

# A Licensing Strategy That Supports Robust Regulatory Reviews And Flexibility To Benefit All Stakeholders



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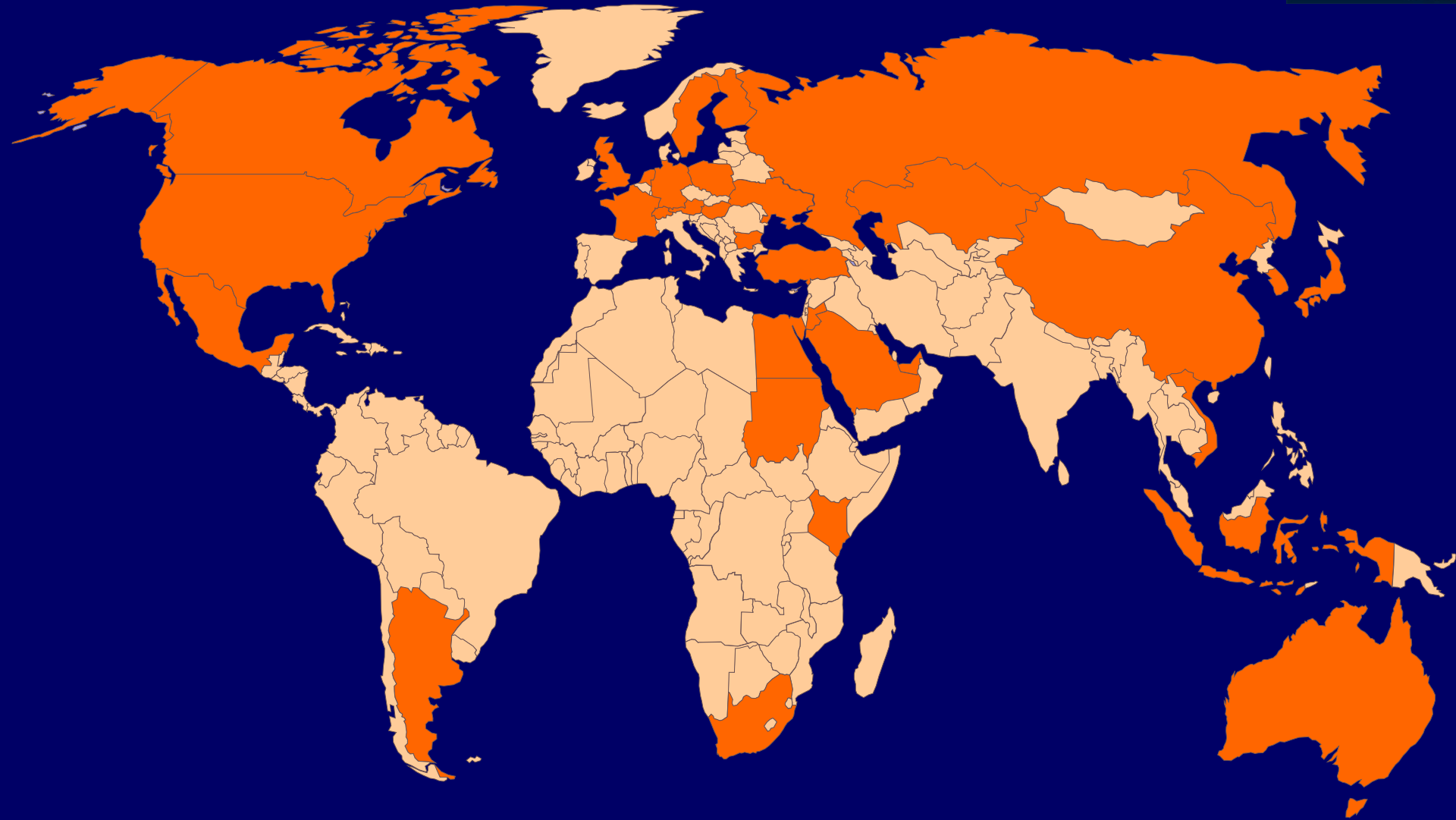
Past President – American Nuclear Society

# EXCEL SERVICES CORPORATION



- EXCEL is a Technical Service Organization (TSO)
- 30 years of service specializing in:
  - Licensing and Regulatory Support
  - Design Documentation (DCD) support
  - Combined License Application (COL) support
  - Design Certification Support
  - Improved Technical Specifications
  - Engineering and Analysis
  - Siting
  - Environmental
  - Technology Selection services
  - Project Management and Consulting

# Where the Licensing Action Is



# Historically Inefficient Application Strategies



- Treat each unit as a separate design
  - i.e., every unit is first of a kind (FOAK)
- Combine reviews of:
  - Siting
  - Reactor design
  - Site specific systems design
  - Operational
- Lack public participation
- Lack regulatory finality

# Initial License Ideal Application Strategy



- Design application is submitted by a vendor > “certified”
  - Includes operational aspects related to design
  - Preferably based on international acceptance criteria
- Site application is submitted by utility / operator
  - Utilizes available parameters from vendor
  - Includes site specific systems design
  - Includes operational aspects independent of design
- Construction approved for above site & certified design
  - Final design developed / revised during construction
- Final constructed, tested design recertified
  - Ready for duplication at multiple sites

# Initial License Ideal Application Strategy



- License / Design should be based on an assessment of the compliance with:
  - Nuclear regulatory requirements in the country where plant will be constructed, licensed and operated
  - Nuclear regulatory requirements of the country of origin where the technology was licensed or certified
  - International nuclear regulatory requirements
- This Compliance Matrix can be utilized by the regulatory authority, the owner/operator and the technology vendor(s) to confirm compliance with all applicable regulatory requirements before, during and after construction.

# Subsequent License Ideal Application Strategy



- Final Design is re-certified version
  - Based on operating, tested plant design
  - No outstanding issues
- Site application is submitted by utility / operator
  - Much like FOAK unit application
  - Timing might be during re-certification process
- Construction approved for site & recertified design
- New Issues must meet high safety threshold

# For the Regulator



## This Application Strategy:

- Satisfies international safety goals / criteria
- Builds confidence of all stakeholders
- Builds confidence of the international nuclear community
- First unit is flexible to allow for change of design
- First site can be reviewed during same time period
- Results in final certification of completed, tested design
- Subsequent sites can be reviewed during first unit construction
- Subsequent units built with high confidence



# For the Utility / Operator



## This Application Strategy:

- Satisfies safety goals / criteria
- Builds confidence for subsequent applications / applicants
- First unit is flexible to allow for change of design
- First site can be reviewed during same time period
- Subsequent sites can be reviewed during first unit construction
- Subsequent units built in a shorter time period with high confidence

# Regulatory Structure Needs



- Consistency with international safety standards
- Process for early public interaction
- Process for FOAK certification
- Process for change review during FOAK construction
- Process for site approval
- Process for high safety threshold of new issues after certification / re-certification
  
- RESULTS in high confidence for subsequent units
  - Final design, Costs, Schedule

**Thank You !**



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