

Managing Licensing Risk in New Build Construction Contracts for Emerging Markets

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About Pillsbury



- International 700+ attorney firm
 - Offices in strategic financial and government centers – New York, Washington DC, London, Abu Dhabi, Beijing, Tokyo
- The oldest and largest, dedicated international nuclear group in the world – over 20 dedicated nuclear lawyers including:
 - Nuclear, chemical, mechanical, and electrical engineers
 - Former nuclear navy
 - Former nuclear industry
 - Former nuclear regulators
 - Partners with 30 years of nuclear experience
 - Specialists in all aspects of the nuclear industry
- Plus 40+ lawyers in our other practices, such as financing, who are nuclear trained

The Global Reach of Pillsbury's Nuclear Practice

Canada

- Advise a Canadian entity regarding privatization of nuclear power plants
- Advise a Canadian utility with respect to transactions with equipment suppliers

United States

- Responsible for the initial licensing of 50+ nuclear power plants and 33 license renewals
- Represented either buyer or seller in transactions for full or partial ownership in 14 nuclear plants
- Represent 50 percent of new nuclear plant licensing proceedings today
- Played a leading role in helping the U.S. nuclear industry establish a nuclear waste management program and is now at the forefront of efforts to enforce U.S. DOE's compliance with the Nuclear Waste Policy Act
- Regularly counsel clients on compliance with U.S. export controls on nuclear-sensitive scientific and technical equipment, materials and technology

Brazil

- Represent a Brazilian public utility in an international arbitration proceeding involving the steam generators and electric generator of a nuclear plant

Argentina

- Advise nuclear equipment manufacturers with respect to nuclear liability protections and contractual indemnities in Argentina

European Union

- Advise several European utilities regarding nuclear plant transactions, contracting and regulatory issues

United Kingdom

- Advise an international investor on the regulatory regime of the United Kingdom, including a detailed review of the process for obtaining a Generic Design Certification and a Nuclear Site License for the construction of new nuclear power plants in the UK
- Advise an international reactor vendor on the nuclear licensing process of the United Kingdom's Office for Nuclear Regulation and compliance with European Union reactor design and safety standards
- Advise UK investment banks and trading companies on uranium trading transactions and nuclear liability issues

Germany

- Represent a nuclear power plant operator in a dispute over uranium before the courts of first, second and third instance in Germany

Russia

- Advise a Russian reactor vendor with respect to legal and regulatory considerations in commercializing the vendor's reactor outside of Russia
- Represent a nuclear fuel venture in the first sole-source purchase of Russian-enriched uranium
- Advise a Russian nuclear fuel and nuclear fuel cycle technology company in the expansion of its activities in the U.S.
- Advise a leading Russian nuclear research and development institution with respect to research and development agreements

Kazakhstan

- Represent a nuclear holding company in Kazakhstan in expansion of its activities in the U.S.
- Represent nuclear fuel traders with respect to uranium transactions in Kazakhstan

Turkey

- Advise on all phases of structuring the 4,800 MW Akkuyu Nuclear Power Plant project in Turkey.

Saudi Arabia

- Advise an NEPIO with respect to the development of the Saudi Arabian civilian nuclear power program

South Africa

- Represent a South African nuclear technology company with respect to the commercialization of its technology
- Represent a nuclear fuel venture in obtaining fuel for the first South African nuclear plant

United Arab Emirates

- Advise government with respect to the development of the UAE civilian nuclear power program
- Represented ENEC in EPC Contract negotiations with KEPCO.

Japan

- Advise major sogo shosha (Japanese trading companies) with respect to transactions involving the purchase, sale and transportation of nuclear fuel products
- Advise a major Japanese reactor vendor with respect to reactor licensing and nuclear trade matters
- Advise a Japanese utility with respect to research and development agreements
- Represent a Japanese reactor vendor and nuclear fuel manufacturer in a fuel fabrication joint venture
- Advise Japanese investors with respect to risk assessments of investing in nuclear power facilities
- Advise Japanese stakeholders with respect to the U.S.-Japan 123 Agreement

Republic of Korea

- Advise the Government of the Republic of Korea with respect to the negotiation of a 123 Agreement with the U.S.

Southeast Asia

- Develop for the government-owned utility of a Southeast Asian country a legal and regulatory roadmap for the development of nuclear power

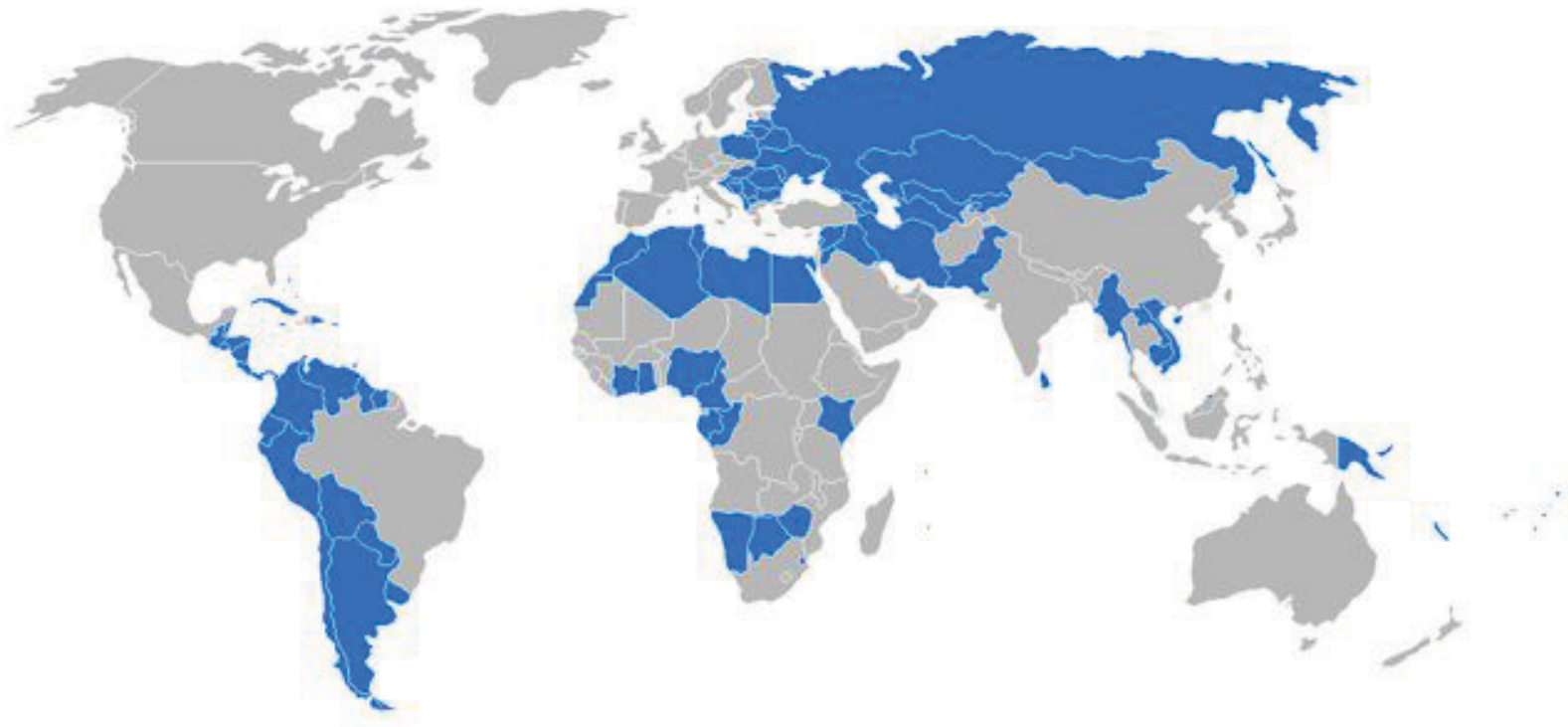
Philippines

- Represent the Republic of the Philippines in major litigation and arbitration proceedings against a U.S. supplier regarding deficiencies in design and construction of a nuclear power plant

Australia

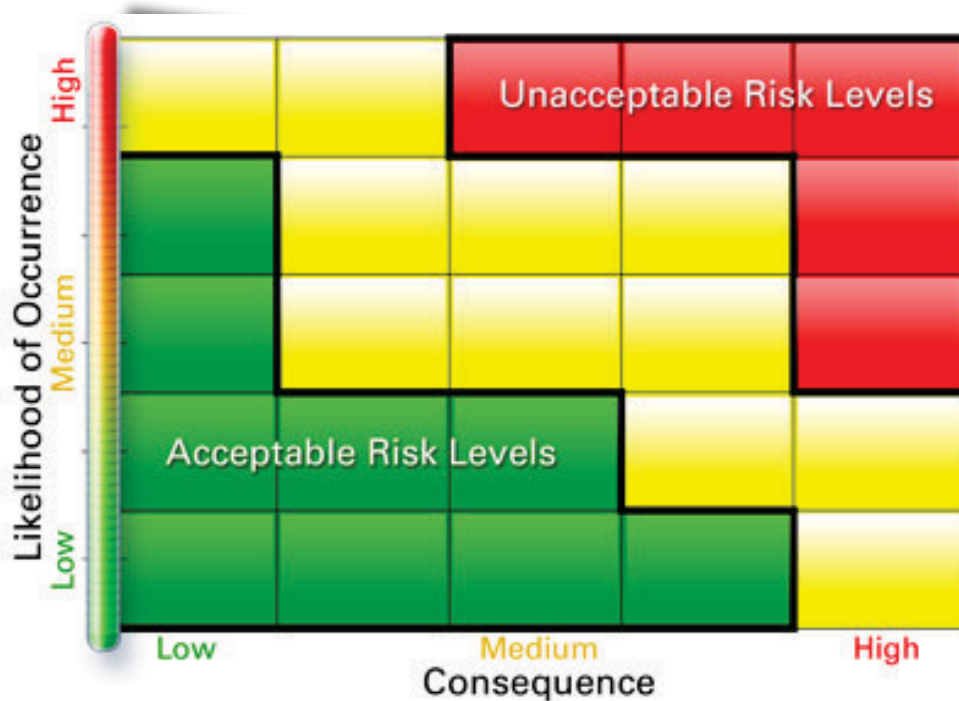
- Represent the Australian Nuclear Science and Technology Organisation with respect to the international packaging and transportation of spent nuclear fuel

Licensing Challenges In Emerging Markets





Risk is the product of **Likelihood of Occurrence** and **Consequence**.



Key Concept -

Lowering the risk of an event means:

- (1) reducing the probability of occurrence;
- (2) reducing the consequences of occurrence;
- or
- (3) reducing both.

Licensing Risk – some examples



- Delay or failure to issue a needed permit or license by the regulator;
- A change in law that increases the burden on the Contractor beyond what was originally anticipated;
- A change in the interpretation of an existing law that increases the burden on the Contractor;
- Voluntary changes in licensing approach by either party;
- Incorrect assumptions (e.g. subsurface conditions, cooling water temperature, etc.);
- Demands from a regulator that are perceived to be unreasonable;
- Requests by the regulator for supporting documentation and analyses beyond that anticipated by the Parties.

The EPC Contract



- An EPC contract represents the common understanding of the Parties' rights and obligations with respect to a Project. The ideal EPC contract would perfectly describe each of the Parties' rights and obligations with respect to the other Party.
- When things don't go exactly as planned, and a risk becomes an issue (i.e. the risk is realized), then the EPC contract should clearly address which party bears the consequences.
- In the absence of clear guidance in the EPC contract regarding which party bears the consequences, each Party will spend time and money in an effort to resolve the matter in a way that is most favourable to itself. This is inefficient.

**Everyone loses if
an issue goes to
dispute resolution
or to the courts!!**

Emerging Markets



- In mature regulatory environments, the law is generally well-settled and outcomes are relatively predictable.
 - A well-drafted EPC contract will explicitly define the applicable law as of the effective date, and any changes will be measured against that baseline standard.
 - The parties can allocate Risk in the terms of the EPC contract as measured against the agreed baseline.
- In emerging markets, the regulatory structure itself may be incomplete, or may be being developed in parallel with the Project.

Key Concept: It is critical that the EPC Contract provides a clear allocation of licensing risk between the Parties.

Addressing Risk at Contract Formation

- Risks are monetized by a Fixed-Price EPC contract
 - If the Contractor is asked to shoulder all risks in a fixed-price contract, then the Contractor will build the cost of those risks into the fixed price. Risk that can't be quantified will likely be over-priced.
 - If the Customer is asked to shoulder all the risks, the benefits of a fixed price are lost.
 - Risks that can't be reasonably quantified by the Contractor should not be included in the fixed price fee but should rather be included as fixed rate or cost reimbursable.

Key concept: The Party who has control over the risk should bear responsibility for that risk.



Addressing Risk at Contract Formation



An experienced EPC Contractor exporting to an emerging market will know what certain items will cost to a good degree of certainty:

- Supply of NSSS
- Supply of BOP equipment
- Domestic design and engineering
- Domestic skilled labour costs
- That same EPC Contractor probably won't have good information regarding:
 - Local Labour costs and productivity
 - Regulatory requirements
 - Leasing local equipment
 - etc.

Balanced Allocation of Risk: Contract Formation



Risks Quantifiable by Contractor at Contract Execution (Fixed Fee)	Local Risks Not Quantifiable by Contractor at Contract Execution (Fixed Rate)	Risks due to market forces (Cost Reimbursable)
Design and Engineering	Civil works	Enriched uranium purchase
Fabrication of Components in Home Market	Dredging	Water
Procurement of equipment	Local trash disposal	Fuel (diesel, petrol)
Baseline licensing	Housing of workers	Electricity
Fuel fabrication	Local regulatory requirements in excess of baseline	
Computer systems, software	Subsurface conditions	

Decreasing Control by Contractor

Addressing Risk at Contract Formation



CHANGES

- All EPC Contracts include provisions for changes
- Changes are inevitable, but can lead to disputes
- Changes settled by dispute resolution waste valuable time and money
- It is critical that the EPC contract clearly and unambiguously address changes.

Balanced Allocation of Risk: Contract Changes



Bucket One: Contractor Pays	Bucket Two: Customer Pays	Bucket Three: Contractor pays for Design, Customer pays for implementation.
Delay in delivery of components	Customer-initiated changes	Changes that will be used in future applications by Contractor.
Defective materials or workmanship	Changes in law of host country above agreed baseline	Improvements requested by customer that will have general application to the fleet
Changes in law in Supplier home country	Changes cause by subsurface conditions	
Supply chain interruptions	Changes caused by owner action or inaction	
Design deficiencies		
Failure to meet agreed-upon standards		

The Party who has **control** over the risk of a change occurring should bear responsibility for that change.



Thank you for your kind attention.



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Vincent Zabielski is a senior lawyer in the law firm's Nuclear Energy practice and is located in the London office. He focuses on international nuclear energy matters, including matters related to nuclear new-build EPC contracts, operation and maintenance agreements for nuclear power plants, nuclear fuel supply chain, nuclear liability issues, and export controls.



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