U.S. Industry Perspective

EXPORT CONTROL AND NON-PROLIFERATION

MARGARET HARDING
MARGARET@4FACTORCONSULTING.COM

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Disclaimer

Although my presence here is sponsored by the U.S. Department of Energy, I am here as a long time member of the U.S. Nuclear Industry.

My talk does not represent DOE or DOE’s views.
Margaret Harding

- US Nuclear industry >33 years
- 27 years at GE (GE-Hitachi)
- GE supplies BWRs, fuel, services
  - Finland, Germany, India, Japan, Mexico, Spain, Sweden, Switzerland, Taiwan, US
  - Global Research in China, Germany, India, and US
- Mainly Fuel Engineering
- As an engineering manager – 14 different countries in my staff
Fuel Engineering Leader

- Staff in U.S. and Japan
- Cooperative agreements with ENUSA (Spain)
- Software developers Mexico and India
- Diversity of experience and perspective
Vice President of Engineering Quality

- INPO Assessment of GE-Hitachi
- Export Control and Global Regulatory Compliance
- NQA-1 Compliance for Engineering
- Qualified Lead auditor
U.S. Export Regulations

Dep’t of Energy

NRC

Dep’t of Commerce
Nuclear Technology

- Specialized Facilities are required
  - Irradiation
  - Test Reactors (concept testing)
  - Hot cells – post irradiation examination

- Long Development cycles
  - Simple changes – 6-10 years
  - New NES – 12-20 years
  - Advanced NES – 15-30 years (Or more??)

Enormously expensive to develop
Different Ways to protect IP

- **Patents**
  - Country (or region) dependent
  - PUBLIC Information
  - Time limited
  - Has a cost

- **Copyright**
  - Country (or region) dependent
  - PUBLIC Information
  - Time limited
  - Low/No Cost

- **Trade Secrets**
  - Company held
  - PRIVATE Information
  - Unlimited time
  - Low/No Cost
When do we use Which?

- **Patents**
  - High potential value
  - Enforceable
  - Time limited value

- **Copyrights/Trademarks**
  - Written work has value
  - Enforceable

- **Trade Secret**
  - Difficult to enforce patent/copyright
  - Public disclosure an issue
  - Long term value
Three Parties for Collaboration

- Governments
  - National prestige
  - Security
  - Welfare of Citizens
- Universities
  - Income
  - Student development
  - University prestige
- Private Corporations
  - Competitive advantage
  - Return on Investment

Plus One…
- Sovereign Corporations
  - Government owned (wholly or partially)
  - Mixed goals

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