain duties that both parties are obligated to perform. Thus far, we have conducted three full-scale tests of our refined coal product, CyClean, that demonstrated the ability to meet the emission control performance required to qualify for the Section 45 Tax Credits.

In addition, we entered into a 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 standard 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 2008 includes net costs of \$213,000 related to our refined coal efforts and \$129,000 from that JV.

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## 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 are able to 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. Our technology also has application in the cement and petroleum refining industries where particulate emissions are being or need to be controlled. We are not currently actively pursuing the non-utility markets but companies in that market have recently expressed interest in our technology.

Revenues from sales of equipment and chemicals to FGC customers in 2008 and 2007 and other FGC contract work totaled \$433,000 and \$1.0 million, respectively.

## 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 sulfur dioxide, nitrogen oxide, 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 and \$1.2 million in 2008 and 2007, respectively, most of which is related to the mercury emission control segment.

## 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 1,100 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 48 new coal-fired power plants in the United States under various stages of development, all of which have requirements for mercury emission control. Through 2008, our mercury control technology has been demonstrated at full scale at over 40 plants, generally yielding over 90% mercury control on most applications. In addition, our approach to mercury control is quite cost effective, in many cases reducing costs associated with mercury controls. 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 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, and the AC we intend to supply from the AC Facility is estimated to range from approximately \$1.0 million to \$2.0 million per year per unit. We believe Norit Americas, Inc., Alstom 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 on price, quality, performance and the ability to supply AC. Based on the contracts we were awarded since 2005, we believe we are the market leader and that we currently have approximately 32% of the existing market. As this market matures, we expect competition to increase, primarily in the AC supply arena. See the discussion above under the caption Market for Our Products and Services.

We are focused on the growing North American market for AC used for the control of mercury emissions from power plant exhaust. Our principal competitors in this market include Norit, N.V., a Dutch company, Calgon Carbon Corporation ( Calgon ), a United States company, RWE Power AG, a German company and Albermarle, a United States company. However, of these, only Norit, Calgon and RWE actually produce the AC they sell. Norit and Calgon have announced that they are constructing additional facilities or renovating existing facilities to expand their capacity to produce and supply AC. Albermarle and Alstom treat and supply AC produced by others. Asian producers of AC, primarily in China, are also sources of AC to the market, and supply companies that re-sell their AC, such as Albermarle. Other US producers of AC, who currently tend to focus on other AC applications, include Mead/Westvaco Corporation and Siemens Water. Competition in AC supply and AC equipment and services is based on price, quality, and performance.

Our primary competition in the FGC arena is conventional FGC technology using either sulfur trioxide (  $SO_3$  ) or a combination of  $SO_3$  and ammonia. This technology has been available commercially since the 1970 s in a variety of forms. Conventional  $SO_3$  FGC has been shown to interfere with the performance of MEC which is expected to severely limit new  $SO_3$  installations after mercury regulations are reinstated. Preliminary tests indicate that our FGC technology does not interfere with MEC as does  $SO_3$  based FGC. The different products in the industry that aid ESP 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 continual 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 9 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 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. See the discussion above under the caption Market for Our Products and Services.

We also supply utility customers with AC for mercury control needs. In 2008, Carbon Solutions commenced deliveries of this material, procured from foreign suppliers and processed at our own facilities for quality and product control. Initial tests of the material we have procured and then treated, packaged and tested under actual operating conditions at a power plant burning Western PRB Coal indicate that our product is effective for removal of greater than 90% of the mercury under very favorable feed conditions.

#### **Raw Materials, Contract 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 fabrication associated with installation of such equipment, again 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. Red River purchased the MHF Furnaces for the AC Facility from IFCO and a boiler through BE&K. Red River is purchasing other equipment for the construction of the AC Facility from BE&K and other suppliers. Such equipment is available from numerous sources. Crowfoot Supply obtains a near-term supply of AC product from foreign suppliers and applies a chemical treatment at its US facility. 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 AC and FGC chemicals depends on the operations of the utilities to which such products are provided. Our AC and FGC 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 AC and FGC chemicals 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 2008, we performed work to supply ACI systems to 12 customers. We recognized 16% and 10% of our total revenue from Ameren Energy Generating Company in Missouri and Alstom Power, Inc. in Tennessee, respectively.



During 2008, we recognized 11% of our revenue from services provided as a subcontractor from Wisconsin Energy Corporation in Wisconsin under a U.S. government contract. (See also Notes 5 and 10 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, 2008, we had contracts in progress for supply of ACI systems totaling approximately \$6.9 million. We expect to complete and recognize approximately \$5.9 million of this revenue in 2009, with the remainder in 2010. Our current DOE and industry funded R&D contracts in progress, assuming no changes in funding, are expected to result in future revenues of \$3.4 million, of which we expect to recognize approximately \$1.9 million in 2009. Contracts in progress for other consulting work totaled approximately \$836,000 at year-end 2008. We expect to complete and realize the revenues for all of our existing consulting work in 2009.

### **Research and Development Activities**

In 2008 we were involved in several R&D contracts funded by DOE and industry groups, primarily directed toward the control of mercury emissions. We participate in cost share arrangements in many of those contracts. For 2008 and 2007 our direct cost share for R&D under DOE related contracts approximated \$30,000 and \$163,000, respectively. In addition, we spent approximately \$948,000 and \$1,038,000 on our own behalf on research and development activities related to further development of our technologies during 2008 and 2007, respectively.

### **Employees**

As of December 31, 2008 we employed a total of 64 full-time personnel, including eight Company executive officers. 57 people are employed at our offices in Littleton, Colorado, 1 in Alabama, 2 in Louisiana, 1 in Maryland, 1 in Pennsylvania and 2 in Texas. In addition, other personnel provided services to us on a contract basis for specific project tasks during the year, including two key positions, one of whom oversees our refined coal business and the other oversees our AC Supply Business.

### **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 amendments thereto, and are available free of charge, as soon as reasonably practicable after the same are filed with or furnished to the SEC, at the Company's website at [www.adaes.com](http://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](http://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 Section 21E of the Securities Exchange Act of 1934 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 national and state mercury regulations on the nation's 1,100-plus coal-fired units;
- (b) rapid development of the mercury emission control market;
- (c) expected growth in the power industry's interest in DOE carbon dioxide removal projects;
- (d) annual lease costs and other expenditures and gross margins;
- (e) our ability to complete and realize revenues from backlog orders;
- (f) our ability to meet contract delivery milestones for ACI systems, refined coal and chemicals;
- (g) the size of the applicable target market and market potential for refined coal technology and ADA-249M;



- (h) the effect of new legislation on Clean Coal s efforts to obtain approval for Section 45 Tax Credits;
  - (i) the timing of completion of projects and future projects;
  - (j) the range of costs for capital equipment expected to be required by each coal-fired unit and range of sorbent requirements per unit;
  - (k) the inability of the supply of AC to meet market demand as early as 2010;
  - (l) the expected costs for the construction of the AC Facility;
  - (m) our ability to enter into additional long-term contracts for the delivery of AC from our new AC Facility;
  - (n) our ability to consummate the sale of the Preferred Stock to ECP under the SPA and to obtain adequate long-term debt financing for the AC Facility;
  - (o) our ability to meet a significant portion of the expected shortage in AC supply, including in the near-term (2009) from interim sources, and in the longer term (2010 and beyond) from the AC Facility;
  - (p) the appropriation of funds by Congress for DOE projects;
  - (q) impact of market price risk;
  - (r) the immateriality of any future adjustments to previously received revenue as a result of DOE audits; and
  - (s) future working capital needs.
- 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 seek to implement reduction of mercury in flue gases;
- (c) contracts we have with the DOE, which generate a significant part of our revenue, 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 strengthened as a result of the court invalidation of CAMR 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 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 to effectively compete against others who may choose to participate in our areas of business;
  - (m) we will obtain the necessary funding required to build the AC Facility;
  - (n) the cost of the AC Facility will remain within budget;
  - (o) we will be able to meet any technical requirements of projects we undertake;
  - (p) we will be able to obtain adequate supplies of the materials and supplies needed in our business, including materials needed to construct our planned AC Facility, and the AC needed to supply customers in the near term; and
  - (q) new legislation will positively impact Clean Coal's ability to obtain approval for Section 45 Tax Credits.
- 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, including the following: changes in existing and planned environmental laws, inadequate supply and increases in costs of AC, coal and other raw materials, inability to obtain funding and other risks relating to the construction of our Greenfield AC Facility, decrease in demand for coal, impact of competition, impact of the general economy, changes in government funding, litigation, IP infringement claims, failure to protect our intellectual property, technical or operational problems with ACI systems sold, dependence on third parties, non-compliance with guaranties on ACI systems, material adjustments due to DOE audits, seasonality of our business, lack or mismanagement of capital and other resources to support future growth, loss of key personnel, lack of management expertise, impact of weather and natural disasters, bank failures, changes in taxation rules or financial accounting standards, dilution resulting from future sales of common stock or other securities, lack of dividend payments to shareholders and significant costs of compliance with securities laws and regulations. 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 EXISTING AND PLANNED ENVIRONMENTAL LAWS AND REGULATIONS GOVERNING MERCURY CONTROL; 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. 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 remand of CAMR has resulted in a *wait and see* approach by our customers, which we have seen in delays in 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.

The impact of state and federal mercury control regulation on the future of our business, and the long-term growth of the MEC market for the electric utility industry will most likely depend on how the states and the federal government react to the remands of CAMR. This will in turn mandate how industry must respond to new federal legislation or regulations, as well as state laws, including those that are presently in various stages of enactment, and permitting requirements for new coal-fired plants. We do not expect significant revenue growth unless and until federal or state regulations impact a significant portion of the 1,100 existing boilers. Rescission of state mercury control legislation or permitting requirements, or undue delay in adoption by the EPA of regulations replacing CAMR or passage of federal mercury control legislation, would likely cause an adverse effect on our business and financial condition.

**INADEQUATE SUPPLIES OF AC WOULD ADVERSELY AFFECT OUR BUSINESS.**

We have seen an increase in demand for AC as power plants begin to use ACI systems to control mercury emissions. Crowfoot Supply has a supply agreement for foreign sources of AC and interim processing capabilities that enables us to supply limited

quantities of AC for the mercury control market in 2009. We believe that it is important for us to be able to supply AC on an interim basis until the AC Facility comes on line in order to compete effectively with other suppliers. If AC supply, which is currently outside our control, is inadequate to meet the increased demand, it would likely have a negative impact on our business and financial condition.

**WE HAVE COMMITTED SIGNIFICANT RESOURCES TO THE DEVELOPMENT OF THE AC FACILITY TO SUPPLY THE EMERGING MEC MARKET AND THE INABILITY TO COMPLETE THE PROJECT IN A TIMELY MANNER WOULD LIKELY HAVE AN ADVERSE EFFECT ON OUR BUSINESS AND FINANCIAL CONDITION.**

ADA has committed significant resources to the development of the AC Facility, to date having contributed approximately \$25.6 million to Carbon Solutions for preliminary development work, including plant design, environmental and other permitting, equipment design and procurement, land acquisition and consulting fees, and construction costs. Carbon Solutions has additional future commitments of approximately \$268.7 million for which ADA has provided guaranties to date. We estimate that the all-in cost of the project will be approximately \$363 million for a facility with one production line capable of producing approximately 150 million pounds of AC per year. If we consummate the sale of our Preferred Stock to ECP under the SPA, we will invest the net proceeds in Carbon Solutions for the AC Facility. We do not have any further capital commitments to Carbon Solutions, and we expect that all future funding for the AC Supply Business will come from ECP and third-party debt financing. Given the recent turmoil in the financial markets, Carbon Solutions has been unable to secure debt financing on reasonable terms. If ECP delays or stops providing additional equity funding for the AC Facility or if Red River is unable to obtain the debt financing for the project in a timely manner and on acceptable terms, the planned schedule for the project would be delayed and would adversely impact the project.

**WE HAVE COMMITTED SIGNIFICANT RESOURCES TO THE DEVELOPMENT OF THE AC FACILITY AND THE INABILITY TO COMPLETE THE PROJECT WOULD LIKELY RESULT IN OUR BEING UNABLE TO RECOUP OUR INVESTMENT.**

In addition, if (i) we are unable to close the sale of our Preferred Stock to ECP under the SPA by the deadline specified in the SPA (as it may be automatically extended) (the SPA Outside Date ) or if the SPA were terminated, in each case other than due to a material uncured breach of the SPA by ECP, or (ii) we materially breach the SPA prior to closing and fail to cure such breach within the time period specified in the SPA (an ADA-ES Triggering Event ), ECP could elect to buy out ADA's equity interest in Carbon Solutions at a purchase price equal to its capital contributions and the amount of any guaranties, letters of credit or other credit support obligations it has provided that are not terminated or replaced or dissolve or sell Carbon Solutions. If Carbon Solutions were sold or dissolved, we would likely not be able to recoup our investment. If any of these events were to occur, our business and financial condition would likely suffer materially as a result.

**CURRENT LEVELS OF MARKET VOLATILITY HAVE ADVERSELY IMPACTED OUR ABILITY TO OBTAIN ON FAVORABLE TERMS THE DEBT FINANCING REQUIRED TO COMPLETE THE AC FACILITY AND COULD CAUSE DELAYS TO THE PROJECT.**

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 most issuers to obtain financing. Our 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 additional delays in our ability to obtain debt financing for the AC Facility on favorable terms.

**UNDER THE LLC AGREEMENT OF CARBON SOLUTIONS, ECP CONTROLS FUTURE FUNDING OF THE AC SUPPLY BUSINESS AND MAY DILUTE OUR EQUITY SUCH THAT WE WOULD NO LONGER BE ABLE TO CONSOLIDATE THE FINANCIAL RESULTS OF CARBON SOLUTIONS WITH ADA'S, WHICH MAY ADVERSELY AFFECT OUR FINANCIAL CONDITION AND RESULTS OF OPERATIONS.**

We are currently in the third tranche of funding under the LLC Agreement. ECP has the sole right to increase the Third Tranche Amount (as defined in the LLC Agreement) and continue funding Carbon Solutions through preferred equity contributions, one-half of which would bear a 12% preferred return, or to move into the fourth tranche of funding and continue funding Carbon Solutions through ordinary capital contributions. Preferred equity contributions have priority over ordinary capital contributions on any distributions. Accordingly, if Carbon Solutions were to sell the AC Supply Business and the proceeds were not sufficient to return all preferred equity (including the preferred return on such equity) and ordinary capital contributions, ADA may not receive a return of

all of its ordinary capital contributions. After a certain period of time, ECP may convert prior preferred equity contributions to ordinary capital contributions, which would result in a dilution of our ownership interest in Carbon Solutions. If our ownership interest is diluted, we would likely no longer be able to consolidate the financial results of the AC Supply Business with our financial statements, which may adversely affect our financial condition and results of operations.

**UNDER THE LLC AGREEMENT OF CARBON SOLUTIONS, ECP CONTROLS FUTURE FUNDING OF THE AC SUPPLY BUSINESS AND MAY DILUTE OUR EQUITY SUCH THAT WE WOULD LOSE MANAGEMENT RIGHTS, WHICH MAY ADVERSELY AFFECT OUR FINANCIAL CONDITION AND RESULTS OF OPERATIONS.**

Carbon Solutions is managed by a Board of Managers consisting of four managers, two of whom are appointed by ADA and two of whom are appointed by ECP. Meetings of such Board require a quorum of at least one ADA manager and one ECP manager, with approval of specified transactions being required of a majority of the managers present at any meeting at which there is a quorum. Other major transactions require the written consent of members holding at least 75% of the aggregate Carbon Solutions membership interests. If ECP makes additional ordinary capital contributions to Carbon Solutions or converts its preferred equity contributions to ordinary capital contributions, our percentage ownership interest would be diluted. In the JDA, we agreed to indemnify ECP and the AC Supply Companies for certain excluded liabilities, and if we default under such indemnity obligations, ECP will have the option to satisfy such indemnity obligations with our membership interests in Carbon Solutions. If our percentage ownership interest is diluted to less than 35%, we would lose our rights to designate one out of the two managers we currently have the right to designate, and the presence of any two managers would constitute a quorum of the Board of Managers. If our interest is further diluted to less than 15%, we would lose our rights to designate any managers. In such event, Carbon Solutions would be managed exclusively by ECP and its designees. Our loss of management rights may result in ECP's making decisions regarding the AC Supply Business that adversely affect our business, financial condition and results of operations. Furthermore, under the LLC Agreement, 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 pursue an AC production business prior to October 1, 2011, which may impede our ability to compete effectively with other suppliers of ACI systems who have the ability to supply their own AC to their customers.

**THE BUILDING OF THE AC FACILITY POSES CERTAIN ADDITIONAL RISKS TO US, ANY OF WHICH COULD HAVE AN ADVERSE EFFECT ON OUR BUSINESS OR FINANCIAL CONDITION.**

*If Red River is not able to obtain the necessary financing for the AC Facility or complete the AC Facility on a timely basis such that Carbon Solutions determines to terminate the project, or complete the facility by the first half of 2010, we would likely owe significant amounts to terminate the agreements to which Red River is now a party or the performance of which we have guaranteed.*

Red River has entered into three significant contracts with respect to the AC Supply Business.

Red River has commitments totaling \$231.4 million to BE&K under the EPC Contract. ADA has guaranteed Red River's payment obligations under the EPC Contract. A \$29.0 million irrevocable letter of credit was issued for BE&K's benefit to assure payment of short-term amounts owing under the EPC Contract; the letter of credit is guaranteed by our JV partner ECP. Red River is required to increase that letter of credit on monthly intervals if adequate third party financing is not then in place to cover amounts Red River would owe in the event of a payment default under the contract. Although Red River can terminate the EPC Contract for convenience at any time, Red River (and us, based on our responsibility under a guaranty we have given to BE&K) would then owe BE&K (a) the amount earned by BE&K under the contract through the effective date of termination, (b) cancellation charges to BE&K's subcontractors, (c) other reasonable termination-related costs incurred by BE&K, (d) costs of demobilization, and (e) unreimbursed sales taxes paid by BE&K. These amounts could be substantial and may not be completely recoverable by us if Red River were to abandon or sell the project.

Red River has also entered into four MHF Contracts with IFCO to purchase four multi-hearth furnaces for the AC Facility at an aggregate cost of approximately \$40.8 million. ADA has guaranteed the payment obligations of Red River under those contracts. As with the EPC Contract, Red River can terminate the MHF Contracts at any time for convenience; however, Red River would then owe IFCO for (a) reimbursable costs and amounts owing for milestone and progress payments, (b) cancellation charges owing to IFCO's subcontractors, and (c) 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 project.

Finally, Red River's AC sales agreement with Luminant requires Red River to sell treated AC to Luminant over a six-year period or until such time as Luminant has purchased its minimum commitment. Red River must deliver AC produced at the AC Facility no later than July 14, 2010, except for periods when the AC Facility is either under construction or unable to produce AC for certain specified reasons. If Luminant terminates the agreement as a result of Red River's default prior to commencement of delivery of AC from the AC Facility, Luminant would be entitled to cover damages up to \$10 million. Luminant may also be entitled to require specific performance. Red River caused a \$1 million irrevocable letter of credit to be issued for the benefit of Luminant and in replacement of ADA's prior guaranty in January, 2009. Red River must replace that letter of credit with a \$10 million irrevocable letter of credit upon closing of the debt financing for the project. If Red River cannot secure financing to be able to meet its obligations to Luminant under this agreement, we may be liable to Luminant for significant damages, which would materially adversely affect our financial condition and our ability to proceed with the project.

***The AC Supply Business will require significant additional AC supply and processing capabilities in order to meet its obligations under long-term sales agreements.***

In order to pave the way for project financing, Red River has entered into AC sales agreements with Luminant and other power companies to sell AC, which ramp up significantly in 2010 and thereafter. Red River intends to enter into additional, similar long-term AC sales agreements. The AC Supply Business currently does not have supply agreements for adequate quantities of AC or the capability to process and deliver the treated AC to meet Red River's obligations under these sales agreements. If the AC Supply Business is unable to secure such supply or develop such capabilities in a timely manner, it would be in default under these agreements, which would likely materially adversely affect our business and the value of the AC Supply Business.

***The AC Supply Business will require long-term supply agreements for the coal feedstock necessary to produce AC from our planned facility.***

In order to assure that Red River will be able to manufacture AC at the AC Facility, the AC Supply Business will need to obtain long-term contracts for the supply of the coal necessary as feedstock for the AC to be produced at the facility. The AC Supply Business does not presently have contracts or commitments for a dependable supply of feedstock for the AC Facility, and its inability to obtain them in a timely manner and on reasonable terms would adversely impact the project.

***Our management does not have significant experience in projects of the size and complexity of the AC Facility and that inexperience could adversely affect our business and financial condition.***

Although the AC Supply Companies have employees who have experience in the design, oversight and construction of complex manufacturing facilities, ADA management has limited experience in managing or overseeing projects as complex as this one. As a result, ADA management will depend on the expertise of others to minimize various difficulties that may arise during the planning, construction or operation of the project, including delays in development or construction, deviations from planned schedule, cost overruns, or any of various other possible construction or operational complications, any of which could impact the viability of the project, thereby causing us to suffer material adverse effects on our business and financial condition.

#### **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, personnel 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 last year 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. The AC Supply Business has significant competition as well. If that business is unable to compete effectively, it may not be able to obtain the necessary debt financing to complete construction of the AC Facility, resulting in the need to abandon or sell the project. Even if the project is completed, competition may reduce demand for AC produced by the AC Facility, and it may not be able to generate operating income, which could have a material adverse impact on our business and financial condition.

**COMPLIANCE WITH ENVIRONMENTAL AND OTHER LAWS AND REGULATIONS COULD RESULT IN SIGNIFICANT COSTS AND LIABILITIES.**

The construction and operation of the AC Facility are subject to federal, state and local laws, regulations and potential liabilities arising under or relating to the protection or preservation of the environment, natural resources and human health and safety. Such laws and regulations will generally require Red River (or our other operating subsidiaries) to obtain and comply with various environmental registrations, licenses, permits, inspections and other approvals. Liability under such laws and regulations may be incurred without regard to fault under various federal and state laws for the remediation of contaminated areas. Private parties may also have the right to pursue legal actions to enforce compliance as well as to seek damages for non-compliance with such laws and regulations or for personal injury or property damage. Our insurance may not cover all environmental risks and costs or may not provide sufficient coverage in the event an environmental claim is made against us. Failure to comply with these laws and regulations could expose us to civil, criminal and administrative fines, penalties and/or interruptions in our operations that could influence our results of operations.

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

In 2008 and 2007, 29% and 37%, respectively of our revenues were derived from or related to DOE programs. The federal budget for fiscal year 2009 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 ARE CURRENTLY THE SUBJECT OF A LAWSUIT ALLEGING MISAPPROPRIATION OF TRADE SECRETS AND OTHER CLAIMS AIMED AT THE AC MANUFACTURING TECHNOLOGY; DEFENSE OF THESE OR SIMILAR CLAIMS IS EXPENSIVE, ADVERSELY AFFECTING OUR FINANCIAL CONDITION, AND THE OUTCOME COULD CAUSE 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, the AC Supply Companies and two of our 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. The case, captioned *Norit Americas, Inc. v. ADA-ES, Inc., ADA Environmental Solutions, LLC, John Rectenwald, and Stephen Young*, Cause No. 08-0673, was filed in the 71<sup>st</sup> Judicial District Court for Harrison County, Texas in August 2008. In addition to Norit, other third parties may claim infringement with respect to our current or future technologies or products or products manufactured by others and incorporating our technologies.



Responding to Norit's claims, whether or not they are ultimately found to have merit, has been time consuming and costly, may adversely impact the AC Supply Companies' ability to obtain debt financing for the AC Facility, may cause development delays, may require us to enter into royalty or license agreements on unfavorable terms, if we are able to do so at all, and could require us to cease using any technology that is determined to be the intellectual property of Norit. In addition, pursuant to agreements we have entered into with ECP and the AC Supply Companies, we have certain indemnification obligations that require us to indemnify ECP and the AC Supply Companies against certain losses they suffer as a result of Norit's lawsuit. We have also 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 our patents or other intellectual property. As a result, this existing infringement lawsuit, or other similar claims, which are at the very least expensive and time-consuming to defend, have had and could continue to have a material adverse effect on our business, operating results and financial condition, even if we are successful in defending ourselves against them.

**OUR SPA WITH ECP GIVES ECP CERTAIN APPROVAL RIGHTS WITH RESPECT TO OUR BUSINESS AND THE LLC AGREEMENT REQUIRES THAT WE INVEST THE NET PROCEEDS OF CERTAIN FINANCING TRANSACTIONS IN CARBON SOLUTIONS, WHICH COULD IMPEDE OUR ABILITY TO RAISE CAPITAL OR ENGAGE IN OTHER ACTIVITIES MANAGEMENT CONSIDERS BENEFICIAL TO OUR BUSINESS.**

The SPA contains a number of covenants regarding operation of our business between signing and closing on the sale of the shares of Preferred Stock under the SPA. Closing is contingent upon obtaining debt financing for the AC Facility and no material adverse effect occurring, among other matters. Covenants include requirements to operate our business in the ordinary course and limitations on our ability to enter into merger and acquisition transactions, sell our securities or assets, incur indebtedness, enter into new lines of business or change our existing lines of business and other matters. Our failure to obtain ECP's approval of any of these matters that management deems necessary or appropriate for our business could adversely affect our business, results of operations and financial condition. In addition, ECP has certain preemptive rights to purchase equity securities we may offer in capital raising transactions. These rights may adversely affect our ability to raise additional equity capital on favorable terms. Finally, the LLC Agreement requires that we invest the net proceeds of certain financing transactions in Carbon Solutions, meaning that ADA could not use such proceeds for ADA's other businesses without ECP's approval. If management determines we need to raise additional capital for ADA's other businesses and cannot obtain ECP's approval, our business and financial condition may be adversely affected.

**IF THE SPA IS TERMINATED UNDER CERTAIN CIRCUMSTANCES, ADA COULD OWE SIGNIFICANT FEES AND EXPENSES TO ECP.**

Each of ECP and ADA has the right to terminate the SPA under certain circumstances. If the SPA were to be terminated for certain specified reasons, ADA could be required to pay ECP's reasonable out-of-pocket fees and expenses up to \$1.5 million and possibly a \$2 million break-up fee. The requirement to pay such fees and expenses would materially adversely affect ADA's financial condition.

**IF THE BUY-SELL PROVISIONS OF CARBON SOLUTIONS' LLC AGREEMENT WERE TRIGGERED IN THE CASE OF A DEADLOCK OR UPSTREAM CHANGE IN CONTROL, OUR BUSINESS AND FINANCIAL CONDITION COULD BE ADVERSELY AFFECTED.**

If there is a deadlock between ECP and ADA after April 1, 2009, either party may offer to buy the other's membership interest in Carbon Solutions at a specified price and the other party will then have the option to either accept such offer or purchase the offering member's membership interest at the same price. In addition, if there is an upstream change of control with respect to a party within the first four years, the other party may offer to buy the other's membership interest in Carbon Solutions at the price specified by the party that experienced a change of control, sell its interest to such party at the specified price or take no action. If either of these buy-sell provisions were triggered, we may not have the financial resources to buy ECP's membership interest in Carbon Solutions, which may result in our deciding to sell our membership interest to ECP, adversely affecting our business or financial condition. In addition, the existence of the buy-sell provisions could deter any proposal for the purchase of ADA.

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**THE MARKET FOR CLEAN COAL S PLANNED REFINED COAL PRODUCT AND QUALIFICATION FOR THE SECTION 45 TAX CREDIT ARE UNCERTAIN AND COULD ADVERSELY AFFECT OUR FUTURE GROWTH AND PROFITABILITY.**

The ability of Clean Coal to sell its planned refined coal product and qualify for the expected Section 45 Tax Credits depends on several conditions, including meeting the emission control requirements, finalizing necessary contractual agreements, and completing and making operational such facilities prior to January 1, 2010, the date presently required by the law. The inability of Clean Coal to successfully resolve and complete any of these conditions would likely have an adverse effect on our 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 such laws 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, pursuing persons who misappropriate our intellectual property is usually costly and 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 currently have our own manufacturing or assembly facility for our ACI systems or other components that we sell in our business. Like 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 and coal feedstock for the production of AC, 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.

**OUR FINANCIAL RESULTS MAY FLUCTUATE AS A RESULT OF SEASONALITY AND OTHER FACTORS WHICH MAKES IT DIFFICULT TO PREDICT OUR REVENUES.**

The sale of AC and FGC chemicals depends on the operations of the utilities to which such chemicals are provided. Our AC and FGC customers routinely schedule maintenance outages in the spring of each year. During the period of such outages, which may range from two weeks to over a month, no AC or FGC chemicals are used and purchases from us are correspondingly reduced.

**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 CONSULTANTS FOR KEY AREAS OF OUR BUSINESS, AND THE LOSS OF ONE OR MORE OF THESE CONSULTANTS COULD HAVE AN ADVERSE EFFECT ON OUR BUSINESS.**

We have engaged consultants to oversee the planning, permitting and construction of the AC Facility as well as to assist us with the operation of our refined coal business. The agreements with these consultants contain provisions that are intended to protect our confidential information and also prevent the consultants from competing with us during the terms of their agreements. The agreements do not, however, prevent these consultants from competing against us following the termination of their agreements. If we were to lose one or more of our consultants, it might be difficult to timely replace the lost consultant on reasonable terms, and our business could be harmed if one or more of our consultants were to engage in activities competitive with one of our businesses or areas of interest.

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**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 2002 through 2008 have not been finalized. Revenues recognized from 2002 through 2008 that are subject to government audit totaled approximately \$29.8 million. In addition, we had \$3.4 million of remaining unearned amounts under contracts subject to audit as of December 31, 2008. 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 until January 1, 2010, however, when the standard coverage limit will return to its prior level of \$100,000 per depositor. 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 December 31, 2008, we had 6,755,932 shares of common stock issued and outstanding. 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 IN THE FUTURE COULD DECREASE THE VALUE OF THE OUTSTANDING SHARES OF OUR COMMON STOCK.**

We plan to issue 3.6 million shares of Preferred Stock under the SPA and hope to raise additional equity capital for our business. The Preferred Stock and any other shares of preferred stock we may issue to raise additional equity capital for our business will have liquidation, dividend and other preferences and priorities over those of our common stock. We might, however, also issue common stock or other convertible securities or debt instruments with additional 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 other than ECP under the SPA. The issuance of any or all of these 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, particularly the remand of CAMR;

developments regarding the AC Facility and AC manufacturing projects announced by our competitors;

the impact or perceived impact of our ongoing litigation with Norit and Calgon on our business;

changes in government funding of our projects;

announcements of ACI systems 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.

During December 31, 2007 to December 31, 2008, the closing price of our common stock ranged from \$2.46 to \$11.67 per share. The last reported closing price for our common stock on December 31, 2008 was \$3.10. 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 the foreseeable future for use in the development of our business. We therefore 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 have concluded that at December 31, 2008, we have 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 SEC 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 and Crowfoot Development leases approximately 3,000 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. We lease approximately 20,000 square feet of combined office and warehouse space in Murchison, Texas for our interim operating AC facility. The term of the lease runs through April 30, 2010 and the lease agreement has

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an option to extend the term for one year. Crowfoot Supply leases approximately 800 square feet of office space in Marshall, Texas for its interim AC facility. The term of the lease runs through September 30, 2009 and the lease agreement continues on a month to month basis. 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 \$292,000 through December 31, 2010.

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## Railroad Car Lease

In August 2008, we leased two railroad cars. The term of the railroad car lease runs for five years from August 12, 2008. On October 1, 2008, this railroad car lease agreement was assigned to Crowfoot Supply. In January 2009, Crowfoot Supply signed a rider to lease four more railroad cars bringing the total to six railroad cars. The term of the 2009 rider to the railroad car lease is for three years from January 19, 2009. Both of these railroad car leases have an option to extend on a month to month basis.

## Land

Red River purchased an approximately 58.8 acre tract of land in order to construct its AC facility in Red River Parish, Louisiana. The fair market value of the tract of land is \$485,000. We need to enter into agreements to procure additional property and rights of way as necessary to support plant operations.

### Item 3. Legal Proceedings.

*Litigation with Norit Americas, Inc.* On August 4, 2008, Norit Americas, Inc. ( Norit ) which is an AC manufacturer with whom we have previously done business, filed a lawsuit against us and two of our employees (who were former employees of Norit) asserting claims for misappropriation of trade secrets and other claims, and seeking monetary damages, attorney fees and injunctive relief to prevent us from using what they allege to be Norit trade secrets and other intellectual property involving the manufacture of AC. The case, captioned *Norit Americas, Inc. v. ADA-ES, Inc., ADA Environmental Solutions, LLC, John Rectenwald, Stephen Young, Crowfoot Development, LLC, Red River Environmental Products, LLC, Underwood Environmental Products, LLC and 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. The lawsuit is in the early stages of discovery and we intend to vigorously defend against the claims which management believes are without merit.

*Litigation with Calgon Carbon Corporation.* 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 as *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. The MOU specified that we would receive a 15% commission on sales resulting from the joint marketing effort, or \$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.

### Item 4. Submission of Matters to a Vote of Security Holders.

See our Current Report on Form 8-K filed on December 9, 2008 for information concerning a special meeting of our shareholders held on December 5, 2008.

## PART II

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

#### Market Information

Our common stock commenced trading on the NASDAQ Capital Market on October 14, 2004 under the symbol ADES. During 2008 and 2007 closing sales price ranges were as follows:



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	2008		2007	
	High	Low	High	Low
1 <sup>st</sup> Quarter	\$ 11.30	\$ 7.85	\$ 16.92	\$ 13.00
2 <sup>nd</sup> Quarter	\$ 11.67	\$ 8.20	\$ 22.67	\$ 13.80
3 <sup>rd</sup> Quarter	\$ 9.74	\$ 7.70	\$ 22.26	\$ 10.19
4 <sup>th</sup> Quarter	\$ 8.50	\$ 2.46	\$ 13.61	\$ 7.15

The price ranges shown in the above table are based on NASDAQ quoted sales prices. The sale prices may reflect inter-dealer prices, without retail mark-up, markdown or commission and may not represent actual transactions.

### Holders

The number of record holders of our common stock as of February 28, 2009 was approximately 1,700. The approximate number of beneficial shareholders is estimated at 3,400.

### Dividends

We have not paid dividends since inception. Under the SPA agreement with ECP, we are to obtain written approval prior to any dividends being set aside, the payment of any dividends or any other stock or asset distribution. We currently have no plans for paying 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.

### Recent Sales of Unregistered Securities

On August 26, 2008, we entered into Subscription Agreements and privately sold 909,092 shares of our common stock to institutional accredited investors at a price of \$7.70 per share, for a total offering price of \$7.0 million (the 2008 Private Placement ). 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. In addition, we paid an additional 2% commission to two other placement agents. The 2008 Private Placement was conducted in accordance with Rule 506 of Regulation D of the Securities Act of 1933, as amended. The shares purchased in the offering are restricted securities that may not be resold unless they are registered under the Securities Act or an exemption from registration is available. An amended registration statement for the resale of such shares was filed and became effective in December 2008.

### 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, 2008.

### Item 6. Selected Financial Data.

#### FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA

<i>(Dollars in thousands, except per share data)</i>	2008	Years Ended December 31,			2004
	2007	2006	2005	2004	
<b>Income Statement Data:</b>					
Revenues	\$ 16,193	\$ 19,248	\$ 15,488	\$ 11,028	\$ 8,417
Net income (loss)	\$ (4,106)	\$ 247	\$ 377	\$ 663	\$ 336
Net income (loss), per common share, basic and diluted	\$ (.67)	\$ .05	\$ .07	\$ .13	\$ .08
Dividends declared per common share	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-

	As of December 31,				
<b>Balance Sheet Data (at year end):</b>					
Total assets	\$ 75,142	\$ 34,906	\$ 31,754	\$ 28,716	\$ 13,080
Long-term debt	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Stockholders' equity	\$ 31,835	\$ 28,404	\$ 27,641	\$ 25,856	\$ 12,010

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



**QUARTERLY FINANCIAL DATA UNAUDITED**

	2008				2007			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
<i>(Amounts in thousands except per share data)</i>								
<b>Revenues</b>	\$ 4,003	\$ 3,847	\$ 5,033	\$ 3,310	\$ 3,904	\$ 4,942	\$ 5,601	\$ 4,801
<b>Gross margin</b>	\$ 1,319	\$ 1,454	\$ 1,660	\$ 856	\$ 1,589	\$ 1,529	\$ 1,669	\$ 1,230
<b>Net income (loss)</b>	\$ (168)	\$ (138)	\$ (167)	\$ (3,633)	\$ (23)	\$ 55	\$ 215	\$ -0-

**Common Stock Data**

## Basic and Diluted:

Net income (loss) per share	\$ (.03)	\$ (.02)	\$ (.03)	\$ (.54)	\$ .00	\$ .01	\$ .04	\$ .00
Average common shares outstanding:								
Basic	5,687	5,802	6,067	6,741	5,635	5,641	5,642	5,649
Diluted	5,687	5,802	6,067	6,741	5,635	5,770	5,676	5,681

**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 emerging 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 ) and other applications. We have also begun research and development efforts in CO<sub>2</sub> capture and control from coal-fired boilers, and we recently signed and commenced work on our first significant contract for this work which is scheduled to continue over at least the next two years. In addition, through a Carbon Solutions joint venture with Energy Capital Partners I, LP and its affiliated funds ( ECP ) we are constructing a Greenfield activated carbon ( AC ) manufacturing facility in Coshatta, Red River Parish, Louisiana (the AC Facility ) for mercury control applications and are developing interim sources of AC to supply to utility customers until such time as the AC Facility is operational. We are also developing and marketing our refined coal technology through our Clean Coal joint venture with NexGen Refined Coal, LLC ( NexGen ), an affiliate of NexGen Resources Corporation.

Mercury has been identified as a toxic substance and, pursuant to a court order, the EPA issued regulations for its control in March 2005. 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. In February 2009, EPA withdrew its appeal of the CAMR ruling, clearing the way to promulgate mercury standards under Section 112 of the Clean Air Act, which governs hazardous air pollutants from stationary sources, but has yet to set any defined timeline for such actions. In the interim, the lack of clear regulations has generated some short-term uncertainty among utilities as to what they will be required to do to reduce mercury emissions and is impacting their ability to include mercury control costs in their rate bases. However, we believe that the likely result will be that either the EPA will develop a maximum achievable control technology ( MACT ) based mercury regulation and/or Congress will enact new legislation requiring stricter mercury emission control within the next year or two with implementation deadlines over the subsequent two to three years.

While federal regulation remains uncertain, the market remains strong in 16 states that have passed their own mercury control regulations for new power plants and several Canadian provinces. We believe that the long-term growth of the MEC market for the electric utility industry will most likely depend on how industry chooses to respond to federal and state regulations. We anticipate this will create an even larger market for our mercury control products beyond 2010. As many as 1,100 existing coal-fired boilers may be affected by such regulations, if and when they are fully implemented. DOE's latest report issued in 2008 includes 95 existing and planned plant projects totaling 58 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, (ii) mercury testing services, and (iii) AC sales to new and existing plants affected by the implementation of enacted regulations. State regulations and increasing numbers of consent decrees, which were unaffected by the invalidation of CAMR, are the largest market driver for this part of our business. Although we expect this market to show steady growth over the next several years, we believe the most significant revenue growth will occur when final federal regulations or legislation impacts a significant portion of previously uncontrolled, existing boilers.

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 CO<sub>2</sub> from coal-fired power plants is currently a hot topic in Washington and a significant issue for the coal industry. In addition, the coal-fired power industry has been under increased scrutiny over environmental issues this past year especially related to the impact of CO<sub>2</sub> emissions on climate change. A number of permits for new coal-fired plants were rejected by various state officials 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 CO<sub>2</sub> generation, CO<sub>2</sub> capture and beneficial use of CO<sub>2</sub>.

In 2008, we signed contracts for seven activated carbon injection ( ACI ) systems to be delivered in 2009 through 2010, bringing the total number of ACI systems that we have installed to date or are in process of installing as of December 31, 2008 to 36. We have commenced work on three additional systems thus far in 2009 and expect several more ACI system contracts to be awarded to us during the year. We expect a total of 30 ACI systems to be awarded in 2009 and 2010. Various consent decrees and state regulations are driving the current market in this rapidly growing portion of our business. We believe the eventual outcome of the remand of CAMR 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 some 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 utilities revise their long-term plans for compliance. Revenue from ACI system contracts totaled \$9.4 million for the year ended December 31, 2008. We had contracts in progress at year-end for supply of ACI systems totaling approximately \$6.9 million. We expect to complete and realize approximately \$5.9 million of revenue under these contracts in 2009 and the remaining revenue in 2010.

We expect funding for mercury control evaluation and testing projects directly from utilities to increase as they strive to meet state and local regulations. In addition, we anticipate that DOE may fund other projects related to our business, including projects aimed at CO<sub>2</sub> control. We had DOE contracts in progress totaling \$3.4 million as of December 31, 2008. We expect to recognize approximately \$1.9 million during 2009, and the remaining \$1.5 million in 2010. We anticipate that DOE programs will represent a decreasing percentage of revenues over the next few years as we focus more on market growth for ACI systems for mercury emission control and the sale of AC to utility customers.

We are obligated to fund half of the operating costs of our 50% Clean Coal joint venture with NexGen. We expect our portion of these costs to average approximately \$16,000 per month or approximately \$193,000 total in 2009. Our net operating loss for 2008 includes net costs of \$213,000 related to our refined coal efforts and \$129,000 from Clean Coal. The ability of Clean Coal to sell its planned refined coal product and qualify for the expected Section 45 Tax Credits depends on several conditions, including meeting the emission control requirements, finalizing necessary contractual agreements, and completing and making operational such facilities prior to January 1, 2010. In the Emergency Economic Stabilization Act of 2008, Congress included language on Section 45 which extended the qualification window for the Tax Credit to January 1, 2010 and eliminated the increased market value test for refined coal. We expect this legislation to positively impact Clean Coal's efforts to obtain approval for the Section 45 Tax Credits. If Clean Coal succeeds in obtaining approval for the anticipated Section 45 Tax Credits, NexGen has the right to maintain its 50% interest by paying us an additional \$4.0 million, in eight quarterly payments of \$500,000 each, beginning in the quarter Clean Coal receives qualification.

To date, we have made significant progress in the construction of our AC Facility to produce AC for the use in capturing mercury from coal-fired power plants. Previously, we had announced that in order to stay ahead of an expected billion dollar market, we had undertaken preliminary activities for the AC Facility including plant design, engineering and initial permitting for the initial site development in Louisiana and for additional sites in North Dakota and third-party market analysis.

The following major milestones were accomplished in 2008:

In May 2008, State and Federal environmental agencies approved the final air permits for two production lines capable of producing up to a total of 350 million pounds of AC per year for the AC Facility.

In July 2008, we purchased the land for the building site and in August 2008, site preparation work commenced.

We entered into long-term customer off-take contracts with a number of major utilities to supply treated AC. We expect these contracts will result in total revenues in excess of \$160 million. The five-year contracts require us to begin delivering AC upon written notice from the utilities. Early supply of AC is being provided by our interim supply program, described below, until mid-2010, when we expect the AC Facility to commence operations. All contracts provide for option periods in which the utilities could increase AC quantities, which could result in significant additional revenues.

On September 8, 2008, Red River entered into an Amended and Restated Engineering, Procurement and Construction Contract (the EPC Contract ) with BE&K Construction Company, LLC ( BE&K ) to perform work needed to build the first production line.

We entered into contracts with critical suppliers to initiate the construction of the AC Facility. First, Red River entered into contracts for the purchase of four multiple-hearth furnaces ( MHF Contracts ), which are key components of the AC production process. Second, BE&K entered into an agreement for the purchase of a boiler to generate steam for manufacturing AC. We believe that these contracts keep us on the critical path to maintain the schedule for the AC Facility to start producing AC mid-2010.

On October 1, 2008, ADA entered into a Joint Development Agreement (the JDA ) and a Limited Liability Company Agreement for Carbon Solutions (the LLC Agreement ) with ECP and related agreements for the purposes of funding and constructing the AC Facility and similar projects. Pursuant to the JDA, we transferred the development assets and certain liabilities relating to our production, processing and supply of AC for the control of mercury emissions from coal-fired power plants (the AC Supply Business ) to certain wholly-owned subsidiaries of ours and then transferred the equity in those subsidiaries and certain contracts, goodwill and intellectual property relating to the AC Supply Business to Carbon Solutions. We provide certain accounting, administrative, oversight, insurance and other services to Carbon Solutions at agreed-upon rates and license to Carbon Solutions intellectual property that relates primarily to the AC Supply Business.

ADA and ECP made equity contributions under the first three tranches of funding provided for in the LLC Agreement of approximately \$88 million, which includes contributions made in February 2009.

Also on October 1, 2008, ADA entered into a Securities Purchase Agreement (the SPA ) providing for the sale to ECP of 1,800,000 shares of Series A Convertible Preferred Stock (the Series A Preferred ) and 1,800,000 shares of Series B Convertible Preferred Stock (the Series B Preferred, and together with the Series A Preferred, the Preferred Stock ). Assuming the closing of the SPA (the Private Placement ), which is subject to certain conditions including obtaining debt financing for the AC Facility, we will invest the expected \$18.8 million in net proceeds into Carbon Solutions.

In November 2008, Carbon Solutions formed Five Forks in connection with mining and supplying of coal for the operations of our AC Facility.

Carbon Solutions is continuing the process of specifying and sourcing key capital equipment, negotiating agreements to support facility operations, including feedstock supply, and negotiating long-term customer off-take contracts to satisfy the securitization requirements for project financing. Many of the state mercury regulations already in place begin in 2010 and as such there are several utilities and independent power producers engaged in an AC procurement process this year. Given the current tight AC supply/demand situation in the U.S., we expect to be able to sell the majority of our AC output under three-to-five year contracts to owners of coal-fired power plants for the purpose of mercury

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mitigation. Carbon Solutions is currently bidding on many requests for proposal for AC with a contract value on the order of \$500 million. We expect that most of these contracts will be awarded during 2009. All-in capital costs for the AC Facility are anticipated to be approximately \$363 million.

In order to supply early and interim quantities of AC to the utility mercury control market, we acquired from Winfield Industries, Inc. ( Winfield ) the assets of an AC processing facility and entered into a take or pay Carbon Supply Agreement with Winfield to purchase AC beginning in 2008, with annual quantities expected to increase to over 20 million pounds during 2009 with additional amounts available for 2010. The AC processing facility and Carbon Supply Agreement were assigned to Crowfoot Supply in October 2008, under the JDA. Initial capital expenditures were approximately \$412,000 plus the purchase of existing AC inventory and a processing facility lease, which are capitalized on our balance sheet under Development Projects. From this facility, we produced our first batch of treated AC and performed a full scale power plant test that achieved greater than 90% mercury removal. A number of

additional tests are under way and others scheduled to allow clients to evaluate this product. Red River is currently selling AC on a continuous basis from this facility to meet delivery obligations under existing off-take agreements and expects to offer such supply to potential long-term customers who may become parties to off-take contracts for AC to be supplied from the AC Facility. Given the expected costs of the foreign carbons to be used for processing plus the transportation expenses in shipping AC from overseas, our AC Supply Business is expected to operate at significantly lower margins than the anticipated margins for the planned AC Facility. Crowfoot Supply is also developing a larger offsite processing facility that is expected to commence operations in the second quarter of 2009 and later operate in conjunction with the AC Facility. Crowfoot Supply is currently procuring additional AC processing equipment to enable it to expand capacity to over 30 million pounds of AC per year.

Carbon Solutions is planning to secure approximately 60% of the financing through debt financing. We are working to support the senior project debt with off-take contracts for the AC that we expect to supply through both interim sources and the new production from the plant. We hope to put in place additional long-term take or pay off-take contracts for AC and have \$160 million in place to secure the expected debt. In addition to the debt financing, Carbon Solutions is planning to fund 40% of the expected project through equity. ADA has contributed \$25.6 million in cash and other property to Carbon Solutions through December 31, 2008. If we consummate the sale of our Preferred Stock to ECP under the SPA, we will invest the net proceeds in Carbon Solutions for the AC Facility. We do not have any further capital commitments to Carbon Solutions, and we expect that all future funding for the AC Supply Business will come from ECP and third-party debt financing.

The market for our FGC chemicals and services has been declining over the last couple of years, and is expected to continue to decline in the near-term or until the recent uncertainty caused by the CAMR ruling has been eliminated. Prior to the CAMR ruling we were responding to inquiries about our product meeting the needs of the changing regulations in combination for mercury control. With a defined mercury rule or legislation, there will be opportunities to combine FGC with MEC as FGC can enhance the performance of MEC in specific market segments. Although margins on these products are declining, they are typically higher than what we recognize for our present MEC sales and represent an important, but decreasing, contribution to our overall revenue and profit potential.

#### **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 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. We expect to complete and realize approximately \$5.9 million of revenue under these contracts in 2009 and the remaining revenue in 2010.

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. In the future, we expect an increase in DOE and industry funding for CO<sub>2</sub> control technology. We anticipate growth in 2009 in the MEC segment to result primarily from an increasing number of ACI systems sales and expected increase in funding for CO<sub>2</sub> 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 these 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 CO<sub>2</sub> control.



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

FGC 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. We expect FGC and other revenues in 2009 to continue to decline as a percentage of our total revenues.

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. For the near term, we expect the sales of mercury control systems and fixed price consulting to continue 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 2009 to be slightly lower than the margin realized in fiscal year 2008.

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. 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 CO<sub>2</sub> demonstration work and sales of AC to positively affect margins.

Cost of revenues for the FGC 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 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 2009 as compared to 2008. We continue to anticipate that our future R&D expenses will grow in direct proportion to DOE funded CO<sub>2</sub> work we perform for the next several years.

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 expect to 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. Refer to Note 3 in the consolidated financial statements.

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 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. We anticipate 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 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. We are no longer subject to U.S. federal examinations by tax authorities for years before 2005 and Colorado state examinations for years before 2004.

Upon forming Carbon Solutions approximately \$1.2 million of development costs that had previously been shown on our 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 plans to vertically integrate into the production of and provide 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.

#### **Results of Operations 2007 versus 2006**

Revenues totaled \$19.2 million for 2007 versus \$15.5 million in 2006, representing an increase of 24%. Revenues in our MEC segment for 2007 increased by \$4.3 million (32%), and FGC and other activities decreased by \$587,000 (31%).

Revenues in 2007 from the MEC segment were comprised of sales of ACI systems (53%), and government and industry-supported contracts (40%), and consulting services (7%), compared to 38%, 51% and 11%, respectively, in 2006. For the year, sales of our ACI systems contributed approximately \$9.6 million to MEC revenues recognized for the year, increasing 85% from the 2006 contribution to revenue of \$5.2 million.

Our DOE and industry demonstration contract revenues totaled \$7.2 million in 2007, representing an increase of 3% from 2006 revenues. While the dollar amount of revenues from both government and industry-supported contracts and ACI systems sales increased from 2006 to 2007, the most significant growth occurred in the sales of ACI systems, which increased \$4.4 million or 85% from 2006 to 2007.

Revenues from consulting services included in the MEC segment decreased approximately \$242,000, from 2006 to 2007, as a result of customer delays.

FGC and other revenues comprised 7% of total revenues in 2007, compared to 12% in 2006. FGC and other revenues decreased due to fewer sales of chemical and revenues related to continuing customers. This segment's gross revenues for 2007 include approximately \$120,000 of chemical sales by Clean Coal. Under existing agreements between us and Clean Coal we will continue to sell such chemicals to Clean Coal at a minor discount and accordingly, the impact on our future revenues is not expected to be material.

Cost of revenues increased by \$3.6 million or 38% in 2007 from 2006 as a result of increased volume and a change in our business product mix, as discussed below. Gross margins were 31% for the year as compared to 38% in 2006. The decrease reflects decreased margins in both MEC and FGC and other segments as described below.

Cost of revenues for the MEC segment increased by \$4.0 million in 2007 or 47%, as compared to the same periods in 2006 primarily due to our increased volume of ACI systems sales. Gross margins for the MEC segment were 31% in 2007 as compared to 38% in 2006. Government and industry supported revenue which has historically generated higher margins, decreased as an overall percent of the revenue in 2007 as compared to 2006, which contributed to the lower overall margins.

Cost of revenues for the FGC and other segment decreased by \$304,000 or 26% in 2007, as compared to 2006 primarily as a result of decreased chemical sales. Gross margins for this segment were 34% for 2007 as compared to 39% in 2006. The decrease in gross margins from 2006 to 2007 is a result of sales of a product we license from ARKAY Technologies, as well as lower margins that we recognized on certain demonstration projects we carried out in 2007.

### **Liquidity and Capital Resources**

Our principal source of liquidity is our working capital. We had a positive working capital of \$18.6 million at December 31, 2008, compared to working capital of \$14.1 million at December 31, 2007. The increase was primarily the result of cash received from our joint venture partner ECP to further fund the development and construction of the AC Facility and the liquidation of securities held as of December 31, 2007, which generated net proceeds of approximately \$4.5 million. Of our \$28.3 million of consolidated cash as of December 31, 2008, \$25.2 million represents the cash on hand with Carbon Solutions. We have no long-term debt and shareholders' equity totaled approximately \$32 million as of December 31, 2008. We expect to use a significant portion of our cash on hand to fund the development and construction activities of Carbon Solutions. We believe that our existing working capital available to the non-AC Supply Business of the Company will be sufficient to meet the anticipated operating needs of such business for at least the next twelve months. We believe that we have sufficient resources on hand to continue pursuit of the rapidly growing mercury emission control market.

In 2009, we may not be able to achieve positive operating cash flow, due to anticipated legal fees we expect to expend in the litigations with Norit and Calgon. We are currently analyzing whether our insurance policies provide coverage of legal fees and other costs we are incurring in connection with the Norit litigation. We have recently instituted programs to conserve cash and working capital related to the non-AC Supply Business, including a 20% reduction in cash compensation of our directors and chief executive, financial and operating officers approved by our Board in March 2009. We will likely institute further short-term cash conservation programs, which may include payment of compensation with ADA stock and reduction in non-core business activities. Our plans for the anticipated future include continuing to increase our AC production which will require additional funding from ECP or other sources and debt financing.

### *AC Facility Related Items*

As noted above, through Carbon Solutions, we are 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 approximately \$363 million. We expect that approximately \$140 million of such cost will be funded through equity contributions to Carbon Solutions pursuant to the LLC Agreement with ECP. The \$363 million cost includes future amounts owing under the EPC Contract up to approximately \$231 million and the MHF Contracts up to approximately \$36.4 million which ADA has guaranteed. We expect that construction costs for the AC Facility will not vary significantly in amount from quarter to quarter in 2009.

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. During the fourth quarter of 2008, ECP contributed \$25.4 million in cash to Carbon Solutions.

As noted above, under the SPA with ECP, subject to the satisfaction of certain conditions, including obtaining debt financing for the AC Facility, ECP has agreed to purchase 3.6 million shares of ADA Preferred Stock. We expect gross proceeds of approximately \$22.6 million from the sale of the Preferred Stock to ECP. We are required to pay Credit Suisse Securities (USA) LLC, the placement agent, a gross spread in the amount equal to 6.0% of the gross proceeds we raise in the Private Placement plus \$1.5 million and a monthly amount that accrues from July 1, 2008 in financial advisory fees. The Private Placement is contingent upon the closing of the debt financing necessary for the Project to move forward, no material adverse effect occurring prior to closing and other matters.

Subject to certain conditions, ECP has committed to contribute capital to Carbon Solutions up to 200% of the expected net proceeds of the Private Placement, in exchange for non-voting preferred equity in Carbon Solutions, until the time that the Private Placement is

completed. One-half of such preferred equity would bear a 12% preferred return. We are required to contribute the net proceeds of the Private Placement and of any equity financing, asset sale or other transaction outside of the ordinary course of business (other than any debt financing) resulting in cash proceeds to us occurring prior to the closing of the Private Placement to Carbon Solutions. Upon such contribution, an equal amount of ECP's outstanding preferred equity bearing a 12% preferred return, plus the applicable 12% preferred return, would be redeemed and a matching amount of ECP's preferred equity that does not bear a preferred return would be converted into ordinary capital contributions. We and ECP would then continue to contribute capital on a 50/50 basis under the third tranche until we have contributed all net proceeds of the Private Placement.

Under a March 1, 2009 amendment to the LLC Agreement, ECP has the right to amend, modify or withdraw capital request notices, thereby giving ECP increased control over funding of Carbon Solutions. In addition, in order to address the anticipated capital needs of Carbon Solutions, ECP may fund additional ordinary capital contributions or increase the third tranche amount and fund additional preferred equity contributions, in each case at such times and in such amounts as ECP determines are necessary to satisfy the capital requirements of Carbon Solutions.

If at any time prior to Carbon Solutions' receipt of debt financing for the Project, ECP reasonably determines, based on negotiations with lenders, anticipated delays or additional capital requirements of Carbon Solutions, that the Project will need equity financing beyond that contemplated for the first three tranches, ECP may notify Carbon Solutions of the amount of equity financing it believes will be required (the Fourth Tranche Amount) and may irrevocably commit to fund all or any portion of the Fourth Tranche Amount. If ECP commits to fund less than the entire Fourth Tranche Amount, we may fund the balance.

The parties are not required to fund additional capital contributions if certain developmental milestones and other conditions are not satisfied, an adverse development that has a material adverse effect on Carbon Solutions or any of its subsidiaries occurs, if the other party is in breach of the LLC Agreement or if the Purchase Agreement is terminated. If funding of Carbon Solutions ceases, we and ECP may pursue a sale of Carbon Solutions, dissolve Carbon Solutions or buy out the other party's interest in Carbon Solutions.

We are working to obtain the debt financing needed for the Project and expect to support the debt with long-term take-or-pay off-take contracts for the AC that Carbon Solutions will be supplying through both interim sources and the new production from the AC Facility. Red River, a subsidiary of Carbon Solutions, has already signed AC sales contracts that, subject to certain conditions, could contribute up to \$160 million in revenues through 2014, of which we expect to recognize \$10-15 million in 2009, assuming consolidation of Carbon Solutions' results of operations. We have guaranteed the AC delivery obligations under one of these AC supply contracts, and should Red River be unable to meet such obligations, we could become liable for cover damages, up to a maximum of \$10 million through the first calendar quarter of 2010, or, under circumstances where cover damages would be inadequate, specific performance. We have no binding commitments from any person to provide debt or additional equity financing at this time, and we are not certain whether the financing will be available to us as needed on acceptable terms. Our inability to achieve any one of what we currently see to be the critical requirements for Carbon Solutions would likely make it difficult for us to complete construction of the AC Facility.

As a result of the pricing of the Series B Preferred Stock, we expect to have insufficient working capital to continue to maintain our 50% interest in Carbon Solutions, even if we complete the Private Placement. If our ownership interest is diluted, we would likely be unable to consolidate the financial results of Carbon Solutions in our financial statements. If our ownership interest is diluted below 35%, we may lose voting and management rights in Carbon Solutions. Based on the anticipated level of equity that will be needed for the project and assuming we are unable to obtain funds to maintain our equity interest, we believe our ownership interest may be diluted to an approximate 30% interest sometime in the second half of 2009.

As noted above, ADA has made guaranties and undertaken other commitments of approximately \$268.7 million related to our AC Supply Business. 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. The commitments are for the turn-key engineering, design and construction of the AC Facility, manufacture and delivery of four multi-hearth furnaces and purchase obligations for AC.

*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, 2008 our trade receivables balance was \$6.0 million, which was offset by billings in excess of recognized income of \$1.7 million or a net of \$4.3 million as compared to \$3.7 million at December 31, 2007. Our trade receivables balance was higher at December 31, 2008 as compared to 2007, due to the nature and timing of our billing milestones for our ACI systems contracts.

Under our defined contribution and 401(k) pension plan, in 2008 we matched up to 7% of salary amounts deferred by employees in the Plan compared to 5% in 2007. During 2008 and 2007, we recognized \$234,000 and \$161,000, respectively, of matching expense. In the past, the Company has also made discretionary contributions to the Plan and employees. In 2008, the Company did not make any such discretionary contributions.

We had recorded net current deferred tax assets of \$216,000 and long term deferred tax assets of \$1.3 million as of December 31, 2008 as compared to net long term deferred tax assets of \$237,000 and net deferred current tax liabilities of \$117,000 in 2007. 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 2008, estimated payments made during the first quarter of \$21,000, larger impact of R&D tax credits and additional tax benefit from 2008 activities. Such amounts exclude any Section 45 Tax Credits related to Clean Coal.

Cash flow used in operations totaled \$4.4 million for 2008 compared to cash flow provided by operations of \$1.6 million in 2007. The change in operating cash flow primarily resulted from an increase in deferred revenues and other liabilities of \$1.5 million, which was offset by an increase in our accounts receivable of \$1.6 million and an increase in inventory of \$787,000. 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 \$4.1 million for non-cash operating activities, which included an impairment charge for goodwill of \$1.6 million, expenses paid with stock and restricted stock of \$1.0 million, and depreciation and amortization of \$488,000 increased our cash flow from operations for 2008, which were partially offset by an increase in recorded deferred tax benefits of \$1.5 million and our minority interest loss of \$688,000.

Net cash used by investing activities was \$12.6 million for 2008 compared to \$4.6 million for 2007. Net cash used by investing activities increased from 2007 primarily due to our continued investment in development projects and equipment of \$17.1 million. We liquidated a net of approximately \$4.5 million in securities and other short term investments to fund our development activities for our AC facilities in 2008.

Cash provided by financing activities was \$31.7 million and \$323,000 in 2008 and 2007, respectively. 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 debt and equity financing to support future anticipated growth and our AC supply business. In addition, on August 26, 2008, we entered into Subscription Agreements and privately sold 909,092 shares of our common stock to institutional accredited 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, 2008:

	Total	2009	Payments due by period		
			2010 and 2011	2012 and 2013	2014 and Beyond
Purchase obligations	\$ 4,367,000	\$ 4,367,000	\$	\$	\$
Operating lease obligations	473,000	294,000	179,000		
Development project obligations	268,045,000	214,937,000	53,075,000	33,000	
Total	\$ 272,885,000	\$ 219,598,000	\$ 53,254,000	\$ 33,000	\$

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## 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 percent of work completed and overall revenue for contracts in progress. We recognize revenues on government contracts based on the time and expenses incurred to date.

**Capitalization of Development Costs** We are capitalizing all direct and identifiable incremental costs associated with our development efforts to build the AC Facility. Such development costs are generally deferred and either (a) expensed when it has been determined they are no longer of future value, or (b) capitalized as part of long-term assets and then subject to future depreciation expense and impairment evaluations.

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 valuation and classification of investments as available-for-sale securities, which is based on estimated fair market value; (3) 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; and (4) our warranty costs, which are based on an estimate of future equipment failures. 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 in determining the estimated current fair value of goodwill and other intangible assets on the consolidated balance sheets for purposes of determining whether an impairment has occurred. Management believes the 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 the Company may grant performance guaranties or equipment warranties 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. 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 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.

## Recently Issued Accounting Policies

In June 2008, the FASB issued Financial Accounting Standards Board Staff Position EITF 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities ( EITF 03-6-1 ). EITF 03-6-1 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 SFAS 128, Earnings per Share. EITF 03-6-1 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 with the provisions in EITF 03-6-1. Early application of EITF 03-6-1 is prohibited. We have not issued dividend or dividend equivalents and expect the adoption of EITF 03-6-1 will not have a material impact on our consolidated financial statements.

In May 2008, the FASB issued SFAS No. 162, The Hierarchy of Generally Accepted Accounting Principles ( SFAS 162 ). SFAS 162 identifies the sources of accounting principles and the framework for selecting principles to be used in the preparation of financial

statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles in the United States. This statement shall be effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board's amendments to AU section 411, The Meaning of Present Fairly in Conformity with Generally Accepted Accounting Principles. We are currently evaluating the impact of SFAS 162, but do not expect the adoption of this pronouncement will have a material impact on our financial position, results of operations or cash flows.

In April 2008, the FASB issued FASB Staff Position ( FSP ) SFAS No. 142-3, Determination of the Useful Life of Intangible Assets . This FSP amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, Goodwill and Other Intangible Assets ( SFAS 142 ). The intent of this FSP is to improve the consistency between the useful life of a recognized intangible asset under SFAS 142 and the period of expected cash flows used to measure the fair value of the asset under SFAS 141R, and other GAAP. This FSP is effective for financial statements issued for fiscal years beginning after December 15, 2008, and interim periods within those fiscal years. Early adoption is prohibited. We are currently evaluating the impact of FSP, but do not expect the adoption of this pronouncement will have a material impact on our financial position, results of operations or cash flows.

Effective January 1, 2008, we adopted Statement of Financial Accounting Standards No. 157 Fair Value Measurements ( SFAS 157 ) for recurring financial fair value measurements. SFAS 157 introduces a framework for measuring fair value and expands required disclosure about fair value measurements of assets and liabilities. On December 31, 2007, we had one level I asset which was available for sale securities and such amounts were reported at their fair value. The adoption of SFAS 157 had no material impact on our financial statements. We adopted SFAS 157 for non-recurring non-financial fair value measurements effective January 1, 2009 and such adoption is not expected to have a material impact on our financial statements.

Effective January 1, 2008, we adopted Statement of Financial Accounting Standards No. 159 ( SFAS 159 ) The Fair Value Option for Financial Assets and Financial Liabilities. SFAS 159 permits entities to choose to measure many financial instruments and certain other items at fair value. This statement is expected to expand the use of fair value measurement, which is consistent with the FASB's long-term measurement objective for accounting for financial instruments. The adoption of SFAS 159 had no material impact on our financial statements.

In December 2007, the FASB issued SFAS No. 160, Noncontrolling Interests in Consolidated Financial Statements an amendment of ARB No. 51. SFAS No. 160 requires the ownership interests in subsidiaries held by parties other than the parent be clearly identified, labeled, and presented in the consolidated statement of financial position 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. Upon adoption of SFAS No. 160, we expect to recharacterize any reportable minority interest as a noncontrolling interest and classify it as a component of equity in our consolidated financial statements. SFAS No. 160 is effective for fiscal years and fiscal quarters beginning on or after December 15, 2008. If we are unable to consolidate the financial results of Carbon Solutions we would account for Carbon Solutions under the equity method. Such gain or losses from Carbon Solutions would be included as other operating income and losses in our consolidated statements of operations.

In December 2007, the FASB also issued SFAS 141 (revised 2007), Business Combinations , ( SFAS 141R ), 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. SFAS 141R also establishes disclosure requirements to enable users of the financial statements to evaluate the nature and financial effects of the business combination. SFAS 141R 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 adopting SFAS 141R will depend on the future business combinations we may pursue after its effective date. Under SFAS 141R, all acquisition costs are expensed as incurred.

**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 2008 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 \$537,000, respectively.





### **Lignite Price Risk**

Market prices for coal have increased significantly over the last year as worldwide demand for this resource has increased. The primary feedstock for the AC Facility is lignite, which we expect to secure through long term supply contracts. We estimate that the lignite needed for the plant will represent about \$15.9 million per year of operating costs at current cost. Based on current estimates of lignite prices a hypothetical 10% increase (or decrease) in the price of lignite would result in a pretax loss or gain of \$1.6 million respectively.

### **Interest Rate Risk**

As of December 31, 2008, approximately \$27.2 million of the cash and cash equivalents were invested in interest bearing accounts. A hypothetical change of 10% in the Company's effective interest rate from the year-end 2008 rate would increase (or decrease) interest income by \$59,000.

### **Item 8. Financial Statements and Supplementary Data.** **Our Financial Statements can be found at pages F-1 through F-23 of this report.**

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

Financial Statements:

ADA-ES, Inc. and Subsidiaries

Consolidated Balance Sheets, December 31, 2008 and 2007

Consolidated Statements of Operations, For the Years Ended December 31, 2008 and 2007

Consolidated Statements of Changes in Stockholders' Equity, For the Years Ended December 31, 2008 and 2007

Consolidated Statements of Cash Flows, For the Years Ended December 31, 2008 and 2007

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, 2008 that our disclosure controls and procedures were effective.

### **Management's Report on Internal Control Over Financial Reporting**

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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, 2008. 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, 2008, 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.**

None.

### **PART III**

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

Information regarding our directors is incorporated by reference from the information contained under the caption "Election of Directors" in our Proxy Statement for the 2009 Annual Meeting of Shareholders ( "2009 Proxy Statement" ) to be filed pursuant to Regulation 14A promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934 within 120 days after the end of our fiscal year ended December 31, 2008. Information regarding any material changes to the procedures by which our shareholders may recommend nominees to our board of directors is incorporated by reference from the information contained under the caption "Nominating and Governance Committee" in our 2009 Proxy Statement. Information regarding our audit committee, including our audit committee financial expert, is incorporated by reference from the information contained under the caption "Audit Committee" in our 2009 Proxy Statement and information regarding executive officers is incorporated by reference from the information contained under the caption "Executive Officers" in our 2009 Proxy Statement. Information regarding Section 16 reporting compliance is incorporated by reference from information contained under the caption "Executive Compensation Section 16(a) Beneficial Ownership Reporting Compliance" in our 2009 Proxy Statement.

#### **Item 11. Executive Compensation.**

The information required by this item is incorporated by reference from the information contained under the captions "Compensation Committee, Executive Compensation, Director Compensation and Stock Incentive Plans" in our 2009 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 2009 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 2009 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 2009 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.**

<b>No.</b>	<b>Description</b>
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 (16)
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 (29)
10.1	Distribution Agreement dated as of March 17, 2003 between Earth Sciences, Inc. and ADA-ES, Inc. (7)
10.2	2003 ADA-ES, Inc. Stock Option Plan** (5)
10.6	Securities Subscription and Investment Agreement between ADA-ES, Inc. and Arch Coal, Inc. dated July 7, 2003 (7)
10.10	Tax Sharing Agreement between ADA-ES, Inc. and Earth Sciences, Inc. dated March 17, 2003 (5)
10.11	U.S. Department of Energy Cooperative Agreement No. DE-FC26-02NT41591 Long-Term Operation of a COHPAC System for Removing Mercury from Coal-Fired Flue Gas (7)
10.12	Amendment No. 1 to Distribution Agreement by and between ADA-ES, Inc. and Earth Sciences, Inc. dated August 15, 2003 (8)
10.13	2003 Stock Compensation Plan #1** (9)
10.14	2003 Stock Compensation Plan #2** (10)

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- 10.15 U.S. Department of Energy Cooperative Agreement No. DE-FC26-03NT41986 Evaluation of Sorbent Injection for Mercury Control (11)
- 10.16 Purchase Order #4500589101 signed 3/18/04 from We Energies (12)
- 10.17 Clean Coal Power Initiative Repayment Agreement between the U.S. Department of Energy and ADA-ES, Inc. dated April 6, 2004 (12)
- 10.21 ADA-ES, Inc. 2004 Executive Stock Option Plan\*\* (13)
- 10.22 U.S. Department of Energy Cooperative Agreement No. DE-FC26-05NT42307 Low-Cost Options for Moderate Levels of Mercury Control (14)
- 10.23 Employment Agreement dated May 1, 1997 between C. Jean Bustard and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) \*\* (14)
- 10.24 Employment Agreement dated May 1, 1997 between Michael D. Durham and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) \*\* (14)
- 10.25 Employment Agreement dated January 2, 2000 between Mark H. McKinnies and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) \*\* (14)
- 10.26 Employment Agreement dated January 1, 2000 between Richard J. Schlager and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) \*\* (14)
- 10.27 2004 Stock Compensation Plan #2 and model stock option agreements\*\* (13)

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- 10.28 2004 Directors Stock Compensation Plan #1\*\* (15)
- 10.29 2005 Directors Compensation Plan\*\*(16)
- 10.30 License Agreement dated as of November 3, 2006 by and between ADA-ES, Inc. and ADA-NexCoal, LLC. (17)
- 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. (18)
- 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. (19)
- 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. (20)
- 10.34 Employment Agreement dated March 1, 2003 between Sharon M. Sjostrom and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.)\*\* (21)
- 10.35 Executive Compensation Plan\*\* (22)
- 10.36 Memorandum of Understanding dated March 20th, 2007, between Calgon Carbon Corporation and ADA-ES, Inc. (23)
- 10.37 2006 Profit Sharing Plan\*\* (24)
- 10.38 2007 Equity Incentive Plan\*\* (25)
- 10.39 Employment Agreement dated November 28, 2005 between Richard Miller and ADA-ES, Inc.\*\* (26)
- 10.40 U.S. Department of Energy Cooperative Agreement No. DE-FC26-06NT42774 Long-term carbon injection field test for >90% Mercury removal for a PRB Unit with a Spray Drier and Fabric Filter (26)
- 10.41 U.S. Department of Energy Cooperative Agreement No. DE-FC26-06NT42780 Evaluation of control Strategies to Effectively meet 70 90% Mercury Reduction on an Eastern Bituminous Coal Cyclone Boiler with SCR (26)
- 10.42 Agreement for Project Development Services dated November 30, 2007 by and among ADA-ES, Inc., Red River Environmental Products, LLC, Bowman Environmental Products, LLC, Underwood Environmental Products, LLC and Emission Strategies, Inc. \*\*\* (26)
- 10.43 Employment Agreement dated January 1, 2008 between Cameron E. Martin and ADA-ES, Inc.\*\* (26)
- 10.44 Engineering, Procurement and Construction Agreement dated January 29, 2008 between Red River Environmental Products, LLC and BE&K Construction Company, LLC. \*\*\* (26)
- 10.45 Project Crowfoot Incentive Program Documents (1)\*\*, \*\*\*(27)
- 10.46 Agreement for the Purchase of Activated Carbon between Red River Environmental Product, LLC and Southern Company Services, Inc dated June 5, 2008\*\*\*
- (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 (28)
- 10.47 Carbon Supply Agreement between Winfield Industries, Inc and ADA-ES, Inc. August 6, 2008 (assigned to Crowfoot Supply Company, LLC on October 1, 2008)\*\*\* (29)
- 10.48 Promissory Note and Account Pledge Agreement for Colorado Business Bank Letter of Credit dated August 15, 2008 (29)
- 10.49 Carbon Supply Agreement between Red River Environmental Products, LLC and Luminant Generation Company, LLC dated September 3, 2008\*\*\* (29)
- 10.50 Multiple Hearth Furnace (MHF) Contract between Industrial Furnace Company, Inc and Red River Environmental Products, LLC dated September 5, 2008\*\*\* (29)
- (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

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- 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\*\*\* (29)
- 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 (29)
- 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 (29)
- 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 \*\*\* (30)
- 10.55 Limited Liability Company Agreement of Crowfoot Development, LLC dated October 1, 2008\*\*\* (29)

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- 10.56 Intellectual Property License Agreement between ADA-ES, Inc. and Crowfoot Development, LLC dated October 1, 2008\*\*\* (29)
- 10.57 Project Crowfoot Incentive Program, as amended and restated on August 13, 2008 and October 15, 2008\*\*, \*\*\* (31)
- 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.
- 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 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).
- (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-SB/A-3 filed on July 28, 2003 (File No. 000-50216).
- (8) Incorporated by reference to the same numbered Exhibit to the Form 10-SB/A-4 filed on August 24, 2003 (File No. 000-50216).
- (9) Incorporated by reference to Exhibit 99.2 to the Form S-8 filed on November 14, 2003 (File No. 333-110479).
- (10) Incorporated by reference to Exhibit 99.1 to the Form S-8 filed on February 6, 2004 (File No. 333-112587).



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- (11) Incorporated by reference to the same numbered Exhibit to the Form 10-KSB for the year ended December 31, 2003 filed on March 30, 2004 (File No. 000-50216).
- (12) 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).
- (13) 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).
- (14) 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).
- (15) Incorporated by reference to Exhibit 99.1 to the Form S-8 filed on April 16, 2004 (File No. 333-114546).
- (16) 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).
- (17) 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).
- (18) 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).
- (19) 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).
- (20) 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).

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- (21) 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).
  - (22) 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).
  - (23) 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).
  - (24) 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).
  - (25) Incorporated by reference to definitive proxy material for the 2007 Annual Meeting filed on April 30, 2007 (File No. 000-50216)
  - (26) 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).
  - (27) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended March 31, 2008 filed on May 7, 2008 (File No. 000-50216).
  - (28) 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).
  - (29) 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).
  - (30) 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).
  - (31) 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).
- (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 27, 2009

March 27, 2009

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.

/s/ John W. Eaves  
John W. Eaves, Director

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

Date: March 27, 2009

Date: March 27, 2009

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

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

Date: March 27, 2009

Date: March 27, 2009

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

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

Date: March 27, 2009

Date: March 27, 2009

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

/s/ Richard Swanson  
Richard Swanson, Director

Date: March 27, 2009

Date: March 27, 2009

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

Date: March 27, 2009

**INDEX TO FINANCIAL STATEMENTS**

	<b>PAGE</b>
<b><u>Report of Independent Registered Public Accounting Firm</u></b>	F-2
<b><u>Consolidated Balance Sheets</u></b> December 31, 2008 and 2007	F-3
<b><u>Consolidated Statements of Operations</u></b> For the Years Ended December 31, 2008 and 2007	F-4
<b><u>Consolidated Statements of Changes in Stockholders' Equity</u></b> For the Years Ended December 31, 2008 and 2007	F-5
<b><u>Consolidated Statements of Cash Flows</u></b> For the Years Ended December 31, 2008 and 2007	F-6
<b><u>Notes to Consolidated Financial Statements</u></b>	F-7

**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, 2008 and 2007, 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 consolidated 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, 2008 and 2007, 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 25, 2009  
Denver, Colorado

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

	<b>DECEMBER 31,</b>	
	<b>2008</b>	<b>2007</b>
<b><u>ASSETS</u></b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 28,201	\$ 13,482
Trade receivables, net of allowance for doubtful accounts of \$17 and \$5, respectively	6,017	4,449
Investments in securities		1,916
Inventory	787	
Prepaid expenses and other	1,164	282
Total current assets	36,169	20,129
<b>PROPERTY AND EQUIPMENT, at cost</b>	<b>36,781</b>	<b>2,622</b>
Less accumulated depreciation and amortization	(1,777)	(1,372)
Net property and equipment	35,004	1,250
<b>GOODWILL, net of \$1,556 in amortization (Note 3)</b>	<b>435</b>	<b>2,024</b>
<b>INTANGIBLE ASSETS, net of \$50 and \$46 in amortization, respectively</b>	<b>256</b>	<b>247</b>
<b>INVESTMENTS IN SECURITIES</b>		<b>2,841</b>
<b>DEVELOPMENT PROJECTS</b>	<b>1,878</b>	<b>8,159</b>
<b>OTHER ASSETS</b>	<b>1,400</b>	<b>256</b>
<b>TOTAL ASSETS</b>	<b>\$ 75,142</b>	<b>\$ 34,906</b>
<b><u>LIABILITIES AND STOCKHOLDERS' EQUITY</u></b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$ 14,639	\$ 4,285
Accrued payroll and related liabilities	985	603
Deferred revenue	1,875	944
Accrued expenses	106	204
Total current liabilities	17,605	6,036
<b>LONG-TERM LIABILITIES:</b>		
Accrued warranty and other	550	318
Total liabilities	18,155	6,354
<b>MINORITY INTEREST (Notes 6 and 7)</b>	<b>25,152</b>	<b>148</b>
<b>COMMITMENTS AND CONTINGENCIES (Notes 6, 7 and 9)</b>		
<b>STOCKHOLDERS' EQUITY:</b>		
Preferred stock; 50,000,000 shares authorized, none outstanding		
Common stock; no par value, 50,000,000 shares authorized, 6,755,932 and 5,683,689 shares issued and outstanding	35,812	28,077
Accumulated other comprehensive income		198
Retained earnings (accumulated deficit)	(3,977)	129

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Total stockholders' equity	31,835	28,404
<b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY</b>	<b>\$ 75,142</b>	<b>\$ 34,906</b>

*See accompanying notes to these consolidated financial statements.*

F-3

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

	<b>FOR THE YEARS ENDED DECEMBER 31,</b>	
	<b>2008</b>	<b>2007</b>
<b>REVENUES:</b>		
Mercury emission control	\$ 15,760	\$ 17,954
Flue gas conditioning and other	433	1,294
Total revenues	16,193	19,248
<b>COST OF REVENUES:</b>		
Mercury emission control	10,461	12,379
Flue gas conditioning and other	443	852
Total cost of revenues	10,904	13,231
<b>GROSS MARGIN</b>	<b>5,289</b>	<b>6,017</b>
<b>OTHER COSTS AND EXPENSES:</b>		
General and administrative	9,168	5,214
Research and development	784	1,201
Depreciation and amortization	488	379
Goodwill impairment charge	1,589	
Total expenses	12,029	6,794
<b>OPERATING LOSS</b>	<b>(6,740)</b>	<b>(777)</b>
<b>OTHER INCOME:</b>		
Interest and other income	439	930
Total other income	439	930
<b>(LOSS) INCOME FROM CONTINUING OPERATIONS BEFORE MINORITY INTEREST AND INCOME TAX</b>	<b>(6,301)</b>	<b>153</b>
<b>MINORITY INTEREST</b>	<b>688</b>	<b>90</b>
<b>(LOSS) INCOME BEFORE INCOME TAXES</b>	<b>(5,613)</b>	<b>243</b>
<b>INCOME TAX BENEFIT</b>	<b>1,507</b>	<b>4</b>
<b>NET (LOSS) INCOME</b>	<b>\$ (4,106)</b>	<b>\$ 247</b>
<b>UNREALIZED GAINS ON INVESTMENTS IN DEBT AND EQUITY SECURITIES, net of tax</b>	<b>\$</b>	<b>\$ 31</b>
<b>COMPREHENSIVE (LOSS) INCOME</b>	<b>\$ (4,106)</b>	<b>\$ 278</b>



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<b>NET (LOSS) INCOME PER COMMON SHARE BASIC AND DILUTED</b>	\$	(.67)	\$	0.05
<b>WEIGHTED AVERAGE COMMON SHARES OUTSTANDING</b>		6,100		5,649
<b>WEIGHTED AVERAGE DILUTED COMMON SHARES OUTSTANDING</b>		6,100		5,737

*See accompanying notes to these consolidated financial statements*

F-4

## ADA-ES, INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

## FOR THE YEARS ENDED DECEMBER 31, 2008 AND 2007

*(Amounts in thousands, except share data)*

	COMMON STOCK		ACCUMULATED OTHER COMPREHENSIVE INCOME	(ACCUMULATED DEFICIT) RETAINED EARNINGS	TOTAL
	SHARES	AMOUNT			
<b>BALANCES, December 31, 2006</b>	5,635,137	\$ 27,592	\$ 167	\$ (118)	\$ 27,641
Stock and stock options issued to consultant and directors for expenses	9,492	156			156
Stock based compensation		206			206
Issuance of stock on exercise of options	39,060	107			107
Tax benefit of stock transactions		16			16
Unrealized holding gains on investments			49		49
Income tax effect			(18)		(18)
Net income				247	247
<b>BALANCES, December 31, 2007</b>	5,683,689	\$ 28,077	\$ 198	\$ 129	\$ 28,404
Stock and restricted stock issued to consultant and directors for expenses	40,295	185			185
Issuance of stock for cash, net	909,092	6,366			6,366
Share based payments	122,856	1,218			1,218
Tax expense of stock transactions		(34)			(34)
Unrealized holding loss on investments			(283)		(283)
Investment reclassification adjustments to income			(31)		(31)
Income tax effect			116		116
Net loss				(4,106)	(4,106)
<b>BALANCES, December 31, 2008</b>	6,755,932	\$ 35,812	\$	\$ (3,977)	\$ 31,835

*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,	
	2008	2007
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Net (loss) income	\$ (4,106)	\$ 247
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Depreciation and amortization	488	379
Provision for bad debts	12	
Loss on asset dispositions and securities	211	21
Write off of inventory		14
Expenses paid with stock, restricted stock and stock options	1,010	362
Minority interest in loss of consolidated subsidiary	(688)	(90)
Impairment of goodwill	1,589	
Deferred tax (benefit)	(1,454)	(271)
Changes in operating assets and liabilities:		
Trade receivables	(1,580)	(927)
Inventory	(787)	
Prepaid expenses and other	(666)	(139)
Accounts payable	118	1,456
Accrued expenses	421	13
Deferred revenue and other	1,065	584
Net cash (used in) provided by operating activities	(4,367)	1,649
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Capital expenditures for equipment, patents and development Projects	(17,114)	(7,643)
Investment in securities	(682)	(3,276)
Proceeds from sale of securities and certificates of deposit	5,151	6,300
Net cash used in investing activities	(12,645)	(4,619)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Minority interest equity contributions	25,363	200
Issuance of common stock	7,001	
Stock issuance costs	(633)	
Exercise of stock options		123
Net cash provided by financing activities	31,731	323
<b>INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	<b>14,719</b>	<b>(2,647)</b>
CASH AND CASH EQUIVALENTS, beginning of year	13,482	16,129
CASH AND CASH EQUIVALENTS, end of year	\$ 28,201	\$ 13,482
<b>SUPPLEMENTAL SCHEDULE OF CASH FLOW INFORMATION:</b>		
Cash payments for income taxes	\$ 104	\$ 235
<b>SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:</b>		
Accrued capital expenditures and development project expenditures	\$ 10,236	477

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Stock and restricted stock issued for service	\$	1,403	\$	469
Tax benefit of stock options exercised	\$		\$	16

*See accompanying notes to these consolidated financial statements*

F-6

## ADA-ES, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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

Nature of Operations The accompanying consolidated financial statements include the accounts of ADA-ES, Inc. ( ADA ) and its wholly-owned subsidiary, ADA Environmental Solutions, LLC ( ADA LLC ), its 50% joint venture interest in ADA Carbon Solutions, LLC ( Carbon Solutions ), and its 50% joint venture interest in Clean Coal Solutions, LLC ( Clean Coal ), (collectively referred to as the Company ). Carbon Solutions includes its wholly-owned subsidiaries of Red River Environmental Products, LLC ( Red River ), Five Forks Mining, LLC ( Five Forks ), Morton Environmental Products, LLC ( Morton ), Underwood Environmental Products, LLC ( Underwood ), and Crowfoot Supply Company, LLC ( Crowfoot Supply ). See our Note 6 below concerning transactions with Energy Capital Partners I, LP and its affiliated funds ( ECP ) that occurred on October 1, 2008. Our activated carbon ( AC ) manufacturing development activities including activities conducted by Carbon Solutions, Five Forks, Red River, Morton, Underwood and Crowfoot Supply comprise our AC Supply Business . Our Company is principally engaged in providing environmental technologies and specialty chemicals to the coal-burning utility industry. We generate a substantial part of our revenue from the supply 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, Clean Coal Solutions, LLC and ADA Carbon Solutions, LLC 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, 2008, was held in three commercial banks and 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.

Inventory Inventory consists of AC available for sale to customers and chemicals used in the treatment of AC. We record inventory at the lower of cost or market as determined on a first-in, first-out basis.

Inventories consist of:

	December 31, 2008 (In thousands)
Inventory for sale	\$ 774
Chemicals	10
ACI parts	3
Total inventory	\$ 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 2008, we recognized goodwill impairment charges totaling \$1.6 million 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, 2008 and 2007, was \$9,000 and \$23,000 respectively. Based on the balance of intangible assets as of December 31, 2008, the Company anticipates amortization expense over the next 5 years to be approximately \$13,000 per year. The weighted average amortization period is 14 years.



## ADA-ES, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Intangible assets consist of:

	At December 31,	
	2008	2007
	(In thousands)	
Patents:		
Cost	\$ 306	\$ 293
Less accumulated amortization	(50)	(46)
Total intangible assets, net	\$ 256	\$ 247

**Investments** Investments in securities included certificates of deposit, common stock and debt securities. All investments were classified as available-for-sale securities, and were recorded at fair value in investments in securities, with the change in fair value during the period excluded from earnings and recorded net of tax as a component of other comprehensive income. Premiums and discounts on investments in debt securities were amortized over the contractual lives of those securities.

**Construction in Progress** Included in property and equipment is the cost to construct both Red River's AC production facility and Crowfoot Supply's interim AC production facility. The Company is capitalizing all cost 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 is expected to be 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** The Company capitalizes all direct and identifiable incremental costs associated with its development efforts related to the development of our AC Supply Business. Such development costs are generally deferred and either (a) expensed when it has been determined they are no longer of future value, or (b) capitalized as part of long-term assets and then subject to future depreciation expense and impairment evaluations.

**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, 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, 2008 and 2007, costs incurred in excess of billings totaled \$2.4 million and \$1.9 million, respectively, and are

included in accounts receivable, net, in the accompanying

F-8



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*ADA-ES, INC. AND SUBSIDIARIES*

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Balance Sheets. Billings in excess of recognized income totaled \$1.9 million and \$0.9 million as of December 31, 2008 and 2007, respectively, and are included in deferred revenue in the accompanying Balance Sheets.

Chemical sales are recognized when products are shipped to customers. Based upon historical trends no reserve has been established for any returns. Chemical products are shipped FOB shipping point and title passes to the customer when the chemicals are shipped. The Company's sales agreements 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.

AC sales are recognized when products are shipped to customers. No reserve is established for any returns, based on historical trends. Products are shipped FOB destination and title passes to the customer when they arrive at the customer. 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 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, 2008 and 2007, the Company recorded penalty and interest charges of \$4,000 and \$50,000, respectively, due to untimely paid tax related to our 2007 and 2006 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 balance sheet date. A valuation allowance is provided if and when deferred tax assets are not expected to be realized. Carbon Solutions is a partnership tax entity and therefore the partners are taxed on their respective ownership interests.

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 dilutive stock options were included in 2008 as a result of our net loss. In 2007, 88,000 shares of dilutive stock options were added to the weighted average number of common shares outstanding used in calculation of diluted EPS and 148,350 shares of stock options were excluded from the diluted shares as their inclusion would be anti-dilutive.

Comprehensive Income(Loss) Comprehensive income or (loss) is defined to include all changes in equity except those resulting from investments by owners and distributions to owners. For the year ended December 31, 2007, comprehensive income or (loss) includes net unrealized gains on investments, net of income tax expense, of \$31,000.

Stock-Based Compensation Effective January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123R (SFAS No. 123R), *Share-Based Payment*, which requires the Company to record equity compensation to employees at estimated fair value. Prior to January 1, 2006, the Company elected to use APB 25, which required expense to be recognized only to the extent the exercise price of the stock-based compensation was below the market price on the date of grant. The

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*ADA-ES, INC. AND SUBSIDIARIES*

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

modified prospective approach was used in adopting SFAS No. 123R. For the years ended December 31, 2008 and 2007, \$1.4 million and \$206,000, was charged to expense for equity compensation, which amounted to \$1.0 million and \$134,000, after tax and (\$0.17) and (\$0.02) 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 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 valuation and classification of investments in available-for-sale securities, which is based on estimated fair market value; and 7) 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.

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 and other (FGC).

Reclassification Certain amounts in the 2007 consolidated financial statements have been reclassified to conform to the 2008 presentation. Such reclassification had no effect on net income.

Recently Issued Accounting Pronouncements In June 2008, the FASB issued Financial Accounting Standards Board Staff Position EITF 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities ( EITF 03-6-1 ). EITF 03-6-1 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 SFAS 128, Earnings per Share. EITF 03-6-1 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 with the provisions in EITF 03-6-1. Early application of EITF 03-6-1 is prohibited. We have not issued dividend or dividend equivalents and expect the adoption of EITF 03-6-1 will not have a material impact on our consolidated financial statements.

In May 2008, the FASB issued SFAS No. 162, The Hierarchy of Generally Accepted Accounting Principles ( SFAS 162 ). SFAS 162 identifies the sources of accounting principles and the framework for selecting principles to be used in the preparation of financial statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles in the United States. This statement shall be effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board's amendments to AU section 411, The Meaning of Present Fairly in Conformity with Generally Accepted Accounting Principles. We are currently evaluating the impact of SFAS 162, but do not expect the adoption of this pronouncement will have a material impact on our financial position, results of operations or cash flows.

In April 2008, the FASB issued FASB Staff Position ( FSP ) SFAS No. 142-3, Determination of the Useful Life of Intangible Assets . This FSP amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, Goodwill and Other Intangible Assets ( SFAS 142 ). The intent of this FSP is to improve the consistency between the useful life of a recognized intangible asset under SFAS 142 and the period of expected cash flows used to measure the fair value of the asset under SFAS 141R, and other GAAP. This FSP is effective for financial statements issued for fiscal years beginning after December 15, 2008, and

**ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

interim periods within those fiscal years. Early adoption is prohibited. We are currently evaluating the impact of FSP, but do not expect the adoption of this pronouncement will have a material impact on our financial position, results of operations or cash flows.

Effective January 1, 2008, we adopted Statement of Financial Accounting Standards No. 157 Fair Value Measurements ( SFAS 157 ) for recurring financial fair value measurements. SFAS 157 introduces a framework for measuring fair value and expands required disclosure about fair value measurements of assets and liabilities. On December 31, 2007, we had one level I asset which was available for sale securities and such amounts were reported at their fair value. The adoption of SFAS 157 had no material impact on our financial statements. We adopted SFAS 157 for non-recurring and non-financial fair value measurements effective January 1, 2009 and such adoption is not expected to have a material impact on our financial statements.

Effective January 1, 2008, we adopted Statement of Financial Accounting Standards No. 159 ( SFAS 159 ) The Fair Value Option for Financial Assets and Financial Liabilities. SFAS 159 permits entities to choose to measure many financial instruments and certain other items at fair value. This statement is expected to expand the use of fair value measurement, which is consistent with the FASB's long-term measurement objective for accounting for financial instruments. The adoption of SFAS 159 had no material impact on our financial statements.

In December 2007, the FASB issued SFAS No. 160, Noncontrolling Interests in Consolidated Financial Statements an amendment of ARB No. 51. SFAS No. 160 requires the ownership interests in subsidiaries held by parties other than the parent be clearly identified, labeled, and presented in the consolidated statement of financial position 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. Upon adoption of SFAS No. 160, we expect to recharacterize any reportable minority interest as a noncontrolling interest and classify it as a component of equity in our consolidated financial statements. SFAS No. 160 is effective for fiscal years and fiscal quarters beginning on or after December 15, 2008. If we are unable to consolidate the financial results of Carbon Solutions we would account for Carbon Solutions under the equity method. Such gain or losses from Carbon Solutions would be included as other operating income and losses in our consolidated statements of operations.

In December 2007, the FASB also issued SFAS 141 (revised 2007), Business Combinations, ( SFAS 141R ), 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. SFAS 141R also establishes disclosure requirements to enable users of the financial statements to evaluate the nature and financial effects of the business combination. SFAS 141R 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 adopting SFAS 141R will depend on the future business combinations we may pursue after its effective date. Under SFAS 141R, all acquisition costs are expensed as incurred.

## 2. **PROPERTY AND EQUIPMENT:**

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

	Life in years	As of December 31, 2008      2007 <i>(In thousands)</i>	
Construction in process		\$ 32,552	\$
Land		485	
Machinery and equipment	3-10	2,896	1,881
Leasehold improvements	2	504	504
Furniture and fixtures	3-7	344	237
		36,781	2,622
Less accumulated depreciation and amortization		(1,777)	(1,372)

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Total property and equipment, net

\$ 35,004

\$ 1,250

F-11

## ADA-ES, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Depreciation and amortization of property and equipment for the years ended December 31, 2008 and 2007 was \$453,000 and \$356,000, respectively.

3. **GOODWILL:**

The changes in carrying amount of goodwill for the years ended December 31, 2008 and 2007 are as follows:

	2008	2007
	<i>(In thousands)</i>	
Balance at January 1,	\$ 2,024	\$ 2,024
Impairment charge	(1,589)	
Balance at December 31,	\$ 435	\$ 2,024

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. The deterioration of the FGC 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 segment to be less than book value. Accordingly, in 2008 the Company recorded a goodwill impairment charge totaling \$1.6 million.

4. **INVESTMENTS:**

During the year ended December 31, 2008, we liquidated all of our remaining investments and transferred the proceeds to our cash and cash equivalent accounts for near term-project needs. At December 31, 2007, our investments were classified as available-for-sale securities and were reported at their estimated fair value and are summarized as follows:

	Unrealized Gain in Accumulated Other Comprehensive Income	Unrealized Loss in Accumulated Other Comprehensive Income <i>(In thousands)</i>	Estimated Fair Value
<u>December 31, 2007</u>			
Common stock	\$ 541	\$ (249)	\$ 1,756
Debt securities	223	(201)	3,001
Total	\$ 764	\$ (450)	\$ 4,757
Less short-term portion			(1,916)

Long-term portion

\$ 2,841

F-12

**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 Statements of Operations. During 2008 and 2007 information on securities sold is as follows:

	2008	2007
	<i>(In thousands)</i>	
Carrying amount of securities sold	\$ 5,120	\$ 6,287
Sale proceeds	\$ 5,151	\$ 6,300
Gross realized losses	\$ (300)	\$ (113)
Gross realized gains	\$ 331	\$ 126

Accumulated other comprehensive income as of December 31, 2007 includes unrealized holding gains, net of tax, on securities of \$198,000.

**5. GOVERNMENT AND INDUSTRY FUNDED CONTRACTS:**

ADA is currently participating in five contracts awarded by the Department of Energy (the DOE) and participates with another two organizations as a subcontractor in contracts that contributed a total of \$4.7 million and \$7.2 million to revenues in 2008 and 2007, respectively. These amounts are included in mercury emission control revenues. ADA typically invoices the DOE and industry cost-share partners monthly for labor and expenditures plus estimated overhead factors, less cost share amounts. The total approved DOE and industry budgets amount to \$27.6 million, of which the Company's and industry partners' cost-share portion is \$3.5 million. The remaining unearned amount of the contracts was \$3.4 million as of December 31, 2008, of which \$1.9 million is expected to be recognized by the Company in 2009 (including cash contributions by other industry partners). These contracts are subject to audit and future appropriation of funds by Congress. The Company's historical experience has not resulted in significant adverse adjustments to the Company, however the government audits for years ended 2002 through 2008 have not yet been finalized.

**6. JOINT VENTURE AND TRANSACTIONS WITH ECP:**

In October 2008, we 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 our planned activated carbon manufacturing facility in Red River Parish, Louisiana (the AC Facility) and similar projects.

Also in October 2008, we entered into a Securities Purchase Agreement (SPA) providing for the sale to ECP of 1,800,000 shares of Series A Convertible Preferred Stock (the Series A Preferred) and 1,800,000 shares of Series B Convertible Preferred Stock (the Series B Preferred, and together with the Series A Preferred, the Preferred Stock, and such sale, the Private Placement) to provide additional equity financing at the ADA-ES corporate level. The purchase price for the Series A Preferred is \$9.37 per share or approximately \$16.9 million in the aggregate. The purchase price for the Series B Preferred has been set at \$3.18 per share or approximately \$5.7 million in the aggregate. The Private Placement was approved by our stockholders in December 2008. Closing of the SPA is subject to certain conditions, including obtaining debt financing for the AC Facility.

Under these agreements, we 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 our 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.

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We and ECP each own 50% of Carbon Solutions. We consolidate Carbon Solutions under provisions of SFAS 94, Consolidation of all Majority-Owned Subsidiaries, and have treated ECP's interest as a minority interest. Upon adoption of

F-13



*ADA-ES, INC. AND SUBSIDIARIES*

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

SFAS No. 160, we will recharacterize ECP's minority interest as a non-controlling interest and classify it as a component of equity. As a result of the pricing of the Preferred Stock we expect to have insufficient working capital to maintain our 50% interest in Carbon Solutions. If our ownership interest falls below 50% we would likely be unable to consolidate the financial results of Carbon Solutions in our financial statements.

In addition to the JDA and LLC Agreement, we also entered into the following related agreements with Carbon Solutions:

*Master Services Agreement.* Pursuant to a Master Services Agreement, we provide certain accounting, administrative, oversight, insurance and other services to Carbon Solutions at agreed-upon rates.

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

Carbon Solutions has entered into AC sales contracts that, subject to certain conditions, could contribute up to \$160 million in revenues through 2014. As of December 31, 2008, the primary assets of Carbon Solutions consist of cash and cash equivalents of \$25.2 million, property and equipment of \$33.9 million and development projects of \$1.9 million. Current liabilities amounted to \$12.1 million.

**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 ( Clean Coal ), to be operated with NexGen Refined Coal, LLC ( NexGen ), to market such technology. The Operating Agreement also requires NexGen and us 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, 2008 and 2007 our share of such cost amounted to \$129,000 and \$150,000, 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, 2008, the primary assets of Clean Coal consist of cash and cash equivalents of \$21,000, property, plant and equipment, net of depreciation of \$79,000 and patents, net of amortization of \$63,000. Current liabilities amounted to \$25,000.

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. If Clean Coal succeeds in obtaining that approval and becomes a Section 45 Business, NexGen has the right to maintain its 50% interest by paying us an additional \$4.0 million, in eight quarterly payments of \$500,000 each, beginning in the quarter the credit is approved. 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 the \$4.0 million that it elects not to pay, if any. Once 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 payments made to us by NexGen. In the Emergency Economic Stabilization Act of 2008, Congress included language on Section 45 which extended the qualification window for the Tax Credit to January 1, 2010 and eliminated the increased market value test for refined coal. We expect this legislation to positively impact Clean Coal's efforts to obtain approval for the Section 45 Tax Credits.

Thus far Clean Coal has conducted three full-scale tests of its refined coal product, which demonstrated the ability to meet the emission control performance required to qualify for the Section 45 Tax Credits. Clean Coal continues to market this product to industry. Our net operating loss for 2008 and 2007 includes net costs of \$213,000 and \$247,000, respectively, related to our refined coal efforts.

*ADA-ES, INC. AND SUBSIDIARIES*

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**8. STOCKHOLDERS' EQUITY:**

Shares and Stock Options Issued for Directors and Consultant Compensation In 2008 and 2007, the Company issued shares of its common stock for compensation of \$185,000 and \$101,000, respectively, to non-management directors based on the market price of the common stock, and recorded \$84,000 and \$55,000, respectively, of expense related to stock options 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, we 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 our 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 was granted and was equal to 100% of the fair market value of a share of our Common Stock on the date the option was 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 2007, 3,354 options were exercised and 5,500 options were forfeited. During 2008, 13,552 options were forfeited. As of December 31, 2008, 72,810 options remained outstanding and exercisable under this plan.

During 2004, we 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 and 17,258 options on December 31, 2008 and 2007, respectively, with an estimated fair value of \$236,000 and \$35,000, respectively. In 2007, 7,057 previously vested options were exercised. As of December 31, 2008, 166,663 options remain outstanding and exercisable under this plan.

During 2004, we 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 our 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. In 2007, 985 of such options were exercised and 4,015 of options were forfeited upon the death of a director. As of December 31, 2008, 13,333 options remained outstanding and exercisable under the 2004 Plan.

During 2005, we 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

## ADA-ES, INC. AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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, 2008, 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, 2008:

	Employee and Director Options	Non-Employee Options	Weighted Average Exercise Price
<b>Options Outstanding</b> , December 31, 2006	344,969	80,000	\$ 11.55
Options granted			
Options expired	(52,215)	(21,000)	16.82
Options exercised	(11,396)		9.39
<b>Options Outstanding</b> , 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			
<b>Options Outstanding</b> , December 31, 2008	272,806	9,000	\$ 10.21

At December 31, 2008, 281,806 options with a weighted average exercise price of \$10.21 were fully vested and exercisable. No options were exercised during 2008.

Following is information related to options outstanding/exercisable at December 31, 2008:

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	11,665	\$ 2.80	11,665	\$ 2.80	4.8
\$8.60 - \$10.00	183,343	8.64	183,343	8.64	6.8
\$13.80 - \$15.20	86,798	14.52	86,798	14.52	5.0
	281,806	\$ 10.21	281,806	\$ 10.21	6.2

The aggregate intrinsic value of options exercised in the years ended December 31, 2008 and 2007, based on an average market price of \$8.05 and \$14.64, respectively, was \$0 and \$60,000, respectively. The aggregate intrinsic value of options exercisable at December 31, 2008 was a negative \$2.0 million based on a market price of \$3.10.

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During 2007, we 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 660,000 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 our Board of Directors. The exercise price for

F-16

**ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

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 our Board of Directors.

During 2007 and 2008, 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 October 2007, seven employees opted to exchange 42,700 outstanding options for 3,389 shares of restricted stock. The exchange did not result in any stock option modification costs. Unvested shares of restricted stock are subject to repurchase by us upon termination of employment. In December 2007, 5,000 shares of restricted stock were awarded to a new employee upon commencement of employment in addition to the normal award based on a percentage of the employee's starting salary, which vest over a two-year period. In 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. During 2008 and 2007, we recognized \$920,000 and \$7,000, respectively, of compensation costs related to the vesting of restricted stock, a portion of which was capitalized as part of development projects.

A summary of the status of the non-vested shares as of December 31, 2008 is presented below:

<b>Non-vested Shares</b>	<b>Shares</b>	<b>Weighted Average Grant Date Fair Value</b>
Non-vested at January 1, 2007		\$
Granted	27,175	10.42
Vested	(502)	12.60
Forfeited		
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

As of December 31, 2008, there was \$334,000 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 2008 and 2007 was \$38,000 and \$7,000, respectively.

9. **COMMITMENTS AND CONTINGENCIES**

In 2008, ADA made guaranties and undertook other obligations related to our AC Supply Business. No liabilities associated with such guaranties and obligations were recorded on our consolidated balance sheet as we do not expect such guaranties and obligations to be called upon.



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*ADA-ES, INC. AND SUBSIDIARIES*

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Summaries of the guaranties and obligations related to the AC Facility and supply activities as of December 31, 2008 are as follows:

ADA engaged an independent project development consultant, (the AC Consultant ), to oversee the development and construction of the AC Facility on our behalf. The contract with the AC Consultant was assigned to Carbon Solutions pursuant to the JDA. The contract provides for fixed monthly compensation, with incentive payments on the attainment of certain milestones, which may include amounts based on revenues from the planned facility. Carbon Solutions can terminate the agreement with the AC Consultant on 30 days notice for convenience, and for cause on 10 days notice, with cure rights to correct any default within 30 days. If termination is for convenience, the AC Consultant is entitled to receive all monthly fees earned prior to termination and any milestone payments for milestones achieved on the project, if ever and if any.

ADA entered into a Carbon Supply Agreement with an unrelated supplier (the AC Supplier ) for deliveries of AC from February 2009 through December 31, 2009. The contract provides for two, two-year extensions of the term if mutually agreeable terms for pricing and quantity, including escalation, are reached. ADA is obligated to purchase approximately 14 million pounds of AC in 2009 with additional amounts in 2010. Our minimum purchase obligation in 2009 is approximately \$6.6 million. Our performance under the contract is subject to Excuse Events, including the failure of AC Supplier to deliver conforming AC to meet its obligations under the contract, material uncured defaults by AC Supplier, certain defined force majeure events, the sale of our AC processing facility or the facility becoming inoperable through no fault of ours. Our purchase obligations are to be equitably reduced to account for the Excuse Event, or excused without further liability on our part if the contract is terminated in its entirety. Under the JDA, ADA assigned this agreement to Crowfoot Supply on October 1, 2008.

In 2008, Red River entered into four separate Multiple Hearth Furnace Contracts (the MHF Contracts ) with an independent equipment supplier, (the MHF Supplier ). The MHF Contracts provide for the turn-key manufacture, delivery, erection and commissioning of four multi-hearth furnaces ( MHFs ), together with related equipment and services, to be installed in the AC Facility. The total contract price for the four MHFs is estimated to be approximately \$41 million, subject to adjustment under certain circumstances. Fixed payments plus reimbursable expenses will be due from us upon attainment of scheduled milestones, and are subject to customary retainage. Amounts due from us to the MHF Supplier prior to the earlier of Financial Close for the Project (consummation of financing for all anticipated costs of our AC Facility) or February 28, 2009, were capped at approximately 45% of the contract price. Red River may terminate the MHF 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 MHF Supplier in relation to our subcontractors, and (c) reasonably incurred actual costs of demobilization. At or prior to the Financial Close, MHF Supplier will provide us with a limited performance bond to guarantee their performance, and Red River will provide MHF Supplier with a parent guaranty to guarantee payment and other obligations under the MHF Contracts (the MHF Supplier Guaranty ). At December 31, 2008, the remaining obligation under the MHF Contracts totaled approximately \$36 million.

Red River entered into an Amended and Restated Engineering, Procurement and Construction Contract (the EPC Contract ) wherein it engaged an independent construction company, (the EPC Contractor ) for the turn-key engineering, design, construction and other services for the AC Facility. The EPC Contract requires a total commitment of approximately \$243.6 million. ADA has guaranteed all amounts owed under the EPC Contract. Our JV partner ECP has caused a \$29.0 million irrevocable letter of credit to be issued for the EPC Contractor s benefit to assure payment of short-term amounts owing under the EPC Contract. Red River will be required to increase that letter of credit on monthly intervals if adequate third party financing is not then in place to cover amounts Red River would owe in the event of a payment default under the contract. Although Red River can terminate the EPC Contract for convenience at any time, our guaranties have given either EPC Contractor or the bank issuing the letters of credit authorization to pay (a) the amount earned by EPC Contractor under the contract through the effective date of termination, (b) cancellation charges to EPC Contractor s subcontractors, (c) other reasonable termination-related costs incurred by EPC Contractor, (d) costs of demobilization, and (e) unreimbursed sales taxes paid by EPC Contractor. These amounts could be substantial and may not be completely recoverable by us if Red River were to sell the AC Facility.

**ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Red River signed a contract to supply treated AC to assist a major utility (the AC Customer 1 ). The five year contract requires Red River to provide AC with expected deliveries to start in the third quarter of 2009 with anticipated revenue of approximately \$35 million over the term of the contract. Upon notice to AC Customer 1 Red River may provide AC from other sources for interim periods or if reasonably unforeseeable events cause a temporary outage or significant reduction at the AC Facility. The contract also contains a one-time option for AC Customer 1 to increase AC quantities by up to 50% from their current commitments to provide AC for other plants within the AC Customer 1 s fleet. Under certain force majeure circumstances, AC Customer 1 may reduce its minimum quantity obligations or terminate the agreement. The agreement is expressly contingent upon the financial close of debt financing for the AC Facility by March 27, 2009. If such financial closing does not occur by this time the agreement will terminate.

Red River entered into a Carbon Supply Agreement with another major utility (the AC Customer 2 ) to supply treated AC to AC Customer 2 beginning in the first half of 2009, and ending on the earlier of December 31, 2014 or such time as AC Customer 2 has purchased their minimum AC commitment under the agreement. AC Customer 2 has committed to purchase a minimum quantity of AC on a take or pay basis over the initial term of the agreement, with the option to reduce such amounts on a going forward basis, if and when, Red River have sold over 400 million pounds of AC. AC Customer 2 has the right to nearly double their purchase commitments under the agreement. Red River may initially deliver AC from alternate sources. AC Customer 2 may terminate the agreement if Red River fails to meet certain specified project development milestones or default in deliveries after commencing delivery from our planned AC Facility. If AC Customer 2 terminates the agreement for our default after January 30, 2009, but prior to commencement of delivery of AC from our AC Facility, damages can be awarded, up to a maximum of \$10 million, through the first calendar quarter of 2010. Both of us are entitled to require specific performance of the other in limited circumstances when the cover remedies prove inadequate.

ADA has guaranteed the obligations of Red River under the Carbon Supply Agreement with AC Customer 2. In January 2009, ECP issued a \$1 million irrevocable letter of credit as additional security for performance under the Agreement. 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.

**Pension Expense and 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 \$234,000 and \$252,000 for 2008 and 2007, respectively, based on a percentage of the eligible employees annual compensation.

**Performance Guarantee on AC Injection Systems** Under certain contracts to supply ACI systems, we may guarantee the performance of the associated equipment for a specified period to the owner of the power plant. We 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, we may have an obligation to correct or replace the equipment. In the event the level of mercury removal is not achieved, we may have a make right obligation within the contract limits. We 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 our accrued warranty and other liabilities in the accompanying 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 our performance guaranties for the years ended December 31, are as follows:

	2008	2007
	<i>(In thousands)</i>	
Beginning Balance	\$ 309	\$ 120
Performance guaranties accrued	263	195
Expenses paid	(26)	(6)
Ending Balance	\$ 546	\$ 309





**ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

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, 2008, we had a standby letter of credit for \$80,000 related to an installation of an ACI system. This commitment was not recorded on our consolidated balance sheet as we do not expect the funds to be called upon under the letter of credit.

**Purchase Obligations** As of December 31, 2008, the Company expects to pay purchase obligations totaling \$751,000 for the purchase of major components related to the manufacturing of our ACI systems in 2009.

**Operating Lease Obligations** We lease office facilities and railroad cars under noncancellable operating lease agreements. Our facilities leases generally provide for periodic rent increases and renewal options. Our operating lease agreements expire in 2010 through 2013. Annual minimum commitments under these leases are shown in the table below.

<u>Years ending December 31,</u>	<b>Operating Lease Commitments (In thousands)</b>
2009	\$ 350
2010	236
2011	57
2012	20
2013	13
<b>Total operating lease commitments</b>	<b>\$ 676</b>

Rent expense totaled \$299,000 and \$228,000 in 2008 and 2007, respectively.

10. **MAJOR CUSTOMERS:**

Sales to unaffiliated customers who represent 10% or more of the Company's sales for the years ended December 31, 2008 and 2007 were as follows:

<b>Customer</b>	<b>2008 (%)</b>	<b>2007 (%)</b>
A	16	4
B	11	7
C	10	13
D (Governmental Contracts)	7	17
E	2	10

At December 31, 2008 and 2007, approximately 58% and 90% of the Company's trade receivables were from four and nine customers, respectively.

11. **INCOME TAXES:**

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

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	2008	2007
	<i>(In thousands)</i>	
Current	\$ (186)	\$ 267
Deferred	(1,321)	(271)
Income tax expense (benefit)	\$ (1,507)	\$ (4)

F-20

**ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

During 2008 and 2007, stockholders' equity has been (decreased) increased in the amounts of \$(34,000) and \$16,000, respectively, for the income tax effects related to stock based compensation.

During 2008 and 2007, the Company recognized (benefits) charges to other comprehensive income of \$(116,000) and \$18,000, respectively, for the income tax (benefit) expense 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 Other Assets, Accrued Expenses and Long-term Liabilities, respectively, in the accompanying Balance Sheets:

	<b>At December 31,</b>	
	<b>2008</b>	<b>2007</b>
	<i>(In thousands)</i>	
<b>Current assets (liabilities):</b>		
Prepaid expenses	\$ (97)	\$ (90)
Allowance for doubtful accounts	6	
Unrealized gains securities held for sale		(116)
Deferred revenues, compensation and other	307	89
	216	(117)
<b>Non-current assets (liabilities)</b>		
Deferred compensation, warranty and other	206	122
Property and intangible asset differences	(70)	(61)
Net operating loss carryforward	902	
Tax credits	286	176
	1,324	237
<b>Net deferred tax assets</b>	<b>\$ 1,540</b>	<b>\$ 120</b>

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:

	<b>At December 31,</b>	
	<b>2008</b>	<b>2007</b>
Expected income tax rate expense (benefit)	(34)%	34%
Permanent differences	11%	(7)%
Tax credits	<(1)%	(32)%
State income taxes	(3)%	3%
Other	<(1)%	0%
<b>Actual effective income tax rate</b>	<b>(27)%</b>	<b>(2)%</b>

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The Company adopted the provisions of FIN 48 on January 1, 2007. No unrecognized tax benefits were recorded as of the date of adoption. Major components related to the permanent difference include goodwill impairment, investment items and incentive stock options for the year ended December 31, 2008 and investment items for the year ended December 31, 2007. 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 2005 and Colorado state examinations for years before 2004.

F-21

**ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The Company has a federal net operating loss carryforward of approximately \$2.3 million that will expire in the year ending 2028 and state net operating loss carryforward of approximately \$3.2 million that will expire in years ranging from 2015 to 2028.

**12. RELATED PARTY TRANSACTIONS:**

As discussed above in Note 8, the Company executed a Securities Subscription and Investment Agreement with Arch Coal, Inc 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 and performed certain testing and research projects under agreements with Arch in 2006. Under such arrangements, the Company has recorded revenue of \$66,000 and \$92,000 in 2008 and 2007, 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.

**13. BUSINESS SEGMENT INFORMATION**

The following information relates to the Company's two reportable segments: MEC and FGC 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.

	<b>Years Ended December 31,</b>	
	<b>2008</b>	<b>2007</b>
	<i>(In thousands)</i>	
<b>Revenue:</b>		
MEC	\$ 15,760	\$ 17,954
FGC	433	1,294
Total	\$ 16,193	\$ 19,248
<b>Segment profit (loss):</b>		
MEC	\$ 3,939	\$ 3,994
FGC	(1,888)	(54)
Total	\$ 2,051	\$ 3,940

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

	<b>Years Ended December 31,</b>	
	<b>2008</b>	<b>2007</b>
Total segment profit	\$ 2,051	\$ 3,940
Non-allocated general and administrative expenses	(8,303)	(4,338)
Depreciation and amortization	(488)	(379)
Interest, other income/expenses and tax (provision) benefit	2,634	1,024

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Net (loss) income	\$ (4,106)	\$ 247
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F-22

*ADA-ES, INC. AND SUBSIDIARIES*

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

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 January 27, 2009, Red River executed an amended Site Work Agreement with the EPC Contractor in connection with the AC Facility we are building. The Site Work Agreement further amends the EPC Contract. Pursuant to the Site Work Agreement, the EPC Contractor will perform services to ensure that stormwater controls are in place, Project site access, laydown and other areas for construction, MHF foundations, the AC Facility site and MHF foundations for MHF erection and construction of the balance of the Project are prepared for construction, which construction is to be performed by EPC Contractor pursuant to the terms, and subject to the conditions of, the Amended EPC Contract (the Site Work ). The award under the Site Work Agreement is \$9.6 million. The Site Work performed by the EPC Contractor shall be in accordance with the Amended EPC Contract s Schedule, and upon completion and payment, the Site Work shall become Work, as defined under the Amended EPC Agreement, and thus subject to the performance test, warranty and all other requirements and obligations of the EPC Contractor under the Amended EPC Contract. All amounts paid to the EPC Contractor under the Site Work Agreement will be counted as part of the Total Work Cost, as such term is defined under the Amended EPC Contract.