

## PRESS RELEASE

## World's First ISO-certified Carbon Capture System operates with ASCO technology

***ASCO Carbon Dioxide, Inc. and HTC Extraction Systems provided a carbon dioxide (CO<sub>2</sub>) capture system for InnoTech Alberta Inc. The system works with a flue gas slipstream from a natural gas fired power plant. The “SGR285 CO<sub>2</sub> stack gas recovery system” marks the first ISO 14034 ETV conformant verification for a carbon capture plant in the world and recovers 6 tons of CO<sub>2</sub> per day.***

350Solutions, a consulting group that provides independent evaluation of new environmental and cleantech innovations, verified the InnoTech's ASCO-HTC system against six verification parameters including operational scale, CO<sub>2</sub> capture efficiency, CO<sub>2</sub> production rate, CO<sub>2</sub> production composition, energy usage, and water usage. For all results, a total of 85 days of data was collected between September 12, 2020 and December 5, 2020. The capture system was verified to operate at a nominal 6 tonnes per day of CO<sub>2</sub> product, with a capture efficiency of 82%. The verification of the capture system was required as part of the NRG CO<sub>2</sub>-SIA Carbon XPRIZE competition. The challenge is aimed to fight climate change and rebalancing Earth's carbon cycle, funded by Elon Musk and the Musk Foundation.

The InnoTech's ASCO-HTC supplied technology utilizes an amine solution solvent and optimized packing technology to provide a highly efficient CO<sub>2</sub> extraction process that is also resistant to O<sub>2</sub> presence in the source stream. A slipstream of flue gas from the natural gas-fired boilers at the Enmax Shepard Energy Centre, an 860-MW combined cycle power plant, is sent to the capture system. This flue gas is first cooled prior to entering the CO<sub>2</sub> extraction process. Flue gas then enters the CO<sub>2</sub> gas absorber, through which the amine-based solvent is fed. Once absorbed, the CO<sub>2</sub> gas is carried within the enriched solvent stream for CO<sub>2</sub> recovery, while remaining products of combustion in the flue gas are vented off from the top of the absorber tower. The solvent, enriched with CO<sub>2</sub>, passes to the stripper tower which uses reboiled lean solvent combined with tower and structured packing material to liberate the CO<sub>2</sub> gas from the enriched solvent stream. The exit CO<sub>2</sub> gas from the stripper is produced at a controlled temperature and pressure and provided as a final product stream consisting of saturated CO<sub>2</sub> at a nominal maximum rate of 6 tonne/day.

Marco Pellegrino, CEO/Managing Director, ASCO CARBON DIOXIDE LTD, is excited: “ASCO is particularly proud of this joint project with HTC and InnoTech. As a pioneer with 85 years of experience in CO<sub>2</sub> process technology, it is overwhelming to now also be recognized as the first ISO certified CO<sub>2</sub> capture project. We hope that this will raise awareness of the possibilities of CO<sub>2</sub> recovery and thus environmental protection.

**Captions:**



ASCO CO<sub>2</sub> Stack Gas Recovery Plant (SGR)

**About ASCO**

Swiss ASCO CARBON DIOXIDE LTD is a provider of complete CO<sub>2</sub> and dry ice solutions with customers worldwide. The product range includes CO<sub>2</sub> Production and CO<sub>2</sub> Recovery Plants, Dry Ice Blasting Units, Dry Ice Production Machines, CO<sub>2</sub> Cylinder Filling Systems, CO<sub>2</sub> Vaporisers, CO<sub>2</sub> Storage Tanks, CO<sub>2</sub> Dosing Systems for Water Neutralisation and various other CO<sub>2</sub> and dry ice equipment. Thanks to this broad product range and more than 130 years of practical experience in the wide field of CO<sub>2</sub> and dry ice, customers benefit from individual, complete CO<sub>2</sub> solutions from a single source. Since 2007 ASCO has been part of the international industrial gas enterprise Messer Group and is its competence centre for CO<sub>2</sub>. By joining forces with the German BUSE Gastek GmbH & Co. KG, based in Bad Hönningen, in the year 2014, the expertise and product portfolio was pooled and significantly expanded. This applies in particular to the complex field of CO<sub>2</sub> recovery. In July 2016, the US subsidiary ASCO CARBON DIOXIDE INC (ASCO Inc.), based in Orange Park/Florida, was founded. [ascoco2.com](http://ascoco2.com)

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