

Achieving Financial Close on Time and Budget

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Scot Peachey
Senior Vice President
Head of Construction Marsh Global Power Practice

Managing Independent Power Producers/Plants Agenda

- Introduction to Independent Power Producers/Plants (IPPs).
- Timetable Management:
 - What makes an IPP different.
 - Managing the timetable.
- Managing contractual obligations:
 - Contractors
 - Lenders
- Setting and achieving your budget.
- Reaching Financial Close:
 - Where can it go wrong.
 - Making sure it happens.

Managing IPPs

Introduction

An **Independent Power Producer** is an entity which is not a public utility company, but which owns facilities to generate electric power for sale to end users.

- **Generally:**
 - Special Purpose Companies with a single asset.
 - Subject to Limited or non-recourse finance.
 - Financial Model dependent on a Power Purchase Agreement (PPA)
 - Sponsors are often large utility companies.
- **Multiple stakeholders:**
 - Owner/Sponsors.
 - Off takers (buyers of electricity).
 - Lenders.
 - Contractors.
 - Manufacturers/suppliers.
 - Governments (financial guarantees)

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Managing the Timeline

- Appointment six to nine months in advance of Financial Close
- Why:
 - Review off taker bid documents.
 - Engineering Procurement Contract (EPC) tenders.
 - Technology choice and insurability benchmarking.
 - Setting budgets.
 - Engaging with lenders.
 - Designing the programme
 - Marketing
 - Binding
 - Closing
- Financial Close delays of three to six months are typical.

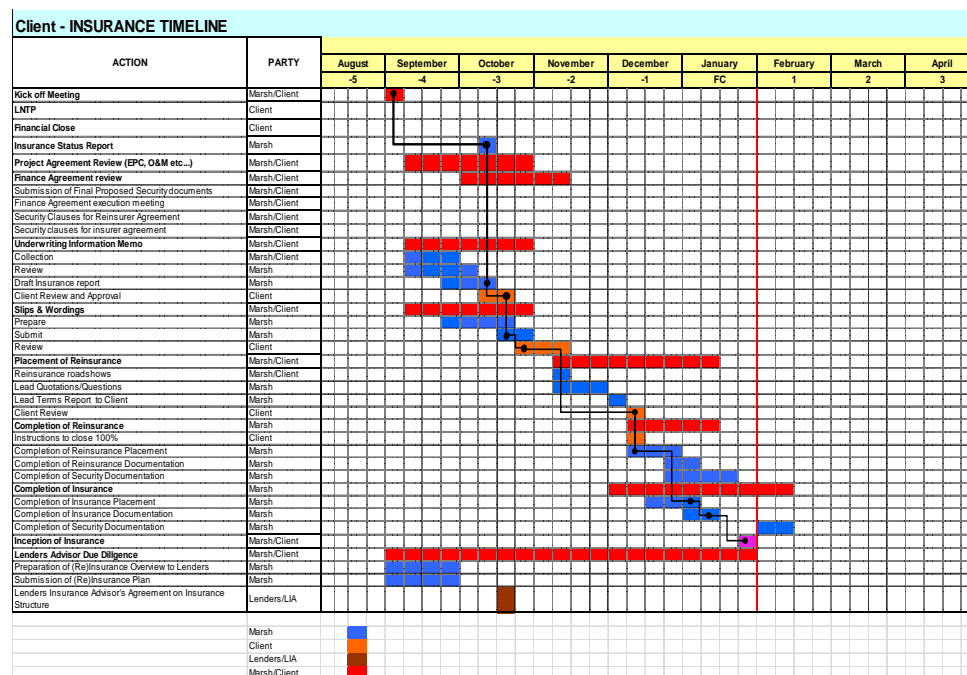
Managing IPPs

Managing the Timeline

- Workflow milestones are not exclusive:

- Intertwined.
- Insurance critical path.
- Dependent on interaction:

- Legal (Lender)
- Financial (Lender)
- Technical (Lender)
- Insurance (Lender)
- Insurance (Contractors)
- Insurance (Suppliers)
- Insurance (Offtakers)



- Insurance is not always high on anyone's priority list until it delays financial close!

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Managing the Timeline

- There is no perfect order (the project/client will dictate):
 - Support EPC tenders.
 - Define scope of the insurance programme.
 - Set the budget.
 - Review/finalise contracts:
 - Power Purchase Agreement (PPA).
 - Long term service agreement (LTSA).
 - Operations and maintenance (O&M).
 - Fuel Supply Agreement (FSA).
 - Construction Contract (EPC).
 - Common Terms Agreement (CTA/loan agreement).
 - Need to recognise consistency in scope and responsibility.
 - Need to manage the **Contractual Risk Matrix**.



Managing Contractual Obligations EPC

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EPC Contract Negotiation

- Significant risk sharing during construction.
- EPC has risk of loss (Incl. uninsured events and deductibles).
- Responsibility to deliver on time, to plan and specification.
- Key negotiations:
 - Deductible retention.
 - Scope of defects cover - Workmanship/Materials/Design.
 - Direct receipt of claims proceeds.
 - Control of claims negotiations.
 - Indemnities & Limitations of liability (pre and post handover).
 - Avoidance of warranty/vitiation provisions.
 - Full cover for manufacturers. Sometimes the “devil is in the detail” – for example: definition of EPC.

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EPC Contract Negotiation – Key Drivers

- Who is your contracting party?

Alstom	Posco	Dongfang
Siemens	Samsung	Shanghai Electric
MHI	Hyundai	Synohydro
General Electric	Daewoo	China Harbour

- Each EPC will have its own insurance philosophies
- Contractor/Supplier EPC's are robust negotiations
- Aim to actively transfer risk through the owners insurance programme
- Some passive negotiations accepting standard wordings, high deductibles and inadequate cover (but not in anyone's interest)

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EPC Contract Negotiation – Key Drivers Technology

- What is the technology?
 - Combined Cycle Gas Turbine (CCGT).
 - Coal boilers:
 - Sub critical.
 - Super critical.
 - Ultra super critical (T24).
 - Hydroelectric:
 - Extent of civil & tunnel works?
 - Nuclear:
 - Legislation & Limits.
 - Insurability:
Proven/Unproven/Prototype
- CCGT:
 - Siemens 501 FD2
 - Siemens SGT6 5000F3
 - Siemens SGT6 5000F 4
Siemens SGT6 5000F 5
 - Siemens SGT6 5000F 5 ee

 - GE 9FB 03 now GE 9FB05

 - GE 9FB 05 now GE 9HA
 - GE FlexEfficiency 50
 - Same machine.
- What deductible for each?

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EPC Contract Negotiation – Key Drivers Technology

Management of Unproven Technology:

- No accurate definition of Prototype.
- 8000 hours is out of date.
- All technologies are insurable:
 - Deductibles/Price/**Warranties**
 - Design cover:
 - LEG1 outright exclusion.
 - LEG2 covering consequential damage.
 - LEG3 covering consequential damage and the defective part.
- Will the risk sharing matrix be bankable?
- Will the manufacturer or EPC retain added risk under the EPC & LTSA?



Managing Contractual Obligations CTA (Loan Agreement)

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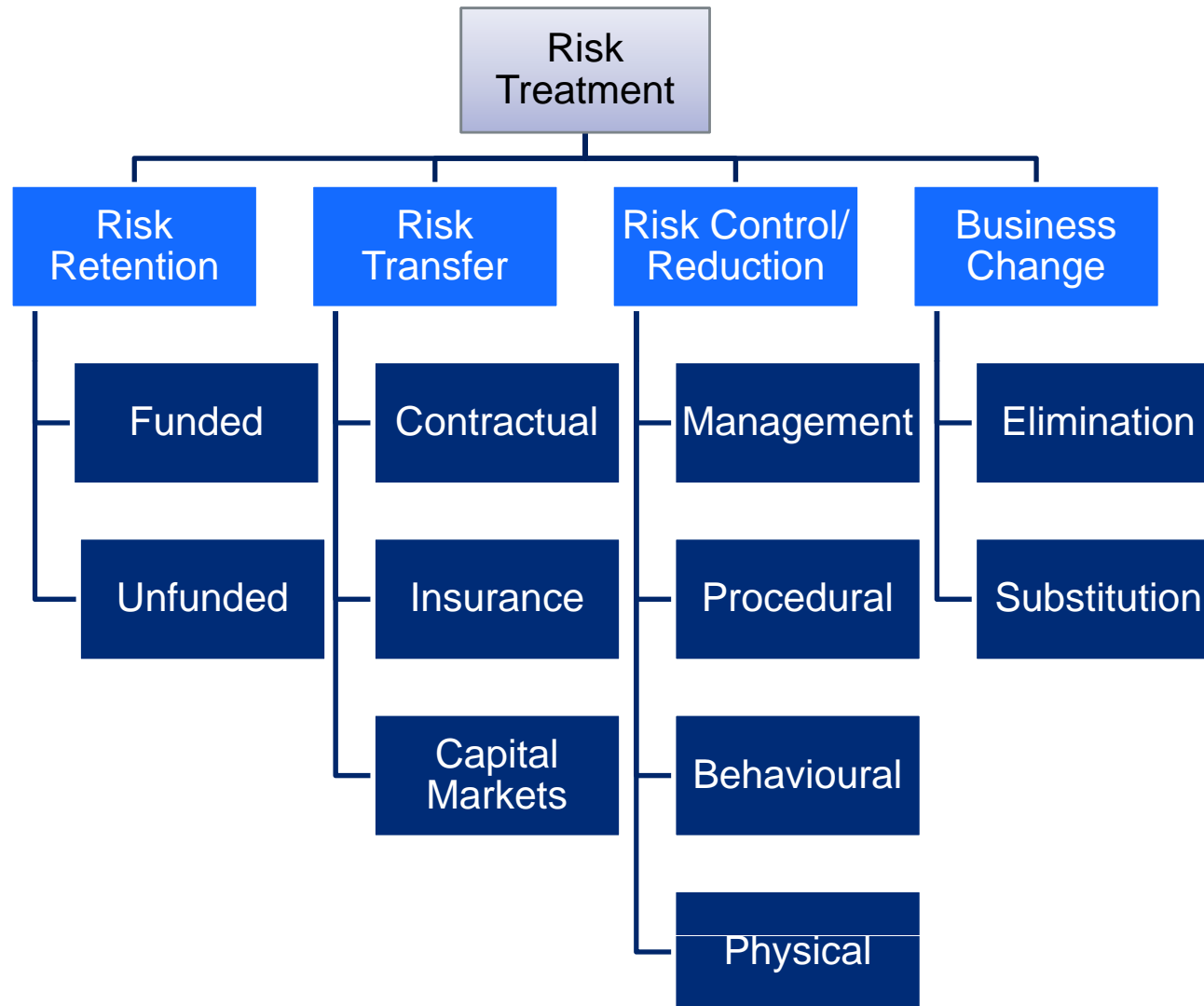
Finance Negotiation

Why is there so much concern?

- Lenders only security of repayment resides in the project and the project revenues.
- Any risk which devalues the assets or endangers project revenues reduces the lenders' chances of repayment.
- Insurance plays a major role in reducing (transferring) the project risks the lenders' security is therefore directly enhanced.
- Lenders require the insurance protection to be as wide as is reasonably available from the insurance market, and to include revenues as well as assets (**normally**).
- Lenders are naturally risk-averse.

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Finance Negotiation – Risk Mitigation



Managing IPPs Finance Negotiation

- Key drivers:
 - Who is your lender?
 - Where are they from?
- Three tiers of finance:
 - Typically domestic lenders in em
 - Chinese Development Bank (CDB), Brazilian National Bank (BNDS).
 - Credit export agencies - KEXIM, EXIM, JBIC.
 - Commercial banks - Society General, HSBC, Sumitomo.
 - Development finance institutions - IFC, EBRD.
- **Have they appointed an Independent Lenders Insurance adviser?**



Managing IPP's Insurance Advisor Roles (CIA and LIA)

Sponsors Insurance Advisor (SIA)

- Design, broke, place and manage the project insurances.
- SPV's interests/risk philosophy reflected.
- Duty of care and reliance to:
 - SPV equity holders.
 - SPV.
- Limit of liability for the benefit of equity holders/SPV and lenders
- Appointment for the Construction term (plus one year of operations is common)

Lenders' Insurance Advisor (LIA)

- Review, assess, comment upon and approve the insurances pursuant to:
 - Project risk review.
 - Contractual risk flow/allocation analysis.
- Only the lenders interests are reflected.
- Duty of care and reliance to:
 - Senior debt providers.
 - Export Credit Agencies (ECAs).
 - Bond underwriter/note holders.
- Limit of liability for the benefit of the lenders.
- Appointment for the term of the loan

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Finance Negotiation - LIA

- Critical negotiations.
 - Agree the lines of cover:
 - Construction all risks (CAR), Delay in Start up (DSU), Third Party Liability (TPL).
 - Environmental.
 - Professional Indemnity (PI).
 - Terrorism.
 - Marine cargo.
 - Set the minimum scope of cover:
 - Design/professional fees/expediting.
 - Deductibles.
 - Limits.
 - Agree the security and lender documentation.

Managing IPPs

Finance Negotiation - Security and Lender documents:

- Insurance brokers letter of undertaking (BLOU).
- Reinsurance brokers letter of undertaking (BLOU).
- Lenders' endorsements attaching:
 - Direct lenders' endorsements.
 - Reinsurance lenders' endorsements.

Assignments:

- Insurance notice of assignment.
- Insurer acknowledgment of assignment.
- Insurer assignment of reinsurance.
- Reinsurer notice of assignment.
- Reinsurer acknowledgement of assignment.

Managing IPPs

Finance Negotiation - Assignments

Assignments:

An insurance company assigns in favor of lenders all its rights, title and interests in the reinsurance policies including rights to all monies payable by reinsurers to insurers including all monies which may be payable in respect of the Reinsurance Policies.

- It's a separate legal document not an insurance policy document.
- It requires legal review by insurers and reinsurers.
- It creates the loss payee mechanism.
- It must be legal in the legislation in which it is being issued.
- If you don't want to delay Financial Close it must be drafted four weeks before Financial Close.
- As broker you need to ask who is issuing the assignments?

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Finance Negotiation – Lenders Endorsements

Non vitiation:

- To vitiate means to render invalid.
- The most likely vitiating party is the Contractor.
- Insurers have powerful vitiation rights arising in the event of:
 - Misrepresentation, non-disclosure of material information, fraud.
 - Breach of policy warranty or condition.
- Lenders seek endorsement wordings which remove or restrict insurers rights to vitiate cover:
 - Non vitiation clause.
- Lenders' interests remain paramount.
- Now accepted by most, and free of additional premium charge.

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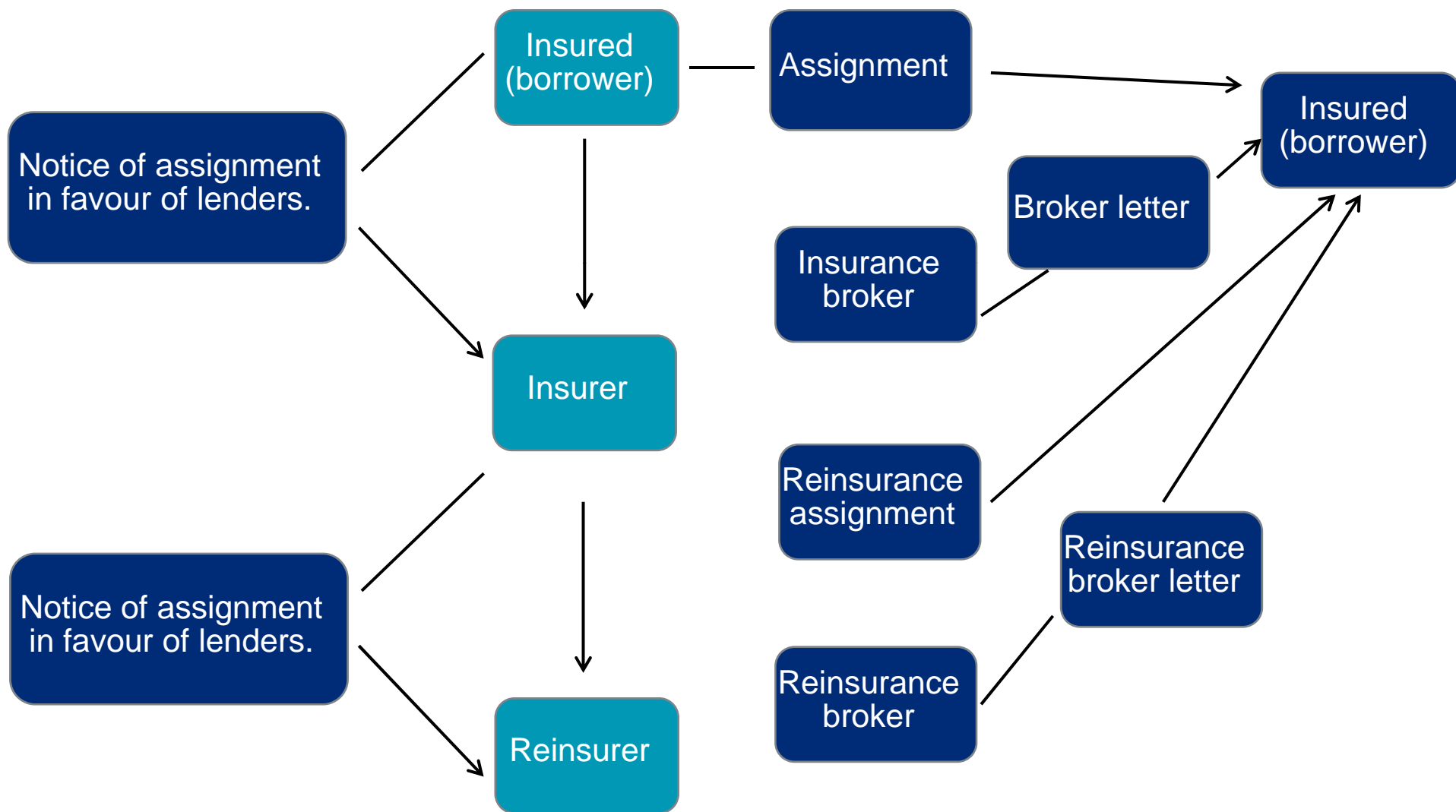
Finance Negotiation

Other standard provisions of lenders endorsements.

- Lenders named as Insured Parties.
- Notice provisions:
 - Before cancellation.
 - Before change of terms.
 - Downgrade of security.
- Major claims to be paid as instructed by lenders (loss payee provisions).
- Primary Insurance Clause.
- Full subrogation waiver for lenders.
- Minimum security requirements (S&P A-)
- Agreement to Assignment.

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Finance Negotiation in Practice



Setting Your Budget

The background of the slide is composed of three distinct horizontal bands. The top band is a dark, navy blue. The middle band is a medium teal color. The bottom band is a light, sky blue color. The boundaries between these bands are slightly wavy, creating a layered, abstract effect.

Managing IPPs Setting Your Budget

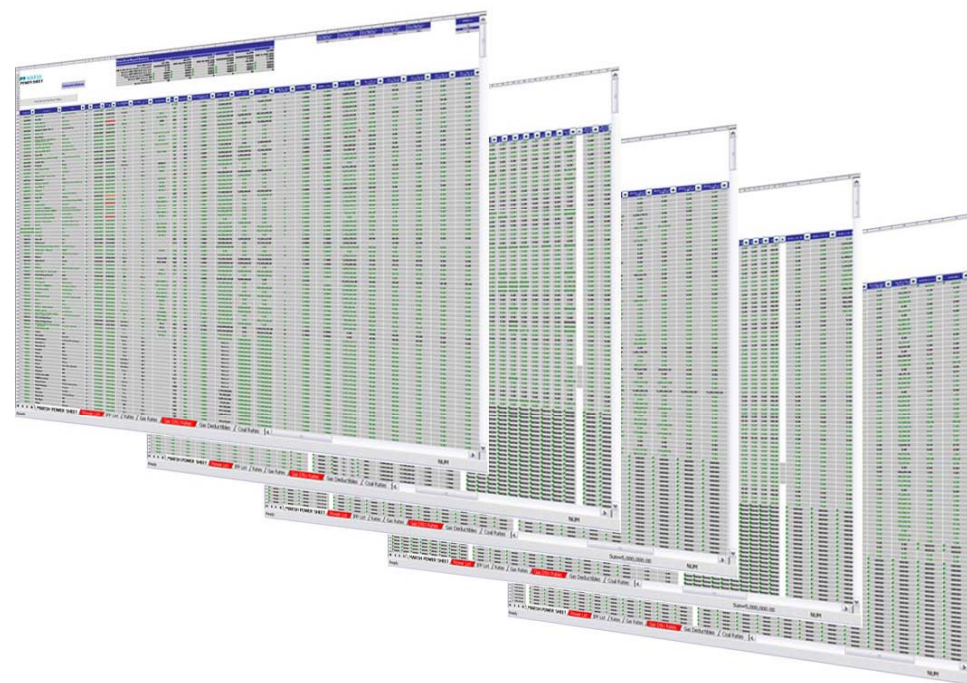
Informed decision, or guess work?

Utilising **90,000 mega watts** worth of data* within **130 projects** across **31 countries** in five years.

Evidence of “low balling” to secure order.

Evidence of “dumping down” cover to secure price.

Lack of information creates uncertainty.

The image shows a series of overlapping spreadsheets or data tables, presented in a 3D perspective view. Each spreadsheet is filled with columns and rows of data, with some cells highlighted in green and others in red. The spreadsheets are arranged in a receding line, creating a sense of depth and volume of data. The overall appearance is that of a complex data management system or a large-scale data analysis project.

*Data source - Marsh

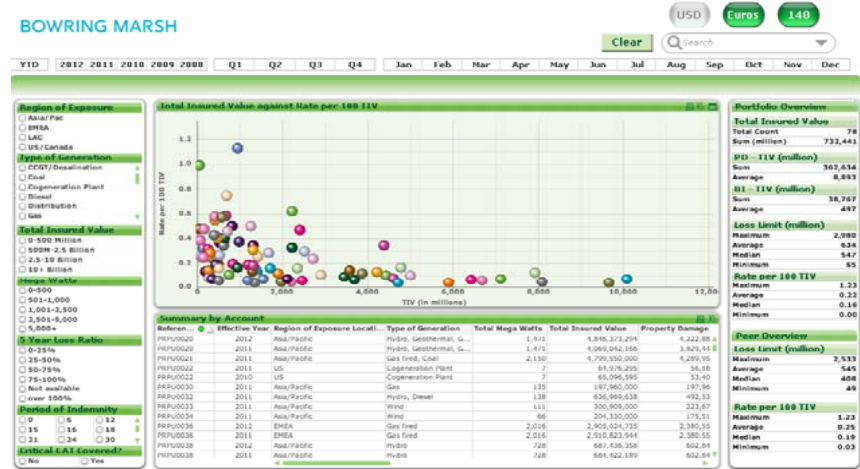
Managing IPPs

Setting Your Budget

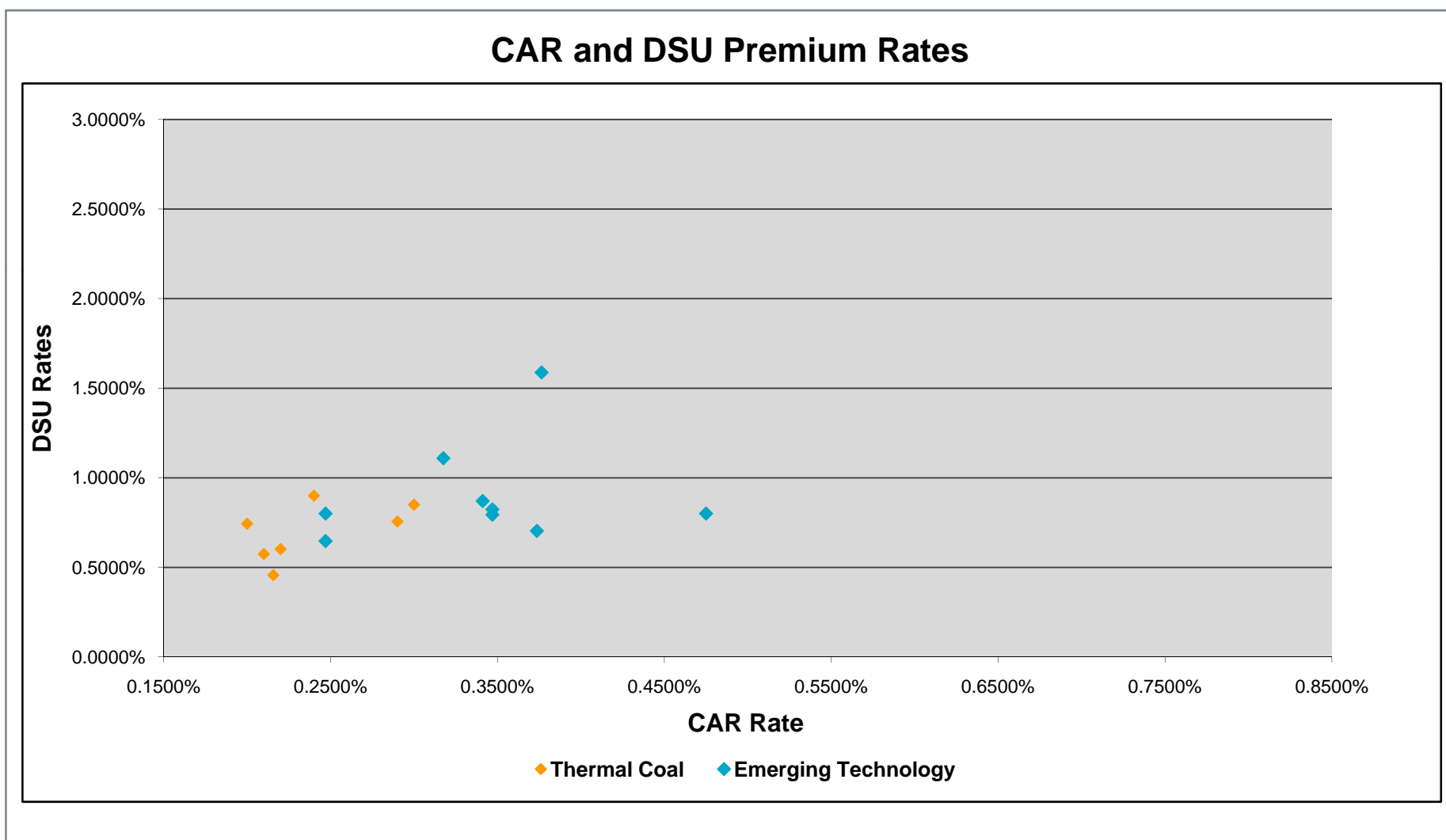
- Location:
 - Earthquake/windstorm/flood.
- Technology choice:
 - CCGT is it proven.
 - Boilers: sub critical/super critical/ultra super critical.
- Lines of cover: Construction all Risks/ Third Party Liability/ Delay in Start Up Marine/Terrorism/Environmental/Professional Indemnity/Political Risks.
- Quality of cover – Brokers Manuscript verses Company Form.
- Your client's ability to deliver quality information.
- Your ability to predict the future for the next twenty years.

Managing IPPs Setting Your Budget – Operational for twenty years

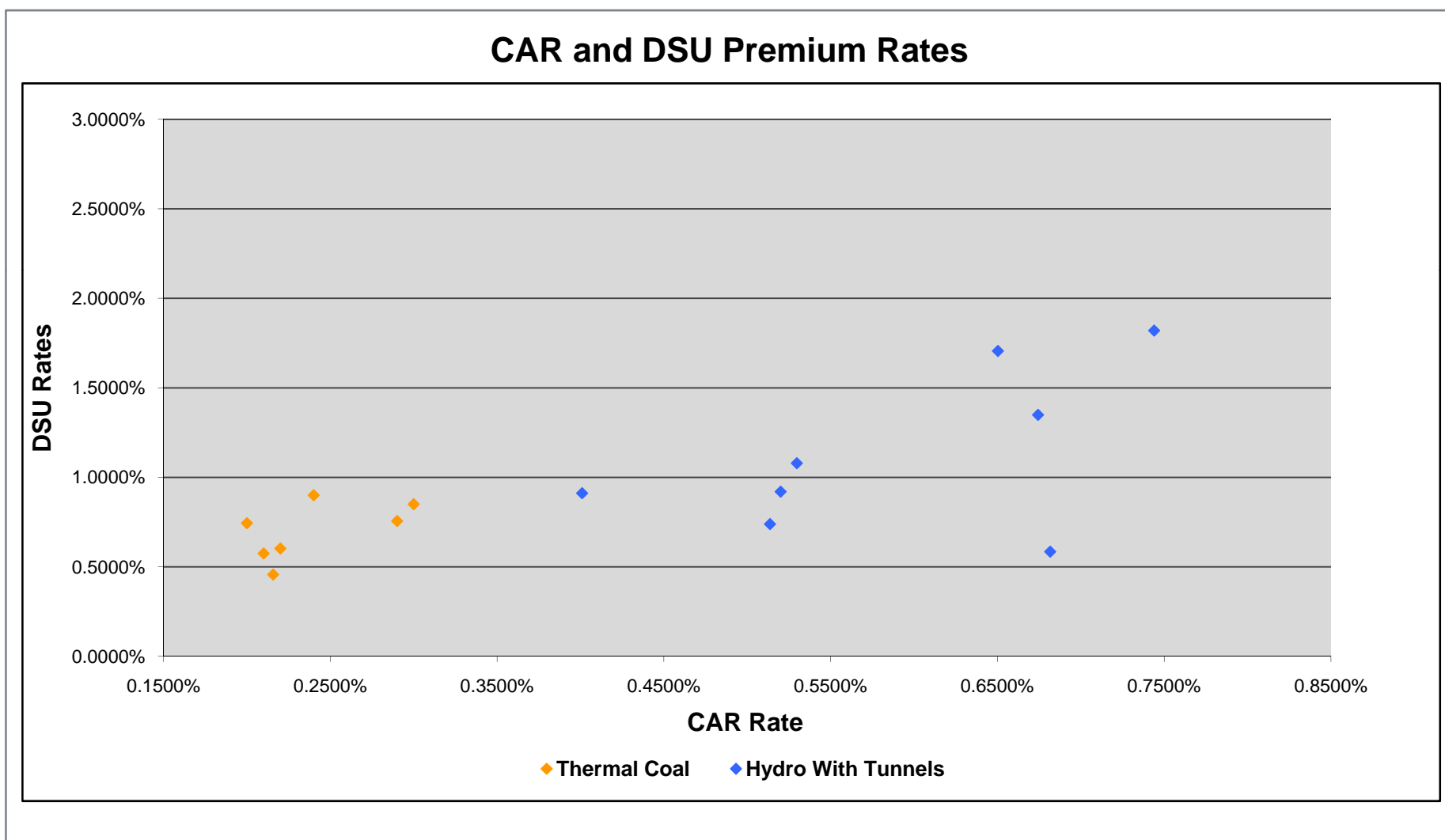
SCREEN SHOTS OF THE RISK ANALYSIS MODELLING PLATFORM



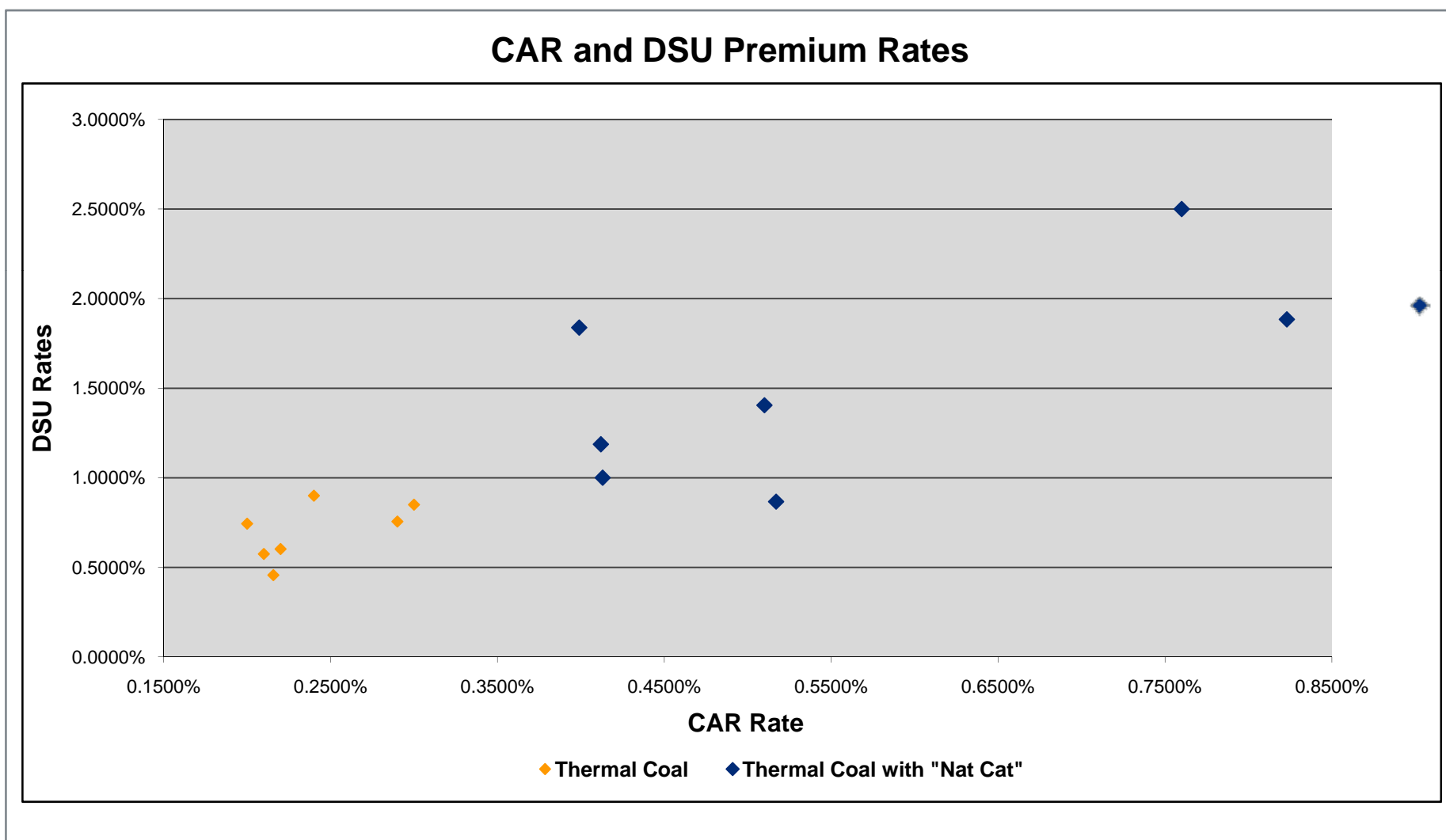
Managing IPP's Setting your Budget – Thermal Coal verses Emerging CCGT Technology



Managing IPP's Setting your Budget – Thermal Coal verses Hydroelectric



Managing IPP's Setting your Budget – Thermal Coal verses Thermal Coal “Nat Cat”



Managing IPP's Setting your Budget - Hydroelectric

Munich Re 101 Tunnelling Clause

In the event of indemnifiable loss or damage the maximum amount payable under this Policy shall be limited to the expenses incurred to reinstate the insured property to a standard or condition technically equivalent to that which existed immediately before the occurrence of loss or damage but not in excess of the percentage as stated below of the original average per-metre construction cost of the immediate damaged area.

Maximum percentage payable: %

- The original construction cost is not a reflection of the Probable Maximum Loss (PML).
- Alternatives are available.
- Some lenders' are using technical consultants to review limits.
- Contractors are learning from bad experiences.

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Setting Your Budget (Achieving Your Budget)

- Information delivery and content is key to success:
 - Underwriting information packs are often the first point of contact.
 - Quality information indicates:
 - Insurance is taken seriously.
 - Good attitude to risk.
 - Value the insurer/client relationship.
 - Underwriting information should be easy to navigate.
 - 5000 pages of random information on a CD Rom is of little help to underwriters.
- Questionnaires should be bespoke to the project.
- Roadshow guidance notes should be bespoke to the project.
- Poor information will result in higher rates and less cover.

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Setting Your Budget (Achieving Your Budget)

- Finalise the scope of cover before you go to market.
- Consider natural catastrophes (Nat Cat) accumulations and pricing.
- Time Management Planning:
 - Round 1.
 - Round 2.
 - Round 3.
- Roadshows:
 - Preparation is key.
 - Can make a good risk better.
 - Can make a challenging risk look good.
- Choose your access points wisely.

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Setting Your Budget (Achieving Your Budget)



Managing Financial Close

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Managing IPPs Reaching Financial Close

- Where can it go wrong?
- Late documentation:
 - Lenders endorsements can take from two to nine weeks to agree.
 - Markets have been taken off post bind due to a failure to sign.
 - Refusal to agree the assignments.
 - Missing evidence of cover.
 - Refusal to sign BLOU as required.
 - Failure to meet the minimum insurance requirements.
- Failure = Non Compliance Waiver Request under the CTA.
- Can be costly to Project Co if Technical Advisers are needed to consult on non performance.

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Reaching Financial Close

How can you be prepared?

- Have a fair budget based on facts:
 - Location.
 - Technology.
 - Cover.
- Push key advisers for early documentation:
 - Assignments/BLOU/lenders endorsements.
- Understand the closing process:
 - Soft versus hard?
 - Is Financial Close first disbursement?

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Reaching Financial Close

Conclusion - be proactive:

- Understand and map deliverables.
- Expect the unexpected underwriters don't sign legal documents blindly.
- Don't underestimate the legal review process (it takes time)
- Discuss and set your milestones with key stakeholders:
 - Owners.
 - Lenders.
- Engage Insurance and Reinsurance companies early.
- If you are an owner engage your broker early.
- Consider everyone wants a Win/Win regarding Financial Close.
- Assume its never been done before, in some emerging markets it hasn't!



Scot.peachey@marsh.com

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