

HYDRO ASIA 2016

TRAINING COURSE ON CONTRACTS MANAGEMENT AND THE PRACTICAL USE OF FIDIC CONDITIONS OF CONTRACT IN THE HYDROPOWER INDUSTRY

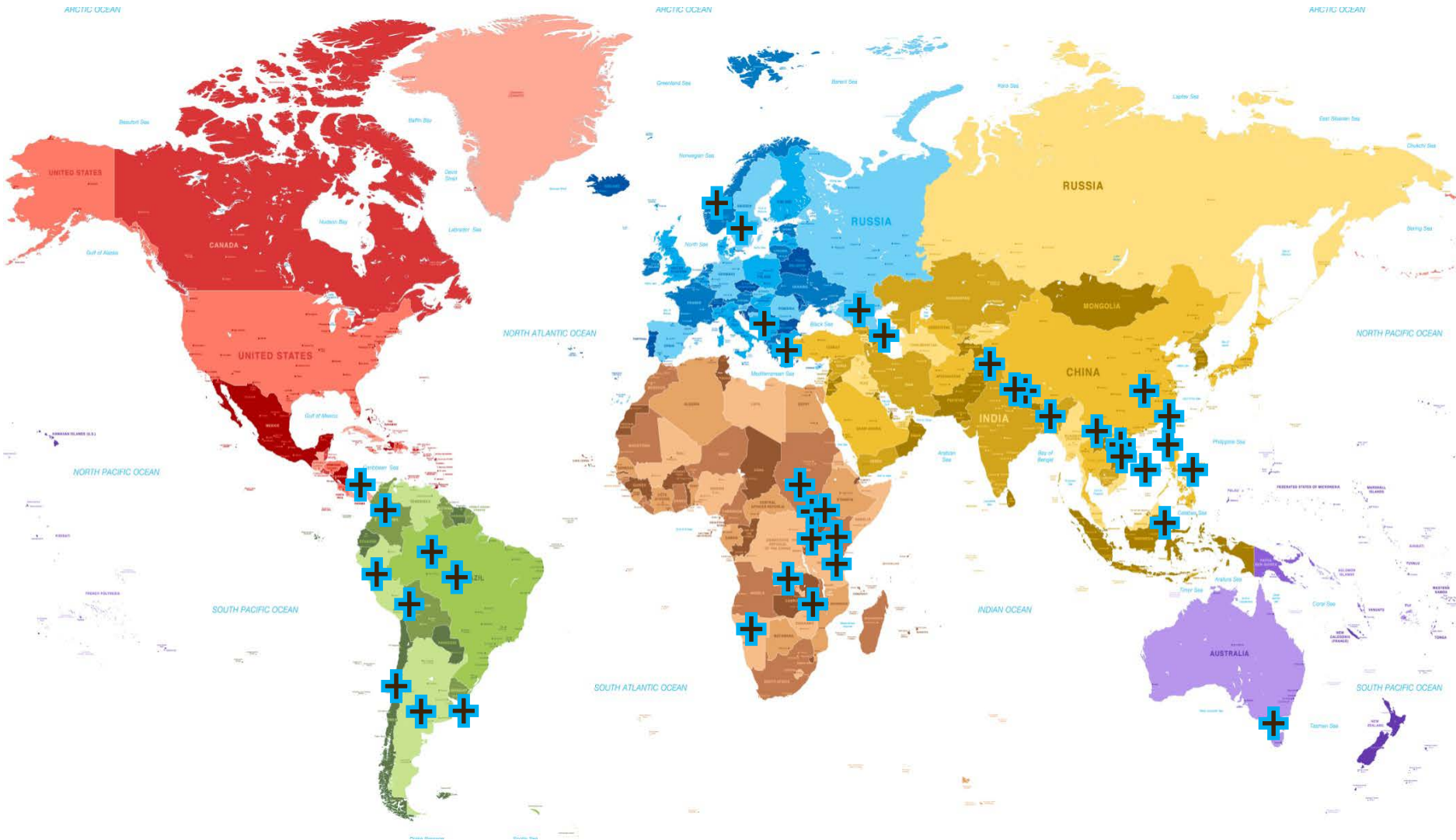


ADOPTING FIDIC CONDITIONS FOR HYDROPOWER CONSTRUCTION - TOP TEN ISSUES

by

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KING & SPALDING POWER PRACTICE EXPERIENCE WITH MAJOR HYDROPOWER PROJECTS



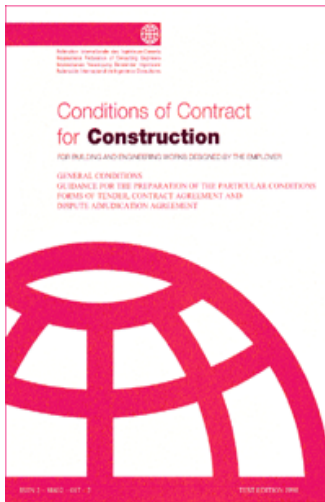
DISCUSSION POINTS

1. Why use FIDIC Contracts?
2. Quick Overview
3. Top 10 Issues

WHY USE FIDIC?

- ✓ Saves time and minimises transaction costs
- ✓ Internationally recognised
- ✓ Familiar risk allocation
- ✓ Tried and tested (though not perfect)

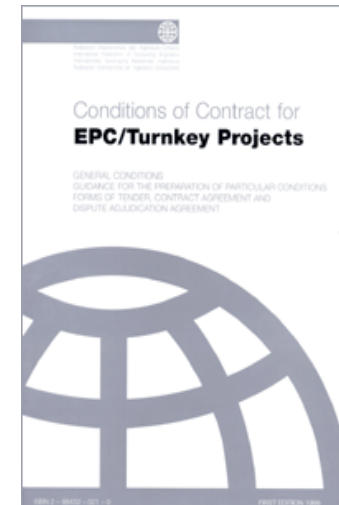
QUICK OVERVIEW



- ✓ Civil Works Packages
- ✓ Contractor-friendly, without modification
- ✓ Unit Price based on Bill of Quantities
- ✓ Employer takes design and unforeseen site condition risk



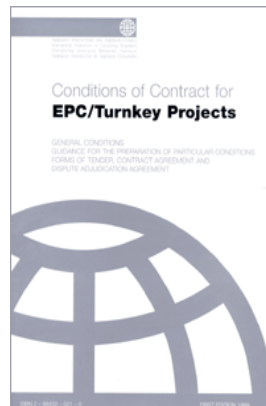
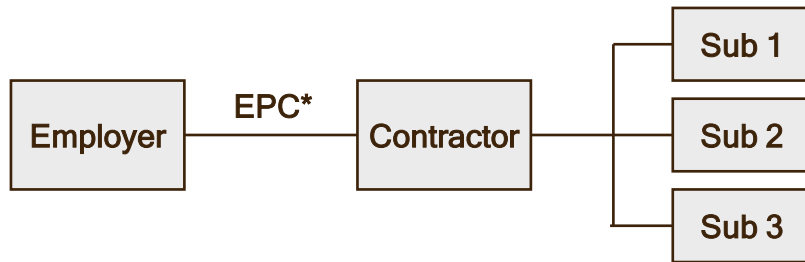
- ✓ Electro-Mechanical/ Transmission and Hydraulic Steel packages
- ✓ Balanced risk-allocation, without modification
- ✓ Lump Sum Price
- ✓ Employer takes unforeseen site conditions risk



- ✓ Full EPC wrap of all construction packages
- ✓ Employer-friendly, without modification
- ✓ Lump Sum Price
- ✓ Contractor takes design and unforeseen site condition risk

ISSUE 1 - CONSTRUCTION TENDERING STRATEGY

EPC MODEL



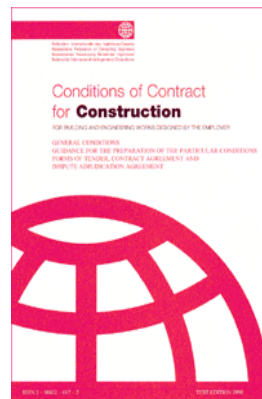
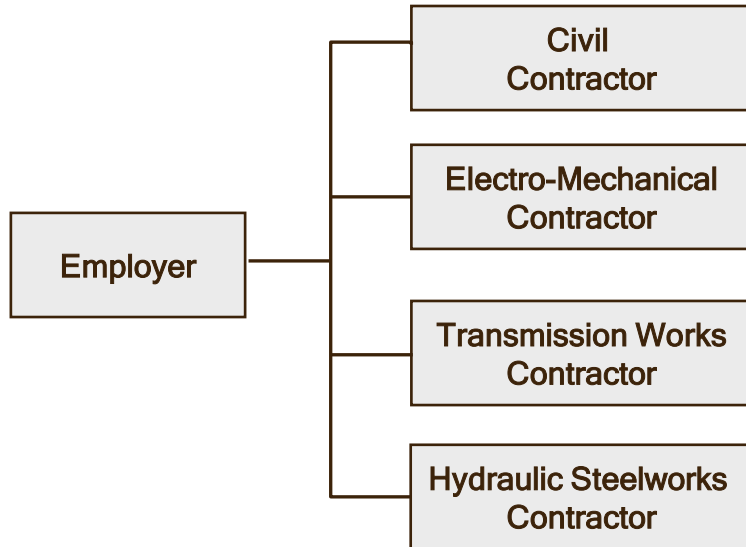
MAIN ADVANTAGES:

- ✓ Single point of responsibility
- ✓ Maximum allocation of construction risk to contractor
- ✓ Full wrap guarantee on all aspects of facilities
- ✓ Maximum budget control
- ✓ Comparatively low transaction costs
- ✓ Minimum Employer oversight

MAIN DISADVANTAGES:

- ✓ Expensive risk premium
- ✓ Limited Employer involvement in design phase and construction process

SPLIT CONTRACT MODEL



MAIN ADVANTAGES:

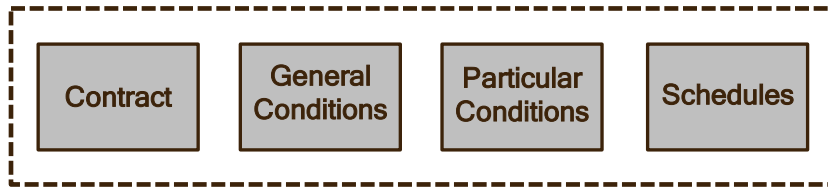
- ✓ Less expensive than EPC
- ✓ Employer involvement in design phase and construction process

MAIN DISADVANTAGES:

- ✓ Interface risk
- ✓ Coordination risk
- ✓ Low liability caps
- ✓ Less budget control
- ✓ High transaction costs
- ✓ Non-uniform contract conditions
- ✓ Greater need for Employer oversight
- ✓ Increase likelihood of warranty period disputes
- ✓ Possibility of parallel litigation risk

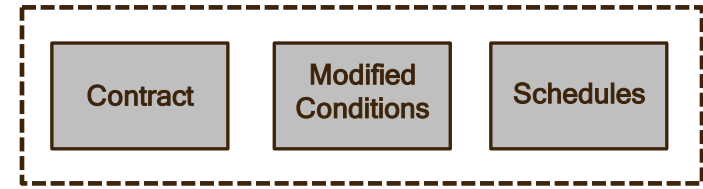
ISSUE 2 - FIDIC STRUCTURE

STANDARD FIDIC



- ✓ Major amendments required for HPPs
- ✓ four volumes
- ✓ highly complex
- ✓ contract-administration unfriendly
- ✓ higher risk of error / litigation
- ✓ FIDIC copyright of General Conditions prohibits modification

RECOMMENDATION MODIFIED FIDIC



- ✓ with FIDIC licence, consolidation of General & Particular Conditions possible
- ✓ three volumes
- ✓ less complexity
- ✓ less risk of error / litigation
- ✓ blackline attachment showing changes from standard FIDIC

ISSUE 3 - UNFORESEEN SITE CONDITIONS

RED & YELLOW BOOKS

Contractor may claim time and cost for unforeseeable site conditions under Red & Yellow Books

SILVER BOOK

The Contractor *"accepts total responsibility for having foreseen all difficulties and costs of successfully completing the Works."*

RECOMMENDATION:

GEOTECHNICAL BASELINE REPORT

Include in Civil Works Contract, especially where construction package involves tunnelling

GEOTECHNICAL SITE INVESTIGATION

Conduct substantial site investigation prior to construction tendering

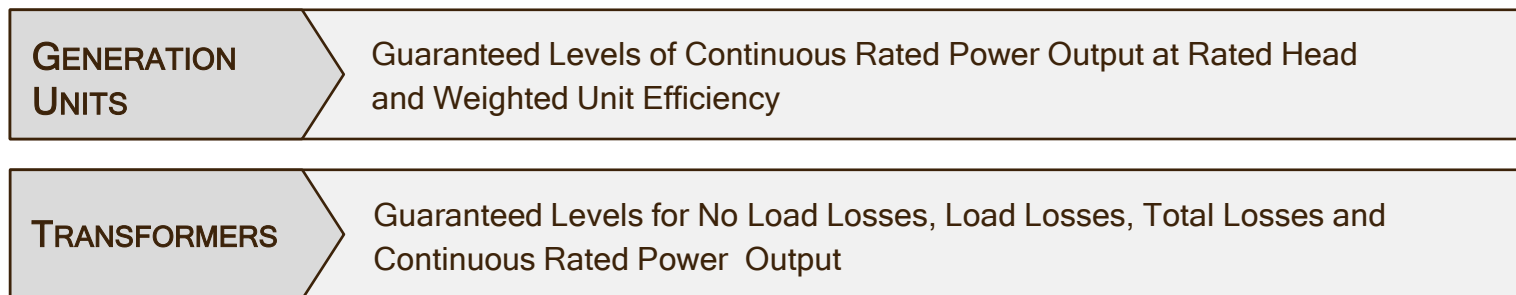
CLAIM METHODOLOGY

Develop specific methodology to grant Variations for unforeseen site conditions

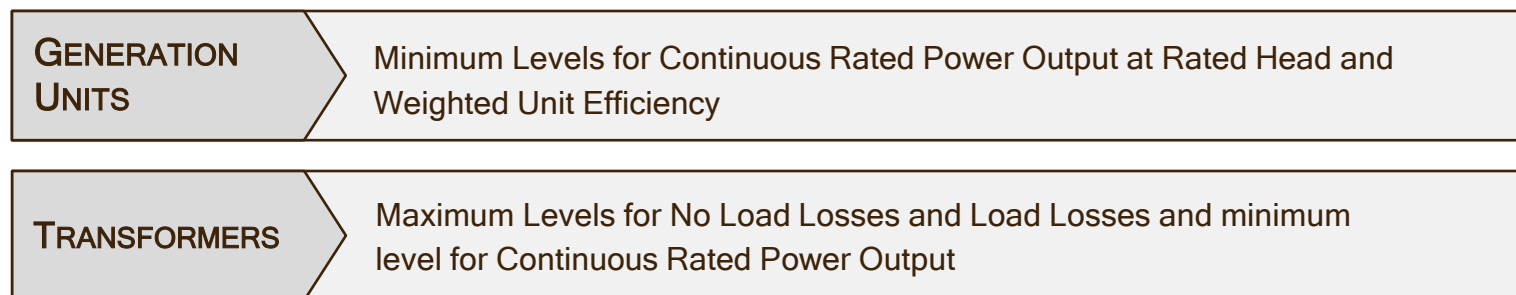
ISSUE 4 - GENERATION UNIT PERFORMANCE

RECOMMENDATIONS:

1. Establish Guaranteed Performance Requirements

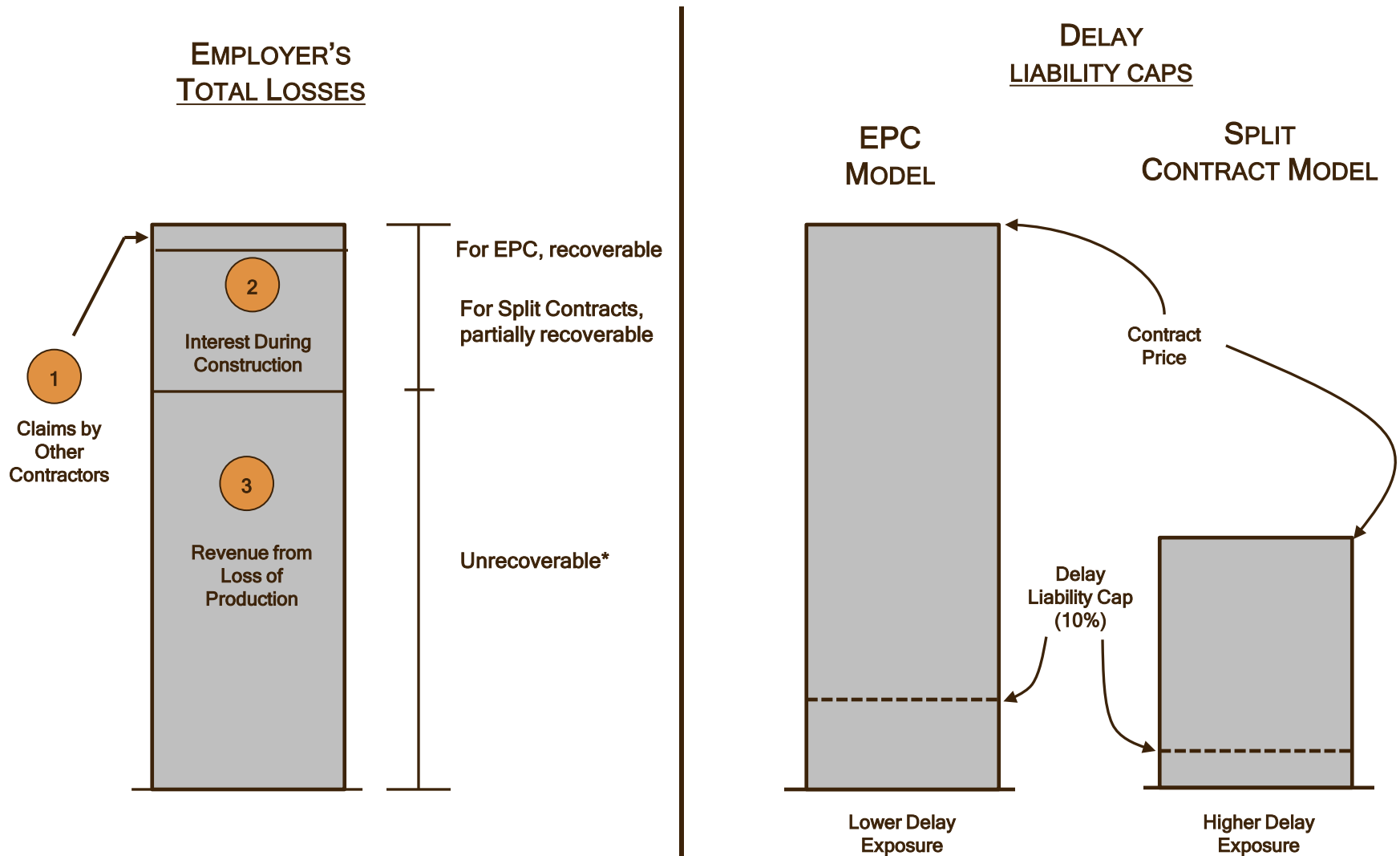


2. Establish Rejection Levels



3. Establish "Buy - Down" Liquidated Damages for Performance Shortfalls

ISSUE 5 - CONSTRUCTION DELAYS



* Big incentive for Employer to fund acceleration of Works by Contractors

ISSUE 6 - HSES REQUIREMENTS

RECOMMENDATION:

Obligate each Contractor / Sub-Contractor to comply with the following international standards:

1. IFC Performance Standards:
 - Social and Environmental Sustainability
 - Labor and Working Conditions
 - Pollution Prevention and Abatement
 - Community Health, Safety and Security
 - Indigenous People
 - Cultural Heritage

2. IFC/World Bank Group Environmental, Health and Safety Guidelines

ISSUE 7 - PERFORMANCE TESTS

RECOMMENDATION:

FACTORY TESTS

Inspection by Employer and/or Engineer of factory tests of all turbines, generators and transformers

TESTS ON COMPLETION

Extensive testing and commissioning program that accounts for Grid Code and requirements of project agreements (e.g. PPA and Connection Agreement) if any

TESTS AFTER COMPLETION

Incorporation of dewatering test for all tunnel facilities within defects notification period

ISSUE 8 - ANTI-CORRUPTION MATTERS

STANDARD FIDIC

Contractor complies with applicable laws of host country that relate to corruption

RECOMMENDATIONS:

INTERNATIONAL STANDARDS

- IFC Anti-Corruption Guidelines
- OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions

REPRESENTATION

Contractor makes anti-corruption representation as of date of contract

DECLARATION OF UNDERSTANDING

Contractor's site manager (i) declares knowledge of criminal penalties for corrupt actions, and (ii) undertakes to notify Employer of any corrupt actions

ISSUE 9 - PERFORMANCE SECURITY

STANDARD FIDIC

- Performance Security
- Retention Money
- Advance Payment Guarantee (APG)

RECOMMENDATIONS:

RETENTION MONEY

- Adversely affects liquidity of Contractor and incentivises Contractor to front load payment schedule
- Do not use

PERFORMANCE SECURITY / APG

- Replace standard forms with forms for on-first Demand Bank Guarantees.
- Require issuing banks to satisfy minimum credit rating tests throughout contract life

ADDITIONAL SECURITY

- Guarantee from Parent Company with balance sheet that stands behind maximum termination payment
- Collateral Warranty Agreements

ISSUE 10 - DISPUTE RESOLUTION

STANDARD FIDIC

- Non-binding Dispute Adjudication Board (DAB)
- Binding Arbitration

RECOMMENDATIONS:

DAB

- Very expensive
- Only use for very large projects
- Works less well for split-contract mode

ARBITRATION

- Use common governing law and arbitration clauses in all contracts
- Use joinder clauses to avoid parallel litigation risk
- Try to match governing law and arbitration venue

**Thank you for your
attention!**