

**TIH PRESENTATION
POWER TURBINE
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- **CHRISTINA WATSON**
- **CMDR BALA**
- **MANOJ AGARWAL**



**SITADAL
TECHNOLOGIES**

**HIGH DENSITY
POWER TURBINE**

**on the ground
on or under the water
or for a data centre**

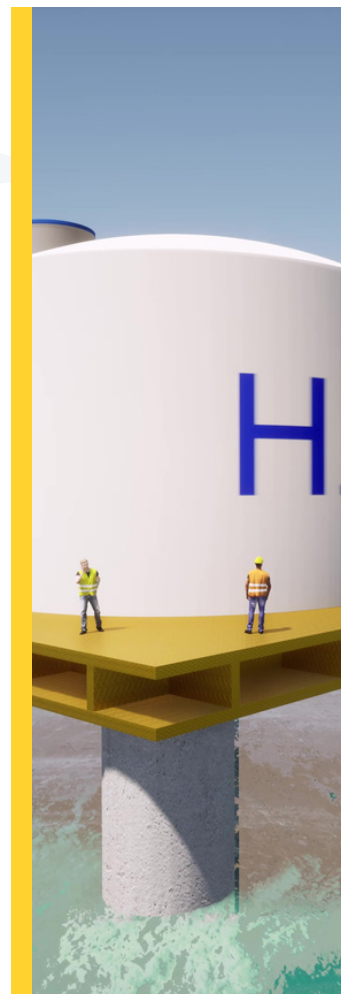


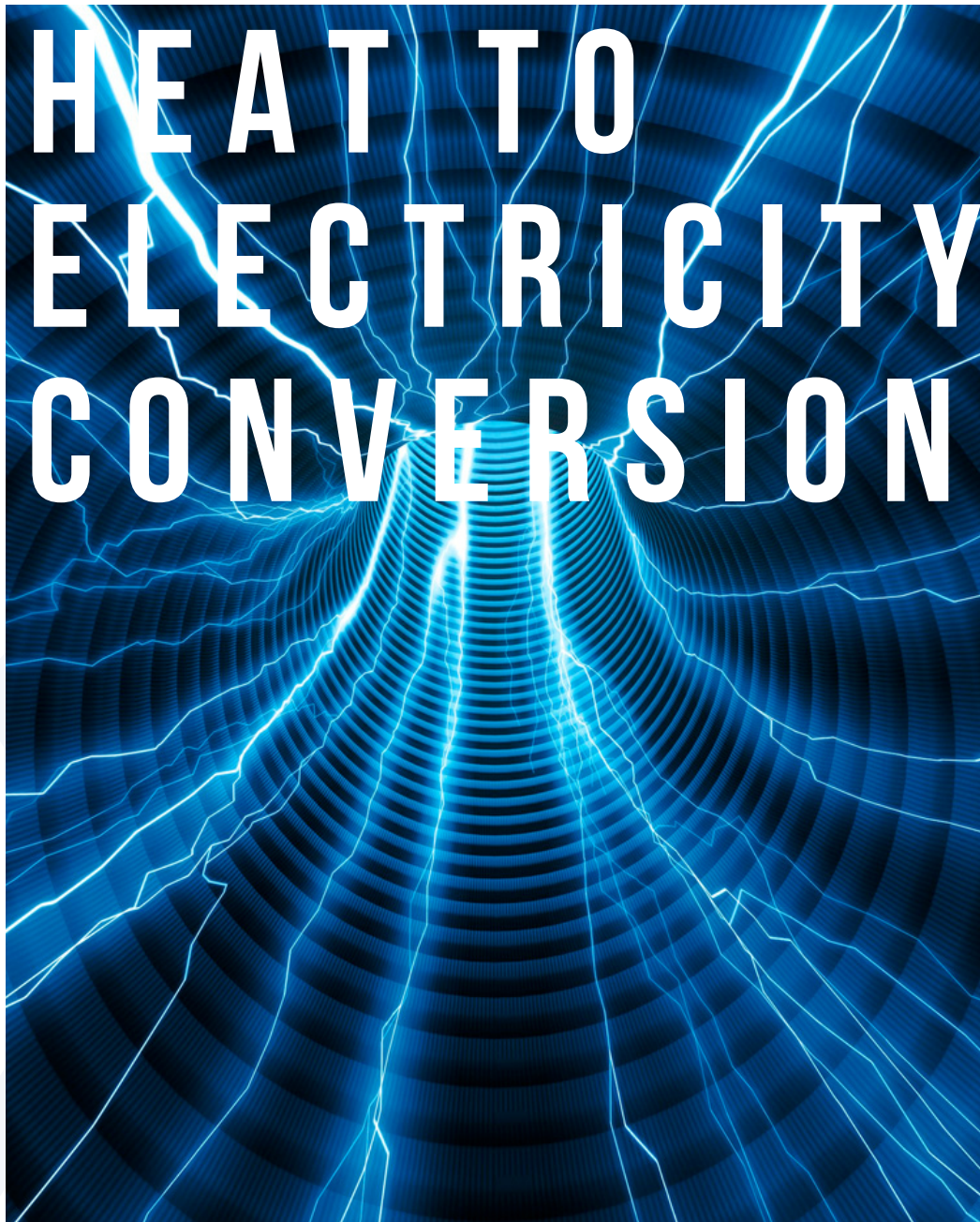
Sitadal Technologies, formed in 2019 and has since been in stealth mode.

The company is focused on the conversion of heat into electricity using two independent pathways:

- through a thermolyser which produces hydrogen to power a fuel cell
- through an externally heated jet engine which would drive a mechanical alternator based on a high-tech motor operating in reverse.

The proposed project refers to the latter.





Air independent power
Using heat as motive energy source
From concentrated solar, gas or nuclear



THE PROBLEM

heat - > > electricity >>
compact form >>
for hybrid electric vehicles
& data centres

Air-independent power source for
Mars in the absence of atmospheric
oxygen.

Diesel generators will soon be
phased out.
Hence, an alternate is required.





THE SOLUTION

is to use a 3 MW jet engine -
with supercritical carbon dioxide as
the motive fluid.

The jet engine would drive a high RPM
electric motor in reverse to generate
1.28 MW of electric power..

The power plant would
consist of three modules:

- 1.heat generator
- 2.closed loop jet engine
3. alternator

This project addresses
the jet engine



The Sitadal power plant is being designed for 1.28 MW electric output at an indicative Rs 25 crores per MW.

This implies a substantial improvement over options like a steam turbine.





INNOVATION



The Sitadal Power System is being configured using 100% indigenous technologies.

The objective of this project is to provide a small technical demonstrator.

sitadal.com
mailbox@sitadal.com
+1 650 900 8833



**SITADAL
TECHNOLOGIES**

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DEPLOYMENT



The proposed system for heat to electricity conversion is currently in early stage development and has not been deployed. The objective of the current project is to:

- design the jet engine
- and demonstrate proof of concept.