

# Creating a Future with Cleaner Coal



**ADA**  
*ENVIRONMENTAL SOLUTIONS*

**NASDAQ:ADES**

Stifel Nicolaus  
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Please note that this presentation contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, which provides a "safe harbor" for such statements in certain circumstances. The forward-looking statements include, but will not necessarily be limited to, statements or expectations regarding the growth in markets for our products and services; amount and timing of future tax credits, revenues, operating income, cash flows, legal expenses and other financial measures; timelines for our projects; scope, timing and impact of current and anticipated regulations and legislation; future supply and demand; resolution of the Norit arbitration and indemnity obligations and its effects; and related matters. These statements are based on current expectations, estimates, projections, beliefs and assumptions of our management. Such statements involve significant risks and uncertainties. Actual events or results could differ materially from those discussed in the forward-looking statements as a result of various factors, including but not limited to, our inability to satisfactorily resolve the Norit arbitration and related indemnity obligations; adverse outcomes in future legal proceedings; lack of working capital to timely fulfill our obligations; changes in laws and regulations, government funding, prices, economic conditions and market demand; timing of regulations and any legal challenges to them; impact of competition; availability, cost of and demand for alternative energy sources and other technologies; technical, start-up and operational difficulties; inability to commercialize our technologies on favorable terms; additional risks related to ADA Carbon Solutions including lack of continued funding and failure to raise additional financing, demand of payment on loans and other obligations, inability to obtain permits, our lack of control and further dilution of our interest, changes in the costs and timing of full commercial operations; additional risks related to Clean Coal Solutions, LLC including failure of its leased facilities to continue to produce coal which qualifies for IRS Section 45 tax credits, termination of the leases for such facilities, decreases in the production of refined coal by the lessee, seasonality and failure to build new facilities to meet the recently extended Section 45 tax credit placed-in-service date; availability of raw materials and equipment for our businesses; loss of key personnel; and other factors discussed in greater detail in our filings with the Securities and Exchange Commission (SEC). You are cautioned not to place undue reliance on such statements and to consult our SEC filings for additional risks and uncertainties that may apply to our business and the ownership of our securities. Our forward-looking statements are presented as of the date made, and we disclaim any duty to update such statements unless required by law to do so.

# Leader in Clean Coal Technology

## Investment Overview

- Primary Market: 1,100+ coal-fired utility boilers in the U.S.
  - Coal provides 50% of electricity in the U.S.
- On March 16, 2011 EPA's Mercury and Air Toxics Standards draft was issued requiring reduction of Hazardous Air Pollutants ("HAPs") from new and existing electricity generating units in the U.S.
  - Rule scheduled to become final November 2011
  - Compliance required in 36 months
- Mercury: 80-90% reduction in mercury
  - Refined Coal through JV Clean Coal Solutions
  - Enhanced Coal, licensed for production to Arch Coal
  - Activated Carbon Injection ("ACI") Equipment
- Dry Sorbent Injection (DSI) systems for control of acid gases, HCl and SO<sub>2</sub>
- 7.6 mm shares outstanding

# ADA's Emissions Solutions for the Existing Fleet

- Supply emission control technologies based upon minimal capital cost for new equipment
  - Doesn't require 10-20 years of extended plant life to justify large equipment costs
- Low CAPEX alternatives trade variable operating expenses for fixed capital costs
  - Allows continued operation of the plants to take advantage of additional economic life
  - Provides continuous revenues for ADA vs. one time equipment sales
- Examples for a 250 MW Plant:
  - ACl: \$1 mm capital
  - Refined Coal: Controls mercury at no cost to utility
  - Enhanced Coal: No capital equipment; \$2-\$4 mm per year in increased fuel costs to the power producer

# ADA's Low CAPEX Approach to Emissions Control Technology

Emission Control Equipment  
(NO<sub>x</sub>, SO<sub>2</sub>, Particulate)

ACI System  
for Mercury



# Refined Coal Reduces Mercury

- Clean Coal Solutions: ADA JV with NexGen Refined Coal LLC
- CyClean – patented technology enhances combustion of PRB coals in cyclone boilers and reduces mercury and NOx emissions
- Two systems installed at two power plants June, 2010 producing 6+ mm tons of Refined Coal per year
  - Received \$9 mm in prepaid rent from monetizer
  - Generated >\$16 mm in revenues to ADA in first 3 Quarters of Operation
  - Expected to produce ~\$1.00/share in earnings per year for ADA for the next nine years (based on 7.6 mm shares)



# Refined Coal Growth Opportunity

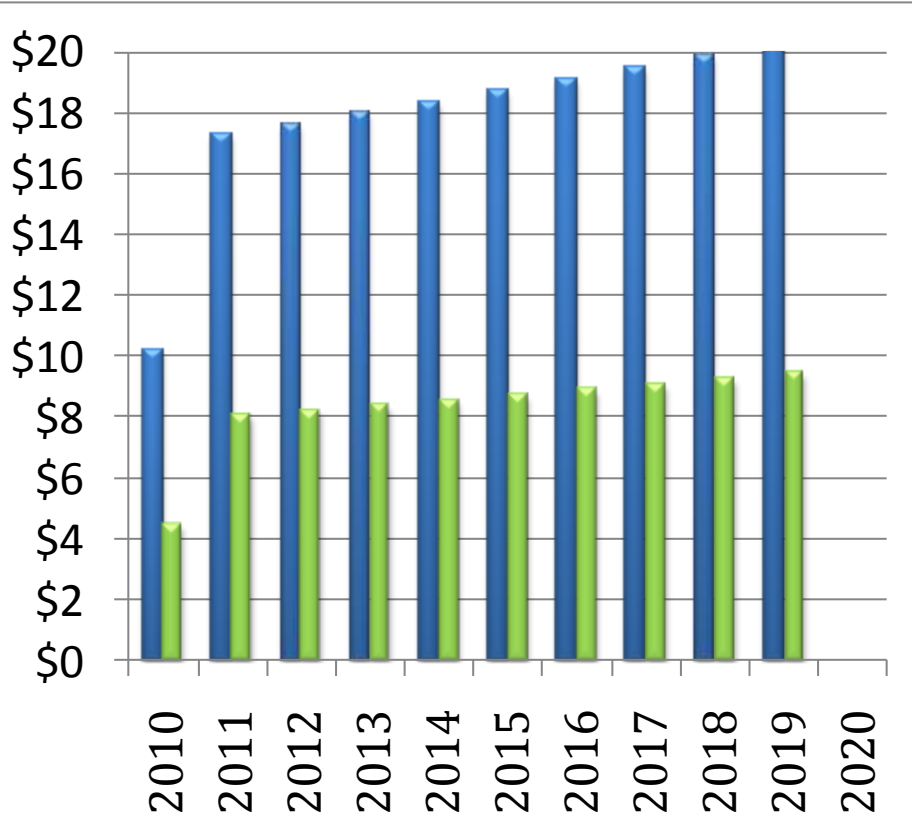
- In December 2010 Congress extended deadline to install new Refined Coal facilities until the end of 2011.
  - New Air Toxics Rule creating additional demand for Refined Coal.
- Currently fabricating 12 additional Refined Coal facilities
  - First 5 facilities scheduled for on-site tests in June through August treating a total of 15 mm tons per year
  - JV has \$10 mm line of credit to finance new units
  - Advance payments for pre-paid rent are expected once the facilities are operational



# Refined Coal Growth Opportunity

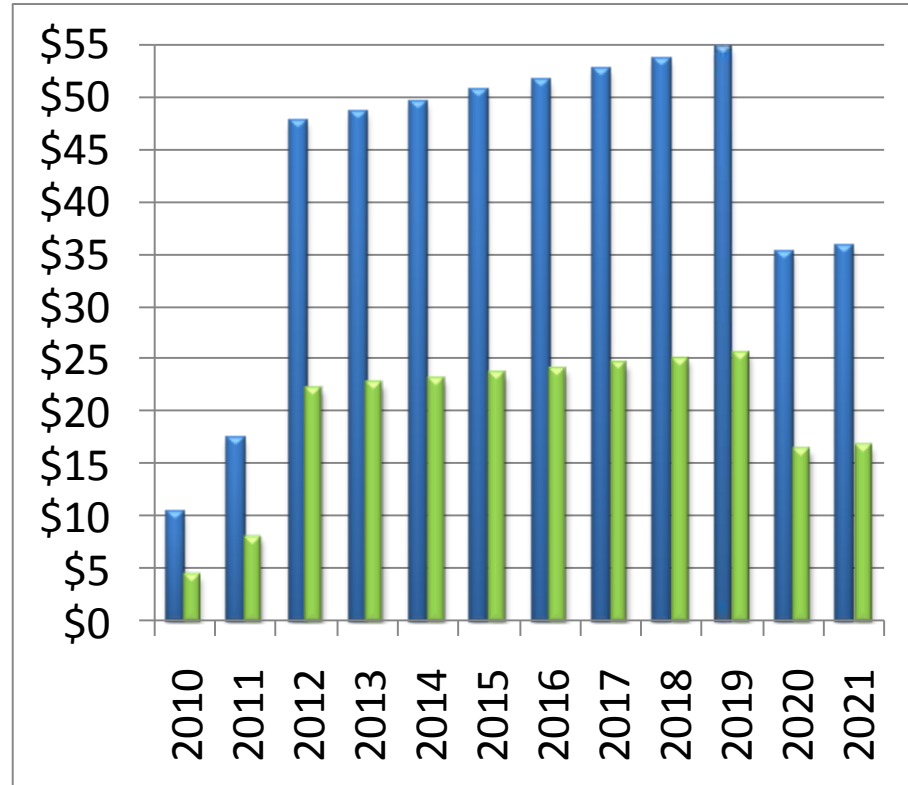
## CURRENT PROJECTIONS

(based on 2 existing facilities @ 6 million tons)



## POTENTIAL OPPORTUNITY

(based on 20 million tons)



\$ in millions



Estimated revenues



Estimated  
operating income

# Mercury Control: License to Arch Coal

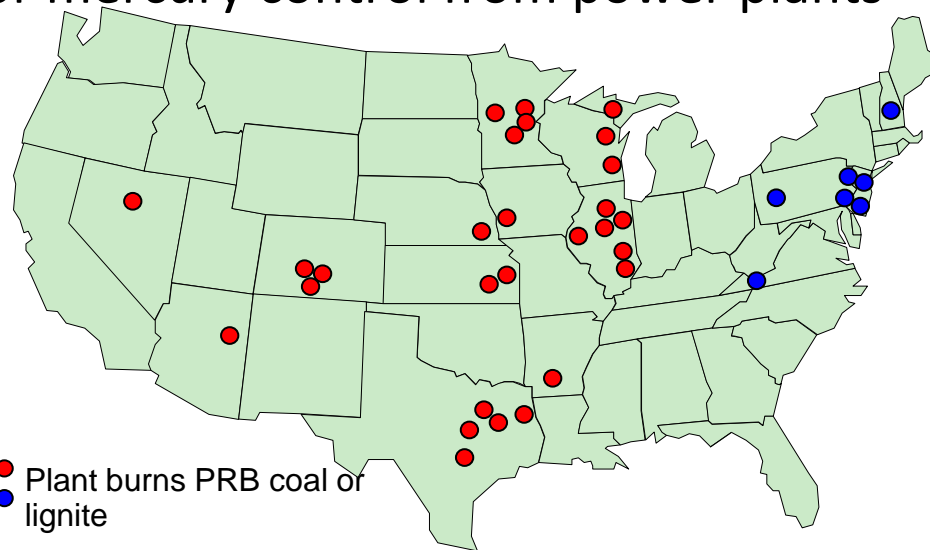
- Designed to enable Arch's PRB coals to burn with lower emissions of mercury and other metals
- \$2.00-4.00/ton in benefits to customer
- Royalty agreement – payments to ADA of up to \$1.00/ton based on premium of Enhanced Coal sales
- Air Toxics Rule could create a market for >100 mm tons/yr of Enhanced PRB
- Full-scale tests proving effectiveness



# ADA Commercial ACI Systems

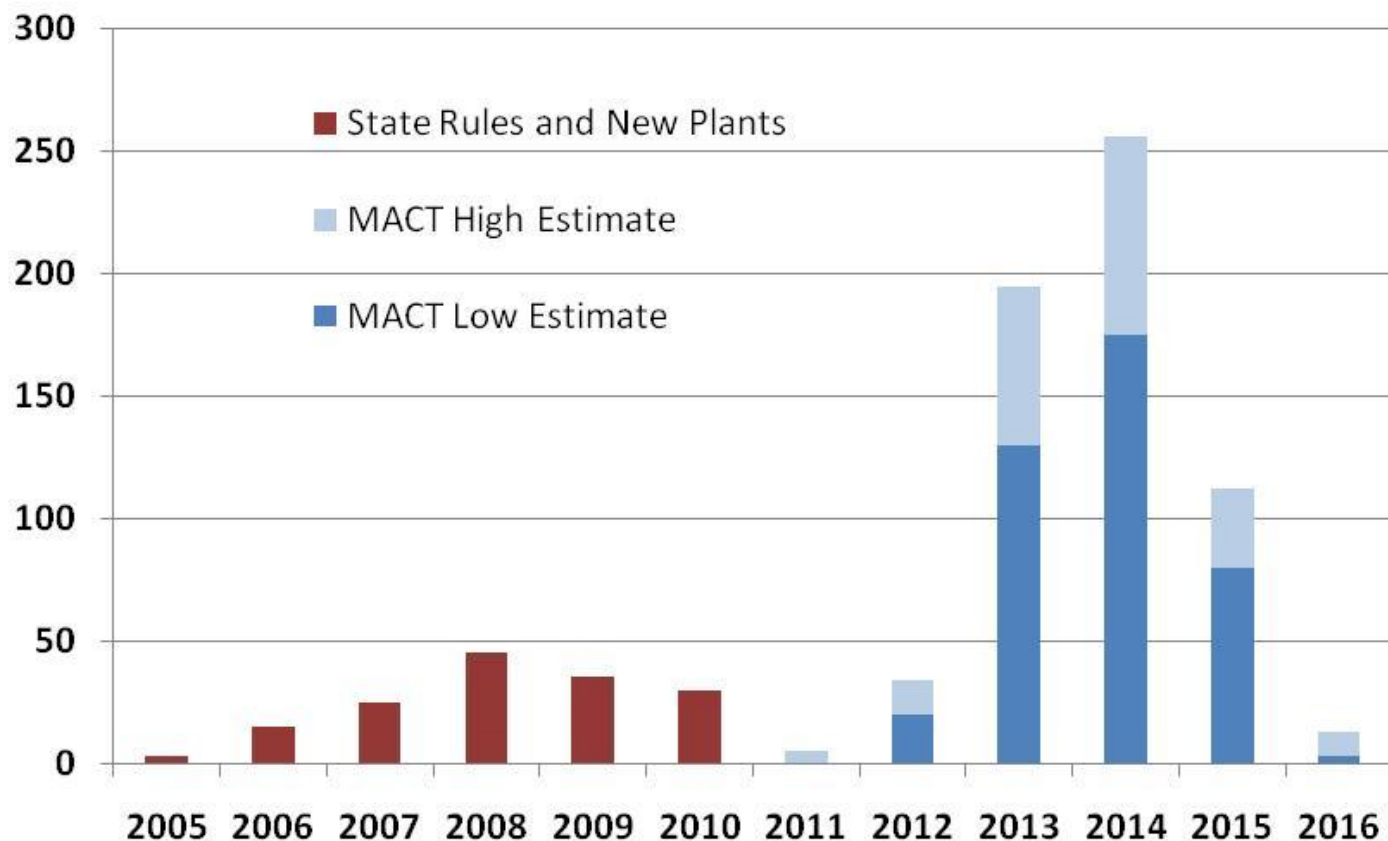
## > 20 GW Sold for Mercury Control

- Installed/installing 47 ACI systems at coal-fired power plants
  - Over 30% market share of 150 systems sold for mercury control from power plants



# Emission Control: Growth Expected in ACI Equipment

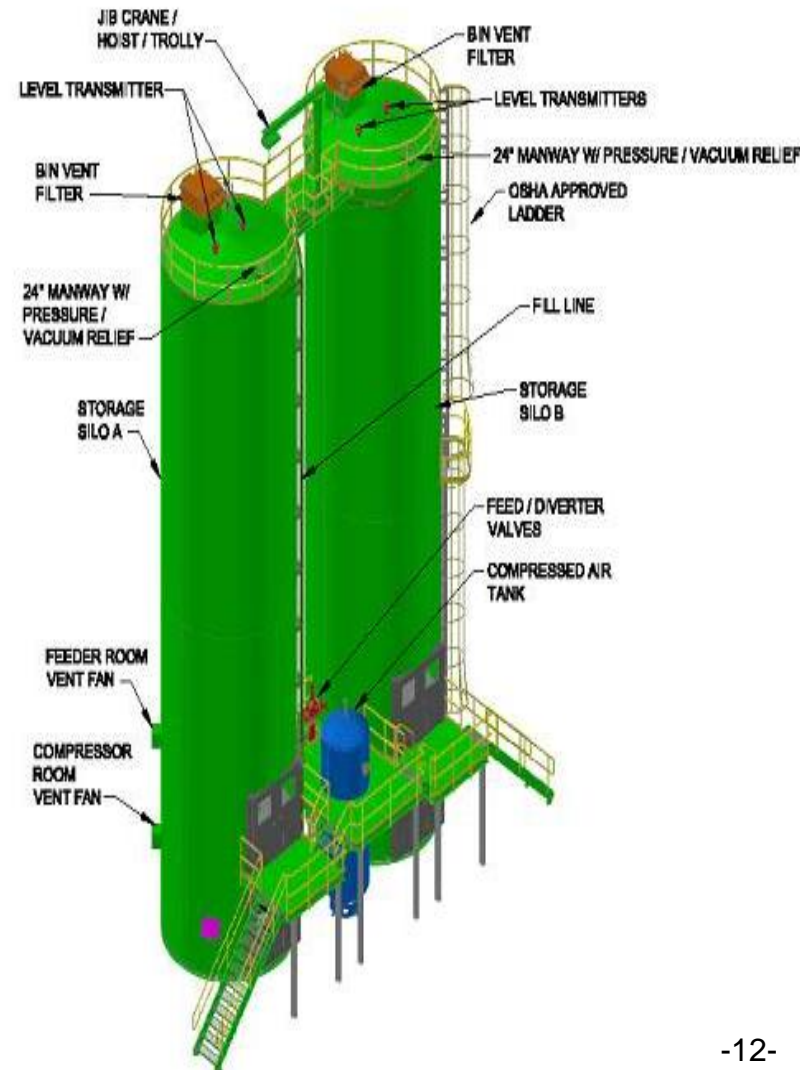
- Expect contracts to begin once the Air Toxics Rule is finalized in November 2011



# Control of Acid Gases

## HCl, SO<sub>2</sub>, SO<sub>3</sub>

- Air Toxics Rule identifies HCl and SO<sub>2</sub> as surrogates for acid gases
- ADA provides dry sorbent injection (DSI) systems as a low-cost option to wet scrubbers
- Equipment costs \$2-3 mm for average size plants
- EPA predicts over 200 systems will be needed by 2015



# CO<sub>2</sub> Capture

- Developing solid sorbent capture technology to capture CO<sub>2</sub> from flue gas in conventional coal-fired boilers
- DOE and industry funding:
  - Phase I - \$3.8 mm R&D program awarded in Nov. 2008 to develop technology; successful field tests at 1 KW pilot plant
  - Phase II - \$19 mm, 51-month contract awarded Oct. 2010 to scale-up technology to 1 MW; key step toward commercialization
- Advantages over competing technologies:
  - For customer: lower cost and less parasitic energy
  - For ADA: continuous revenues from sale of proprietary chemical sorbents

# Norit Arbitration

- Arbitration Panel issued Interim Award to Norit in April
  - \$37.9 mm for breach of non-solicitation provision of Market Development Agreement relating to two contracts
  - Running Royalty on all net AC sales by ACS - 10.5% for 3 years, 7% for 5 years, excludes sales made under above contracts
- Further proceedings to be held on timing for payment of obligations and award of any legal fees
  - Hearings scheduled for later in May and into June/July
  - Final award expected within next few months
- ADA evaluating options including court protection
  - Allows the Company to continue to operate its business
  - Provides time to negotiate or otherwise attempt to restructure its debts
- Management believes that given ADA's options, resolution of the Norit arbitration and indemnity obligations and payment thereof will not prevent ADA from meeting its obligations to customers and vendors or operating its business.

# Summary of Recent Financial Results

	Three Months ended 03/31/11 <sup>(1)</sup>	Three Months ended 03/31/10	Year Ended 12/31/10 <sup>(2)</sup>
Total Revenues	\$8.5 mm	\$3.9 mm	\$22.3 mm
Gross Margin	85%	35%	61%
Operating Income (Loss)	\$1.9 mm	(\$3.6) mm	(\$21.0) mm
Net Loss (per share)	(\$27.5) mm (\$3.63)	(\$2.8) mm (\$0.39)	(\$15.5) mm (\$2.09)
Adjusted Net Income per share <sup>(3)</sup>	\$1.0 mm \$0.14	N/A	\$5.1 mm \$0.69

(1) Adjusted net income excludes \$39.5 mm expense related to interim award in the Norit arbitration as well as associated \$1.9 mm of non-routine legal expenses, and a non-cash loss of \$2.0 mm from ADA's equity interest in ADA-CS, and \$14.9 mm for the tax effect of such items.<sup>3</sup>

(2) Adjusted net income excludes \$24.0 mm of non-routine legal expenses, and a non-cash loss of \$8.2 mm from ADA's equity interest in ADA-CS, net of tax on these items of \$11.6 mm.<sup>3</sup>

(3) These non-GAAP financial measure should not be considered as a substitute for any related financial measure under GAAP; however, we believe that our presentation of this measure provides investors with greater transparency with respect to our results of operations and that it is useful for period-to-period comparisons of results.



# Balance Sheet Highlights

	As of 3/31/11 <sup>(1)</sup>	As of 12/31/10
Cash & Cash Equivalents	\$9.3 mm	\$9.7 mm
Working Capital	\$3.2 mm	\$10.1 mm
Shareholders' (Deficit) Equity	(\$13.6) mm	\$13.4 mm
Shares Outstanding	7.6 mm	7.6 mm

(1) As a result of the Interim Award to Norit, ADA accrued \$33 mm in long-term liabilities and \$6.5 mm as a current liability.

# Other Data

- As of 05/20/11:
  - Market cap: \$67 mm
  - 7.6 mm shares outstanding
  - 50%+ held by institutions
  - ~11% held by insiders and employees
  - Analyst coverage: JMP Securities, Johnson Rice, Lazard Capital Markets, Pritchard Capital Partners, Wedbush Securities

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**NASDAQ:ADES**

***A Leader in Clean Coal Technology***

