



31 May 2023

Ms Maria Skyllas-Kazacos joins Tivan's Technical Advisory Group

- **Tivan recently established a Technical Advisory Group to provide independent technical advice on a range of strategic project matters.**
- **Ms Maria Skyllas-Kazacos, globally renowned as the inventor of Vanadium Redox Flow Batteries, has joined the Group.**

The Board of Tivan Limited (ASX: TVN) ("Tivan" or the "Company") recently announced the formation a Technical Advisory Group ("TAG" or the "Group") to provide independent technical advice to facilitate project delivery and commercialisation pathways (see ASX announcement of 26 May 2023).

The Board is delighted to advise that Ms Maria Skyllas-Kazacos has joined the Group. As the inventor of Vanadium Redox Flow Batteries (VRFB), Ms Skyllas-Kazacos holds unique prestige in the sector, and is globally recognised for her ongoing technical contributions to the commercialisation of the technology. Ms Skyllas-Kazacos' presence will significantly enhance Tivan's corporate profile, and her technical knowledge and experience will be keenly sought in developing and standardising the global value chain in VRFB.

Ms Maria Skyllas-Kazacos - Biography

After graduating with 1st Class Honours and the University Medal in Industrial Chemistry at UNSW Sydney, Maria Skyllas-Kazacos completed her PhD at the same university in 1979 in the area of High Temperature Molten Salt Electrochemistry under the supervision of Professor Barry Welch. She then spent a year as a Member of the Technical Staff at Bell Telephone Laboratories in Murray Hill, New Jersey, USA where she worked with Adam Heller and Barry Miller on liquid junction solar cells and with John Broadhead on lead-acid batteries. On returning to Australia, she was awarded a Queen Elizabeth II Postdoctoral Fellowship to continue her work on liquid-junction solar cells with Prof Dan Haneman at UNSW Sydney. In 1982, she was appointed to the academic staff in the School of Chemical Engineering and Industrial Chemistry where she initiated research programs in aluminium electrowinning and began her pioneering work on vanadium flow batteries. After filing the first patent on the vanadium redox flow battery in 1986, Maria expanded her research team's efforts into all areas of the vanadium battery technology, from electrolyte production to stack materials, design and manufacture, sensors and control system development, while also completing several field trials. Over the next 30 years, her group's work led to more than 40 new patents which currently form the basis of the vanadium flow battery technology that is being commercialised around the world.

In addition to these patents, Maria has published over 200 refereed papers in international journals, has written 8 book chapters and has edited or co-edited more than 12 books and conference proceedings. Her pioneering work on the vanadium battery has been recognised through many honours and awards, including the Chemeca, Wiffen, R.K. Murphy and Castner Medals. In 1999 she was made Member of the Order of Australia and in 2009, was Invested as



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Grand Lady of the Byzantine Order of St Eugene of Trebizond. Maria is a Fellow of the Australian Academy of Technological Sciences and Engineering, of the Royal Australian Chemical Institute and of the Institution of Engineers Australia.

Comment from Executive Chairman

Mr Grant Wilson commented:

"It has been a privilege to get to know Maria in recent months, and to introduce her to the journey we are on with Tivan. I am delighted she has recognised the opportunity and capability we have to broaden and deepen the commercialisation pathway for VRFB on a global basis, consistent with Tivan's strategic mission.

Maria's invention is a critical enabling technology in the global energy transition, and an exemplar of Australian research and development. Her technical contributions in vanadium electrolyte and VRFB will be keenly sought as we move forward. Maria's presence at Tivan will resonate globally and will inspire our team onward."

Comment from Ms Maria Skyllas-Kazacos

Ms Maria Skyllas-Kazacos commented:

"After getting to know Grant in recent months, I realised that we share the same passion for clean energy and a carbon-free future. It's been a very long wait, but the time for the clean energy transition has finally arrived and I am so happy to see that the VFB is being recognised as an important enabling technology for this transition. I was therefore delighted to accept Grant's invitation to join the Technical Advisory Group at Tivan so that I can help to create a thriving vanadium industry here in Australia".

This announcement has been approved by the Board of the Company.

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