

# Challenges and Opportunities Industrializing a Second-To-None

## Anode Support Solid Oxide Technolgy

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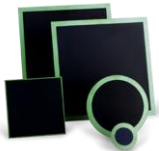
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Strongly rooted in the Estonian heratige of electrochemistry and processing of advanced ceramics combined with a background form Finish fuel cell technology development. Elcogen is taking its state of the art anode support solid oxide cell and stack technologies from pilot scale production into an archtype industrial scale production with local footprint and international reach.

To reach this point has been a highly multidisciplinary effort including:



Cell development involving aspects of inorganic chemistry, material science, and materials processing in combination with characterization and electrochemical testing and analysis.



Stack development involving aspects conceptual mechanical engineering, fluid dynamics, material science across cell, coatings, and steel grades. Manufacturing excellence, electrochemical testing and deployment into a variety of of applications



Process integration of single stacks as well as larger numbers of manifolded stacks to design the right-sized fit with process equipment and power electronics for various fuel cell and electrolyser application enabling efficient production of clean energy with high the lowest environmental footprint.

The presentation will address multiple aspects of work done at Elcogen enabling industrialization of Solid Oxide Cell technology and achievements done duing the deployment of the technology into various applications, emphasizing the technological barriers and challenges to be overcome to realize a competitive technology and the business development required to realize the high potential opportunity for growth in Estonian and Finnish workplaces and export of Estonian -Finnish technology.