ADA-ES INC Form S-3 May 28, 2010 Table of Contents

As filed with the Securities and Exchange Commission on May \_\_\_, 2010

Registration No. 333-\_\_\_\_

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# FORM S-3 REGISTRATION STATEMENT

**UNDER** 

THE SECURITIES ACT OF 1933

ADA-ES, INC.

(Exact name of registrant as specified in its charter)

Colorado (State or other jurisdiction of

84-1457385 (I.R.S. Employer

incorporation or organization)

8100 SouthPark Way, Unit B, Littleton, Colorado 80120

(303) 734-1727

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant s Principal Executive Offices)

### Mark H. McKinnies

8100 SouthPark Way, Unit B, Littleton, Colorado 80120

(303) 734-1727

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

Copies to:

Julie A. Herzog, Esq.

SCHUCHAT, HERZOG & BRENMAN, LLC

1900 Wazee Street, Suite 300

**Denver, CO 80202** 

(303) 295-9700

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

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

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer "Accelerated filer "On not check if a smaller reporting company)

Smaller reporting company x

### CALCULATION OF REGISTRATION FEE

| Title of each class of     |                |                         |                    | Amount of    |
|----------------------------|----------------|-------------------------|--------------------|--------------|
| securities to be           | Amount to be   | Proposed maximum        | Proposed maximum   | registration |
|                            |                | offering price per unit | aggregate offering |              |
| registered                 | registered (2) | (1)                     | Price (1)          | Fee          |
| Common Stock, no par value | 262,499        | \$5.90                  | \$1,548,744        | \$110.43     |

- (1) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457 under the Securities Act. The price per share and aggregate offering price are based on the average of the high and low sales prices of the registrant s common stock on May 25, 2010, as reported on the Nasdaq Capital Market.
- (2) Pursuant to Rule 416 under the Securities Act, this registration statement also covers such additional number of shares of common stock issuable upon stock splits, stock dividends, distributions, recapitalizations or similar events with respect to the 262,499 shares of common stock being registered pursuant to this registration statement.

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

The information in this prospectus is not complete and may be changed. The selling shareholder named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to completion, dated May 26, 2010

**PROSPECTUS** 

# **262,499 SHARES**

### ADA-ES, INC.

### COMMON STOCK, NO PAR VALUE

ADA-ES, Inc. (ADA-ES or we) has prepared this prospectus to register for resale by one of our shareholders of up to 262,499 shares of our common stock that we sold to such shareholder pursuant to the private placements described on page 1 of this prospectus.

The selling shareholder identified in this prospectus, or its permitted pledgees, donees, transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. We are not selling any shares of common stock and will not receive any proceeds from the sale of the shares under this prospectus.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling shareholder will pay or assume brokerage commissions and similar charges incurred for the sale of these shares of our common stock.

Our common stock is listed on the NASDAQ Capital Market under the symbol ADES. On May 25, 2010, the reported last sale price of our common stock on the NASDAQ Capital Market was \$6.00 per share. You are urged to obtain current market quotations for the common stock.

INVESTING IN OUR COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. SEE <u>RISK FACTORS</u> BEGINNING ON PAGE 2 OF THIS PROSPECTUS.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is May , 2010.

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The address of our principal executive office is 8100 SouthPark Way, Unit B, Littleton, Colorado 80120, and our telephone number is (303) 734-1727.

Unless the context otherwise requires, references in this prospectus to ADA-ES, we, us, and our refer to ADA-ES, Inc. and its subsidiaries.

We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. The selling shareholder is offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock.

#### PROSPECTUS SUMMARY

This summary highlights important features of this offering and the information included or incorporated by reference in this prospectus. This summary does not contain all of the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, especially the risks of investing in our common stock discussed under Risk Factors.

#### **Our Business**

Incorporated in Colorado in 1997, ADA-ES, Inc. develops and implements proprietary environmental technology and provides specialty chemicals that enable coal-fueled power plants to meet emissions regulations, enhance existing air pollution control equipment, maximize capacity and improve operating efficiencies. ADA-ES became a stand-alone public company through a spin-off from its parent company, Earth Sciences, Inc. in September 2003. We have a wholly-owned subsidiary called ADA Environmental Solutions, LLC and a 50% interest in a Colorado limited liability company called Clean Coal Solutions, LLC ( Clean Coal ). As of March 31, 2010 we had a 32% interest in a Delaware limited liability company called ADA Carbon Solutions, LLC ( Carbon Solutions ). Carbon Solutions has five wholly-owned subsidiaries called Crowfoot Supply Company, LLC ( Crowfoot Supply ), Red River Environmental Products, LLC ( Red River ), Five Forks Mining, LLC, Bowman Environmental Products, LLC, and Underwood Environmental Products, LLC, all Delaware limited liability companies.

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

Our major activities include the development and marketing of our refined coal technology for control of NO<sub>x</sub> and mercury, which also qualifies for certain tax credits, through our Clean Coal joint venture with NexGen Refined Coal, LLC, an affiliate of NexGen Resources Corporation (NexGen), the sale of equipment, field testing and services related to mercury emission control for coal-fired boilers used in electric generation, the research and development of CO<sub>2</sub> capture technology through a contract supported by the Department of Energy (DOE) and industry participants, the sale of flue gas conditioning (FGC) equipment and chemicals, and other chemicals and technologies for coal-fired boilers, and through Carbon Solutions, our joint venture with Energy Capital Partners I, LP and its affiliated funds (ECP), the construction and operation of a new Greenfield facility in Coushatta, Red River Parish, Louisiana (the AC Facility) for the manufacture of AC for mercury control applications and the supply from interim sources of AC to utility customers until such time as the AC Facility is operational.

### **Private Placements**

On March 23, 2010, we entered into a Subscription Agreement with Arch Coal, Inc. We refer to Arch Coal, Inc. in this prospectus interchangeably as Arch Coal and the selling shareholder. The Subscription Agreement provided for the issuance and sale by us to Arch Coal of an aggregate of 143,885 shares of our common stock at \$6.95 per share. In connection with the sale of the shares of our common stock to Arch, we did not incur any fees to placement agents for the transaction. We issued these shares of common stock in reliance on an exemption from registration pursuant to Section 4(2) of the Securities Act of 1933, as amended, and Rule 506 of Regulation D promulgated thereunder. We are now registering for resale under this prospectus the shares of common stock issued to Arch Coal in the March 23, 2010 private placement. We are required to register these shares pursuant to a Registration Rights Agreement we entered into with Arch Coal in connection with this private placement.

In addition, this prospectus covers the resale of 118,614 shares of our common stock previously issued to Arch Coal in a 2003 private placement and subsequently registered for resale pursuant to another registration statement. The shares registered on the other registration statement will cease to be registered on such other registration statement and, instead, will be registered for resale under the registration statement of which this prospectus is a part effective upon the effectiveness of such registration statement.

### THE OFFERING

Common stock offered by selling shareholder 262,499 shares

Use of proceeds We will not receive any proceeds from sales of our common stock, if any, by the selling

shareholder.

Risk Factors See <u>Risk Factors</u> beginning on page 2 and other information included in this prospectus

for a discussion of factors you should carefully consider before deciding to invest in the

shares.

NASDAQ Capital Market symbol ADES

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#### RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below before purchasing our common stock. The risks and uncertainties described below are not the only ones facing our company. Additional risks and uncertainties may also impair our business operations. If any of the following risks actually occur, our business, financial condition or results of operations would likely suffer. In that case, the trading price of our common stock could fall, and you may lose all or part of the money you paid to buy our common stock.

#### **Risks Related to our Business**

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

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

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

In October 2009, the U.S. Environmental Protection Association (EPA) agreed to promulgate final rules to reduce hazardous air pollutants (HAPs) from coal-fired power plants, based on MACT by November 2011 with implementation in 2014. A lack of definitive mercury (and other HAPs) emission regulations until then will likely continue the uncertainty among independent power producers and utilities as to what will be required of them as far as mercury (and other HAPs) controls, which has adversely impacted their ability to include pollution control costs in their rate bases. This uncertainty is and will likely continue to negatively impact our business, results of operations and financial condition until new federal regulations are finalized, which will then mandate how industry must respond to the new federal regulations or state laws, including those that are presently in various stages of enactment, for pollution control and permitting requirements for new coal-fired plants. We do not expect significant revenue growth in this area unless and until federal or state regulations impact a significant portion of the 1,500 existing boilers.

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

Finally, federal, state and local legislation mandating that utility companies serving a state or region purchase a minimum amount of power from renewable energy sources such as wind, hydroelectric, solar and geothermal would reduce demand for our products and services.

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

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

Norit Americas, Inc., which is an AC manufacturer with whom we have previously done business, filed a lawsuit against us, Carbon Solutions, certain of Carbon Solutions subsidiaries (collectively with Carbon Solutions, the AC Supply Companies ) and two of Carbon Solutions employees (who were former employees of Norit) asserting claims for misappropriation of trade secrets and other claims, and seeking monetary damages and injunctive relief that seek to prevent us from using what they allege to be Norit trade secrets and other intellectual property involving the manufacture of AC, particularly in connection with the AC Facility. The case, which was originally captioned Norit Americas, Inc. v. ADA-ES, Inc., ADA Environmental Solutions, LLC, John Rectenwald, and Stephen Young, Cause No. 08-0673, was filed in Harrison County, Texas in August 2008 (the Texas Action ), has been moved by order of the court to binding arbitration in Atlanta, Georgia. An arbitration panel was recently appointed and on April 29, 2010, in accordance with a schedule established by the panel, heard motions to dismiss and motions for summary judgment made by us and the other ADA Defendants. The panel has not ruled on these motions at this time. Assuming the matter is not resolved by the pending motions, the panel has scheduled the matter to be heard beginning in October, 2010 and continuing until the parties have submitted their cases in full, which will likely be in November, 2010. In addition, in December 2009, Norit N.V., which is the Dutch parent of Norit, opened a preliminary proceeding in the Almelo District Court, the Netherlands, to take preliminary testimony based on allegations that we violated a confidentiality agreement entered into by us in 2005 with Norit N.V. Responding to Norit s claims, whether or not they are ultimately found to have merit, has been time consuming and very costly, and the ultimate outcome of these matters is unknown. In addition, the litigation could result in substantial damages for which we would be responsible. Finally, pursuant to agreements we have entered into with ECP and the AC Supply Companies, certain liabilities were expressly excluded from the transactions ( Excluded Liabilities ), including liabilities with respect to the Texas Action, and we are obligated to provide indemnity against the reasonable costs, expenses and losses that are incurred as a result of such Excluded Liabilities (the Indemnity Obligations ). Satisfaction of any Indemnity Obligations to ECP may be made via a decrease in our capital contributions (and corresponding increase in ECP s capital contributions) in Carbon Solutions and adjustment of each party s percentage ownership accordingly. As described above, such amounts are substantial, and, if payment were required, it would likely have a material adverse effect on our business and financial condition, and there may be doubt as to our ability to continue as a going concern.

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

Our principal source of liquidity has been our existing working capital. We had a negative operating cash flow for the year ended December 31, 2009 and the quarter ended March 31, 2010 and this trend may continue throughout 2010, primarily due to legal expenses incurred in connection with the Texas Action, Carbon Solutions has funded, through loans or equity contributions from ECP to Carbon Solutions, a significant portion of the legal expenses related to the Texas Action, As of March 31, 2010, we had recorded a liability to Carbon Solutions of approximately \$8.6 million related to such expenses. We do not currently have any accrued indemnity obligations to ECP, and we are unable to estimate the total amount of any future indemnity obligations to Carbon Solutions or ECP at this time. ECP has notified us that it believes such obligations include any losses it suffers due to its loss of potential customers and diminution in the value of its businesses as well as costs and fees it will incur and any damages it may suffer as a result of a new lawsuit Norit N.V. has filed against ECP in state court in New Jersey. We may also require additional working capital to meet our 50% share of capital expenditures and operating requirements of Clean Coal and to pursue our other businesses. Our ability to generate the financial liquidity required to meet ongoing operational needs and to meet our current and future indemnification obligations to Carbon Solutions and potentially to ECP, will likely depend upon several factors, including ongoing legal expenses incurred by the parties in the Norit matters, timing of satisfaction and ultimate amount of the Indemnity Obligations, insurance coverage with respect to the Norit matter, our ability to finalize negotiations on a license agreement with Arch Coal (the Arch Coal License ) to exclusively license certain technology to Arch Coal and obtain the initial license fee of \$2.0 million, our ability to maintain a significant share of the market for mercury control equipment, continuation of FGC chemical sales and Clean Coal s success in monetizing Section 45 tax credits through the sale or lease of facilities to third party investors. Our failure to have sufficient working capital to fund these obligations would likely have a material adverse impact upon our business and financial condition.

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

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

In addition to the Indemnity Obligations, we have provided guaranties and undertaken other commitments of approximately \$84.0 million as of March 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 all amounts owed by Red River under the contract for the engineering, procurement and construction of the AC Facility. As of March 31, 2010, the remaining obligations under this contract totaled approximately \$73.0 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 March 31, 2010, the remaining obligation under these contracts was approximately \$9.4 million. Red River can terminate these contracts at any time for convenience; however, Red River would then owe the supplier for reimbursable costs and amounts owed for milestone and progress payments, cancellation charges to subcontractors and costs of demobilization. These amounts could be substantial and may not be completely recoverable by us if Red River were to abandon or sell the AC Facility. Finally, we have guaranteed Red River s obligations under three AC sales agreements with a maximum liability of \$12 million. If Red River cannot meet its obligations under these agreements, we may be liable to the customers for significant damages, which would materially adversely affect our financial condition.

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

Under terms of agreements with Carbon Solutions, as amended in August, 2009, Red River has agreed to reimburse us and ECP if we or they make payments related to the guaranties provided by ECP and us and has granted a security interest in its assets to ECP and us to secure the reimbursement agreement and any loans ECP makes to Red River. Carbon Solutions has guaranteed the obligations of Red River under a reimbursement and loan agreement and has pledged its equity interest in Red River to ECP and us as security for this guaranty. We have assigned our rights under these agreements to ECP, and any amounts payable to us would be paid directly to ECP until ECP s preferred equity in Carbon Solutions is fully redeemed or converted and all loans to Red River have been paid in full. As of March 31, 2010, the outstanding amount of ECP s preferred equity totaled \$98.5 million, and as of that date, the principal balance of ECP s loans to Red River totaled \$138.6 million. These amounts have increased between March 31, 2010 and the present, and will likely continue to increase until either the AC Facility is completed or permanent debt financing is in place. ECP s loans to Red River are evidenced by secured demand notes bearing interest at 12% per annum compounded quarterly.

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

Carbon Solutions is managed by a Board of four Managers, three of which were designated by ECP. Certain major transactions require the written consent of members holding at least 75% of the aggregate Carbon Solutions membership interests, of which we held 32% as of March 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 diluted. In addition, if we fail to promptly pay our indemnity obligations to ECP, although no dollar amounts have been claimed by ECP, ECP may decrease our capital contributions (and increase ECP s capital contributions) in Carbon Solutions by such amount and adjust each party s percentage ownership accordingly. If our interest in Carbon Solutions is diluted to less than 15%, we would lose our rights to designate our one remaining designee on the Board of Managers, and Carbon Solutions would be managed exclusively by ECP and its designees. If all of ECP s outstanding equity and loans were converted to ordinary capital contributions, our percentage ownership interest would be diluted to less than 15%. Our loss of approval rights may result in ECP s making decisions regarding the AC Facility and AC supply business that adversely affect our business, financial condition and results of operations. Furthermore, under the LLC Agreement of Carbon Solutions, until October 1, 2011, we may not pursue additional investments in carbon lines for the AC Facility or additional investments in AC production projects without ECP s agreement. Accordingly, even if our membership interest in Carbon Solutions were significantly diluted, we could not freely pursue an AC production business prior to October 1, 2011, which would likely adversely impact our ability to compete effectively with other suppliers of ACI systems that have the ability to supply their own AC to their ACI system customers.

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

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

disruption in global financial markets that has reduced the liquidity available to us, our customers and suppliers;

a substantially weakened banking and financial system with increasing risk and exposure to the impact of non-performance by banks committed to provide financing, hedging counterparties, insurers, customers and suppliers;

extreme volatility in commodity prices;

increasing risk that customers and suppliers may liquidate or seek protection under federal bankruptcy laws and reject existing contractual commitments; and

the inability to predict with any certainty the effectiveness and long-term impact of economic stimulus plans. We are unable to predict the impact, severity and duration of these events, any of which could have a material adverse impact on our financial position, results of operations and cash flows.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The price of commodities that we require in our operations, including steel for silos, is subject to price fluctuations, and the timing of changes in the market prices for these commodities is largely unpredictable. We may not be able to pass on all cost increases to our customers or offset fully the effects of higher costs for raw materials or freight through the use of surcharges and other measures, which may negatively impact profitability. There is also the possibility of potential time lag between increases in prices for raw materials under our purchase contracts and the point when we can implement corresponding increase in price under our sales contracts with customers. As a result, we may be exposed to fluctuations in raw material prices, including steel, since during the time lag we may have to bear the additional cost of the price increase under our purchase contracts. If these events were to occur, beyond the price validity time period we have obtained from our suppliers, they could have a material adverse effect on our financial position, results of operations and cash flows.

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

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

### WE DEPEND ON KEY PERSONNEL.

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

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

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

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

Thirteen of our completed and current contracts awarded by the DOE and related industry participants remain subject to adjustments as a result of future government audits. Our historical experience with these audits has not resulted in significant adverse adjustments to amounts previously received; however the audits for the years 2004 and later have not been finalized. Revenues recognized from 2004 through 2009 that are subject to government audit totaled approximately \$27.3 million. In addition, we had \$800,000 million of remaining unearned amounts under contracts subject to audit as of March 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 results of operations or financial condition.

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

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

#### RISKS RELATING TO OUR COMMON STOCK

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

As of April 30, 2010, we had 7,410,976 shares of common stock issued and outstanding, including an aggregate of 262,499 shares issued and outstanding that are held by Arch Coal on that date that we are required to register or continue to register for resale under the Securities Act. Sales of our common stock, or the perception that such sales might occur, have had and may continue to have a material adverse effect on our stock price.

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

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

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

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

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

| changes in laws or regulations and court rulings;   |
|---|
| developments regarding the AC Facility and AC manufacturing projects announced by our competitors;                                |
| the impact or perceived impact of our ongoing legal actions with Norit, Norit N.V. and Calgon Carbon Corporation on our business; |
| changes in government funding of our projects;  |
| announcements of sales awards;  |
| conditions and trends in our industry;  |
| adoption of new accounting standards affecting our industry;  |

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changes in financial estimates by securities analysts;

perceptions of the value of corporate transactions; and

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

From December 31, 2008 to December 31, 2009, the closing price of our common stock ranged from \$2.07 to \$6.87 per share, and from January 1 through May 25, 2010, the closing price of our common stock ranged from \$4.99 to \$8.53 per share. Significant declines in the price of our common stock could impede our ability to obtain additional capital, attract and retain qualified employees and reduce the liquidity of our common stock.

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

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

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

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

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

### SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus includes and incorporates forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements, other than statements of historical facts, included or incorporated in this prospectus regarding our strategy, future operations, financial position, future revenues, projected costs, prospects, plans and objectives of management are forward-looking statements. The words anticipates, believes, estimates, expects, intends, may, plans, projects, will, and would, the negative expressions of such statements, and similar expression intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Forward-looking statements included or incorporated in this prospectus include, without limitation, statements regarding the following:

- (a) the impact of the invalidation of the Clean Air Mercury Rule ( CAMR ), when Maximum Achievable Control Technology ( MACT ) based mercury relations will be promulgated and/or mercury control legislation will be enacted and the timing, scope and impact of such regulations or legislation;
- (b) expected long-term growth in the MEC market and changes in the FGC market;

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|-----|--|
| (n) | the materiality of any future adjustments to previously received revenue as a result of DOE audits.  |
| (m) | working capital and liquidity; and   |
| (1) | the ability of Clean Coal to monetize its refined coal facilities;   |
| (k) | impact of pending legal actions, including the costs thereof and our indemnity obligations to Carbon Solutions and ECP;  |
| (j) | timing and amounts of or changes in future revenues, funding for our business, margins, expenses, cash flow and other financial measures   |
| (i) | possible changes in the level of our ownership of Carbon Solutions;  |
| (h) | the willingness and ability of ECP to continue to fund the construction costs of the AC Facility and legal expenses relating to the Norit arbitration through contributions and loans to Carbon Solutions; |
| (g) | the expected costs, capacity of, funding of and timing for the commencement of operations at the AC Facility;  |
| (f) | the proposed Arch Coal License;  |
| (e) | the timing of awarding of contracts and their value;   |
| (d) | the appropriation of funds by Congress for DOE CO2 projects;   |
| (c) | expected growth in the power industry s interest in and funding for carbon dioxide ( CO2 ) capture projects;   |

We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included or incorporated in this prospectus, particularly under the heading Risk Factors above and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2009, as well as under the heading Quantitative and Qualitative Disclosures About Market Risk in such Form 10-K, and in other reports we file with the SEC which are incorporated by reference herein that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make. Any such forward-looking statements represent management s views as of the date of the document in which such forward-looking statement is contained. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change, unless otherwise required by law.

#### USE OF PROCEEDS

We are filing the registration statement of which this prospectus is a part to permit the selling shareholder to resell shares of common stock it holds as described in the section entitled Selling Shareholder. We will not receive any proceeds from the resale of shares by the selling shareholder.

#### SELLING SHAREHOLDER

The following table sets forth the number of shares beneficially owned by the selling shareholder and certain other information regarding such shareholder, as of immediately after the closing of our private placement to Arch Coal on March 23, 2010. The Chief Operating Officer of the selling shareholder, Mr. John Eaves, is a member of our Board of Directors. The initial appointment of Mr. Eaves to our Board was made pursuant to a 2003 Subscription and Investment Agreement with Arch Coal whereby our management agreed to make available one seat on the Board for an Arch Coal designee and to vote all shares and proxies they are entitled to vote in favor of such designee for so long as Arch Coal continues to hold at least 100,000 shares of our common stock. The 2003 Subscription and Investment Agreement with Arch Coal also provides Arch Coal with certain registration rights until such time as Arch Coal is free to sell the shares of common stock issued to Arch Coal under that Agreement without registration or restriction pursuant to Rule 144 promulgated under the Securities Act. The registration statement of which this prospectus is a part includes 118,614 shares of our common stock pursuant to those registration rights. Except for our ongoing negotiations with Arch Coal with respect to the Arch Coal License, there are no other material relationships with us within the past three years other than as a result of the selling shareholder s purchase and ownership of our common stock and our obligation to maintain the registration of such common stock under specific circumstances and for specific times.

The shares offered by this prospectus may be offered from time to time by the selling shareholder. The following table assumes that the selling shareholder will sell all of the shares being offered for its account by this prospectus. However, we are unable to determine the exact number of shares that actually will be sold, if any. We do not know how long the selling shareholder will hold the shares of our common stock before selling them and we currently have no agreements, arrangements or understandings with the selling shareholder regarding the sale of any of the shares of our common stock. The information in the table below is current only as of the date of this prospectus. If the selling shareholder transfers some or all of its common stock to a pledgee, donee, transferee or other successor-in-interest, we may be required to file a prospectus supplement or a post-effective amendment to the registration statement of which this prospectus is a part.

In the following table, beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission, or SEC, and includes voting or investment power with respect to the shares. Except as otherwise indicated in the footnotes below, we believe that the selling shareholder named in this table has sole voting and investment power over the shares of our common stock indicated.

In determining the number of shares of our common stock beneficially owned by the selling shareholder and the percentage ownership of the selling shareholder, we include any shares as to which the selling shareholder has sole or shared voting power or investment power. The selling shareholder currently holds no shares subject to warrants, options or other convertible securities.

Number of Shares Beneficially Owned Prior to Offering

Number of Shares Registered for Sale

Shares Owned After
Sale of Registered
Shares
Number Percentage

Selling Shareholder

Arch Coal, Inc. 262,499 262,499 0 0

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#### PLAN OF DISTRIBUTION

The shares covered by this prospectus may be offered and sold from time to time by the selling shareholder. The term selling shareholder includes donees, pledgees, transferees or other successors-in-interest selling shares received after the date of this prospectus from the selling shareholder as a gift, pledge, distribution or other non-sale related transfer. The selling shareholder will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then current market price or in negotiated transactions. The selling shareholder may sell its shares by one or more of the following methods:

| purchases by a broker-dealer as principal and resale by such broker-dealer for its own account pursuant to this prospectus;   |
|---|
| ordinary brokerage transactions and transactions in which the broker solicits purchasers;   |
| an over-the-counter distribution in accordance with the rules of The NASDAQ Capital Market;   |
| in privately negotiated transactions;   |
| in options transactions;  |
| to or through underwriters;   |
| through dealers or agents;  |
| a block trade in which the broker or dealer so engaged will attempt to sell the securities as an agent but may position and resell a portion of the block as a principal to facilitate the transaction; |
| through a combination of these methods; and   |
| by any other legally available means.  any shares that qualify for sale pursuant to Rule 144 may be sold under Rule 144 rather than pursuant to this prospectus.  |

In addition, any shares that qualify for sale pursuant to Rule 144 may be sold under Rule 144 rather than pursuant to this prospectus.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution. In connection with the distributions of shares or otherwise, the selling shareholder may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of the common stock in the course of hedging the positions they assume with the selling shareholder. The selling shareholder may enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The selling shareholder may also pledge shares to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may effect sales of the pledged shares pursuant to this prospectus (as supplemented or amended to reflect such transaction).

In effecting sales, underwriters, broker-dealers or agents engaged by the selling shareholder may arrange for other underwriters or broker-dealers to participate. Underwriters, broker-dealers or agents may receive commissions, discounts or concessions from the selling shareholder in amounts to be negotiated immediately prior to the sale. Such discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary for the types of transactions involved.

In offering the shares covered by this prospectus, the selling shareholder and any broker-dealers who execute sales for the selling shareholder may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. Any profits realized by the selling shareholder and the compensation of any broker-dealer may be deemed to be underwriting discounts and commissions. Some of the underwriters or deemed underwriters or agents and their associates may be customers of, engage in transactions with, and perform services for us in the ordinary course of business.

In order to comply with the securities laws of certain states, if applicable, the shares must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the selling shareholder that the anti-manipulation rules of Regulation M under the Securities Exchange Act of 1934, as amended, or the Exchange Act, apply to sales of shares in the market and to the activities of the selling shareholder and their affiliates. In addition, we will make copies of this prospectus available to the selling shareholder for the purpose of satisfying the prospectus delivery requirements of the Securities Act of 1933, as amended, or the Securities Act. The selling shareholder may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

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At the time a particular offer of shares is made, if required, a prospectus supplement will be distributed that will set forth the number of shares being offered and the terms of the offering, including the name of any underwriter, dealer or agent, the purchase price paid by any underwriter, any discount, commission and other item constituting compensation, any discount, commission or concession allowed or reallowed or paid to any dealer, and the proposed selling price to the public. In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

We will pay all expenses of the registration of the shares of common stock pursuant to agreements with Arch, including, without limitation, U.S. Securities and Exchange Commission filing fees and expenses of compliance with state securities or blue sky laws; provided, however, that the selling shareholder will pay all underwriting discounts, commissions and concessions and brokers or agents commissions and concessions or selling commissions and concessions, if any. We have agreed to indemnify the selling shareholder against certain liabilities, including certain liabilities under the Securities Act. Underwriters, dealers and agents may be entitled to indemnification by us and the selling shareholder against specific civil liabilities, including liabilities under the Securities Act or to contribution with respect to payments which the underwriters or agents may be required to make in respect thereof, under underwriting or other agreements. The terms of any such indemnification provisions will be set forth in a prospectus supplement.

We have agreed with the selling shareholder to keep the registration statement of which this prospectus constitutes a part effective with respect to the shares of common stock issued in the 2003 private placement until such time as the selling shareholder is free to sell the shares of common stock issued to Arch Coal under without registration or restriction pursuant to Rule 144 promulgated under the Securities Act, and the shares issued in the 2010 private placement until the earliest of (1) one year from its effective date (subject to certain extensions), (2) such time as all of the shares covered by this prospectus may be sold pursuant to Rule 144(b) without volume or manner of sale restrictions, (3) such time as all of the shares covered by this prospectus have been publicly sold pursuant to this prospectus or Rule 144. Notwithstanding the foregoing obligations, we may, under specified circumstances, suspend the use of the registration statement, or any amendment or supplement thereto.

### LEGAL MATTERS

The validity of the shares offered by this prospectus has been passed upon by Schuchat, Herzog & Brenman, LLC, 1900 Wazee Street, Suite 300, Denver, Colorado 80202.

#### **EXPERTS**

The consolidated financial statements of ADA-ES, Inc. as of and for the years ended December 31, 2009 and December 31, 2008 appearing in our Annual Reports on Form 10-K for such years have been audited by Ehrhardt Keefe Steiner & Hottman PC, an independent registered public accounting firm, as set forth in their reports thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

#### WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other documents with the SEC. You may read and copy any document we file at the SEC s public reference room at 100 F Street NE, Room 1580, Washington, D.C. 20549. You should call 1-800-SEC-0330 for more information on the public reference room. Our SEC filings are also available to you on the SEC s Internet site at <a href="https://www.sec.gov">www.sec.gov</a>.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and our common stock, including certain exhibits and schedules. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC s website.

Our Common Stock is currently traded in the over-the-counter market and is quoted on the NASDAQ Capital Market. Reports, proxy statements and other information filed by the Company therewith can be inspected at the National Association of Securities Dealers, Inc. 1735 K Street NW, Washington, D.C. 20006.

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#### INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC requires us to incorporate into this prospectus information that we file with the SEC in other documents. This means that we can disclose important information to you by referring to other documents that contain that information. The information incorporated by reference is considered to be part of this prospectus. Information contained in this prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus automatically updates and supersedes previously filed information. We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of this offering.

our Annual Report on Form 10-K for the fiscal year ended December 31, 2009 filed with the SEC on March 29, 2010;

our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2010 filed with the SEC on May 13, 2010;

those portions of our revised Definitive Proxy Statement on Schedule 14A, filed with the Commission on April 28, 2009, incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2009;

any other filings we make pursuant to the Exchange Act after the date of filing the initial registration statement and prior to effectiveness of the registration statement; and

the description of our common stock contained in our Registration Statement on Form 10-SB filed with the SEC on March 24, 2003, as amended and declared effective by the SEC.

Notwithstanding the foregoing, unless specifically stated otherwise, none of the information that we disclose under Items 2.02 and 7.01 of any Current Report on Form 8-K that may be listed above or that we furnish from time to time to the SEC will be incorporated by reference into, or otherwise included in, this prospectus.

You may request a copy of these documents, which will be provided to you at no cost, by writing or telephoning us using the following contact information:

Mark McKinnies

Secretary of ADA-ES

8100 SouthPark Way, Unit B,

Littleton, Colorado 80120

(303) 734-1727

E-mail: markm@adaes.com

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this document.

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#### PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

### Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of the securities being registered hereby, all of which will be borne by ADA-ES (except any underwriting discounts and commissions and expenses incurred by the selling shareholder for brokerage, accounting, tax or legal services or any other expenses incurred by the selling shareholder in disposing of the shares). All amounts shown are estimates except the SEC registration fee.

| SEC registration fee         | \$<br>110    |
|------------------------------|--------------|
| Legal fees and expenses      | \$<br>5,000  |
| Accounting fees and expenses | \$<br>3,500  |
| Miscellaneous expenses       | \$<br>5,000  |
| Total expenses               | \$<br>13,610 |

#### Item 15. Indemnification of Directors and Officers.

The Colorado Business Corporation Act allows a corporation to indemnify its directors, officers, employees, fiduciaries and agents against liability in certain situations. Our Articles provide that we will indemnify our directors, officers, employees, fiduciaries and agents (each, a Proper Person as defined in our Amended and Restated Bylaws (the Bylaws )) to the maximum extent provided by law.

Under the Colorado Business Corporation Act and our Articles, indemnification would be mandatory with respect to a director or officer who was wholly successful in defense of an action, suit or proceeding. As permitted by the Colorado Business Corporation Act, our Bylaws provide the following as to the indemnification of Proper Persons:

We will indemnify any Proper Person against reasonably incurred expenses, judgments, penalties, fines and amounts paid in settlement reasonably incurred by him in connection with an action, suit or proceeding if it is determined that he conducted himself in good faith and that he reasonably believed (i) in the case of conduct in his official capacity, that his conduct was in the company s best interests, or (ii) in all other cases (except criminal cases), that his conduct was at least not opposed to the company s best interests, or (iii) in the case of a criminal proceeding, that he had no reasonable cause to believe his conduct was unlawful.

In proceedings brought by or in the right of the company, indemnification will be limited to reasonable expenses incurred in connection with the proceeding.

No indemnification will be provided a Proper Person with respect to any claim, issue or matter in connection with a proceeding by or in the right of the company in which the Proper Person was adjudged to be liable to the company on in any proceeding charging that the Proper Person derived an improper personal benefit, whether or not involving action in an official capacity, in which he was adjudged to be liable to the company on the basis that he derived an improper personal benefit.

Additional indemnification may be provided to officers, employees, fiduciaries or agents if they are not also directors, so long as such additional indemnification is provided for by general or specific action by the Board of Directors or shareholders or by contract and would not be inconsistent with public policy.

### Item 16. Exhibits

| EXHIBIT<br>NUMBER | DESCRIPTION   |
|-------------------|---|
| 4.1               | Registration Rights Agreement dated March 23, 2010 (a)                              |
| 4.2               | Subscription and Investment Agreement dated July 7, 2003 (b)                        |
| 5.1               | Opinion of Schuchat, Herzog & Brenman, LLC  |
| 23.2              | Consent of Ehrhardt Keefe Steiner & Hottman PC                                      |
| 23.3              | Consent of Schuchat, Herzog & Brenman, LLC (included in Exhibit 5.1 filed herewith) |
| 24.1              | Power of Attorney (See signature page of this Registration Statement)               |

- (a) Incorporated by reference to Exhibit 4.1 of our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2010 (File No. 000-50216).
- (b) Incorporated by reference to Exhibit 10.6 of Form 10SB12G/A filed with the SEC on July 28, 2003 (File No. 000-50216).

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### Item 17. Undertakings.

- (a) The undersigned registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
- (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (i), (ii) and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for purposes of determining liability under the Securities Act of 1933 to any purchaser:
- (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
- (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (b) The undersigned registrant hereby undertakes that, for the purpose of determining any liability under the Securities Act of 1933, each filing of the registrant s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore,

unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

#### **SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Littleton, State of Colorado, on May 26, 2010.

ADA-ES, INC.

By: /s/ MARK H. McKinnies

Mark H. McKinnies

Senior Vice President and Chief Financial Officer

### SIGNATURES AND POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Mark H. McKinnies and Michael D. Durham his true and lawful attorneys-in-fact and agents, each acting alone, with full powers of substitution and re-substitution, for him and in his name, place and stead, in any and all capacities, to sign any or all amendments to this registration statement, including all pre-effective and post-effective amendments, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, and hereby ratifies and confirms all his said attorneys-in-fact and agents, each acting alone, or his substitute or substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature                                 | Title  | Date         |
|---|--|--------------|
| /s/ Michael D. Durham Michael D. Durham   | President, Director<br>(Principal Executive Officer)   | May 26, 2010 |
| /s/ MARK H. McKinnies Mark H. McKinnies   | Senior Vice President, Chief Financial Officer and Director (Principal Accounting and Financial Officer) | May 26, 2010 |
| /s/ ROBERT N. CARUSO Robert N. Caruso     | Director   | May 27, 2010 |
| /s/ JOHN W. EAVES John W. Eaves           | Director   | May 28, 2010 |
| /s/ Derek C. Johnson Derek C. Johnson     | Director   | May 27, 2010 |
| /s/ RONALD B. JOHNSON Ronald B. Johnson   | Director   | May 26, 2010 |
| /s/ W. PHILLIP MARCUM W. Phillip Marcum   | Director   | May 27, 2010 |
| /s/ Jeffrey C. Smith Jeffrey C. Smith     | Director   | May 26, 2010 |
| /s/ Richard J. Swanson Richard J. Swanson | Director   | May 26, 2010 |

### **EXHIBIT INDEX**

### **EXHIBIT**

| NUMBER | DESCRIPTION   |
|--------|---|
| 4.1    | Registration Rights Agreement dated March 23, 2010 (a)                              |
| 4.2    | Subscription and Investment Agreement dated July 7, 2003 (b)                        |
| 5.1    | Opinion of Schuchat, Herzog & Brenman, LLC  |
| 23.2   | Consent of Ehrhardt Keefe Steiner & Hottman PC                                      |
| 23.3   | Consent of Schuchat, Herzog & Brenman, LLC (included in Exhibit 5.1 filed herewith) |
| 24.1   | Power of Attorney (See signature page of this Registration Statement)               |

- (a) Incorporated by reference to Exhibit 4.1 of our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2010 (File No. 000-50216).
- (b) Incorporated by reference to Exhibit 10.6 of Form 10SB12G/A filed with the SEC on July 28, 2003 (File No. 000-50216).