

November 2000

**New Electricity Trading
Arrangements (NETA) –
Implementation Phase**

**NETA Go Live Decision Making
Indicators**

Table of contents

1. Introduction.....	2
Purpose of this document.....	2
Background.....	2
Informing the Decision Making Process.....	2
Timetable.....	3
Structure of Document.....	3
Contact Point.....	4
2. Go Live in Context.....	5
Physical Readiness.....	5
Technical Readiness.....	6
Commercial Readiness	9
3. NETA Programme Components.....	11
4. Go Live Indicators	13
Introduction.....	13
Indicators Within Programme Delivery Scope.....	13
Industry Readiness Status (Outside of Direct Programme Scope).....	14
ELEXON and NGC Indicators.....	15
Appendix 1 Go Live Target Date – Announcement 27 October 2000	29
Explanation of the Revised Timetable.....	29
Introduction.....	29
Overall Programme	30
Service Delivery	30
Participant Integration Tests	31
Central Systems Integration Tests.....	32
Process Special Tests	32
Pre-Production Running	32

Data Validation and Qualification	33
Legal, Regulatory and Commercial Arrangements	35
Risks and Mitigating Actions.....	35
Appendix 2 Glossary Of Terms	37

1. Introduction

Purpose of this document

- 1.1 The introduction of the New Electricity Trading Arrangements (NETA) will bring significant changes to the way in which electricity is traded in England & Wales. This document explains the basis on which the decision will be made to put NETA into live operation.

Background

Target Go Live date

- 1.2 On 27 October 2000 Ofgem announced that the NETA Programme is working to a new 'Go Live' date of 27 March 2001. To achieve this date, not only have the central systems to be in place and working, but a significant proportion of the anticipated one hundred participants or so will have to be able to communicate with those central systems. In view of this, the Programme will wait until the New Year before making a final decision on this new 'Go Live' date when it can see if satisfactory progress has been made (Appendix 1 explains the revised timetable to the new Go Live target date).

Go Live in Context

- 1.3 NETA Go Live has been viewed by some as the most important date associated with the implementation of the new trading arrangements. It represents the point in time (midnight on the day in question) at which Pool trading ceases and the new balancing and settlement arrangements begin to operate in England and Wales. However, it is important to recognise that the implementation of NETA is part of an ongoing process, with the Go Live day representing one point in a continuum of change that is already well advanced and will continue well beyond the Go Live date itself.

Informing the Decision Making Process

- 1.4 The final decision to put NETA into live operation will be made by the Secretary of State who will take into account the recommendation made to him by the Gas

and Electricity Markets Authority (the Authority¹). The Authority's recommendation will be informed by a consolidated report and a recommendation from the NETA Steering Group,² that details readiness to Go Live against pre-defined criteria.

- 1.5 The consolidated report from the NETA Steering Group will draw together three separate reports – from the National Grid Company (NGC), ELEXON as the Balancing & Settlement Company (BSCCo) and the NETA Programme. Each of the three reports will detail those elements of the new trading arrangements that are within the respective organisation's delivery scope.
- 1.6 The Report to the Authority will form an input to the recommendation to be provided by the Authority to the Secretary of State. The Authority will also need to take into account its statutory duties under Section 3 of the Electricity Act 1989 (as amended by the Utilities Act 2000) and any other information relevant to the recommendation. The Secretary of State will then make his decision in light of the Authority's recommendation, his own statutory duties and any other relevant information available to him.

Timetable

- 1.7 On the basis of a Go Live date of 27 March 2001, it is planned to deliver the final Consolidated Report to the Authority on 7 March 2001. The Authority, in turn, plans to provide its recommendation to the Secretary of State on 9 March 2001. The Secretary of State's decision by 16 March 2001 would allow the Pool Cut-over³ plan to start and for Go Live to happen on 27 March 2001. By the 5th day of Pool Cut-over, Pool decommissioning will be sufficiently advanced such that, from a Pool systems' point of view, the point of no return will have been reached.

Structure of Document

- ◆ Section 2: sets the NETA "Go Live" date in its wider context;

¹ See Appendix 2 (Glossary), for an explanation of this and other terms used in this document.

² Set up as part of the Ofgem/DTI NETA Programme (See Appendix 2 for more information).

³ Transfer of operations from the Pool to NETA.

- ◆ Section 3: provides a description of the key components that form the NETA Programme;
- ◆ Section 4: lists the indicators that will be reported by the Steering Group to the Authority, showing readiness of the key components to Go Live;
- ◆ Appendix 1: contains the timetable to Go Live;
- ◆ Appendix 2: contains a Glossary.

Contact Point

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2. Go Live in Context

- 2.1 It is widely recognised that the new trading arrangements represent a radical change to the Pool-based trading arrangements introduced in 1990. The arrangements incorporate a departure from a system of central control (apart from the balancing arrangements, which it is anticipated will represent a small proportion of the total market) to one in which individual companies take responsibility for, and control of, their own physical positions. By introducing the concept of 'Gate Closure' for every half-hour, the market moves from one that is day-ahead to one that operates very close to real time.
- 2.2 The move from the Pool to NETA is part of an ongoing process with the Go Live day representing just one point in a continuum of change. To enable better understanding of this process, three elements of the preparations for the move to the new trading arrangements are considered below.

Physical Readiness

- 2.3 It is vital that NGC, as system operator, is confident that the moment to moment balancing of demand and supply on the Transmission System can be operated securely at the start of trading under NETA. To this end, NGC has established a comprehensive NETA Programme designed to ensure that the company is prepared for the new arrangements. The status of this programme, as at October 2000, was that NGC has successfully tested the data transfer systems used to communicate with market participants (the electronic data transfer and logger - EDT and EDL - links that interface between NGC and power stations and energy management centres). It has completed its own business process interface tests (BPITS). NGC has also started its own End-to-End tests with Market Integration Testing (MIT) participants and has completed these tests with two parties. In addition, NGC intends to operate a system of parallel running for a seven week period immediately prior to Go Live to give further assurance that system operation will be secure under the new arrangements.
- 2.4 Under parallel running, participants will submit offers into the Pool at the day-ahead stage, as at present. NGC will then request participants to submit initial and final physical notifications on the basis of the Constrained Schedule

produced by the scheduling algorithm GOAL. Participants will also provide Balancing Mechanism offers and bids during this period of parallel running. In the event that NGC wishes a generator to depart from its generation position established by the Constrained Schedule (something that happens on a daily basis under the Pool), NGC will accept Balancing Mechanism offers and bids to effect the change⁴. This period of parallel running will therefore give generators (and any demand side participants that wish to take part in the parallel running tests) experience of submitting physical notifications on a timely basis half hour by half hour. It will also provide operational experience of posting offers and bids in the Balancing Mechanism and of responding to acceptances of such offers and bids by NGC. In this way parallel running will demonstrate participants' ability to play their part in maintaining the secure operation of the system.

- 2.5 At the start of the seven-week parallel running, attention is likely to be focussed by participants and NGC on ensuring that the physical control of generation and demand operates as expected under NETA. Communication and operational links between power stations, energy management centres and NGC will already have been tested in the interface and integration testing. However, parallel running will further prove the ability of systems and procedures used both by participants and NGC to perform consistently over a seven-week period, building towards 24-hour trials.
- 2.6 Besides the Balancing Mechanism trials, all the NETA central systems will be available 24 hours per day during Unified Pre-Production⁵ to accept any additional NETA data the participants wish to trial.

Technical Readiness

- 2.7 Considerations of technical readiness in the lead up to Go Live may be considered under three principal categories.
- 2.8 The first category concerns the systems and processes of the central service providers. The four principal service providers are Logica, EPFAL, NGC and ELEXON (responsible for the "Stage 2" processes). For all central service

⁴ The acceptances will relate only to volumes; cashing out any such changes will still take place under Pool Rules.

⁵ See Appendix 1 for details of the approach to testing and Pre-Production running.

providers NETA has involved the development of major new computer systems and processes and the Programme has included provision for these to be tested both individually and together. These tests should be thought of as an on-going process designed to give increasing confidence that the systems and processes fulfil their NETA functions satisfactorily. Inevitably, during the early stages of testing, systems problems will arise, necessitating fixes and software patches. This does not reflect a willingness to tolerate faults and unnecessary patches, but the inevitable reality of the situation where genuine system problems necessitate action.

- 2.9 The second category of technical readiness concerns participant systems. Participants need to have the necessary interfaces in place to communicate with central systems consistent with the role or roles that they wish to play in the market and the ways in which they wish to manage their business. At one extreme would be a non-physical participant that always required its trading counter-parties to notify contracts to central systems. For such a participant, communications with central systems would be restricted to registration activities that would only need to be updated occasionally and to the management of funds flows associated with imbalance charges that would be payable in the unlikely event that the trader's net contract position was not zero. At the other extreme would be a participant wishing to undertake a broad range of roles in the market, such as generation (including participation in the Balancing Mechanism), supply, and trading, with the participant taking responsibility, at least for part of its activities, for contract notification and meter registration. Central systems communications for this type of participant would involve a range of interfaces with central service providers, several of which would need to be operational essentially in real time.
- 2.10 Some participant systems and procedures will extend far beyond that necessary simply to interface with the central systems. Many participants will choose to automate the communication with central systems using their own technology solutions to act as hubs to control flows and manage the data transfer processes. Some companies are also using the introduction of NETA to revisit completely the way in which they measure, control and manage the risks associated with participating in a competitive wholesale market. Systems to automate front office activities are being implemented which enable participants to enter

bilateral trades and accepted Balancing Mechanism (BM) offers and bids directly into their own trading system records. Mid-office solutions to measure and control risks are being implemented by some participants to enable timely metrics such as value at risk and capital at risk to be reported (the latter being particularly important in the management of credit risk). Also, back-office systems that enable participants to audit their trading activities and reconcile cash-out exposure with that reported by central systems are included in the systems being implemented by some participants.

- 2.11 For many participants the systems solutions being implemented for NETA are comprehensive and relatively complex in the way that they interact with the companies' businesses. This means that inevitably, during the initial stages of testing, problems are likely to emerge associated with the interaction between the central systems and participants' own systems solutions. Many of these will be resolved during the testing phases but, in some cases, "work-arounds" will be used as participants take pragmatic decisions focused on being ready for commercial operation under the new arrangements, recognising that some aspects of their systems solutions will be implemented after the start of Pre-Production and, in some cases, after Go Live. Other participants will have their systems solutions fully operational prior to Pre-Production and yet others will have chosen a minimal systems approach, which will do little more than enable the participant to communicate effectively with the central systems appropriate to their own businesses.
- 2.12 The third category of technical readiness concerns the ability of market participants to communicate with each of the central service providers.
- 2.13 The NETA Programme has designed the Participant Interface Tests (PITs) and Central Systems Integration Testing (CSIT), in part, to demonstrate the integrity of participant communications with central systems. These tests do not represent a "once and for all" demonstration that communications are robust, but should instead be thought of as part of a process of giving increasing assurance that the necessary communications will work. By the time the Programme enters Pre-Production there should be a high degree of confidence that communications with central service providers do not represent an impediment to the successful implementation of NETA. This does not mean, however, that there will be no

outstanding issues with regard to communications, or that communication problems will have been reduced to such a level that faults are not considered to be credible. What it does mean is that communications with central service providers operate well and that procedures are in place to deal with problems when they arise.

Commercial Readiness

- 2.14 The third element of the preparations for the move to NETA concerns commercial readiness. This builds upon the discussion of technical readiness of participant systems in Paragraphs 2.9 and 2.10. It is not sufficient just to have the necessary systems; participants also need to develop commercial strategies.
- 2.15 For all participants, NETA represents an environment of new risks and new opportunities. The emphasis of the new arrangements is on the ability of participants to manage their own physical and commercial positions. The corollary of this is that participants who are unwilling or unable to manage their own positions (or to engage others to do so on their behalf) will be exposed to imbalance cash-out.
- 2.16 A number of different, though not mutually exclusive, ways of preparing commercially for the introduction of NETA are available to participants. Some will choose to adopt a broadly based and comprehensive approach to risk management under the new arrangements, supported as necessary by appropriate systems. Some participants will adopt what they may consider to be a relatively simple approach, in which they attempt to cover their physical positions as closely as possible at all times with contracts. In the event that a significant mismatch arises, they will accept the exposure to imbalance cash-out. Other participants may elect to contract to remove all risk of exposure to cash-out in return for a contract fee that would be expected to incorporate a premium for removing such risks.
- 2.17 It is to be expected that all participants will prepare for the new arrangements by initiating the appropriate training and orientation programmes for their staff consistent with the commercial strategy adopted, including exercises to simulate commercially the way in which they will operate post Go Live. It is important to recognise that the development by each participant of a commercial strategy for

NETA along with its associated training programme are not dependent on the timetable established by the NETA central programme for testing and Pre-Production. Many participants are already well advanced in the implementation of their own programmes with staff now having a keen awareness of the important commercial changes that NETA will bring and a good understanding of their roles and responsibilities under NETA. The onus is on participants being ready for NETA. This is consistent with the confirmation on a number of occasions by Ofgem and DTI that the decision to Go Live will not be based on the preparedness of the slowest participant. It also reflects the current reality that many participants have already made very significant progress.

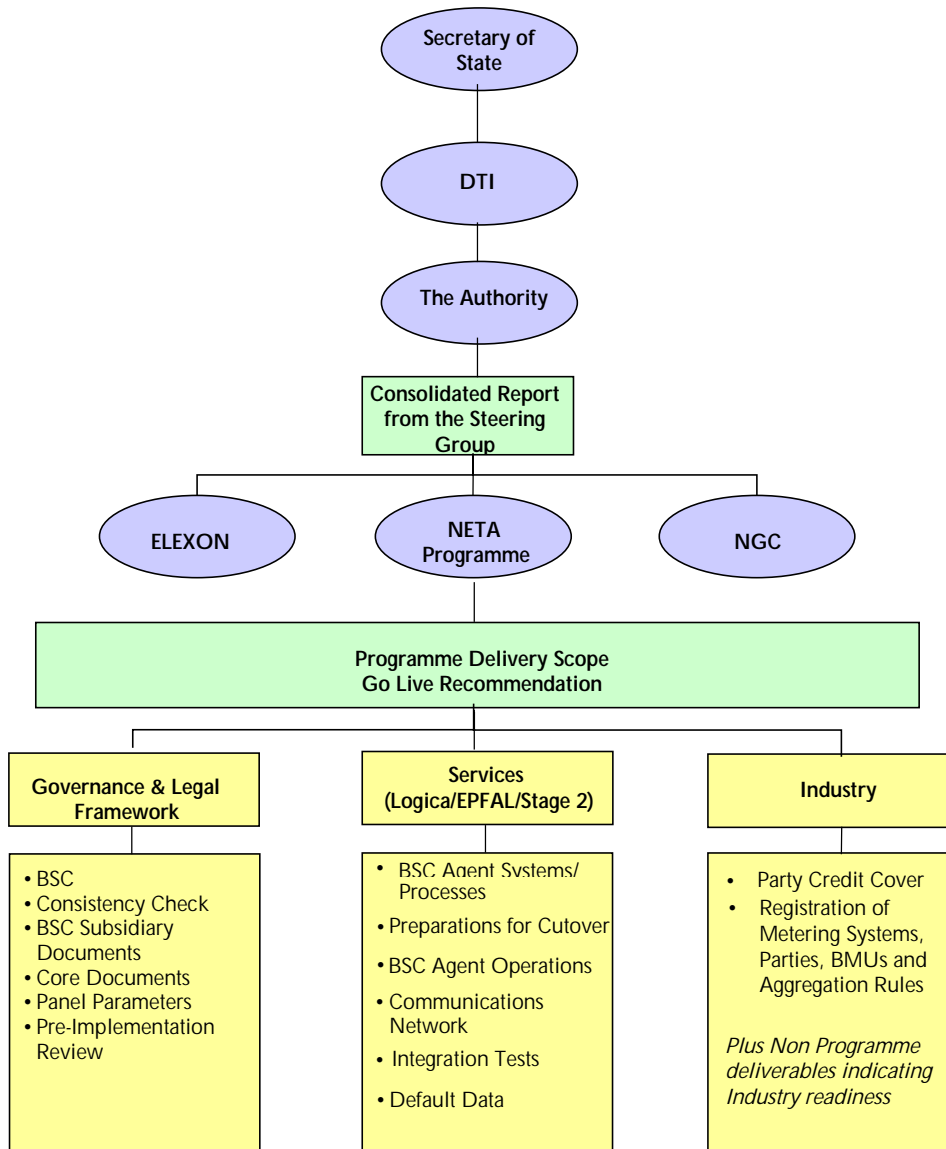
- 2.18 As in other areas, the commercial strategies adopted by participants are likely to be characterised by a process of continuous development in which Go Live is just one point on a continuum of change. For example, in the period immediately following Go Live, many participants may choose to manage the commercial risks to which they are exposed in a relatively simple manner. Thus, even a participant that expected to fulfil a wide range of roles in the market, and had put systems and procedures in place to notify contracts and to measure and manage the risks to which it was exposed, might nonetheless choose to operate in a restricted way both during Pre-Production and immediately post Go Live.
- 2.19 A participant who was pursuing this strategy would probably not wish to notify contracts very close to Gate Closure at the start of Go Live. As confidence in its systems and procedures grew and with a greater understanding of the way in which the market in general was likely to develop close to real time, the participant might progressively seek opportunities that would require contract notification closer to Gate Closure. Also, in the early stages of NETA, some participants may wish to operate with very low risk exposure. Over time, as greater experience of the market is gained and a better appreciation of the prices and volatilities in the BM and forward markets is developed, commercial strategies designed to extract more value from the wholesale market may be adopted.

3. NETA Programme Components

- 3.1 The Go-Live programmes of the NETA Programme, ELEXON and NGC are each based upon the delivery of a number of key components.
- 3.2 In the case of the NETA Programme, the components have been chosen so as to provide a comprehensive list of all the elements necessary for the live operation of NETA.
- 3.3 For the purposes of defining appropriate indicators, the NETA Programme components have been categorised into three areas:
- i) ***Governance and Legal Framework:*** These are the indicators that provide assurance that the framework within which NETA will operate is in place;
 - ii) ***Central Services:*** These include central systems and processes, the networks over which communications take place, and the operation of all of these. A number of indicators are identified that provide assurance that the central services are ready to support the introduction of the new arrangements; and
 - iii) ***Industry:*** There are formal (hard) indicators, which report on specific metrics under the control of the Programme, and informal (soft) indicators, which report other aspects of industry readiness. The ability of the industry to participate in the new arrangements and communicate with the central systems is vital to the success of NETA.
- 3.4 Figure 3.1, overleaf, lists the components under each of the three component areas that will be reported by the NETA Programme. It also illustrates how these components feed into the Go Live recommendation from the Steering Group to the Authority, together with the wider decision making process.

Figure 3.1

How the NETA Programme Components feed into the Wider Go Live Decision.



3.5 Likewise, the Go-Live programmes of ELEXON and NGC are each based upon the delivery of a number of key components, as listed in Section 4.

3.6 Across the three organisations, specific indicators have been developed for each component, as detailed in Section 4. It is these indicators that provide the qualitative and quantitative measures against which the delivery of each component is assessed. The indicators provide an insight into the readiness of each of the components, which together make up the new trading arrangements.

4. Go Live Indicators

Introduction

- 4.1 The Go Live recommendation will come after a period of continuous assessment. The status of the indicators listed in this paper will provide an insight into the readiness of individual components of the new trading arrangements and the risks associated with implementation. In total, the status of the indicators help to provide a guide to the readiness to Go Live. The indicators allow for an analysis of readiness to be completed, where measurable results are compared to pre-determined threshold levels.
- 4.2 Indicators will be monitored over the weeks leading up to the Go Live decision being made. Once an indicator passes a minimum threshold level, sufficient information will be available to allow a risk assessment to be completed. The indicator will continue to be tracked over time and the risk assessment updated, until it passes a further threshold, where there is sufficient confidence that the criterion has been met such that a risk assessment is no longer required.
- 4.3 Wherever possible, actual outcomes rather than forecasts will be used to measure performance.

Indicators Within Programme Delivery Scope

- 4.4 These indicators are specific to the NETA Programme recommendation, forming an integral part of the wider joint recommendation from the NETA Programme, NGC and ELEXON.
- 4.5 Table 4.1, towards the end of this Section, details the NETA Programme indicators. When used in practice, the table will show the associated indicators for each component area and the current status of that indicator. An indicator will either be red, amber or green:
- ◆ **Red (*left hand column*):** signals that there is insufficient information against which to assess the risk of implementing NETA from Go Live;
 - ◆ **Amber (*middle column*):** signals that the minimum threshold level has been reached for the indicator in question and that a risk assessment can

be performed. A "★" shows the position of the indicator in the risk assessment range, which can be tracked over time to ensure that it is moving to the right in accordance with the plan. The purpose of risk assessment is to give an understanding of the risk of going live given the current status (i.e. having not achieved the Go Live threshold). The risk assessment could take a number of forms, dependent on the stage in the process of the indicator in question. For example, in the early period, the assessment may simply be a forecast that the indicator will turn green by Go Live. In other cases, it is likely that a more detailed risk assessment will be required. Any resulting decision would be one based on informed judgement. Failure to reach the Go Live threshold does not necessarily signal that a positive Go Live decision could not be taken; or

- ◆ **Green (*right hand column*)**: signals that the indicator has met the listed Go Live threshold, such that no further risk assessment is necessary.

4.6 In the final Go Live Decision Making Indicators Consolidated Report and Recommendation to the Authority (7 March 2001), any remaining red indicators would signal a serious risk, rather than just denoting insufficient information. For any red or amber indication, a full risk assessment, including where relevant remedial action or contingency arrangements, will be included in that final Report.

4.7 It should be noted that in all the tables that follow, the current status shown is for illustration only of how the table presentation works and should not be seen as representing the actual current status of any indicator.

Industry Readiness Status (Outside of Direct Programme Scope)

4.8 There are a variety of information sources relating to industry readiness. The primary focus here is on commercial readiness, with the principal information sources including:

- ◆ feedback from the NETA Participant Support function, with particular emphasis on reports from the Account Managers of the Implementation and Testing work-streams (given their focus on supporting Participant delivery);

- ◆ responses to questionnaires;
- ◆ analysis of qualification test results; and
- ◆ feedback from industry service providers.

4.9 The Programme intends to use all these sources, as appropriate. The use of questionnaires will continue to be a feature throughout the remaining period. This will supplement the information obtained through the new partnership approach to implementation between industry and the Programme, where Participant Support Managers will work closely with the industry to assist participants in becoming operationally ready.

4.10 In addition, prior to the final Go Live recommendation, the Programme will ask all participants to respond to a series of detailed questions relating to readiness. To provide the necessary assurance of quality in the responses, the Programme will require this final questionnaire (or "Participant Report") to be signed off at Company Director level as a true and accurate reflection of readiness.

4.11 It has been decided not to use formal indicators to show industry readiness, other than those directly within the Programme scope, as listed in Table 4.1. There are two reasons for this. First, it is not appropriate for the NETA Programme to take a definitive view on the preparedness of industry participants, as such a view can only properly be taken by each participant in the light of detailed knowledge of its own business. Second, some participants may be unwilling to share the very detailed information on preparedness that would inevitably be required if the Programme were to attempt to draw up specific industry indicators.

ELEXON and NGC Indicators

4.12 At Go Live, ELEXON, as BSCCo, must be ready to meet its obligations under Section C of the Balancing and Settlement Code. The Authority will be looking for assurance from ELEXON that it is ready to provide and procure the facilities, resources and services required for the proper, effective and efficient implementation of the Code. In particular, the Authority will be seeking written assurance from the Chairman of ELEXON that from Go Live ELEXON will be

able to exercise its powers and discharge its functions and responsibilities with a view to achieving the objectives set out in Section B1.2.1 of the Code (construed as though references to the Panel were to BSCCo). This says that the BSCCo shall conduct its business under the Code with a view to achieving a number of objectives:

- that the Code is given effect fully and promptly and in accordance with its terms;
- that the Code is given effect in such a manner as will facilitate achievement of the objectives set out in Condition 7A(3)(a) to (c)⁶ of the Transmission Licence;
- that the Code is given effect without undue discrimination between Parties or classes of Party;
- that the Code is given effect as economically and efficiently as is reasonably practicable; and
- that there is transparency and openness in the conduct of the business of the Panel and BSCCo.

4.13 Key indicators relating to ELEXON's readiness in relation to the Code are listed in Table 4.2. In addition, the Authority will be seeking ELEXON's assurance that it is able to meet its obligations relating to Supplier Volume Allocation (previously known as Trading Stage 2). This is the process by which the amount of electricity produced or consumed in each half hour at each Grid Supply Point (GSP) Group for each BM Unit, made up of metering systems registered in Supplier Meter Registration Service (SMRS), is determined.

4.14 Similarly, the Authority will be seeking written assurance from NGC that it will continue to meet its licence obligations from Go Live. In general, the Authority's interest will be focused on receiving adequate assurance from NGC that security of supply will be maintained. In particular, the Authority will be seeking assurance from NGC that from Go Live it will be able to comply with Conditions 7A (Balancing & Settlement Code) and 7B (Procurement & Use of

⁶ Note that this reference may change when Standard Licences are introduced. These are currently the subject of a consultation paper, "Utilities Act, Standard Licence Conditions, Volume 1, Final Proposals". The paper is available on the Ofgem website (www.ofgem.gov.uk) together with Volume 4 which contains a draft of the proposed revised standard conditions for electricity transmission.

Balancing Services) of its Transmission Licence⁷, together with its statutory obligations under the Act.

- 4.15 Condition 7A states that the Licensee shall at all times have in force a BSC (including a modification process), setting out the terms of the balancing and settlement arrangements, designed such that they facilitate achievement of the following objectives:
- the efficient discharge by the Licensee of its Licence obligations;
 - the efficient, economic and co-ordinated operation by the Licensee of the Licensee's Transmission System;
 - promoting effective competition in the generation and supply of electricity, and promoting such competition in the sale and purchase of electricity; and
 - promoting efficiency in the implementation and administration of the balancing and settlement arrangements.
- 4.16 Condition 7B of the Transmission Licence states that the Licensee shall operate its Transmission System in an efficient, economic and co-ordinated manner. In summary, it says that the Licensee shall not discriminate as between any persons or classes of persons in its procurement of Balancing Services. It lays out how NGC must detail on an annual basis its Balancing Services requirements for the next twelve months and how it must report to the Authority on Balancing Services procured for the previous twelve months. In addition, prior to Go Live, the Licensee must prepare an approved statement setting out the principles and criteria by which the Licensee will determine which Balancing Services it will use (and to what extent) to assist in the operation of its Transmission System. This statement must be reviewed at least annually in an open, consultative manner and the Licensee must report on the manner in which, and the extent to which, it has complied with the statement then in force.
- 4.17 NGC's indicators are listed in Table 4.3.

⁷ Note that these references may change when Standard Licences are introduced.

Table 4.1 NETA Programme Indicators (*Note – results shown are for illustration only*)

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
			50%	> - - - - > - - - - > - - - - >	100%
Governance & Legal Framework					
BSC and Subsidiary Documents	1	Percentage of modifications to the BSC and its Subsidiary Documents identified as “essential for Go Live” that have been implemented	50%	★	100%
Consistency Check	2	Percentage of material inconsistencies which have been resolved	50%		100%
Results of Assurance Review	3	Percentage of issues identified “as essential for Go Live”, which have been resolved.	50%	★	100%
Core Industry Documents	4	Percentage of modifications identified as being necessary to Core Industry Documents that have been made	50%		100%
Contingency Arrangements	5	Percentage of Indicators where a risk assessment is required for which adequate contingency arrangements have been developed.	50%		100%

Component	Go Live Indicator	Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
			> ----- > ----- > ----->	
Services				
BSC Agent Operations	6	Given no Class 1 Errors, the percentage of Class 2 Errors, which have been resolved from all Operational Readiness Tests.	50%	95%
	7	Percentage compliance of BSC Agents with their contractual service levels during the period of unified Pre-Production running.	50%	100%
	8	Percentage of all BSC Operating Services available	50%	100%
	9	Percentage of BSC Agent Support & Maintenance Services available.	70% of all critical services unavailable	All available

Component	Go Live Indicator	Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
			> ----- > ----- > ----->	
	10	BSC Agent contracts agreed and signed	More than one contract remains unsigned with significant issues outstanding	All agreed and signed
	11	Percentage of total data to be acquired that has been validated	50%	100%
BSC Agent Systems/ Processes	12	Given no Class 1 Errors, the percentage of Class 2 Errors, which have been resolved from critical processes in Service Provider tests.	50%	95%
	13	Given no Class 1 Errors, the percentage of Class 2 Errors, which have been resolved from critical processes in Central Systems Integration testing.	50%	95%
	14	Given no Class 1 Errors, the percentage of Class 2 Errors which have been resolved from critical processes in Pre-Production	50%	95%
	15	The testing compliance matrix (which shows how the objectives of testing are met by a combination of the different stages of testing being performed by the overall Programme) demonstrates that systems and processes have been tested.	One or more critical processes remain untested	All systems and processes have been successfully tested

Component	Go Live Indicator	Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
			> ----- > ----- > ----->	
	16	Percentage of Change Requests (CRs) that are “essential for Go Live” which have been resolved	50%	100%
	17	Percentage of default data (including Panel data) that is loaded into relevant systems	50%	100%
	18	Pre-Production settlement runs are successfully executed: <ul style="list-style-type: none"> • Uninterrupted; and • No unexplained material differences in metered data readings between those of the BSC’s Central Data Collection Agent (CDCA) and the Pool’s Central Data Collection System (CDCS); 	Fails to run uninterrupted for a single settlement day cycle and/or there is a material difference between CDCA and CDCS.	Minimum of 3 settlement day cycles and no material difference in the total energy flows between CDCA and CDCS
Communications Networks	19	Percentage of all Original Parties which have successfully completed testing	50%	90%
	20	Operational readiness of Logica’s network confirmed on the basis of the percentage of total volumes for Original Parties and known applicants that the network can now handle	50%	95%

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ☆ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
				> - - - - > - - - - > - - - - >	
Preparations for Cut-over	21	Cut-Over Plan is complete	No appropriate cut-over plan in place		Appropriate cut-over plan in place

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
				> > > >	
Industry					
Party Credit Cover	22	Percentage of all Parties who intend to trade that have lodged credit with the Funds Administration Agent (FAA)	50%		100%
Registration of Metering Systems, Parties, BMUs and Aggregation Rules	23	Percentage of all Trading Parties which have completed Registration	50%		100%
	24	Percentage of the total energy volume of all Original Trading Parties that has completed Registration	50%		100%
	25 26	Percentage of all Metering Systems, BM Units and Aggregation Rules in respect of Relevant Energy Flows ⁸ in the Central Volume Allocation (CVA) which have been registered and validated as a complete set Percentage of all Default BM Units belonging to all Supplier Volume Allocation (SVA) Suppliers for which registration is complete Percentage of total volume of all Default BM Units belonging to all SVA Suppliers for which registration is complete	50% 50%		90% 90%
		⁸ Relevant Energy Flows as defined in the Transition Document.			
Office of Gas and Electricity Markets			23		November 2000

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ★ <i>shows position of indicator in the range</i> <i>(Results shown are for illustration only)</i>	Indicator level at which no further risk assessment is required prior to Go Live
				> > >>	
	27	Percentage of Original Parties participating in Pre-Production	50%		90%
	28	Percentage of the total energy volume belonging to Original Parties in Pre-Production	50%		90%
Qualification Tests	29	Percentage of Original Parties completing Qualification Tests	50%		90%
	30	Percentage of the total energy volume belonging to Original Parties who have completed Qualification Tests.	50%		90%

Table 4.2 ELEXON Go Live Indicators (*Note – results shown are for illustration only*)

In providing the Authority with written assurance that from Go Live ELEXON will be able to exercise its powers and discharge its functions and responsibilities with a view to achieving the objectives set out in Section B1.2.1 of the Code, ELEXON will monitor and report on the following key indicators:

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
				> ----- > ----- > ----- >	
Action Task Force	1	Action Task Force in place to support resolution of problems from Go Live.	No Task Force Established.		Full strength Task Force in place.
BSC Obligations	2	ELEXON understands its obligations under the BSC and has the processes in place to support them.	50% of processes in place.	★	100% of processes in place.
Panel	3	Panel Established	No Panel.	★	Panel established and fully operational.
	4	Percentage of parameters that the Panel is required to set under the BSC which has been set.	80%	★	100%
ELEXON Funding	5	Percentage of budgeted funding in place at Go Live	50%		100%
Credit Warning	6	Credit warning process in place	Minimal credit warning process in place.	Limited credit warning process in place.	Full credit warning process in place.

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ★ <i>shows position of indicator in the range (Results shown are for illustration only)</i>	Indicator level at which no further risk assessment is required prior to Go Live
				> - - - - > - - - - > - - - - >	
Contracts	7	Essential operational contracts in place	50%		100%
Modifications	8	Modifications process in place			Full Process in place.
Disputes	9	Disputes service implemented	Service implemented that is able to handle 50% of projected number of disputes.		Service implemented that is able to handle 100% of projected number of disputes.

Table 4.3 NGC Go Live Indicators (Note – results shown are for illustration only)

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
				> ----- > ----- > ----- >	
Communications networks	1	NETA Electronic Data Transfer (EDT) Data Transfer Systems in place	< 80%		95%
	2	NETA Electronic Data Logger (EDL) systems in place	< 80%		90%
Ancillary Services (AS)	3	AS contracts in place	Strategic Warming Services and Standing Reserve contracts in place	Some contracts with principal parties ★	Contracts with most participants
	4	Essential Services in place (mandatory AS)	< 75%	★	90%
Testing	5	Central Systems Integration Tests (CSIT) / Process Special Tests (PST) ⁹ successful	Key test failed	Some non-critical tests failed ★	All tests at pass/conditional pass
Parallel running trials	6	BSC parties registered for Pre-Production	< 75%		95%
	7	Participation level in last 5 weeks of Pre-Production	85% of 2 shifting and peak Plant, 75% of baseload		95% of 2 shifting and peak Plant, 85% of baseload
⁹ See Appendix 1 for details.					

Component	Go Live Indicator		Indicator level at which risk assessment may begin	Risk Assessment Required ★ shows position of indicator in the range (Results shown are for illustration only)	Indicator level at which no further risk assessment is required prior to Go Live
				> ----- > ----- > ----- >	
	8	Parallel running trials successful	< 4 hours continuous NETA despatch		> 8 hours continuous NETA despatch
Legal, licence and Grid Code requirements	9	Implementation Scheme	Key requirements not agreed	Some non-essential requirements not agreed ★	Key requirements agreed
	10	Implementation plan/roles agreed	Plan/roles not clear	Some inconsistencies between NGC plan and Implementation plan ★	Plans consistent with NGC plan
	11	Grid Code changes	Key codes not agreed	Some non-essential code changes not agreed ★	All changes agreed
	12	Licence/Grid Code derogations agreed (if any are necessary)	Not agreed		Formal agreement
Commercial arrangements	13	Revenue recovery Transmission Network Use of Systems (TNUoS) and Balancing Services Use of System (BSUoS) charging	No adequate systems/arrangements	Some arrangements or contingencies in place ★	Adequate systems/arrangements

Appendix 1 Go Live Target Date – Announcement 27 October 2000

Explanation of the Revised Timetable

Introduction

- 1.1 The revised Programme plan contains the high level tasks, dependencies and milestones through to Go Live. The target completion date is 27th March 2001.
- 1.2 The plan details the new dates and duration of the different workstream activities and the objectives for each of these workstreams.
- 1.3 The high level risks and their mitigating actions are detailed towards the end of this Appendix.
- 1.4 The new plan is underpinned by a new strategy. This new strategy impacts three areas; Testing, Baseline and Pre-Production Running.

Testing

- 1.5 The main element of testing will focus on the Central Service Providers (CSP) to prove that the new systems and processes will support the central trading arrangements.
- 1.6 The key change is that industry participants will be de-coupled from this test element. An additional stream of technical and business support labelled 'Participant Support' will commence to work with participants (on site if necessary) to provide assurance that participant systems are consistent with the core systems.
- 1.7 Testing of central interfaces with a sample of industry participants will be completed against the new baseline.

Baseline

- 1.8 Issues arising from previous test runs, helpdesk queries and document inconsistencies are being addressed and will be resolved in a new issue of the Interface Definition Document (IDD) and Programme Baseline. The new baseline will underpin all future tests and implementation activities.

Pre-Production Running

- 1.9 Ongoing work to define the Programme Go Live criteria has recognised that the original duration was too short to provide the required level of assurance. In the revised plan, the Unified Pre-Production running will last six weeks, with four weeks in advance to assemble and prepare 'as live' production environments.

Overall Programme

Objectives

- 1.10 The overall objective is to deliver NETA to time, cost and quality.
- 1.11 NETA is defined to be:
- ◆ The Balancing and Settlement Code and its subsidiary documents.
 - ◆ Core Industry Documents.
 - ◆ The Implementation Scheme.
 - ◆ The systems, process and infrastructure associated with ELEXON and its Service Providers, NGC and Participants.
- 1.12 The key objectives of the major NETA components are described in the following sections.

Service Delivery

- 1.13 The objective of Service Delivery is:
- ◆ To deliver systems (associated with ELEXON Service Providers) into the Participant Integration Test (PIT) environment
 - ◆ To deliver the process elements of the services (again associated with ELEXON Service Providers) into the Central Systems Integration Tests (CSIT)
 - ◆ To deliver all elements of the services (associated with ELEXON Service Providers) into the Pre-Production environment.
- 1.14 Four activities are required to deliver the above objectives:
- ◆ System Testing

- ◆ Service Provider Integration Testing
 - ◆ Assurance Review
 - ◆ Network Infrastructure.
- 1.15 The objectives of System Testing are to prove the functionality of Logica systems, as defined in the relevant System Specifications and to prove the functionality of EPFAL Systems, as defined in the relevant System Specifications.
- 1.16 The objectives of Service Provider Integration Testing are to prove the interfaces between the various Logica systems and processes, as defined in the Logica Interface Design Document, to prove the processes within the Logica environment and to prove both of the above in respect of EPFAL.
- 1.17 The objective of the Assurance Review is to establish the extent to which the System Delivery objective has been achieved and, as a logical consequence, whether the CSIT and PIT entry criteria have been met.
- 1.18 The objective of the Network Infrastructure activity is to provide an operational communications infrastructure such that a sufficient number of participants are able, firstly to enter PIT and secondly, to undertake Qualification.

Participant Integration Tests

- 1.19 The objective of the Participant Integration Tests (PIT) is to prove the interface design between the central Service Providers and participant systems, and the interpretation of the IDD is consistent between these participants.
- 1.20 To prove these electronic interfaces a series of tests will be performed with external participants. These tests will also prove the processes and documentation for use in Qualification. The intention is to use the previously run BPIT tests with additional but non-critical tests where required.
- 1.21 PIT will comprise of three stages to be run sequentially:
- ◆ Preparation
 - ◆ PIT Initial Execution
 - ◆ PIT Formal Execution

Central Systems Integration Tests

- 1.22 The objectives of the Central Systems Integration Tests (CSIT) are to prove the interfaces between Logica, EPFAL, NGC and ELEXON, as defined in relevant baseline documents, and to ensure the new systems can support the business processes against agreed documents (including BSC & Subsidiary documents).
- 1.23 During CSIT, the bid-to-bank business processes will be proven, with at least one reconciliation run. It will therefore deliver proven core trading arrangements into the Pre-Production and Qualification and Data Acquisition environments.
- 1.24 Additional assurance will be sought that routine process calculations are correct, and proven day to day processes are available prior to use in Pre-Production.
- 1.25 The scope of CSIT will include all trading flows but with a focus on the core Service Providers, input and output from external participants will be simulated. The industry participants will be de-coupled from the execution of CSIT.

Process Special Tests

- 1.26 PST is a continuation of CSIT focusing on the non-daily/exception processes. The objective is to prove that these NETA Processes operate successfully across CSP and participants against agreed documents, and to give further assurance that routine process calculations are correct.
- 1.27 Additional test scenarios will cover exceptional circumstances (e.g. Disputes process) to deliver proven processes into the ELEXON environment (i.e. the live environment). Real, rather than modelled industry participants will be involved during PST.
- 1.28 The enduring registration process and walkthroughs of tests will form part of the PST scope of activities.

Pre-Production Running

- 1.29 The objective of Pre-Production is to deliver live trading arrangements.
- 1.30 Four activities are employed to deliver this objective. Assembly, Start-Up, Unified Pre-Production and Cutover.

- 1.31 The objectives of the Assembly activity are to establish the operational platforms and to populate the systems with standing data, in accordance with the agreed baseline.
- 1.32 The objectives of Start-Up are to populate the operational systems with transactional data, to start the integrated central services and to integrate all original participants.
- 1.33 The objectives of Unified Pre-Production are to confirm the operational readiness of all central services and of a sufficient number of participants and to confirm that the arrangements provide a full allocation of energy.
- 1.34 It should also be noted that the achievement of the above objectives should enable the Go-Live Decision Making Indicators to be achieved such that the Go-Live decision can be taken.
- 1.35 The objective of Cutover is to transfer all systems, data and processes from the Pre-Production environment to the Live environment.

Data Validation and Qualification

- 1.36 The objective of the Data validation and Qualification workstream is to deliver a minimum number of Qualified participants and an associated minimum set of standing data into the Pre-Production environment and to provide a Qualification service for participants up until Go-Live.
- 1.37 Three activities are employed to deliver this objective:
- ◆ Data Acquisition and Validation
 - ◆ Data Migration
 - ◆ Qualification
- 1.38 Data Acquisition and Validation will co-ordinate the feed of all standing data into a holding database for a minimum set of participants. This will enable the operation of settlement, and the validation of participant data to confirm the adequacy of Meter Technical Details and Aggregation Rules.
- 1.39 The objective of Data Migration is to send the above standing data to the Pre-production environment.
- 1.40 The objective of Qualification is to qualify the above participant systems and interfaces and to enable other participants to undertake Qualification.

Legal, Regulatory and Commercial Arrangements

- 1.41 The objective of the Legal, Regulatory and Commercial Arrangements workstream is to deliver the legal, regulatory and commercial framework that enables the new Trading Arrangements to operate.
- 1.42 The activities to achieve this are:
- ◆ Work on Additional BSC changes (as specified in the Implementation Scheme).
 - ◆ Completion of transitional Code Modifications (those falling under section G5.3 of the Implementation Scheme)
 - ◆ Finalisation of BSC Subsidiary Documents (including BSC Procedures.)
 - ◆ Support to the update of the BSC to include sections on Supplier of Last Resort, Emergencies and Manifest Errors, and Schedule 23. (The G3 Work Groups)
- 1.43 It is recognised that code modifications may require system changes towards the end of the schedule. However, given the nature of the modification work, this is not a likely scenario. If such an issue is raised it will be resolved by the Programme at that time. Priority has been given to work that will underpin testing and this at an advanced stage of completion.

Risks and Mitigating Actions

- 1.44 There are two main areas of risk associated with the revised plan:
- ◆ Participant Assurance from revised Test Strategy
 - ◆ Multiple workstream critical paths
- 1.45 The following sections provide information on the mitigating actions to be taken.

Participant Assurance from Revised Strategy

- 1.46 To provide an appropriate level of Participant assurance following the de-coupling from the central service providers in CSIT a participant support team will become active immediately. This will focus on account management by constituency and geographic location, and will provide expert technical and business support.

Multiple Workstream Critical Paths

- 1.47 To reduce the risks from multiple critical paths through testing and Data Acquisition/Migration, the Testing and Implementation workstreams will co-locate to a single environment. New partnerships with service providers have been developed to focus on the delivery of central services.

Appendix 2 Glossary Of Terms

Authority	The Gas & Electricity Markets Authority (the Authority) came into being on 1 st November 2000 and is due, on the 21 st November 2000, to take over the authority from the offices of Director General of Gas Supply and Director General of Electricity Supply, which are abolished on this date.
BSC Subsidiary Documents	For a complete list, see Annex 2 of the Programme Implementation Scheme, which can be found on the Ofgem website www.ofgem.gov.uk .
BM Unit (BMU)	Collections of generation plant and 'demand plant' that import and/or export electricity, so that physical imports and exports can be treated appropriately under the BSC.
Balancing & Settlement Code (BSC or Code)	Document maintained in force by NGC under a condition in its Transmission Licence, which details the new arrangements for balancing and settlement. It sets out the terms of the Balancing Mechanism and imbalance settlement arrangements, together with the related governance arrangements.
Balancing Services	Means: <ul style="list-style-type: none">• Ancillary Services;• Offers and bids made in the Balancing Mechanism; and• Other services available to NGC which assist it as Licensee in operating the Transmission System in accordance with the Act or the Conditions and/or in doing so efficiently and economically.
BSC Agent	The person or persons for the time being appointed for the purposes of providing the services specified in a BSC Service Description (a document setting out requirements of central services), as described in Section E of the BSC.
BSCCo	Means ELEXON Limited, or any successor to that Company, acting in the capacity of BSCCo. Section C of the BSC details its constitution, Shareholder obligations, powers, functions, responsibilities, and provisions relating to its subsidiaries. The principal role of BSCCo is to provide and procure the facilities, resources and services required for the proper, effective and efficient implementation of the Code.
BSC Operating Services	Referred to in the NETA Programme Services Agreement Schedules Volume 1 (Schedule 1) as Settlement Administration, Central Registration, Balancing Mechanism Reporting, Technical Assurance, Energy Contract Volume Aggregation and Central Data Collection.
Class 1 Error	An error in operation or function of a component which is essential for Go-live that will render the component inoperable in the live environment.
Class 2 Error	An error in operation or function of a component which is essential for Go Live that will cause erroneous output or result in performance levels that are below the agreed operating service levels.

Consistency Check	Checking User Requirement Specifications against the Balancing and Settlement Code (BSC), BSC Procedures (BSCPs) and Service Descriptions for inconsistencies.
Core Industry Documents	Grid Code, MCUSA and Supplemental Agreements, Ancillary Services Agreements, Master Registration Agreement, Data Transfer Service Agreement, British Grid Systems Agreement, Use of Interconnector Agreement, Settlement Agreement for Scotland, Distribution Codes, Distribution Use of System Agreements and Distribution Connection Agreements.
Central Systems Integration Testing (CSIT)	A simulation of NETA restricted simply to the central service suppliers (Logica, ELEXON, EPFAL, NGC), sometimes referred to as “Middle to Middle” Tests.
Critical processes	Those processes critical to the operation of NETA.
Cut-Over Plan	Transfer of operations from Pool systems to NETA at Go Live.
Essential for Go Live	Functional requirements and operational service levels which must be at a pre-determined level and quality before NETA can Go Live without recourse to emergency procedures. It will be essential to establish this for each NETA central service.
Gate Closure	Means, in relation to a Settlement Period, the spot time 3.5 hours before the spot time at the start of that Settlement Period. It defines the moment in time when bilateral contracting ends and the Balancing Mechanism for each associated trading period begins.
Maintenance Services	Described in the NETA Programme Services Agreement Schedules Volume 2 (Schedules 2-21), Schedule 3, Part A.
Operational Readiness Tests	Tests of systems in preparation for Go Live – a combination of Central Systems Integration Testing, Process Special Tests (which include such items as Business Continuity and Disaster Recovery), together with tests arising from Pre-Production and cutover.
Original Parties	Those who signed the BSC Framework Agreement at Go Active, as defined in the list of Original Parties.
Participant Interface Tests (PITs)	These tests confirm the ability of participants to send and to receive appropriate flows (as defined in the NETA Data File Catalogue) as part of an integrated business activity.
Pre- Implementation Assurance Review	An independent audit of assurance to provide the NETA Steering Group with a review of the test programme undertaken by the NETA Programme and its service providers. The review will also provide assurance that appropriate security and control features and audit trails have been built into the system.
Pre-Production (or Unified Pre-Production)	The running, prior to the Go-live date, of those systems provided by the BSC Agents and the Transmission Company, which are intended for use at or after the Go-live date. It includes participation of some or all Parties in a simulation of the Balancing Mechanism, trading and settlement

processes under the BSC. Note that this includes periods of Balancing Mechanism parallel running where full participation is a requirement for success. Its purpose is to provide confirmation of operational readiness of central and participant processes and systems between 'start-up' and 'cut-over'. As part of this phase, NGC will be operating the Balancing Mechanism, using data submitted by participants, and passing data to Logica for use in Pre-Production NETA settlement and for publication by the Balancing Mechanism Reporting Service.

Qualification Tests	Method by which NETA Participants confirm that their systems are Go Live compliant.
Registration	Registration process as defined in the relevant BSC Procedure, BSCP65.
Relevant Energy Flow	An energy flow measured by a Stage 1 Metering System, which is used in settlement under the P&SA that is expected to be used on the day before the Go-live date. It is required under the BSC to be measured by one or more CVA Metering Systems at the Go-live date or any other energy flow that is required under the BSC to be measured by one or more CVA Metering Systems at the Go-live date.
Steering Group	The NETA Steering Group was established in October 2000 as an integral part of the replanning activity. Its focus is on Go Live, with the objective of delivering the implementation of the new trading arrangements to the agreed timetable, quality, and cost. It is chaired by NGC and the Group's membership includes representatives of Ofgem and the DTI, together with the leaders of the delivery workstreams, which report directly to the Steering Group.
Supplier Volume Allocation (previously known as Trading Stage 2)	Supplier Volume Allocation (previously known as Trading Stage 2) determines the amount of electricity produced or consumed in each half hour at each Grid Supply Point (GSP) Group for each BM Unit made up of metering systems registered in Supplier Meter Registration Service (SMRS). The process uses metered data recorded by half hourly and non-half hourly metering systems, and total GSP Group Take determined by the Settlement Administration Agent (SAA).
Support & Maintenance Services	<p>Provided under contract by the Service Provider (Logica UK Limited).</p> <p>Maintenance services cover covering preventative and corrective maintenance on the System (the hardware and software in combination with each other and the Operating Manuals intended for use from Go Live, or in force at that time). These maintenance services are designed to enable the Service Provider to meet the Service Levels from the Go-Live Date.</p> <p>Support services cover such support areas as strategic planning, co-operation with other service providers, technological changes, provision of adequate security, system and data backup, archiving, support for disputes, new entrants service, audits, disaster recovery, reporting, and service improvement.</p>