

# Bay Area Geophysical Society Seminar Series



## Mining for Net Zero: The impossible task

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### **Abstract:**

The world aspires, as it must, to move away from fossil fuels to renewables for energy production and transportation as soon as possible. This notion is encapsulated in the United Nation's mission of Carbon Neutrality by 2050. The roadmap for this is laid out in the recent Flagship report "A Roadmap for the Energy Sector" by the International Energy Agency (IEA, 2021). The objectives of the presentation are to raise awareness of:

- The increasing need for minerals & metals in our society, especially to achieve Net Zero
- The difficulty in finding new deposits
- The threat that global domination of mineral resources by China poses
- The reducing enrolments in Earth sciences, especially geophysics, at Universities in Western countries
- Excellent national programmes in China and Australia

Taken together, these will mean Canada in particular will become more-and-more reliant on metals supplies from other countries – and if the pandemic has taught us anything, it is that we need to be self-reliant.

## Presenter's Bio:



Alan G. Jones is the President and Managing Director of Complete MT Solutions Inc. in Ottawa, Canada. In addition, he is Senior Professor Emeritus at the Dublin Institute for Advanced Studies (DIAS), a Specially-Appointed Professor at the China University of Geosciences Beijing, and Adjunct Professor at Macquarie University (Sydney, Australia) and at the University of Western Australia (Perth, Australia). He obtained a degree in Physics at the University of Nottingham (UK), an Msc in Applied Geophysics at the University of Birmingham and a PhD in Geophysics (magnetotellurics) at the University of Edinburgh. He worked in academic institutions and geological surveys in Germany and Sweden and Canada before becoming Section Head and later on Acting Director of the Continental Geoscience Division of the Geological Survey of Canada (GSC) in 1989. During his time at the GSC, Jones led the EM aspects of most of the transects conducted during the Lithoprobe program. In 2004, he moved to DIAS, where he became Senior Professor and Head of Geophysics. During his 11 years at DIAS, Jones conducted numerous MT investigations in three continents, which led to fundamentally new understanding of processes of continental convergence and lithospheric-scale structures. He also oversaw the initiation of the Irish National Seismic Network (INSN) and the School's Seismology program, among others Jones retired in 2015, when he returned to Canada and founded Complete MT Solutions Inc.

Jones was awarded the Tuzo Wilson medal of the Canadian Geophysical Union in 2006. In 2009, he was appointed an International Member of the Geo-Electromagnetism Committee, Chinese Geophysical Society and was elected to Academia Europaea. He was made a Member of the Royal Irish Academy in 2010. He was a Blaustein Visiting Professor at Stanford University for the Winter Term of 2016, and was appointed a Life Affiliate Member of the Geological Society of South Africa in 2016. In 2019 he was elected a Fellow of the American Geophysical Union. Jones is the most published (>200 papers) and most cited (>15,500 citations) scientist in his chosen field of magnetotellurics. Together with Alan Chave, he published the most authoritative textbook to date on MT - The Magnetotelluric Method: Theory and Practice (Cambridge University Press).

## Zoom meeting information:

Zoom ID: 952 4296 0872

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