

ADA-ES INC  
Form 10-K  
March 28, 2011  
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**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, 2010

Commission File Number: 000-50216

**ADA-ES, Inc.**

(Name of registrant as specified in its charter)

**Colorado**  
(State of incorporation)

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

**8100 SouthPark Way, Unit B, Littleton, Colorado 80120-4527**

(Address of principal executive offices) (Zip Code)

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

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

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| Title of each class        | Name of each exchange on which registered |
|----------------------------|---|
| Common Stock, no par value | NASDAQ Capital Market                     |

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

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

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

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

|  |   |
|--|---|
| Large accelerated filer <input type="checkbox"/> | Accelerated filer <input type="checkbox"/>                    |
| Non-accelerated filer <input type="checkbox"/>   | Smaller Reporting Company <input checked="" type="checkbox"/> |

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, 2010 was \$34,500,000.

As of March 25, 2011, there were outstanding 7,605,938 shares of the Registrant's common stock, no par value.

**DOCUMENTS INCORPORATED BY REFERENCE:**

Portions of the Definitive Proxy Statement to be filed pursuant to Regulation 14A for ADA-ES, Inc.'s annual shareholder meeting for 2011 are incorporated by reference into Part III of this Form 10-K.

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**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.

**Business Purpose and Strategy**

Incorporated in Colorado in 1997, ADA-ES, Inc. develops, implements and offers proprietary environmental technologies and provides equipment and specialty chemicals that enable coal-fueled power plants to meet emissions regulations by enhancing existing air pollution control equipment, maximizing capacity and improving operating efficiencies. ADA-ES became a stand-alone public company through a spin-off from its parent company, Earth Sciences, Inc. in September 2003. We have three wholly-owned subsidiaries called Advanced Emissions Solutions, Inc., a Delaware corporation ( ADES ), ADA Intellectual Property, LLC, a Colorado limited liability company ( ADA IP ) and ADA Environmental Solutions, LLC, a Colorado limited liability company, and a 50% interest in Clean Coal Solutions, LLC, a Colorado limited liability company ( Clean Coal ). As of December 31, 2010, we had a 25.9% interest in a Delaware limited liability company called ADA Carbon Solutions, LLC ( Carbon Solutions ).

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 or carbon capture 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 power generating companies to remain competitive while meeting environmental regulations. Our proprietary patented technologies and services provide a continual revenue stream for us.

Our major activities include:

the development and marketing of our refined coal ( RC ) technology, including leasing of two RC facilities for control of nitrous oxides ( NOx ) and mercury, which also qualifies for certain tax credits, through our Clean Coal joint venture with NexGen Refined Coal, LLC, an affiliate of NexGen Resources Corporation ( NexGen ),

the sale of equipment, field testing, chemicals and services primarily related to mercury emissions control for coal and solid fuel fired boilers used in electric generation,

the research and development of carbon dioxide ( CO<sub>2</sub> ) capture technology through contracts supported by the Department of Energy ( DOE ) and industry participants,

the license to Arch Coal, Inc. ( Arch Coal ) to use certain technology to enhance coal mined by Arch Coal at mines and sites located in the Powder River Basin ( PRB ) which allow the coal to be burned with lower emissions ( Enhanced Coal ), and

through Carbon Solutions, our joint venture with Energy Capital Partners I, LP and its affiliated funds ( ECP ), the manufacture and sale of activated carbon ( AC ) for mercury control applications to electric power generation customers from an activated carbon manufacturing facility in Coushatta, Red River Parish, Louisiana (the AC Facility ).

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### **Financial Information for Industry Segments**

We have three reportable segments:

emissions control and other, or EC,

CO<sub>2</sub> capture or CC, and

refined coal or RC.

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 14 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 laws and regulations impacting the electric power generation industry. Environmental regulations, such as the 1990 Clean Air Act Amendments, recent Maximum Achievable Control Technology (MACT) regulations and various state regulations, and permitting requirements for new coal-fired power plants are requiring electric power generators to reduce emissions of pollutants, such as particulate matter, sulfur dioxide (SO<sub>2</sub>), mercury, and acid gases. We are a key supplier of mercury control equipment and services to the EC market whose commercial component first began in 2005 when individual states began to require limits on mercury emissions. We expect our product offerings to expand as a result of finalization of additional regulations. Through Clean Coal, we have constructed and leased two RC facilities and are developing additional RC facilities. The recent Tax Relief and Job Creation Act of 2010 passed by Congress on December 17, 2010 extended the time available to build and install additional RC facilities until the end of 2011. In addition, through Carbon Solutions, we have helped position the AC Facility as a key supplier of AC in the market for mercury control. We anticipate Carbon Solutions will become a market leader in the AC supply market through likely future expansions in which we have the option for a higher participation rate.

Our business is based upon providing technology for the approximately 1,200 coal-burning plants that produce roughly 50% of electricity in the U.S. in addition to steam for industrial processes and heating. The DOE Energy Information Administration estimates an additional 24 GW of new capacity between 2008 and 2030. A 2007 National Coal Council report estimated that United States coal reserves will be capable of serving demand for the next 250 years. Currently, the nation's existing coal-fired power plants emitted approximately 48 tons of mercury per year, or approximately 37% of all human-caused mercury emissions in the U.S. 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. We expect that attaining significant reductions in mercury emissions and other pollutants from coal-fired power plants will help relieve public concerns. Regulations currently exist that require a small portion of the existing fleet and all new coal-fired plants to control mercury emissions. These regulations remained unchanged during 2010 as there was no significant regulatory activity for mercury emission control at the individual state levels during the year. There are as many as 57 new coal-fired power plants in the United States under various stages of development, which must comply with these regulations.

Whether operating in a regulated or unregulated environment, power generating companies face competitive challenges requiring constant control of 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 participate in the emissions control market for coal-fired boilers with:

mercury control technology that effectively reduces mercury emissions over a broad range of plant configurations and coal types,

our proprietary flue gas chemical conditioner that improves the capture of particulate matter emissions by new or existing equipment and offers both technical and economic advantages over the hazardous chemicals that have been and continue to be in use,

products, such as CyClean, our proprietary pre-combustion coal treatment processes that provide electric power generators mercury emission control and flexibility in choosing the grade of fuel electric power generators can burn,

licenses of proprietary technology, such as with Arch Coal, which we expect to enhance certain coals mined by Arch Coal to allow them to burn with reduced emissions,

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a dry sorbent injection process to reduce emissions of sulfur dioxide and acid gases such as sulfur trioxide (  $\text{SO}_3$  ) and hydrogen chloride (  $\text{HCl}$  ), and

research and development of technologies aimed at the capture and conversion of  $\text{CO}_2$  emissions.

We have established ourselves as a leader in the mercury control market for electric power generators. Our systems have been demonstrated to be effective in mercury emissions control, even in difficult applications, and have also been shown to be cost effective and in many cases, reduce the costs associated with mercury emissions control.

The coal-fired power industry has been under increased scrutiny over environmental issues during the last several years, especially related to  $\text{NO}_x$ ,  $\text{SO}_x$ , particulate matter, and mercury emissions, as well as the impact of  $\text{CO}_2$  emissions on climate change. In response to concerns expressed by environmental groups and others, various state officials rejected a number of permits for new coal-fired plants in 2009 and 2010. These actions have slowed the progress of new coal-fired plants. We expect environmental pressures will lead to new emissions limits that will increase the market for our products and services. With new portfolio standards for increased use of renewable energy sources and potential requirements for reduction of greenhouse gases limiting the permitting of new coal-based plants, the dependence on the existing fleet for base load power increases. To continue operating as environmental regulations become more stringent, these older plants will likely require the use of retrofit technologies to address conventional pollutants (such as  $\text{SO}_2$ ,  $\text{NO}_x$ , and particulates and now for pollutants such as mercury, acid gases, and emissions such as  $\text{CO}_2$ ) or face closure. Therefore, the current trend toward cleaner energy has created a growing market for ADA's existing and developing innovative technologies.

**Environmental Legislation and Regulations**

Mercury has been identified as a toxic substance and, pursuant to a court order, the U.S. Environmental Protection Agency ( EPA ) issued regulations for its control from power plants in March 2005, which was known as the Clean Air Mercury Rule or CAMR. CAMR had been subject to significant challenges since it was issued and was ultimately declared invalid. In April 2010, the U.S. District Court of Appeals of the District of Columbia approved the consent agreement reached last year between EPA and a coalition of public health and environmental groups that sued in 2008 to force the agency to set tighter emission limits. That settlement requires EPA to issue a final rule requiring strict plant-specific controls for power plants' toxic air pollutants no later than November 16, 2011. Recent rulings by the courts related to the Industrial Boiler MACT, defined below, indicate that they will not tolerate significant deviations from the expected schedule for finalization. On March 16, 2011, the EPA issued a draft of the Proposed Mercury and Air Toxics Standards rules a MACT based hazardous pollutant regulation, which provides for among other provisions, control of mercury, organics and volatile metals such as arsenic, selenium and acid gases such as  $\text{HCl}$  and other Hazardous Air Pollutants ( HAPs ) such as dioxins and furans (the Air Toxics Rule ). The draft Air Toxics Rule standard is based upon the average of the best-performing 12% of power plants and only allows minimal averaging or trading. The Air Toxics Rule proposed a limit for mercury emissions that will require capture of 80% to 90% of the mercury in the coal burned in electric power generation boilers. While the new regulations will require additional emission control equipment, the EPA estimates a small percentage of the current generation fleet will be forced to retire due to the cost of complying with the regulations.

In addition to the electric power generators, EPA has developed a MACT-based mercury emissions regulation for the Portland Cement Industry through proposed amendments to the National Emission Standards for HAPs for the Portland Cement Manufacturing Industry (the Cement MACT ). The Cement MACT regulation was finalized on August 9, 2010. This regulation requires cement plants to reduce HAPs by 2013 including 92% of mercury and 83% of hydrocarbons. This regulation could require ACI systems on up to 90 cement kilns in the U.S., which are owned by approximately 15 companies. We have been engaged in several testing programs for cement companies to define their emissions and evaluate how our ACI equipment and sorbents will work in that industry. The tests were designed to evaluate the effectiveness of collecting mercury and organics from cement kiln exhaust gas streams. We believe the Cement MACT will increase the market for both ACI systems and AC.

The EPA has also issued a new MACT regulation for coal-fired boilers that provide mostly steam and/or electricity for small industrial and institutional power needs with no more than 25 MW of electricity sold to the grid (the Industrial Boiler MACT ). The final regulation, which is under reconsideration for the wide variety of boiler types and fuels used, was released on February 23, 2011, with compliance deadlines in early 2014. The Industrial Boiler MACT could impact over 600 existing coal-fired industrial boilers. The emission limit of 4.6 pounds of mercury per Trillion BTU for existing and two pounds per Trillion BTU for new coal-fired industrial boilers will require 60% to 70% capture of mercury from boilers burning bituminous coals and 40% to 50% capture of mercury from boilers burning sub-bituminous coals. We believe the final Industrial Boiler MACT could increase the market for ACI

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systems by several hundred and the associated AC by 50 to 100 million pounds per year. These totals could be even higher, when considering that 400 or more biomass and wood fired boilers are also covered under this regulation and, as with coal-fired units, require both mercury and other hazardous air pollutant reductions (dioxins and furans), that can be controlled by activated carbon injection. We are in discussions with several companies that own and operate a number of industrial boilers regarding how our technology can help such companies comply with the new regulations.

The Clean Air Act requires that all emission control related regulations be met within 36 months. We believe that substantial long-term growth of the EC market for the electric power generation industry will most likely depend on how industry chooses to respond to the pending and new federal regulations. In general, all three of these regulations are less stringent than expected, meaning fewer scrubbers and forced retirements, however, we anticipate the final federal MACT regulations will create an even larger market for our mercury control products beyond 2011. We expect that as many as 1,200 existing coal-fired boilers will be affected by such regulations, if and when they are fully implemented. Many power companies recognize the urgency of these pending regulations, and as a result we are contracting with power plants to evaluate mercury control options at a number of their plants. This could result in near-term ACI demonstration revenue, puts us in close contact with companies that could purchase ACI equipment and could result in long-term contracts for AC.

In addition to the U.S. market, we are seeing market potential in the six Canadian provinces that have passed their own mercury control regulations.

### **Clean Coal and Our Refined Coal Technology**

In 2006, we established Clean Coal with an affiliate of NexGen to commercialize our patented RC technology that reduces emissions of NO<sub>x</sub> and mercury from certain coals in cyclone boilers. We licensed the technology, including the claims contained in certain patents, to Clean Coal upon formation of this joint venture. Clean Coal supplies chemicals, additives, equipment and technical services to cyclone fired boiler users, but its primary purpose is to qualify RC for Section 45 Tax Credits (a Section 45 Business ), which amounts to an annually escalating \$6.27 per ton of RC for a period of ten years. Clean Coal placed two RC facilities in service prior to the initial placed-in-service date of January 1, 2010 and demonstrated the required emission reductions for their RC product to qualify for the tax credits.

In December 2010, the Tax Relief and Job Creation Act of 2010 extended the placed-in-service date for the Section 45 tax credits by two years, to January 1, 2012. This extension gives Clean Coal through the end of 2011 to place in service additional RC facilities. Clean Coal has been discussing additional RC facilities with potential customers to capitalize on the expanded Section 45 tax credit opportunity.

Clean Coal signed agreements with a subsidiary of a large financial institution at the end of June 2010 to lease the two RC facilities it had previously placed in service. These facilities produce RC that is intended to qualify for Section 45 tax credits. The two facilities are installed at two different power plants in the Midwest each of which operates two cyclone boilers burning PRB coal from Wyoming. With all four boilers operating, the units are expected to burn approximately 6 million tons of RC per year that will qualify for the approximately \$6.27 per ton of federal tax credits, which per ton amount escalates annually and which credits are expected to be available for these two facilities through 2019.

In September 2010, the RC facilities ramped up production to expected continuous levels and are now treating over 98% of the available coal used by the four generating units at the two power plants. In the first two quarters of operation, these two units generated over \$10 million in consolidated revenues for ADA. We expect these production levels to generate between approximately \$15 to \$20 million per year in revenues and, after deduction of NexGen's 50% share, between approximately \$7 to \$10 million in pre-tax cash flow and operating income, or approximately \$1 per share annually for ADA through 2019 (assuming no significant change in outstanding number of shares).

As a result of the Tax Relief and Job Creation Act of 2010 and marketing efforts to date, we have taken steps to schedule construction of six additional RC systems with a possibility of up to 16 additional RC systems before January 1, 2012. We anticipate each unit will be capable of producing between one and five million tons of RC per year.

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### **Emissions Control and Other**

#### *Activated Carbon Injection Systems and Mercury Emissions Control Services*

ACI systems are currently the dominant control technology to address mercury emissions and are being actively deployed to meet existing state and new plant regulations. ACI controls have been thoroughly evaluated by the DOE National Energy Technology Laboratory over the course of its three-phase mercury control field testing program and have been demonstrated to reduce mercury emissions by over 90% in many coal-fired power plants. Thus far, to date, we have installed or are in the process of installing 47 ACI systems. Although we expect the equipment market to remain static in 2011, we believe we have the opportunity for significant revenue growth for our EC products and services when final federal regulations or legislation impacts a significant portion of previously uncontrolled and existing boilers. Given the current expected timing for implementation of the Air Toxics Rule, we anticipate the need for 500 to 700 ACI systems to be supplied between 2012 and 2015, which would require rapid scale-up of our engineering and production efforts to maintain our approximate 30% market share. For an average sized plant, the ACI equipment costs are between \$2 to \$3 million.

The company also has developed and is offering commercial systems to inject dry alkali sorbents for control of acid gases such as SO<sub>3</sub> and HCl. Dry sorbent injection systems, which cost approximately \$2 to \$3 million for an average size plant, provide a low-capital cost alternative to scrubbers for meeting certain provisions of the Air Toxics Rule. The Company conducted some full-scale tests of this equipment in 2010. Experts have predicted that up to a quarter of the 1,200 plus coal fired boilers could be forced to shut down if they were required to add scrubbers and selected catalyst reduction systems which can cost \$200 to \$300 million per installation.

#### *Arch Coal Development and License Agreement for Enhanced Coal*

Since 2004, we have been working with Arch Coal to explore certain unique characteristics of some types of coals produced by Arch Coal that allow them to be burned with lower emissions. We believe a recent technical breakthrough provides a potential means to obtain similar performance improvements from all of Arch Coal's PRB coals. As a result on June 25, 2010, we entered into a Development and License Agreement (the License Agreement) with Arch Coal that provides Arch Coal with an exclusive, non-transferable license to use certain technology to produce Enhanced Coal by the application of our proprietary coal treatment technology for coal mined by Arch Coal at mines and sites located in the PRB. We expect that the technology will reduce certain emissions from the burning of the PRB coal, which should help to meet the Air Toxics Rule. Pursuant to the License Agreement, we are providing development services to Arch Coal aimed at applying the technology to the PRB coal. In addition, if we develop improvements to the technology that are related to the reduction of certain emissions from the burning of PRB coal, that technology will either be included in the license at no additional cost, or, under certain circumstances, we will negotiate with Arch Coal to determine if Arch Coal wants to use the additional improvements. We retain all right, title and interest, including all intellectual property rights, in and to any technology we license to Arch Coal. The initial demonstration of coal treated at the mine and shipped by rail to a power plant produced promising results. Additional demonstrations are planned in 2011.

In consideration for the development work and the license to Arch Coal, Arch Coal paid us an initial, non-refundable license fee in cash of \$2 million in June 2010. Arch Coal may be obligated to make royalty payments to us that could amount to as much as \$1 per ton of Enhanced Coal sold by Arch Coal, depending upon the successful implementation of the technology and Arch Coal's future sales of the Enhanced Coal product. Arch Coal currently produces more than 100 million tons of PRB coal per year. Any royalty ultimately payable under the License Agreement will first be subject to credit to Arch Coal of an amount equal to the initial license fee, other development and operational costs paid by Arch Coal plus a rate of return on such payments.

As a part of entering into the License Agreement we agreed to negotiate and enter into a Supply Agreement under which Arch Coal will purchase the additives described in the License Agreement exclusively from us, and we will supply Arch Coal with the additives it needs. We expect to negotiate the final terms of the Supply Agreement in the next six months.

In recent tests we have shown that we can enhance PRB coal at the mine and achieve mercury reductions when the coal is burned at power plants. Based upon these results we are planning on sending additional trainloads of the coal to different plants to show the capabilities of this new product that we believe provides a benefit of \$2 to \$4 per ton of coal to the power plants. The proposed Air Toxics Rule could create a market for a significant percentage of the greater than 100 million tons per year of PRB coal mined by Arch Coal.



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### *Flue Gas Chemicals and Services*

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

### *Other Consulting Services*

We also offer consulting services to assist electric power generators in planning and implementing strategies to meet new government emission standards requiring reductions in SO<sub>2</sub>, NO<sub>x</sub>, particulates, acid gases 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.

We are investigating, developing and providing services and systems to measure and mitigate acid gases from coal fired boilers. These acid gas emissions are often the unintended result of the retrofit and operation of NO<sub>x</sub> control technology on medium to high sulfur coal-fired boilers.

## **CO<sub>2</sub> Capture**

### *Government and Industry-Supported Contracts*

The DOE issues solicitations periodically for various research, development and demonstration ( R&D ) projects. DOE solicitations range in subject matter, and we submit proposals for those solicitations that fit our mission, strategic plan and capabilities. The bids include a proposed statement of work and cost estimates, and DOE then negotiates a final contract with the successful bidder to perform the specified work. The contracts with the DOE can be Grants or Cooperative Agreements and are considered financial assistance awards. Generally, the agreements cover the development and/or demonstration of air pollution control technologies for coal-fired power generating plants. The work may involve designing and fabricating equipment, installing the equipment at power plants, testing the equipment, preparing economic studies, and preparing various reports. The deliverables required by the agreements include various technical and financial reports that we submit on a prescribed schedule. The agreements require us to perform the negotiated scope of work, which includes testing/demonstrating various air pollution control technologies. The agreements with the DOE provide that any inventions we create as a result of the work become our property and we retain the rights to commercialize any products we develop under the contracts. We are currently participating in two such agreements pursuant to which we are researching and developing a novel process to capture CO<sub>2</sub> from coal-fired power plants. We expect one project to be completed in 2011 with the remaining project to be completed by the end of 2014.

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

## **Carbon Solutions and AC Production**

We believe that the current supply capacity of AC will be inadequate for the projected demand created by the expanding mercury emissions control market. Without regard to Carbon Solutions' supply and production capabilities, we projected shortages of the material as early as 2012 coinciding with MACT regulation compliance. 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

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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 the expected regulations to reduce mercury emissions, the demand could nearly double by the end of 2012.

In 2006, we decided to pursue the design and construction of a new AC facility with the expected manufacturing capacity of approximately 150 million pounds of AC, sufficient to capture mercury from up to 40 GW of coal-fired power generation. This AC facility is based on a significantly improved technology that is cost-effective, energy efficient, and environmentally sound. All-in financing for the first production line and related activities is estimated at approximately \$400 million.

On October 1, 2008, we entered into a Joint Development Agreement and formed a joint venture with ECP known as Carbon Solutions. Carbon Solutions is principally engaged in the marketing and sale of AC produced at the AC Facility and development activities related to its AC business.

In July 2010, ADA Carbon Solutions (Red River), LLC ( Red River ) began shipping activated carbon to customers from its manufacturing facility. The plant operated during the year utilizing the furnace capacity required to service its customer base. We expect the plant to become fully operational during 2011. Red River continues to add customers from primarily the utility emissions sector.

**Formation of Advanced Emissions Solutions, Inc. and Proposed Reorganization**

On March 14, 2011, we, ADES, and ADA Merger Corp., a Colorado corporation and wholly owned subsidiary of ADES ( MergerCo ), entered into an Agreement and Plan of Merger (the Reorganization Agreement ), that provides for the merger (the Merger ) of ADA-ES with MergerCo, with ADA-ES surviving the Merger as a wholly owned subsidiary of ADES, and the conversion of each share of common stock, no par value per share ( ADA Common Stock ), of ADA-ES, issued and outstanding immediately prior to the effective time of the Merger (other than shares held in treasury, which will be cancelled), into one duly issued, fully paid and nonassessable share of common stock, par value \$0.001 per share ( ADES Common Stock ), of ADES (the Reorganization ). In addition, each outstanding option to purchase or other right to acquire shares of ADA Common Stock would automatically convert into an option to purchase or right to acquire, upon the same terms and conditions, an identical number of shares of ADES Common Stock.

Upon completion of the Reorganization, ADES will, in effect, replace ADA-ES as the publicly held corporation. ADES and its subsidiaries, including ADA-ES, will conduct all of the operations we currently conduct. We believe that implementing the holding company structure will provide us with strategic, operational and financing flexibility and incorporating the new holding company in Delaware will allow us to take advantage of the flexibility, predictability and responsiveness that Delaware corporate law provides. We expect that the ADES Common Stock will be traded on the NASDAQ Capital Market under the symbol ADES. The board of directors of ADES presently consists of the same persons comprising the ADA-ES board of directors. Upon consummation of the Reorganization, the ADES board of directors will be the same as the directors elected by our shareholders at the Annual Meeting. ADES expects that its executive officers following the Reorganization will be the same as those of ADA-ES immediately prior to the Reorganization.

The boards of directors of ADA-ES, ADES and MergerCo unanimously approved and adopted the Reorganization Agreement and the transactions contemplated thereby. The Reorganization Agreement is subject to specified conditions, including approval by our shareholders at our 2011 Annual Meeting of Shareholders (the Annual Meeting ), which is currently scheduled for May 25, 2011. If approved by ADA-ES 's shareholders at the Annual Meeting and the other conditions set forth in the Reorganization Agreement are satisfied, it is currently expected that the Reorganization would be completed on or about June 1, 2011.

The Reorganization Agreement may be terminated and the transactions contemplated thereby may be abandoned at any time prior to the effective time of the merger by action of our board of directors if it should determine that for any reason the completion of the transactions provided for therein would be inadvisable or not in the best interest of ADA-ES or its shareholders. The Reorganization is intended to be tax-free for ADA-ES and our shareholders for U.S. federal income tax purposes.

The foregoing description of the Reorganization is not complete and is qualified in its entirety by reference to the Reorganization as described in the preliminary joint proxy statement/prospectus ADES filed with the U.S. Securities and Exchange Commission (subject to completion) as part of its Registration Statement on Form S-4 relating to the

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Reorganization Agreement and by any future filings ADES or the Company may make regarding the Reorganization. The preliminary joint proxy statement/prospectus and other filings related to the Reorganization are available at the SEC's website (<http://www.sec.gov/>). Among other things, the filing states that the information in the preliminary joint proxy statement/prospectus is not complete and may be changed. **Neither the SEC nor any state securities commission has approved or disapproved of the securities to be issued under the proxy statement/prospectus or determined if the proxy statement/prospectus is accurate or adequate. Any representation to the contrary is a criminal offense.**

### **Competition**

Through 2010, our mercury control technology has been demonstrated at full scale at over 47 plants and 34 commercial ACI systems, generally yielding over 90% mercury control on most applications. Our approach to mercury control is quite cost effective compared to competing technologies that require capital intensive equipment. We add significant value to our base offerings by having complementary products and services. Our expertise in installing full-scale demonstration plants reflects our understanding of the application of mercury control technology that customers find invaluable. In combination with our practice of providing users with performance guaranties and offering both equipment and (through Carbon Solutions) AC, this expertise enhances our competitive position in this market. The capital equipment we provide for the larger utility coal-boilers generally ranges from approximately \$750,000 to \$1 million per coal-fired boiler unit. We estimate the AC usage to range from approximately \$1 million to \$2 million per year per unit for an average size plant (250-300 MW). We believe companies such as Norit Americas, Inc. ( Norit ), Alstom Power, Inc. and Cyld Bergeman have responded to requests for commercial bids for ACI systems, and are some of our principal competitors in this market. Competition for ACI systems is based primarily on price, quality, performance and the ability to meet the requested schedule. Based on the contracts we were awarded since 2005, we believe we are one of the market leaders and that we currently have approximately 30% of the existing market. As this market matures, we expect competition to continue to increase.

With respect to our RC technology, the main barriers to entry are the January 1, 2012 deadline to qualify RC facilities for the Section 45 tax credit, experience in developing such facilities and availability of capital. Electric power generating companies are generally slow to embrace new technologies when they perceive any potential for disruption in the production of electricity. Potential competition for RC technology comes from the use of coal blends and other types of emissions control as discussed above. However, the primary landscape for this business segment is the combination of emissions control and applicable tax credits. One other company that provides competitive Refined Coal technology is ChemMod, a subsidiary of Arthur J. Gallagher. ChemMod placed 20 to 30 Refined Coal facilities into service before the December 2009 deadline. As such they have had a one year head start on selling these systems to the power industry. We also compete for capital with others who either produce tax credits or are involved in tax-leveraged transactions. The list of those who provide such investment opportunities is wide and varied among industries.

### **Patents**

We have received 10 patents and have an additional 18 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 and Arch Coal, as noted above. We typically negotiate blending contracts that include secrecy agreements with chemical suppliers located near major 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.

Carbon Solutions supplies electric power generation customers with AC for mercury control needs. In 2008, Carbon Solutions commenced deliveries of this material, procured from foreign suppliers and processed at its facilities for quality and product control. During 2010, supply of AC primarily came from production at the AC Facility.

### **Raw Materials and Working Capital Practices**

We purchase equipment from a variety of vendors for the engineered ACI systems, components and other equipment we manufacture or provide. Such equipment is available from numerous sources; however based on the system requested by the customer, we may determine that some sources are not suitable. We typically subcontract the major portion of the work associated with installation of such equipment from a variety of vendors, usually located near the work site. We purchase our proprietary chemicals through negotiated blending contracts with chemical

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suppliers generally located near each major customer. The chemicals used are readily available, and there are several chemical suppliers that can provide us with our requirements. We enhance coal through a propriety process and components of the enhancement are readily available. 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 chemicals and RC facility operations depend on the operations of the electric power generators to which the applicable equipment and products are provided. These customers routinely schedule maintenance outages in the spring or fall depending upon the operation of the boilers. During the period in which an outage may occur, which may range from one week to over a month, no chemicals are used or RC produced and purchases from us and related revenues are correspondingly reduced. The other aspects of our business are not seasonal in any material way.

### **Dependence on Major Customers**

In 2010, we performed work to supply ACI systems to 18 customers. In 2010, through Clean Coal, we recognized 47% of our total revenue from GS RC Investments, LLC. In addition, we recognized 7% of our revenue from services provided under a contract with the DOE. (See Note 5 to the Consolidated Financial Statements included elsewhere in this Report). Our own sales staff markets our technology through trade shows, mailings and direct contact with potential customers.

### **Backlog Orders**

As of December 31, 2010, we had contracts in progress for work related to our EC segment totaling approximately \$2.9 million. We expect to recognize approximately 90% of this revenue in 2011, with the balance to be completed and realized in 2012. Our current DOE and industry funded R&D contracts in progress, assuming no changes in funding, are expected to result in future revenues of \$18.8 million, of which we expect to recognize approximately \$2.4 million in 2011.

### **Research and Development Activities**

In 2010, we were involved in several R&D contracts funded by DOE, industry groups and ourselves, primarily directed toward the control of mercury emissions, RC activities and CO<sub>2</sub> capture. We participate in cost share arrangements in many of those contracts. We had no significant direct cost share for R&D under DOE related contracts in either 2010 or 2009. We spent approximately \$100,000 and \$170,000 on our own behalf on research and development activities related to further development of our technologies during 2010 and 2009, respectively.

### **Employees**

As of December 31, 2010, we employed 57 full-time and part-time personnel, including seven Company executive officers. Fifty-five people are employed at our offices in Littleton, Colorado, one in Maryland, and one in Pennsylvania.

### **Copies of Reports**

Our periodic and current reports are filed with the SEC pursuant to Section 13(a) of the Securities Exchange Act of 1934 and are available free of charge within 24 hours after they 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

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Compensation Committee Charter

Nominating and Governance Committee Charter

Code of Conduct

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### **Forward-Looking Statements Found in this Report**

This Annual Report contains forward-looking statements within the meaning of Sections 21E of the Securities Exchange Act of 1934 and 27A of the Securities Act of 1933 that involve risks and uncertainties. In particular such forward-looking statements are found in this Part I 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) when final MACT-based mercury and other regulations or pollution control requirements will be promulgated and become effective and the scope and impact of such regulations;
- (b) expected growth in our target markets;
- (c) who are potential competitors are and who they will be in the future, expected levels of competition in our target markets and whether we have direct competition for our technology;
- (d) expected supply and demand for our products and services;
- (e) expected growth in the power industry's interest in and funding for CO<sub>2</sub> capture projects;
- (f) continued funding by Congress of our DOE CO<sub>2</sub> projects, including industry cost share of such projects;
- (g) the effectiveness of our technologies;
- (h) expected timing of conducting additional demonstrations of our technology and completing a supply agreement with Arch Coal;
- (i) the timing of awards of, and work under, our contracts and agreements and their value and their availability;
- (j) expected production levels at our two RC facilities owned by Clean Coal and leased to a third party;
- (k) our ability to develop, place into service, generate Section 45 tax credits and profitably sell, lease and/or operate additional RC facilities;
- (l) possible changes in the level of our ownership of Carbon Solutions, our joint venture with ECP;
- (m) the expected costs, capacity of, timing of full operational capacity and anticipated sales levels at the AC Facility built by Red River;
- (n)

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the willingness and ability of ECP to continue to fund operations of the AC Facility through contributions and loans to Carbon Solutions and its subsidiaries;

- (o) availability of lease space in the states we do business;
- (p) timing and amounts of or changes in future revenues, funding for our business and projects, margins, expenses, earnings, dividends, tax rate, cash flow, working capital, liquidity and other financial and accounting measures;
- (q) impact of pending legal actions and appeals, including the costs thereof and our indemnity obligations to Carbon Solutions and ECP;
- (r) the materiality of any future adjustments to previously recorded revenue as a result of DOE audits; and
- (s) the costs, benefits and results related to the Reorganization including the holding company structure and the impact of Delaware law; timing and completion of the Reorganization; the trading symbol of ADES's stock and on what exchange it will trade after the Reorganization; who the directors and executive officers of ADES will be after the Reorganization; and the tax implications of the Reorganization.

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

- (a) coal will continue to be a major source of fuel for electrical generation in the United States;
- (b) we will continue as a key supplier of equipment and services to the coal-fired power generation industry as it seeks to implement reduction of mercury emissions;
- (c) contracts we have with the DOE will continue to be funded at expected levels and we will be chosen to participate in additional contracts of a similar nature;
- (d) current environmental laws and regulations requiring reduction of mercury from coal-fired boiler flue gases will be expanded and strengthened as a result of the EPA MACT process and by pending federal 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 and continue meet our other obligations under contracts;
- (f) we will be able to obtain adequate capital and personnel resources to meet our operating needs and to fund anticipated growth and our indemnity obligations;
- (g) we will be able to establish and retain key business relationships with other companies;
- (h) orders we anticipate receiving will in fact be received;
- (i) we will not be subject to a significant adverse judgment in our pending arbitration with Norit;





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- (j) governmental audits of our cost incurred 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, including those for Enhanced Coal, that will be useful to, and accepted by, the coal-fired boiler power generation business;
  
- (l) we will be able effectively to compete against others;
  
- (m) Red River will produce and sell AC at its maximum capacity;
  
- (n) we will be able to meet any technical requirements of projects we undertake;
  
- (o) Clean Coal will be able to monetize new RC facilities; and
  
- (p) our Annual Meeting will occur on May 25, 2011, shareholders will approve the Reorganization and we will be able to obtain the expected benefits of the Reorganization.

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

**Item 1A. Risk Factors.**

**RISKS RELATING TO OUR BUSINESS**

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

**DEMAND FOR OUR PRODUCTS AND SERVICES DEPENDS SIGNIFICANTLY ON ENVIRONMENTAL LAWS AND REGULATIONS; UNCERTAINTY AS TO THE FUTURE OF SUCH LAWS AND REGULATIONS, AS WELL AS CHANGES TO SUCH LAWS AND REGULATIONS, 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 present and expected environmental laws and regulations that limit mercury emissions from coal-fired power plants and other environmental laws. If such laws and regulations were rescinded or substantially changed to increase acceptable emission limits, our business would be adversely affected by declining demand for such products and services. For example:

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The invalidation of CAMR in February 2008 resulted in a "wait and see" approach by our customers, which we have seen in delays in orders and deliveries of previously placed orders, cancellations or delays in planned product demonstrations and decreased sales to coal-fired electric generating utilities. Such uncertainty has also caused delays in purchasing decisions for EC equipment, especially for those utilities who were considering multi-pollution control solutions.

In October 2009, the EPA agreed to promulgate final rules to reduce HAPs from coal-fired power plants, based on MACT by November 2011 with implementation in 2014 and a draft of such regulations was issued on March 16, 2011. A lack of definitive mercury (and other HAPs) emission regulations until then will likely continue the uncertainty among independent power producers and utilities as to what will be required of them as far as mercury (and other HAPs) controls, which has adversely impacted their ability to

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include pollution control costs in their rate bases. This uncertainty is and will likely continue to negatively impact our business, results of operations and financial condition until new federal regulations are finalized, which will then mandate how industry must respond to the new federal regulations or state laws, including those that are presently in various stages of enactment, for pollution control and permitting requirements for new coal-fired plants. We do not expect significant revenue growth in this area unless and until federal or state regulations impact a significant portion of the 1,200 existing boilers.

Rescission of Canadian or U.S. state mercury control legislation or permitting requirements would likely cause an adverse effect on our business and financial condition.

To the extent federal, state and local legislation mandating that electric power generating companies serving a state or region purchase a minimum amount of power from renewable energy sources such as wind, hydroelectric, solar and geothermal, and such amount lessens demand for electricity from coal-fired plants, those mandates would likely reduce demand for our products and services.

Enactment of laws or passage of regulations regarding emissions from the combustion of coal by the U.S. or some of its states or by other countries, or other actions to limit such emissions including public opposition to new coal power plants, has caused and could continue to cause electricity generators to transition from coal to other fuel and power sources, such as natural gas, wind, hydroelectric and solar. The potential financial impact on us of future laws or regulations or public pressure will depend upon the degree to which electricity generators diminish their reliance on coal as a fuel source. That, in turn, will depend on a number of factors, including the specific requirements imposed by any such laws or regulations, the periods over which those laws or regulations would be phased in, amount of public opposition and the state of commercial development and cost of related technologies and processes. In view of the significant uncertainty surrounding each of these factors, we cannot reasonably predict the impact that any such laws or regulations or public opposition may have on our results of operations, financial condition or cash flows.

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

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

Norit, which is an AC manufacturer with whom we have previously done business, filed a lawsuit against us, Carbon Solutions, certain of Carbon Solutions' subsidiaries (collectively with Carbon Solutions, the "AC Supply Companies") and two of Carbon Solutions' employees (who were former employees of Norit) asserting claims for misappropriation of trade secrets and other claims, and seeking monetary damages and injunctive relief that seek to prevent us from using what they allege to be Norit trade secrets and other intellectual property involving the manufacture of AC, particularly in connection with the AC Facility. The case, which was originally captioned Norit Americas, Inc. v. ADA-ES, Inc., ADA Environmental Solutions, LLC, John Rectenwald, and Stephen Young, Cause No. 08-0673 (the "Norit Action") was filed in Harrison County, Texas in August 2008, was moved by order of the court to binding arbitration in Atlanta, Georgia, and was heard by the arbitration panel in October and November, 2010 with final closing statements made in February, 2011. The panel has indicated it intends to issue its decision in April 2011. In addition, in December 2009, Norit N.V., which is the Dutch parent of Norit, opened a preliminary proceeding in the Almelo District Court, the Netherlands, to take preliminary testimony based on allegations that we violated a confidentiality agreement entered into by us in 2005 with Norit N.V. Responding to Norit's claims, whether or not they are ultimately found to have any merit, has been time consuming and very costly, and the ultimate outcome of these matters is presently unknown. In addition, the litigation could result in substantial damages for which we would likely be responsible. Finally, pursuant to agreements we have entered into with ECP and the Carbon Solutions, certain liabilities were expressly excluded from the transactions ("Excluded Liabilities"), including liabilities with respect to the Norit Action, and we are obligated to provide indemnity against the reasonable costs, expenses and losses that are incurred as a result of such Excluded Liabilities (the "Indemnity Obligations"). Satisfaction of any Indemnity Obligations to ECP and its deemed affiliates may be made via a decrease in our capital contributions (and corresponding increase in ECP's capital contributions) in Carbon Solutions and adjustment of each party's percentage ownership accordingly. As described above, such amounts are substantial, and, if payment were required, it would likely have a material adverse effect on our business and financial condition.



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***We may not have sufficient working capital to fund the Indemnity Obligations or other indemnity claims and maintain and grow our business.***

Our principal source of liquidity has been our existing working capital. Although we had positive operating cash flow for the year ended December 31, 2010, this trend may not continue into 2011 as a result of resolving our indemnity liability related to legal expenses incurred in connection with the Norit Action. Carbon Solutions has funded, through loans or equity contributions from ECP to Carbon Solutions, a significant portion of the legal expenses related to the Norit Action. As of December 31, 2010, we had recorded a liability to Carbon Solutions of approximately \$27.4 million related to such expenses. We have not currently recorded any accrued indemnity obligations to ECP, and we are unable to estimate the total amount of any future indemnity obligations to Carbon Solutions or ECP at this time. ECP has notified us that it believes such obligations include any losses it suffers due to its loss of potential customers and diminution in the value of its businesses as well as costs and fees it has incurred and will incur and any damages it may suffer as a result of a new lawsuit Norit N.V. has filed against ECP in state court in New Jersey. Our ability to generate the financial liquidity required to meet ongoing operational needs and to meet our current and future indemnification obligations to Carbon Solutions and potentially to ECP, will likely depend upon several factors, including timing of satisfaction and ultimate amount of the Indemnity Obligations, insurance coverage with respect to the Norit Action, our ability to maintain a significant share of the market for mercury control equipment, continued operation of Clean Coal's two facilities and Clean Coal's success in monetizing Section 45 tax credits through the sale or lease of additional facilities to third party investors. Our failure to have sufficient working capital to fund these obligations would likely have a material adverse impact upon our business and financial condition.

***In addition to the Indemnity Obligations, we have provided guaranties and undertaken other commitments of approximately \$30 million as of December 31, 2010 related to Carbon Solutions and do not have sufficient working capital to meet such obligations if they were called upon.***

We have guaranteed significant amounts owed by Red River under the contract for the engineering, procurement and construction of the AC Facility. As of December 31, 2010, the remaining obligations under this contract totaled approximately \$12.3 million. Although Red River can terminate this contract for convenience at any time, Red River (and us, based on our guaranty) would then owe the contractor the amount earned through the termination date, cancellation charges to subcontractors, other reasonable termination-related costs incurred by the contractor, costs of demobilization and unreimbursed sales taxes paid by the contractor. We have also guaranteed the payment by Red River of amounts owing under four multi-hearth furnace contracts for the AC Facility. As of December 31, 2010, the remaining obligation under these contracts was approximately \$6.7 million. Red River can terminate these contracts at any time for convenience; however, Red River would then owe the supplier for reimbursable costs and amounts owed for milestone and progress payments, cancellation charges to subcontractors and costs of demobilization. These amounts could be substantial and may not be completely recoverable by us if Red River were to abandon or sell the AC Facility. Finally, we have guaranteed Red River's obligations under two AC sales agreements with a maximum liability of \$11 million. If Red River cannot meet its obligations under these agreements, we may be liable to the customers for significant damages, which would materially adversely affect our financial condition.

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

Under terms of agreements with Carbon Solutions, as amended in August, 2009, Red River has agreed to reimburse us and ECP if we or they make payments related to the guaranties provided by ECP and us and has granted a security interest in its assets to ECP and us to secure the reimbursement agreement and any loans ECP makes to Red River. Carbon Solutions has guaranteed the obligations of Red River under a reimbursement and loan agreement and has pledged its equity interest in Red River to ECP and us as security for this guaranty. We have assigned our rights under these agreements to ECP, and any amounts payable to us would be paid directly to ECP until ECP's preferred equity in Carbon Solutions is fully redeemed or converted and all loans to Red River have been paid in full. As of December 31, 2010, the outstanding amount of ECP's preferred equity totaled \$89.3 million, and the principal balance of ECP's loans to Red River totaled \$193.8 million. These amounts will likely continue to increase until permanent debt financing is in place. ECP's loans to Red River are evidenced by secured demand notes bearing interest at 12% per annum compounded quarterly.

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**ECP CONTROLS CARBON SOLUTIONS AND MAY DILUTE OUR EQUITY FURTHER SUCH THAT WE WOULD LOSE ADDITIONAL MANAGEMENT RIGHTS, WHICH MAY ADVERSELY AFFECT OUR ABILITY TO PARTICIPATE IN THE FUTURE GROWTH ANTICIPATED IN THE AC SUPPLY MARKET.**

Carbon Solutions is managed by a Board of four Managers, three of which are designated by ECP. Certain major transactions require the written consent of members holding at least 75% of the aggregate Carbon Solutions membership interests, of which we held 25.9% as of December 31, 2010. If ECP makes additional ordinary capital contributions to Carbon Solutions or converts its demand loans or preferred equity contributions to ordinary capital contributions, our percentage ownership interest would be further diluted. In addition, if we fail to promptly pay our indemnity obligations to ECP, although no dollar amounts have been specified by ECP as of the date of this report, ECP may decrease our capital contributions (and increase ECP's capital contributions) in Carbon Solutions and adjust each party's percentage ownership accordingly. If our interest in Carbon Solutions is diluted to less than 15%, we would lose our rights to designate our one remaining designee on the Board of Managers, and Carbon Solutions would be managed exclusively by ECP and its designees. If all of ECP's outstanding equity and loans were converted to ordinary capital contributions, our percentage ownership interest would be diluted to less than 15%. A dilution in our interest in Carbon Solutions may adversely affect our ability to participate in the future growth of the AC supply market.

**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, uncertainty and costs related to possible periods of significant or prolonged inflation or deflation;

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

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

We face competition in all aspects of our operations, including competition from both domestic and foreign suppliers. In North America, our competitors consist of large national and international companies and local and regional companies of varying sizes and financial resources. Certain of our competitors have advantages over us, including substantially greater financial and other resources. We may not be able to successfully compete with them. We have seen our market share for ACI systems decline due to pricing pressures from increased competition. If we are unable to maintain a significant market share for our systems, our financial prospects 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 market share, margins, revenues and business.

**IF THE DOE DISCONTINUES FUNDING OF EXISTING AND PLANNED CO<sub>2</sub> CAPTURE TECHNOLOGY PROGRAMS, OUR BUSINESS WOULD BE HARMED.**

For the years 2010 and 2009, 7% and 19%, respectively, of our revenues were derived from or related to DOE programs. If Congress does not appropriate funds consistent with past practice for research and development of CO<sub>2</sub> capture technology programs or other programs in which we might participate, our business and financial condition would be harmed.

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

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

**THE ABILITY OF CLEAN COAL TO CONTINUE OPERATIONS AT ITS EXISTING RC FACILITIES AND TO MONETIZE SECTION 45 TAX CREDITS FROM THE SALE OR LEASE OF ADDITIONAL RC FACILITIES IS NOT ASSURED, AND THE INABILITY TO SELL AND OPERATE RC FACILITIES TO GENERATE SECTION 45 TAX CREDITS COULD ADVERSELY AFFECT OUR FUTURE GROWTH AND PROFITABILITY.**

Clean Coal placed two RC facilities into operation prior to January 1, 2010, the initial required date for doing so under Internal Revenue Code provisions for Section 45 tax credits for RC to be produced by the facilities, and has leased the facilities to a third party in exchange for rent payments based on the availability of Section 45 tax credits to the lessee. As a result of the extension of the placed in service deadlines for facilities eligible for Section 45 tax credits to January 1, 2012, Clean Coal is attempting to sell or lease additional facilities and monetize the Section 45 tax credits resulting from the sale of refined coal from these facilities, but does not yet have agreements in place with any third parties to do so. The inability of Clean Coal to continue operations at its existing RC facilities or to successfully sell additional facilities and monetize the Section 45 tax credits that it expects to generate from those facilities would likely have an adverse effect on future growth and profitability.

In addition, if in the future electric power generators decide not to burn and use RC and instead switch to another power or fuel source, Clean Coal would likely be unable to fully monetize the Section 45 tax credits potentially available from current and future RC facilities over the anticipated term of the tax credits.

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

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

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

Clean Coal placed its first two RC facilities into operation in June 2010 and is attempting to sell or lease additional facilities. Clean Coal is continuing to evaluate the likelihood for technical or operational problems with its current and future RC facilities from long-term operations, but cannot be certain that such problems will not arise. Any such problems could result in decreased production of RC at such facilities and delays in, or postponement or cancellation of, expected installations at potential facilities and would likely have a material adverse effect on our business and financial condition.



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

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

There may be limited sources of acceptable supply for some key ACI system components and a limited universe of third party manufacturers who can assemble RC facilities to our satisfaction. Business disruptions, financial difficulties of the manufacturers or suppliers of these components and facilities or raw material shortages could increase the cost of our goods sold or reduce the availability of these components and affect Clean Coal's ability to build RC facilities within the extended placed-in-service date. If orders of ACI systems and opportunities to build new RC facilities accelerate as we anticipate, we will likely experience a rapid and substantial increase in our need for components and facilities. 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 and customers or liability for liquidated damages under delivery contracts. If we fail to build and sell additional RC facilities in a timely manner, we may miss the opportunity of the extended placed-in-service date. Either of these scenarios 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 ACI systems (such as silos) or RC facilities 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 prices of commodities that we require in our operations, including steel for silos, iron waste products and other chemicals, are 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 AND ISSUING PAYMENT AND PERFORMANCE GUARANTIES FOR CLEAN COAL'S RC FACILITIES IS UNKNOWN AND COULD ADVERSELY AFFECT OUR FINANCIAL CONDITION.**

Performance and payment guaranties have been and may likely continue to be an integral part of successful sales of our products and services. Guaranties with respect to our ACI systems 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. In addition, we, NexGen and two entities affiliated with NexGen have provided Clean Coal's sublessee with joint and several guaranties guaranteeing any payments and performance that might be due the lessee under the various agreements Clean Coal executed. Any substantial payments under such guaranties would have a material adverse effect on our financial position, results of operations and cash flows.

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**WE DEPEND ON KEY PERSONNEL.**

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

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

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

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

Fourteen of our completed and current contracts awarded by the DOE and related industry participants remain subject to adjustments as a result of future government audits. Our historical experience with these audits has not resulted in significant adverse adjustments to amounts previously received; however the audits for the years 2004 and later have not been finalized. Revenues recognized from 2004 through 2010 that are subject to government audit totaled approximately \$29 million. In addition, we had \$18.8 million of remaining unearned amounts under contracts subject to audit as of December 31, 2010. 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 or future 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 ADDITIONAL INVESTMENTS IN OUR BUSINESSES.**

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

**RISKS RELATED TO PROPOSED REORGANIZATION INTO A DELAWARE HOLDING COMPANY**

**OUR BOARD OF DIRECTORS MAY CHOOSE TO DEFER OR ABANDON THE REORGANIZATION.**

Completion of the Reorganization may be deferred or abandoned, at any time, by action of our board of directors, whether before or after the Annual Meeting. While we currently expect the Reorganization to take place on or about June 1, 2011, assuming that the Reorganization proposal is approved at the Annual Meeting, ADA-ES's board may defer completion or may abandon the Reorganization because of any determination by our board of directors that the Reorganization would not be in the best interests of ADA-ES or its shareholders or that the Reorganization would have material adverse consequences to ADA-ES or its shareholders.



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**WE MAY NOT OBTAIN THE EXPECTED BENEFITS OF OUR REORGANIZATION INTO A HOLDING COMPANY.**

We believe our Reorganization into a holding company will provide us with benefits in the future. These expected benefits may not be obtained if market conditions or other circumstances prevent us from taking advantage of the strategic, business and financing flexibility that we believe it will afford us. As a result, we may incur the costs of creating the holding company without realizing the possible benefits.

**AS A HOLDING COMPANY, ADES WILL DEPEND IN LARGE PART ON DIVIDENDS FROM ITS OPERATING SUBSIDIARIES TO SATISFY ITS OBLIGATIONS.**

After the completion of the Reorganization, ADES will be a holding company with no business operations of its own. Its only significant assets will be the outstanding capital stock of its subsidiaries, which will initially be ADA-ES and its subsidiaries. As a result, ADES will rely on funds from ADA-ES and any subsidiaries that it may form in the future to meet its obligations.

**THE MARKET FOR ADES SHARES MAY DIFFER FROM THE MARKET FOR ADA-ES SHARES.**

Although it is anticipated that the ADES common shares will be authorized for listing on the NASDAQ Capital Market, the market prices, trading volume and volatility of the ADES shares could be different from those of the ADA-ES shares.

**ANTI-TAKEOVER PROVISIONS IN ADES' S CERTIFICATE OF INCORPORATION AND BYLAWS MAY DELAY OR PREVENT A THIRD PARTY ACQUISITION OF ADES, WHICH COULD DECREASE THE VALUE OF ADES' S COMMON STOCK.**

The certificate of incorporation and bylaws of ADES contain provisions that could make it more difficult for a third party to acquire it without the consent of its board of directors. These provisions, the first three of which are currently in effect with respect to ADA-ES, will:

limit the business at special meetings to the purpose stated in the notice of the meeting;

authorize the issuance of blank check preferred stock, which is preferred stock with voting or other rights or preferences that could impede a takeover attempt and that the board of directors can create and issue without prior stockholder approval;

establish advance notice requirements for submitting nominations for election to the board of directors and for proposing matters that can be acted upon by stockholders at a meeting; and

require the affirmative vote of the disinterested holders of a majority of our common stock to approve certain business combinations involving an interested stockholder or its affiliates, unless either minimum price criteria or procedural requirements are met, or the transaction is approved by a majority of our continuing directors (known as fair price provisions).

Although we believe all of these provisions will make a higher third-party bid more likely by requiring potential acquirors to negotiate with the board of directors, these provisions will apply even if an initial offer may be considered beneficial by some stockholders and therefore could delay and/or prevent a deemed beneficial offer from being considered.

**RIGHTS AFTER THE REORGANIZATION WILL BE DIFFERENT FROM, AND MAY BE LESS FAVORABLE THAN, ADA-ES' S SHAREHOLDERS CURRENT RIGHTS AS A SHAREHOLDER OF A COLORADO CORPORATION.**

After the completion of the Reorganization, each ADA-ES shareholder will become a stockholder of a public company incorporated in Delaware instead of Colorado. As a result, each ADA-ES' s shareholder' s rights as a stockholder will be governed by Delaware corporate law as opposed to Colorado corporate law. Because they are separate bodies of law, Delaware corporate law will be different from Colorado corporate law.

Although many of these differences will not have a significant impact on the rights of stockholders, some of these differences may be more or less favorable to stockholders. Some of the differences between Delaware and Colorado corporate law that may be less favorable to stockholders after the completion of the reorganization include the following:

under Delaware corporate law, fewer corporate transactions give rise to dissenters' rights than under Colorado corporate law; and

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under Delaware corporate law and ADES's bylaws, holders of 20% of the voting shares of ADES will have the right to call a special meeting of stockholders, as opposed to Colorado corporate law, which gives holders of 10% of the voting shares the right to call a special meeting.

These differences may limit the significance of an ADA-ES shareholder's rights as a stockholder in these contexts.

**THE PROPOSED REORGANIZATION INTO A HOLDING COMPANY MAY RESULT IN SUBSTANTIAL DIRECT AND INDIRECT COSTS WHETHER OR NOT COMPLETED.**

The Reorganization may result in substantial direct costs. These costs and expenses are expected to consist primarily of attorneys' fees, accountants' fees, filing fees and financial printing expenses and will be substantially incurred prior to the vote of our shareholders at the Annual Meeting. The Reorganization may also result in certain indirect costs by diverting the attention of our management and employees from our business and by increasing our administrative costs and expenses. These administrative costs and expenses will include keeping separate records and in some cases making separate regulatory filings for each of ADES and ADA-ES. The Reorganization may also result in certain state sales taxes and other transfer taxes.

**RISKS RELATING TO OUR COMMON STOCK**

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

As of March 25, 2011, we had 7,605,938 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 COULD DECREASE THE VALUE OF THE OUTSTANDING SHARES OF OUR COMMON STOCK.**

On January 28, 2011, we filed a shelf registration to raise \$140 million in connection with our fundraising efforts by which we may issue additional shares of common stock or convertible securities with preferences and priorities over those of our common stock. The issuance of any additional securities could dilute the percentage interests and per share book value of existing shareholders and have a detrimental impact on the market for our common stock.

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

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

Actual or anticipated fluctuations in our operating results and financial condition;

changes in laws or regulations and court rulings;

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

the impact or perceived impact of our ongoing legal actions with Norit and Norit N.V. on our business;

the Section 45 placed-in-service extension;

changes in government funding of our projects;

announcements of sales awards;

conditions and trends in our industry;

changes in supply and demand of key equipment and raw materials;

adoption of new accounting standards affecting our industry;

changes in financial estimates by securities analysts;

perceptions of the value of corporate transactions; and

the degree of trading liquidity in our common stock and general market conditions.

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From December 31, 2009 to December 31, 2010, the closing price of our common stock ranged from \$4.65 to \$11.16 per share. Significant declines in the price of our common stock could impede our ability to obtain additional capital, attract and retain qualified employees and reduce the liquidity of our common stock.

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

**OUR ARTICLES OF INCORPORATION AND BYLAWS CONTAIN PROVISIONS THAT MAY DELAY OR PREVENT AN OTHERWISE BENEFICIAL TAKEOVER ATTEMPT OF OUR COMPANY.**

Certain provisions of our articles of incorporation and bylaws could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our shareholders. These include provisions:

establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at shareholders' meetings; and

allowing our board of directors to issue shares of preferred stock without shareholder approval.

These provisions, alone or in combination with each other, may discourage transactions involving actual or potential changes of control, including transactions that otherwise could involve payment of a premium over prevailing market prices to holders of our common stock, or could limit the ability of our shareholders to approve transactions that they may deem to be in their best interest.

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

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

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

We are required to comply with Section 404 of the Sarbanes-Oxley Act of 2002. While we concluded that at December 31, 2010, we had no material weaknesses in our internal controls over financial reporting, we cannot assure you that we will not have a material weakness in the future. A material weakness is a control deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. If we fail to maintain a system of internal controls over financial reporting that meets the requirements of Section 404, we might be subject to sanctions or investigation by regulatory authorities such as the Securities and Exchange Commission or by the NASDAQ Stock Market. Additionally, failure to comply with Section 404 or the report by us of a material weakness may cause investors to lose confidence in our financial statements and our stock price may be adversely affected. If we fail to remedy any material weakness, our financial statements may be inaccurate, we may be subject to shareholder litigation and 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.



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**Table of Contents****Item 2. Properties.***Office Leases*

We lease all of our office facilities covering approximately 26,000 square feet of combined office and warehouse space in Littleton, Colorado, a suburb of Denver. The term of all the leases runs through August 31, 2012. One lease agreement has options to extend the lease for a portion of the facilities for three one-year periods, while another lease agreement has one option to extend the lease term for another portion of the facilities for one three-year period. In the near-term, we believe that sufficient space is available at reasonable rates in areas where we do business. Future annual average lease costs are expected to amount to approximately \$242,000 through the end of the leases. We have subleased approximately 5,300 square feet of combined office and warehouse space to Carbon Solutions. The initial term of this sublease runs through August 31, 2012. Future annual sublease rental income is expected to amount to approximately \$84,000.

*Clean Coal Leases*

Clean Coal leased two RC Facilities in June 2010 to an independent third party. The leases have initial terms that run through December 31, 2012 and automatically renew for annual terms through the end of 2019, subject to a number of termination clauses. Clean Coal receives fixed and contingent rent payments as defined in the lease agreements. Future minimum fixed rent payments through 2019 total \$118.3 million and do not include contingent rental payments which are based on the production of RC. The two RC Facilities revert back to Clean Coal upon termination of the leases.

**Item 3. Legal Proceedings.**

*Litigation with Norit Americas, Inc. and Norit N.V.* As previously reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009 and Quarterly Reports on Form 10-Q filed in 2010, Norit, which is an AC manufacturer with whom we have previously done business, filed a lawsuit against us, ADA Environmental Solutions LLC, Carbon Solutions (formerly known as Crowfoot Development, LLC), Red River (now known as ADA Carbon Solutions (Red River), LLC), Underwood Environmental Products, LLC, Morton Environmental Products, LLC and two employees of Carbon Solutions (who were former employees of Norit and who are now employees of Carbon Solutions) (collectively the ADA Defendants ) on August 4, 2008, asserting that the ADA Defendants have misappropriated Norit's trade secrets related to AC manufacturing, and other claims. The original case, captioned Norit Americas, Inc. v. ADA-ES, Inc., ADA Environmental Solutions, LLC, John Rectenwald, Stephen D. Young, Crowfoot Development, LLC, Red River Environmental Products, LLC, Underwood Environmental Products, LLC, Morton Environmental Products, LLC f/k/a Bowman Environmental Products, LLC, Cause No. 08-0673, was filed in the 71st Judicial District Court for Harrison County, Texas. Norit is seeking monetary damages under various legal theories, attorney fees, and injunctive relief to prevent us or any related entity or third party from using Norit's alleged trade secrets or other Norit intellectual property related to AC manufacturing. We are vigorously defending against Norit's claims, which management believes are without merit. Also as previously reported, after more than a year of litigation in Texas and the filing of cross motions to compel arbitration of all or some of the claims pending between the parties, the parties agreed to resolve all claims between them in an arbitration currently pending in Atlanta, Georgia before a panel of three arbitrators under the rules of the American Arbitration Association. The ADA Defendants and Norit filed statements of claims in the arbitration which added additional claims against each other arising out of their former relationship. The arbitration panel met in Atlanta for approximately four weeks in October and early November 2010. Final briefs and oral arguments were heard by the arbitrators on February 8, 2011, with the arbitrators expected to make their final ruling within 60 days.

As also previously reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009 and our Quarterly Reports on Form 10-Q filed in 2010, in December, 2009, Norit N.V., the Dutch parent of Norit, filed a petition with the Almelo District Court in the Netherlands requesting that the court conduct preliminary witness examinations into possible breaches of a confidentiality agreement we signed with Norit N.V. in 2005 as part of due diligence for a potential acquisition of Norit's carbon business. These alleged breaches of the 2005 confidentiality agreement are also the subject of the arbitration in Atlanta and so it is our position that the petition in the Netherlands is a duplicative matter, in addition to being groundless. The petition, which is a pre-litigation procedure in the Netherlands designed to determine if there is a basis to bring a claim, does not require any direct response by us and is currently pending before the Dutch court. As of this date, no witness statements have been taken in the matter and to our knowledge, the Dutch court has not made any findings with respect to the matter. We have attempted to determine if the Dutch court has been properly advised by Norit N.V. of the pending arbitration in Atlanta but have received no substantive information regarding this matter from Norit N.V. or the Dutch court.

*Litigation with Calgon Carbon Corporation.* As previously reported in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009, and Quarterly Reports on Form 10-Q filed in 2010, on September 29, 2008, Calgon filed a declaratory judgment action against us in the United States District Court for the Western District of Pennsylvania. The case, captioned Calgon Carbon Corporation v. ADA-ES, Inc., concerns a March 20, 2007



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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 during the term of the MOU. We believe this bid and our marketing efforts with Midwest resulted in an award of an AC contract for Calgon and pursuant to the MOU we counterclaimed for commissions due under the MOU. After a seven day jury trial in July 2010 in Pittsburgh, Pennsylvania, the jury awarded us \$12 million on our breach of contract claim for commissions, comprised of \$3 million for sales to date by Calgon and \$9 million as the net present value of commission due to us for future sales by Calgon to Midwest Generation. Calgon filed various post trial motions requesting that the verdict be reversed or modified, all of which motions were rejected by the Court. In late October, Calgon filed a notice of appeal to the Third Circuit Court of Appeals. On December 22, 2010, we reached a settlement with Calgon pursuant to which Calgon paid us \$7.2 million in return for the satisfaction of the judgment.

**Item 4. (Removed and Reserved)****PART II****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.****Market Information**

Our common stock currently trades on the NASDAQ Capital Market under the symbol ADES. The table below sets forth the price range of our common stock for 2010 and 2009:

|                         | 2010     |         | 2009    |         |
|-------------------------|----------|---------|---------|---------|
|                         | High     | Low     | High    | Low     |
| 1 <sup>st</sup> Quarter | \$ 9.50  | \$ 4.72 | \$ 5.97 | \$ 2.42 |
| 2 <sup>nd</sup> Quarter | \$ 8.31  | \$ 5.00 | \$ 5.00 | \$ 2.45 |
| 3 <sup>rd</sup> Quarter | \$ 7.17  | \$ 4.72 | \$ 4.70 | \$ 3.05 |
| 4 <sup>th</sup> Quarter | \$ 11.70 | \$ 4.54 | \$ 7.45 | \$ 2.05 |

**Holders**

The number of record holders of our common stock as of March 25, 2011 was approximately 1,500. The approximate number of beneficial shareholders is estimated at 3,500.

**Dividends**

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

**Securities authorized for issuance under equity compensation plans**

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

**Purchases of Equity Securities by the Company and Affiliated Purchasers**

Neither we nor any affiliated purchaser, as defined in SEC Rule 10b-18(a)(3), purchased any of our equity securities during the quarter ended December 31, 2010.

**Table of Contents****Item 6. Selected Financial Data.****FIVE-YEAR SUMMARY OF SELECTED FINANCIAL DATA**

| <i>(Dollars in thousands, except per share data)</i>   | Years Ended December 31, |            |            |           |           |
|--|--------------------------|------------|------------|-----------|-----------|
|  | 2010                     | 2009       | 2008       | 2007      | 2006      |
| <b>Income Statement Data:</b>                          |                          |            |            |           |           |
| Revenues   | \$ 22,281                | \$ 20,061  | \$ 16,193  | \$ 19,248 | \$ 15,488 |
| Net income (loss)                                      | \$ (15,470)              | \$ (8,771) | \$ (4,106) | \$ 247    | \$ 377    |
| Net income (loss), per common share, basic and diluted | \$ (2.09)                | \$ (1.26)  | \$ (.67)   | \$ .05    | \$ .07    |
| Dividends declared per common share                    | \$ -0-                   | \$ -0-     | \$ -0-     | \$ -0-    | \$ -0-    |

|                            | As of December 31, |           |           |           |           |
|----------------------------|--------------------|-----------|-----------|-----------|-----------|
|                            | 2010               | 2009      | 2008      | 2007      | 2006      |
| <b>Balance Sheet Data:</b> |                    |           |           |           |           |
| Total assets               | \$ 56,668          | \$ 40,967 | \$ 75,142 | \$ 34,906 | \$ 31,754 |
| Long-term debt             | \$ -0-             | \$ -0-    | \$ -0-    | \$ -0-    | \$ -0-    |
| Stockholders' equity       | \$ 11,409          | \$ 24,252 | \$ 31,835 | \$ 28,404 | \$ 27,641 |

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

**QUARTERLY FINANCIAL DATA - UNAUDITED**

| <i>(Amounts in thousands except per share data)</i> | 2010           |                |                |                            | 2009           |                |                |                            |
|---|----------------|----------------|----------------|----------------------------|----------------|----------------|----------------|----------------------------|
|   | 1st<br>Quarter | 2nd<br>Quarter | 3rd<br>Quarter | 4 <sup>th</sup><br>Quarter | 1st<br>Quarter | 2nd<br>Quarter | 3rd<br>Quarter | 4 <sup>th</sup><br>Quarter |
| Revenues  | \$ 3,867       | \$ 1,937       | \$ 7,509       | \$ 8,968                   | \$ 4,867       | \$ 4,758       | \$ 3,735       | \$ 6,597                   |
| Gross margin  | \$ 1,355       | \$ 8           | \$ 5,826       | \$ 6,479                   | \$ 2,044       | \$ 1,805       | \$ 1,199       | \$ 1,030                   |
| Net loss  | \$ (2,820)     | \$ (3,710)     | \$ (5,823)     | \$ (3,117)                 | \$ (543)       | \$ (1,630)     | \$ (5,315)     | \$ (1,283)                 |

**Common Stock Data**

|   |          |          |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| Basic and Diluted:                                  |          |          |          |          |          |          |          |          |
| Net loss per share                                  | \$ (.39) | \$ (.50) | \$ (.78) | \$ (.42) | \$ (.08) | \$ (.24) | \$ (.76) | \$ (.18) |
| Basic and Diluted average common shares outstanding | 7,194    | 7,412    | 7,455    | 7,494    | 6,869    | 6,929    | 7,021    | 7,070    |

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

We develop, offer and implement proprietary environmental technology and market equipment and specialty chemicals to the coal-burning electric power generating industry, to the Portland cement industry and to industrial boiler operators. Beginning this year, we have changed our segment reporting structure to better reflect the way we manage and measure the performance of our business. We have three operating segments: EC (emissions control); CC (CO<sub>2</sub> capture) and RC (refined coal). The EC segment includes revenue from the supply of emissions control systems including powdered activated carbon injection (ACI) systems, dry sorbent injection systems to control SO<sub>2</sub> and other acid gases and the sale of specialty chemicals, equipment and services for flue gas conditioning projects, the licensing of certain technology, consulting services related to such matters and other applications. The CC segment includes revenue from projects relating to the CO<sub>2</sub> capture and control market, including projects co-funded by government agencies, such as the Department of Energy (DOE) and industry supported contracts. The RC segment primarily represents revenues from the leasing of two RC facilities.

We conduct research and development efforts in CO<sub>2</sub> capture and control from coal-fired boilers. On September 30, 2010, we signed our second significant contract related to CO<sub>2</sub> capture with the DOE, which is scheduled to continue through the end of 2014. We are marketing our RC facilities through our 50% interest in our Clean Coal joint venture with NexGen an affiliate of NexGen Resources Corporation. We currently own two RC facilities



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through Clean Coal, which leases them through its subsidiaries to a subsidiary of a major financial institution. The two RC facilities are operated by Clean Coal Solutions Services, LLC ( CCSS ), a Colorado limited liability company owned 50% by us and 50% by NexGen. In addition, the Carbon Solutions joint venture, of which we owned 25.9% as of December 31, 2010, has commenced commercial operations at its newly constructed AC Facility whose production is focused primarily for mercury emissions control applications for coal burning electric power generators.

**Emissions Control***Environmental Legislation and Regulations*

Mercury has been identified as a toxic substance and, pursuant to a court order, the EPA issued regulations for its control from power plants in March 2005, which was known as the Clean Air Mercury Rule or CAMR. CAMR had been subject to significant challenges since it was issued and was ultimately declared invalid. In April 2010, the U.S. District Court of Appeals of the District of Columbia approved the consent agreement reached last year between EPA and a coalition of public health and environmental groups that sued in 2008 to force the agency to set tighter emission limits. That settlement requires EPA to issue a final rule requiring strict plant-specific controls for power plants toxic air pollutants no later than November 16, 2011. Recent rulings by the courts related to the Industrial Boiler MACT, defined below, indicate that they will not tolerate significant deviations from the expected schedule for finalization. On March 16, 2011, the EPA issued a draft Air Toxics Rule, a MACT based hazardous pollutant regulation, which provides for among other provisions, control of mercury organics and volatile metals such as arsenic, selenium and acid gases such as HCl and other HAPs such as dioxins and furans. The draft Air Toxics Rule is based upon the average of the best-performing 12% of the power plants and will only allow minimal averaging or trading. The Air Toxics Rule standard proposed a limit for mercury emissions that will require capture of 80% to 90% of the mercury in coal burned in electric power generation boilers. While the new regulations will require additional emission control equipment, the EPA estimates a small percentage of the current generation fleet will be forced to retire due to the cost of complying with the regulations.

In addition to the electric power generators, EPA has developed a Cement MACT which is a MACT-based mercury emissions regulation for the Portland Cement Industry through proposed amendments to the National Emission Standards for HAPs for the Portland Cement Manufacturing Industry. The Cement MACT regulation was finalized on August 9, 2010. This regulation requires cement plants to reduce HAPs by 2013 including 92% of mercury and 83% of hydrocarbons. This regulation could require ACI systems on up to 90 cement kilns in the U.S., which are owned by approximately 15 companies. We have been engaged in several testing programs for cement companies to define their emissions and evaluate how our ACI equipment and sorbents will work in that industry. The tests were designed to evaluate the effectiveness of collecting mercury and organics from cement kiln exhaust gas streams. We believe the Cement MACT will increase the market for both ACI systems and AC.

The EPA has also issued a new Industrial Boiler MACT regulation for coal-fired boilers that provide mostly steam and/or electricity for small industrial and institutional power needs with no more than 25 MW of electricity sold to the grid. The final regulation, which is under reconsideration for the wide variety of boiler types and fuels used, was released on February 23, 2011, with compliance deadlines in early 2014. The Industrial Boiler MACT could impact over 600 existing coal-fired industrial boilers. The emission limit of 4.6 pounds of mercury per Trillion BTU for existing and two pounds per Trillion BTU for new coal-fired industrial boilers will require 60% to 70% capture of mercury from boilers burning bituminous coals and 40% to 50% capture of mercury from boilers burning sub-bituminous coals. We believe the final Industrial Boiler MACT will increase the market for ACI systems by several hundred and the associated AC by 50 to 100 million pounds per year. These totals could be even higher, when considering that 400 or more biomass and wood fired boilers are also covered under this regulation and, as with coal-fired units, require both mercury and other hazardous air pollutant reductions (dioxins and furans), that can be controlled by activated carbon injection. We are in discussions with several companies that own and operate a number of industrial boilers regarding how our technology can help such companies comply with the new regulations.

The Clean Air Act requires that all emission control related regulations be met within 36 months. We believe that substantial long-term growth of the EC market for the electric power generation industry will most likely depend on how industry chooses to respond to the pending and new federal regulations. In general, all three of these regulations are less stringent than expected, meaning fewer scrubbers and forced retirements, however, we anticipate the final federal MACT regulations will create an even larger market for our mercury control products beyond 2011. We expect that as many as 1,200 existing coal-fired boilers will be affected by such regulations, if and when they

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are fully implemented. Many power companies recognize the urgency of these pending regulations, and as a result we are contracting with power plants to evaluate mercury control options at a number of their plants. This could result in near-term ACI demonstration revenue, puts us in close contact with companies that could purchase ACI equipment and could result in long-term contracts for AC.

In addition to the U.S. market, we are seeing market potential in the six Canadian provinces that have passed their own mercury control regulations.

### *ACI Systems and Services*

Thus far to date, we have installed or are in the process of installing 47 ACI systems. Some market demand continues in 19 states and 6 Canadian provinces that either have passed their own mercury control regulations or have entered agreements with power plants to reduce mercury emissions for new power plants. We remain active in the bid and proposal process and expect the number of awards this year to remain flat or decline compared to last year. Although we expect the equipment market to continue to be static in 2011, we believe we have the opportunity for significant revenue growth for our EC products and services when final federal regulations or legislation affects a significant portion of previously uncontrolled and existing boilers. Given the current expected timing for finalization of the Air Toxics Rule, we anticipate the need for 500 to 700 ACI systems to be supplied between 2012 and 2015, which would require rapid scale-up of our production capabilities to maintain our approximate 30% market share. For an average sized plant, the ACI equipment costs are between \$2 to \$3 million.

We have developed and are offering commercial systems to inject dry alkali sorbents for control of acid gases such as SO<sub>3</sub> and HCl. Dry sorbent injection systems, which cost approximately \$2 to \$3 million for an average size plant, provide a low-capital cost alternative to scrubbers for meeting certain provisions of the Air Toxics Rule. We conducted full-scale tests of this equipment in 2010. Experts have predicted that up to a quarter of the 1,200 plus coal fired boilers could be forced to shut down if they were required to add scrubbers and selected catalyst reduction systems which can cost \$200 to \$300 million per installation.

We are investigating, developing and providing services and systems to measure and mitigate acid gasses from coal fired boilers. These acid gas emissions are often the unintended result of the retrofit and operation of NOx control technology on medium to high sulfur coal-fired boilers.

### *Arch Coal Development and License Agreement for Enhanced Coal*

Since 2004, we have been working with Arch Coal to explore certain unique characteristics of some types of coals produced by Arch Coal that allow them to be burned with lower emissions. We believe a recent technical breakthrough provides a potential means to obtain similar performance improvements from all of Arch Coal's PRB coals. As a result on June 25, 2010, we entered into a Development and License Agreement (the License Agreement) with Arch Coal. Pursuant to the License Agreement, we provided Arch Coal with an exclusive, non-transferable license to use certain technology to produce Enhanced Coal by the application of ADA's proprietary coal treatment technology for coal mined by Arch Coal at mines and sites located in the PRB. We expect that the technology will reduce certain emissions from the burning of the PRB coal, which should help to meet the Air Toxics Rule regulation. Pursuant to the License Agreement, we are providing development services to Arch Coal aimed at applying the technology to the PRB coal. In addition, if we develop improvements to the technology that are related to the reduction of certain emissions from the burning of PRB coal, that technology will either be included in the license at no additional cost, or, under certain circumstances, we will negotiate with Arch Coal to determine if Arch Coal wants to use the additional improvements. We retain all right, title and interest, including all intellectual property rights, in and to any technology we license to Arch Coal. The initial demonstration of coal treated at the mine and shipped by rail to a power plant produced promising results.

In consideration for the development work and the license to Arch Coal, Arch Coal paid us an initial, non-refundable license fee in cash of \$2 million in June 2010 and we have recognized \$666,000 of such amount as revenue from the inception of the agreement through the six-month period ended December 31, 2010. Arch Coal may be obligated to make royalty payments to us that could amount to as much as \$1 per ton of Enhanced Coal sold by Arch Coal, depending upon the successful implementation of the technology and Arch Coal's future sales of the Enhanced Coal product. Arch Coal currently produces more than 100 million tons of PRB coal per year. Any royalty ultimately payable under the License Agreement will first be subject to credit to Arch Coal of an amount equal to the initial license fee, other development and operational costs paid by Arch Coal plus a rate of return on such payments.

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The License Agreement contains standard indemnification provisions customary for license agreements, including indemnification by us for any losses suffered by Arch Coal as a result of any claims for infringement by the technology as to intellectual property rights of any third party. Either party may terminate the License Agreement upon written notice to the other party if the other party materially breaches any material term of the License Agreement, generally with a right to cure a breach within 30 days. In addition, if we materially breach the provisions of the License Agreement relating to ownership of the related technology and maintaining confidential information, and fail to correct any such breach within 30 days, the licenses granted to Arch Coal become fully paid-up, perpetual and irrevocable, without any further obligation of Arch Coal to pay any ongoing royalty.

In recent tests we have shown that we can enhance PRB coal at the mine and achieve mercury reductions when the coal is burned at power plants. Based upon these results we are planning on sending additional trainloads of the coal to different plants to show the capabilities of this new product that we believe provides a \$2 to \$4 per ton benefit of coal to the power plants. The proposed Air Toxics Rule could create a market for a significant percentage of the greater than 100 million tons per year of PRB coal mined by Arch. Additional demonstrations are planned in 2011.

As a part of entering into the License Agreement we agreed to negotiate and enter into a Supply Agreement under which Arch Coal will purchase the additives described in the License Agreement exclusively from us, and we will supply Arch Coal with the additives it needs. We expect to negotiate the final terms of the Supply Agreement in the next six months.

### *Sale of Common Stock to Arch Coal*

On March 23, 2010, under a subscription agreement with Arch Coal, we issued and sold to Arch Coal in a private placement an aggregate of 143,885 shares of our common stock at a purchase price of \$6.95 per share for aggregate proceeds of \$1.0 million. The per-share price was the closing sales price of our common stock as listed on the NASDAQ Capital Market on the day before we entered into the subscription agreement.

## **CO<sub>2</sub> Capture**

In addition to our two key growth areas, emissions control and RC, 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 topic of discussion in Washington and a significant issue for the coal industry as a result of 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 2010 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>.

DOE is funding CO<sub>2</sub> control projects related to our business and on September 30, 2010, we signed a new contract with DOE to continue development of clean coal technology to capture CO<sub>2</sub> from coal-fired power plants and other industrial sources of CO<sub>2</sub> emissions. We are the prime contractor for the approximately \$19 million project administered by DOE's National Energy Technology Laboratory which is providing \$15 million of the funding. We expect approximately \$4 million in co-funding and support to be provided by several major electric power generation companies including Southern Company, Luminant and the Electric Power Research Institute. The project provides funding to advance our commercialization plan for regenerable solid-sorbent technology, which is designed to capture CO<sub>2</sub> generated by coal-fired power plants.

In 2010 we began the first field tests of our CO<sub>2</sub> control technology on a \$3.8 million program co-funded by DOE, as well as several major forward-thinking utility companies. The initial results at a plant confirmed the promising performance we had demonstrated in our laboratory. The pilot plant was moved to another plant for additional testing. Once captured, the CO<sub>2</sub> could be either stored underground (sequestration) or beneficially used in processes such as enhanced oil recovery. This technology appears to offer potential cost and energy advantages over competing liquid-solvent-based technologies.

In October 2010 we began work on the new DOE CO<sub>2</sub> project, which is expected to run for a total of 51 months to scale-up the technology to the one-megawatt level, which is a key step in the technology development process. This contract will not only fund research and development ( R&D ) on this technology, but it will also provide significant contributions to our revenue and margin over the next four plus years.



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We anticipate that DOE programs will continue to represent an important component of the revenue stream of the Company over the next several years as we position ourselves for the market growth for ACI systems, enhanced coal additives and related technology with Arch Coal and other technologies for emissions control.

### **Refined Coal**

#### *Environmental Legislation and Regulations*

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 Emergency Economic Stabilization Act of 2008, the American Recovery and Reinvestment Act of 2009 for qualifying RC and the Tax Relief and Job Creation Act of 2010. In December 2009, the IRS issued the anticipated guidance as to the specifics concerning how the emissions reductions are to be measured and certified to demonstrate compliance necessary to qualify for the tax credits. Clean Coal placed two RC facilities in service prior to January 1, 2010 and demonstrated the required emission reductions for their RC product to qualify for the tax credits. As a result of the 2010 legislation, we are pursuing strategic relationships to sell or lease six additional facilities during 2011 with a potential of 16 total facilities. The tax credits amount to an annually escalating \$6.27 per ton of RC for a period of ten years for facilities placed in service period to January 1, 2012.

#### *Clean Coal*

On June 29, 2010, Clean Coal executed contracts in which the two RC facilities were leased to GS RC Investments LLC, the lessee. The leases have base terms that run through December 31, 2012 (the Initial Term), and automatically renew for annual terms through the end of 2019. The other 50% of Clean Coal is owned by NexGen and the two RC facilities are owned, respectively, by two special purpose entities (the Lessors). Clean Coal owns 95%, and we and NexGen each own 2.5% of the Lessors. The lessee has entered into supply agreements for each RC facility pursuant to which it supplies RC to the applicable power plant owner. CCSS will (subject to oversight by the lessee) operate and maintain the RC facilities under two Operating and Maintenance Agreements entered into with the lessee as part of the transaction. In addition to reimbursement for costs incurred, CCSS receives a fee of \$.08 per ton of coal processed through the RC facilities for its services. The lessee pays the costs for operating and maintaining the RC facilities, subject to certain limitations. CCSS also arranges for the purchase and delivery of certain chemical additives necessary for lessee's production of RC under two supply agreements entered into with the lessee as part of the transaction. CCSS receives a fee for its services in the amount of 5% of the cost of chemical additives and transportation costs. The term of each supply agreement runs coincident with the leases.

We control and consolidate the results of Clean Coal in our financial statements, but do not consolidate the results of CCSS because NexGen controls the entity pursuant to the operating agreement of the entity. The leases included an upfront payment of \$9 million in prepaid rent for both facilities and provide for fixed rent and contingent rent based upon future production of RC, each of which is payable on a quarterly basis. We are recognizing the prepaid rent over the Initial Term of the leases. Such revenues are recorded as they are earned. Historically, the utilities at which the facilities operate have used over six million tons of coal per year, which amount can vary based on several factors. The total annual contribution to our operating income will ultimately depend on the utilities' use of coal in the generation of electricity, which use will likely fluctuate over the term of the tax credits. A portion of the lease payments made by lessee during the Initial Term was held in an escrow account, which was established to provide a fund from which the lessee can reclaim a portion of the lease payments if certain circumstances arise that affect the availability of Section 45 Credits for RC from the RC facilities.

Each lease may be terminated by the lessee for various reasons, the most significant of which are:

For any reason as of the end of the Initial Term by giving notice by no later than July 1, 2012.

If the Total Operating Expenses (as defined in each lease) paid by the lessee for two consecutive quarters exceed 140% of the projected operating costs for the RC facility.

If any of Lessor's representations or warranties were breached as of the date made and such breach is not cured within 30 days after notice.

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If a change of law, or certain other specified events affecting the availability of the Section 45 credits, occurs.

Upon the occurrence of a governmental regulatory event that would make the contemplated transaction impermissible.

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In order to maintain our 50% interest in Clean Coal, we are obligated to fund half of its operating costs and capital expenditures. In order to satisfy a portion of the 2009 capital needs of Clean Coal, Clean Coal entered into a Loan Commitment Agreement with NexGen in October 2009, by which NexGen loaned Clean Coal \$1.0 million. The note was paid in full prior to April 30, 2010. In the future, we expect the operations of the facilities to generate sufficient working capital to meet their operating needs.

We, Clean Coal and the lessee also entered into a technology sublicense (the Technology Sublicense) pursuant to which we licensed and Clean Coal sublicensed to the lessee certain technology required to operate each RC facility and to produce RC. The Technology Sublicense parallels the license previously granted by us to Clean Coal and requires that we stand behind Clean Coal if it fails to perform its obligations under the sublicense, other than as a result of a default by lessee. The agreement contains representations and warranties customary for such agreements regarding intellectual property, and, subject to certain liability limits, requires us to indemnify the lessee in the event of certain infringement claims by a third party. We are also obligated to actively prosecute infringement of the technology by third parties, or to cooperate with the lessee if it does so, in which case any award would go to the lessee and any other sublicensee who prosecutes the infringement. The annual license fee payable to Clean Coal for the sublicense is \$10,000 per year, but this amount is deductible from the amount the lessee pays in rent under the leases.

In addition, we, NexGen and two entities affiliated with NexGen have provided the lessee with joint and several guaranties (the CCS Guaranties) guaranteeing all payments and performance due under the agreements described above. We also entered into a contribution agreement (the Contribution Agreement) with NexGen under which any party called upon to pay on a CCS Guaranty is entitled to receive contribution from the other party equal to 50% of the amount paid. The parent of lessee provided Clean Coal with a guaranty as to the payment only of all fixed rent payments under the leases, which, although terminable at any time, cannot be terminated without the substitution of such guaranty with another guaranty on similar terms from a creditworthy guarantor. Clean Coal signed agreements with a subsidiary of a large financial institution at the end of June 2010 to lease the two RC facilities it had previously placed in service.

In September 2010, the RC facilities ramped up production to expected continuous levels and are now treating over 98% of the available coal used by the four generating units at the two power plants. In the first two quarters of operation, these two units generated over \$10 million in consolidated revenues for ADA. These production levels are expected to generate between approximately \$15 to \$20 million per year in revenues and, after deduction of NexGen's 50% share, between approximately \$7 to \$10 million in pre-tax cash flow and operating income, or approximately \$1 per share annually for ADA through 2019 (assuming no significant change in outstanding number of shares).

Pursuant to the American Recovery and Reinvestment Act of 2009 for qualifying RC and the Tax Relief and Job Creation Act of 2010 which extends the placed-in-service deadline to January 1, 2012, we have taken steps to schedule the construction of six additional RC systems with a possibility of up to 16 additional RC systems before placed-in-service deadline. Thus far in 2011, Clean Coal has issued through us purchase orders totaling approximately \$3.8 million in connection with the construction of these facilities.

### *Carbon Solutions*

Carbon Solutions, our joint venture company with ECP, has constructed the AC Facility through its wholly owned subsidiary Red River. The AC Facility, which achieved commercial operation in May 2010, is operating on two of the four furnaces and is expected to be capable of operation at full capacity sometime in early 2011. In the second half of 2010 the AC passed certification testing that will allow it to be sold into the water market.

Under the terms of the Limited Liability Company Agreement (the LLC Agreement) of Carbon Solutions among ECP and ADA, we have contributed \$25.6 million in cash and other property and ECP has contributed cash of \$171.6 million, including preferred equity contributions of \$89.3 million, through December 31, 2010. Effective June 2009 and since that date, ECP converted some of its preferred equity contributions to ordinary capital contributions resulting in a dilution of our ownership percentage to 25.9% as of December 31, 2010 and as a result, we include our share of Carbon Solutions' loss under the equity method of accounting. Our initial investment combined with our share of Carbon Solutions' cumulative losses to date has resulted in a net investment in Carbon Solution of \$13.6 million as of December 31, 2010. We do not have any further capital commitments to Carbon Solutions, and expect that all future funding for the AC Facility will come from ECP and third-party debt financing. See *Liquidity and Capital Resources* below for additional information.

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Carbon Solutions predicts a significant gap between AC production and demand beginning in 2012, with the gap growing close to a billion pounds per year after all the MACT regulations are in place by 2015. They believe that the growth anticipated will require up to five additional AC production lines of the same size and capacity as Red River. To prepare for the additional demand created by the draft Air Toxics Rule, Carbon Solutions has permitted a second 150 million pound per year production line at the Red River plant and is pursuing permits for up to four additional AC production plants. We have certain rights to participate by up to 50% in capacity additions.

In addition, we provide certain services to Carbon Solutions under a Master Services Agreement ( MSA ). Sales and other revenues under the MSA totaled \$293,000 and \$1.1 million for 2010 and 2009, respectively, which amounts are included in EC revenues in the accompanying consolidated statement of operations.

**Results of Operations 2010 versus 2009**

Revenues totaled \$22.3 million for 2010 versus \$20.1 million in 2009, representing an increase of 11%. The change is due primarily to initiation of revenues from operations at the RC facilities we leased to a third party offset by the decrease in our EC segment revenues. We expect overall revenues for 2011 to be higher than those reported for 2010.

Cost of revenues decreased by \$5.3 million or 38% in 2010 from 2009 primarily as a result of decreased revenues in our EC segment and lower RC segment costs described below. Gross margins were 61% for the year as compared to 31% in 2009. The increase primarily reflects the increased RC margins and revenues as described below. For the near term, we expect the sales related to RC segment to represent an increasing source of revenues, for which the anticipated gross margins are higher than our EC and CC segments. As a result, we expect the gross margin for fiscal year 2011 to be higher than the overall margin realized in 2010.

*Emission Control*

Revenues in our EC segment totaled \$9.8 million versus \$15.9 million in 2009, representing a decrease of 38%. The amounts reported for 2010 and 2009 excludes the work ADA has conducted for Clean Coal, as further described below, which was eliminated in our consolidation.

Revenues from the EC segment for the year ended December 31, 2010 were comprised of sales of ACI systems and services (56%), flue gas chemicals and services (6%) and other services (38%), compared to 66%, 2%, and 32%, respectively, in 2009. For the near term, we expect the consulting services in our EC segment to increase as a percentage of EC revenues as the industry seeks to analyze and evaluate the probable MACT regulations in addition to increased revenues related to our technical breakthrough related to PRB coal. We expect our EC segment revenues related to ACI systems to remain at static levels until such time as utilities, cement plants and industrial boilers start to react to the new and anticipated MACT regulations. We expect overall gross margins for the EC segment for 2011 to be lower than levels achieved in 2010.

Our consulting revenues decreased approximately \$1.3 million during 2010 as compared to 2009 as we have completed nearly all of our mercury control demonstrations and analysis. Such decline is offset by our Arch Coal non-refundable license revenue. Our consulting revenues contributed approximately \$3.6 million during 2010 and we expect our consulting revenue to increase as a percentage of EC revenues for the next year as several customers are seeking advice on how best to comply with the proposed and finalized MACT regulations.

As of December 31, 2010, we had contracts in progress for work related to our EC segment totaling approximately \$2.9 million, of which we expect to recognize approximately 90% as revenue in 2011, with the balance to be completed and realized in 2012. Our ACI systems revenues totaled \$5.5 million for 2010, representing a decrease of 48% compared to 2009. In the EC segment, we performed work related to RC systems provided to Clean Coal valued at \$3.7 million and \$1.3 million for the years ended December 31, 2010 and 2009, respectively, which would otherwise be recognized as revenue but was eliminated in the consolidation of Clean Coal.

Cost of revenues for the EC segment decreased by \$3.4 million or 36% in 2010 from 2009, primarily as a result of the decreased revenue-generating activities from our ACI system sales. Gross margins for this segment were 38% for the year as compared to 40% for 2009. The decrease in gross margins from the prior year are primarily a result of the impact of our consulting and ACI system margins as well as the elimination of \$3.0 million and \$1.0 million in consolidation for the years ended December 31, 2010 and 2009, respectively, related to our work on Clean Coal's RC facilities.

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EC segment profits decreased by \$3.2 million or 60% for 2010 as compared to 2009. The decrease was primarily a result of decreased ACI systems sales and work performed for Clean Coal in the period.

### *CO<sub>2</sub> Capture*

Revenues in our CC segment totaled \$2.1 million versus \$1.5 million for 2009 representing an increase of 36%. We had outstanding DOE contracts, including anticipated industry cost share in progress totaling approximately \$18.8 million as of December 31, 2010. We expect to recognize approximately \$2.4 million from these contracts in 2011 including participation by other industry partners. As discussed above, on September 30, 2010 we signed a contract on a DOE project totaling approximately \$19 million (including expected contributions by other industry partners) with work ramping up in the fourth quarter of 2010.

Cost of revenues for the CC segment increased by \$97,000 or 10% for 2010 from 2009, primarily from increased activities related to our development of CO<sub>2</sub> capture technology. Gross margins for this segment were 49% for 2010 as compared to 37% for 2009. The increase in gross margins from 2010 to 2009 is due primarily to the increased work being performed under these projects. We expect overall gross margins for the CC segment for fiscal year 2011 to be lower than the levels achieved in 2010, due to the mixture of direct costs (labor versus equipment) associated with this segment.

CC segment profits increased by \$546,000 or 156% for 2010 as compared to 2009. The increase was primarily the result of increased activities related to our development of CO<sub>2</sub> capture technology, which ramped up significantly in 2010.

Our contracts with the government are subject to audit by the federal government, which could result in adjustment(s) to previously recognized revenue. Our historical experience with these audits has not resulted in significant adverse adjustments to amounts previously received; however the audits for the years 2004 and later have not been finalized. Revenues recognized from 2004 through 2010 that are subject to government audit totaled approximately \$29 million. In addition, we had \$18.8 million of remaining unearned amounts under contracts subject to audit as of December 31, 2010. We believe, however, that we have complied with all requirements of the contracts and future adjustments, if any, will likely not be material. In addition, the federal government must appropriate funds on an annual basis to support DOE contracts, and funding is always subject to unknown and uncontrollable contingencies.

### *Refined Coal*

Revenues in our RC segment totaled \$10.4 million versus \$2.6 million in 2009, representing an increase of 301%, as the leased RC facilities initiated routine operations. As discussed above, in June 2010 we leased the two RC facilities and earn related rent revenues, which began in July 2010. The first two systems are expected to produce approximately 6 million tons of RC annually, which is anticipated to qualify for the present \$6.27 per ton federal tax credit through 2019. We expect our quarterly revenues to fluctuate based on seasonal variations in electricity demand as well as planned and unplanned outages required by the power plants for equipment repair and maintenance.

Cost of revenues for the RC segment decreased by \$1.9 million or 57% for 2010 from 2009, primarily due to the two RC facilities ramping up production levels in the fourth quarter of 2010. In 2009, we recorded the sales of RC which were made essentially on a cost basis with no margin. There were no similar sales in 2010 as that activity was conducted by the lessee of the facilities. Costs of revenues are expected to stabilize as the RC facilities settle into routine operations. We expect future RC margins to be at a level near 95%.

RC segment profits increased by \$9.2 million or 697% for 2010 as compared to 2009 as the two facilities were leased and placed in routine operation in the middle of 2010.

### *Other Items*

General and administrative expenses increased by \$16 million or 96% to approximately \$32.8 million in 2010. The dollar increase for 2010 resulted primarily from legal costs related to our legal proceedings with Norit and Calgon described in Part II, Item 1 of this report, which comprises approximately 75% of the overall general and administrative expense for 2010. We expect non-routine legal costs to decrease somewhat in the first quarter of 2011, and decrease significantly starting in the second quarter of 2011 as the Norit arbitration is expected to reach its final stages. We expect other components of our G&A to increase in 2011 as we build our infrastructure in preparation for the increased market opportunities anticipated from the several MACT regulations.



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We incur R&D expenses not only on direct activities we conduct but also by sharing a portion of the costs in the government and industry programs in which we participate. Total R&D expense increased by \$202,000 or 28% in 2010 as compared to 2009 as a result of increases in CC and RC activities. We had no significant direct cost share for R&D under DOE related contracts in either 2010 or 2009. The increase in total R&D is related to preparing for growth in the delivery of our ACI systems, as well as our RC 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 higher in 2011 as compared to 2010. 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 and other technology development we choose to pursue.

We had net interest and other income of \$8.6 million in 2010 as compared to \$34,000 for 2009. As discussed below in Part I, Item 3 of this report, in December 2010, we accepted a \$7.2 million payment (recognized a net of \$6.1 million after payment of certain contingent legal fees) and recognized income related to the settlement of our damage claim against Calgon. In addition, during the second quarter of 2010, we recognized approximately \$1.8 million related to the notes payable delivered by NexGen, by which NexGen has paid us as a portion of the amounts required to maintain its 50% interest in Clean Coal. Such payments have been recorded as other income. During the second half of 2010, we recognized approximately \$200,000 in interest and other income related to the notes receivable and other amounts due from NexGen.

The income tax provisions for 2010 and 2009 represent an effective tax rate benefit of approximately 42% and 37%, respectively, for the years ended December 31, 2010 and 2009. No unrecognized tax benefits were recorded as of December 31, 2010. 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 2007 and Colorado state examinations for years before 2006. Our income tax rate does not include any material amount of Section 45 tax credits from Clean Coal as those tax benefits will primarily be realized by the lessee under the RC facilities leases.

In June 2009, our partner in the Carbon Solutions joint venture, ECP, converted a portion of its preferred equity contributions in Carbon Solutions to ordinary capital contributions thereby reducing our ownership interest below 50%. Accordingly, we deconsolidated Carbon Solutions in June 2009 as we no longer held a controlling interest and began to account for our investment in Carbon Solutions under the equity method of accounting. Additional preferred equity contributions have been converted and common equity contributions have been made by ECP since that time and our interest in Carbon Solutions has been decreased to 25.9% as of December 31, 2010. Our net investment of \$13.6 million as of December 31, 2010 in Carbon Solutions is accounted for under the equity method of accounting. Accordingly, our equity in the net loss of Carbon Solutions for the year ended December 31, 2010 has been recognized in other income (expense) in the consolidated statement of operations and our investment in Carbon Solutions has been reduced by our respective share of such loss. For the year, we recorded a loss of \$8.0 million, which represents our share of Carbon Solutions' net loss for the year. The amount is reported net of our equity in the net income of CCSS which amounted to \$118,000 for the year.

The net operating loss from continuing operations attributable to ADA was \$21 million or \$2.84 per share in 2010 as compared to a net operating loss of \$11.8 million or \$1.69 per share, respectively in 2009. The net operating loss is due in large part to the costs associated with our litigation matters involving Norit and Calgon and the losses incurred by Carbon Solutions. We expect to continue to report equity in loss of Carbon Solutions for 2011 and future years as sales ramp up and other development activities continue. We expect to continue to report our equity in the net income of CCSS for 2011 as routine operations are anticipated for the year. We would have a net income after tax of approximately \$5.1 million or \$0.69 per share for the year excluding the non-routine legal expenses related to the Calgon and Norit matters and disregarding the non-cash loss from Carbon Solutions. With the expected reduction in non-routine legal expenses in the second quarter of 2011 and thereafter, we should be in a position, apart from the losses we pick up from Carbon Solutions, to achieve very attractive levels of profitability.

**Results of Operations 2009 versus 2008**

Revenues totaled \$20.1 million for 2009 versus \$16.2 million in 2008, representing an increase of 24% primarily due to the tests related to placing Clean Coal's two facilities in service. Cost of revenues increased by \$3 million or 27% in 2009 from 2008 primarily as a result of increased revenues. Gross margins were 31% for the year as compared to 33% in 2008. The decrease primarily reflects the decrease in margins for the RC segment as described below.

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### *Emission Control*

Revenues in our EC segment for 2009 increased by \$12,000 versus 2008. Revenues in 2009 from the EC segment were comprised of sales of ACI systems and services (66%), flue gas chemicals and services (2%), and other services (32%), compared to 58%, 3% and 39%, respectively, in 2008. In 2009, sales of our ACI systems contributed \$10.6 million to EC revenues recognized for the year, increasing 13% from the 2008 contribution of \$9.4 million.

Revenues from consulting services included in the EC segment increased approximately \$3.3 million, from 2008 to approximately \$5 million in 2009 which were net of eliminated revenues totaling \$1.3 million related to our efforts to construct RC facilities for Clean Coal. The change for the year resulted primarily from two mercury control programs that commenced and were largely completed in 2008 offset by increased activity with current and new test programs that commenced during 2009.

Cost of revenues for the EC segment decreased by \$1.3 million in 2009 or 12%, primarily from decreased activity in our government and industry supported mercury contracts and other consulting services, offset by cost saving activities related to our ACI system sales. Cost of revenues were reduced by \$1.0 million related to the eliminated revenues described above in connection with our construction of RC facilities for Clean Coal. Gross margins for the EC segment were 40% in 2009 as compared to 32% in 2008. The increase was primarily due to the increased margins related to our ACI system sales as a result of the implementation of our improved modular ACI equipment design, which broadens fabrication and material supply options, simplifies field installation and reduces system costs and increased margins in our emission strategy consulting services as a result of higher utilization of labor on such projects.

EC segment profits increased by \$3.4 million or 170% to \$5.3 million as compared to 2008. The increase was primarily a result of increased EC segment revenues from our ACI systems offset by our decline in DOE and industry supported mercury revenues.

The remaining unearned amount on outstanding contracts in our EC segment was \$7.3 million as of December 31, 2009. During 2008, government funded work for mercury demonstration projects diminished significantly as the market moved into a commercial phase.

Our contracts with the government are subject to audit by the federal government, which could result in adjustment(s) to previously recognized revenue. We believe, however, that we have complied with all requirements of the contracts and future adjustments, if any, will not be material. In addition, the federal government must appropriate funds on an annual basis to support DOE contracts, and funding is always subject to unknown and uncontrollable contingencies.

### *CO<sub>2</sub> Capture*

Revenues in our CC segment were \$1.5 million in 2009, primarily from our one CO<sub>2</sub> contract representing an increase of \$1.3 million or 491% versus 2008. In 2009, we increased testing and research on our first significant project related to CO<sub>2</sub> demonstration work sponsored by the DOE which initially began late 2008.

Costs of revenues for the CC segment were \$969,000 in 2009 which represents an increase of \$861,000 or 797% versus 2008. As 2009 was the beginning of significant efforts in carbon capture, largely under our contracts with DOE. Gross margins for the CC segment were 36% in 2009 as compared to 58% primarily due to the timing of revenue recognized with industry supported costs share participants in 2008.

CC segment profits increased by \$199,000 in 2009 or 133% versus 2008, which was consistent with our revenue efforts in carbon capture.



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*Refined Coal*

Revenues in our RC product in 2009 (primarily for the tests related to placing Clean Coal's two facilities in service) amounted to approximately \$2.6 million. Prior to the fourth quarter of 2009, we did not have any prior revenue generating activities to report for this segment.

Cost of revenues for our RC segment totaled \$3.4 million in 2009, primarily for the tests related to placing Clean Coal's two facilities in service and other start up activities related to the segment. In 2008, we did not have any significant direct costs associated with this segment.

RC segment loss was \$1.3 million in 2009 and represents activities related to placing the first two RC facilities into service.

*Other items*

General and administrative expenses increased by \$7.6 million or 83% to \$16.7 million in 2009. The dollar increase in 2009 resulted primarily from the increased legal fees due to litigation efforts (approximately \$9.6 million) and increased corporate governance costs \$384,000, offset by savings in personnel costs \$868,000 and occupancy and other general and administrative costs \$733,000. Included in our general and administrative expenses was approximately \$251,000 related to share based compensation. In 2009, we curtailed hiring personnel in response to the then delayed regulatory environment.

We incur R&D expenses not only on direct activities we conduct but also by sharing a portion of the costs in the government and industry programs in which we participate. Total R&D expense decreased by \$75,000 or 10% in 2009 as compared to 2008. Our direct cost share for R&D under DOE related contracts decreased from \$30,000 in 2008 to \$1,000 in 2009, reflecting the anticipated decrease in our cost share contribution and the overall decrease in mercury related demonstrations that we carried out during the year. The decrease is somewhat offset by increased activities related to preparing for growth in the delivery of our ACI systems, as well as our RC activities. Our future R&D expenses are expected to grow in direct proportion to DOE funded CO<sub>2</sub> work we perform for the next several years.

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

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

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

Our operating loss from continuing operations was \$11.8 million in 2009 as compared to a loss of \$6.7 million in 2008, due in large part to the costs associated with our litigation matters involving Norit and Calgon and those related to the Company's growth initiatives for RC. We would have had a net income after tax of approximately \$18,000 or less than \$0.01 per share in 2009 if we did not incur the non-routine legal expenses related to the Calgon and Norit matters and disregarding the non-cash loss from Carbon Solutions.

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**Liquidity and Capital Resources**

Our principal source of liquidity in 2010 was our working capital, our cash flow from RC activities, proceeds from settlement of litigation matters and other operations. We had consolidated cash and cash equivalents totaling \$9.7 million at December 31, 2010 as compared to consolidated cash and cash equivalents of \$1.5 million at December 31, 2009.

At December 31, 2010, we had working capital of \$10.1 million as compared to \$2.2 million at December 31, 2009. We have long-term liabilities recorded totaling \$31.8 million for our accrued warranty, long-term deferred revenue, including deferred rental income, and other obligations of \$4.4 million and indemnity costs related to the Norit Action of \$27.4 million as of December 31, 2010. Although we had positive operating cash flow for the year ended December 31, 2010, this trend may not continue in 2011, due to expected resolution of the indemnity costs as the Norit Action is resolved. Expansion of efforts related to our Clean Coal joint venture and preparation for the market opportunities expected from the MACT regulations will also likely require additional investments in 2011.

The increase in working capital during 2010 resulted primarily from:

\$2 million payment received, net of deferred amounts, for the exclusive licensing of technology to Arch Coal,

\$1 million from the sale of our Common Stock to Arch Coal,

\$2.1 million in equity contributions to Clean Coal by NexGen,

Prepaid rents received and other rentals earned related to the lease of Clean Coal's RC facilities, net of current deferred revenues, and

\$6.1 million from the settlement of the Calgon litigation which amount is net of related contingent legal fees associated with the settlement structure.

The above were offset by decreases in cash and cash equivalents which included:

\$3.7 million in cash distributed by Clean Coal to NexGen and

\$2.9 million in capital expenditures including those improvements made by Clean Coal to the RC facilities that were subsequently leased.

Our shareholders' equity is approximately \$13.4 million as of December 31, 2010 compared to \$24.4 million as of December 31, 2009. To provide flexibility in the capital markets, we filed a universal shelf registration statement with the SEC on January 28, 2011 and, when declared effective by the SEC, this registration would give us the ability to offer and sell up to \$140 million of securities consisting of common stock, preferred stock, warrants, units or a combination thereof. After the shelf registration becomes effective, we may offer and sell such securities from time to time and through one or more methods of distribution, subject to market conditions, for our capital needs and regulatory requirements. The terms of any offering under the shelf registration statement will be established at the time of such offering and will be described in a prospectus supplement filed with the SEC prior to completion of the offering.

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

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with a corresponding increase in ECP's capital contributions) in Carbon Solutions and adjustment of each party's percentage ownership accordingly.

We may also require additional working capital to meet our 50% share of capital expenditures and working capital requirements of Clean Coal as it constructs additional RC facilities to qualify for Section 45 tax credits which Clean Coal expects to finance through a \$10 million credit facility expected to be in place in early 2011.

Our ability to generate the financial liquidity required to meet ongoing operational needs and to meet our current and future indemnification obligations to Carbon Solutions and potentially to ECP, will likely depend upon several factors, including our ongoing legal expenses incurred by the parties in the Norit matters, timing of satisfaction and ultimate amount of the Indemnity Obligations and insurance coverage with respect to the Norit matters, our ability

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to maintain a significant share of the market for mercury control equipment, Clean Coal's continued operation of the two RC facilities placed in service in 2010 and success in monetizing Section 45 tax credits through the sale or lease of additional facilities to third party investors.

Consequently, we may not have sufficient working capital to fund all these obligations in the event we are called upon to do so. We believe we could, if need be, defer some of the growth initiatives or reduce expenses, or both, if necessary to fund operations through at least December 31, 2011.

*Clean Coal Related Items*

Clean Coal, our 50% joint venture with NexGen, has placed two RC production facilities into service, which have been leased to a third party. Based on the amount of RC that we expect will be produced from the RC facilities, we expect to recognize pre-tax tax cash flows between \$7 to \$10 million per year through 2019, the expected period for which Section 45 tax credits are available for these facilities.

NexGen has elected to retain its interest in Clean Coal by paying us up to \$4 million (plus any accrued interest under the notes described below) as follows: (a) \$1.8 million under NexGen's two-year promissory notes issued to us in June 2010, plus (b) 25% of cash distributions (other than for income taxes) due to NexGen from Clean Coal. NexGen's promissory notes are shown as notes receivable, bear interest at 5% per annum, are payable out of 35% of cash distributions to NexGen and secured by NexGen's interest in Clean Coal. We expect to receive payments from NexGen based upon a portion of cash distributed to NexGen from Clean Coal, with a portion of that amount to be applied as payment on the notes and any additional amounts to be applied to the remainder of the total \$4 million expected to be paid by NexGen, which payments are expected by the end of 2011. We expect to report these amounts upon receipt as other income. NexGen is not obligated to make those payments, but if it does not do so, it will forfeit a part of its interest in Clean Coal in direct proportion to the amount that it elects not to pay (including any election not to pay under any notes issued). Once it fails to make any one payment, it cannot reclaim its interest by making later payments. We are not required to refund any of the cash paid by NexGen. In addition, we, NexGen and two entities affiliated with NexGen have provided Clean Coal's sublessee with joint and several guaranties guaranteeing any payments and performance due the lessee under the various agreements Clean Coal executed in the lease of the RC facilities.

*AC Facility Related Items*

As noted above, Carbon Solutions has commenced commercial operations at its AC Facility, which has an estimated all-in, total cost for one production line capable of producing approximately 150 million pounds of AC per year of including related activities of approximately \$400 million. Red River has received a conditional commitment for up to \$245 million from the DOE to guarantee a loan related to the costs of construction of the AC Facility.

In order to address the anticipated capital needs of Carbon Solutions, ECP may fund additional ordinary capital contributions or preferred equity contributions to Carbon Solutions or make loans to Red River, in each case at such times and in such amounts as ECP determines are necessary to satisfy their capital requirements. Neither ADA nor ECP is required to fund additional capital contributions to Carbon Solutions at this time. In October 2008, the Company entered into a Securities Purchase Agreement (SPA) providing for the potential sale to ECP of 1,800,000 shares of Series A Convertible Preferred Stock and 1,800,000 shares of Series B Convertible Preferred Stock. The Company terminated the SPA on March 23, 2010. One-half of ECP's preferred equity bears a preferred return of 12% per annum, and the other half does not bear a preferred return. ECP is entitled to receive priority distributions on its preferred equity until it is redeemed or converted and has the option to convert any such unredeemed preferred equity into ordinary capital contributions.

Pursuant to an Amended and Restated Credit and Reimbursement Agreement among Red River, ECP and us dated as of September 2, 2009 and related documents (the Carbon Solutions Credit Support Documents), ECP may make loans to Red River from time to time. As of December 31, 2010, the principal balance of ECP's loans to Red River totaled approximately \$193.8 million. Such loans are evidenced by convertible demand promissory notes bearing interest at 12% per annum compounded quarterly. ECP may convert any outstanding amounts due under such notes to ordinary capital or preferred equity contributions in Carbon Solutions at any time at its option. The outstanding loans are secured by Red River's assets and guaranteed by Carbon Solutions, and Carbon Solutions' guaranty is secured by a pledge of Carbon Solutions' equity in Red River. If and when Carbon Solutions is able to place long-term commercial debt, we expect a significant portion, if not all, of its outstanding loans from ECP to be replaced by such debt.

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As of December 31, 2010, ECP had outstanding preferred equity in Carbon Solutions totaling approximately \$89.3 million, all of which is convertible to ordinary capital contributions. In 2009 and subsequently, ECP has converted some of its then outstanding preferred equity to ordinary capital contributions and made additional ordinary capital contributions, resulting in dilution of our ownership interest in Carbon Solutions to 25.9% as of December 31, 2010. Because of such dilution to date, ECP now elects three out of the four managers of the Board of Carbon Solutions and controls decisions of the Board. Through March 1, 2011, ECP had contributed cash of \$171.6 million to Carbon Solutions and had loaned \$193.8 million to Red River. We continue to have the right to participate in significant decisions subject to member approval so long as we continue to hold at least a 15% ownership interest. Member approval requires approval of members holding at least 75% of the ownership interests.

In addition to our indemnity obligations described above, we have given guaranties and undertaken other commitments of approximately \$30 million related to Carbon Solutions. No liabilities associated with such guaranties and obligations were recorded on our financial statements as we do not expect the guaranties and commitments to be called upon. Pursuant to the Carbon Solutions Credit Support Documents, Red River has agreed to reimburse us and ECP in the event we or they are required to make payments related to these guaranties and guaranties provided by ECP. Red River's reimbursement obligations are secured by Red River's assets and guaranteed by Carbon Solutions, and Carbon Solutions guaranty is secured by a pledge of Carbon Solutions' equity in Red River. We assigned our rights under these agreements to ECP, and any amounts payable to us would be paid directly to ECP until ECP's preferred equity in Carbon Solutions is fully redeemed or converted and all loans to Red River have been paid in full.

### *Other Liquidity and Capital Resource Items*

Our trade receivables balance is comprised of both amounts billed to customers as well as unbilled revenues that have been recognized. As of December 31, 2010 our trade receivables balance was \$9.1 million, which was offset by billings in excess of recognized income of \$452,000 or a net of \$8.6 million as compared to \$4.5 million at December 31, 2009. Our trade receivables balance was higher at December 31, 2010 as compared to 2009, primarily due to the RC facilities rent earned during the quarter ended December 31, 2010 and not collected until the first quarter of 2011, and due to the nature and timing of our billing milestones for our ACI systems contracts.

As discussed above, we have recorded approximately \$27.4 million in potential indemnity obligations to Carbon Solutions related to the Norit Action. These accrued expenses have resulted in the increase in accrued long-term liabilities in 2010. Our net accrued warranty obligations have increased by \$8,000, related to our increase in related ACI projects.

Under our defined contribution and 401(k) retirement plan, in 2010 and 2009 we matched up to 7% of salary amounts deferred by employees in the Plan. During 2010 we recognized \$282,000 of matching expense which payment was made with our stock, while in 2009, we recognized \$267,000 of matching expense the payments for which were made in both cash and our stock. In the past, we have also made discretionary contributions to the Plan for employees, however in 2010 and 2009, we did not make any such discretionary contributions. Our matching expense is expected to amount to \$300,000 for 2011 depending on employee participation in the plan.

We had recorded net current deferred tax assets of \$188,000 and long-term deferred tax assets of \$15.4 million as of December 31, 2010 as compared to net current deferred tax asset of \$271,000 and net long-term deferred tax assets of \$6.8 million as of December 31, 2009. We believe that it is more likely than not that our deferred tax assets will be realized in the future. The change is largely a result of our loss in 2010.

Cash flow provided by operations totaled \$11.7 million for 2010 compared to cash flow used in operations of \$1.6 million in 2009. The change in operating cash flow primarily resulted from an increase in deferred revenues and other liabilities of \$7.7 million, an increase in our accrued indemnity liability of \$20.6 million and a decrease in prepaid and other assets of \$288,000, which were offset by a decrease in our accounts payable of \$1.7 million and an increase in receivables of \$3.2 million. 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 \$15.4 million for non-cash operating activities, which included expenses paid with stock and restricted stock of \$1.3 million, depreciation and amortization of \$917,000, non-controlling interest in Clean Coal of \$3.6 million and our net minority equity interest in the net income/loss of unconsolidated entities of \$8 million all of which increased our cash flow used in operations during 2010, and were partially offset by an increase in recorded deferred tax benefits of \$8.6 million.

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Net cash used by investing activities was \$3.1 million for 2009 compared to \$25.9 million for 2009. The cash used consisted of investments in short term paper of \$105,000 and purchases of equipment of \$2.9 million. Offsetting cash provided by investing activities consisted of payments received from NexGen related to their note receivable to us. The 2009 cash used of \$25.9 million was primarily related to the deconsolidation of Carbon Solutions.

Cash used by financing activities was \$356,000 in 2010 compared to cash provided by financing activities of \$725,000 in 2009. Cash provided during 2010 consisted of \$2.1 million in capital contributions by the non-controlling interest in Clean Coal and the sale of stock for proceeds totaling \$1 million and the exercise of stock options totaling \$347,000. Uses of cash consisted of the distribution by Clean Coal to the non-controlling interest.

We had the following contractual commitments as of December 31, 2010:

|                             | Total             | Payment due by period |                   |                  |                    |
|-----------------------------|-------------------|-----------------------|-------------------|------------------|--------------------|
|                             |                   | 2011                  | 2012 and<br>2013  | 2014 and<br>2015 | 2016 and<br>Beyond |
| Purchase obligations        | \$ 433,000        | \$ 433,000            | \$ 0              | \$ 0             | \$ 0               |
| Operating lease obligations | 402,000           | 240,000               | 162,000           | 0                | 0                  |
| <b>Total</b>                | <b>\$ 835,000</b> | <b>\$ 673,000</b>     | <b>\$ 162,000</b> | <b>\$ 0</b>      | <b>\$ 0</b>        |

**Off-Balance Sheet Arrangements**

We do not have any off-balance sheet arrangements except for the operating leases disclosed above and the commitments and contingencies disclosed in Note 9 of our consolidated financial statements contained in Item 8 of this Annual Report.

**Critical Accounting Policies and Estimates**

**Revenue Recognition** We follow the percentage of completion method of accounting for all significant contracts excluding government contracts, chemical sales, technology license and related royalties, and RC lease. The percentage of completion method of reporting income takes into account the estimated costs to complete and estimated gross margin for contracts in progress. We recognize revenue on government contracts generally based on the time and expenses incurred to date. We are recognizing revenue from the Arch Coal license over the estimated time for which Arch expects to recoup its investment in the technology and the related royalties will be recognized when earned. RC base rents, which are fixed, are recognized over the life of the lease. Contingent rents are recognized as they are earned.

Significant estimates are used in preparation of our financial statements and include:

our allowance for doubtful accounts, which is based on historical experience;

our warranty costs;

our expectation that it is more likely than not that our deferred tax assets will be realized in the future;

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

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the period over which we estimate we will earn up-front license payments.

In addition, amounts invoiced for government contracts are subject to change based on the results of future audits by the federal government. We have not experienced significant adjustments in the past, and we do not expect significant adjustments will be required in the future. We also use our judgment to support the current fair value of goodwill and other intangible assets of \$695,000 on the consolidated balance sheets. 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 we may grant performance guaranties or equipment warranties for a specified period and the achievement of certain plant operating conditions. In the event the equipment fails to perform as specified, we are obligated to correct or replace the equipment. Estimated warranty costs are recorded at the time of sale based on current industry factors. The amount of the warranty liability accrued reflects our best estimate of expected future costs of honoring our obligations under the warranty section of each contract. We believe the accounting estimate related to warranty costs is a critical accounting estimate because changes in it can materially affect net income, it requires us to forecast the amount of equipment that might fail to perform in the future, and it requires a large degree of judgment.

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

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

**Consolidation of Subsidiaries** Our equity partner in Carbon Solutions, ECP, contributed equity capital significantly in excess of our contributions. We expect that our ownership percentage may be further diluted below the 25.9% existing as of December 31, 2010 and that we will continue recording our interest under the equity method.

Our equity partner in Clean Coal, NexGen, must pay us up to \$4 million to maintain its 50% interest in Clean Coal for which it has issued notes payable to us evidencing a portion of that amount as described above. Although we expect performance on these notes and remaining amounts due us, we believe our 50% interest and other elements of our participation constitutes control of Clean Coal and, therefore, have consolidated its accounts with ours.

We hold a 50% interest in CCSS. However, we control only two of the five seats on the board of managers and our equity partner controls the other three seats. Therefore, we believe our 50% interest does not constitute control of CCSS and we have recorded our interest under the equity method.

### **Recently Issued Accounting Policies**

No pronouncements have been issued which would have a significant impact on us.

### **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 2010 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 \$500,000, respectively.



**Table of Contents****Interest Rate Risk**

As of December 31, 2010, approximately \$8.9 million of the cash and cash equivalents and investment in certificate of deposit were invested in interest-bearing accounts. A hypothetical change of 10% in the Company's effective interest rate from the year-end 2010 rate would increase (or decrease) interest income by \$18,000.

**Item 8. Financial Statements and Supplementary Data.**

**Our Financial Statements can be found at pages F-1 through F-24 of this report.**

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Report of Independent Registered Public Accounting Firm

Financial Statements:

ADA-ES, Inc. and Subsidiaries

Consolidated Balance Sheets, December 31, 2010 and 2009

Consolidated Statements of Operations, For the Years Ended December 31, 2010 and 2009

Consolidated Statements of Changes in Stockholders' Equity, For the Years Ended December 31, 2010 and 2009

Consolidated Statements of Cash Flows, For the Years Ended December 31, 2010 and 2009

Notes to Consolidated Financial Statements

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

None.

**Item 9A. 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, 2010 that our disclosure controls and procedures were effective.

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

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

A material weakness is a control deficiency, or combination of control deficiencies, that result in more than a remote likelihood that a material misstatement of annual or interim financial statements will not be prevented or detected. Our management assessed our internal control over financial reporting as of December 31, 2010. 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,

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we believe that, as of December 31, 2010, our internal control over financial reporting is effective based on those criteria.

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

The information required by this item is incorporated by reference from the information contained under the captions Election of Directors, Experience and Qualifications of Director Nominees, Corporate Governance Director Independence, Corporate Governance Board Meetings and Committees, Corporate Governance Audit Committee, Corporate Governance Nominating and Governance Committee, Executive Officers, Corporate Governance Code of Ethics and Executive Compensation Section 16(a) Beneficial Ownership Reporting Compliance in our definitive Proxy Statement for the 2011 Annual Meeting of Shareholders ( 2011 Proxy Statement ) to be filed within 120 days after the end of our fiscal year ended December 31, 2010.

**Item 11. Executive Compensation.**

The information required by this item is incorporated by reference from the information contained under the captions Corporate Governance Compensation Committee, Executive Compensation, Director Compensation and Stock Incentive Plans in our 2011 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 2011 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 2011 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 captions Relationship with Independent Certified Public Accountants and Audit Committee Approval of Services in our 2011 Proxy Statement.

**Table of Contents****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**

| No.   | Description  |
|-------|--|
| 3.1   | Amended and Restated Articles of Incorporation of ADA-ES (1)   |
| 3.2   | Second Amended and Restated Bylaws of ADA-ES (2)   |
| 4.1   | Form of Specimen Common Stock Certificate (3)  |
| 4.2   | Registration Rights Agreement dated October 21, 2005 (4)   |
| 4.3   | Registration Rights Agreement between ADA-ES, Inc. and Arch Coal, Inc. dated March 19, 2003 (5)  |
| 4.4   | Standstill and Registration Rights Agreements dated August 3-6, 2004 (6)   |
| 4.5   | Registration Rights Agreement among ADA-ES, Inc., Perella Weinberg Partners Oasis Master Fund L.P., Black River Commodity Select Fund and Black River Small Capitalization Fund Ltd. dated August 26, 2008 (7) |
| 4.6   | ADA-ES, Inc. Profit Sharing Retirement Plan Adoption Agreement (8)   |
| 4.7   | American Funds Distributors, Inc. Nonstandardized 401(K) Plan (9)  |
| 4.8   | American Funds Distributors, Inc. Defined Contribution Prototype Plan and Trust (10)   |
| 4.9   | Amended ADA-ES, Inc. Plan Policy Document *  |
| 4.10  | Employer Stock Addendum to Trust Agreement (11)  |
| 4.11  | Registration Rights Agreement between ADA-ES, Inc. and Arch Coal, Inc. dated March 23, 2010 (12)   |
| 10.2  | 2003 ADA-ES, Inc. Stock Option Plan** (13)   |
| 10.13 | 2003 Stock Compensation Plan #1** (14)   |
| 10.14 | 2003 Stock Compensation Plan #2** (15)   |
| 10.21 | ADA-ES, Inc. 2004 Executive Stock Option Plan** (16)   |
| 10.23 | Employment Agreement dated May 1, 1997 between C. Jean Bustard and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (17)   |
| 10.24 | Employment Agreement dated May 1, 1997 between Michael D. Durham and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (17)   |
| 10.25 | Employment Agreement dated January 2, 2000 between Mark H. McKinnies and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (17)   |
| 10.26 | Employment Agreement dated January 1, 2000 between Richard J. Schlager and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.) ** (17)   |
| 10.27 | 2004 Stock Compensation Plan #2 and model stock option agreements** (16)   |

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- 10.28 2004 Directors Stock Compensation Plan #1\*\* (18)
- 10.29 2005 Directors Compensation Plan\*\* (5)
- 10.31 Chemicals, Equipment, and Technical Engineering Services Supply Agreement dated as of November 3, 2006 by and between ADA-ES, Inc. and Clean Coal Solutions, LLC (f/ka ADA-NexCoal, LLC). (19)
- 10.32 Purchase and Sale Agreement dated as of November 3, 2006 by and among ADA-ES, Inc., NexGen Refined Coal, LLC and Clean Coal Solutions, LLC (f/ka ADA-NexCoal, LLC). (20)
- 10.33 Amended and Restated Operating Agreement of Clean Coal Solutions, LLC (f/ka ADA-NexCoal, LLC) dated as of November 3, 2006 by and among ADA-ES, Inc., NexGen Refined Coal, LLC and Clean Coal Solutions, LLC (f/ka ADA-NexCoal, LLC). (21)
- 10.34 Employment Agreement dated March 1, 2003 between Sharon M. Sjostrom and ADA Environmental Solutions, LLC (assigned to ADA-ES, Inc.)\*\* (22)
- 10.35 Executive Compensation Plan\*\* (22)
- 10.38 2007 Equity Incentive Plan\*\* (23)
- 10.39 Employment Agreement dated November 28, 2005 between Richard Miller and ADA-ES, Inc.\*\* (24)
- 10.43 Employment Agreement dated January 1, 2008 between Cameron E. Martin and ADA-ES, Inc.\*\* (24)
- 10.44 Engineering, Procurement and Construction Agreement dated January 29, 2008 between Red River Environmental Products, LLC and BE&K Construction Company, LLC. \*\*\* (24)

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|       |  |
|-------|--|
| 10.46 | Agreement for the Purchase of Activated Carbon between Red River Environmental Product, LLC and Southern Company Services, Inc dated June 5, 2008*** (25)  |
| (a)   | Master Agreement for the Purchase of Activated Carbon  |
| (b)   | General Conditions of the Contract for the Purchase of Chemical and/or Gas Products  |
| (c)   | Special Supplemental Conditions Contract   |
| 10.48 | Promissory Note and Account Pledge Agreement for Colorado Business Bank Letter of Credit dated August 15, 2008 (7)   |
| 10.49 | Carbon Supply Agreement between Red River Environmental Products, LLC and Luminant Generation Company, LLC dated September 3, 2008*** (7)  |
| 10.50 | Multiple Hearth Furnace (MHF) Contract between Industrial Furnace Company, Inc and Red River Environmental Products, LLC dated September 5, 2008*** (7)  |
| (a)   | Unit 1- Project No. 65214-RFP No. EFH-101  |
| (b)   | Unit 2- Project No. 65214-RFP No. EFH-101  |
| (c)   | Unit 3- Project No. 65214-RFP No. EFH-101  |
| (d)   | Unit 4- Project No. 65214-RFP No. EFH-101  |
| 10.51 | Amended and Restated Engineering, Procurement and Construction Agreement between Red River Environmental Products, LLC and BE&K Construction Company, LLC dated September 8, 2008*** (7)   |
| 10.52 | Guaranty of ADA-ES, Inc. to BE&K Construction Company, LLC dated September 8, 2008 regarding Amended and Restated Engineering, Procurement and Construction Agreement (7)  |
| 10.53 | Securities Purchase Agreement between ADA-ES, Inc. and Energy Capital Partners I, LP, Energy Capital Partners I-A LP, Energy Capital Partners I-B, LP and Energy Capital Partners I (TEF IP), LP dated October 1, 2008 (7)                       |
| 10.54 | Joint Development Agreement between ADA-ES, Inc. and Energy Capital Partners I, LP, Energy Capital Partners I-A LP, Energy Capital Partners I-B IP, LP and Energy Capital Partners I (Crowfoot IP), LP dated October 1, 2008 *** (26)            |
| 10.55 | Limited Liability Company Agreement of Crowfoot Development, LLC dated October 1, 2008*** (7)  |
| 10.56 | Intellectual Property License Agreement between ADA-ES, Inc. and Crowfoot Development, LLC dated October 1, 2008*** (7)  |
| 10.57 | Project Crowfoot Incentive Program, as amended and restated on August 13, 2008 and October 15, 2008**, *** (27)  |
| 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 (28)   |
| 10.59 | Site Work Agreement between Red River Environmental Products, LLC and BE&K Construction Company, LLC dated January 23, 2009 (29)   |
| 10.60 | First Amendment to the Securities Purchase Agreement between ADA-ES, Inc. and Energy Capital Partners I, LP, Energy Capital Partners I-A LP, Energy Capital Partners I-B, LP and Energy Capital Partners I (TEF IP), LP dated March 6, 2009 (29) |
| 10.61 | Second Amendment to ADA Carbon Solutions, LLC Limited Liability Company Agreement dated March 6, 2009 (29)   |
| 10.62 | First Amendment to the Carbon Supply Agreement between Red River Environmental Products, LLC and Luminant Generation Company, LLC dated March 31, 2009*** (29)   |
| 10.63 | Second Amendment to the Agreement for the Purchase of Activated Carbon between Red River Environmental Products, LLC and Southern Company Services, Inc. dated February 26, 2009 (29)  |
| 10.64 | First Amendment to Purchase and Sale Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., NexGen Refined Coal, LLC and Clean Coal Solutions, LLC (f/ka ADA-NexCoal, LLC) (30)   |
| 10.65 | Loan Commitment Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., NexGen Refined Coal Holding, LLC and Clean Coal Solutions, LLC (30)  |
| 10.66 | First Amendment to Chemicals, Equipment, and Technical Engineering Services Supply Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., and Clean Coal Solutions, LLC (30)  |

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- 10.67 Continuing Unconditional Guaranty dated as of October 26, 2009 by and among ADA-ES, Inc., and NexGen Refined Coal Holdings, LLC (30)
- 10.68 Security and Pledge Agreement dated as of October 26, 2009 by and among ADA-ES, Inc., and NexGen Refined Coal Holdings, LLC (30)
- 10.69 Promissory Notes dated as of October 26, 2009 by and among ADA-ES, Inc., Clean Coal Solutions, LLC and NexGen Refined Coal Holdings, LLC (30)
- 10.70 Project Crowfoot Incentive Program as amended and restated on August 13, 2008, October 15, 2008 and March 23, 2010 \*\*\* (31)
- 10.71 Development and License Agreement with Arch Coal, Inc. dated June 25, 2010\*\*\* (32)

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10.72 Equipment Lease between AEC-NM, LLC and GS RC Investments LLC dated June 29, 2010\*\*\* (32)

10.73 Equipment Lease between AEC-TH, LLC and GS RC Investments LLC dated June 29, 2010\*\*\* (32)

10.74 Technology Sublicense Agreement between ADA-ES, Inc., Clean Coal Solutions, LLC and GS RC Investments LLC dated June 29, 2010 (32)

10.75 ADA-ES, Inc. Guaranty for the benefit of GS RC Investments LLC dated June 29, 2010 (32)

10.76 Agreement to Lease between Clean Coal Solutions, LLC, AEC-NM, LLC, AEC-TH, LLC, and GS RC Investments LLC dated June 29, 2010\*\*\* (32)

10.77 Amended and Restated License Agreement between ADA-ES, Inc. and Clean Coal Solutions, LLC dated October 30, 2009 (32)

10.78 Refined Coal Activities Supplemental Compensation Plan for Employees, Contractors and Consultants of ADA-ES, Inc dated April 20, 2010 (32)

10.79 Amended and Restated 2007 Equity Incentive Plan, dated August 31, 2010 (33)

10.80 US Department of Energy Cooperative Agreement No. DE-FE0004343 Evaluation of Solid Sorbents as an Industrial Retrofit Technology for Carbon Dioxide Capture , dated September 30, 2010 (33)

10.81 First Amendment to the Amended and Restated License Agreement between ADA-ES, Inc. and Clean Coal Solutions, LLC dated as of August 4, 2010 \*

10.82 2010 Non-Management Compensation and Incentive Plan (34)

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 10-Q for the quarter ended September 30, 2010 filed on November 12, 2010 (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-Q for the quarter ended September 30, 2008 filed on November 07, 2008 (File No. 000-50216).
- (8) Incorporated by reference to Exhibit 4.1 to the form S-8 filed on June 3, 2009 (File No. 333-159715).
- (9) Incorporated by reference to Exhibit 4.1 to the form S-8 filed on June 3, 2009 (File No. 333-159715).
- (10) Incorporated by reference to Exhibit 4.2 to the form S-8 filed on June 3, 2009 (File No. 333-159715).
- (11) Incorporated by reference to Exhibit 4.4 to the form S-8 filed on June 3, 2009 (File No. 333-159715).
- (12) Incorporated by reference to Exhibit 4.1 to the Form 10-Q for the quarter ended March 31, 2010 filed on May 13, 2010 (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).



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- (14) Incorporated by reference to Exhibit 99.2 to the Form S-8 filed on November 14, 2003 (File No. 333-110479).
- (15) Incorporated by reference to Exhibit 99.1 to the Form S-8 filed on February 6, 2004 (File No. 333-112587).
- (16) Incorporated by reference to Exhibit 99.3 to the Form S-8 filed on December 14, 2004 (File No. 333-121234).

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- (17) 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).
- (18) Incorporated by reference to Exhibit 99.1 to the Form S-8 filed on April 16, 2004 (File No. 333-114546).
- (19) 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).
- (20) 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).
- (21) 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).
- (22) Incorporated by reference to the same numbered Exhibit 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 definitive proxy material proposal No. 2 for the 2007 Annual Meeting filed on April 30, 2007 (File No. 000-50216).
- (24) 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).
- (25) 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).
- (26) 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).
- (27) Incorporated by reference to Exhibit 10.38 to the Form 10-Q for the quarter ended September 30, 2008 filed on November 07, 2008 (File No. 000-50216).
- (28) Incorporated by reference to the same numbered Exhibit to Form 10-K for the year ended December 31, 2008 filed on March 27, 2009 (File No. 000-50216).
- (29) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended March 31, 2009 filed on May 14, 2009 (File No. 000-50216).
- (30) Incorporated by reference to the same numbered Exhibit to Form 10-K for the year ended December 31, 2009 filed on March 29, 2010 (File No. 000-50216).
- (31) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended March 31, 2010 filed on May 13, 2010 (File No. 000-50216).
- (32) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended June 30, 2010 filed on August 16, 2010 (File No. 000-50216).
- (33) Incorporated by reference to the same numbered Exhibit to the Form 10-Q for the quarter ended September 30, 2010 filed on November 12, 2010 (File No. 000-50216).
- (34) Incorporated by reference to Exhibit 99.1 to the Form S-8 filed on February 9, 2010 (File No. 333-164792).

**(b) See (a)(3) above.**

**(c) See (a)(2) above.**

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**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 28, 2011

Date: March 28, 2011

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 28, 2011

Date: March 28, 2011

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

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

Date: March 28, 2011

Date: March 28, 2011

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

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

Date: March 28, 2011

Date: March 28, 2011

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

/s/ Richard Swanson  
Richard Swanson, Director

Date: March 28, 2011

Date: March 28, 2011

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

Date: March 28, 2011

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**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders of

ADA-ES, Inc. and Subsidiaries

Littleton, Colorado

We have audited the accompanying consolidated balance sheets of ADA-ES, Inc. and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of ADA-ES, Inc. and subsidiaries as of December 31, 2010 and 2009, 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 28, 2011  
Denver, Colorado

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

|  | <b>DECEMBER 31,</b> |                  |
|--|---------------------|------------------|
|  | <b>2010</b>         | <b>2009</b>      |
| <b><u>ASSETS</u></b>   |                     |                  |
| <b>CURRENT ASSETS:</b>   |                     |                  |
| Cash and cash equivalents  | \$ 9,696            | \$ 1,456         |
| Receivables, net of allowance for doubtful accounts of \$10 and \$17, respectively | 9,066               | 5,812            |
| Investment in securities   | 505                 | 400              |
| Note receivable  | 1,580               | 0                |
| Assets held for resale and inventory   | 9                   | 2,059            |
| Prepaid expenses and other   | 594                 | 1,110            |
| <b>Total current assets</b>  | <b>21,450</b>       | <b>10,837</b>    |
| <b>PROPERTY AND EQUIPMENT, at cost</b>   | <b>8,041</b>        | <b>3,100</b>     |
| Less accumulated depreciation and amortization                                     | (3,235)             | (2,252)          |
| <b>Net property and equipment</b>  | <b>4,806</b>        | <b>848</b>       |
| <b>GOODWILL</b>  | <b>435</b>          | <b>435</b>       |
| <b>INTANGIBLE ASSETS, net of \$71 and \$61 in amortization, respectively</b>       | <b>260</b>          | <b>229</b>       |
| <b>INVESTMENT IN UNCONSOLIDATED ENTITIES</b>                                       | <b>14,021</b>       | <b>21,776</b>    |
| <b>DEFERRED TAXES AND OTHER ASSETS</b>   | <b>15,696</b>       | <b>6,842</b>     |
| <b>TOTAL ASSETS</b>  | <b>\$ 56,668</b>    | <b>\$ 40,967</b> |
| <b><u>LIABILITIES AND STOCKHOLDERS' EQUITY</u></b>                                 |                     |                  |
| <b>CURRENT LIABILITIES:</b>  |                     |                  |
| Accounts payable   | \$ 3,646            | \$ 5,312         |
| Accrued payroll and related liabilities  | 1,852               | 578              |
| Deferred revenue   | 5,639               | 1,452            |
| Accrued expenses and other liabilities   | 244                 | 1,306            |
| <b>Total current liabilities</b>   | <b>11,381</b>       | <b>8,648</b>     |
| <b>LONG-TERM LIABILITIES:</b>  |                     |                  |
| Accrued indemnity (Notes 6 and 9)  | 27,411              | 6,822            |
| Accrued warranty and other   | 4,432               | 1,146            |
| <b>Total liabilities</b>   | <b>43,224</b>       | <b>16,616</b>    |
| <b>COMMITMENTS AND CONTINGENCIES (Notes 6, 7 and 9)</b>                            |                     |                  |
| <b>STOCKHOLDERS' EQUITY:</b>   |                     |                  |
| ADA-ES, Inc. stockholders' equity  |                     |                  |
| Preferred stock; 50,000,000 shares authorized, none outstanding                    |                     |                  |

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|   |                  |                  |
|---|------------------|------------------|
| Common stock; no par value, 50,000,000 shares authorized, |                  |                  |
| 7,538,861 and 7,093,931 shares issued and outstanding     | 39,627           | 37,000           |
| Accumulated deficit                                       | (28,218)         | (12,748)         |
| Total ADA-ES, Inc. stockholders' equity                   | 11,409           | 24,252           |
| Non-controlling interest                                  | 2,035            | 99               |
| <b>TOTAL STOCKHOLDERS' EQUITY</b>                         | <b>13,444</b>    | <b>24,351</b>    |
| <b>TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY</b>         | <b>\$ 56,668</b> | <b>\$ 40,967</b> |

*See accompanying notes to these consolidated financial statements.*

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

|   | <b>FOR THE YEARS ENDED<br/>DECEMBER 31,</b> |             |
|---|---|-------------|
|   | <b>2010</b>                                 | <b>2009</b> |
| <b>REVENUES:</b>  |   |             |
| Emission control  | \$ 9,825                                    | \$ 15,947   |
| CO <sub>2</sub> capture   | 2,073                                       | 1,526       |
| Refined coal  | 10,383                                      | 2,588       |
| Total revenues  | 22,281                                      | 20,061      |
| <b>COST OF REVENUES:</b>  |   |             |
| Emission control  | 6,107                                       | 9,544       |
| CO <sub>2</sub> capture   | 1,066                                       | 969         |
| Refined coal  | 1,440                                       | 3,357       |
| Total cost of revenues  | 8,613                                       | 13,870      |
| <b>GROSS MARGIN</b>   | 13,668                                      | 6,191       |
| <b>OTHER COSTS AND EXPENSES:</b>  |   |             |
| General and administrative  | 32,790                                      | 16,745      |
| Research and development  | 911   | 709         |
| Depreciation and amortization   | 917   | 577         |
| Total expenses  | 34,618                                      | 18,031      |
| <b>OPERATING LOSS</b>   | (20,950)                                    | (11,840)    |
| <b>OTHER INCOME (EXPENSE):</b>  |   |             |
| Interest and other income   | 2,494                                       | 34          |
| Settlement of litigation, net   | 6,072                                       | 0           |
| Net equity in income (loss) from unconsolidated entities                              | (8,037)                                     | (3,243)     |
| Total other income (expense)  | 529   | (3,209)     |
| <b>LOSS FROM CONTINUING OPERATIONS BEFORE INCOME TAX AND NON-CONTROLLING INTEREST</b> | (20,421)                                    | (15,049)    |
| <b>INCOME TAX BENEFIT</b>   | 8,564                                       | 5,546       |
| <b>NET LOSS BEFORE NON-CONTROLLING INTEREST</b>                                       | (11,857)                                    | (9,503)     |
| <b>NON-CONTROLLING INTEREST</b>   | (3,613)                                     | 732         |
| <b>NET LOSS ATTRIBUTABLE TO ADA-ES, INC.</b>  | \$ (15,470)                                 | \$ (8,771)  |
| <b>NET LOSS PER COMMON SHARE BASIC AND DILUTED ATTRIBUTABLE TO ADA-ES, INC.</b>       | \$ (2.09)                                   | \$ (1.26)   |



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|  |       |       |
|--|-------|-------|
| WEIGHTED AVERAGE COMMON SHARES OUTSTANDING         | 7,393 | 6,973 |
| WEIGHTED AVERAGE DILUTED COMMON SHARES OUTSTANDING | 7,393 | 6,973 |

*See accompanying notes to these consolidated financial statements*

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**Table of Contents****ADA-ES, INC. AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY****FOR THE YEARS ENDED DECEMBER 31, 2010 AND 2009***(Amounts in thousands, except share data)*

|  | COMMON STOCK |           | (ACCUMULATED<br>DEFICIT) | TOTAL ADA-ES           | NON-CONTROLLING | TOTAL     |
|--|--------------|-----------|--------------------------|------------------------|-----------------|-----------|
|  | SHARES       | AMOUNT    | RETAINED<br>EARNINGS     | STOCKHOLDERS<br>EQUITY | INTEREST        |           |
| <b>BALANCES, December 31, 2008</b>               | 6,755,932    | \$ 35,812 | \$ (3,977)               | \$ 31,835              | \$ 25,152       | \$ 56,987 |
| Stock-based compensation                         | 265,649      | 997       | 0                        | 997                    | 0               | 997       |
| Issuance of stock on exercise of options         | 1,250        | 4         | 0                        | 4                      | 0               | 4         |
| Issuance of stock to 401(k) plan                 | 71,100       | 204       | 0                        | 204                    | 0               | 204       |
| Equity contributions                             | 0            | 0         | 0                        | 0                      | 738             | 738       |
| Deconsolidation of ADA Carbon Solutions, LLC     | 0            | 0         | 0                        | 0                      | (25,059)        | (25,059)  |
| Expense of stock registration                    | 0            | (17)      | 0                        | (17)                   | 0               | (17)      |
| Net loss   | 0            | 0         | (8,771)                  | (8,771)                | (732)           | (9,503)   |
| <b>BALANCES, December 31, 2009</b>               | 7,093,931    | \$ 37,000 | \$ (12,748)              | \$ 24,252              | \$ 99           | \$ 24,351 |
| Stock-based compensation                         | 214,089      | 1,024     | 0                        | 1,024                  | 0               | 1,024     |
| Issuance of stock on exercise of options         | 41,850       | 347       | 0                        | 347                    | 0               | 347       |
| Issuance of stock to 401(k) plan                 | 45,106       | 282       | 0                        | 282                    | 0               | 282       |
| Issuance of stock for cash                       | 143,885      | 1,000     | 0                        | 1,000                  | 0               | 1,000     |
| Equity contributions by non-controlling interest | 0            | 0         | 0                        | 0                      | 2,090           | 2,090     |
| Distributions to non-controlling interest        | 0            | 0         | 0                        | 0                      | (3,767)         | (3,767)   |
| Expense of stock issuance and registration       | 0            | (26)      | 0                        | (26)                   | 0               | (26)      |
| Net (loss) income                                | 0            | 0         | (15,470)                 | (15,470)               | 3,613           | (11,857)  |
| <b>BALANCES, December 31, 2010</b>               | 7,538,861    | \$ 39,627 | \$ (28,218)              | \$ 11,409              | \$ 2,035        | \$ 13,444 |

*See accompanying notes to these consolidated financial statements*

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

|   | <b>FOR THE YEARS ENDED<br/>DECEMBER 31,</b> |             |
|---|---|-------------|
|   | <b>2010</b>                                 | <b>2009</b> |
| <b>CASH FLOWS FROM OPERATING ACTIVITIES</b>                                     |   |             |
| Net loss  | \$ (15,470)                                 | \$ (8,771)  |
| Adjustments to reconcile net loss to net cash provided by operating activities: |   |             |
| Depreciation and amortization   | 917   | 577         |
| Loss on asset dispositions  | 0   | 17          |
| Provision for doubtful accounts   | (7)   | 0           |
| Deferred tax benefit  | (8,563)                                     | (5,555)     |
| Expenses paid with stock, restricted stock and stock options                    | 1,306                                       | 1,201       |
| Non-controlling interest in net income (loss) of subsidiaries                   | 3,613                                       | (732)       |
| Net equity in net income/loss from unconsolidated entities                      | 8,037                                       | 3,243       |
| Non-cash gain from joint venture partner  | (1,768)                                     | 0           |
| Changes in operating assets and liabilities:                                    |   |             |
| Trade receivables, net  | (3,247)                                     | 282         |
| Assets held for resale and inventory  | 0   | (2,056)     |
| Prepaid expenses and other  | 288   | (155)       |
| Accounts payable  | (1,666)                                     | 2,567       |
| Accrued expenses  | 20,589                                      | (407)       |
| Deferred revenue and other  | 7,686                                       | 8,186       |
| Net cash provided by (used in) operating activities                             | 11,715                                      | (1,603)     |
| <b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>                                    |   |             |
| Capital expenditures for equipment, patents and development projects            | (2,919)                                     | (296)       |
| Investment in securities  | (105)                                       | (400)       |
| Cash balance held in deconsolidated entity                                      | 0   | (25,171)    |
| Cash contributions to equity in unconsolidated subsidiary                       | (283)                                       | 0           |
| Principal payments received on notes receivable                                 | 188   | 0           |
| Net cash used in investing activities   | (3,119)                                     | (25,867)    |
| <b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>                                    |   |             |
| Non-controlling interest equity contributions                                   | 2,090                                       | 738         |
| Distributions to non-controlling interest                                       | (3,767)                                     | 0           |
| Issuance of common stock and exercise of stock options                          | 1,347                                       | 4           |
| Stock issuance and registration costs   | (26)  | (17)        |
| Net cash (used in) provided by financing activities                             | (356)                                       | 725         |
| <b>INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS</b>                         |   |             |
| CASH AND CASH EQUIVALENTS, beginning of year                                    | 1,456                                       | 28,201      |
| CASH AND CASH EQUIVALENTS, end of year  | \$ 9,696                                    | \$ 1,456    |
| <b>SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:</b>    |   |             |
| Stock and restricted stock issued for services                                  | \$ 1,306                                    | \$ 1,201    |

*See accompanying notes to these consolidated financial statements*

**Table of Contents****ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS****1. SUMMARY OF NATURE OF OPERATIONS AND SIGNIFICANT ACCOUNTING POLICIES:**

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

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

**Cash and Cash Equivalents** The Company considers all highly liquid debt instruments with purchased maturities of three months or less to be cash equivalents. The Company maintains the majority of its cash in money market accounts. The amount on deposit at December 31, 2010, was held in two commercial banks both of which deposits were 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. The balance was as follows:

|                           | As of December 31,    |                 |
|---------------------------|-----------------------|-----------------|
|                           | 2010                  | 2009            |
|                           | <i>(In thousands)</i> |                 |
| Receivables balance       | \$ 8,239              | \$ 5,041        |
| Unbilled revenues balance | 827                   | 771             |
| <b>Total</b>              | <b>\$ 9,066</b>       | <b>\$ 5,812</b> |

**Assets Held for Resale and Inventory** Assets held for resale and inventory consisted of chemicals used for the production of RC and the RC facilities held for sale at December 31, 2009. The Company records inventory at the lower of cost or market as determined on a first-in, first-out basis and consisted of:

|                         | At December 31,       |                 |
|-------------------------|-----------------------|-----------------|
|                         | 2010                  | 2009            |
|                         | <i>(In thousands)</i> |                 |
| Chemicals and materials | \$ 0                  | \$ 69           |
| Equipment held for sale | 0                     | 1,987           |
| ACI parts               | 9                     | 3               |
| <b>Total inventory</b>  | <b>\$ 9</b>           | <b>\$ 2,059</b> |

**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 2010 and 2009, we did not have any recognized goodwill impairment charges.

**Intangible Assets** Intangible assets principally consist of patents.



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

|   | At December 31,       |           |
|---|-----------------------|-----------|
|   | 2010                  | 2009      |
|   | <i>(In thousands)</i> |           |
| <b>Patents:</b>   |                       |           |
| Cost  | \$ 331                | \$ 290    |
| Less accumulated amortization                                 | (71)                  | (61)      |
| Total intangible assets, net                                  | \$ 260                | \$ 229    |
| Amortization expense of intangible assets for the year        | \$ 10,000             | \$ 12,000 |
| Amortization life in years of patents                         | 17                    | 17        |
| Anticipated annual amortization expense over the next 5 years | 15,000                | 13,000    |
| Weighted average amortization period in years                 | 14                    | 13        |

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

**Investment in Unconsolidated Entities** On October 1, 2008, the Company entered into a Joint Development Agreement ( JDA ) and formed a joint venture with Energy Capital Partners I, LP and its affiliated funds ( ECP ) known as ADA Carbon Solutions, LLC ( Carbon Solutions ). As of December 31, 2010, ADA owns a 25.9% interest in Carbon Solutions. Among Carbon Solutions eight wholly-owned subsidiaries are ADA Carbon Solutions (Red River), LLC ( Red River ), and Crowfoot Supply Company, LLC ( Crowfoot Supply ). As of December 31, 2010, our net investment in Carbon Solutions was \$13.6 million and is being accounted for under the equity method of accounting. Accordingly, our respective share of Carbon Solutions net loss for the period has been recognized in the consolidated statement of operations and our investment in Carbon Solutions has been reduced by our respective share of such loss. Carbon Solutions is principally engaged in development activities related to its activated carbon business and selling of activated carbon from its AC manufacturing facility (the AC Facility ).

On January 20, 2010, the Company, together with NexGen Resources Corporation ( NexGen ), formed Clean Coal Solutions Services, LLC ( CCSS ) for the purpose of operating the RC facilities leased to a third party. The Company has a 50% ownership interest in CCSS (but does not control it) and accordingly has accounted for the investment under the equity method of accounting.

The Company evaluates these investments annually for other than temporary declines in value. At December 31, 2010, no other than temporary declines existed on such investments.

**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 and maintenance and repair of the RC facilities are the responsibility of CCSS under agreements with the lessee of the facilities. 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.

**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)** The Company routinely performs an evaluation of the recoverability of the carrying value of its long-lived assets to determine if facts and circumstances indicate that the carrying value of assets or intangible assets may be impaired and if any adjustment is warranted. Based on the Company s evaluation as of December 31, 2010 and 2009, no impairment of value existed for long-lived assets.





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

**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,    |          |
|---|-----------------------|----------|
|   | 2010                  | 2009     |
|   | <i>(In thousands)</i> |          |
| Cost in excess of billing included in accounts receivable, net      | \$ 602                | \$ 659   |
| Billing in excess of recognized income included in deferred revenue | \$ 452                | \$ 1,300 |

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

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

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

**General and Administrative** General and administrative costs include personnel related fringe benefits, sales and administrative staff labor costs, legal expenses, 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.

|                              | Year Ended<br>December 31, |      |
|------------------------------|----------------------------|------|
|                              | 2010                       | 2009 |
|                              | <i>(In thousands)</i>      |      |
| Penalty and interest charges | \$ 1                       | \$ 6 |

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

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



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

**Net Income (Loss) Per Share** Basic EPS is calculated by dividing the income or (loss) available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted EPS is calculated using the same numerator as basic EPS and further reflects the potential dilution that could occur if outstanding stock options were exercised. No stock options were included in the calculations for 2010 or 2009 as their inclusion would be anti-dilutive due to our net losses for those periods.

**Stock-Based Compensation** The Company records equity compensation to employees at estimated fair value.

|                                     | As of December 31,    |          |
|-------------------------------------|-----------------------|----------|
|                                     | 2010                  | 2009     |
|                                     | <i>(In thousands)</i> |          |
| Stock based compensation before tax | \$ 1,306              | \$ 1,201 |
| Stock based compensation after tax  | 833                   | 720      |
| Basic and diluted (loss) per share  | (0.11)                | (0.11)   |

**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:

the impairment of and the remaining realizability of its long-lived assets including equity method investments, goodwill and intangibles;

estimates of certain overhead and other rates on research contracts with the U.S. Government, which are subject to future audits;

fair value of stock options;

warranty costs;

the allowance for doubtful accounts, which is based on historical experience;

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;

the deferred tax assets expected to be realized in future periods; and

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the period over which we estimate we will earn up front license payments.

Segment Information The Company follows established standards on the way that public companies report financial information about operating segments in annual financial statements and required reporting of selected information about operating segments in interim financial statements issued to the public. The standard also provides for disclosures regarding products and services, geographic areas, and major customers. These standards define operating segments as components of a company about which discrete financial information is available that is evaluated regularly by the chief operating decision maker(s) in deciding how to allocate resources and in assessing performance.

In applying these standards, the Company has defined its components as three reportable segments:

emission controls and other ( EC ),

CO<sub>2</sub> Capture ( CC ) and

refined coal ( RC ).

Reclassification Certain amounts in the 2009 consolidated financial statements have been reclassified to conform to the 2010 presentation. Such reclassification had no effect on net income.

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

Recently Issued Accounting Pronouncements No pronouncements have been issued which would have a significant impact on the Company.

**2. NOTE RECEIVABLE:**

NexGen Refined Coal, LLC ( NexGen ), the Company's partner in Clean Coal, is required to pay the Company up to \$4 million in order to maintain its 50% interest in Clean Coal. In June 2010, NexGen executed notes payable to the Company for approximately \$1.8 million with a due date of June 2012. Prior to that date, the Company expects to receive payments from NexGen based upon a portion of cash distributed to NexGen from Clean Coal, with a portion of that amount to be applied as payment on the notes and any additional amounts to be applied to the remainder of the total \$4 million expected to be paid by NexGen. The notes and remaining balance are accruing interest at the rate of 5% per annum.

Full payment of the principal amount of the notes is expected to be received by the Company by the end of 2011. During the second quarter of 2010, the Company recognized a non-operating gain of \$1.8 million as a result of these notes, which is included in interest and other income on the consolidated statement of operations. The Company has received \$188,000 through December 31, 2010 in principal payments on these notes.

**3. PROPERTY AND EQUIPMENT:**

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

|  | Life in<br>Years | As of December 31,    |               |
|--|------------------|-----------------------|---------------|
|  |                  | 2010                  | 2009          |
|  |                  | <i>(In thousands)</i> |               |
| Machinery and equipment                        | 3-10             | \$ 2,497              | \$ 2,346      |
| Leasehold improvements                         | 2-5              | 535                   | 504           |
| Furniture and fixtures                         | 3-7              | 284                   | 250           |
| Assets under lease (See Note 10)               | 10               | 4,725                 | 0             |
|  |                  | 8,041                 | 3,100         |
| Less accumulated depreciation and amortization |                  | (3,235)               | (2,252)       |
| <b>Total property and equipment, net</b>       |                  | <b>\$ 4,806</b>       | <b>\$ 848</b> |

|   | Year Ended<br>December 31, |        |
|---|----------------------------|--------|
|   | 2010                       | 2009   |
|   | <i>(In thousands)</i>      |        |
| Depreciation and amortization of property and equipment | \$ 906                     | \$ 565 |

**4. DEFERRED REVENUE**

Deferred Revenue consists of:

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billing in excess of costs and earnings on uncompleted contracts;

unearned revenues on licensing of the Company's intellectual property (as discussed further below); and

deferred rent revenue related to Clean Coal's lease of its RC facilities (also as discussed further below).

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**Table of Contents****ADA-ES, INC. AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS***Arch Coal*

In June 2010, the Company entered into a Development and License Agreement with Arch Coal, Inc. ( Arch ) in which the Company licensed, on an exclusive non-transferable basis, the use of certain of its technology to enhance coal by the application of additives and received a non-refundable license fee of \$2 million in cash. The Company expects to recognize these revenues as the technology is further evaluated and developed and the licensee realizes the benefits of the technology. The Company expects to sell certain chemical additives to the licensee, which is expected to enhance the licensee's coal. Future revenues, which are expected to be recognized in the next year are included in current deferred revenues. The Company expects to recognize approximately \$1.3 million by the end of 2011.

*Clean Coal*

In June 2010, Clean Coal executed agreements to lease its RC facilities. These agreements provided for, among other things, a prepaid rent payment of \$9 million for both leases that was made before June 30, 2010.

During 2010, the Company has recognized \$10.4 million in total rent revenues which includes \$1.8 million from the initial prepaid rent payment. Future revenues expected to be recognized with respect to the prepaid rent paid by the lessee are included in deferred revenues for the current period and in deferred revenues, accrued warranty and other for the long-term period, and are as follows:

| Year ending December 31, | Expected revenue<br>recognition<br>(In thousands) |
|--------------------------|---|
| 2011                     | \$ 3,600  |
| 2012                     | 3,600   |
| <b>Total</b>             | <b>\$ 7,200</b>                                   |

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

The Company has participated in several contracts awarded by the Department of Energy (the DOE). The Company typically invoices the DOE and industry cost-share partners monthly for labor and expenditures plus estimated overhead factors, less any cost share amounts. The contracts under which the Company has performed are subject to audit and future appropriation of funds by Congress. The Company has not experienced adverse adjustments as a result of government audits, however, the government audits for years ended 2004 through 2010 have not yet been finalized.

|  | As of December 31, |          |
|--|--------------------|----------|
|  | 2010               | 2009     |
|  | (In thousands)     |          |
| Revenue recognized related to CC Segment | \$ 2,073           | \$ 1,526 |
| Unearned contract amount                 | 18,800             | 1,600    |
| Expected revenue in 2011                 | 2,400              | 0        |

**6. INVESTMENTS IN UNCONSOLIDATED ENTITIES:***Carbon Solutions*

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

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

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

Under the JDA and the LLC Agreement, the Company transferred the development assets and certain liabilities relating to the production, processing and supply of AC to the Company's then wholly-owned subsidiaries Red River, Morton, Underwood and Crowfoot Supply and subsequently transferred the equity in these subsidiaries and certain contracts, goodwill and intellectual property relating to its AC supply business to Carbon Solutions as our \$18.4 million initial contribution.

As of June 30, 2009, the Company deconsolidated Carbon Solutions as the Company no longer held a controlling interest in Carbon Solutions as the joint venture partner converted a portion of its preferred equity contribution to ordinary capital contributions as of that date. Additional preferred equity contributions have been converted in 2010 and accordingly, the Company's interest decreased to 25.9% as of December 31, 2010. After the deconsolidation, the Company has accounted for the investment in Carbon Solutions under the equity method.

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

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

|   | As of December 31,    |          |
|---|-----------------------|----------|
|   | 2010                  | 2009     |
|   | <i>(In thousands)</i> |          |
| Service revenue related to MSA included in EC Segment           | \$ 293                | \$ 1,100 |
| Amounts due from Carbon Solutions included in trade receivables | 55                    | 161      |

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

Under the terms of the JDA, the Company is required to indemnify ECP and Carbon Solutions for certain damages and expenses they have incurred with respect to the Company's litigation with Norit Americas, Inc. ( Norit ) (See Note 9). As of December 31, 2010, the Company has recorded a liability to Carbon Solutions of approximately \$27.4 million related to such damages and expenses paid by Carbon Solutions. These amounts have been classified as non-current liabilities as the Company expects to satisfy the obligation through resources not involving current assets.

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

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

|                               | As of<br>December 31, 2010         | As of<br>December 31, 2009         |
|-------------------------------|------------------------------------|------------------------------------|
|                               | <i>(In thousands)</i>              |                                    |
| Current assets                | \$ 40,589                          | \$ 29,029                          |
| Property, equipment and other |                                    |                                    |
| long term assets              | 325,769                            | 230,588                            |
| <b>Total assets</b>           | <b>\$ 366,358</b>                  | <b>\$ 259,617</b>                  |
| Total liabilities             | \$ 214,638                         | \$ 95,680                          |
|                               |                                    |                                    |
|                               | Year Ended<br>December 31,<br>2010 | Year Ended<br>December 31,<br>2009 |
|                               | <i>(In thousands)</i>              |                                    |
| Net revenue                   | \$ 18,765                          | \$ 7,482                           |
| Net loss                      | \$ (27,806)                        | \$ (7,268)                         |

As of December 31, 2010, a demand note payable to ECP for monies advanced in the amount of \$193.8 million is included in Carbon Solutions liabilities.

**Clean Coal Solutions Services**

As discussed in Note 1 above, on January 20, 2010, the Company, together with NexGen, formed Clean Coal Solutions Services, LLC. The Company's investment of \$401,000 as of December 31, 2010 includes its share of CCSS income since its formation, which has been accounted for under the equity method of accounting.

Following is unaudited summarized information as to assets, liabilities and results of operations of CCSS:

|  | As of December 31, 2010         |
|--|---------------------------------|
|  | <i>(In thousands)</i>           |
| Current assets                                 | \$ 34,534                       |
| Property, equipment and other long term assets | 17,644                          |
| <b>Total assets</b>                            | <b>\$ 52,178</b>                |
| Total liabilities                              | \$ 33,896                       |
|  |                                 |
|  | Year Ended December 31,<br>2010 |

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|                                |    |                       |
|--------------------------------|----|-----------------------|
|                                |    | <i>(In thousands)</i> |
| Net revenue                    | \$ | 90,854                |
| Net income- attributed to CCSS | \$ | 236                   |

### 7. **JOINT VENTURE AND TRANSACTIONS WITH NEXGEN:**

In November 2006, the Company sold a 50% interest in its RC technology to a joint venture called Clean Coal Solutions, LLC, which was formed in 2006 with NexGen, to market RC technology. The Operating Agreement requires NexGen and the Company to each pay 50% of the costs of operating Clean Coal and specifies certain duties that both parties are obligated to perform.

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At present, we are considered the primary beneficiary of this joint venture and have consolidated the accounts of Clean Coal. Clean Coal's function is to supply chemicals, additives, equipment and technical services to cyclone fired boiler users, but Clean Coal's primary purpose is to put into operation facilities that produce RC that qualifies for Section 45 Tax Credits. Clean Coal qualified two facilities in 2009 for such purposes and monetized those facilities. As discussed in Note 2 above, NexGen has the right to maintain its 50% interest in Clean Coal by paying us an additional \$4 million. Under the terms of the agreement, as amended, NexGen may elect to retain its interest in Clean Coal by paying the Company up to \$4 million (plus any accrued interest under the notes described below) as follows: (a) \$1.8 million under NexGen's two-year promissory notes issued to the Company in June 2010, plus (b) 25% of cash distributions (other than for income taxes) due to NexGen from Clean Coal. NexGen's promissory notes are shown as notes receivable, bear interest at 5% per annum, are payable out of 35% of cash distributions to NexGen and are secured by NexGen's interest in Clean Coal. NexGen will make payments from cash that would otherwise be distributable to NexGen under the Clean Coal Operating Agreement. NexGen is not obligated to make those payments, but if it does not do so, it will forfeit a part of its interest in Clean Coal in direct proportion to the amount of \$4 million that it elects not to pay, if any. If NexGen fails to make any one payment, it cannot reclaim its interest by making later payments. In no event are we required to refund any of the cash payments made to us by NexGen.

Following is unaudited summarized information as to assets, liabilities and results of operations of Clean Coal:

|  | As of December 31,    |          |
|--|-----------------------|----------|
|  | 2010                  | 2009     |
|  | <i>(In thousands)</i> |          |
| <b>Primary assets of Clean Coal</b>                                |                       |          |
| Cash and cash equivalents  | \$ 1,335              | \$ 703   |
| Accounts receivable, net   | 4,835                 | 0        |
| Chemical inventory and equipment for resale                        | 0                     | 2,300    |
| Property plant and equipment including assets under lease, net     | 5,066                 | 53       |
| <b>Primary liabilities of Clean Coal</b>                           |                       |          |
| Accounts payable and accrued liabilities                           | \$ 362                | \$ 1,800 |
| Deferred revenue, current  | 3,600                 | 1,000    |
| Deferred revenue, long-term  | 3,600                 | 0        |
| Net costs included in net operating loss related to our RC efforts | \$ 318                | \$ 388   |

**8. STOCKHOLDERS' EQUITY:**

Pursuant to certain agreements, on March 23, 2010, the Company issued 143,885 shares of its Common Stock to Arch and received proceeds, net of issuance costs, totaling \$974,000. The Company has filed a registration statement, which was effective September 1, 2010, to register these shares in accordance with provisions of the registration rights agreement, which was executed at the time of the stock subscription agreement.

For the years ended December 31, 2010 and 2009, the non-controlling interest portion of stockholders' equity includes a non-controlling interest related to Clean Coal.

Since 2003, the Company has had several stock and option plans, in addition to the Amended and Restated 2007 Equity Incentive Plan dated as of August 31, 2010 (the "2007 Plan") and the ADA-ES, Inc. Profit Sharing Retirement Plan, which is a plan qualified under Section 401(k) of the Internal Revenue Code (the "401(k) Plan") described below. These plans allow the Company to issue stock or options for shares of Common Stock to employees, Board of Directors and non-employees.

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Following is a table of options activity for the two years ended December 31, 2010:

| Options Activity                              | Employee and Director Options | Non-Employee Options | Weighted Average Exercise Price |
|---|-------------------------------|----------------------|---------------------------------|
| Options Outstanding, December 31, 2008        | 272,806                       | 9,000                | \$ 10.21                        |
| Options granted                               | 0                             | 0                    | 0                               |
| Options expired                               | (1,291)                       | 0                    | 13.80                           |
| Options exercised                             | (1,250)                       | 0                    | 2.80                            |
| <b>Options Outstanding, December 31, 2009</b> | <b>270,265</b>                | <b>9,000</b>         | <b>10.23</b>                    |
| Options granted                               | 0                             | 0                    | 0                               |
| Options expired                               | (14,495)                      | (9,000)              | 14.11                           |
| Options exercised                             | (41,850)                      | 0                    | 8.60                            |
| <b>Options Outstanding, December 31, 2010</b> | <b>213,920</b>                | <b>0</b>             | <b>\$ 10.18</b>                 |

Following is a table of aggregate intrinsic value of options exercised and exercisable for the two years ended December 31, 2010:

| Aggregate Intrinsic Value of Options | Value          | Average Market Price |
|--------------------------------------|----------------|----------------------|
| Exercised, December 31, 2009         | \$ 1,000       | \$ 3.70              |
| Exercised, December 31, 2010         | \$ (86,000)    | \$ 6.23              |
|                                      | Value          | Market Price         |
| Exercisable, December 31, 2009       | \$ (1,200,000) | \$ 6.10              |
| Exercisable, December 31, 2010       | \$ 209,000     | \$ 11.16             |

Stock options outstanding and exercisable at December 31, 2010 are summarized in the table below:

| Range of Exercise Prices | Number of Options Outstanding and Exercisable | Weighted Average Exercise Price | Weighted Average Remaining Contractual Lives |
|--------------------------|---|---------------------------------|--|
| \$2.80                   | 8,165   | \$ 2.80                         | 2.8  |
| \$8.60 - \$10.20         | 143,743                                       | \$ 8.66                         | 4.9  |
| \$13.80 - \$15.20        | 62,012  | \$ 14.70                        | 3.5  |
|                          | 213,920                                       | \$ 10.18                        | 4.4  |

No stock options were granted and/or vested during the year ended December 31, 2010.

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Although the Company adopted the 2007 Plan in 2007, it was further amended and restated as of August 31, 2010 to make non-material changes to assure Internal Revenue Code Section 409A compliance and to increase the non-management director annual grant limit to 15,000 shares of Common Stock from 10,000 shares. The 2007 Plan authorizes the issuance to employees, directors and non-employees of up to 745,779 shares of Common Stock, either as restricted stock grants or to underlie options to purchase shares of the Company's Common Stock.

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A summary of the status of the non-vested shares under the 2007 Plan for the two years ended December 31, 2010 is presented below:

| Non-vested Shares               | Shares   | Weighted<br>Average Grant<br>Date Fair<br>Value |
|---------------------------------|----------|---|
| Non-vested at December 31, 2008 | 110,786  | \$ 8.82   |
| Granted                         | 67,689   | 5.05  |
| Vested                          | (50,978) | 8.81  |
| Forfeited                       | (11,184) | 8.37  |
| Non-vested at December 31, 2009 | 116,313  | \$ 6.65   |
| Granted                         | 34,175   | 5.94  |
| Vested                          | (52,634) | 8.06  |
| Forfeited                       | (4,918)  | 5.55  |
| Non-vested at December 31, 2010 | 92,936   | \$ 5.46   |

In 2009, the Company revised its 401(k) Plan. The revision permits the Company to issue shares of its Common Stock to employees to satisfy its obligation to match employee contributions under the terms of the Plan in lieu of matching contributions in cash. The Company reserved 300,000 shares of its Common Stock for this purpose. The value of Common Stock issued as matching contributions under the Plan is determined based on the per share market value of our Common Stock on the date of issuance.

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Following is a table summarizing the activity under various stock issuance plans for the two years ended December 31, 2010:

|  | Stock Issuance Plans  |                |                         |
|--|-----------------------|----------------|-------------------------|
|  | 2007 Plan             | 401(k)<br>Plan | Other<br>Stock<br>Plans |
| Balance available, December 31, 2008                                   | 418,657               | 300,000        | 26,065                  |
| Evergreen addition   | 107,224               | 0              | 0                       |
| Restricted stock issued to new, anniversary and executive employees    | (67,689)              | 0              | 0                       |
| Restricted stock repurchased   | 11,184                | 0              | 0                       |
| Stock issued based on incentive and matching programs to employees     | (5,500)               | (71,100)       | 0                       |
| Stock issued to executives, directors and non- employees               | (196,644)             | 0              | (7,000)                 |
| Balance available, December 31, 2009                                   | 267,232               | 228,900        | 19,065                  |
| Evergreen addition   | 33,800                | 0              | 0                       |
| Restricted stock issued to new, anniversary and executive employees    | (34,175)              | 0              | 0                       |
| Restricted stock repurchased   | 4,918                 | 0              | 0                       |
| Stock issued based on incentive and matching programs to employees     | (51,345)              | (45,106)       | 0                       |
| Stock issued to executives, directors and non- employees               | (126,487)             | 0              | (7,000)                 |
| Balance available, December 31, 2010                                   | 93,943                | 183,794        | 12,065                  |
| Expense recognized under the different plans for the two years ended:  |                       |                |                         |
|  | <i>(In thousands)</i> |                |                         |
| December 31, 2009  | \$ 954                | \$ 204         | \$ 43                   |
| December 31, 2010  | \$ 983                | \$ 282         | \$ 41                   |
| Unrecognized expense under the different plans for the two year ended: |                       |                |                         |
|  | <i>(In thousands)</i> |                |                         |
| December 31, 2009  | \$ 363                | \$ 0           | \$ 0                    |
| December 31, 2010  | \$ 341                | \$ 0           | \$ 0                    |

9. **COMMITMENTS AND CONTINGENCIES**

**Retirement Plan** The Company assumed a defined contribution and 401(k) plan covering all eligible employees as of January 1, 2003 which was revised in 2009, and makes matching contributions to the plan in the form of cash and its common stock. Such contributions (in 000 s) for the years ended December 31, are as follows:

|                                 | 2010   | 2009   |
|---------------------------------|--------|--------|
| Matching contributions in stock | \$ 282 | \$ 204 |
| Matching contributions in cash  | 0      | 63     |



|       |        |        |
|-------|--------|--------|
| Total | \$ 282 | \$ 267 |
|-------|--------|--------|

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

|                                | As of December 31,    |        |
|--------------------------------|-----------------------|--------|
|                                | 2010                  | 2009   |
|                                | <i>(In thousands)</i> |        |
| Beginning balance              | \$ 604                | \$ 546 |
| Performance guaranties accrued | 74                    | 138    |
| Expenses paid                  | (66)                  | (80)   |
| Ending balance                 | \$ 612                | \$ 604 |

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, 2010, the Company had a standby letter of credit for \$105,000 related to an installation of an ACI system. This commitment was not recorded on the Company's consolidated balance sheet, as the Company does not expect the funds to be called upon under the letter of credit.

**Purchase Obligations** As of December 31, 2010, the Company expects to pay purchase obligations totaling approximately \$433,000 primarily for the purchase of components and services related to our Emission Control Segment in 2011.

**Operating Lease Obligations** The Company leases office facilities under non-cancellable operating lease agreements. Our facilities leases generally provide for periodic rent increases and renewal options. Our operating lease agreements expire on August 31, 2012. Annual minimum commitments under the leases are shown in the table below:

|                                   | Operating Lease<br>Commitments |
|-----------------------------------|--------------------------------|
|                                   | <i>(In thousands)</i>          |
| Years ending December 31,         |                                |
| 2011                              | \$ 240                         |
| 2012                              | 162                            |
| Total operating lease commitments | \$ 402                         |

Rental expense incurred for the years ended December 31, is as follows:

| 2010 | 2009 |
|------|------|
|------|------|

|              | <i>(In thousands)</i> |        |
|--------------|-----------------------|--------|
| Rent expense | \$ 339                | \$ 259 |

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The Company has subleased approximately 5,300 square feet of combined office and warehouse space to a related third party. The term of this lease runs through August 31, 2012. Future annual sublease payments are expected to be received as follows:

|                           | <i>(In thousands)</i> |
|---------------------------|-----------------------|
| Years ending December 31, |                       |
| 2011                      | \$ 84                 |
| 2012                      | 56                    |
| Total                     | \$ 140                |

**Litigation**- The Company is involved in litigation with Norit. The Norit suit has been moved to arbitration with final arguments in this action conducted on February 8, 2011. The Company has made no estimate of potential loss resulting from the action as such losses, if any, cannot be determined at this time. Accordingly, no provision for a loss has been recognized in these financial statements other than the potential indemnity obligations related to Carbon Solutions discussed elsewhere and below.

In December 2010, we reached an agreement with Calgon Carbon Corporation ( Calgon ) settling their judgment award to us for \$7.2 million which is recognized net of certain additional fees in other income (expense) on the accompanying consolidated statement of operations.

**Carbon Solutions**

In 2008, the Company made certain guaranties and undertook other obligations related to Carbon Solutions. No liabilities associated with such guaranties and obligations were recorded on the Company's consolidated balance sheet as the Company does not expect such guaranties and obligations to be called upon.

Summaries of the guaranties and obligations related to Carbon Solutions are as follows:

|  | As of<br>December 31, 2010<br><i>(In thousands)</i> |
|--|---|
| AC Facility construction contract <sup>1</sup> | \$ 12,300   |
| Equipment contracts <sup>2</sup>               | 6,700   |
| Sales contract A guarantee <sup>3</sup>        | 10,000  |
| Sales contract B guarantee <sup>4</sup>        | 1,000   |
| Total guaranties and obligations               | \$ 30,000   |

<sup>1</sup> The Company has guaranteed all amounts owed by Red River under its construction contract for the AC Facility. The amount shown is the approximate remaining obligation under the contract. Red River can terminate this contract at any time and would be liable for certain items.

<sup>2</sup> Red River entered into four contracts with an independent equipment supplier for the purchase of certain equipment. A parent guaranty is applicable to both the Company and our partner in the joint venture. The amount shown is the approximate remaining obligation remaining under these contracts. Red River may terminate these contracts at any time and would be liable for certain items.

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- <sup>3</sup> The Company has also guaranteed the obligations of Red River under an amended sales contract with another major electric power generating company. Both parties are entitled to require specific performance of the other in limited circumstances when the cover remedies prove inadequate. No later than five business days after the third party debt financing portion for the AC Facility is obtained, each party is obligated to deliver to the other a \$10 million standby, unconditional, irrevocable letter of credit to secure the obligations to the other party in the event of default.
- <sup>4</sup> The Company has also guaranteed the obligations of Red River under an amended sales contract with a different major electric power generation company. The guaranty is effective until Red River has fulfilled its contractual obligations, which is estimated to occur in the second quarter of 2012, and may be terminated earlier based on Red River's financial position or the credit rating of its debt financing for the AC Facility. This is the Company's maximum aggregate liability under the guaranty.

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Under the terms of the JDA, the Company is required to indemnify ECP and Carbon Solutions for certain damages and expenses they incur with respect to the Company's litigation and arbitration with Norit described in Part II, Item 1.

Under terms of agreements with Carbon Solutions, as amended in August, 2009, Red River has agreed to reimburse the Company and ECP in the event they are required to make payments related to these guaranties and guaranties provided by ECP and has granted a secured interest in its assets to ADA and ECP to secure the reimbursement agreement and any loans ECP makes to Red River. Carbon Solutions has guaranteed the obligations of Red River under the reimbursement and loan agreement and has pledged its equity interest in Red River to the Company and ECP as security for this guaranty. The Company has assigned its rights under these agreements to ECP, and any amounts payable to the Company would be paid directly to ECP until ECP's preferred equity in Carbon Solutions is fully redeemed or converted and all loans to Red River have been paid in full.

Following is unaudited contributions made by ECP:

|   | As of December 31,    |           |
|---|-----------------------|-----------|
|   | 2010                  | 2009      |
|   | <i>(In thousands)</i> |           |
| Preferred equity contributions  | \$ 89,300             | \$ 98,500 |
| Loans to Red River by secured notes bearing interest at 12% per annum compounded quarterly. | 193,800               | 76,300    |

**10. LEASING ACTIVITIES:**

Clean Coal leased two RC Facilities in June 2010 to an independent third party. The leases have initial terms that run through December 31, 2012 and automatically renew for annual terms through the end of 2019, subject to a number of termination clauses. Clean Coal receives fixed contingent rent payments as defined in the lease agreements. In addition, the lessee paid \$9 million at the inception of the lease, which was recorded as deferred revenue and is being amortized into revenue under the straight-line method over the initial term of the lease through December 31, 2012. During the year ended December 31, 2010, \$1.8 million of deferred revenue was recognized. Contingent rental income received during 2010 totaled \$6 million. Future minimum lease payments shown below do not include contingent rentals, which are based on the production of RC.

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The following is a schedule, by year, of total fixed lease payments to be received, if all term extension options are exercised, through December 31, 2019.

| Years ending December 31,    | Operating lease payments<br>expected<br>(In thousands) |
|------------------------------|--|
| 2011                         | \$ 7,963   |
| 2012                         | 8,729  |
| 2013                         | 12,805   |
| 2014                         | 13,353   |
| 2015                         | 13,941   |
| Thereafter                   | 61,483   |
| Total minimum lease payments | \$ 118,274   |

**11. MAJOR CUSTOMERS:**

Sales to unaffiliated customers who represent 10% or more of the Company's sales were as follows:

| Customer | As of December 31, |             |
|----------|--------------------|-------------|
|          | 2010<br>(%)        | 2009<br>(%) |
| A        | 47                 | 0           |
| B        | 1                  | 15          |
| C        | 1                  | 13          |

The Company's receivables were as follows:

|                                     | Number of<br>customers<br>that made<br>up<br>percentage<br>of balance | Percentage<br>of balance<br>(%) |
|-------------------------------------|---|---------------------------------|
| Receivables for the two years ended |   |                                 |
| December 31, 2010                   | 1   | 67                              |
| December 31, 2009                   | 2   | 51                              |

**12. INCOME TAXES:**

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

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|                              | As of December 31,    |            |
|------------------------------|-----------------------|------------|
|                              | 2010                  | 2009       |
|                              | <i>(In thousands)</i> |            |
| Current                      | \$ (1)                | \$ 9       |
| Deferred                     | (8,563)               | (5,555)    |
| Income tax expense (benefit) | \$ (8,564)            | \$ (5,546) |

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The following lists the Company's deferred tax assets and (liabilities), which are included in deferred taxes and other assets, accrued expenses and other liabilities, respectively, in the accompanying consolidated balance sheets:

|  | As of December 31,    |                 |
|--|-----------------------|-----------------|
|  | 2010                  | 2009            |
|  | <i>(In thousands)</i> |                 |
| <b>Deferred tax assets:</b>                              |                       |                 |
| Deferred compensation, warranty and other                | \$ 223                | \$ 229          |
| Allowance for doubtful accounts                          | 4                     | 7               |
| Deferred revenues, compensation and other                | 306                   | 371             |
| Net equity in net income/loss of unconsolidated entities | 459                   | 0               |
| Net operating loss carryforward                          | 14,072                | 6,235           |
| Tax credits  | 753                   | 568             |
| <b>Total tax assets</b>                                  | <b>15,817</b>         | <b>7,410</b>    |
| <b>Deferred tax liabilities</b>                          |                       |                 |
| Prepaid expenses   | 122                   | 107             |
| Net equity in net income/loss of unconsolidated entities | 0                     | 187             |
| Property and intangible asset differences                | 38                    | 23              |
| <b>Total tax liabilities</b>                             | <b>160</b>            | <b>317</b>      |
| <b>Net deferred tax assets</b>                           | <b>\$ 15,657</b>      | <b>\$ 7,093</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:

|  | As of December 31, |              |
|--|--------------------|--------------|
|  | 2010               | 2009         |
| Expected income tax rate - expense (benefit) | (34)%              | (34)%        |
| Non-controlling interest                     | (6)%               | 0%           |
| Permanent differences                        | <1%                | <1%          |
| Tax credits                                  | <1%                | (2)%         |
| State income taxes                           | (2)%               | (4)%         |
| Other  | 1%                 | 3%           |
| <b>Actual effective income tax rate</b>      | <b>(42)%</b>       | <b>(37)%</b> |

The Company did not have any unrecognized tax benefits in 2010 and 2009. Major components related to the permanent difference include goodwill impairment, investment items and incentive stock options for the year ended December 31, 2009. Permanent differences for the year ended December 31, 2010 are not considered significant. The primary jurisdictions in which the Company files income tax returns are the U.S.

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federal government and State of Colorado. The Company is no longer subject to U.S. federal examinations by tax authorities for years before 2007 and Colorado state examinations for years before 2006.

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

The Company has a federal net operating loss carryforward of approximately \$38.9 million that will expire in the years from 2029 to 2030 and state net operating loss carryforward of approximately \$27.5 million that will expire in years ranging from 2016 to 2030.

### 13. **RELATED PARTY TRANSACTIONS:**

As discussed above in Note 4 and Note 8, the Company entered into a Development and License Agreement and executed a Securities Subscription and Investment Agreement with Arch in 2010.

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|   | Years Ended December 31, |       |
|---|--------------------------|-------|
|   | 2010                     | 2009  |
|   | <i>(In thousands)</i>    |       |
| Revenues recognized from activities with Arch | \$ 784                   | \$ 30 |

John Eaves is the President and Chief Operating Officer and a director of Arch and also one of the members of the Company's Board of Directors. The initial appointment of Mr. Eaves to the Board was made pursuant to a 2003 Subscription and Investment Agreement with Arch whereby the Company's management agreed to make available one seat on our Board for an Arch designee and to vote all shares and proxies they are entitled to vote in favor of such designee for so long as Arch continues to hold at least 100,000 shares of our common stock. Mr. Eaves abstained from voting on the above-described transactions. In addition, as required by our related-party transaction policy, the transactions were approved by the Company's audit committee before being recommended to the Board for approval and were then approved by the disinterested members of the Board.

**14. BUSINESS SEGMENT INFORMATION**

The following information relates to the Company's three reportable segments: Emissions control ( EC ), Capture ( CC ) and Refined coal ( RC ). 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 and the U.S. Government.

|                               | Years Ended December 31, |                  |
|-------------------------------|--------------------------|------------------|
|                               | 2010                     | 2009             |
|                               | <i>(In thousands)</i>    |                  |
| <b>Revenue:</b>               |                          |                  |
| EC                            | \$ 9,825                 | \$ 15,947        |
| CC                            | 2,073                    | 1,526            |
| RC                            | 10,383                   | 2,588            |
| <b>Total</b>                  | <b>\$ 22,281</b>         | <b>\$ 20,061</b> |
| <b>Segment profit (loss):</b> |                          |                  |
| EC                            | \$ 2,114                 | \$ 5,326         |
| CC                            | 895                      | 349              |
| RC                            | 7,842                    | (1,313)          |
| <b>Total</b>                  | <b>\$ 10,851</b>         | <b>\$ 4,362</b>  |

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

|   | Years Ended December 31, |          |
|---|--------------------------|----------|
|   | 2010                     | 2009     |
| Total segment profit                              | \$ 10,851                | \$ 4,362 |
| Non-allocated general and administrative expenses | (30,884)                 | (15,625) |
| Depreciation and amortization                     | (917)                    | (577)    |
| Interest income and other income/expenses         | 8,566                    | 34       |
| Income tax benefit                                | 8,564                    | 5,546    |

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|  |             |            |
|--|-------------|------------|
| Net equity in net income/loss from unconsolidated entities | (8,037)     | (3,243)    |
| Net (income) loss attributable to non-controlling interest | (3,613)     | 732        |
| Net loss   | \$ (15,470) | \$ (8,771) |

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.

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