ETIP HYDROPOWER Governing Board Application form

Name and surname	Jeffrey Andrew Tuhtan
Photo	
Name of entity (e.g. company, association, etc.)	**Tallinn University of Technology**
Job title / role	Tenured Associate Professor of Environmental Sensing Technologies
Stakeholder category	☐ Hydropower industry and technology[1] ☐Operator/owner of large hydropower plants and/or pumped storage plant(s) ☐Independent operator/owner of small hydropower plant(s) ☐Design, planning and project development ☐Finance, business and insurance[2] ☒Research, innovation and development[3] ☐Environment and civil society[4]
Country	**Estonia**
Previous experience (1300 characters with spaces)	Worked in hydropower consultancy SJE Ecohydraulic Engineering GmbH for 8.5 years. Conducted river bathymetry surveys and implemented 2D hydrodynamic models to assess the environmental impacts (sediments, fish, zoobenthos) of hydropower operations on the environment. I currently run a research group with 8 PhDs, 2 post-docs and 3 full-time engineers developing underwater sensing technologies for hydropower including: passive sensors for barotrauma detection during turbine passage, biologgers for fish to assess risk of injury and mortality during downstream passage through turbines, spillways, gates and bypasses. In the last five years, we have developed and commercialized the HydroCAM to IAMHYDRO GmbH

[1] Equipment supplier and/or manufacturer, maintenance industry, etc.
[2] Financial, legal & developing institutions, development, public or commercial banks, financial organisations, and private investors/investment funds, international monetary fund, insurance, legal advisors, etc.
[3] R&D institutions, research centers and institutes of universities, etc.
[4] Environmental or conservation NGO´s, civil society associations, policy makers, water resources associations, project stakeholders, etc.

	with more than 50 units installed for camera-based fish monitoring in Europe. I also lead a team which is developing computer vision solutions for automated fish species and migration behaviour for the German Federal Institute of Hydrology. Our group carries out industrial R&D projects with several hydropower operators in Europe including EDF, BKW and TIWAG as well as organizations such as SINTEF, INBO and the UK Environmental Agency. We are well-connected across the European hydropower landscape, and I also serve on the IAHR Ecohydraulics Leadership Team.
Motivation to become Governing Board member (1300 characters with spaces)	My primary motivation to leave industry and begin a research group in academia was to build advanced hydropower sensing technologies which were not needed, but unavailable. Current technologies are now advanced enough such that their automation (e.g. fish counting) is becoming possible at large-scale. However, a major gap which requires concerted effort by the wider industrial and research communities to fill is the lack of automated environmental compliance monitoring and reporting technologies. These technologies are urgently needed to deliver EU Taxonomy compliant reports for the hydropower sector. If elected to the ETIP governing board, I will create an effective and highly collaborative environment in which EU Taxonomy reporting for hydropower environmental impacts can be realized. These technologies will cover sediments, fish up- and downstream passage, and water quality.