



PRIZE CAPITAL™ REPORT PROFILES 90 UNCONVENTIONAL CARBON CAPTURE TECHNOLOGIES

***New technologies can combine with emerging “carbon recycling” approaches
to reveal end-to-end carbon mitigation strategies***

San Diego, January 31, 2012 – Prize Capital, LLC today released a supplement to its groundbreaking *Carbon Capture and Recycling (CCR) Industry Overview* report that profiles emerging technologies that capture carbon dioxide (CO₂) from industrial facilities. This captured CO₂ can subsequently be used by CCR technologies as a feedstock in the production of valuable products such as fuel, building materials, animal feed, specialty chemicals, and plastics, among others, providing end-to-end solutions for industry members.

This new *Emerging Carbon Capture Technologies* report focuses its examination on “post-combustion” carbon capture technologies, given that this existing power generation infrastructure is where CCR technologies are most applicable. The report is an aggregation of information, data, and developments in the field of carbon capture, with a particular eye towards the targets of recent government funding, given that the government has been by far the industry’s largest funding source.

Carbon capture technologies support efficient carbon recycling

“In our first report, we examined the carbon mitigation option in CCR,” said Matt Peak, Prize Capital’s director of clean technologies and the report’s author. “Yet many CCR technologies and approaches aren’t able to utilize raw flue gas and instead require a relatively pure stream of CO₂. In cases such as these, breaking through the challenges associated with conventional carbon capture is essential.”

As the report outlines, current carbon capture technologies have focused on amines and chilled ammonia. These approaches were developed decades ago for use in other industries, such as synthetic ammonia production, H₂ production, and limestone calcination, where they have served these industries well given the relatively low volumes of carbon captured and high price points. Yet now that the power industry is examining carbon capture approaches and experimenting with scaling up these existing technologies to meet their volumetric needs and price-points, the industry is realizing that these traditional technologies are falling short. Furthermore, the current requisite hundreds of millions of dollars of investment required to capture and separate CO₂ must be radically reduced for carbon capture from power plants to be viable.

Seven technology categories receive significant federal funding

In order to spur advancements, governments around the world have provided billions of dollars in funding to support the development of carbon capture breakthroughs. In the United States, the Department of Energy (DOE) has been actively funding technological development of advanced technologies for a decade, and has dramatically increased its level of financial support in recent years, largely through its National Energy Technology Laboratory (NETL) and Advanced Research Projects Agency-Energy (ARPA-E).

The new report profiles breakthrough technologies that have been targeted by these agencies in the areas of solvents, enzyme-based systems, physical sorbents, precipitated calcium carbonate, ionic liquids, gas separation membranes, and metal organic frameworks (MOFs).

Electric utilities seek end-to-end solution

Tri-State Generation and Transmission Association, a consumer-owned, not-for-profit wholesale power supplier serving 44 electric cooperatives in four western states, sponsored the report to help identify the range of carbon capture technology opportunities that could work with the emerging CCR technologies and in turn assist the power supplier to cost effectively manage carbon emissions.

“We seek an end-to-end solution,” said Ken Anderson, Tri-State’s chief executive officer. “A solution that can plug in to power plants and convert carbon that is currently emitted or thrown away into a product that creates value, and can help ensure cost-effective solutions to keep electric power affordable and reliable.”

As the new report outlines, arriving at an end-to-end solution will require cross-pollination between the CCR and carbon capture industries and a significant level of experimentation to determine which combination of CCR and carbon capture technologies perform best. Given that there are 136 (and counting) emerging CCR entities and 90 emerging carbon capture entities presented in this new report alone, simply providing a platform to allow these various entities to experiment with each other leaves the door open for nearly 13,000 possible end-to-end solutions.

The report concludes that the key to realizing the reality and potential of end-to-end solutions is constructing the platform that allows for and encourages just such experimentations, promoting collaborative competition resulting in the diversification of innovation.

The report is available as a supplement to Prize Capital’s *Carbon Capture and Recycling (CCR) Industry Overview* report, which is available via the Prize Capital website:

<http://www.prizecapital.net>

About Prize Capital, LLC

Prize Capital, LLC was established by entrepreneur and environmentalist Lee Stein to provide capital to environmental start-ups worldwide while reducing risk for investors. Its proprietary methodology diversifies risk and widens market access, enabling Prize Capital to deliver capital to innovators from early-stage companies not served within current

financial markets. Prize Capital's parallel investment funds mitigate risk through a unique option equity strategy and create additional leverage through the prize mechanism. For additional information, visit www.prizecapital.net

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