Carbon TerraVault Provides Third Quarter 2023 Update

01.11.2023 | Business Wire

Announcing the First Fully Integrated Capture to Storage CO_2 Project at Elk Hills and a New Storage Only CDMA with NLC Energy

Carbon TerraVault (CTV), a subsidiary of California Resources Corp. (NYSE: CRC) which provides carbon management services that include capture, transport and storage of carbon dioxide (CO_2) for its customers, today provided an update on its operations.

"During the third quarter, our team made tremendous progress on the Carbon TerraVault front by announcing California's first 100 thousand metric tons per year fully integrated capture to storage project and by bringing the number of emission under CDMAs close to 1 million metric tons per year," said Francisco Leon, CRC's President and Chief Executive Officer. "Our carbon management strategy reflects our determination to provide solutions for hard-to-decarbonize industries and new technologies alike."

Primary Highlights

- Announcing CTV's first capture to storage project at one of the CRC's gas processing plants, Elk Hills cryogenic gas plant, in Kern County, California. This new project is expected to begin to remove and permanently store 100,000 metric tons per annum (MTPA) of CO_2 in the CTV I reservoir by year end 2025
- Signed a storage-only Carbon Dioxide Management Agreement (CDMA) with NLC Energy LLC (NLCE) with a minimum volume commitment of 150,000 MTPA of CO_2 injection at CTV I reservoir.
- CTV's total projected CO_2 injection rate now stands at 1,065,000 MTPA that targets 655,000 MTPA in the San Joaquin Basin and 410,000 MTPA in the Sacramento basin
- CTV's total submitted storage capacity under permits to the EPA is at 191 million metric tons (MMT)
- Targeting the receipt of first draft EPA Class VI permit by year end in California

First Capture to Storage Project at the CTV Clean Energy Park

Today, CTV announced plans to construct a capture to storage facility at the CTV Clean Energy Park (formerly Net Zero Industrial Park) at Elk Hills Field in Kern County, California, that will remove approximately 100,000 MTPA of associated CO_2 from inlet gas used for Elk Hills Power Plant (EHPP) for permanent sequestration at the CTV I reservoir.

Located in close proximity to the EHPP, CTV estimates the new pre-combustion CO_2 capture project will increase operational efficiency of the cryogenic gas processing plant, improve propane recovery, and reduce the carbon intensity of the electricity generated by EHPP. This will further reduce CRC's Scope 1 emissions from EHPP and Scope 2 emissions from the hydrocarbon products produced from the Elk Hills field.

Highlights of the New Capture to Storage Project Include:

- The carbon capture equipment will be designed and constructed to capture 100,000 MTPA of associated CO_2 off of CRC's cryogenic gas processing plant and subsequently sequester the captured CO_2 in the CTV I reservoir
- Estimated capital required to construct the carbon capture equipment will be in the $10 - $15 million range. This favorable level of capital investment is due to the Company's full control of the project's value chain
- The project will use existing amine technology to capture the CO_2 from inlet gas with approximately 95% efficiency

- The project's location at CTV's Clean Energy Park will eliminate the need for long haul CO_2 transportation and reduce certain midstream capital requirements
- The capture project is targeting 45Q credit generation as well as the potential for LCFS qualification, subject to CARB approval, Cap & Trade (C&T) avoidance and enhanced cryogenic gas processing plant yields
- CTV anticipates paying CTV JV an injection fee for CO_2 sequestration services on a per metric ton basis that fits within the previously disclosed economic type-curve for projects that require a storage-only solution
- Project Final Investment Decision (FID) is targeted for first half of 2024, with injection operations expected to begin in the second half of 2025

NLC Energy, LLC CDMA

Carbon TerraVault JV HoldCo, LLC (CTV JV) has entered into a storage only CDMA with NLCE, a company that designs, builds, owns, and operates renewable natural gas (RNG) facilities that convert organic waste into useful commodities like clean energy, organic nutrients, clean water, organic liquid carbon dioxide, and dry ice, to sequester a minimum of 150,000 MTPA of CO_2 at the CTV I reservoir.

The CDMA expects NLCE will build a new waste to energy production facility at the CTV Clean Energy Park at Elk Hills. This new facility is expected to produce up to 7,000 million British thermal units (MMBtu) per day of RNG from biomass and other agricultural waste feedstock to provide decarbonized energy to other companies' green technology facilities located at the park, and sell into the California market, further reducing the carbon intensity of the state's hard-to-abate sectors.

"This project highlights the value proposition of our CTV Clean Energy Park and its important role within Carbon TerraVault's strategy," said Francisco Leon, CRC's President and Chief Executive Officer. "We welcome NLCE as a trusted partner in developing and furthering California's decarbonization efforts and supporting Kern county's ambitions to become the leading carbon sequestration area in the state."

"Low-carbon, renewable natural gas replaces higher-carbon fuels that are used in transportation, utilities, and manufacturing," said Bruce S. MacDonald, NLCE's Founder and President. "Our clients and partners are continuing to make efforts to meet net-zero carbon emission objectives, and this exciting agreement with CTV opens a new set of growth opportunities for NLCE in California and helps decarbonize California's essential industries."

Highlights of the NLCE CDMA Include:

- The facility will be designed and constructed by NLCE to produce up to 7,000 MMBtu per day of RNG for use by industrial projects at the CTV Clean Energy Park. A minimum of 150,000 MTPA of associated CO_2 is expected to be permanently sequestered at CTV I
- Project FID is targeted for late 2024, with operations expected to begin by 2027
- The CDMA also provides NLCE with a lease for 60 acres at the CTV Clean Energy Park to construct its facility
- CTV JV will provide in-field transportation and a permanent CO_2 sequestration site at CTV I in exchange for an injection fee on a per metric ton basis that fits within the previously disclosed economic type-curve for projects that require a storage-only solution
- The project's location within the CTV Clean Energy Park will eliminate the need for long haul CO_2 transportation and reduce certain midstream capital requirements
- CTV JV and NLCE are discussing CRC's potential financial participation in the RNG facility
- The CDMA frames the contractual terms between parties by outlining the material economics and terms of the project and includes conditions precedent to close. The CDMA provides a path for the parties to reach final definitive documents and FID

EPA Class VI Permitting Update

As of September 30, 2023, CRC has submitted 6 Class VI permits to the EPA for a total projected storage capacity of 191 MMT. CTV expects the receipt of its first draft EPA Class VI permit for CTV I 26R reservoir by year end and its second permit for CTV I's A1-A2 reservoir in the first half of 2024.

About Carbon TerraVault

Carbon TerraVault Holdings, LLC (CTV), a subsidiary of CRC, provides services that include the capture, transport and storage of carbon dioxide for its customers. CTV is engaged in a series of CCS projects that inject CO_2 captured from industrial sources into depleted underground reservoirs and permanently store CO_2 deep underground. For more information about CTV, please visit www.carbonterravault.com.

About Carbon TerraVault Joint Venture

Carbon TerraVault Joint Venture is a carbon management partnership focused on carbon capture and sequestration development, and was formed between Carbon TerraVault, a subsidiary of CRC, and Brookfield Renewable. The CTV JV develops both infrastructure and storage assets required for CCS development in California. CRC owns 51% of the CTV JV with Brookfield Renewable owning the remaining 49% interest.

About California Resources Corporation

California Resources Corp. (CRC) is an independent energy and carbon management company committed to energy transition. CRC has some of the lowest carbon intensity production in the US and it is focused on maximizing the value of its land, mineral and technical resources for decarbonization by developing CCS and other emissions reducing projects. For more information about CRC, please visit www.crc.com.

About NLC Energy LLC

NLC Energy (NLCE) is a leading waste-to-energy provider, which owns and operates renewable natural gas facilities. Methane is captured and harvested from organic waste to produce energy, as well as renewably sourced, food-grade dry ice, and beverage-grade liquid CO2. NLC Energy has the ability to process both manure and food waste as feedstocks, and has a track record of safe and reliable production. A seasoned team includes experts in bio engineering, anaerobic digester technology, and advanced control systems. This team is committed to creating durable environmental solutions, and has developed new technologies that are already shaping the future of renewable natural gas production. To learn more about NLC Energy, visit www.nlcenergy.com.

Forward-Looking Statements

This document contains statements that CRC believes to be "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements other than historical facts are forward-looking statements, and include statements regarding CRC's future financial position, business strategy, projected revenues, earnings, costs, capital expenditures and plans and objectives of management for the future.

Words such as "expect," "could," "may," "anticipate," "intend," "plan," "ability," "believe," "seek," "see," "will," "would," "estimate," "forecast," "target," "guidance," "outlook," "opportunity" or "strategy" or similar expressions are generally intended to identify forward-looking statements. Such forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in, or implied by, such statements.

Although CRC believes the expectations and forecasts reflected in CRC's forward-looking statements are reasonable, they are inherently subject to numerous risks and uncertainties, most of which are difficult to predict and many of which are beyond CRC's control. No assurance can be given that such forward-looking statements will be correct or achieved or that the assumptions are accurate or will not change over time. Particular uncertainties that could cause CRC's actual results to be materially different than those expressed in CRC's forward-looking statements include:

- CRC's ability to finalize definitive documents and reach a final investment decision with respect to new project contemplated by their respective CDMAs;

- the ability of new projects to achieve expected production volumes and associated CO2 generation and the ability of the CTV to sequester such CO2 volumes, respectively;
- CRC's ability to successfully execute on the construction of new projects and other aspects of infrastructure projects and enter into third party contracts on contemplated terms;
- fluctuations in commodity prices and the potential for sustained low commodity prices;
- equipment, service or labor price inflation or unavailability;
- legislative or regulatory changes, including those related to (i) the management of energy, water, land, greenhouse gases (GHGs) or other emissions, (ii) the protection of health, safety and the environment, (iii) CRC's ability to claim and utilize tax credits or other incentives, or (v) the transportation, marketing and sale of CRC's products and CO2;
- availability or timing of, or conditions imposed on, permits and approvals necessary for drilling or development activities and carbon management projects;
- changes in business strategy and CRC's capital plan;
- CRC's ability to realize the benefits contemplated by the business strategies and initiatives related to energy transition, including carbon capture and storage projects and other renewable energy efforts;
- CRC's ability to successfully identify, develop and finance carbon capture and storage projects and other renewable energy efforts, including those in connection with the CTV;
- global geopolitical, socio-demographic and economic trends and technological innovations;
- limitations on CRC's financial flexibility due to existing and future debt;
- insufficient cash flow to fund CRC's capital plan and other planned investments, stock repurchases and dividends;
- insufficient capital or lack of liquidity in the capital markets or inability to attract potential investors;
- limitations on transportation or storage capacity;
- CRC's ability to successfully gather and verify data regarding emissions, its environmental impacts and other initiatives;
- the compliance of various third parties with CRC's policies and procedures and legal requirements as well as contracts it enters into in connection with CRC's climate-related initiatives;
- climate-related conditions and weather events;
- disruptions due to accidents, mechanical failures, power outages, transportation or storage constraints, natural disasters, labor difficulties, cyber-attacks or other catastrophic events;
- pandemics, epidemics, outbreaks, or other public health events, such as the COVID-19; and
- other factors discussed in Part I, Item 1A - Risk Factors in CRC's Annual Report on Form 10-K and its other SEC filings available at www.crc.com.

CRC cautions you not to place undue reliance on forward-looking statements contained in this document, which speak only as of the filing date, and CRC undertakes no obligation to update this information. This document may also contain information from third party sources. This data may involve a number of assumptions and limitations, and CRC has not independently verified them and do not warrant the accuracy or completeness of such third-party information.

View source version on businesswire.com: https://www.businesswire.com/news/home/20231101970747/en/

Contact

Joanna Park (Investor Relations)
818-661-3731
Joanna.Park@crc.com

Richard Venn (Media)
818-661-6014
Richard.Venn@crc.com