Commercial Deployment of TEUSA’s Innovative Gen IV Integral Molten Salt Reactor

“Restoring America’s Nuclear Competitive Edge with the Cost Competitive and Highly Reliable IMSR400”

March 2018
- Private and Confidential -
SEALED AND REPLACEABLE IMSR® CORE-UNIT

400 MWth, 192 MWe Liquid Fueled Advanced Small Modular Reactor

Pool-Type, High Temperature, Graphite Moderated, Thermal Reactor

Primary pumps, heat exchangers and graphite moderator integrated into a compact and replaceable reactor vessel Core-unit

Atmospheric operating pressure

704 °C Reactor Outlet Temp

600 °C Solar Salt Delivery Temp

Fueled with Low Assay (<5%) LEU

Common Fluoride Salts with UF4

7-year operational life

2 Core-unit silos, allows switching Core-unit operations from one silo to the other every 7 years

Entire Core-unit replaced after 7 years of continuous operations
IMSR® END-USE APPLICATIONS

Secondary Coolant Salt (non-radioactive)

Secondary Coolant Salt Pump

Fuel-Salt Pump Drive Motors

600° C INDUSTRIAL SOLAR SALT LOOPS

POWER GENERATION

GRID SERVICES

CHEMICAL SYNTHESIS • H₂ • NH₃ • Syn-fuels

PROCESS HEAT USES

H₂O DESALINATION

IMSR® CORE-UNIT

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