



PRIZE CAPITAL ACTIVITY

AND CARBON TECHNOLOGY ECOSYSTEM UPDATE

FROM: LEE STEIN, PRIZE CAPITAL & ERIC BEYNON, SUSTAINABLE GROWTH CO.



INTRODUCTION: Prize Capital has been working with and connected to various initiatives focused on advancing carbon technology and prize-based innovation. This newsletter provides an overview of some of the activities underway, along with key opportunities for collaboration and value enhancement.

CARBON XPRIZE UPDATE



Finalist team preparation

- Three finalists testing at the Alberta Carbon Conversion Technology Centre (natural gas flue gas) have set up and are operational. One more is about to connect.
- The first team is currently working to set up and connect at the Wyoming Integrated Test Center (coal flue gas). Many of the internationally based teams are testing at the Wyoming ITC.

XPRIZE has extended finalist testing for the Carbon XPRIZE until August 17

The final deadline has been moved back by seven weeks to account for restrictions resulting from the COVID-19 pandemic. The greatest impact has been on the teams originating outside of North America due to the travel restrictions. The final testing date may move further.

Carbon Removal XPRIZE <https://carbon.xprize.org/prizes/carbon>

Prize design for a Carbon Removal (direct air capture) XPRIZE competition was completed early this year. This prize competition will build on the first Carbon XPRIZE and aims to be the largest prize competition ever launched; however, the full scope may be revised to fit the post-COVID-19 economy.

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LAUNCH OF NEW CLIMATE INVESTOR DATABASE [link](#)

The [Circular Carbon Capital Index](#) was recently launched as a resource to document technologies and investors in carbon technologies. It includes a database of capital providers interested in or active in funding climate solutions.



The inaugural Capital Index covers over 80 of the leading global climate investors – from venture and private equity firms to family offices, project finance firms, corporations, foundations, and governments – representing over \$175 Billion of assets under management (AUM), with more than 77% indicating that they are active or interested in circular carbon solutions.

STRIPE PURCHASES \$1M IN CARBON REMOVAL CREDITS

The online payments company Stripe selected the first four projects that it would pay to remove carbon from the atmosphere. Where technical capacity is still low in 2020 they have allocated the money to pre-purchase future reductions.

Selected from 24 applications, the first four projects which each receive \$250,000 are:

- Climeworks
- Project Vesta
- CarbonCure
- Charm Industrial

For more information see [Reuters article](#).

NEW STUDY ANALYZING TECHNICAL AND ECONOMIC PROSPECT OF CO2 UTILIZATION

A new study published in the science magazine nature analyzed 10 pathways for CO2 utilization and confirmed that each pathway could scale to 0.5 gigatonnes of annual CO2 reductions, however substantial barriers to implementation remain.

For more information see [nature article](#).

THE CIRCULAR CARBON CAPITAL INDEX INCLUDES A DATABASE OF CAPITAL PROVIDERS INTERESTED IN OR ACTIVE IN FUNDING CLIMATE SOLUTIONS.

CLIMATE CHANGE AND AI

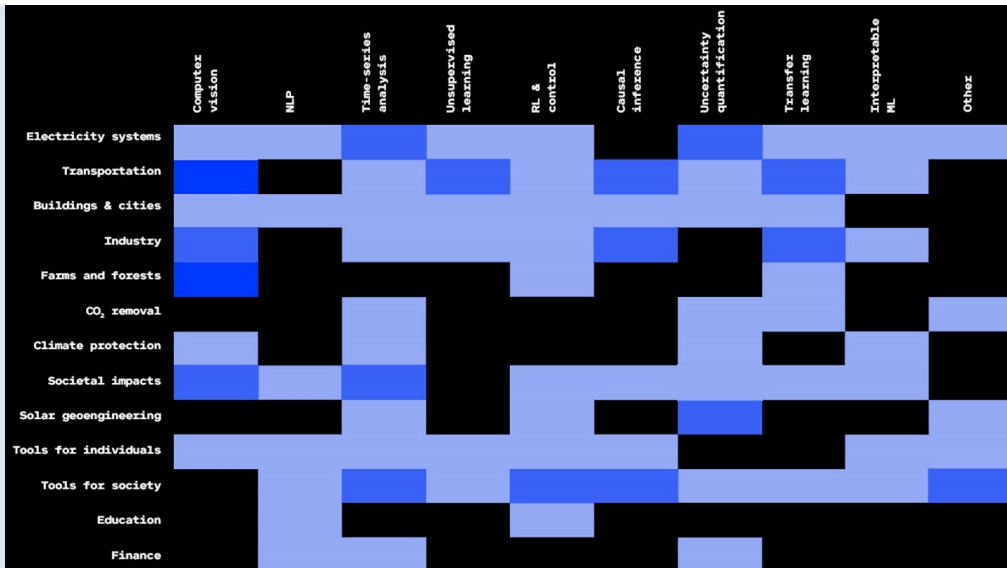
A group of global scientists with specializations in artificial intelligence (AI) and machine learning (ML) have coalesced around understanding how machine learning can play a role in climate mitigation and adaptation. A comprehensive paper has been published that looks at machine learning applications and how they may be directed to accelerate action across a suite of climate change interventions (For more information and the research paper: [link](#)).

Here are 10 of the “high leverage” recommendations from the report as summarized in a MIT Technical Review article ([link](#))

1. Improve predictions of how much electricity we need
2. Discover new materials
3. Optimize how freight is routed
4. Lower barriers to electric-vehicle adoption
5. Help make buildings more efficient
6. Create better estimates of how much energy we are consuming
7. Optimize supply chains
8. Make precision agriculture possible at scale
9. Improve deforestation tracking
10. Nudge consumers to change how we shop

TABLE:

APPLICABILITY OF VARIOUS MACHINE LEARNING APPROACHES (COLUMNS) TO ADVANCE EFFECTIVENESS OF CLIMATE CHANGE APPROACHES (ROWS). THE DARKER THE BLUE THE MORE EFFECTIVE.



WYOMING INTEGRATED TEST CENTRE UPDATES



First research project on the ground at the Integrated Test Center

TDA, a Colorado-based research firm, became the first tenant at the Integrated Test Center when they began testing over the winter. TDA tested a novel hybrid carbon capture system, which incorporates membrane and solid sorbent technologies.

WY Integrated Test Center Receives 2020 Climate Leadership Award

Initiative Recognized with ‘Innovative Partnership Certificate’



The Wyoming Integrated Test Center was awarded an ‘Innovative Partnership Certificate’ yesterday at the 2020 Climate Leadership Awards in Detroit, recognizing the pioneering initiative that has brought together private and public leaders to drive the next generation of clean energy technology in the heart of coal country.

The ninth annual Climate Leadership Awards took place in Detroit, Michigan during the Climate Leadership Conference, which brings together forward-thinking leaders from business, government, academia, and the non-profit community to address climate change through policy, innovation, and business solutions. The Center for Climate and Energy Solutions (C2ES) and The Climate Registry (TCR) bestowed a total of 18 awards to 13 organizations, two partnerships, and three individuals. The Innovative Partnership Certificate recognizes organizations working collaboratively on leading edge climate initiatives that are above and beyond business as usual.

UNIVERSITY OF WYOMING UPDATES



University of Wyoming to launch carbon capture collaboration with Department of Energy

The U.S. Department of Energy plans to partner with the University of Wyoming to accelerate research on carbon capture technology at two of the state's coal-fired power plants. [Link](#)

Wyoming & Japan Continue Partnership with further Research Projects Slated for ITC

Japan Coal Energy Center to Fund New Carbon Utilization Test in WY.

funded by JCOAL with additional support from project partners.

The State of Wyoming and JCOAL have been working together since 2016, when former Wyoming Governor Matt Mead and Osamu Tsukamoto, President of JCOAL, signed an initial MOU committing to cooperation in coal research and development of technologies and coal trade.

The Wyoming Infrastructure Authority entered into a Memorandum of Understanding (MOU) with the Japan Coal Energy Center (JCOAL), GreenOre Clean Tech LLC and Columbia University today to bring a new research project to the Wyoming Integrated Test Center. The test is to be

JCOAL operates under the supervision of the Ministry of Economy, Trade and Industry of Japan and is supported by more than 120 member coal-related businesses, including Kawasaki Heavy Industries, Ltd., Mitsubishi Hitachi Power Systems, Nippon Steel and Toshiba. The organization works to promote overall coal activities, from coal mining to the field of coal utilization, toward a stable energy supply, sustainable economic growth and the reduction of global environment emissions. Kawasaki is slated to test their solid sorbent capture technology at the ITC beginning in 2021.



Photo from [Star Tribune](#)

THE PARTNERSHIP
WILL ACCELERATE
RESEARCH ON
CARBON CAPTURE
TECHNOLOGY AT
TWO OF THE
STATE'S COAL-FIRED
POWER PLANTS

XPRIZE FOUNDATION UPDATES

XPRIZE COVID-19 Alliance

The objective is to bring the innovative power of the global crowd together with a powerful network of partners who can work together to solve the world's greatest challenges and enable radical breakthroughs for the benefit of humanity.



Anthem.

The Alliance will bring visibility into existing solutions and projects in development that are grounded in data and have been validated by experts.

The Alliance is inviting the world's innovators to share solutions, learnings and resources and allow the global community to:

- Participate in the latest breakthroughs, research and solutions in development
- Ask the network for help in scaling the impact of promising and vetted COVID-19 solutions

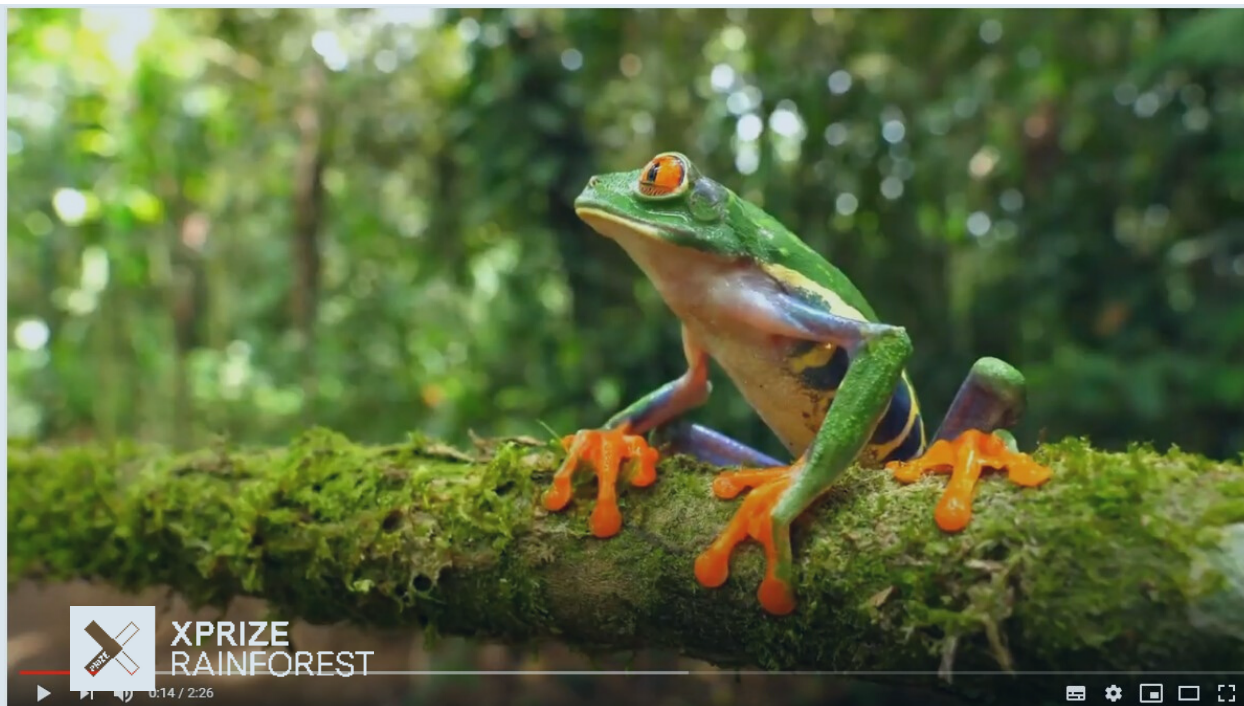
Alliance members offer their resources to help enable and accelerate existing efforts and pave the way for new solutions.

Rainforest XPRIZE Launched

A five-year competition with a \$10 Million Dollar prize purse to enhance understanding of the rainforest ecosystem.

The objective is to accelerate the innovation of autonomous technologies needed for biodiversity assessment and enhance understanding of rainforest ecosystems. The winning team will develop novel technologies to rapidly and comprehensively survey rainforest biodiversity and use that data to improve our understanding of this complex ecosystem.

The Rainforest XPRIZE will reveal the true potential of the standing forest, accelerating the development of new, just, and sustainable bioeconomies.



FOR MORE INFORMATION

LEE STEIN
Prize Capital
lee@prizecapital.net



ERIC BEYNON
Sustainable Growth Company
ebeynon@sustainablegrowth.ca

