## ANNEX 2 – CONSULTATION RESPONSES

Representations were received from the following parties:

| No | Company | File Number | No. Parties Represented |
|---|---|---|---|
| **1.** | Utility Link Ltd | P40_ASS_001 | 1 |
| **2.** | London Electricity Group | P40_ASS_002 | 1 |
| **3.** | Western Power Distribution | P40_ASS_003 | 1 |
| **4.** | TXU Europe | P40_ASS_004 | 12 |
| **5.** | SEEBOARD | P40_ASS_005 | 1 |
| **6.** | npower Ltd | P40_ASS_006 | 8 |
| **7.** | Scottish & Southern Energy plc | P40_ASS_007 | 4 |
| **8.** | Powergen UK plc | P40_ASS_008 | 4 |

**P40_ASS_001 – Utility Link Ltd**

Name: Chris Welby
Organisation: Utility Link Ltd

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

| Question | Response |
|---|---|
| **Q1** Have you experienced distortion in settlement or DUoS billing as a result of negative EAC values? If so how, and what was the net effect? | Minimal distortion |
| **Q2** If you do believe that negative EAC values are distorting settlement and DUoS billing, do you perceive this as a historical problem which is now under control, or as an on-going problem that requires further action? | Mainly historical, but action required to improve situation further |
| **Q3** Do you believe that Modification Proposal P40 (i.e. substituting a GSP Group Profile Class Average EAC for negative EAC values) would better facilitate the Applicable BSC Objectives? | No |
| **Q4** Section 4.3 of this document identifies three technical options for achieving Modification Proposal P40:<br>1) Incorporate all the functionality in ELEXON's EAC/AA calculator.<br>2) Amend the EAC/AA calculator to output a null in place of a negative EAC, as a signal to the NHHDC to substitute a GSP Group Profile Class Average EAC.<br>3) Incorporate all the functionality in NHHDC systems (leaving ELEXON's EAC/AA calculator unchanged).<br>The costs of these options are being assessed in parallel with this consultation. However, to the extent that you feel able to express a view prior to seeing the costs, which do you believe is the most appropriate approach? | Option 3 seems most cost effective. However, I disagree with the Mod group that leaving it to the NHHDA would be complex. The NHHDA system already subsitutes class averages for several reasons, and issues a D0095 report. This change would be simple and the most cost effective. |

**Possible Alternative Solutions**

| Question | Response |
|---|---|
| **Q5** As described in section 5.1 of this document, the Modification Group discussed the use of a Previous EAC in place of a negative EAC, but decided that this was probably not an appropriate Alternative. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree |
| **Q6** As described in section 5.2 of this document, the Modification Group discussed the use of a zero EAC in place of a negative EAC, and concluded that it was a less desirable Alternative than P40, unless P40 turns out to be prohibitively expensive. Do you agree with this analysis? | Agree |
| **Q7** As described in section 5.3 of this document, the Modification Group discussed the possibility of implementing an alternative to P40 in NHHDA rather than NHHDC, but concluded that this would be more complex and less transparent than P40 itself. Do you agree with this analysis, or do you believe that this option should be considered further? | No. The NHHDA system already substitutes the class average EAC in several places and this is recorded in the SPM. If you subsitute the –ve EAC elsewhere it will not be recorded and reported, so the Subsitution Should be in the NHHDA system, not in the NHHDC system. This in my view would be the most cost effective option. |
| **Q8** As described in section 5.4 of this document, the Modification Group discussed the possibility of tightening validation requirements on NHHDC to prevent the meter advances that lead to negative EACs from entering settlement in the first place. However, they took the view that this ran the risk of increasing unacceptably the workload on NHHDC, and decided not to pursue the option further. Do you agree with this analysis, or do you believe that this option should be considered further? | Sympathise with the view, but feel by ignoring the root cause of the problem the problem is being accepted.<br><br>Rather than tightening the validation process. The group should consider how the deemed read process works as it is inaccurate deemed reads that cause the most inaccurate EAC/AA. Could the deemed read process be improved? |

| Question | Response |
|---|---|
| **Q9** As described in section 5.5 of this document, the Modification Group discussed the option of excluding from settlement meter advances that the Supplier has decided to exclude from his own billing processes. Do you believe that this is a workable method of ensuring that inappropriate meter advances (including negative advances) do not enter settlement? Would you support it as an alternative solution to the issues raised by Modification Proposal P40? Or as an additional solution, implemented alongside P40? | Do not believe this is workable. |

## APPENDIX 2 – OPTIONS FOR HIGH LEVEL IMPACT ASSESSMENT BY PARTIES AND PARTY AGENTS

As described in sections 4 and 5 of this document, the Volume Allocation Modification Group decided to issue the following options for impact assessment:

| SUMMARY OF OPTIONS ISSUED FOR IMPACT ASSESSMENT | | |
|---|---|---|
| **Option** | **Summary of Impact on EAC/AA System** | **Summary of Impact on NHHDC** |
| P40 Technical Option 1 | EAC/AA system must load GGPCAEC and AFYC data from MDD, and use them to calculate a substitute value for any negative EAC. | Little or none – change confined to EAC/AA software |
| P40 Technical Option 2 | EAC/AA system must replace any negative EAC value with a null. | NHHDC must recognise the null EAC as a signal to substitute a default value calculated from the GGPCAEAC and AFYC in MDD. |
| P40 Technical Option 3 | No impact. | NHHDC must recognise negative EAC values, and replace them with substitute values calculated from the GGPCAEAC and AFYC in MDD. |
| Replacing negative EAC/AA with zero value | EAC/AA system must replace any negative EAC value with a zero. | Little or none – change confined to EAC/AA software |
| Removing EAC/AA from settlement when the corresponding advance is rejected by the Suppliers for billing purposes. | No impact. | Supplier must inform NHHDC when a read is rejected for billing purposes.<br><br>NHHDC must the review the reading, and withdraw it from settlement unless they have good reason to believe it is correct. |

When responding would you describe the impact on your processes and systems of implementing Modification Proposal P043, the Alternative Modification and the Alternative Proposal, in particular the timescales for implementation of the proposed changes in your organisation, using the forms overleaf.

**Modification Proposal P40 – Technical Option 1**

The implementation of Modification Proposal P40 (Technical Option 1) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Modification Proposal P40 – Technical Option 2**

The implementation of Modification Proposal P40 (Technical Option 2) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Modification Proposal P40 – Technical Option 3**

The implementation of Modification Proposal P40 (Technical Option 3) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Alternative Modification Proposal – Replacing Negative EAC with Zero**

The alternative solution of replacing negative EAC with zero (as described in section 5.2 of this document) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Alternative Modification Proposal – Removing Supplier-Rejected Reads from Settlement**

The alternative solution of withdrawing from settlement those meter advances rejected by the Supplier for billing purposes (as described in section 5.5 of this document) will impact on our systems and processes.

We would require 180 days notice to implement the necessary changes.

Comments: Implementation would be dependant on what solution is provided for Suppliers to inform NHHDC of rejected readings. But would probably need 6 months notice.

**P40_ASS_002 – London Electricity Group**

Name: HARISH MISRTY
Organisation: LONDON ELECTRICITY GROUP – THIS RESPONSE IS ON BEHALF OF LONDON POWER NETWORKS PLC ( LPN)

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

| Question | Response |
|---|---|
| **Q1** Have you experienced distortion in settlement or DUoS billing as a result of negative EAC values? If so how, and what was the net effect? | - |
| **Q2** If you do believe that negative EAC values are distorting settlement and DUoS billing, do you perceive this as a historical problem which is now under control, or as an on-going problem that requires further action? | - |
| **Q3** Do you believe that Modification Proposal P40 (i.e. substituting a GSP Group Profile Class Average EAC for negative EAC values) would better facilitate the Applicable BSC Objectives? | YES |
| **Q4** Section 4.3 of this document identifies three technical options for achieving Modification Proposal P40:<br>1) Incorporate all the functionality in ELEXON's EAC/AA calculator.<br>2) Amend the EAC/AA calculator to output a null in place of a negative EAC, as a signal to the NHHDC to substitute a GSP Group Profile Class Average EAC.<br>3) Incorporate all the functionality in NHHDC systems (leaving ELEXON's EAC/AA calculator unchanged).<br>The costs of these options are being assessed in parallel with this consultation. However, to the extent that you feel able to express a view prior to seeing the costs, which do you believe is the most appropriate approach? | WE SUPPORT OPTION 1<br>COSTS SHOULD BE CNETRALLY SHARED BUY ALL BSC PARTIES |

**Possible Alternative Solutions**

| Question | Response |
|---|---|
| **Q5** As described in section 5.1 of this document, the Modification Group discussed the use of a Previous EAC in place of a negative EAC, but decided that this was probably not an appropriate Alternative. Do you agree with this analysis, or do you believe that this option should be considered further? | YES |
| **Q6** As described in section 5.2 of this document, the Modification Group discussed the use of a zero EAC in place of a negative EAC, and concluded that it was a less desirable Alternative than P40, unless P40 turns out to be prohibitively expensive. Do you agree with this analysis? | YES |
| **Q7** As described in section 5.3 of this document, the Modification Group discussed the possibility of implementing an alternative to P40 in NHHDA rather than NHHDC, but concluded that this would be more complex and less transparent than P40 itself. Do you agree with this analysis, or do you believe that this option should be considered further? | YES |
| **Q8** As described in section 5.4 of this document, the Modification Group discussed the possibility of tightening validation requirements on NHHDC to prevent the meter advances that lead to negative EACs from entering settlement in the first place. However, they took the view that this ran the risk of increasing unacceptably the workload on NHHDC, and decided not to pursue the option further. Do you agree with this analysis, or do you believe that this option should be considered further? | YES |

| Question | Response |
|---|---|
| **Q9** As described in section 5.5 of this document, the Modification Group discussed the option of excluding from settlement meter advances that the Supplier has decided to exclude from his own billing processes. Do you believe that this is a workable method of ensuring that inappropriate meter advances (including negative advances) do not enter settlement? Would you support it as an alternative solution to the issues raised by Modification Proposal P40? Or as an additional solution, implemented alongside P40? | NO<br><br>NO |

## APPENDIX 2 – OPTIONS FOR HIGH LEVEL IMPACT ASSESSMENT BY PARTIES AND PARTY AGENTS

As described in sections 4 and 5 of this document, the Volume Allocation Modification Group decided to issue the following options for impact assessment:

| SUMMARY OF OPTIONS ISSUED FOR IMPACT ASSESSMENT | | |
|---|---|---|
| **Option** | **Summary of Impact on EAC/AA System** | **Summary of Impact on NHHDC** |
| P40 Technical Option 1 | EAC/AA system must load GGPCAEC and AFYC data from MDD, and use them to calculate a substitute value for any negative EAC. | Little or none – change confined to EAC/AA software |
| P40 Technical Option 2 | EAC/AA system must replace any negative EAC value with a null. | NHHDC must recognise the null EAC as a signal to substitute a default value calculated from the GGPCAEAC and AFYC in MDD. |
| P40 Technical Option 3 | No impact. | NHHDC must recognise negative EAC values, and replace them with substitute values calculated from the GGPCAEAC and AFYC in MDD. |
| Replacing negative EAC/AA with zero value | EAC/AA system must replace any negative EAC value with a zero. | Little or none – change confined to EAC/AA software |
| Removing EAC/AA from settlement when the corresponding advance is rejected by the Suppliers for billing purposes. | No impact. | Supplier must inform NHHDC when a read is rejected for billing purposes.<br><br>NHHDC must the review the reading, and withdraw it from settlement unless they have good reason to believe it is correct. |

When responding would you describe the impact on your processes and systems of implementing Modification Proposal P043, the Alternative Modification and the Alternative Proposal, in particular the timescales for implementation of the proposed changes in your organisation, using the forms overleaf.

**Modification Proposal P40 – Technical Option 1**

The implementation of Modification Proposal P40 (Technical Option 1) will/~~will not~~ impact on our systems and processes.

We would require _30__days notice to implement the necessary changes.

Comments:

**Modification Proposal P40 – Technical Option 2**

The implementation of Modification Proposal P40 (Technical Option 2) will / will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:we do not support this option

**Modification Proposal P40 – Technical Option 3**

The implementation of Modification Proposal P40 (Technical Option 3) will / will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments: we do not support this option

**Alternative Modification Proposal – Replacing Negative EAC with Zero**

The alternative solution of replacing negative EAC with zero (as described in section 5.2 of this document) will / will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Alternative Modification Proposal – Removing Supplier-Rejected Reads from Settlement**

The alternative solution of withdrawing from settlement those meter advances rejected by the Supplier for billing purposes (as described in section 5.5 of this document) will / will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**P40_ASS_003 – Western Power Distribution**
Name: Graham Smith
Organisation: Western Power Distribution

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

| Question | Response |
|---|---|
| **Q1** Have you experienced distortion in settlement or DUoS billing as a result of negative EAC values? If so how, and what was the net effect? | We are aware of the potential for a negative impact on cash flow but, as we currently have no right of access to the AA/EAC data, have not quantified it. |
| **Q2** If you do believe that negative EAC values are distorting settlement and DUoS billing, do you perceive this as a historical problem which is now under control, or as an on-going problem that requires further action? | Ongoing problem |
| **Q3** Do you believe that Modification Proposal P40 (i.e. substituting a GSP Group Profile Class Average EAC for negative EAC values) would better facilitate the Applicable BSC Objectives? | Yes |
| **Q4** Section 4.3 of this document identifies three technical options for achieving Modification Proposal P40:<br>1) Incorporate all the functionality in ELEXON's EAC/AA calculator.<br>2) Amend the EAC/AA calculator to output a null in place of a negative EAC, as a signal to the NHHDC to substitute a GSP Group Profile Class Average EAC.<br>3) Incorporate all the functionality in NHHDC systems (leaving ELEXON's EAC/AA calculator unchanged).<br>The costs of these options are being assessed in parallel with this consultation. However, to the extent that you feel able to express a view prior to seeing the costs, which do you believe is the most appropriate approach? | Option 1 |

**Possible Alternative Solutions**

| Question | Response |
|---|---|
| **Q5** As described in section 5.1 of this document, the Modification Group discussed the use of a Previous EAC in place of a negative EAC, but decided that this was probably not an appropriate Alternative. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree with the analysis |
| **Q6** As described in section 5.2 of this document, the Modification Group discussed the use of a zero EAC in place of a negative EAC, and concluded that it was a less desirable Alternative than P40, unless P40 turns out to be prohibitively expensive. Do you agree with this analysis? | Yes, agree with the analysis |
| **Q7** As described in section 5.3 of this document, the Modification Group discussed the possibility of implementing an alternative to P40 in NHHDA rather than NHHDC, but concluded that this would be more complex and less transparent than P40 itself. Do you agree with this analysis, or do you believe that this option should be considered further? | Yes, agree with the analysis |
| **Q8** As described in section 5.4 of this document, the Modification Group discussed the possibility of tightening validation requirements on NHHDC to prevent the meter advances that lead to negative EACs from entering settlement in the first place. However, they took the view that this ran the risk of increasing unacceptably the workload on NHHDC, and decided not to pursue the option further. Do you agree with this analysis, or do you believe that this option should be considered further? | Yes, agree with the analysis |

| Question | Response |
|---|---|
| **Q9** As described in section 5.5 of this document, the Modification Group discussed the option of excluding from settlement meter advances that the Supplier has decided to exclude from his own billing processes. Do you believe that this is a workable method of ensuring that inappropriate meter advances (including negative advances) do not enter settlement? Would you support it as an alternative solution to the issues raised by Modification Proposal P40? Or as an additional solution, implemented alongside P40? | We do not support this option as either an alternative or additional solution. |

## APPENDIX 2 – OPTIONS FOR HIGH LEVEL IMPACT ASSESSMENT BY PARTIES AND PARTY AGENTS

As described in sections 4 and 5 of this document, the Volume Allocation Modification Group decided to issue the following options for impact assessment:

| SUMMARY OF OPTIONS ISSUED FOR IMPACT ASSESSMENT | | |
|---|---|---|
| **Option** | **Summary of Impact on EAC/AA System** | **Summary of Impact on NHHDC** |
| P40 Technical Option 1 | EAC/AA system must load GGPCAEC and AFYC data from MDD, and use them to calculate a substitute value for any negative EAC. | Little or none – change confined to EAC/AA software |
| P40 Technical Option 2 | EAC/AA system must replace any negative EAC value with a null. | NHHDC must recognise the null EAC as a signal to substitute a default value calculated from the GGPCAEAC and AFYC in MDD. |
| P40 Technical Option 3 | No impact. | NHHDC must recognise negative EAC values, and replace them with substitute values calculated from the GGPCAEAC and AFYC in MDD. |
| Replacing negative EAC/AA with zero value | EAC/AA system must replace any negative EAC value with a zero. | Little or none – change confined to EAC/AA software |
| Removing EAC/AA from settlement when the corresponding advance is rejected by the Suppliers for billing purposes. | No impact. | Supplier must inform NHHDC when a read is rejected for billing purposes.<br><br>NHHDC must the review the reading, and withdraw it from settlement unless they have good reason to believe it is correct. |

When responding would you describe the impact on your processes and systems of implementing Modification Proposal P043, the Alternative Modification and the Alternative Proposal, in particular the timescales for implementation of the proposed changes in your organisation, using the forms overleaf.

**Modification Proposal P40 – Technical Option 1**

The implementation of Modification Proposal P40 (Technical Option 1) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Modification Proposal P40 – Technical Option 2**

The implementation of Modification Proposal P40 (Technical Option 2) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Modification Proposal P40 – Technical Option 3**

The implementation of Modification Proposal P40 (Technical Option 3) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Alternative Modification Proposal – Replacing Negative EAC with Zero**

The alternative solution of replacing negative EAC with zero (as described in section 5.2 of this document) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**Alternative Modification Proposal – Removing Supplier-Rejected Reads from Settlement**

The alternative solution of withdrawing from settlement those meter advances rejected by the Supplier for billing purposes (as described in section 5.5 of this document) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:

**P40_ASS_004 – TXU Europe**

Name: Philip Russell
Organisation: All TXU Europe BSC Parties (12)

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

| Question | Response |
|---|---|
| **Q1** Have you experienced distortion in settlement or DUoS billing as a result of negative EAC values? If so how, and what was the net effect? | Yes. We do not know the net effect as we have not tried to calculate it. |
| **Q2** If you do believe that negative EAC values are distorting settlement and DUoS billing, do you perceive this as a historical problem which is now under control, or as an on-going problem that requires further action? | Intellectually it must be correct that negative EACs are "erroneous". The question is whether the cost of the change is considered worthwile. As the cost is currently unknown |
| **Q3** Do you believe that Modification Proposal P40 (i.e. substituting a GSP Group Profile Class Average EAC for negative EAC values) would better facilitate the Applicable BSC Objectives? | In principle – Yes. We note that if this were done it would use a different methodology from the "default" EAC process as set out in Clause S2 4.4.15. Leaving this aside (and being pedantic) should the proposed amendment not read $GGPCAEAC_{HPC}$ * $AFYC_{HPR}$ ? |
| **Q4** Section 4.3 of this document identifies three technical options for achieving Modification Proposal P40:<br>1) Incorporate all the functionality in ELEXON's EAC/AA calculator.<br>2) Amend the EAC/AA calculator to output a null in place of a negative EAC, as a signal to the NHHDC to substitute a GSP Group Profile Class Average EAC.<br>3) Incorporate all the functionality in NHHDC systems (leaving ELEXON's EAC/AA calculator unchanged).<br>The costs of these options are being assessed in parallel with this consultation. However, to the extent that you feel able to express a view prior to seeing the costs, which do you believe is the most appropriate approach? | Not an easy question – if we had a blank sheet of paper we would go for option 1. However as we have already put a "fix" along the lines of Option 2 for changes to PC during a Meter Advance Period.<br>The problem with putting another "fix" in the NHHDA software is that the NHHDC and NHHDA databases become more "out of line". In an ideal world we would probably remove the current "fix" from the NHHDA software and put both "corrections" in the EAC/AA software. |

**Possible Alternative Solutions**

| Question | Response |
|---|---|
| **Q5** As described in section 5.1 of this document, the Modification Group discussed the use of a Previous EAC in place of a negative EAC, but decided that this was probably not an appropriate Alternative. Do you agree with this analysis, or do you believe that this option should be considered further? | Yes |
| **Q6** As described in section 5.2 of this document, the Modification Group discussed the use of a zero EAC in place of a negative EAC, and concluded that it was a less desirable Alternative than P40, unless P40 turns out to be prohibitively expensive. Do you agree with this analysis? | Yes |
| **Q7** As described in section 5.3 of this document, the Modification Group discussed the possibility of implementing an alternative to P40 in NHHDA rather than NHHDC, but concluded that this would be more complex and less transparent than P40 itself. Do you agree with this analysis, or do you believe that this option should be considered further? | Yes |
| **Q8** As described in section 5.4 of this document, the Modification Group discussed the possibility of tightening validation requirements on NHHDC to prevent the meter advances that lead to negative EACs from entering settlement in the first place. However, they took the view that this ran the risk of increasing unacceptably the workload on NHHDC, and decided not to pursue the option further. Do you agree with this analysis, or do you believe that this option should be considered further? | Yes |

| Question | Response |
|---|---|
| **Q9** As described in section 5.5 of this document, the Modification Group discussed the option of excluding from settlement meter advances that the Supplier has decided to exclude from his own billing processes. Do you believe that this is a workable method of ensuring that inappropriate meter advances (including negative advances) do not enter settlement? Would you support it as an alternative solution to the issues raised by Modification Proposal P40? Or as an additional solution, implemented alongside P40? | Possibly. We agree that it would be a good idea for there to be a feedback from Supplier Billing to NHHDC / EAC/AA calculations but it raises audit issues and extra DTC flow requirements which are unlikely to be any cheaper or easier to implement than those for the EAC/AA software. |

## APPENDIX 2 – OPTIONS FOR HIGH LEVEL IMPACT ASSESSMENT BY PARTIES AND PARTY AGENTS

As described in sections 4 and 5 of this document, the Volume Allocation Modification Group decided to issue the following options for impact assessment:

| SUMMARY OF OPTIONS ISSUED FOR IMPACT ASSESSMENT | | |
|---|---|---|
| **Option** | **Summary of Impact on EAC/AA System** | **Summary of Impact on NHHDC** |
| P40 Technical Option 1 | EAC/AA system must load GGPCAEC and AFYC data from MDD, and use them to calculate a substitute value for any negative EAC. | Little or none – change confined to EAC/AA software |
| P40 Technical Option 2 | EAC/AA system must replace any negative EAC value with a null. | NHHDC must recognise the null EAC as a signal to substitute a default value calculated from the GGPCAEAC and AFYC in MDD. |
| P40 Technical Option 3 | No impact. | NHHDC must recognise negative EAC values, and replace them with substitute values calculated from the GGPCAEAC and AFYC in MDD. |
| Replacing negative EAC/AA with zero value | EAC/AA system must replace any negative EAC value with a zero. | Little or none – change confined to EAC/AA software |
| Removing EAC/AA from settlement when the corresponding advance is rejected by the Suppliers for billing purposes. | No impact. | Supplier must inform NHHDC when a read is rejected for billing purposes.<br><br>NHHDC must the review the reading, and withdraw it from settlement unless they have good reason to believe it is correct. |

When responding would you describe the impact on your processes and systems of implementing Modification Proposal P043, the Alternative Modification and the Alternative Proposal, in particular the timescales for implementation of the proposed changes in your organisation, using the forms overleaf.

**Modification Proposal P40 – Technical Option 1**

The implementation of Modification Proposal P40 (Technical Option 1) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments: No impact on Supplier systems

**Modification Proposal P40 – Technical Option 2**

The implementation of Modification Proposal P40 (Technical Option 2) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments: No impact on Supplier systems

**Modification Proposal P40 – Technical Option 3**

The implementation of Modification Proposal P40 (Technical Option 3) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments: No impact on Supplier systems

**Alternative Modification Proposal – Replacing Negative EAC with Zero**

The alternative solution of replacing negative EAC with zero (as described in section 5.2 of this document) will not impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments: No impact on Supplier systems

**Alternative Modification Proposal – Removing Supplier-Rejected Reads from Settlement**

The alternative solution of withdrawing from settlement those meter advances rejected by the Supplier for billing purposes (as described in section 5.5 of this document) will impact on our systems and processes.

We would require several months notice to implement the necessary changes.

Comments: if this were to be progressed it would need to be co-ordinated with a new release of the DTC to implement a new DTC flow from Supplier to NHHDC to reject Meter Readings in the D010 and a further flow to allow confirmation or rejection of the Supplier request from the NHHDC.

**P40_ASS_005 – SEEBOARD**

Name: Sue Fraser for Dave Morton

Organisation: SEEBOARD

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

| Question | Response |
|---|---|
| **Q1** Have you experienced distortion in settlement or DUoS billing as a result of negative EAC values? If so how, and what was the net effect? | Yes, we believe the effect is large but have not fully quantified its value. |
| **Q2** If you do believe that negative EAC values are distorting settlement and DUoS billing, do you perceive this as a historical problem which is now under control, or as an on-going problem that requires further action? | This is an ongoing problem. These tend to follow from negative AAs, but there are several reasons why such AAs can be correct. However, even in such cases a negative EAC should never exist, as over a long period a metering system can never use negative energy. |
| **Q3** Do you believe that Modification Proposal P40 (i.e. substituting a GSP Group Profile Class Average EAC for negative EAC values) would better facilitate the Applicable BSC Objectives? | Yes, this should ensure competition is on a level playing field irrespective of any issues regarding settling on EACs. |
| **Q4** Section 4.3 of this document identifies three technical options for achieving Modification Proposal P40:<br>1) Incorporate all the functionality in ELEXON's EAC/AA calculator.<br>2) Amend the EAC/AA calculator to output a null in place of a negative EAC, as a signal to the NHHDC to substitute a GSP Group Profile Class Average EAC.<br>3) Incorporate all the functionality in NHHDC systems (leaving ELEXON's EAC/AA calculator unchanged).<br>The costs of these options are being assessed in parallel with this consultation. However, to the extent that you feel able to express a view prior to seeing the costs, which do you believe is the most appropriate approach? | Given we have no prior view of costs we feel that option 1 is the preferred way forward. From our consideration of these options we feel this would provide cheapest solution to industry.<br>Having considered what information would be required from MDD we believe a single table is all that's required. This would need to be incorporated into EAC/AA calculator with entries for profile class and class average EAC values. We would think that this could be populated either manually or by use of a D Flow. As this is a small table either solution would be effective. |

| | |
|---|---|
| | |

**Possible Alternative Solutions**

| Question | Response |
|---|---|
| **Q5** As described in section 5.1 of this document, the Modification Group discussed the use of a Previous EAC in place of a negative EAC, but decided that this was probably not an appropriate Alternative. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree |
| **Q6** As described in section 5.2 of this document, the Modification Group discussed the use of a zero EAC in place of a negative EAC, and concluded that it was a less desirable Alternative than P40, unless P40 turns out to be prohibitively expensive. Do you agree with this analysis? | Agree |
| **Q7** As described in section 5.3 of this document, the Modification Group discussed the possibility of implementing an alternative to P40 in NHHDA rather than NHHDC, but concluded that this would be more complex and less transparent than P40 itself. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree. However, it would still be worth getting costs from Logica for a modification to NHHDA software. |
| **Q8** As described in section 5.4 of this document, the Modification Group discussed the possibility of tightening validation requirements on NHHDC to prevent the meter advances that lead to negative EACs from entering settlement in the first place. However, they took the view that this ran the risk of increasing unacceptably the workload on NHHDC, and decided not to pursue the option further. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree, taking this option further would possibly mean deemed reads being discontinued. We do not think this is an acceptable way forward for industry. |

| Question | Response |
|---|---|
| **Q9** As described in section 5.5 of this document, the Modification Group discussed the option of excluding from settlement meter advances that the Supplier has decided to exclude from his own billing processes. Do you believe that this is a workable method of ensuring that inappropriate meter advances (including negative advances) do not enter settlement? Would you support it as an alternative solution to the issues raised by Modification Proposal P40? Or as an additional solution, implemented alongside P40? | We believe that there is merit in exploring differences between supplier billing processes and the settlement validations. It may, however, be that the settlement process is robust enough to cater for a greater degree of variance than individual billing accounts. A supplier should have the right to reject an advance, with the responsibility on a DC to withdraw when advised to do so. However, we feel that this should be separate from the current P40 modification. |

## APPENDIX 2 – OPTIONS FOR HIGH LEVEL IMPACT ASSESSMENT BY PARTIES AND PARTY AGENTS

As described in sections 4 and 5 of this document, the Volume Allocation Modification Group decided to issue the following options for impact assessment:

| SUMMARY OF OPTIONS ISSUED FOR IMPACT ASSESSMENT | | |
|---|---|---|
| **Option** | **Summary of Impact on EAC/AA System** | **Summary of Impact on NHHDC** |
| P40 Technical Option 1 | EAC/AA system must load GGPCAEC and AFYC data from MDD, and use them to calculate a substitute value for any negative EAC. | Little or none – change confined to EAC/AA software |
| P40 Technical Option 2 | EAC/AA system must replace any negative EAC value with a null. | NHHDC must recognise the null EAC as a signal to substitute a default value calculated from the GGPCAEAC and AFYC in MDD. |
| P40 Technical Option 3 | No impact. | NHHDC must recognise negative EAC values, and replace them with substitute values calculated from the GGPCAEAC and AFYC in MDD. |
| Replacing negative EAC/AA with zero value | EAC/AA system must replace any negative EAC value with a zero. | Little or none – change confined to EAC/AA software |
| Removing EAC/AA from settlement when the corresponding advance is rejected by the Suppliers for billing purposes. | No impact. | Supplier must inform NHHDC when a read is rejected for billing purposes.<br><br>NHHDC must the review the reading, and withdraw it from settlement unless they have good reason to believe it is correct. |

When responding would you describe the impact on your processes and systems of implementing Modification Proposal P043, the Alternative Modification and the Alternative Proposal, in particular the timescales for implementation of the proposed changes in your organisation, using the forms overleaf.

**Modification Proposal P40 – Technical Option 1**

The implementation of Modification Proposal P40 (Technical Option 1) will impact on our systems and processes.

We would require 15 days notice to implement the necessary changes.

Comments:
This timescale refers to the time from receipt of a new EAC/AA calculator from Elexon to live operational implementation.

**Modification Proposal P40 – Technical Option 2**

The implementation of Modification Proposal P40 (Technical Option 2) will impact on our systems and processes.

We would require 90 days notice to implement the necessary changes.

Comments:
At present this timescale is tentative and will depend on other changes on the NHHDC side. It is possible that other modifications, for example, P43 could require changes to these systems. If this is the case we would prefer these to be implemented as a single change to our systems to reduce costs and potential errors.

**Modification Proposal P40 – Technical Option 3**

The implementation of Modification Proposal P40 (Technical Option 3) will impact on our systems and processes.

We would require 90 days notice to implement the necessary changes.

Comments:
As per Option 2.

**Alternative Modification Proposal – Replacing Negative EAC with Zero**

The alternative solution of replacing negative EAC with zero (as described in section 5.2 of this document) will impact on our systems and processes.

We would require 90 days notice to implement the necessary changes.

Comments:
As per Option 2.

**Alternative Modification Proposal – Removing Supplier-Rejected Reads from Settlement**

The alternative solution of withdrawing from settlement those meter advances rejected by the Supplier for billing purposes (as described in section 5.5 of this document) will impact on our systems and processes.

We would require ___days notice to implement the necessary changes.

Comments:
This could be done manually or via system changes. At this stage we cannot determine what implementation notice is required until we have further view on the solution if this modification alternate is taken forward.

**P40_ASS_006 – npower Ltd**

Name: Terry Ballard
Organisation: npower Ltd – Response on behalf of Innogy plc, Innogy Cogen Ltd, npower Ltd, npower Direct Ltd, npower Northern Ltd, npower Northern Supply Ltd, npower Yorkshire Ltd, npower Yorkshire Supply Ltd.

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

| Question | Response |
|---|---|
| **Q1** Have you experienced distortion in settlement or DUoS billing as a result of negative EAC values? If so how, and what was the net effect? | Yes. This is compounded by the effect of large EACs/AAs. |
| **Q2** If you do believe that negative EAC values are distorting settlement and DUoS billing, do you perceive this as a historical problem which is now under control, or as an on-going problem that requires further action? | See response to Q1 |
| **Q3** Do you believe that Modification Proposal P40 (i.e. substituting a GSP Group Profile Class Average EAC for negative EAC values) would better facilitate the Applicable BSC Objectives? | No, not unless the root causes of 'erroneously' large EACs/AAs (some of which still have legitimate causes within the current rules) are also addressed. |
| **Q4** Section 4.3 of this document identifies three technical options for achieving Modification Proposal P40:<br>1) Incorporate all the functionality in ELEXON's EAC/AA calculator.<br>2) Amend the EAC/AA calculator to output a null in place of a negative EAC, as a signal to the NHHDC to substitute a GSP Group Profile Class Average EAC.<br>3) Incorporate all the functionality in NHHDC systems (leaving ELEXON's EAC/AA calculator unchanged).<br>The costs of these options are being assessed in parallel with this consultation. However, to the extent that you feel able to express a view prior to seeing the costs, which do you believe is the most appropriate approach? | 1) Incorporate all the functionality in ELEXON's EAC/AA calculator. |

**Possible Alternative Solutions**

| Question | Response |
|---|---|
| **Q5** As described in section 5.1 of this document, the Modification Group discussed the use of a Previous EAC in place of a negative EAC, but decided that this was probably not an appropriate Alternative. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree with Modification Group. This should not be considered further. |
| **Q6** As described in section 5.2 of this document, the Modification Group discussed the use of a zero EAC in place of a negative EAC, and concluded that it was a less desirable Alternative than P40, unless P40 turns out to be prohibitively expensive. Do you agree with this analysis? | Agree with Modification Group. (This would also cause a problem with identifying the different reasons for zero EACs.) |
| **Q7** As described in section 5.3 of this document, the Modification Group discussed the possibility of implementing an alternative to P40 in NHHDA rather than NHHDC, but concluded that this would be more complex and less transparent than P40 itself. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree with Modification Group – this should not be considered further. (This would also cause problems of inconsistency between NHHDC and NHHDA databases.) |
| **Q8** As described in section 5.4 of this document, the Modification Group discussed the possibility of tightening validation requirements on NHHDC to prevent the meter advances that lead to negative EACs from entering settlement in the first place. However, they took the view that this ran the risk of increasing unacceptably the workload on NHHDC, and decided not to pursue the option further. Do you agree with this analysis, or do you believe that this option should be considered further? | Agree with Modification Group. This should not be considered further unless/until the process for feedback between Supplier and NHHDC has been addressed (See response to Q9). |

| Question | Response |
|---|---|
| **Q9** As described in section 5.5 of this document, the Modification Group discussed the option of excluding from settlement meter advances that the Supplier has decided to exclude from his own billing processes. Do you believe that this is a workable method of ensuring that inappropriate meter advances (including negative advances) do not enter settlement? Would you support it as an alternative solution to the issues raised by Modification Proposal P40? Or as an additional solution, implemented alongside P40? | Introducing the suggested NHHDC/Supplier feedback mechanism could be beneficial, but should be used in conjunction with and not as an alternative to this Modification. Depending on how this is implemented, it may have significant systems/process implications for Suppliers and NHHDCs, and therefore separate consultation on fully worked up detailed proposals is required if this is to be considered as a potential mandatory requirement. The issue of the criteria on which a Supplier may exclude settlement meter advances also needs to be addressed. |

## APPENDIX 2 – OPTIONS FOR HIGH LEVEL IMPACT ASSESSMENT BY PARTIES AND PARTY AGENTS

As described in sections 4 and 5 of this document, the Volume Allocation Modification Group decided to issue the following options for impact assessment:

| SUMMARY OF OPTIONS ISSUED FOR IMPACT ASSESSMENT | | |
|---|---|---|
| **Option** | **Summary of Impact on EAC/AA System** | **Summary of Impact on NHHDC** |
| P40 Technical Option 1 | EAC/AA system must load GGPCAEC and AFYC data from MDD, and use them to calculate a substitute value for any negative EAC. | Little or none – change confined to EAC/AA software |
| P40 Technical Option 2 | EAC/AA system must replace any negative EAC value with a null. | NHHDC must recognise the null EAC as a signal to substitute a default value calculated from the GGPCAEAC and AFYC in MDD. |
| P40 Technical Option 3 | No impact. | NHHDC must recognise negative EAC values, and replace them with substitute values calculated from the GGPCAEAC and AFYC in MDD. |
| Replacing negative EAC/AA with zero value | EAC/AA system must replace any negative EAC value with a zero. | Little or none – change confined to EAC/AA software |
| Removing EAC/AA from settlement when the corresponding advance is rejected by the Suppliers for billing purposes. | No impact. | Supplier must inform NHHDC when a read is rejected for billing purposes.<br><br>NHHDC must the review the reading, and withdraw it from settlement unless they have good reason to believe it is correct. |

When responding would you describe the impact on your processes and systems of implementing Modification Proposal P043, the Alternative Modification and the Alternative Proposal, in particular the timescales for implementation of the proposed changes in your organisation, using the forms overleaf.

**Modification Proposal P40 – Technical Option 1**

The implementation of Modification Proposal P40 (Technical Option 1) will / ~~will not~~ impact on our systems and processes.

We would require 240 days notice to implement the necessary changes.

Comments:

**Modification Proposal P40 – Technical Option 2**

The implementation of Modification Proposal P40 (Technical Option 2) will / ~~will not~~ impact on our systems and processes.

We would require 240 days notice to implement the necessary changes.

Comments:

**Modification Proposal P40 – Technical Option 3**

The implementation of Modification Proposal P40 (Technical Option 3) will / ~~will not~~ impact on our systems and processes.

We would require 240 days notice to implement the necessary changes.

Comments:

**Alternative Modification Proposal – Replacing Negative EAC with Zero**

The alternative solution of replacing negative EAC with zero (as described in section 5.2 of this document) will / ~~will not~~ impact on our systems and processes.

We would require 240 days notice to implement the necessary changes.

Comments:

**Alternative Modification Proposal – Removing Supplier-Rejected Reads from Settlement**

The alternative solution of withdrawing from settlement those meter advances rejected by the Supplier for billing purposes (as described in section 5.5 of this document) will / ~~will not~~ impact on our systems and processes.

We would require 240 days notice to implement the necessary changes.

Comments:

**P40_ASS_007 – Scottish & Southern Energy plc**

This response is sent on behalf of Southern Electric, Scottish and Southern Energy, Keadby Generation Ltd. and SSE Energy Supply Ltd.

We have nothing specific to say at this time about this Modification.

Regards
Garth Graham
Scottish & Southern Energy plc

**P40_ASS_008 – Powergen UK plc**

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

I am writing in response to the consultation on the above modification proposal. This response is made on behalf of Powergen UK plc, Powergen Retail Limited, Diamond Power Generation Limited and Cottam Development Centre Limited.

Generally, we are not certain that the effect of negative EACs is sufficient to warrant significant changes to the arrangements. Nevertheless, we appreciate other Parties may have a different perspective as the effect on them may be greater. Should it be agreed that it is necessary to proceed with the proposal, we would favour an option based around the EAC/AA software which replaces the negative with a non zero value of EAC. The best solution to this would probably be to use a class average EAC.

We would urge, however, that an appropriate cost benefit analysis is carried out to ensure that system changes are appropriate.

Our response to the questionnaire and the impact assessment is attached. Please contact me in the first instance on 024 7642 4829 should you wish to discuss any of our response further.

Yours sincerely,
Paul Jones
Strategy and Regulation

Name: Paul Jones
Organisation: Powergen UK plc, Powergen Retail Limited, Diamond Power Generation Limited, and Cottam Development Centre Limited

**Modification Proposal P40 – Calculation of Negative Estimates of Annual Consumption**

| Question | Response |
|---|---|
| **Q1** Have you experienced distortion in settlement or DUoS billing as a result of negative EAC values? If so how, and what was the net effect? | Negative values will distort settlement, but we do not believe that this has had a significant impact on our total settlement values |
| **Q2** If you do believe that negative EAC values are distorting settlement and DUoS billing, do you perceive this as a historical problem which is now under control, or as an on-going problem that requires further action? | Whilst some historical causes of negative values have been addressed it would be unwise to assume that values would not be created in future. |
| **Q3** Do you believe that Modification Proposal P40 (i.e. substituting a GSP Group Profile Class Average EAC for negative EAC values) would better facilitate the Applicable BSC Objectives? | If an negative EAC is incorrect then it would be appropriate to assign a default EAC when one is calculated. This would act as a signal that something is wrong in the process allowing investigation and correction by the supplier and its agent. |

| | |
|---|---|
| **Q4** Section 4.3 of this document identifies three technical options for achieving Modification Proposal P40:<br>1) Incorporate all the functionality in ELEXON's EAC/AA calculator.<br>2) Amend the EAC/AA calculator to output a null in place of a negative EAC, as a signal to the NHHDC to substitute a GSP Group Profile Class Average EAC.<br>3) Incorporate all the functionality in NHHDC systems (leaving ELEXON's EAC/AA calculator unchanged).<br>The costs of these options are being assessed in parallel with this consultation. However, to the extent that you feel able to express a view prior to seeing the costs, which do you believe is the most appropriate approach? | Least Cost Option should be adopted |

**Possible Alternative Solutions**

| Question | Response |
|---|---|
| **Q5** As described in section 5.1 of this document, the Modification Group discussed the use of a Previous EAC in place of a negative EAC, but decided that this was probably not an appropriate Alternative. Do you agree with this analysis, or do you believe that this option should be considered further? | We agree with the analysis. |
| **Q6** As described in section 5.2 of this document, the Modification Group discussed the use of a zero EAC in place of a negative EAC, and concluded that it was a less desirable Alternative than P40, unless P40 turns out to be prohibitively expensive. Do you agree with this analysis? | We agree with the analysis as there would be a danger that these would be confused with actual zero EAC's. |
| **Q7** As described in section 5.3 of this document, the Modification Group discussed the possibility of implementing an alternative to P40 in NHHDA rather than NHHDC, but concluded that this would be more complex and less transparent than P40 itself. Do you agree with this analysis, or do you believe that this option should be considered further? | Impact by NHHDC/DA required. As a principle it would appear more sensible that issues with EACs/AAs should be addressed by the party which calculates them. |

| Question | Response |
|---|---|
| **Q8** As described in section 5.4 of this document, the Modification Group discussed the possibility of tightening validation requirements on NHHDC to prevent the meter advances that lead to negative EACs from entering settlement in the first place. However, they took the view that this ran the risk of increasing unacceptably the workload on NHHDC, and decided not to pursue the option further. Do you agree with this analysis, or do you believe that this option should be considered further? | From a Supplier's viewpoint this is an acceptable option, but clearly this will have an impact on the NHHDC. |
| **Q9** As described in section 5.5 of this document, the Modification Group discussed the option of excluding from settlement meter advances that the Supplier has decided to exclude from his own billing processes. Do you believe that this is a workable method of ensuring that inappropriate meter advances (including negative advances) do not enter settlement? Would you support it as an alternative solution to the issues raised by Modification Proposal P40? Or as an additional solution, implemented alongside P40? | Not a viable option for Suppliers to control and manage due to the effect on existing processes and systems. |

## APPENDIX 2 – OPTIONS FOR HIGH LEVEL IMPACT ASSESSMENT BY PARTIES AND PARTY AGENTS

As described in sections 4 and 5 of this document, the Volume Allocation Modification Group decided to issue the following options for impact assessment:

| SUMMARY OF OPTIONS ISSUED FOR IMPACT ASSESSMENT | | |
|---|---|---|
| **Option** | **Summary of Impact on EAC/AA System** | **Summary of Impact on NHHDC** |
| P40 Technical Option 1 | EAC/AA system must load GGPCAEC and AFYC data from MDD, and use them to calculate a substitute value for any negative EAC. | Little or none – change confined to EAC/AA software. |
| P40 Technical Option 2 | EAC/AA system must replace any negative EAC value with a null. | NHHDC must recognise the null EAC as a signal to substitute a default value calculated from the GGPCAEAC and AFYC in MDD. |
| P40 Technical Option 3 | No impact. | NHHDC must recognise negative EAC values, and replace them with substitute values calculated from the GGPCAEAC and AFYC in MDD. |
| Replacing negative EAC/AA with zero value | EAC/AA system must replace any negative EAC value with a zero. | Little or none – change confined to EAC/AA software |
| Removing EAC/AA from settlement when the corresponding advance is rejected by the Suppliers for billing purposes. | No impact. | Supplier must inform NHHDC when a read is rejected for billing purposes.<br><br>NHHDC must the review the reading, and withdraw it from settlement unless they have good reason to believe it is correct. |

When responding would you describe the impact on your processes and systems of implementing Modification Proposal P043, the Alternative Modification and the Alternative Proposal, in particular the timescales for implementation of the proposed changes in your organisation, using the forms overleaf.

**Modification Proposal P40 – Technical Option 1**

The implementation of Modification Proposal P40 (Technical Option 1) will not impact on our systems and processes.

Comments:

**Modification Proposal P40 – Technical Option 2**

The implementation of Modification Proposal P40 (Technical Option 2) will not impact on our systems and processes.

Comments:

**Modification Proposal P40 – Technical Option 3**

The implementation of Modification Proposal P40 (Technical Option 3) will not impact on our systems and processes.

Comments:

**Alternative Modification Proposal – Replacing Negative EAC with Zero**

The alternative solution of replacing negative EAC with zero (as described in section 5.2 of this document) will not impact on our systems and processes.

Comments:

**Alternative Modification Proposal – Removing Supplier-Rejected Reads from Settlement**

The alternative solution of withdrawing from settlement those meter advances rejected by the Supplier for billing purposes (as described in section 5.5 of this document) will impact on our systems and processes.

We would require 180 days notice to implement the necessary changes.

Comments: This solution is not acceptable to us.

# ANNEX 3 – BSC AGENT IMPACT ASSESSMENTS

## Modification Proposal P40

The developer of the EAC/AA software provided the following impact assessment of Modification Proposal P40:

| | | | | | |
|---|---|---|---|---|---|
| Logica Ref | **LCRA186** | Type | **ELEXON Originated Change Request** | Component | **EAC/AA** |
| ELEXON Ref | **Mod P40 Ref:402SCL01** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Assessor Name** | **Simon Lewis** | **Assessor Location** | **Logica Project Team, Leatherhead** | **Date** | **09/11/2001** |

**Title: Calculation of Negative Estimates of Annual Consumption**

**Description**

At present it is possible for EAC/AA to calculate negative EAC values. These negative EACs result from negative Annualised Advances, which, it has been suggested, may occur for one of the following 3 reasons: (1) the process has been followed correctly, but has led to a negative meter advance (eg if a deemed reading is followed by a lower actual reading) (2) the process has not been followed correctly leading to a negative meter advance (eg a meter rollover is incorrectly interpreted as a huge negative advance) or (3) a negative advance is deliberately introduced into settlement to compensate for a previous erroneously large advance. The resulting negative EACs introduces error into settlement.

To minimise the errors due to negative EACs, two modifications to EAC/AA have been proposed by ELEXON:

(A) Modify it so that it replaces a negative EAC value with the value:

(GSP Group Profile Average EAC) * (Average Fraction of Yearly Consumption).

(B) Modify it so that it replaces a negative EAC value with a predefined value (as a signal to NHHDC that it should substitute the Class Average EAC).

**Response**

**Option (A)**

Database changes

It is envisaged that three new database tables will be created; edb_gspg_pc_av_eacs will contain GSP Group Profile Class Average EAC values (GGPCAEs), edb_av_frac_y_cons will contain Average Fraction of Yearly Consumption values (AFYCs) and edb_system_parameters will contain a *Latest Archive Date* parameter. These tables will have the following columns (# indicates the prime key):

edb_gspg_pc_av_eacs:

- # std_sett_config_id
- # profile_class_id
- # gsp_group_id
- # effective_from_settlement_date (GGPCAEs)
- effective_to_settlement_date (GGPCAEs)
- researched_av_eac

edb_av_frac_y_cons:

- # std_sett_config_id
- # profile_class_id

- # gsp_group_id
- # effective_from_settlement_date (AFYCs)
- effective_to_settlement_date (AFYCs)
- # t_p_regime_id
- researched_av_eac

edb_system_parameters:

- # param_type
- # param_type2
- description
- value
- maintain_ui

Loading of D0269 files

A new D0269 file loader will be implemented to populate tables edb_gspg_pc_av_eacs and edb_av_frac_y_cons from the D0269 flow records SCI, VSD, GAE and ASD. It will load data into these tables only for Standard Settlement Configurations that appear in table edb_settlement_configs with load_dpc flag set The records will be validated only to the level required to ensure they can be used to calculate the substitute EAC values. The file loader will not delete any previously loaded data. Errors and warnings will be recorded in a new type of Exception Report. Data will only be loaded for which Effective_To_date > Archive Date.

The D0269 file loader will also populate the existing table edb_std_settlement_configs from the SCI records using the same functionality as the existing D0227 file loader. It will generate a Load Standard Settlement Configuration Exception Report in the existing format. Since EAC/AA does not have access to the common file processing functions available to NHHDA, these will have to be written specially, which is a significant amount of work.

The D0269 file will always be loaded automatically. This will simplify the change but it may have performance implications. Should it be required to reload the file, this must be done by copying it again into the input directory. No form will be provided to reapply a D0269 flow that has already been received and processed.

Loading of D0227 files

The existing D0227 file loader will be removed.

Update of File Receipt Manager

The file receipt manager (EFR subsystem) will be updated to handle receipt of the D0269. Handling of the D0227 receipt will be removed.

User Interface Changes

Two new forms will be implemented to maintain the new tables edb_gspg_pc_av_eacs and edb_av_frac_y_cons. They will allow records to be inserted, amended or deleted. They will provide a similar level of validation to the D0269 file loader. They will be accessible to the EAC/AA Operations Supervisor only and will be accessed from the existing Maintain Parameters menu.

There will be no user interface to allow the user to modify the contents of the new database table edb_system_parameters.

The existing form Maintain Standard Settlement Configurations will be modified so that the check boxes “Don’t load DPCs”” are renamed “Don’t load MDD Data”. The operation of the form will not be changed. It is proposed to leave the name of the underlying database column (load_dpc) unchanged.

Archiving Changes

Archive Daily Profile Coefficients will be enhanced to delete data from the tables edb_gspg_pc_av_eacs and edb_av_frac_y_cons where Effective_To_Date =< Archive Date. The deleted data will not be written to tape and the Report on Archived Data functionality will not be modified. The Archive Date specified will be compared to the *Latest Archive Date* value in the edb_system_parameters table. The later of these two values will be written back to the

edb_system_parameters table.

EAC/AA Calculation Changes

Procedure eac_calculate_eacaa within EPD_EAC will be updated so that having calculated a negative EAC, it will look up the appropriate values of GGPCAEC and AFYC from tables edb_gspg_pc_av_eacs and edb_av_frac_y_cons respectively, and calculate a substitute value from GGPCAEC * AFYC.

If the current software detects a negative EAC, it writes an informational message to the control report, recording Metering_System_Id, Effective_From_Settlement_Date(for the Meter Advance), Effective_To_Settlement_Date(for the Meter Advance), TPR_Id and EAC value. It is proposed to modify the message to add that a default value <X> has been substituted for the negative EAC.

The EAC/AA request file contains the effective_from_settlement_date and effective_to_settlement_date for the consumption. It is possible that either or both of GGPCAEC and AFYC could change during this period. To simplify the calculation of the substitute EAC, it is proposed to select the values of these entities effective at the consumption effective_to_settlement_date. If the appropriate value of GGPCAEC or AFYC does not exist in the database, it is proposed that (i) a warning is recorded in the EAC/AA Control Report stating which value could not be found, and that no EAC could be calculated and (ii) a null value is output in the EAC/AA file. This will be consistent with the behaviour when no smoothing parameter can be found.

Database update scripts

Scripts will be written to modify the following tables during the installation process:

edb_ref_values:

- Add a row for the File Content Code domain for D0269001.
- Remove the row for the File Content Code domain for D0227001.

edb_message

- Insert new messages for the D0269 loader
- Remove redundant messages for the D0227 loader.

edb_system_parameters

- Initialise the *Latest Archive Date* to the earliest Oracle date.

Testing

The following new functionality will be tested:

- Loading of D0269 files– loading of valid data after the Archive Date, rejection of data up to the Archive Date, rejection of data for which “don’t load standing data” has been selected on the Maintain Standard Settlement Configurations form, rejection of invalid data.
- Rejection of D0227 files.
- Insertion, amendment and deletion of GGPCAE and AFYCs via User Interface.
- Calculation of substitute values for negative EACs using data loaded from D0269 files.
- Handling of errors when substitute values for negative EACs cannot be calculated due to the required data not having been loaded from D0269 files.
- Archiving – deletion of data loaded by D0269 and correct update of *Latest Archive Date*

The following existing functionality will be regression tested to ensure it has not changed:

- Calculation of positive EACs
- Calculation of NULL EACs (eg when smoothing parameter is missing)
- Calculation of positive, negative and null AAs.
- Archiving (ie existing functionality for DPCs)
- Report on Archived Data

In addition to specific regression tests for the above cases, IVT will be run.

The upgrade path from the current supported EAC/AA release will be tested.

Documentation Deliverables

Updates will be required to the following maintained products: Logical Data Design, Conceptual Model,

Function Definition, Technical Specification, Operations Guide, System Management Guide, Installation Guide, Operator's Training Course, System Manager's Training Course.

**Option (B)**

Database changes

It is envisaged that one database table will be created, edb_system_parameters. This will contain a *Substitute Value for Negative EAC* parameter. This table will have the following columns (# indicates the prime key):

edb_system_parameters:

- # param_type
- # param_type2
- description
- value
- maintain_ui

User Interface Changes

There will be no user interface to allow the user to modify the contents of the new database table edb_system_parameters.

EAC/AA Calculation Changes

Procedure eac_calculate_eacaa within EPD_EAC will be updated so that having calculated a negative EAC, it will then replace it by the parameterised value from the edb_system_parameters table.

Note that in the current software, if an EAC cannot be calculated (eg because the smoothing parameter is not available), the EAC value is output as a NULL to the EAC/AA PEEX_01 file. Hence another value needs to be chosen to indicate a negative EAC if these 2 cases are to be distinguished.

If the current software detects a negative EAC, it writes an informational message to the control report, recording Metering_System_Id, Effective_From_Settlement_Date(for the Meter Advance), Effective_To_Settlement_Date(for the Meter Advance), TPR_Id and EAC value. It is proposed to modify the message to add that a predefined value <X> has been substituted for the negative EAC.

Database update scripts

A scripts will be written to modify the following table during the installation process:

edb_system_parameters

- Initialise the *Substitute Value for Negative EAC* parameter to the required value.

Testing

The following new functionality will be tested:

- Calculation of substitute values for negative EACs using default value held in edb_system_parameters.

The following existing functionality will be regression tested to ensure it has not changed:

- Calculation of positive EACs
- Calculation of NULL EACs (eg when smoothing parameter is missing)
- Calculation of positive, negative and null AAs.

In addition to specific regression tests for the above cases, a subset of IVT will be run covering EAC/AA calculation.

The upgrade path from the current supported EAC/AA release will be tested.

Documentation Deliverables

Updates will be made to the following maintained products: Logical Data Design, Function Definition,

Technical Specification, Operations Guide, System Management Guide, Installation Guide, Operator's Training Course, System Manager's Training Course.

**Related Impact**

Option A

The D0269 file will take longer to load than the D0227 file.

If this option implemented, then when the enhanced system is installed on a live environment an MDD file should be loaded to populate the new tables.

The EAC/AA URS requires update by ELEXON. For example, section 3.2.4 of version 6.0 states that EACs may be negative.

**Assumptions**

For option A, the changes to the URS will be agreed prior to start of development.

Following a telephone conversation with John Lucas of ELEXON on 09/11/2001, the proposed solution for Option A has been kept as simple as possible (eg in defining the database changes and forms required to store and maintain the data loaded from the D0269 file). This is in line with the view that EAC/AA is a subsidiary system and there is no cost justification in making it complex. Note, however, that a consequence of this is that EAC/AA will not hold a coherent set of data (eg (i) the GSP group and Profile Class data held in the existing edb_tolerance_values table will not be related to the corresponding data held in the new tables; (ii) GSP Group, Profile Class etc in existing flows will not be validated against data loaded from the D0269 file). Should this become a future requirement for EAC/AA, it will become more expensive to implement since the changes made under Option A will require rework.

The calculation of an EAC uses the previous EAC value which is received by EAC/AA in the "EAC/AA Request File". This value could itself be negative. It is assumed that no additional validation of this flow will be carried out, ie negative EAC values in EAC/AA Request Files will be accepted.

The new tables introduced will not be audited.

The EAC/AA Help files will not be updated as part of this development.

EAC/AA IVT will not be enhanced.

No performance testing will be carried out as part of this development.

Documentation will be updated but not issued as part of this release.

All work will be done as part of a standalone LCR.

Estimates include issue of one full release for Option A or one patch for Option B.

**Risks**

Logica considers option (A) to be of low to medium risk since implementing a D0269 file loader is quite complex.

Logica considers option (B) to be of low risk.

**Other comments**

Suggestion for additional option for consideration

Having considered this Change Request, we wish to suggest the following option (very similar to that proposed in P40 section 5.3 2nd bullet point), which provides more accurate substitute values for negative EACs. We outlined this briefly to John Lucas (09/11/2001) and he agreed it may be worth further investigation:

At present, during Aggregation, if NHHDA does not have an AA or EAC value, it will calculate a value (Default Metered Consumption, DEM) for the missing EAC. If it has sufficient numbers of AAs and EACs (more than the Threshold Parameter), it calculates DEM from these values. If it does not have enough AAs and EACs, it calculates DEM from GGPCAEC * AFYC (ie the same calculation as in P40). Our proposal is to modify NHHDA aggregation so that it treats a negative EAC in exactly the way as for a missing EAC. Optionally, an additional exception type (E15) could be defined to report on negative EACs within NHHDA (similar to the existing E01, which reports on missing consumption data. No change will be required to EAC/AA).

This option will probably be less expensive than option A, but more expensive than option B.

This additional option for consideration, outlined above, is Logica's preferred solution. If ELEXON wish, we can provide a formal quote for this change under an additional LCRA.

(Note that a similar effect could be achieved by leaving NHHDA unmodified, implementing option B for EAC/AA, and setting the *Substitute Value for Negative EAC* parameter to a NULL or empty string. However, this will result in an a greater reduction in transparency of the data collection and aggregation process.)

Software release contents

If option A is implemented, a full release will be required. If option B is implemented it is suggested that it is released as a patch since only one executable is affected.

**Timescale implications**

**Option (A)**

Logica will assign 2 staff to work on this development and, assuming no other developments are in progress, would plan to deliver the patch 13 weeks from receipt of an appropriate CCN. A more formal delivery date will be confirmed once ELEXON's planned timetable for this work and other Stage 2 settlement work is known.

**Option (B)**

Logica will assign 1 staff to work on this development and, assuming no other developments are in progress, would plan to deliver the patch 5 weeks from receipt of an appropriate CCN. A more formal delivery date will be confirmed once ELEXON's planned timetable for this work and other Stage 2 settlement work is known.

**Costs:**

a. Derivation
The costs for implementing the change are summarised in the following table.

The table includes the man-day estimates for implementing the change and releasing the change, including associated Configuration Management, as set out on the Change Request Estimator spreadsheet attached. Two estimates are transferred from the spreadsheet; the first ('Change') is the estimate to design and make the change to all affected products ('Change Management'), and the second ('Release') is an estimate to produce and issue the revised products both to ELEXON, and internally to the Logica team ('Release Management').

An average Day Rate of £667 per day has been used to convert the effort shown on the Estimator spreadsheet to a charge; the day rate is that set under CCN078 and confirmed in the letter, reference LOG/EPL/997. The Estimator spreadsheet excludes time spent in processing and interacting with ELEXON on external document review comments.

**Option A**

b. Contingency
The contingency level has been set at 15%.

| | Change in effort (days) | Role | Day Rate (£) | Total (£) |
|---|---|---|---|---|
| a. Assessment + preparation of LCRA - part of the July allocation | | | | |
| b. Change Management: Designing, testing and implementing the change (see attached Estimator spreadsheet). | 87.75 | Average Team rate | 667 | 58,529 |
| c. Release Management: Releasing revised Documentation and Software for this change in isolation (see attached Estimator spreadsheet) | 3.5 | Average Team rate | 667 | 2,334 |
| d. Process ELEXON's review comments on draft documentation. | 13.0 | Team Leader | 685 | 8,905 |
| e. Warranty risk contingency: allowance for unforeseen impact elsewhere in software, or fault in change implementation, which requires re-work and re-release of software and documents, calculated as 15% likelihood; allowance = 15%* impact if it occurs =15%(sum b & d). | 15.0 | Average Team rate | 667 | 10,005 |
| **NET CHANGE TOTAL** | 119.25 | | | 79,773 |

The Stage milestone payment profile is:

| Change in Payment Profile | Stage Payments |
|---|---|
| Receipt of CCN | 23,900 |
| Start of System Tests for patches | 39,900 |
| Delivery of patches to SVAA software | 15,973 |
| Total | 79,773 |

**Option B**

c. Contingency
The contingency level has been set at 10%.

| | Change in effort (days) | Role | Day Rate (£) | Total (£) |
|---|---|---|---|---|
| a. Assessment + preparation of LCRA - part of the July allocation | | | | |
| b. Change Management: Designing, testing and implementing the change (see attached Estimator spreadsheet). | 18.25 | Average Team rate | 667 | 12,172 |
| c. Release Management: Releasing revised Documentation and Software for this change in isolation | 2.0 | Average Team rate | 667 | 1,334 |

| | | | | |
|---|---|---|---|---|
| (see attached Estimator spreadsheet) | | | | |
| d. Process ELEXON's review comments on draft documentation. | 2.5 | Team Leader | 685 | 1,712 |
| e. Warranty risk contingency: allowance for unforeseen impact elsewhere in software, or fault in change implementation, which requires re-work and re-release of software and documents, calculated as 10% likelihood; allowance = 10%* impact if it occurs =10%(sum b & d). | 2.0 | Average Team rate | 667 | 1,334 |
| **NET CHANGE TOTAL** | 24.75 | | | 16,552 |

The Stage milestone payment profile is:

| Change in Payment Profile | Stage Payments |
|---|---|
| Receipt of CCN | 5,000 |
| Start of System Tests for patches | 8,300 |
| Delivery of patches to SVAA software | 3,252 |
| Total | 16,552 |

The above assessment and fixed price assume that:

a. a CCN is received by 10/12/01;

b. a Maintenance Service Contract exists until at least **3 months** after the acceptance of the changes;

c. prices exclude VAT.

## Possible Alternative Solution

As described in section 5.4.3 of the Assessment Report, one of the alternative solutions considered by the Modification Group was to amend the Non Half Hourly Data Aggregation (NHHDA) software. The developer of this software provided the following impact assessment:

| Logica Ref | **LCRA186/2** | Type | **ELEXON Originated Change Request** | Component | **NHHDA** |
|---|---|---|---|---|---|
| ELEXON Ref | **CP No:404SCL01** | | | | |

| **Assessor Name** | **Richard Ascough** | **Assessor Location** | **Logica Project Team, Leatherhead** | **Date** | **19/11/2001** |
|---|---|---|---|---|---|

**Title: P40 - Calculation of Negative Estimates of Annual Consumption in NHHDA**

**Description**

At present it is possible for EAC/AA to calculate negative EAC values. These negative EACs result from negative Annualised Advances, which, it has been suggested, may occur for one of the following 3 reasons: (1) the process has been followed correctly, but has led to a negative meter advance (eg if a deemed reading is followed by a lower actual reading) (2) the process has not been followed correctly leading to a negative meter advance (eg a meter rollover is incorrectly interpreted as a huge negative advance) or (3) a negative advance is deliberately introduced into settlement to compensate for a previous erroneously large advance. The resulting negative EACs introduces error into settlement.

To minimise the errors due to negative EACs, two modifications to EAC/AA have been proposed by ELEXON:

(A) Modify it so that it replaces a negative EAC value with the value:

(GSP Group Profile Average EAC) * (Average Fraction of Yearly Consumption).

(B) Modify it so that it replaces a negative EAC value with a predefined value (as a signal to NHHDC that it should substitute the Class Average EAC).

In responding to this LCRA Logica proposed an option C which involved modifying NHHDA instead of EAC/AA. This assessment is to do with Option C only.

**Response**

**Option (C)**

At present NHHDA calculates values for the SPM when there are no EACs or AAs available for a particular metering system. These values are derived from either

- the 'Default EAC' (also known as the Researched Average EAC) multiplied by the AFYC; or
- an average calculation of the Total consumption of known AAs and EACs divided by the number of AAs and EACs comprising this consumption

The determining factor as to when the average calculation is used (second bullet) as opposed to the data from MDD (first bullet) is whether the number of known AAs and EACs exceeds the threshold parameter.

It is proposed that this same calculation is used to determine a value to be used if the EAC (not the AA) is negative.

EAC/AA will still provide negative EACs to NHHDC which will forward them onto NHHDA in the D19 flow. NHHDA will stored these negative EACs in its database using the existing validation rules. When NHHDA performs its aggregation process it will adjust the contribution from the negative EACs based on the calculation above.

The first stage of Aggregation is to extract the data required from the database tables. This data is

added together and written to the ndb_spmatrix table. This table will require modification to record the number of negative EACs within the SPM. The process will also require slight modification to decide when the EAC is negative. The logic for this process is described in the attached powerpoint presentation (calc_defaults). (It should be noted that AAs will still be used in preference to EACs). A new aggregation exception will be written to say that a negative EAC was found.

The second stage of Aggregation is to calculate the defaults for when there is no EAC/AA or the EAC is negative. The total of these defaults is added to the EAC total (as per now), however the number of defaults calculated is only those for where there is no EAC or AA.

The third stage of the Aggregation process will not have to be modified as this just writes out the SPM file. The data by this stage is already in the correct columns in the tables and hence will not need to be modified. The format of the SPM file (D0041) will not change.

It should be noted that if the NHHDA database contains more than one EAC and no AAs the EAC from the latest appointed Data Collector will be used, even if this EAC is negative and the other EACs are positive.

Database changes

The ndb_spmatrix table requires a new column to store the number of negative EACs to be used in the SPM. When this patch is applied this not nullable column will be set to zero for all existing SPMs.

It should be noted that this new functionality will come into force at the time of applying the patch. There will be no mechanism for turning it on or off.

Testing

The following areas will be tested:

- Aggregation with and without negative EACs
- Aggregation with and without no EACs and AAs
- Archiving of SPMs
- Production of SPMs (reproduction) from the front end.

In addition to specific regression tests for the above cases, IVT will be run for aggregation.

The upgrade path from the current supported NHHDA release will be tested.

Documentation Deliverables

Updates will be required to the following maintained products: Logical Data Design, Function Definition, Technical Specification, Operations Guide, System Management Guide, Operator's Training Course, System Manager's Training Course.

**In addition to this change a further set of functionality is recommended. This is described below:**

In order to let suppliers known when a negative EAC has been received, it is proposed to add a new exception into the CDCD sub-system. This exception will be produced in a similar way to the E01 (no EAC or AA available) in that it will be reported whenever a negative EAC is a candidate for inclusion in Aggregation.

*Primary Objective*

To identify when the (PRS) appointed NHHDC is sending negative EACs to the (PRS) appointed NHHDA.

*Brief Description*

This exception is raised when there is no AA and the EAC is negative.

This new exception will be returned in the D95 flow. No other processing or the returning of exceptions by NHHDA will be modified.

Testing

The following new functionality will be tested:

- Production of the new exception in CDCD

In addition to specific regression tests for the above cases, a subset of IVT will be run covering NHHDA CDCD process.

Documentation Deliverables

Updates will be made to the following maintained products: Function Definition, Technical Specification and Operations Guide.

It should be noted that the D95 User guide and URS will need to be modified by ELEXON for this new exception.

**Related Impact**

The NHHDA URS requires update by ELEXON.

The D95 User Guide may require update by ELEXON depending on whether the CDCD modification is required.

The updating of the D95 User Guide will affect the LCRA associated with incorporating this document into the NHHDA design and user documents.

**Assumptions**

The following assumptions have been made in preparing this LCRA:

- the change will be issued as a patch to the NHHDA software
- preparation and release of the patch is included in the total price of the LCR;
- updated documentation will not be issued as part of this LCR. It is assumed this will be done at a later date;
- the existing NHHDA IVT scripts will be not modified to incorporate this change;
- only the changes software will be tested (as detailed above);
- no performance testing is included as part of this LCR;
- all work will be done as a stand alone LCR;
- no new data requires extracting from the MDD file;
- No change to EAC/AA is required for this option.
- The NHHDA Help files will not be updated as part of this development.

**Risks**

Logica considers this option (including the CDCD change) to be of medium risk as Aggregation is key to the whole of NHHDA and CDCD is a very complex area of code.

**Other comments**

**Timescale implications**

**Aggregation Change**
Logica will assign 1 staff to work on this development and, assuming no other developments are in progress, would plan to deliver the patch 9 weeks from receipt of an appropriate CCN. A more formal delivery date will be confirmed once ELEXON's planned timetable for this work and other Stage 2 settlement work is known.

**CDCD Change**
Logica will assign 1 additional staff to work on this development and be able to maintain the timescales above. A more formal delivery date will be confirmed once ELEXON's planned timetable for this work and other Stage 2 settlement work is known.

**Costs:**

a. Derivation
The costs for implementing the change are summarised in the following table.

The table includes the man-day estimates for implementing the change and releasing the change, including associated Configuration Management, as set out on the Change Request Estimator spreadsheet attached. Two estimates are transferred from the spreadsheet; the first ('Change') is the estimate to design and make the change to all affected products ('Change Management'), and the second ('Release') is an estimate to produce and issue the revised products both to ELEXON, and internally to the Logica team ('Release Management').

An average Day Rate of £667 per day has been used to convert the effort shown on the Estimator spreadsheet to a charge; the day rate is that set under CCN078 and confirmed in the letter, reference LOG/EPL/997. The Estimator spreadsheet excludes time spent in processing and interacting with ELEXON on external document review comments.

**Aggregation Change**

d. Contingency
The contingency level has been set at 15%.

| | Change in effort (days) | Role | Day Rate (£) | Total (£) |
|---|---|---|---|---|
| a. Assessment + preparation of LCRA - part of the July allocation | | | | |
| b. Change Management: Designing, testing and implementing the change (see attached Estimator spreadsheet). | 31.5 | Average Team rate | 667 | 21,010 |
| c. Release Management: Releasing revised Documentation and Software for this change in isolation (see attached Estimator spreadsheet) | 3.5 | Average Team rate | 667 | 2,334 |
| d. Process ELEXON's review comments on draft documentation. | 4.5 | Team Leader | 685 | 3,082 |
| e. Warranty risk contingency: allowance for unforeseen impact elsewhere in software, or fault in change implementation, which requires re-work and re-release of software and documents, calculated as 15% likelihood; allowance = 15%* impact if it occurs =15%(sum b & d). | 5.5 | Average Team rate | 667 | 3,668 |
| **NET CHANGE TOTAL** | 45 | | | 30,094 |

The Stage milestone payment profile is:

| Change in Payment Profile | Stage Payments |
|---|---|
| Receipt of CCN | 9,000 |
| Start of System Tests for patch | 15,000 |
| Delivery of patch to NHHDA software | 6,094 |
| Total | 30,094 |

**CDCD Change**

e. Contingency
The contingency level has been set at 15%.

| | Change in effort (days) | Role | Day Rate (£) | Total (£) |
|---|---|---|---|---|
| a. Assessment + preparation of LCRA - part of the July allocation | | | | |
| b. Change Management: Designing, testing and implementing the change (see attached Estimator spreadsheet). | 15.15 | Average Team rate | 667 | 10,105 |
| c. Release Management: Releasing revised Documentation and Software for this change in isolation (see attached Estimator spreadsheet) | 0 | Average Team rate | 667 | 0 |
| d. Process ELEXON's review comments on draft documentation. | 2.5 | Team Leader | 685 | 1,712 |
| e. Warranty risk contingency: allowance for unforeseen impact elsewhere in software, or fault in change implementation, which requires re-work and re-release of software and documents, calculated as 15% likelihood; allowance = 15%* impact if it occurs =15%(sum b & d). | 2.5 | Average Team rate | 667 | 1,667 |
| **NET CHANGE TOTAL** | 20.15 | | | 13,484 |

The Stage milestone payment profile is:

| Change in Payment Profile | Stage Payments |
|---|---|
| Receipt of CCN | 4,000 |
| Start of System Tests for patch | 6,700 |
| Delivery of patch to NHHDA software | 2,784 |
| Total | 13,484 |

The above assessment and fixed price assume that:

d. a CCN is received by 19/12/01;

e. a Maintenance Service Contract exists until at least **3 months** after the acceptance of the changes;

f. prices exclude VAT.