

ice-sa NEC Forum

Including Jam Session 7

FREE

Thursday, 8th August 2024
4 pm – 5:30 pm



ONLINE

**Improving SA Infrastructure
using NEC Contracts as intended**

**CPD
Accredited**

NEC Jam Session 7

**Presented by Mile Sofijanic from
ECS Associates**

TOPIC:
Section 5 – Payment
Section 6 – Compensation
events

10 NEC Jam Sessions Topics

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Session 1

Introduction to the NEC3 family of contracts; How it came about, what it tries to do and how it is used; Synopsis of each of the 12 contracts in the family.

Session 2

Procurement & contract strategies; Parties and role players; Getting the best out of the NEC contract - change of the culture.

Session 3

Introduction to the sections of Core Clauses & actions in ECC3,
Section 1 – General.

Session 4

Section 2 - *Contractor's* main responsibilities,
Section 3 – Time.

Session 5

Section 4 - Testing & Defects (Quality),
Risk Management.

Session 6

Alignment between contracting Parties,
Diversity and Inclusion.

Session 7

Section 5 - Payment, Cost and the Options,

Section 6 - Change management through compensation.

Session 8

Section 7 - Title,
Section 8 - Risks and insurance,
Section 9 - Termination,
Disputes and Adjudication.

Session 9

Pre-award documentation & Developing a contract.

Session 10

NEC3 and NEC4 – the differences.

Objectives of 10 NEC Jam Sessions

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- Delegates should leave with
 - an understanding of the NEC philosophy, its associated culture change and how it contributes to the effective management of a project;
 - a basic understanding of how to prepare, tender to, and administer the ECC3 (Engineering and Construction Contract)

Introduction to ECS ice-sa

Collaborative Project Strategies©

ECS Associates
Empowered Contract and Project Management Services



www.ecs.co.za

Facts and Values

A leading, fully-empowered organisation.
35% black woman owned. BBBEE Level1



3 decades of experience in South Africa and overseas

Delivery of international best practice professional contract and project management services from front end studies to implementation

Business solutions through a combination of expert knowledge and hands on experience

Drive clients' success through collaborative, mutually beneficial contract and business management practices

Collaborative Project Strategies©
Agile Project Delivery

Our Founder Andrew Baird was a key member of the drafting committee for NEC 1, 2 & 3

Our associate Peter Higgins is chairman of the drafting committee for NEC4

Network based business model – low overhead cost
(current staff 100+, network 1000+)

Integrity

Professionalism

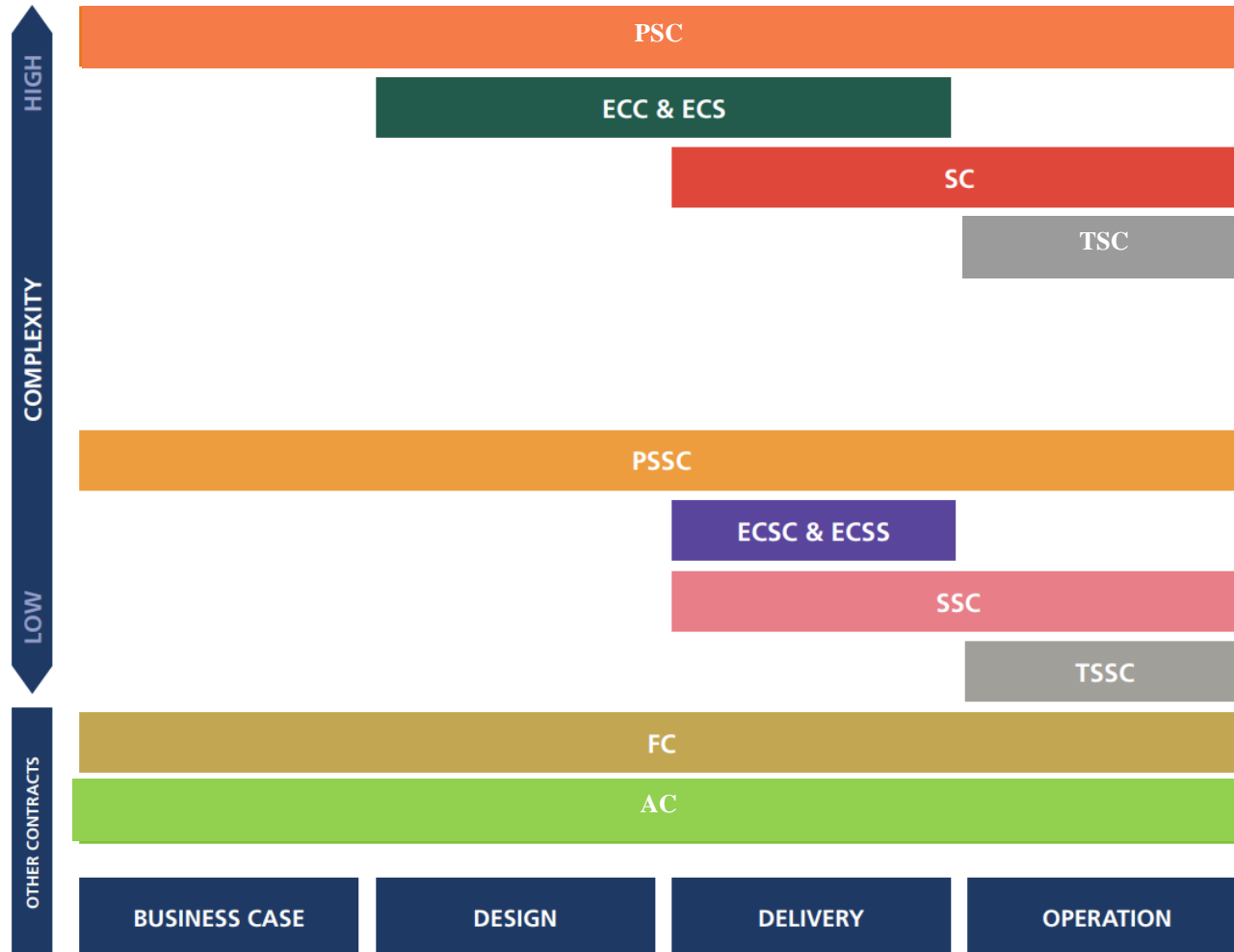
Collaboration

Courage

Reflection on the previous sessions

- Flexibility
- Clarity and simplicity
- Stimulus to good management
 - The most important objective; every procedure is designed to contribute to rather than detract from the effectiveness for all parties
 - foresight applied collaboratively mitigates problems and shrinks risk
 - clear division of function and responsibility helps accountability and motivates people

Contracts in NEC3 family^{ice-sa}



Procurement Strategies

- How to split project in smaller components if required?
- Who does Engineering, Procurement and Construction?
- Who is managing interfaces?

Contract Strategies

- Allocation of risk and incentive
- Choosing the right Options through selection of Main and Secondary Options

Best practice: Use the NEC contract with no or minimum changes where required through Z clauses

NEC is the route to partnering

Moving industry culture



Traditional
Adversarialism

NEC



Mature
Partnering

- **Section 1 – General**

- | | |
|---|-------------------------|
| • Actions | Clause 10 (10.1) |
| • Identified and defined terms | Clause 11 |
| • Interpretation and the law | Clause 12 |
| • Communications | Clause 13 |
| • The <i>Project Manager</i> and the <i>Supervisor</i> | Clause 14 |
| • Adding to the Working Areas | Clause 15 |
| • Early warning | Clause 16 |
| • Ambiguities and inconsistencies | Clause 17 |
| • Illegal and impossible requirements | Clause 18 |
| • Prevention | Clause 19 |

- **Section 2 - Contractor's main responsibilities**
 - Providing the Works **Clause 20 (20.1)**
 - The Contractor's design **Clause 21**
 - Using the Contractor's design **Clause 22**
 - Design of Equipment **Clause 23**
 - People **Clause 24**
 - Working with the *Employer* and Others **Clause 25**
 - Subcontracting **Clause 26**
 - Other responsibilities **Clause 27**

- **Section 3 – Time**

- | | |
|--|-----------|
| • Starting, Completion and Key Dates | Clause 30 |
| • The programme | Clause 31 |
| • Revising the programme | Clause 32 |
| • Access to and use of the Site | Clause 33 |
| • Instruction to stop or not to start work | Clause 34 |
| • Take over | Clause 35 |
| • Acceleration | Clause 36 |

- **Section 4 – Testing and Defects**
 - **Tests and inspections** **Clause 40**
 - **Testing and inspection before delivery** **Clause 41**
 - **Searching for and notifying Defects** **Clause 42**
 - **Correcting Defects** **Clause 43**
 - **Accepting Defects** **Clause 44**
 - **Uncorrected Defects** **Clause 45**

Risk Management Options

Step 1 (Trigger!)

Choose Risk Management Approach

Consequence 1
Drivers/ Incentives

Consequence 2
Values

Consequence 3
Outcome

Avoid Risk

Traditional (Rigid) contract
High level liabilities
Lack of alignment
Do not lose money!
Manage the contract

Blame
Short-term focus
Confusion
Hierarchy
Bureaucracy

1. lose-lose
2. win-lose
3. lose-win
4. unlikely win-win

Manage Risk

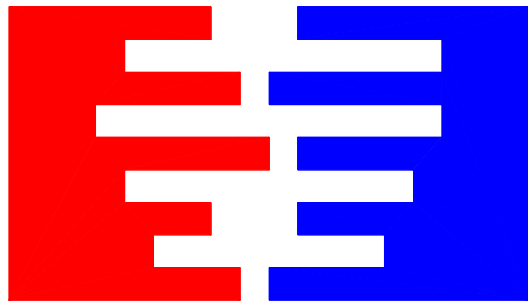
Full alignment
Long term relationship focused
Shared risk and reward – no finger pointing
Development, learning and improvement
Manage the project

Commitment
Accountability
Integrity
Caring
Creativity / Resourcefulness
Performance

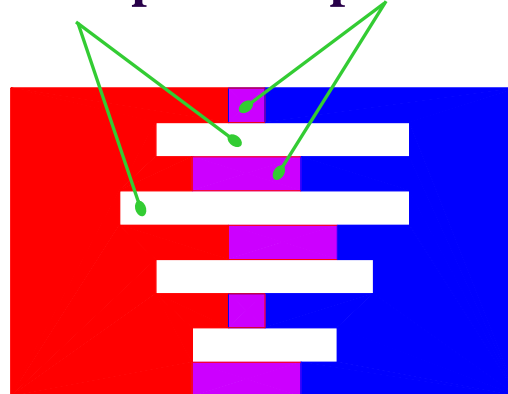
1. win-win
2. -
3. -
4. unlikely lose-lose

Alignment between ice-sa the contracting Parties

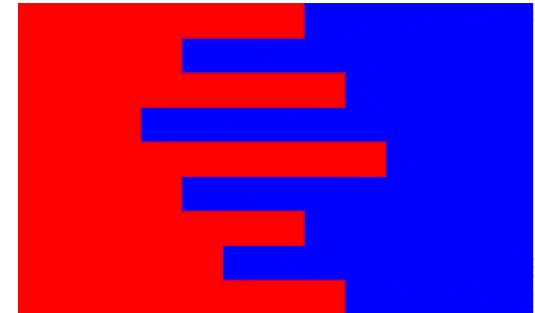
Separate Capabilities



Gaps Duplication



Typical
Partnering Results
in Alignment



Employer

Contractor

Employer

Contractor

Partner

Partner

Alignment: the greatest opportunity for step - change improvement

When alignment, diversity ice-sa and inclusion works



NEC Jam session 7

- Section 5 - Payment, Cost and the Options,
- Section 6 - Change management through compensation

Section 5

Payment Cost and the Options

Assessing the amount due

50.1 The *Project Manager* assesses the amount due

- at each assessment date
- considers any invoice received

50.2 Price for Work Done to Date per main option

- other amounts due or retained from the *Contractor*
 - retention & inflation % of PWDD
 - other amounts; (bonus, delay damages, advanced payment, interest etc.)

50.3 Retain 25% if no programme containing information which this contract requires

<u>Option</u>	<u>Prices</u>
A & C	Activity Schedule prices for activities 11.2(30)
B & D	BoQ rates and lump sums 11.2(31)
E & F	Defined Cost + Fee 11.2(29)

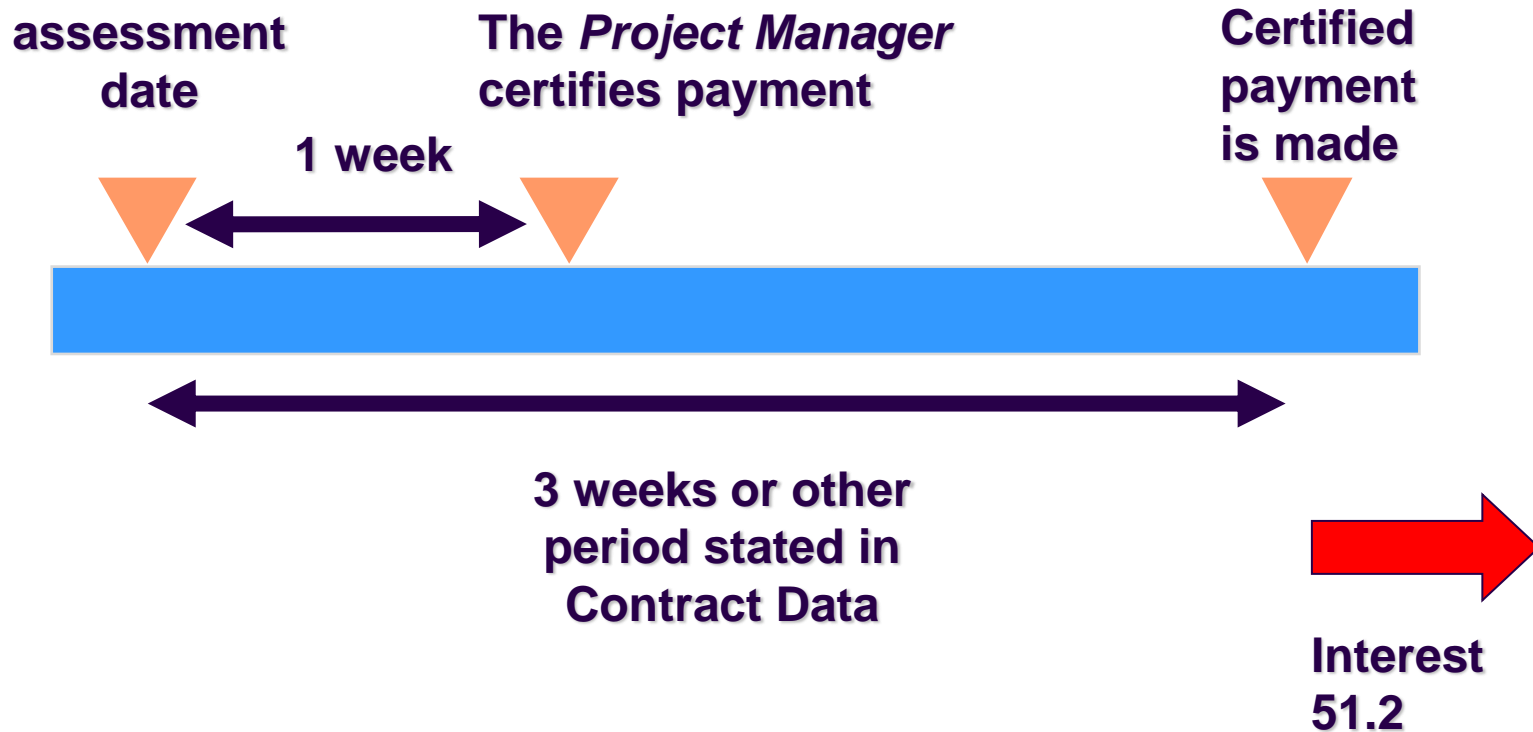
Price for Work Done to Date

<u>Option</u>	<u>PWDD</u>
A	Total of the Prices for completed activities 11.2(27)
B	Quantities of completed work at BoQ rates and proportions of lump sums 11.2(28)
C to F	Defined Cost forecast to be paid before next assessment + Fee 11.2(29)

Certification & payment

- The *Project Manager*:
 - certifies within one week of assessment date
 - issues certificate to the *Contractor* and the *Employer*
- The *Employer* pays within 3 weeks of assessment date (or longer per C-D)
 - payment period in ECS3 is four weeks
 - no pay when paid clauses
- interest on late payments and late certification (clause 51.2)

Payment time periods **ice-sa**



Reference to Defined Cost

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– Defined Cost (52.1)

- All the Contractor's costs which are not included in the Defined Cost are treated as included in the Fee
- Includes only amounts
 - calculated using rates and percentages stated in the Contract Data
 - and other amounts at open market or competitively tendered prices with deductions for all discounts, rebates and taxes which can be recovered

Payment of Defined Cost

<u>Option</u>	<u>Defined Cost</u>
A & B	Cost of the components in the SSCC whether work is subcontracted or not 11.2(22) [CE's only]
C to E	Amount of payments due to Subcontractors for work which is subcontracted and the cost of components in the SCC for other work less Disallowed Cost 11.2(23)
F	Amount of payments due to Subcontractors for work which is subcontracted and the <i>prices</i> for work done by the <i>Contractor</i> himself less Disallowed Cost 11.2(24)

Disallowed Cost

<u>Option</u>	<u>Disallowed Cost</u>
C to E 11.2(25)	Cost which the <i>Project Manager</i> decides e.g. <ul style="list-style-type: none">- is not justified...- should not have been paid to a Subcontractor...- was incurred only because the <i>Contractor</i> did not....give an early warning...- correcting Defects after Completion etc.
F 11.2(26)	As C to E plus <ul style="list-style-type: none">- is a payment to a Subcontractor for work which the Contract Data states that the <i>Contractor</i> will do himself or the <i>Contractor's</i> management

– The Fee

- (11.2(8)) is the
 - sum of the amounts calculated by applying
 - the *subcontracted fee percentage* to the Defined Cost of subcontracted work and
 - the *direct fee percentage* to the Defined Cost of other work

What is in *fee percentages*?

- **Options A & B**

- Only profit & head office costs for C-E's
- Most already included in Activity Schedule or the BoQ

- **Options C, D & E**

- All work paid on “Defined Cost-plus-Fee” basis; only contribution to Head Office costs and profit is through the Fee

- **Option F**

- As for C, D & E but also allow for work not subcontracted or priced separately & risk

Option A: Priced contract ice-sa with Activity Schedule

11.2(20) lump sum contract to Provide the Works

- broken down into activities with a lump sum price for each activity
- contractor determines activities can be in groups: design ... shipping ...
- The *Employer* may specify some activities
- flexibility for change is linked to quality (completeness and accuracy) of the Works Information

- 11.2(27) The *Employer* pays on completion of each activity
- 31.4 each activity on the Accepted Programme
- 54.1 no Works Information or Site Information on Activity Schedule
- 63.1 & 11.2(22) changes to the Works Information valued at Defined Cost plus Fee

- compensation events assessed using Shorter Schedule of Cost Components whether subcontracted or not
- Two fee percentages;
 - *direct* for own costs
 - *subcontracted* for other

Option B: Priced contract **ice-sa** with Bill of Quantities

11.2(28) re-measurement contract

60.4, 60.5 & 60.6 change to quantities & departure from method of measurement could be a compensation event

55.1 information in BoQ is not the Works Information

63.1 & 11.2(22) compensation events at Defined Cost plus either of the two fee percentages using Shorter Schedule of Cost Components

63.13 can agree to use rates & lump sums

NOT necessarily bill rates & lump sums

Shorter Schedule of Cost Components (SSCC) ice-sa

– General

- Not used in Option F
- Used for assessing compensation events
 - in Options A and B
 - in Options C to E if the *Project Manager* and the *Contractor* agree (63.15)
- If Option A or B then Defined Cost is the cost of the components in the SSCC whether work is subcontracted or not 11.2(22)
- If Option C, D or E then the *Contractor* means the *Contractor* and not his Subcontractors
- An amount is included only in one cost component and only if it is incurred to Provide the Works

Shorter Schedule of Cost Components (SSCC)

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- Components
 - People
 - Equipment
 - Plant and Materials (as SCC)
 - Charges
 - Manufacture and fabrication
 - Design (as SCC)
 - Insurance
- Data completed in Contract Data part 2

Target Contracts : C and D

- total of Prices (Activity Schedule 11.2(30) or BoQ 11.2(31)) is the target

11.2(23) all payments at Defined Cost less Disallowed Cost + Fee

53 difference between the TARGET and the final PWDD is shared - basis in Contract Data

63.12 adjust the target with compensation events

Target Contracts : C and D

20.3 The Contractor advises on design and needs
The *Project Manager's* acceptance of
subcontracts

20.4 The Contractor provides forecasts of final
costs with explanations of changes

52.2 Open book accounting

- need to understand industry in order to set share ranges & percentages
- The *Project Manager* must be very experienced

Option E: Cost reimbursable

11.2(29) & (32) Price and PWDD are Defined Cost + Fee

20.4 The *Contractor* forecasts total Defined Cost

65.3 Compensation events change forecasts

52.1 Defined Cost at open market competitively tendered rates

26.4 The *Project Manager* to accept subcontract data

- used for early start & minimal definition

Schedule of Cost Components (SCC)

– General

- Applies only to Options C to E
- Used for assessing
 - compensation events
 - Price for Work Done to Date (PWDD)
- The *Contractor* means the *Contractor* and not his Subcontractors
- An amount is included only in one cost component and only if it is incurred in order to Provide the Works

Schedule of Cost Components (SCC)

– Components

- People**
- Equipment**
- Plant and Materials**
- Charges**
- Manufacture and fabrication**
- Design**
- Insurance**

– Data completed in Contract Data part 2

Option F : ice-sa Management contract

20.2 most work is subcontracted by the
Contractor

- Price and PWDD are Defined Cost + Fee

11.2(24) Defined Cost is payment to subcontractors; Fee to cover anything not subcontracted or priced separately

- The *Contractor* still responsible to Provide the Works

Amounts from secondary Options

X1 Price adjustment for inflation

X3 Multiple currencies

X6 Bonus for early Completion

X7 Delay damages

X14 Advanced payment to Contractor

X16 Retention

X17 Low performance damages

X20 Key Performance Indicators

Section 6

Compensation events

Change management through compensation

Changes to contract ice-sa



Traditional methodology

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- procedure prescribed for some changes
 - especially when bills are used
- other changes rely on the reasonableness of the engineer / architect / employer
- problem for lump sum and cost plus
- what is cost and expense ?
- identifying events which lead to change ?

- Identify all events which lead to change
- use same procedure irrespective of pricing strategy or event
- use “Cost Plus” to value effect of the change event : no reference to tender, provisional sums or dayworks
- allow for alternative proposals
- deal with programme at the same time

ice-sa Intent of NEC philosophy is:

The Contractor

- can price what he sees at tender and be indifferent to what may be changed by *Employer* after award
- should not be held to tendered rates
- is aware of what compensation he may be due and how it is calculated
- but knows that he needs to prove entitlement on basis of his programme and costing

Intent of NEC philosophy is: ice-sa

The *Employer* (customer)

- Can ask the *Contractor* for firm quotation for a change before it is implemented
- May seek quotations for different ways of completing the change, including maintaining the same Completion Date
- Is entitled to be notified early about events that may lead to change and not be held to ransom over an end of contract claim

Identify change events

- **Clause 60.1 compensation events:**
 - a listed event which, if it occurs, allows for changes in the contract Price or time for completion providing it does not arise from a fault of the *Contractor*.
- list is fully comprehensive; includes breach of contract by the *Employer*
- 19 in core; potentially 8 more in Options
- The *Contractor* carries cost of events not listed

Compensation events relate to:

- What the *Employer*, the *Project Manager* and the *Supervisor* do to the *Contractor*
- The *Employer's* risks of loss and damage
- The *Employer's* design and use of the works
- adverse physical and unusual weather conditions (shared risks)
- other, depending on clause options

Actions of E, PM and S

- (1) The *Project Manager* changes the Works Information
- (2), (3), (5) & (16) the *Employer* does not do ...
- (4) suspension or deferment of work
- (6), (7), (8), (9) & (17) the *Project Manager's* other instructions & assumptions
- (10) & (11) delay to testing and searching by the *Supervisor*
- (15) The *Project Manager* certifies take over before both Completion & Completion Date

Shared risk events

(12) adverse physical

- includes foreseeable but unreasonable to allow for
- within the Site and not weather conditions
- basis of judgement in 60.2

(13) unusual weather, by comparison of 1 in 10 year weather data

(19) The Contractor prevented from completing the works (force majeure)

Employer's risk and breach

(14) The *Employer's* risk events in Clause 80.1

- indemnity for default in use of the Site, purpose of the *works*, fault of others and the *Employer* & in the *Employer's* design
- Loss & damage to free issue materials, due to excluded events and to the *works* after take-over

(18) breach of contract which is not one of the other compensation events

Other compensation events

- excess quantities & departure from method of measurement (Options B, D)
- changes in the law, (Option X2)
- advanced payment delay (Option X14)
- also in secondary Options X12.3(6) & (7), X15.2, and possibly Z if used
- additional events listed in Contract Data
 - (see Guidance Notes)

Compensation event administration

- Notification (Clause 61)
- Quotation (Clause 62)
- Assessment (Clause 63)
 - *Project Manager* assesses if *Contractor* does not or does it incorrectly (Clause 64)
- Implementation (Clause 65)

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ARCADIS

Design & Consultancy
for natural and
built assets

Lessons Learned No.9 ice-sa



Have a register of early warnings and compensation events with timelines

If you are late with notifications – it does not matter if you are right or wrong – no entitlement!

61 Notification procedure

- 61.1 for events which proceed before quote
- 61.2 for events which require quote first
- 61.3 the *Contractor* notifies other events and those which the *Project Manager* forgets to notify

61.4 No change to price or time if the *Project Manager* decides not valid

61.5 The *Project Manager* notifies the *Contractor* if early warning not given

61.6 The *Project Manager* states assumptions if uncertain

61.7 Not notified after *defects date*

Notifications by the *Project Manager*

61.1 For events arising from the *Project Manager* or the *Supervisor* giving instruction or changing earlier decision

- For example 60.1(1) instruction changing the Work Instruction; could be in the form of a revised drawing
- Instructs the *Contractor* to give quotation AT THE SAME TIME
- The *Contractor* puts event into effect
- **61.2** The *Project Manager* may ask for quote for proposed change. The *Contractor* does not put into effect
 - The *Employer* may wish to know time and money consequences before instructing

Events notified by the Contractor

- 61.3 If the Contractor believes it is an event or the *Project Manager* has not notified per 61.1**
- Adverse weather, physical conditions etc
 - Checks drawings and notices a change; the *Project Manager* did not request a quote under 61.1
 - **Notification is time barred after 8 weeks**
 - No change to Prices or Completion Date
 - Does not apply if the *Project Manager* should have notified

The *Project Manager's* response

- Under clause 61.4, within one week the *Project Manager* notifies the *Contractor*:
 - If not a compensation event choose one of four bullet points not to accept
 - If yes, confirm & instruct the *Contractor* to provide a quotation
- If the *Project Manager* does not respond, the *Contractor* may remind
- if still no response 61.3 notification is deemed to be a compensation event and the *Contractor* may submit quote

Quotations by Contractor

62.1 The *Project Manager* may ask for alternative quotations

- The *Contractor* may also suggest other solutions

62.2 Quotations comprise proposed changes to Prices and any delay to Key Dates or Completion Date assessed by the *Contractor*

62.3 The *Contractor* submits within 3 weeks

- The *Project Manager* responds with further 2 weeks; and may ask for revised quotes with reasons (62.4)

62.6 No response by the *Project Manager* is deemed acceptance of the *Contractor's* quotation

Cost assessment of ice-sa compensation events

63.1 effect of the event on

- (proven) Defined Cost of work already done
- forecast Defined Cost of work not yet done, &
- the resulting Fee (total Defined Cost * *fee percentage*)

- Defined Cost in main Options

- components in Schedule of Cost Components
- and payments to Subcontractors (not A & B)

63.5 Assessed as if early warning had been given

Time assessment of ice-sa compensation events

62.2 revised programme included in quotation

63.3 effect of the event on the Contractor's planned Completion & meeting Key Date

- added to Completion Date or Key Date
- The Contractor keeps terminal float & time risk allowances

63.6 Include time risk allowances for matters which are at the Contractor's risk due to event

The *Project Manager's* ice-sa assessment

64 The *Project Manager* assess if the *Contractor* has

- not done correctly
- not done in time allowed
- not provided up to date programme

64.3 The *Project Manager* assesses in 3 weeks

- Uses his own assessment of the programme
- if late deemed acceptance by the *Project Manager* of the *Contractor's* quotation

Implementation of a **ice-sa** compensation event

63.1 check valuation is per SCC or SSCC

52.1 open market or competitively tendered

63.3 time delay on critical path

65.2 Forecast cost & time not changed if later proved wrong

65.1 The *Project Manager* changes Prices and Completion Date per main Option requirements

The end of NEC Jam Session 7



Next NEC Jam Session

Session 8

- Section 7 - Title,
- Section 8 - Risks and insurance,
- Section 9 - Termination,

Disputes and Adjudication

**Thank you for your
participation**

Feedback is welcome

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