

***Pre-Application Licensing Plan
for the
Gas Turbine - Modular Helium Reactor***

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***Objectives of
Pre-application Interactions***

- **Seek NRC licensability statement on**
 - GT-MHR design licensability
 - Safety and licensing approach
- **Establish foundation for future application**
 - Combined License (COL) for a first module
 - Design Certification for the GT-MHR plant

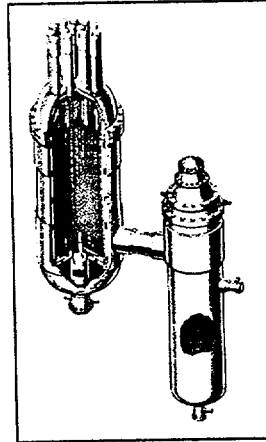
**NRC Advanced Reactor Policy guidance encourages
earliest possible interaction**

- Most effective regulation for advanced reactors
- Timely, independent assessment of the safety characteristics of advanced reactor designs



MHTGR - Starting Point for GT-MHR Interaction

- **Steam cycle** MHTGR interaction with NRC in mid-1980s
- Key items submitted for review
 - Top-level regulatory criteria
 - Risk informed licensing bases
 - Probabilistic Risk Assessment
 - Prelim Safety Information Document
- Extensive review by NRC staff and national labs
- MHTGR evolved to **Brayton cycle** GT-MHR in early 1990s
 - Similar safety characteristics
 - Similar licensing approach



 **GENERAL ATOMICS**

5 Areas Proposed for Discussion

- Programmatic and Process Topics
- Licensing Approach
- Technology Development
 - Fuel
 - Graphite
 - Metals
- Design Description
- Accident Analyses

 **GENERAL ATOMICS**

Interaction Process during Pre-application Phase

- **Topical Meeting**
 - GT-MHR presentation on topic or issue
 - NRC comments or questions at meeting
- **GT-MHR follows up meeting with written documentation of presentation**
 - Letter
 - Report
 - Draft SAR format
- **Written comments or queries from NRC**
- **GT-MHR response**

Licensability statement is final comment

