

CONTRACTUAL CHANGES – CONTROL VALUE AND MANAGE RISKS

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1. ABSTRACT

Changes during a project are more of a rule than an exception. This is why everyone involved in project business should realize the importance of change management. In the global contracting environment where emphasis is placed on minimizing costs and maximizing performance, poorly managed changes are hazardous.

Change management has to be considered already when planning and negotiating a contract. Proactive contracting will strengthen project performance and eliminate communication difficulties among contracting parties. For a project, it is crucial to carefully define the scope and the other key contractual provisions, which should include a workable dispute resolving mechanism before signing a contract.

Contractors and employers often rely on standard terms and conditions (STCs) to govern their relationship. No doubt, these are helpful instruments, but they should be used with awareness and care. When STCs constitute a part of a contract, it is essential for the contracting parties to truly understand how they allocate costs and risks between the parties and what requirements they set for variations and the communication of claims, notifications, etc.

In this paper, the variations clauses of two STCs, namely Orgalime turn key General Conditions 2003 and FIDIC Silver Book for EPC/turnkey projects, are examined in respect of the following three questions: Who is entitled to initiate variations? When and how is the variation established? Who bears the costs for the variation? The STCs are evaluated from both the employer's and the contractor's point of view and their main differences are discussed. Not surprisingly, the Orgalime turn key conditions seem to be more contractor friendly and the FIDIC Silver Book more employer friendly. Neither of them, unfortunately, seems to provide sufficient detailed change control procedures. Contracting parties should take this into account and address change control issues upfront in their negotiations.

An outline of change control procedure and issues to be addressed are presented in the last chapter. The task of such procedures is to provide efficient tools to agree on changes before they occur and to keep the project on track and within budgetary limits.

2. KEYWORDS

Change management, FIDIC, Orgalime turnkey, variations, changes, standard terms and conditions (STCs), proactive contracting, claim, scope, change control procedures

3. INTRODUCTION

In any project there are likely to be changes to the original plan during the course of the project. This is true also for turn key projects, which are used as examples in this paper. Over the time of project implementation, new issues evolve. When negotiating a contract change management is often overlooked by the dealmakers. The acknowledgement of the mere fact that changes and variations are likely to occur may be seen as a weakness in the contracting process. The members of project teams should, however, not be "blue eyed": On one hand, there are contractors who see an opportunity in changes: charging for changes may improve your results from the project. Employers should be aware of this when negotiating contracts and change clauses. On the other hand there are employers who take an uttermost restrictive view on changes and who will reserve the right to say the final word on a proposed change.

In contractual vocabulary, change is a wide concept. Usually thereby is meant changes to the contract for both external and project internal causes. Herein we use change for claims, variations etc. which

lead to a change of the contract. By variations, we mean variation to the scope of works i.e. usually changes that arise during the course of the project from project internal reasons.

The parties may during the implementation of a contract have claims on each other. Claims may arise for a number of reasons e.g.: unforeseen conditions, acts by the authorities, variations, unsuccessful remedial work, delays, suspension, delayed payment, tests, insurances, force majeure, indemnities, termination etc. A claim may result in a change to the contract – but whether and how the claim impacts on the contract will depend on the content of the contract. In chapter 4, we stress the importance of proactive contracting in order to minimise changes and risks generally.

In chapter 5 below we focus on some key issues in relation to variations by giving some illustrative examples of change management clauses based on the FIDIC (the International Federation of Consulting Engineers) Silver Book and Orgalime turnkey General Conditions 2003 for EPC/turnkey projects.

Need of variations and project changes may arise as a consequence of poor initial planning, design errors, technical innovation, modernisation, emerging of new products, changed plans by the employer etc. Often variations creep into the scope and surface at a stage when the cost and time impact already is big. Variations may have been poorly dealt with in the contract or left to project management procedures to be established during the course of the project. In the absence of change procedures and when a variation later turns visible, project managers on both sides start reading the technical requirements, the scope, the functional requirements, which may have diverging contents at different priority levels of the contract (like the request for bid, the bid, other contractual appendices). It may emerge at such later time that the parties have a different perception of the intended end result of the project or delivery. The task to converge the parties' opinions at this stage may be burdensome and collapse the project as has happened for example in many IT projects.

Change control procedures are discussed in chapter 6 below. Bearing in mind the impact on project costs, schedule and quality of results both parties will benefit from a carefully considered procedure for changes, which is documented and agreed in advance. Change control processes must be established before work starts. When changes start to creep into the scope, it may be too late. The process should, however, not encourage changes unduly. A change is always an exception and must be justified. Bureaucracy should be avoided and small changes with little impact should be dealt with at working level. As in all business, activity focus must be on issues, which are material for the result or bottom line. It is worthwhile investing some time in agreeing on good change management procedure since it may cost more to have a bad one. If this approach is taken, resources will be freed for the main task for project teams on both sides, which are the implementation of the project and the creation of value to the parties.

4. MINIMISE CHANGES BY CONTRACTING WITH CARE AND FORESIGHT

Management of changes starts with drafting and negotiating the contract with care and foresight. It is crucial to know how the commercial heart of the contract and what rules governs it. It is not enough to pay attention only to the change control clause, since the basis for its application is some heavy contractual stuff allocating the business value and the risks. As highlighted in the introduction claims may arise for numerous reasons like delays, defects, omissions etc. It is important that those reasons are foreseen as far as possible and that the consequences are dealt with in the contract in order to minimise costs and conflicts. There will be surprises anyway and the resources should be spared to tackle those. The role of the lawyer is to be a member of the project team from the very beginning, because only then he or she can focus on proactive contracting and avoid disputes.

When looking at the causes for claims and variations it is advisable to start with the scope of the works. The scope must be carefully and clearly defined. As an employer, you must check that the bid responds to your bid request. As a contractor, you must make sure your changes to the scope proposed in your bid will be part of the contract. Both parties have a task to avoid contradictions or misunderstandings. Make sure your lawyer is familiar with the scope since it is the basis of the remedies clauses etc.

The negotiators and project team members must be aware what the price is supposed to include/cover and how it is structured. The general assumption is that the price agreed shall cover the scope described

in the contract, unless otherwise agreed. Is the price defined as a lump sum or based on unit prices, or both? If the scope is defined in detail, missing details may lead to changes and have impact on the price. If the scope is defined functionally, by end results, there may be less risk for changes of the price. The contractual change mechanism is often placed in connection with the price clause providing unit prices etc. as a basis for changes to be agreed on.

Scope and price are essential, but you should not yet give up and leave the rest to your lawyer alone. There are many more clauses having a substantial impact on your business results. The contract is not only a legal document to be put in an archive after signing, but it shall also provide the guidelines for the project work and management in order to minimise conflicts.

For example, the documentation may enable the employer to apply for permits required by the authorities and to operate the delivery. Incomplete or faulty documentation can have a major impact on the results and delay the project. Claims and changes relating to the documentation must be foreseen and dealt with. The intellectual property rights to both the delivery and the documentation will have impact on how the results can be used (e.g. right to amend standard documentation in order to obtain permits).

Time is money and the delivery should happen on time. The delivery may be delayed for different reasons: contractor is delayed, contractor's subcontractor is delayed, employer is delayed, force majeure, ground conditions, delays by the authorities (which may initially be caused by either of the parties) etc. These delays will have to be dealt with in the contract in different ways depending on the risk division agreed by the parties. Usually a party will have to bear the risks and costs of delays on his side. Attention must be paid to careful definition of the causes of delays and their consequences.

The delivery shall be tested against agreed criteria and be repaired or replaced should the criteria not be met. Passing of tests is usually a precondition for taking over the delivery. It is important for both parties to establish a procedure for how the test criteria shall be met. The payment schedule usually ties in with the progress of the delivery and a clear definition of the take over conditions is essential for both parties.

The remedies clauses must not be forgotten either. Consequences of delays, liquidated damages for failed performance, obligation to remedy and repair belong to this group of issues. Furthermore, if the project totally fails, the rejection and termination may come into the picture. The legal system to which the contract in question belongs must not be forgotten either since claims may arise on tort basis. For large projects the remedies provided by the law in the Nordic countries in case of termination are difficult: the performance on both sides should go back (it may be easy to give back monies, but how about a factory installed at a piece of land?). This is why there must be detailed provisions how to value the delivery and compensate the suffering party should the worst thing happen.

In contractual words, pay attention to clauses like Documentation, Intellectual Property Rights, Reporting, Schedule, Delays, Testing, Take Over, Guarantees, Indemnities, Liabilities, Insurances, Rejection, Termination etc. These clauses may give rise to claims and they are all linked with the scope, the price and the change or variations clauses.

5. VARIATIONS – SOME KEY ISSUES AND HOW THEY ARE RESOLVED IN STANDARD TERMS AND CONDITIONS

Contractors and employers often rely on STCs to govern their relationship. No doubt these are helpful instruments, but they should be used with awareness and care. When STCs constitute a part of a contract, it is essential for the contracting parties to truly understand how the conditions allocate risks between the parties. The party is able to minimize his own risks and estimate properly the value of the contract only after he has identified the risks which he is about to agree to bear. This is especially true when the allocation of risks is not in equilibrium but rather one of the parties is to bear most of the risk.

FIDIC (the International Federation of Independent Consulting Engineers) Conditions of Contract for EPC/Turnkey Projects also known as the *Silver Book* contains, in addition to clauses governing the claims of the Contractor resp. Employer, a contract clause on variations (Clause 13 Variations and Adjustments). Orgalime (Liaison group of the European mechanical; electrical; electronic and metalworking industries) Turnkey Contract for Industrial Works consists of three integrated parts, the

main Contract Document, the General Conditions and the Checklist. The General Conditions which contain a clause for variations (Clause 8 Variations).

For more information on these two above mentioned organizations see websites: www.fidic.org and www.orgalime.org.

The following issues highlight a just a few aspects of these standard conditions on variations, which should be taken into consideration by the parties:

Issue 1: Who is entitled to initiate variations?

FIDIC Silver Book

Orgalime Turn Key

<p>Clause 13.1(1) The Employer at any time prior to issuing the Taking-Over Certificate by <i>instructing</i> a variation or by <i>requesting for a proposal</i> from the Contractor.</p> <p>Clause 13.2(1) The Contractor, at any time, by submitting to the Employer a written proposal which (in the Contractor's opinion) will, if adopted, (i) accelerate completion, (ii) reduce the cost to the Employer of executing, maintaining or operative the Works, (iii) improve the efficiency or value to the Employer of the completed Works, or (iv) otherwise be of benefit to the Employer. The procedure is generally called Value Engineering.</p> <p>Clause 13.3(2) The Contractor shall not delay any work whilst awaiting a response.</p> <p><i>Comment: The Contractor may not execute the proposed variation, whether as a response to the Employer's request or out of its own initiative, without the Employer's instruction or approval. The Contractor shall carry out the work as normal until instructed otherwise by the Employer.</i></p>	<p>Clause 8.2 The Contractor by informing the Purchaser of possible variations which the Contractor considers to be in the interest of the Purchaser or any changes occurring in standards and norms, (which, according to the Contract, shall be observed in the performance of the Works).</p> <p>Clause 8.4 The Purchaser by giving a notice to the Contractor of his request. Note that the notice has to contain detailed description of the variation required and that the required variations need to be in the agreed scope, design or manner of execution of the works (ref. to clause 8.1 and later in connection with issue 2.)</p> <p><i>Comment: The Contractor may not as a general rule execute a variation prior to agreement. There is no mention that the Contractor shall continue the works as agreed until the variation has been determined. The parties should take this into consideration when agreeing on variations under these provisions.</i></p>
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Difference: It is clear under both standard conditions that the Employer/Purchaser has a general right to instruct or propose variations for whatever reasons, whereas the Contractor's right is qualified by the interest of the Employer/Purchaser. The rights of the Employer are stronger under FIDIC Silver Book since the variation has to be executed by the Contractor on the mere instruction by the Employer. Under Orgalime Turn Key the risk that the works stops after a variation proposal should be taken into account. The value engineering under both standard conditions is in the control of the Contractor since it is restricted to his opinion on the matter.

Issue 2: When and how is the variation established?

FIDIC Silver Book

Orgalime Turn Key

<p>Clause 13.1(2) The Contractor is obligated to execute and is bound by the variations instructed by the Employer <i>unless he promptly gives notice</i> with supporting particulars. The grounds on which the Contractor may refuse from executing the variation are limited: the Contractor cannot readily obtain the Goods required for the Variation, it will reduce the safety or suitability of the Works, or it will have an adverse impact on the achievement of the Performance Guarantees. Upon receiving this notice, the Employer shall cancel, confirm or vary the instruction.</p> <p>Clause 13.3(1) If the Employer requests a proposal, the Contractor shall respond in writing either by giving reasons why he cannot comply or by submitting a detailed proposal.</p> <p>Clause 13.3 (2) The Employer shall as soon as practicable after receiving such proposal, respond with approval, disapproval or comments. The Contractor shall not delay any work whilst awaiting a response.</p> <p>Clause 13.3 (4), clause 3.5 Upon instructing or approving a variation, the Employer shall proceed in accordance with Sub-Clause 3.5 to agree or determine adjustments to the Contract Price and the Schedule of Payments. These adjustments shall include reasonable profit, and shall take account of the Contractor's submissions concerning value engineering.</p> <p>Clause 3.5 provides for the Employer's determination, which shall be fair and in accordance with the Contract. ...Each party shall give effect to the determination, unless the Contractor gives notice, to the Employer of his dissatisfaction with a determination within 14 days of receiving it. Either party may then refer the dispute to the Dispute Adjudication Board.</p> <p><i>Comment: It is important to notice that, notwithstanding the notice given by the Contractor, the Employer may confirm his instructions and the Contractor is to execute the variation and remains with the only possibility of referring the matter to the Dispute Adjudication Board (DAB) or ultimately to Arbitration.</i></p>	<p>Clauses 8.1 (1st and 2nd para) The Contractor is obligated to carry out variations required by the Purchaser that are in the agreed scope, design or manner of execution of the works, but he is not obligated to carry out variations of an extent or character which he could not reasonably have foreseen when entering into the Contract.</p> <p>Clause 8.1 (3rd para) The Contractor is also obligated to carry out variation, which becomes necessary due to changes in Laws and Regulations.</p> <p>Clause 8.3 In case of variations the Contract Price, the Time for Completion and other terms of the Contract shall be amended to reasonably reflect the consequences of the variation.</p> <p>Clause 8.9 The Contractor shall not be obliged or entitled to carry out a variation before the parties have reached written agreement on how it shall be carried out and its consequences, or the matter has been settled by the Expert.</p> <p><i>Comment: Purchasers should be aware that the Contractor has a wide opportunity to refuse to perform variations initiated by the Purchaser (other than those required by law or regulation) if they do not happen to be foreseen. Also the notice and agreement system favours the Contractor.</i></p>
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Differences: The Contractor is obligated under FIDIC Silver Book to act on Employer's instruction, whereas Orgalime Turn Key requires agreement of both parties or expert resolution to implement a variation. This is an important difference. Under FIDIC Silver Book the Contractor is very exposed to the Employer's decision making and may have to wait to achieve justice, but under Orgalime Turn Key again there may be long delay to the project which may cost more than the dispute in question. Orgalime Turn Key also enables the Contractor to refuse variations not foreseen. In a long project, the need for a variation may not be foreseen.

Issue 3: Who bears the costs for the variation?

FIDIC Silver Book

Orgalime Turn Key

<p><i>Costs due to preparation of variations:</i> Clause 13.2(2) The Contractor-initiated proposals are prepared on the Contractor's cost. Neither is the Contractor entitled to any payment for responding to a request. The Employer prepares his instructions constituting a variation on his own cost.</p> <p><i>Comment: Uncertainty arises when the Contractor submits a proposal on request and the variation is not executed. The Silver Book does not answer this question. Therefore, it is recommendable that the parties agree on the matter pretender, especially when detailed and expensive design is involved.</i></p> <p><i>Costs/benefits due to variations:</i> Clause 13.3 (4), clause 3.5 If agreement have not been reached following the Contractor's proposal etc. he Employer shall proceed in accordance with Sub-Clause 3.5 to agree or determine adjustments to the Contract Price and the Schedule of Payments. These adjustments shall include reasonable profit, and shall take account of the Contractor's submissions concerning value engineering.</p> <p>The Employer is in his determination i.e. guided by Clauses: 13.4-13.8., which among other things deal with:</p> <ul style="list-style-type: none"> - Payment in applicable currencies and adjustment therefore. - Adjustment for changes in legislation. - Adjustment for changes in cost. <p><i>Comment: The Silver Book gives some steering how variations are to be valued. According to the variation procedure, the Employer agrees or determines the value of variations by adjustments to the contract price. According to the sub-clauses, these adjustments shall include reasonable profit (except in case of change in laws). The estimation of what is reasonable is left to the discretion of the Employer, or ultimately to the Dispute Adjudication Board or Arbitrator. It is recommendable to agree on provisions concerning compensation on delay and</i></p>	<p><i>Costs due to preparation of variations:</i> Clause 8.6: The Purchaser is obligated to reimburse the Contractor any costs incurred in examining the consequences of a variation requested by the Purchaser.</p> <p><i>Comment: It should be noted that there is no mention who pays the costs if the Contractor suggests variation in these General Conditions.</i></p> <p><i>Costs/benefits due to variations:</i> Clauses 8.3 In case of variations the Contract Price, the Time for Completion and other terms of the Contract shall be amended to reasonably reflect the consequences of the variation.</p> <p>Clause 8.5 The Contractor shall, without undue delay after he has received the Purchaser's request notify the Purchaser whether it is possible to carryout the variation and, if so, specify the manner of execution and the effects of the variation on the Contract Price, the Main Time Schedule and other terms of the Contract.</p> <p><i>Comment: The conditions give no steer as to the valuation of the effect of the variation on the Contract Price. The conditions do not contain exact regulation on how benefits of the variations are defined. In case the contracting parties fail to agree on the variation or on the resulting amendments of the terms and conditions of the contract, the dispute may be settled by an independent expert who decides on the terms. Therefore, the parties should agree on guidelines for the valuation, e.g. the price effect (unit prices, direct costs etc.).</i></p>
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disruptions caused by variations.

According to clause 13.3 the Employer has to take the value engineering into account in his determination, but there are no guidelines on how this should happen. The Contractor shall therefore consider agreeing on the matter before signing the Contract.

Difference 1: Under FIDIC Silver Book, the Contractor bears the costs of preparation in case of Value Engineering, whereas under Orgalime the Purchaser bears the costs if he proposes a variation. Both conditions leave room for interpretation and scope for more specific agreement, but in different matters.

Difference 2: FIDIC Silver Book gives some steering on the cost division which implies a faster resolution period if agreement cannot be reached than under Orgalime. Project management requires, however, in most cases more detailed guidelines and steering on cost/benefit division, especially in cases where variations are likely.

As is clear from this limited comparison, the process and cost/benefit sharing differ depending on the STCs we have chosen and negotiated. The examples show that the employer under FIDIC Silver Book is in control of the change process, whereas the employer under Orgalime Turn Key has less power to initiate and implement a variation.

The above comparison does not comprise all clauses relating to changes or variations of these STCs, but a more thorough examination shows that the change and variations clauses may not provide sufficient tools to manage changes as part of normal project management. This fact should be considered prior to signing the contract and a procedure be established as part of the contract documentation.

6. CHANGE CONTROL PROCEDURE AS PART OF PROJECT AND CONTRACT MANAGEMENT

Change control is an essential part of contract management and it should at least:

- facilitate the building of trust between the parties;
- help to avoid hidden or tacit changes like scope creep etc.;
- provide workable tools to agree on unavoidable and/ or useful changes before they are made;
- provide means to analyse the quality impact of proposed changes and
- assist in keeping the project on the track within budgetary limits.

As a minimum, a contract provides that changes are only valid if agreed upon by the parties. This is clear since in most jurisdictions a contract shall be implemented as it is written and a change would not automatically be accepted. It is, however, necessary to state that changes must be agreed in writing. The grey area often a cause for disputes is changes originating from insufficiently defined contractual clauses like scope, price etc. The example procedure shown below may seem detailed and burdensome, but the mission is to catch the issues upfront, in advance and have the rules clear when the project starts. If project managers only have to apply the rules, not to invent them, they are freed from the tensions relating to negotiations and conflicts.

A workable change control mechanism should address at least the following questions:

1. No change work is to be performed without a properly executed change order according to the procedure set out in the contract. Such a provision is needed in order to avoid scope creep and surprises.
2. Who has the right to instruct/propose changes? Is it only the customer or both the customer and the contractor? Are the reasons qualifying the right to propose specified? Should the contractor have an obligation to propose improvements to the project? The answer to these questions will

depend on the project in question: is it a turnkey project based on proven design or an IT delivery to be developed during the project.

3. Format of and requirements on the change proposal. Will the change proposals be submitted through a computerised change management system or will they have to be physically signed and submitted to the other party? Does it have a standard content etc.?
4. Procedure to agree on minor changes. Small issues do not belong to a complicated change management procedure, but they should have their own easy procedure. Project managers of the parties should agree on minor changes and keep records (e.g. update in a computerised change management system).
5. Costs of change proposal or response preparation work. The usual division of costs here is that each party bears his own costs, unless the other party by faulty performance or omission has caused the change proposal.
6. Details on the cost, timetable and other impact of the change on the project. Costs increases or reductions are easier to agree on if they are derived from agreed criteria, e.g. time based costs, agreed overheads. Extensions of the timetable and other impacts of the change may be more difficult to agree in advance, but the contractor should present his justified estimate of such impact for the customer's approval.
7. How is the decision on the change made? From a project point of view, leaving costs and other impact aside, it is usually crucial that the decision can be made without any undue delays. This may in practise mean that the customer should have a right to instruct works to go ahead pending agreement or resolution. Such a provision may, however, in practise limit the contractor's possibilities to impact on the change in question.

Customer's approval -> Acceptance, contract change order becomes an integral part of the Contract.

Customer's rejection -> Delivery to be continued as originally agreed or dispute resolution

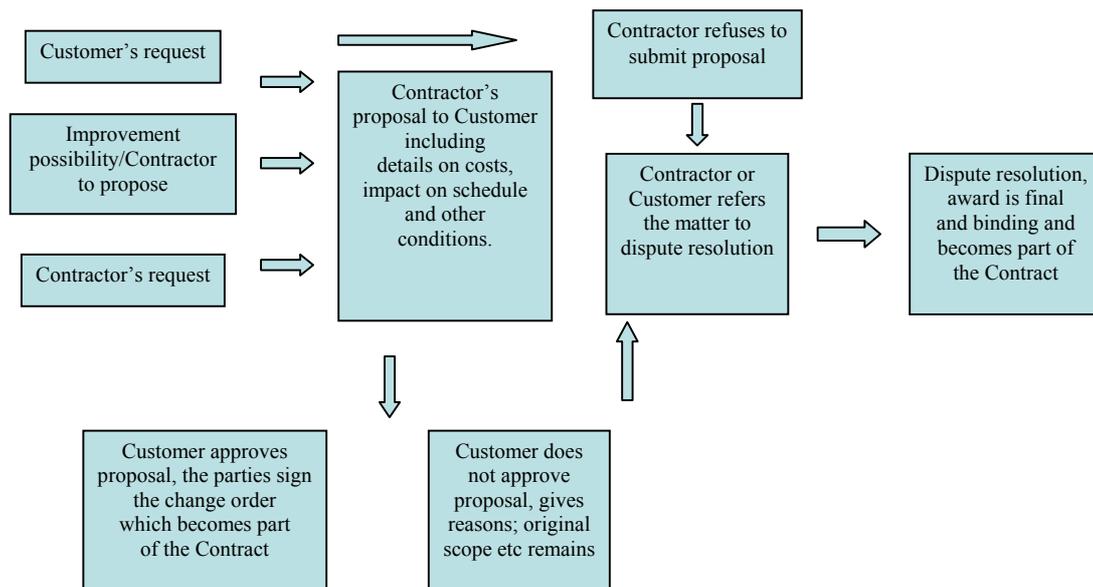
The procedure should also give a steer on the Contractor's obligation to perform according to original contract until change order agreed, unless otherwise instructed. There may be disagreement between the parties whether the proposed change is included in the scope of the contract or not and finally that may have to be left to dispute resolution. The customer should, however, have the right to give instructions on a requested/proposed change prior to agreement/resolution irrespectively of whether the change is included in the original scope or is a justified change. If the employer later turns out to be wrong, he may have to compensate the contractor for unnecessary work.

8. How are records kept on the changes? Records should be kept both on minor and changes requiring more substantial approval procedure. Project managers or assistants of both parties should be authorised to update and check the records.
9. Notices – agree on requirement on notices: format (electronic or physical), time limits etc. as part of the change management procedure.
10. A workable dispute resolution mechanism. There are various models for dispute resolution. Change management would generally benefit from a technical/economical and non-legal dispute resolution mechanism. The engineer institute in the Anglo-American contracting is instrumental in change management. The engineer is, however, not truly impartial and a dispute resolution mechanism is needed also in the cases where an engineer has been named by the customer. There is the Dispute Adjudication Board (DAB) under the FIDIC conditions and the ADR (Amicable Dispute Resolution) rules by ICC just to mention a couple of procedures. Nothing, however, prevents the parties from agreeing on a local procedure and naming the persons who shall act as adjudicators in advance.

11. Last but not least, do not forget to inform and train the project team in the change control procedure. This is essential especially in cases where the negotiation team is not continuing as the project team.

Note that the comments to the above list do not reflect the content of any particular STCs, but are merely based on experience from cases worked on. Careful attention should always be paid to standard clauses and change practises should be determined by the parties in the context of the project in question.

The above issues have been summarised in the following picture:



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