

TRAINING PROVIDED BY ECS

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1. Why train with us:

Andrew Baird of ECS is the most qualified NEC trainer available having been one of the original designers of NEC under the direction of Dr Martin Barnes CBE. He is a member of the NEC drafting Panel in London and has been since inception in 1993. He has presented NEC training events to thousands of delegates in many countries since 1996. Andrew Baird is a registered professional civil engineer in South Africa and UK with a 25 year international career in major projects having worked for client, consulting engineer, contractor and supplier. His CV is available on request. We may from time to time use other presenters for the workshop events. They will be NEC users with many years of hands on experience.

ECS is an approved CPD Provider in terms of the Engineering Council of South Africa (ECSA) requirements. Details of the registration of each event are given in the event descriptions below.

We specialise in providing our training in house as part of a holistic NEC implementation programme tailored to suit organisational requirements.

Although our training modules are standard, we are able to deliver the training to suit customers' particular requirements, either project or organisation related. However if our wide range of training modules still does not suit your immediate requirements, please contact us and we will see how we can best meet your needs.

Please contact us to discuss your training requirements and dates and we will provide a detailed quotation for your acceptance.

Each NEC training event is designed to introduce delegates to:

- What the contract requires:

- Actions by whom and when, terminology, design, programming and planning, defect correction, payment, change management, title, risks, responsibilities, liabilities, insurance, disputes and termination.

The tools to do the job:

- Demonstration of standard forms we have developed to help users with the actions and processes in the contract.

Practical examples:

- Group working through typical scenarios – if time allows – mainly in the workshop events.

2. Brief description of each training module

The main event is **Module 1 Introduction to NEC3 and the ECC3**. This two day event introduces delegates to

- the NEC philosophy and why it is different to other contract systems,
- provides a summary of all the contracts in the NEC3 system,
- identifies the role players and procurement strategies available, and then
- addresses the key principles, terminology and processes within the **NEC3 Engineering & Construction Contract (ECC3)** – the black book.

Having attended Module 1 and gained a sound overall awareness of the NEC3 system and the ECC3, delegates can then benefit from in depth one day workshop style **Modules 2 to 6 on the key processes within the ECC3** including contract preparation from tender to award.

Modules 7 to 10 introduce delegates to the other contracts in the NEC3 family. Although each one day event is an adequate introduction to the contract, delegates will benefit more from these events if they have attended Module 1 first in order to have a better appreciation of the NEC philosophy.

2.1. Introduction to NEC and the works contracts

Module 1	Introduction to NEC3 and the ECC3	2 days
<p>Before applying or tendering to any NEC contract it is essential to have an understanding of its background and what it is designed to achieve in the best interests of both parties. Most of the first morning is used to introduce delegates to the NEC system by providing an awareness of:</p> <ul style="list-style-type: none"> • The basic objectives, drafting principles and philosophies set for the whole system. • Each of the eleven contracts in the NEC family and the pricing options within them. • How the contracts are used by reference through use of Contract Data. • Procurement and contracting strategies available for different allocations of risk and motivation. • The role players and their overall responsibilities and liabilities. • The culture and attitude necessary to make best use of NEC for the effective management of a project. <p>This sets the foundation for training delegates in the use of any of the NEC contracts.</p> <p>The remaining day and a half is spent training delegates how to understand and apply the NEC3 Engineering & Construction Contract, June 2005 commonly known as the black book. This includes:</p> <ul style="list-style-type: none"> • Selecting the main and secondary Options to form a contract; completing the Contract Data. • Terminology used, general requirements and the role of the Project Manager & Supervisor. • Use of early warnings and a Risk Register for creative risk avoidance. • Dealing with ambiguity and prevention (force majeure). • Contractor’s main responsibilities including design and subcontracting. • The vital Clause 32.1 programme, planning, float, Completion, take over and acceleration. • Testing and Defect correction before and after Completion • Assessing amounts due and payment under each of the main Options A to F; • Management of change through compensation events; use of the Schedule of Cost Components. • Title, Employer’s risks, insurance, indemnities and repairs. • Termination and resolution of disputes. <p>Throughout the event we will demonstrate how project management techniques have been incorporated into contractual arrangements to stimulate management of the relationship between the parties. We will also demonstrate some of the standard forms we have developed for users to manage the processes and procedures in the contract.</p> <p>The event ends with a session on how to compile a typical ECC3 contract in conformance with the CIDB’s national Standard for Uniformity.</p> <p>Being an introduction to NEC3 and ECC3, the style of presentation is based on lecture sessions, with opportunities for questions and working through illustrative scenarios.</p>		
NEC3 documents required:	Each delegate should have a copy of the NEC3 Engineering & Construction Contract (ECC3), commonly known as ‘the black book’ and it’s Guidance Notes, ‘the brown book’. Copies can be provided at current list prices to delegates who do not have them. Detailed course notes are provided which can be used as a working manual afterwards.	
CPD registration	SAICEcon10/000825/13 for 2 CPD Points	

NOTE: Some customers may prefer to hold the **Introduction to NEC3** part as a one day event on its own specifically for persons new to the NEC system. Similarly the Introduction session could be excluded to provide the full two days for more in depth working through the processes in ECC3 if the majority of delegates have already been through the Introduction in previous NEC training events.

Having obtained the overall awareness provided by Module 1, persons required to draft a contract based on a ECC3 contract (or contractors required to prepare a contract based on NEC3 Engineering & Construction Subcontract) should attend **Module 2** which is a step by step workshop on how to draft the contract using templates developed by **Engineering Contract Strategies (ECS)**. Delegates are encouraged to discuss their current project requirements.

Although based on the ECC3, the techniques and processes described apply equally well to other contracts in the NEC family. Templates developed by **ECS** are available for all NEC family contracts, including the NEC3 subcontracts.

Module 2	Drafting an ECC3 contract from tender to award with special attention to Contract Data and Works Information	1 day
<p>This workshop will focus on the preparation of a works contract based on the NEC3 Engineering and Construction Contract, June 2005 (ECC3). The day is spent working in an interactive manner between delegates and presenter by going through the requirements for:</p> <ul style="list-style-type: none"> • The CIDB Standard for Uniformity in engineering and construction procurement documentation. • The 'three volume' approach to tender documentation & how to get from tender to contract. • CIDB Invitation to & Conditions of Tender, Tender Data and the Form of Offer & Acceptance. • Preparation of ECC3 Contract Data, both parts. Special focus will be given to each item of Data including selection of the conditions of contract, the Adjudicator, weather data, insurance, - and the significance of the Contractor's data in Part 2. • Pricing Data and the different requirements for each main Option. • Preparation of the Works Information. There are over 30 cross references from the ECC3 'black book' to the Works Information and delegates will be cautioned about the problems of inadequate (or too much) Works Information, how its content may differ for each main Option, and the problems caused by ambiguity within a contract. • Dealing with the Contractor's Works Information before award. • Preparation and content of Site Information. The difference between Works Information and Site Information will also be explained. • Compiling the final contract and dealing with tenderers' submissions & qualifications. <p>The Presenter will work through standard MS Word templates which ECS has prepared for the compilation of most Parts within a contract. [The templates are available separately to suit user requirements].</p>		
NEC3 documents required:	Each delegate should bring his copy of the NEC3 Engineering & Construction Contract (ECC3), [the black book] and it's Guidance Notes, [the brown book]. Copies can be provided at current list prices to delegates who do not have them. Workshop notes are provided which can be used later as a working reference manual.	
CPD registration	SAICEcon10/00827/13 for 1 CPD point	

Persons required to administer an ECC3 contract (or provide staff to do so) should then attend Modules 3, 4 and 5 which are designed as interactive workshops to focus on the most important processes within the ECC3. Delegates are encouraged to bring their current working examples for discussion.

As the NEC3 Engineering & Construction Subcontract (ECS3) is back-to-back with the ECC3, these modules will apply equally well to contractors required to administer their subcontracts.

Module 3	The role of the <i>Project Manager</i> and the <i>Supervisor</i> in an ECC3 contract and the agents in other NEC3 contracts	1 day
<p>The day will be spent working in an interactive manner between delegates and presenter by going through:</p> <ul style="list-style-type: none"> • How the <i>Project Manager</i> and <i>Supervisor</i> are appointed by the <i>Employer</i> • How the ECC3 places considerable authority in the hands of the <i>Project Manager</i> and how the contractual role of the <i>Project Manager</i> is defined in terms of the actions and decisions he is to take. • The differences between roles under the contract and roles and duties as an employee of the <i>Employer</i> or an employee of an organization contracted to the <i>Employer</i> to provide <i>Project Manager / Supervisor</i>. • The liabilities, duties and responsibilities of the <i>Project Manager</i> and <i>Supervisor</i>. • The most important actions taken by the <i>Project Manager</i> and the <i>Supervisor</i>, however a full list of them will be provided in the workshop notes. • The skills needed to act in the role of <i>Project Manager</i> or <i>Supervisor</i> with particular reference to programming, administrative and costing skills and a review of how these skills may be obtained from persons allocated to assist the <i>Project Manager</i>. • What the <i>Employer</i> does in terms of the contract and needs to do to support the <i>Project Manager</i> and to monitor his actions. <p>Reference will be made to the roles of the agents in other NEC3 contracts, such as the <i>Employer's Agent</i> in PSC3, the <i>Service Manager</i> in TSC3 and how 'agency' is used in the short contracts such as ECSC3.</p> <p>It is essential that Project Directors, Project Managers, Area Managers Project Engineers Engineering Managers, Procurement Managers, Contract Administrators and Quantity Surveyors attend this event to fully appreciate what the <i>Employer</i> commits the <i>Project Manager</i> and <i>Supervisor</i> for in an ECC3 contract and how they need to be supported accordingly.</p>		
NEC3 documents required:	Each delegate should bring their copy of the NEC3 Engineering & Construction Contract (ECC3), [the black book] and it's Guidance Notes, [the brown book]. Copies can be provided at current list prices to delegates who do not have them. Workshop notes are provided which can be used later as a working reference manual.	
CPD registration	SAICEcon10/00828/13 for 1 CPD point	

Module 4	Programming and planning in NEC contracts	1 day
<p>The project management influence in NEC calls for a high standard of time management in the drive for completing projects on time and within budget. The day will be spent working in an interactive manner between delegates and presenter by going through:</p> <ul style="list-style-type: none"> • Philosophy of programming and planning in the NEC context. • Minimum requirements for the Clause 32.1 programme in ECC3. • Understanding time risk allowances float and who owns the float. • Planned Completion, the Completion Date and Key Dates. • Activities to be shown on the Accepted Programme (Options A and C). • Submissions for acceptance at tender and throughout the contract. • Consequences of not having an Accepted Programme in place. • Links between the Accepted Programme and other provisions in the contract. • Revising the programme and keeping it up to date; dealing with extensions of time. • Method statements for each operation Contractor intends to carry out. • Compensation events and their effect on the programme to be shown by the Contractor in his quotations for compensation events. • Problems in a multi contract project environment. 		

<p>Programme provisions in PSC3 are now similar to ECC3. Provisions in the other NEC3 contracts will be compared.</p> <p>It is essential that persons acting in the role of <i>Project Manager</i> under an ECC3 contract attend this workshop. Also Project Planners and Contract Administrators should attend.</p>	
<p>NEC3 documents required:</p>	<p>Each delegate should bring their copy of the NEC3 Engineering & Construction Contract (ECC3), [the black book]. Copies can be provided at current list prices to delegates who do not have them. Workshop notes are provided which can be used later as a working manual.</p>
<p>CPD registration</p>	<p>SAICEcon10/00829/13 for 1 CPD Point</p>

Module 5	Change management through compensation events	1 day
<p>This workshop has proved to be very popular after completing the Introduction event as it allows more time to consider change management using examples of on job situations. The day will be spent working in an interactive manner between delegates and presenter by going through:</p> <ul style="list-style-type: none"> • Philosophy of change management in NEC contracts (which is quite different to traditional approaches); • Risk register (pre and post award), early warnings and risk reduction meetings; • Listed compensation events, which if they occur may entitle the Contractor to extra time and money providing they are not due to a fault of the Contractor. Such events include changes to the Works Information, adverse weather, and others not doing what the Works Information says they will do; there are 19 such events in ECC3; • Process of notification, its three different categories and associated time bars; • Request for Contractor to submit quotations and effects of not giving early warning; • Process of quotation and assessment of an event using Defined Cost plus the Fee; • Use of the two Schedules of Cost Components; fee percentages and Working Area overheads. • If the Contractor does not quote correctly, the Project Manager assesses the event. • Implementation of a compensation event in each main Option for changes to the Prices, Completion Date and Key Dates. <p>Delegates will be taken through the three main standard form processes developed by ECS for administration of compensation events and are invited to bring actual working examples to the workshop for analysis.</p> <p>As this section of the contract is likely to be where most of the <i>Project Manager's</i> effort will be directed after contract award it is imperative that persons acting in the role of <i>Project Manager</i> together with cost engineers and quantity surveyors attend this event.</p> <p>Delegates will also be introduced to a web based ECC change management system.</p>		
<p>NEC3 documents required:</p>	<p>Each delegate should bring their copy of the NEC3 Engineering & Construction Contract (ECC3), [the black book]. Copies can be provided at current list prices to delegates who do not have them. Workshop notes are provided which can be used later as a working reference manual.</p>	
<p>CPD registration</p>	<p>SAICEcon10/000826/13 for 1 CPD Point</p>	

Module 6	Tendering to an ECC3 contract and setting up subcontracts to it	½ or 1 day
<p>This workshop has been developed especially for contractors required to tender for work based on an ECC3 contract. At the start of the event the presenter will establish what delegates wish to deal with but in any case it will cover:</p> <ul style="list-style-type: none"> • The basic philosophy of how the ECC3 and its back-to-back subcontract, the NEC3 Engineering and Construction Subcontract (ECS3) work. • The principal obligations, risks, liabilities, indemnities and prevention (force majeure). • Review of Z clauses - additional conditions and changes - commonly included by employers. • Completing part 2 Contract Data provided by the Contractor with special reference to the overhead and fee percentages and use of the Schedule of Cost Components. • Compensation events and how they are managed. • Drafting subcontracts using ECS3 and making use of the short subcontract ECSS3 for trades. • The need to inform and train subcontractors. • Appointing the Adjudicator. 		
NEC3 documents required:	<p>Each delegate should bring their copy of the NEC3 Engineering & Construction Contract (ECC3), [the black book]. It would be desirable but not essential to also bring a copy of the NEC3 Engineering & Construction Subcontract (ECS3), the “purple book”. Copies can be provided at current list prices to delegates who do not have them. Workshop notes are provided which can be used later as a working reference manual.</p>	
CPD registration	SAICEcon10/00833/13 for 0.5 CPD Point	

The following modules are designed to introduce delegates to each of the other contracts in the NEC3 family.

As most of the other contracts in the NEC3 family use a structure, terms and procedures similar to the ECC3, delegates who have already attended **Module 1 Introduction to NEC3 and ECC3** will gain an immediate benefit over those who have not.

Module 7	Introduction to the NEC3 Engineering & Construction Short Contract (ECSC3)	1 day
<p>Whilst the ECC3 is designed to procure any type, discipline, complexity or value of engineering and construction works designed by either party, there are many works contracts for which ECC3 would be ‘an overkill’ as many of its procedures would not be needed. The ECSC3 has been provided for these “less sophisticated” situations such as for short duration low value works which are not part of a major project procured using several contracts.</p> <p>Operating divisions of major utilities and mining houses as well as property developers and home owners will find this contract particularly suitable for their numerous small value works contracts and refurbishment projects.</p> <p>This event will describe the complete ECSC3 contract package and make comparisons with ECC3 to understand when it should and should not be used as well as its limitations.</p> <p>Delegates will be taken through its clauses and how to prepare and administer a contract using ECSC3 based on templates and standard forms developed by ECS. Case studies will be included.</p>		
NEC3 documents required:	<p>Each delegate should have a copy of the NEC3 Engineering & Construction Short Contract, June 2005 [the “blue book”] and its Guidance Notes and Flow Charts. Copies can be provided at current list prices to delegates who do not have them. Comprehensive workshop notes are provided and can also be used later as a working reference manual.</p>	
CPD registration	SAICEcon10/000830/13 for 1 CPD Point	

2.2. The service contracts

The NEC3 family caters for the **services** category of procurement through its three services contracts:

- NEC3 Professional Services Contract, June 2005 (PSC3) for the appointment of professionals of any discipline providing their services on a fiduciary basis;
- NEC3 Term Service Contract, June 2005 (TSC3) for appointment of a contractor to provide maintenance or operational services for a facility or infrastructure owner on a continuous or task by task basis;
- NEC3 Term Service Short Contract, September 2008 (TSSC3) for the appointment of a contractor or service provider for the provision of day to day services of a straight forward nature.

Module 8	Introduction to the NEC3 Professional Services Contract (PSC3)	1 day
<p>This latest edition of PSC aligns more closely with the ECC3 in response to a demand from customers using it for appointment of contractors acting in a construction management or EPCM role on behalf of an employer. However the basis of responsibility remains that of reasonable skill and care. Delegates will be introduced to::</p> <ul style="list-style-type: none"> • How the PSC3 is likely to be used; • The selection of main and secondary Options, the four pricing strategies and why there is no pricing strategy based on the value of constructed works; • Switching from one main Option to the other as the project progresses will also be discussed. • All the clauses in the PSC3 including terminology, obligations and responsibilities of the Parties, programming, quality management, payment, compensation events, title and IP, risks, liabilities, insurance, termination and dispute resolution. • Procedures for sub-consulting as well as using the PSC3 as a subcontract;; • Development of the Scope of Work (called the Scope in PSC3) based on the UK's CIC format; • Relationship between PSC3 and the new NEC3 Framework Contract which will also be discussed. <p>Delegates will be taken through the standard forms which have been developed by ECS for use with PSC3, including the Contract Data and Scope framework.</p>		
NEC3 documents required:	<p>Each delegate should have a copy of the NEC3 Professional Services Contract June 2005 (PSC3) commonly known as 'the 'Orange Book' and it's Guidance Notes and Flow Charts. Copies can be provided at current list prices to delegates who do not have them. Comprehensive workshop notes are provided and can also be used later as a working reference manual.</p>	
CPD registration	<p>SAICEcon10/000831/13 for 1 CPD Point</p>	

Module 9	Introduction to the NEC3 Term Service Contract (TSC3) and the NEC3 Term Service Short Contract (TSSC3)	1 day
<p>These contracts are not for a project, but for the appointment of a contractor or service provider to provide a service for a fixed period of time, the “<i>service period</i>”. The service can be continuous, performed at regular intervals, or when instructed on a task by task basis. These are the maintenance contracts in the NEC family. TSC3 will be used for complex services such as maintaining a nuclear power station or operating a baggage handling system whereas TSSC3 will be used more for gardening, security, painting and the like.</p> <p>Most of the day will be devoted to how TSC3 is used with comparisons to the TSSC3 to indicate how the latter may be used for less complex day to day services.</p> <p>Delegates will be introduced to:</p> <ul style="list-style-type: none"> • The broad application of TSC3 and the selection of appropriate main and secondary Options. • Use of Option X19 for performing services on a Task by Task basis. • All the clauses in the TSC3 including terminology, early warning, obligations and responsibilities of the Parties, the Contractor’s plan, quality management, payment, compensation events, risks, liabilities, insurance, termination and dispute resolution. • Procedures for subcontracting as well as using the TSC3 or the TSSC3 as a subcontract; • Development of the Scope of Work, called the Service Information in TSC3. <p>Delegates will be taken through standard forms which have been developed by ECS for use with TSC3, including Contract Data and Service Information and the complete package framework for TSSC3.</p>		
NEC3 documents required:	<p>Each delegate should have a copy of the NEC3 Term Service Contract June 2005 (TSC3) and it’s Guidance Notes. It would be desirable but not essential to have copies of the NEC3 Term Service Short Contract. Copies can be provided at current list prices to delegates who do not have them. Comprehensive workshop notes are provided and can also be used later as a working reference manual.</p>	
CPD registration	SAICEcon10/000833/13 for 1 CPD Point	

2.3. The Supply Contracts

The NEC3 family caters for the **supply of goods** category of procurement through its two supply contracts:

- NEC3 Supply Contract, December 2009 (SC3) for local and international procurement of high value goods specified by the Purchaser and services associated with the supply including design.
- NEC3 Supply Short Contract, December 2009 (SSC3) for local and international procurement of goods under a single order basis or on a batch order basis in contracts which do not require sophisticated management techniques and impose only low risks on both Purchaser and Supplier.

Module 10	Introduction to the NEC3 Supply Contract (SC3) and the NEC3 Supply Short Contract (SSC3)	1 day
<p>Most of the day will be devoted to how SC3 is used with comparisons to the SSC3 to indicate how the latter may be used as a simpler alternative for less complex supplies. The SC3 caters for supply arrangements based on reference to INCOTERMS or based on the Purchasers own arrangements, both referred to as the Purchaser's Supply Requirements.</p> <p>Delegates will be introduced to:</p> <ul style="list-style-type: none"> • How the SC3 is used, including selection of appropriate Options. • Development of Purchasers Supply Requirements whether his own or by use of INCOTERMS. • All the clauses in the SC3 including terminology, early warning, obligations and responsibilities of the Parties, subcontracting, the Suppliers programme, defect management, payment, compensation events, risks, liabilities, insurance, termination and dispute resolution. • Development of the Scope of Work, called the Goods Information in SC3. <p>Delegates will be taken through standard forms which have been developed by ECS for use with SC3, including Contract Data and Goods Information and the complete package framework for SSC3.</p>		
NEC3 documents required:	<p>Each delegate should have a copy of the NEC3 Supply Contract December 2009 (SC3) and it's Guidance Notes. It would be desirable but not essential to have copies of the NEC3 Short Supply Contract. Copies can be provided at current list prices to delegates who do not have them. Workshop notes are provided and can also be used later as a working reference manual.</p>	
CPD registration	SAICEcon10/00832/13 for 1 CPD Point	

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