

Nuclear New Build: Risk and Finance

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Shearman & Sterling's Global Nuclear Group

- **Dedicated nuclear energy lawyers**
- **Nuclear projects, finance & development group**
 - Developed many IPP models under US and English law
 - 140 year history advising financial institutions
 - FOAK nuclear projects and transactions around the world
 - Advising lenders on developing their policy and investing into nuclear projects
- **Nuclear disputes**
 - Advising on the world's largest nuclear arbitration
- **Focus on delivering practical, bankable and deal-making solutions for our nuclear industry clients based on experience and lessons-learned**

A Changing Industry

Past

- Majority government owned/sponsored nuclear industry
- Pre-Fukushima environment
- Proven (but older generation) technologies
- Government financed

Today & Future

- Privately owned/sponsored
- Post-Fukushima risk environment
- FOAK technologies (today) but soon proven (and safer/more efficient) technologies
- New sources of finance sought – limited current availability (focus on ECA and vendor finance)

Nuclear Project Risks – from Lenders’ Perspectives

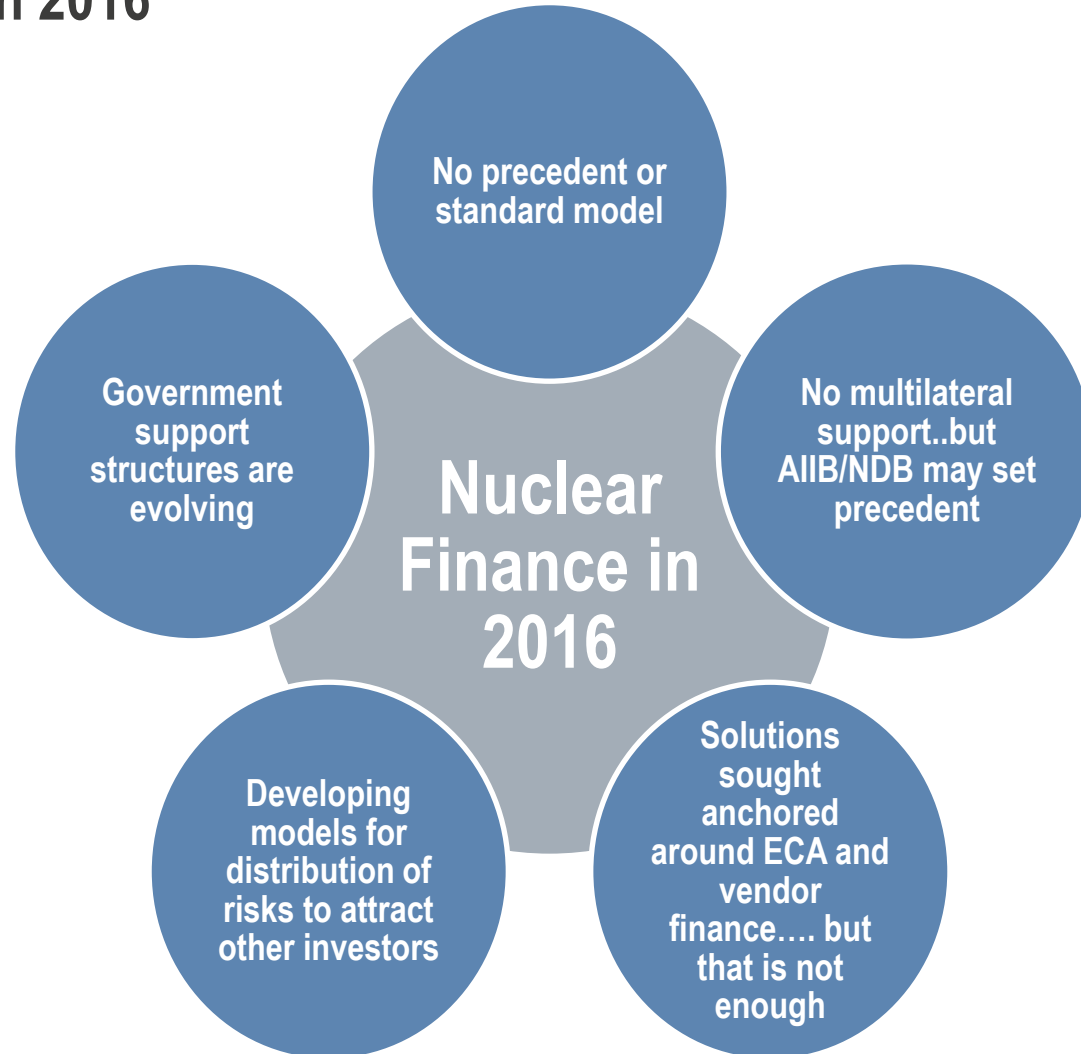
Financial risk – primarily driven by:

- Historical/current experience of project delay and cost overruns
- Long-term regulatory and power market uncertainty
- Need for long-term human resources development
- Significant amount of finance and long development/construction periods
- Nuclear liability

Reputational risk – primarily driven by:

- Social perceptions associated with nuclear
- Political risk and public acceptance issues
- Post-Fukushima environment and nuclear safety concerns
- Nuclear non-proliferation
- Radioactive waste management/disposal **AND**
- Historical/current experience of project delay and cost overruns

Nuclear Finance in 2016



What Should be (but not always is) the Easy Part: De-risking Your Projects

Safety

Demonstrable safety culture – in absence, regulators will delay projects

Design

Complete detailed design, recently constructed reference plant using proven supply chain and construction team

Vendor management

Integrated project delivery team with key personnel experience in building nuclear power projects and experienced sub-contractor networks

Owner management

Owner experience in managing large construction projects

Project management

Sound project management is best way to minimize risk. Vendor implemented with “hands off leadership by owner” (as stated by one of the most experienced project managers I know)

Owner-vendor partnership and teamwork

A good contract should be your guide, not a manual for filing claims

What Should be (but not always is) the Easy Part: De-risking Your Projects (continued)

Regulatory process and interface

Clear and established interface mechanisms with the regulator; capacity and capability of regulator; cooperation between regulatory authorities; country of origin licensing

Host government and export government supporting structures

Bilateral nuclear cooperation on export controls, nuclear liability, industry participation and human resource development

Human resource development

Long-lead item

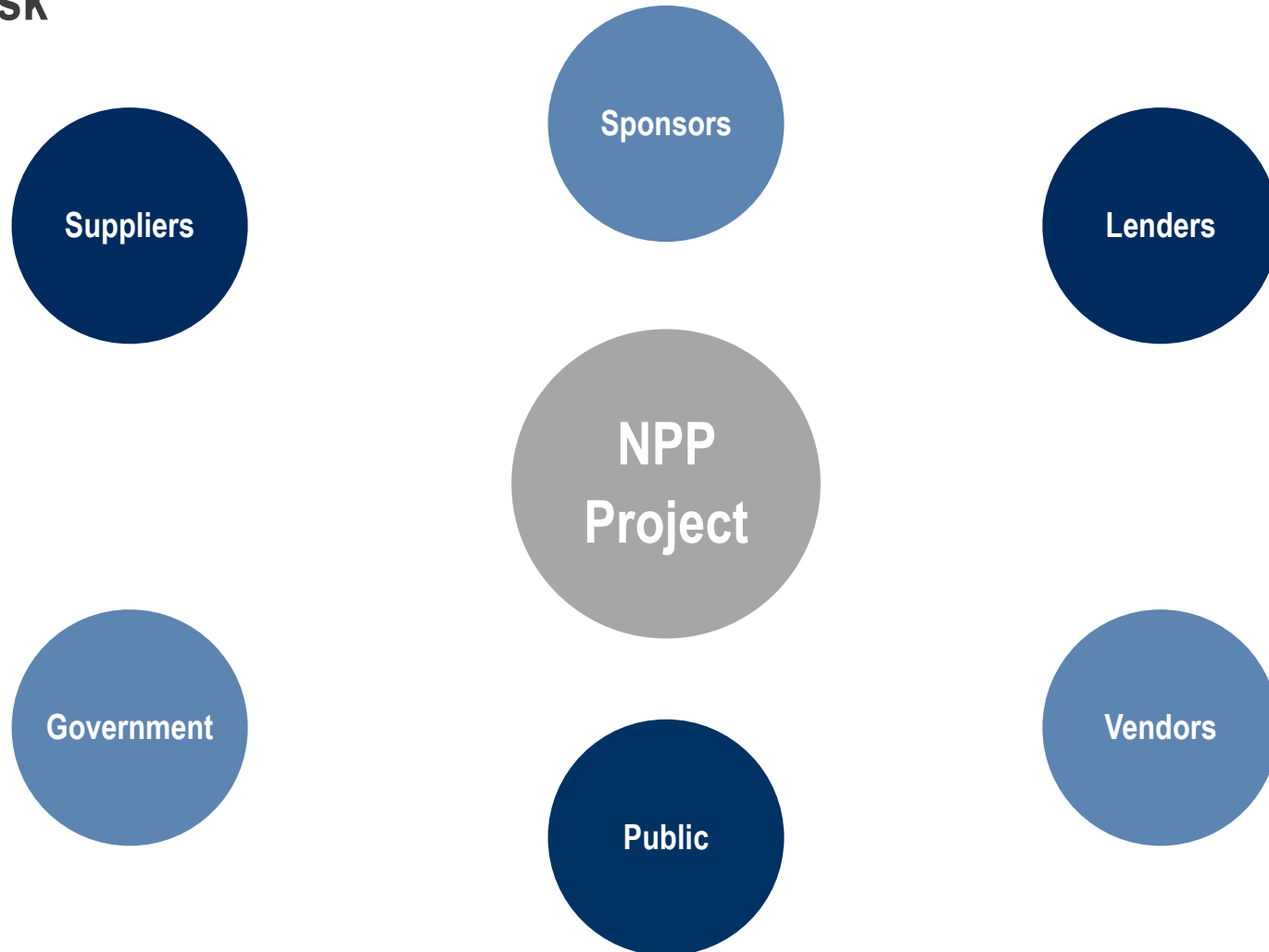
Bringing in Other Investors

- **Engage with investors at the early stage of project development**

- **Understand and explain risks**
 - Demystify
 - Speak in plain terms
 - Apply practical perspective on likelihood and potential impact

- **Developing solutions**
 - “Lessons learned”
 - Explain what you will do differently to avoid past challenges
 - Detailed risk identification/allocation/mitigation

View of Risk



Shearman & Sterling has a full-scope Global Nuclear Group. Working with the firm's world-leading Project Development & Finance Group, with experience under English and US law, we focus on procurement, construction and financing for nuclear new build, and offer nuclear industry advice on international nuclear law, nuclear liability and nuclear trade issues.

We advise on first-of-a-kind projects and transactions and have devised practical, bankable and deal-making solutions. Our Global Nuclear Group is headed by partner George Borovas, who has 20 years of experience advising the nuclear industry and is based in Tokyo.

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