



CTI HYDROGEN

Integrating CTI driven RF as the energy input for a methane pyrolysis reactor in turquoise hydrogen production could result in the cleanest, most flexible, and most economic hydrogen globally.

THE PROBLEM

Low-cost, distributed hydrogen production does not exist but is required to enable new use cases.

- Steam methane reforming (SMR) is low-cost but centralized, requires costly transportation, and requires carbon capture to reduce emissions
- Electrolysers are modular, but require large amounts of electricity and are high cost per kg of H_2

Clean Tech Inverter (CTI)

Acceleware's field-proven, proprietary industrial heating technology platform can enable the decarbonization of multiple industrial heating processes via highly efficient delivery of radio frequency energy.



THE SOLUTION

Turquoise Hydrogen via CTI powered Methane Pyrolysis.

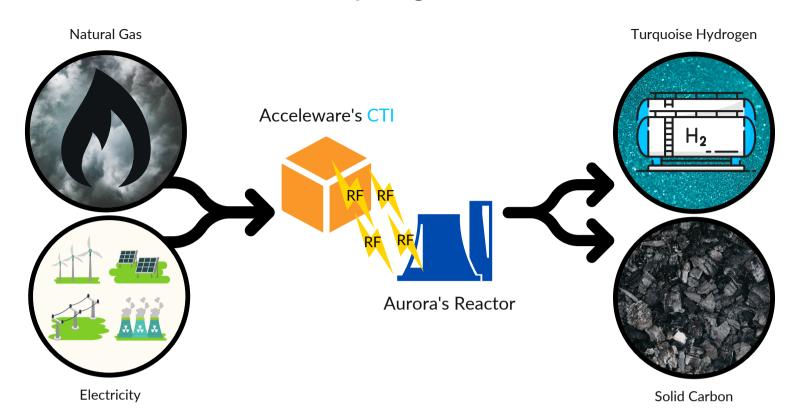
- Flexible, scalable, distributed low-cost production method with **near-zero emissions**
- Zero fresh water required, resulting in zero wastewater
- The Acceleware/Aurora Hydrogen collaboration project is currently underway, and is expected to be the most efficient, clean, and scalable hydrogen production process designed to date.

What Does CTI Do?

The CTI very efficiently converts electricity to radio frequency (RF) energy. It is capable of operating at 20 kHz to 120 kHz and at a power range from 100 kW to over 10 MW. This provides a rapid path to scale hydrogen production to industrial levels of 20 tonnes /day at 10 MW while maintaining unparalleled energy conversion efficiency.

The power of the CTI heating 'engine' could allow for significant improvements to a pyrolysis reaction since CTI produced RF energy could provide conversion efficiency and cost advantages over other energy sources.

The Acceleware/Aurora Hydrogen Solution



Benefits



Lowest potential \$/kg



Zero direct GHG emissions



Zero fresh water requirements



CTI scales to 10 MW, which could produce 20 tonnes/day H₂



Deploy anywhere natural gas available, converting it to H₂ at point of use

FOR FURTHER INFORMATION CONTACT:

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