



Aduro Announces Achievement of First Milestone After Receiving Independent Validation of Hydrochemolytic Chemical Conversion Technology

Commercialization plans advance with third-party confirmation of major milestone achievement.

Sarnia, ON, January 20, 2022 – [Aduro Clean Technologies, Inc.](#) ("Aduro" or the "Company") (CSE:ACT) (OTCQB:ACTHF) (FSE:9D50), a Canadian developer of patented water-based technologies to chemically recycle plastics and to transform heavy crude and renewable oils into new-era resources and higher-value fuels, is pleased to announce the achievement of the first milestone under the securities exchange agreement dated October 22, 2021, as amended (the "[Securities Exchange Agreement](#)") (the "**First Milestone**") and the receipt of the third party report following the successful review and independent validation of its patented chemical conversion technology by Dr. Paul Charpentier, an expert in chemistry and alternative energy applications. .

The objective of the review and independent validation was to confirm that Alberta bitumen, flowing continuously through the R2 reactor, was upgraded to lighter crude compared to the feedstock. More specifically, Aduro Hydrochemolytic™ chemical conversion technology (HCT) was applied to improve the properties of bitumen feedstock with an "API gravity" (density) of 14.6 °API, upgrading it to lighter petroleum with a density of 19.5 °API. Higher °API values mean lower density and higher market value.

"Aduro was able to demonstrate upgrading of Bitumen on a flow-through reactor in a controlled laboratory environment and therefore meet the objectives of the First Milestone" said Dr. Paul Charpentier.

Management believes these results further validate that the patented HCT, developed and proven by Aduro in small-batch R1 reactors, is viable for use in the types of continuous-flow reactors commonly used in commercial applications. The main benefits of HCT, when applied to bitumen, include partial upgrading of bitumen that improves viscosity, density, and market value, while reducing capital costs.

"Third-party evaluation increases confidence that our projections regarding lower operating costs and lower energy consumption in commercial applications are technically grounded" said Marc Trygstad, Chief Technology Officer of Aduro.

The results of the work completed by Aduro and evaluated by Dr. Charpentier support continuation of work to establish the foundation for HCT scaleup to pilot plants, precommercial deployments, and full-scale commercial systems, while creating opportunities for Aduro to continue engagement of potential partners and customers through demonstration projects.

The R2-scale work on bitumen supports the next-phase design and development of the pilot-scale R3 reactor system to process barrels-per-day of bitumen. R3 reactor design work started in June 2021 and continues to proceed at a rapid pace. Furthermore, lessons learned from bitumen processing are also

being applied to accelerate the design of an R2-scale demonstration system optimized for upcycling of plastics, such as polyethylene and polypropylene.

“My thanks to Dr. Paul Charpentier for his efforts to evaluate our work, and my highest appreciation to the Aduro technology team for their tireless efforts enabling completion of this milestone. We are moving forward and growing our team, focusing our attention on pilot plants and customer demonstrations, and continuing acceleration of our commercialisation efforts,” said Ofer Vicus, Chief Executive Officer of Aduro.

The completion of independent validation also marks the achievement of the First Milestone. On the receipt of the Third-Party Report, 13,333,328 Class A special warrants held by the special warrants trustee are deemed to be distributed in accordance with the Securities Exchange Agreement and are automatically converted on a one-for-one basis into common shares of the Company for no additional consideration and will be distributed to the former security holders of Aduro Energy Inc.

Furthermore, 13,333,328 Class B special warrants also held by the special warrants trustee will be distributed in accordance with the terms of the Securities Exchange Agreement and will only be converted when the second milestone is achieved, at which point the warrants will be convertible into common shares for no additional consideration on a one-for-one basis. 10,492,321 of the common shares issued on the conversion of Class A special warrants and 11,414,864 of the Class B special warrants will be distributed to Company insiders.

About Dr. Charpentier

[Dr. Paul Charpentier](#) is a Professor in the Department of Chemical and Biochemical Engineering and Mechanical and Materials Engineering at Western University, where he has served as a faculty member for over 20 years. He is a member of International Composites Research Centre, and he also a Professor in the Institute for Chemicals and Fuels from Alternative Resources (ICFAR) and the Biomedical Engineering Graduate Program at Western University. Dr. Charpentier holds a Master of Science degree in Polymer Chemistry from the University of Waterloo, and a PhD degree in Chemical Engineering from McMaster University.

About Aduro Clean Technologies

[Aduro Clean Technologies](#) is a developer of patented water-based technologies to chemically recycle waste plastics; convert heavy crude and bitumen into lighter, more valuable oil; and transform renewable oils into higher-value fuels or renewable chemicals. The Company’s Hydrochemolytic™ technology activates unique properties of water in a chemistry platform that operates at relatively low temperatures and cost, a game-changing approach that converts low-value feedstocks into 21st-century resources. With funding and support from [Bioindustrial Innovation Canada](#), the company has developed a pre-pilot reactor system to upgrade heavy petroleum into lighter oil.

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Forward-Looking Statements

This news release contains forward-looking statements. All statements, other than statements of historical fact that address activities, events, or developments that the Company believes, expects or anticipates will or may occur in the future, are forward-looking statements. The forward-looking statements reflect management's current expectations based on information currently available and are subject to a number of risks and uncertainties that may cause outcomes to differ materially from those discussed in the forward-looking statements. Forward-looking statements in this release include the potential commercialization of the Company's technology; the Company's projections that its technology will allow for lower operating costs and lower energy consumption in commercial applications; that the technology can be scaled up to pilot plants, precommercial deployments and full-scale commercial systems; the future engagement of potential partners and customers through demonstration projects; the implementation of the next phase design of the pilot-scale R3 reactor system; the acceleration of the design of an R2-scale demonstration system optimized for upcycling of plastics, like polyethylene and polypropylene; the achievement of the second milestone and the conversion of the Class B special warrants. Although the Company believes that the assumptions inherent in the forward-looking statements are reasonable, forward-looking statements are not guarantees of future performance and, accordingly, undue reliance should not be put on such statements due to their inherent uncertainty. Important factors that could cause actual results to differ materially from the Company's expectations include adverse market conditions and other factors beyond the control of the parties. These factors include the possibility that the Company may for various reasons fail to achieve commercialization of its technology; the Company's technology may not allow for lower operating costs and lower energy consumption in commercial applications as anticipated or at all; that the technology may be unable to be scaled up to be used for pilot plants, precommercial deployments and full-scale commercial systems; the Company may be unable to engage potential partners and customers in the future; the Company may be unable to implement the next phase design of the pilot-scale R3 reactor system or achieve completion of the design of an R2-scale demonstration system optimized for upcycling of plastics; the Company may not achieve the Second Milestone as anticipated or at all. The Company expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except as required by applicable law.