Press Release

Milad Mohsenzadeh from the University of Melbourne wins third "Aquila Capital Transformation Award" for his research on solar thermal desalination that supports climate change mitigation

- **The cost effective and scalable prototype developed by Mohsenzadeh will help supply drinking water to disaster-stricken or remote areas**
- **The scientist's work was selected from a large number of global applications by a jury of international academics**
- **The objective of the annual award is to encourage innovation and support research that provides an implementable solution to a problem caused by climate change**

Sydney, 02 February 2023 – Aquila Capital, the sustainable investment management and asset development company headquartered in Hamburg, Germany, and with an Asia Pacific hub in Singapore, awards its third Aquila Capital Transformation to Milad Mohsenzadeh, a recent PhD graduate from the University of Melbourne and the current postdoctoral research fellow at the University of New South Wales (UNSW), School of Photovoltaic and Renewable Energy Engineering. Mohsenzadeh was selected for his research on producing drinking water cost-effectively by using an innovative floating, self-cleaning solar thermal distillation concept.

Unlike other desalination technologies, his is easily made from readily available and affordable materials and can be deployed on the surface of brackish water in a short amount of time. As the climate crisis impacts the amount of available drinking water and increases the chance of flooding and other natural disasters occurring, having a viable, cost-effective solution that desalinates and purifies water – a traditionally energy intensive process – with renewable energy, and that requires very few materials, could have a significant impact on climate change mitigation.

This research addresses challenges close to home, especially with the latest flooding in Western Australia, where drinking water was not just scarce, but access to the power grid was also limited which meant that high-tech and costly desalination methods were not viable. As it stands today, if desalination on land is not an option, the main solution is to import bottled water.

This floating technology could have far-reaching benefits for other countries and regions across the globe facing the same challenges; one must only think back to Pakistan or Tonga's recent devastating floods to imagine the potential positive impact of this concept. Because of

this level of innovation and its practical implementation, Mohsenzadeh's research was selected for the award from numerous submissions. As part of the prize, he will receive an endowment to support additional research in making the prototype more efficient and commercially viable.

Milad Mohsenzadeh, winner of the award and Postdoctoral Research Fellow at the University of New South Wales, comments: *"Next to the energy transition, water scarcity and access to clean water are the most important problems we must urgently solve. My long-term vision is to therefore translate this research into a commercial product that can make a significant improvement on the quality of life in remote regions impacted by the ongoing climate crisis, here in Australia, and abroad. To attract more funding from industry, NGOs, and governments, I must first set up a team to optimise and improve the prototype. With this award, I feel huge encouragement to continue to pursue this long-term goal."*

Roman Rosslenbroich, Co-founder and CEO of Aquila Capital, comments: *"We initiated the Aquila Capital Transformation Award to derive implementable solutions from academic research. The winning paper combines all essential criteria of our award, as the presented concept is innovative, at the same time practical and scalable, and its implementation would have a large impact. Water scarcity in remote areas is an increasing challenge induced by climate change, and the presented concept provides an effective mitigation solution."*

This year's esteemed jury included Prof Hans-Joachim Schellnhuber, Director Emeritus at the Potsdam Institute for Climate Impact Research; Prof Eicke R. Weber, former Director of the Fraunhofer Institute for Solar Energy Systems ISE; Prof Yukari Takamura, Professor at the University of Tokyo's Institute for Future Initiatives; Prof Armin Aberle, CEO of the Solar Energy Research Institute at the National University of Singapore (SERIS); and Prof Claudia Kemfert, Head of Department for Energy, Transportation and Environment at the German Institute of Economic Research (DIW) and Professor of Energy Economics and Energy Policy at Leuphana University Lüneburg. All submissions were evaluated according to originality, quality and significance.

Prof Armin Aberle, member of the jury, comments on the decision: *"The developed prototype of a cost-efficient desalination solution for remote areas is of utmost relevance to combat the increasing freshwater scarcity caused by the climate crisis. Desalination is an energy-intensive process where the land availability for renewable power supply has always been a limiting factor. The floating solar thermal technology presented can be efficiently expanded on water surfaces and does not require a water pump. Additionally, given its design simplicity and application of abundant materials, local manufacturing without strong supply chain dependencies is feasible."*

In line with this year's theme, "Solving the Climate Crisis through Innovation", the Aquila Capital Transformation Award recognises outstanding scientific research focused on applicable and unconventional solutions to combat climate change and its consequences. In addition to providing financial support for research, the annual award focuses on cooperation in implementing the research solutions.

For more information on the Aquila Capital Transformation Award and the criteria for 2022, please visit: https://www.aquila-capital.de/en/about-us/transformation-award

About Aquila Capital

Aquila Capital is an investment and asset development company focused on generating and managing essential assets on behalf of its clients. By investing in clean energy and sustainable infrastructure, Aquila Capital contributes to the global energy transition and strengthens the world's infrastructure backbone. The company initiates, develops and manages essential assets along the entire value chain and over asset lifetimes. Currently, Aquila Capital manages more than EUR 13 billion on behalf of institutional investors worldwide. Its primary objective is to generate performance for its clients by managing the complexity of essential assets.

Today, the company manages wind energy, solar PV and hydropower assets of 11.1 GW capacity. Additionally, 1.7 million square metres of sustainable real estate and green logistics projects have been completed or are under development. Aquila Capital also invests in energy efficiency, carbon forestry and data centres. The company has been carbon neutral since 2006. Sustainability has always been part of Aquila Capital's value system and is an integral part of its investment strategies, processes and management of assets. The company has around 630 employees from 48 nations, operating in 16 offices in 15 countries worldwide.

In Asia Pacific, Aquila's fast-growing team of over 50 professionals across five offices (Singapore, Taiwan, Japan, Korea and New Zealand) focuses on developing and constructing solar PV, wind power, BESS and other sustainable assets across the region.

Further information: https://www.aquila-capital.de/en/

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