ANNEX CONTENTS

ANNEX 1 BSC AGENT IMPACT ASSESSMENTS

A1.1 Detailed Level Impact Assessment

A detailed level impact assessment was issued with the P81 Consultation Document (reference 4) to BSC Agents on 13 September 2002 with responses due by 26 September 2002. Responses were received from the Profile Administrator, the SVAA / MDD Agent and the SVAA / NHHDA and EAC/AA software developer (Logical). The detailed responses received are attached below.

A1.1.1 Profile Administrator Response

General Description of the Research required by the Profile Administrator

1. It is assumed that at this stage the generation under consideration is limited to gas micro-CHP and Photo-Voltaic (PV) units only. Other domestic generation, for example Fuel Cells, wind, etc. would be considered for investigation at some time in the future. It is also assumed that the necessary data for gas consumption, average levels of illumination and operating characteristics of the micro-CHP and PV units likely to be on the market within the next two to three years would be made available to the PrA at no cost. The PrA would maintain confidentiality agreements as necessary.

2. An annual set of estimated import and export periods for each micro-generation type would be achieved by overlaying a synthesised generation profile onto the load profile for the customer group.

3. In practice the actual load and generation curves and hence the import and export periods would be dynamic with the values dependent on local temperatures and other conditions. The volume under each curve would depend on the annual consumption and annual generation for the site. Therefore in order to estimate the import and export periods the curves must be fixed by assuming average conditions.

4. By assuming group average annual consumptions with 10 year average temperatures and Birmingham sunset times the average load curve would be fixed. For each micro-generation type an estimate of the group average annual generation would be required. Average generation curves would be produced using manufactures operating data and assuming average values for the prime energy source.

5. An investigation into the suitability of applying these average conditions to all customer groups would indicate if different import and export periods for some groups would produce a more realistic fit. Some example groups being; by domestic tariff, by size of micro-CHP generator or PV unit or by GSP Group.

6. A series of import and export time periods with supporting information would be produced. The supporting report would include a list of the assumptions made and an indication of the likely errors and areas of concern. The report would provide a transparent basis and justification of the time periods used in settlements to all the parties concerned.

7. If the Alternative Modification is introduced then the customer base would be extended to include some non-domestic customers. The above process would be repeated for these additional customer groups.

Impact on System and Processes

8. It is assumed that the PrA would produce this data as a one off process. The same values being reused each year. This modification would have no other impact on the PrA's systems or processes.

9. For the Proposed Modification, an indication of the cost of developing the data as described is £30,000. A firm quotation would be provided against an agreed detailed specification.

10. If the Alternative Modification is used, extending to non-domestic sites, the likely cost would be £40,000.

Implementation time table

11. It would be very difficult for the PrA to start this work before 2 December 2002, although the process of collecting the necessary data could take place before this date.

12. For the Proposed Modification, the timescale is estimated as 40 working days. With a starting date of 2 December 2002 this gives an estimated completion date at 3 February 2003.

13. For the Alternative Modification, the timescale is estimated as 57 working days. With a starting date of 2 December 2002 this gives an estimated completion date at 26 February 2003.

Any other comments

14. Whilst recognising that the Proposed Modification and the Alternative Modification are likely to have the least cost and the least impact on the settlement system, it raises concerns over their overall accuracy.

15. If the number of installed units became significant then the error in settlements may be intolerable. At which point it would be appropriate to raise a further modification to introduce import and export profiles from field measurements.

A1.1.2 Supplier Volume Allocation agent / MDD Agent

MP No.	81	Title	Removal Of The Requirement For Half Hourly Metering On Third Party Generators At Domestic Premises

BCA Name	Clive Mallinson	Assessor	SVA Agent	Date	26/09/02

Costs

£14,304 - Estimated costs to develop, test and implement changes to MDD to add a new data item to Standard Settlement Configuration (SSC) records in order to distinguish between Export and Import configurations and include this item in the relevant output flows.

£ 5,066 – Estimated costs to develop, test and implement changes to the Pool Application to include correct Export NHH Energy consumption values in the Supplier Serial 1 and NHH Demand reports.

No costs have been included for any changes that may be required to Logging in respect of hard coded CCC's used in analysis reports.

No costs have been included for Integration Testing, as this has yet to be defined.

Timescale implications

The estimated timescale for this development is 3 months from receipt of an order, assuming that no other development work from ELEXON has a higher priority.

Risks

Comments

MDD

The four new Consumption Component Class (CCC) records can be entered into MDD using existing processes. However, the Modification Proposal requires the ability to distinguish between Export and Import Standard Settlement Configurations by the addition of a new data item to the SSC records. This will require changes to the MDD tables and front-end screens. Also, new structures will be required for the D0269, D0270 and D0277 data flows, which are used to distribute MDD data to the Market Participants, and for the D0278, which is used to load MDD data into ISRA.

It should be noted that changes to existing SSC records in MDD cause validation warnings, which have to be investigated and agreed by ELEXON before a Publish can be processed. A change to the validation rules would overcome this. (This is currently under investigation by ELEXON, as a separate exercise).

The Proposal also requires all existing SSC records to be flagged as Import, which will require 661 records to be changed. This work will be carried out free of charge.

ISRA

The modification now states, in section 6.1, that no new Profile Classes will need to be created, therefore the problem highlighted in the HLIA relating to the P0015 flow is no longer an issue.

There are problems associated with loading CCC records into ISRA in that, although CCC records are included in the D0269 transfer file, the ISRA load process ignores these records. Moreover, there is no facility within the ISRA application to input CCC's manually. Therefore, in order to implement this Proposal the ISRA application will need to be amended, either by correcting the load process or by including functionality to input CCC's manually.

Pool Application

During the development of the new Deemed Take Apportionment extract (P0120002) it was observed

that, as specified, the previous version of this flow (P0120001) accumulates NHH energy without regard to the Active Import or Active Export flag for the Consumption Component Class. This has not been an issue to date as all existing NHH CCC records are flagged as Active Import. However, the inclusion of Active Export energy data will mean that this consumption is added to the total, whereas in order to obtain the correct consumption value it should be subtracted. This has been amended in the new version of the Deemed Take Apportionment extract and it is understood that the old version will not be required after the end of November 2002. However, further investigations have established that two other reports, Supplier Serial 1 NHH Data for 100kW Sites (P0103001) and NHH Demand (PA002REP), work in a similar way and will produce incorrect results unless they are changed before MP81 is implemented.

Logging and Performance Monitoring

Although the additional records within the CCC table will have no impact on Logging, there are hard coded CCC's within the Market Indicator Reports for the accumulation of totals against particular CCC's (e.g. Mix of Actuals and Estimates Report totals for 17, 18 and 19). ELEXON need to advise if the new NHH CCC's are to be included with the selection of any of these reports. No costs have been included in this assessment for such work.

Assumptions

It is assumed that ELEXON will include any requirements for integration testing etc in a separate request. No costs have been included in this assessment for such work.

It is assumed that no special validation rules will be required for the new CCC records.

It is assumed that the Actual Estimated Indicator field in the new CCC records should be set to blank, i.e. the same as all the existing NHH records.

It is assumed that the new versions of the MDD flows will replace the existing ones, which will be de-supported after successful implementation.

Recommendation

Not applicable.

Impact assessment issued by SVAA to BSCCo Change Processes

Julian Sellen 26/09/02

A1.1.3 EAC / AA / NHHDA & SVAA Software

The following response was received from Logica detailing the impacts to the EAC/AA software, the NHHDA software and the SVAA software.

Logica Ref	**LCR203/2**	Type	**ELEXON Originated Change Request**	Component	**EAC/AA NHHDA SVAA**
ELEXON Ref	**432SCL012 P81**				
Assessor Name	**Richard Ascough**	Assessor Location	Logica Project Team, Leatherhead	Date	**23/09/2002**

Title: P81 – Removal of the Requirement for Half Hourly Metering on Third Party Generators at Domestic Premises

Description

P81 seeks to remove the requirement for domestic premises with Third Party Generating Plant to have Half Hourly Metering installed, if the Exports are to be taken into account in Settlements. It suggests that this will better facilitate competition in the supply and generation of electricity, by removing an obstacle to the use of micro-generation e.g. domestic Combined Heat and Power and photovoltaic cells.

Further to the high level assessment undertaken by Logica in August 2002 with regard to changes in EAC/AA, NHHDA and SVAA, the method selected by ELEXON for implementing P81 is the chunked profile method. No new profile classes will be created for export metering systems. However two options are now requested for assessment:

1) Standard Modification

   It should be noted that two sub-options exist:

   a. A new set of SSCs will be created to allocated Export energy to the appropriate part of the day.

   b. Export meters would be read using a different set of registers resulting in a number of TPRs. This option would still require a new set of SSCs.

   The difference between the two options only affects the data.

2) Alternative Modification

   This option relates to the data affected by the modification. As this is a data option, no additional coding is required.

This assessment is based on ELEXON document ref P081AC10. It should be noted that there is no change in the requirement of having separate meters for import and export.

Functional Response

EAC/AA

Due to the fact that export meters will have positive meter readings and that there is no requirement for EAC/AA to distinguish between import or export AAs and EACs, there is no change required to the EAC/AA application.

However, if the MDD flow (D0227001) used to load SSCs into the application changes in such a way as to prevent the application loading these SSCs, then the MDD load process will require modification. As the format of this flow is not currently known, it is unclear if the EAC/AA MDD load requires any change. It is therefore recommended that discussion with Logica occurs prior to deciding any new format of this flow.

It should be noted that when this modification is implemented, NHHDCs will have to load the new SSCs into the EAC/AA application, ensure that the flag is set for loading DPCs relating to the SSCs, and load in

the appropriate DPCs prior to being able to calculate EACs and AAs.

Logica have assumed in this assessment that the changes to the MDD flow are such that the application does not require any changes.

NHHDA

As for EAC/AA there is no requirement for NHHDA to distinguish between import and export meter reads. NHHDA will aggregate similar meters and hence the SPM will have values for both import and export meters. As these are identified by different SSCs import and export meters will not be aggregated together. NHHDA therefore requires no change.

As for EAC/AA it is unclear if the MDD flow (D0269001) used to load SSCs into the database will be changed in such a way to prevent the SSCs being loading without a change to the NHHDA load module. It is therefore recommended that discussion with Logica occurs prior to deciding any new format of this flow.

It should be noted that the new SSCs will need to be loaded in to NHHDA prior to any instructions containing export meters being loaded into the application.

Logica have assumed in this assessment that the changes to the MDD flow are such that the application does not require any changes.

SVAA

In order to distinguish between import and export meters, the SSCs will now contain a flag. This flag will be identified in the MDD Flow, however the SSCs within SVAA are only maintained via the front end and not the loading of the D0269001 flow. The SSC form will therefore require a change to allow for the addition of the import/export flag.

The SSR run will require changes to allow NHH data to be recorded as either import or export.

Reports created at the end of the SSR Run will need to be verified to ensure that they are functioning correctly with the new set of CCCs.

Risks

Logica consider this to be of high risk for the following reasons:

1. The changes affect the SSR run, which is core to the functionality of the SVAA application.

Performance

Whilst Logica do not currently have the facilities to undertake full production testing we have tried to indicate below the expected changes in performance if these options were implemented.

With addition of new functionality to the core module within SVAA there is a high risk that there will be some form of application degradation with regard to the running of the SSR run. Logica estimate that this will be no more than 5%.

It should also be noted that Logica do not envisage that the changes to the SSR run reports will be significant as these reports are generally run in parallel after the SSR run itself.

Other comments

With regard to the assessment there is no difference to the implementation of option 1a, 1b or option 2. All require a new set of SSCs with a new MDD flag. The difference comes in the form of the data stored on the database.

Quotation Price

The total price for this Logica Change Request Assessment is £73,040

Technical Response

EAC/AA and NHHDA

No changes assuming changes are not required to the MDD load modules.

SVAA

The database table used to store SSCs will need to be amended in order to store the import/export flag. A new NOT NULL column will be added (VARCHAR2(1)) which can be set to 'I' or 'E'. Constraints will be added to the database to enforce these values. During the data migration exercise, it will be assumed that all existing SSCs are for import meters.

The 'Maintain Standard Settlement Configurations' form will be amended to display the I or E flag. Users will be forced to select import or export when creating or modifying SSCs. There are no plans to amend the 'Maintain Profile Classes and Configuration Combinations' form which links PCs and SSCs.

SVAA will use the import/export flag for SSCs to determine the appropriate Component Consumption Class (CCC) during the SSR run as at present the NHH CCC is assumed to be active import. This will no longer be the case.

The following reports will need to be tested with the new set of consumption component classes used to report the export energy for NHH exports:

- Deemed Take Report (D0043001)
- Settlement Run Equitability Report (P0008001)
- GSP Group Consumption Totals Report (D0276001)
- Supplier BM Unit Report (D0296001)
- BM Unit Supplier Take Energy Volume Report (P0182001)
- TUoS report (D0083001)

An upgrade script will be required to modify the database for the SSC flag, undertake the necessary data migration and add the new CCCs.

There are no plans:

- to change the SPM report to display the SSC import/export flag.
- automatically load the SSCs from the MDD flow

Testing

EAC/AA and NHHDA

With regard to EAC/AA and NHHDA it is recommended that the data load modules of the applications are tested with new MDD flows. This is outside the scope of this assessment.

SVAA

The explicit new functionality will be tested using a new set of scripts:

- Creation, amendment and deletion of standing data (SSCs, PCs, TPRs, switching times)
- Loading of data flows containing examples of the NHH import and export data flag (ie. SPMs)
- The SSR run for three settlement days using the data loaded above. The results of the runs will be checked against expected values.
- The production of SSR run reports (reports listed above)

The basis of these tests will be taken from the Unix 5.1 upgrade tests. Whilst implementing this change Logica will update the regression tests so that they continue to be kept current and can be easily used in future testing.

Documentation Changes

A number of documentation changes will be required:

2. SVAA Logica Data Design
3. SVAA Functional Definition and User Catalogue
4. SVAA Technical Specification
5. SVAA Operations Guide
6. SVAA System Management Guide

Related Impact

None

Assumptions

The assessment assumes that:

1. The requirements for the change are as described in ELEXON document P081AC
2. No changes are required to EAC/AA and NHHDA due to modifications to the D0269001 and D0227001 flows.
3. SVAA will not be modified to load the SSC import/export flag from the MDD flow.
4. The necessary changes to the URS are agreed prior to the order being made.
5. The changes only affect SVAA and not ISRA.
6. Due to the current unavailability of the PTS server, the effort to undertake performance testing has been excluded from this assessment (See Performance section above).
7. This change will be carried out as a stand alone LCR.
8. Documentation will be updated but not issued as part of this change.
9. The Help File will not be regenerated as part of this change.
10. The four CCC Ids are defined prior to the implementation start date.
11. Performance Testing is excluded from this assessment, however Logica are happy to discuss the modification of this LCRA with regard to performance once the PTS is available. Any changes to the scope would require a new assessment of this LCRA.

Timescale implications

Logica estimate that it would take approximately 13 weeks to complete System Testing from receipt of a suitable CCN. A more accurate figure could be given once we have a clearer understanding of the required delivery timescales and what else is being implemented at the same time. Logica may require between two and four weeks notice in order to obtain suitably qualified staff for this work.

Change in Payment Profile	Stage Payments
Receipt of CCN	£21,900
Start of testing	£21,900
Successful completion of testing	£21,900
Delivery of Beta release	£0
Delivery of Formal release	£7,340
Total	£73,040

The above assessment and fixed price assume that:

a) a CCN is received by 23rd October 2002;

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

prices exclude VAT.

Logica Ref	**LCR203/3**	Type	**ELEXON Originated Change Request**	Component	**EAC/AA**
ELEXON Ref	**432SCL0121 P81**				**SVAA**

Assessor Name	**Richard Ascough**	Assessor Location	Logica Project Team, Leatherhead	Date	**07/10/2002**

Title: P81 – Removal of the Requirement for Half Hourly Metering on Third Party Generators at Domestic Premises

Description

P81 seeks to remove the requirement for domestic premises with Third Party Generating Plant to have Half Hourly Metering installed, if the Exports are to be taken into account in Settlements. It suggests that this will better facilitate competition in the supply and generation of electricity, by removing an obstacle to the use of micro-generation e.g. domestic Combined Heat and Power and photovoltaic cells.

A high level assessment was undertaken by Logica in August 2002 with regard to changes in EAC/AA, NHHDA and SVAA. A more detailed assessment of two options was completed in September 2002. ELEXON have now refined the requirements and have requested a re-assessment of the application.

The difference between the two options (Standard Modification and Alternative Modification) is purely data related and therefore the choice of options has no impact on SVAA. The costs are the same for implementing either option.

The difference between this assessment and LCRA203/2 is

- that the SSC import/export flag will now be loaded through a new version of the D0278 flow (v2). This new flow would be a new version and hence called D0278002.
- the EAC Export CCCs should be either excluded from the data sent to SAA or substituted by zeros in the calculation. This may also affect reports from SVAA and hence the best (SAA report) and worse case scenarios (all reports) should be considered.
- the D0269 flow (v3) may also be changed to include the new SSC import/export flag and this should be loaded into NHHDA but not used in any calculations.

This assessment is based on ELEXON document ref P081AC10 and discussions between Richard Ascough, John Lucas and Joanne Ellis.

It should be noted that there is no change in the requirement of having separate meters for import and export.

The potential enhancement for NHHDA for P81 is assessed in LCRA203/4.

Functional Response

EAC/AA

Due to the fact that export meters will have positive meter readings and that there is no requirement for EAC/AA to distinguish between import or export AAs and EACs, there is no change required to the EAC/AA application.

ELEXON have indicated that the MDD flow D0227001 used to load SSCs into the application changes will not be changed. With this assumption there is no requirement to change the EAC/AA application.

It should be noted that when this modification is implemented, NHHDCs will have to load the new SSCs into the EAC/AA application, ensure that the flag is set for loading DPCs relating to the SSCs, and load in the appropriate DPCs prior to being able to calculate EACs and AAs.

NHHDA

See LCRA203/4.

SVAA

In order to distinguish between import and export meters, the SSCs will now contain a flag. This flag will be identified in the MDD Flows D0278 (v2) and D0269 (v3). Changes are therefore required to load the D0278002 flow into SVAA. The application will load in the new versions of the flow but not support two versions simultaneously. The SSC form will also require a change to allow for the addition of the import/export flag. (NB. There are no plans to load in the D0269 v2 or v3 as part of this LCR.)

The SSR run will require changes to allow NHH data to be recorded as either import or export.

Reports created at the end of the SSR Run will need to be modified to allow for changes to the calculations for export CCCs. Other reports (which are not changed) will still need to be tested to ensure that they are functioning correctly with the new set of CCCs.

Min option

The min option below assumes that only the SSR run report to SVA is changing.

Max option

The max option below assumes that all the applicable SSR run reports are changed.

Risks

Logica consider the SVAA change to be of high risk for the following reasons:

1. The changes affect the SSR run, which is core to the functionality of the SVAA application.

Performance

Whilst Logica do not currently have the facilities to undertake full production testing we have tried to indicate below the expected changes in performance if these options were implemented.

SVAA

With addition of new functionality to the core module within SVAA there is a high risk that there will be some form of application degradation with regard to the running of the SSR run. Logica estimate that this will be no more than 5%.

It should also be noted that Logica do not envisage that the changes to the SSR run reports will be significant as these reports are generally run in parallel after the SSR run itself.

The additional functionality in the D0278 load module will most likely cause a small degradation in the performance of about 2% in the D0278 load.

Other comments

Quotation Price

The total price for this Logica Change Request Assessment is

- SVAA (max) £108,640
- SVAA (min) £87,992

Technical Response

EAC/AA

No changes.

NHHDA

See LCRA203/4.

SVAA

The database table used to store SSCs will need to be amended in order to store the import/export flag. A new NOT NULL column will be added (VARCHAR2(1)) which can be set to 'I' or 'E'. Constraints will be added to the database to enforce these values. During the data migration exercise, it will be assumed that all existing SSCs are for import meters.

The 'Maintain Standard Settlement Configurations' form will be amended to display the I or E flag. Users will be forced to select import or export when creating or modifying SSCs. There are no plans to amend the 'Maintain Profile Classes and Configuration Combinations' form which links PCs and SSCs.

The load module for the D0278 flow (v2) will need to be enhanced to load in the new import/export flag. It is assumed that the first version of the D0278 flow will no longer be loaded into the application.

SVAA will use the import/export flag for SSCs to determine the appropriate Component Consumption Class (CCC) during the SSR run as at present the NHH CCC is assumed to be active import. This will no longer be the case.

The following reports will need to be enhanced to either exclude the EAC export CCCs or set them to zero:

- BM Unit Supplier Take Energy Volume Report (P0182001)

The following reports will, as a minimum, need to be tested with the new set of consumption component classes used to report the export energy for NHH exports. They may need to be enhanced if the use of Export CCCs changes (eg they should always be regarded as zero):

- Deemed Take Report (D0043001)
- Settlement Run Equitability Report (P0008001)
- GSP Group Consumption Totals Report (D0276001)
- Supplier BM Unit Report (D0296001)
- TUoS report (D0083001)

The modification of one report and testing of all 6 reports is costed as the min option. The max option assumes that all 6 reports require changes and testing.

An upgrade script will be required to modify the database for the SSC flag, undertake the necessary data migration and add the new CCCs.

There are no plans:

- to change the SPM report to display the SSC import/export flag.
- automatically load the SSCs from the MDD flow

Testing

EAC/AA

No testing required as there are no changes to the application (assuming there are no changes to the flows loaded into EAC/AA).

SVAA

The explicit new functionality will be tested using a new set of scripts:

- Creation, amendment and deletion of standing data (SSCs, PCs, TPRs, switching times) through the front end

- The loading of the D0278 v2 containing SSCs with the import and export flag set.
- Test that the D0278 v1 is correctly rejected.
- Loading of data flows containing examples of the NHH import and export data flag (ie. SPMs)
- The SSR run for three settlement days using the data loaded above. The results of the runs will be checked against expected values.
- The production of SSR run reports (reports listed above)

The basis of these tests will be taken from the Unix 5.1 upgrade tests. Whilst implementing this change Logica will update the regression tests so that they continue to be kept current and can be easily used in future testing.

Documentation Changes

A number of documentation changes will be required:

1. SVAA Logica Data Design
2. SVAA Conceptual Process Model
3. SVAA Functional Definition and User Catalogue
4. SVAA Technical Specification
5. SVAA Operations Guide
6. SVAA System Management Guide

Related Impact

URS modifications are agreed and updated by ELEXON prior to the LCR being implemented.

Assumptions

The assessment assumes that:

1. The requirements for the change are as described in ELEXON document P081AC and further clarified in the Letter reference 434SCL0121.
2. No changes are required to EAC/AA due to modifications to the D0227001 flow.
3. The necessary changes to the URS are agreed prior to the order being made.
4. The changes do not affect ISRA (only SVAA).
5. Due to the current unavailability of the PTS server, the effort to undertake performance testing has been excluded from this assessment (See Performance section above).
6. This change will be carried out as a stand alone LCR.
7. Documentation will be updated but not issued as part of this change.
8. The Help File will not be regenerated as part of this change.
9. The four CCC Ids are defined prior to the implementation start date.
10. Performance Testing is excluded from this assessment, however Logica are happy to discuss the modification of this LCRA with regard to performance once the PTS is available. Any changes to the scope would require a new assessment of this LCRA.
11. No other changes to the flows are made other than to include the SSC import/export flag.
12. SVAA will not support two versions of the same flow simultaneously.
13. SVAA and ISRA will still load in the first version of the D0269 flow.
14. The format of the new version of flow D0278 is agreed before the order is placed.
15. A decision on the option of reports requiring modification and whether the EAC Export CCCs will be excluded or set to zero is agreed before the order is placed.

Timescale implications

SVAA (min)

Logica estimate that it would take approximately 15 weeks to complete System Testing from receipt of a suitable CCN. A more accurate figure could be given once we have a clearer understanding of the required delivery timescales and what else is being implemented at the same time. Logica may require between two and four weeks notice in order to obtain suitably qualified staff for this work.

SVAA (max)

Logica estimate that it would take approximately 17 weeks to complete System Testing from receipt of a suitable CCN. A more accurate figure could be given once we have a clearer understanding of the required delivery timescales and what else is being implemented at the same time. Logica may require between two and four weeks notice in order to obtain suitably qualified staff for this work.

SVAA (min)
The Stage milestone payment profile is:

Change in Payment Profile	Stage Payments
Receipt of CCN	£26,400
Start of testing	£26,400
Successful completion of testing	£26,400
Delivery of Beta release	£0
Delivery of Formal release	£8,792
Total	£87,992

SVAA (max)
The Stage milestone payment profile is:

Change in Payment Profile	Stage Payments
Receipt of CCN	£32,600
Start of testing	£32,600
Successful completion of testing	£32,600
Delivery of Beta release	£0
Delivery of Formal release	£10,840
Total	£108,640

The above assessment and fixed price assume that:

c) a CCN is received by 8th November 2002;

d) a Maintenance Service Contract exists until at least 3 months after the acceptance of the changes;

e) prices exclude VAT.

Logica Ref	**LCR203/4**	Type	**ELEXON Originated Change Request**	Component	**NHHDA**
ELEXON Ref	**432SCL0121 P81**				

Assessor Name	**Richard Ascough**	Assessor Location	Logica Project Team, Leatherhead	Date	**08/10/2002**

Title: P81 – Removal of the Requirement for Half Hourly Metering on Third Party Generators at Domestic Premises

Description

P81 seeks to remove the requirement for domestic premises with Third Party Generating Plant to have Half Hourly Metering installed, if the Exports are to be taken into account in Settlements. It suggests that this will better facilitate competition in the supply and generation of electricity, by removing an obstacle to the use of micro-generation e.g. domestic Combined Heat and Power and photovoltaic cells.

A high level assessment was undertaken by Logica in August 2002 with regard to changes in EAC/AA, NHHDA and SVAA. A more detailed assessment of two options was completed in September 2002. ELEXON have now refined the requirements and have requested a re-assessment of the application. LCRA203/3 looks at the impact P81 has on EAC/AA and SVAA. This LCRA looks at the impact of P81 on NHHDA.

The difference between this assessment and LCRA203/2 is

- the D0269 flow may also be changed to include the new SSC import/export flag and this should be loaded into NHHDA but not used in any calculations.

This assessment is based on ELEXON document ref P081AC10 and discussions between Richard Ascough, John Lucas and Joanne Ellis.

Functional Response

NHHDA

As for EAC/AA there is no requirement for NHHDA to distinguish between import and export meter reads. NHHDA will aggregate similar meters and hence the SPM will have values for both import and export meters. As these are identified by different SSCs import and export meters will not be aggregated together.

If there is a requirement to load in the SSC import/export flag into NHHDA then following changes are required:

- a database table update to record the SSC import/export flag
- a change to the MDD load (D0269) to cope with the updated flow (v3)
- the application will load in the new version of the flow but not support two versions simultaneously.
- a change to the front end to change and update the SSC import/export flag.

It will be assumed during the data migration that all existing SSCs are import.

It should be noted that the new SSCs will need to be loaded in to NHHDA prior to any instructions containing export meters being loaded into the application. It is also assumed that there will be no change to the flows D0209 and D0019 or any requirement to load other additional data from the D0269 flow version 3.

Risks

Logica consider the NHHDA change to be of low risk.

Performance

Whilst Logica do not currently have the facilities to undertake full production testing we have tried to indicate below the expected changes in performance if these options were implemented.

NHHDA

As the change to the D0269 flow is minimal, Logica estimate the loading of the D0269 flow will be less than a 1% degradation. The performance of Aggregation, Instruction Processing and CDCD will be unaffected.

Other comments

The impact of P81 on SVAA and EAC/AA is assessed in LCRA203/3.

Quotation Price

The total price for this Logica Change Request Assessment is

- NHHDA £34,083

Technical Response

NHHDA

The database table ndb_std_sett_cfgs will need to be amended to add a new column to define the import/export flag. A new NOT NULL column will be added (VARCHAR2(1)) which can be set to 'I' or 'E'. Constraints will be added to the database to enforce these values. During the data migration exercise, it will be assumed that all existing SSCs are for import meters.

The "Define Standard Settlement Configurations" form will need to be amended to include the new flag.

The Standard Settlement Configurations Report will need to change to display the import/export flag.

The MDD load module will need changing to load the new import/export flag. A new error will need to be defined to report an invalid value for the import/export flag.

Note:

- The application will need to be enhanced to support the use of flow versioning. The simple method would be for NHHDA to recognise the D0269003 as a new file type, however the disadvantage would be that the load would not realise that the D0269003 and D0269001 are different versions of the same flow, however if version 1 of the flow is removed from the application when the change is implemented, then this would not be a problem. If the application supported the use of both flows then it would be possible to load an earlier version of one flow after a later version of the other.

For this assessment Logica have assumed that the application will only support version 3 of the D0269 flow after this change has been implemented.

An upgrade script will also be required to migrate the existing SSC table. It is assumed that all existing SSCs are import.

It should be noted that a thorough testing of the loading of the D0269 flow is required to ensure that the other data values are still loaded correctly.

Archiving will also need to be modified to include the new flow version.

Testing

NHHDA

The explicit new functionality will be tested using a new set of scripts:

- Creation, amendment and deletion of standing data (SSCs) through the front end
- Loading of the D0269 v3 containing examples of the NHH import and export data flag. These needs to include that other data is still loaded successfully even through it is a new flow version.
- Test that the D0269 v1 is correctly rejected.
- The production of the SSC report.
- A simple regression test (automated) for instructions processing
- A simple regression test for aggregation.
- An archiving test.

The basis of these tests will be taken from the automated NMI tests from NHHDA 7.3.0 and IVT.

Documentation Changes

A number of documentation changes will be required:

16. NHHDA Logica Data Design
17. NHHDA Conceptual Process Model
18. NHHDA Functional Definition and User Catalogue
19. NHHDA Technical Specification
20. NHHDA Operations Guide
21. NHHDA System Management Guide
22. NHHDA Training Courses

Related Impact

URS modifications are agreed and updated by ELEXON prior to the LCR being implemented.

Assumptions

The assessment assumes that:

23. The requirements for the change are as described in ELEXON document P081AC and further clarified in the Letter reference 434SCL0121.
24. The necessary changes to the URS are agreed prior to the order being made.
25. Due to the current unavailability of the PTS server, the effort to undertake performance testing has been excluded from this assessment (See Performance section above).
26. This change will be carried out as a stand alone LCR.
27. Documentation will be updated but not issued as part of this change.
28. The Help File will not be regenerated as part of this change.
29. Performance Testing is excluded from this assessment, however Logica are happy to discuss the modification of this LCRA with regard to performance once the PTS is available. Any changes to the scope would require a new assessment of this LCRA.
30. No other changes to the flows are made other than to include the SSC import/export flag.
31. NHHDA will not support two versions of the same flow simultaneously.
32. The format of the new version of flow D0269 is agreed before the order is placed.

Timescale implications

NHHDA

Logica estimate that it would take approximately 8 weeks to complete System Testing from receipt of a suitable CCN. A more accurate figure could be given once we have a clearer understanding of the required delivery timescales and what else is being implemented at the same time. Logica may require between two and four weeks notice in order to obtain suitably qualified staff for this work.

The Stage milestone payment profile is:

Change in Payment Profile	Stage Payments
Receipt of CCN	£10,200
Start of testing	£10,200
Successful completion of testing	£10,200
Delivery of Beta release	£0
Delivery of Formal release	£3,483
Total	£34,083

The above assessment and fixed price assume that:

f) a CCN is received by 8th November 2002;

g) a Maintenance Service Contract exists until at least 3 months after the acceptance of the changes;

h) prices exclude VAT.

A1.2 High Level Impact Assessment

A high level impact assessment was issued with the P81 Requirements Specification (reference 3) to BSC Agents on 9 August 2002 with responses due by 21 August 2002. Responses were received from the Profile Administrator, the SVAA / MDD Agent and the SVAA / NHHDA and EAC/AA software developer (Logical). The detailed responses received are attached below.

A1.2.1 Profile Administrator

Profiling Option	Domestic premises Impact & Cost / Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Cost / Timescale for implementation
New Export Profiles	By making some assumptions it is possible to construct an export profile. The level of inaccuracy is impossible to determine at this stage but it is not simply a function of sample size, it is fundamentally inaccurate. Further information on the availability of within day gas demand data is required before an estimate of the cost or timescale can be made but it is envisaged that an export profile could be produced for use in 2004. The accuracy could be improved by replacing the synthesised generation profile with measurements from a conventional load research sample.	A separate export profile may be required for non-domestic customers as the generation shape would differ from domestic.
Chunked demand Profile	Any improvement in accuracy is very dependent on the register switching times. Further work is required to asses the cost, timescale and level of improvement.	
Please include any additional information / costs relating to multi-rate metering rather than single rate metering	None	
Gross Generation Profiles	This is the simplest profiling option. All values can be accurately estimated. Further information on the availability of within day gas demand data is required before an estimate of the cost or timescale can be made but it is envisaged that a generation profile could be produced for use in 2004. The accuracy could be improved by replacing the synthesised generation profile with measurements from a conventional load research sample.	
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	No comment	

Please give your views on if you believe the additional Consumption Component Classes are necessary.	No comment	
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.	No comment	
Please give details of SVAA impacts and further changes that have not been identified.	No comment	
Please give details of SMRA impacts and further changes that have not been identified.	No comment	
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.	No comment	
Please give details of Profile Administrator impacts and further changes that have not been identified.	Additional data processing would require some initial setup costs but thereafter it becomes a marginal cost if produced with the existing profiles. A fieldwork sample requires further costs of the order of one eighth of the current profiles	
Please give details of DSO impacts and further changes that have not been identified.	No comment	
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes	No comment	

A1.2.2 Supplier Volume Allocation agent / MDD Aennt

MP No.	81	Title	Removal Of The Requirement For Half Hourly Metering On Third Party Generators At Domestic Premises

BCA Name	Clive Mallinson	Assessor	SVA Agent	Date	21/08/02

Costs
£14,304.00 - Estimated costs to develop test and implement changes to MDD to add new data items to Profile Class and CCC data

Timescale implications
Estimated timescales for this development is 2 months from receipt of an order, assuming that no other development work from ELEXON has a higher priority.

Risks

Comments
MDD
Profile Class and CCC records can be entered into MDD using existing processes. If there were no changes to the record structure then there would be no impact on the MDD application.
However, the Modification Proposal requests the option to highlight Specific Export Profile Classes by the addition of a new data items to the Profile Class and SSC data. If this option were to be implemented then changes to the MDD tables, front-end screens and a new flow structure would be required.

ISRA
There are problems associated with loading both Profile Class and CCC records into ISRA.
New Profile Class data is loaded via the P0015 file. There is an issue with this file load outstanding since 1999. The record structure in the P0015 does not map onto the corresponding SVAA record, causing the file load to fail. The agreed work around is that for every publish, a modified version of an old P0015 file (i.e. one created prior to 1999) is used instead. This only works because to date no new Profile Data has been added to MDD. However, the introduction of new Profile Classes will make this workaround inoperable, and will therefore require the P0015 load process into ISRA to be corrected by Logica.
CCC records are included in the D0269 load into ISRA, but it is believed that the ISRA load process ignores these records. This will need to be tested before a detailed level assessment can be provided.
There is no facility within the ISRA application to load CCCs manually, therefore if these are not loaded via the D0269 the application will need to be amended to enable new CCCs to be entered.

PARMS
During the development of the PARMS Deemed Take Apportionment Report (P0120002)it was observed that the code for the previous version of this flow (P0120001) accumulates NHH energy without regard to the Active Import or Active Export flag for the Consumption Component Class. This has not been an issue as all existing NHH CCCs are Active Import. However, the inclusion of Active Export energy will mean that this consumption is added to the total rather than subtracted from it.
This has been amended in the new version of the Deemed Take Apportionment Report. However, the original software was working to specification. It is possible, therefore, that other PARMS reports work in a similar way, and will produce incorrect results if MP81 is implemented. A review of all existing PARMS reports will be required and the cost of any remedial work identified before a detailed level assessment could be produced.

Assumptions
After discussion with Joanne Ellis of ELEXON it is assumed that there will be no more than 10 records to be manually entered into ISRA. If this assumption is incorrect there may be a cost associated with this activity.
It is assumed that ELEXON will define any requirements for integration testing etc, therefore no costs have been included for this.

Recommendation
Not applicable.

Impact assessment issued by SVAA to BSCCo Change Processes
Chris Hawkins 21/08/02

A1.2.3 EAC / AA / NHHDA & SVAA Software

Logica Ref	LCR203	Type	ELEXON Originated Change Request	Component	EAC/AA NHHDA SVAA
ELEXON Ref	430SCL012 P81				
Assessor Name	Richard Ascough	Assessor Location	Logica Project Team, Leatherhead	Date	21/08/2002

Title: P81 – Removal of the Requirement for Half Hourly Metering on Third Party Generators at Domestic Premises

Description

P81 seeks to remove the requirement for domestic premises with Third Party Generating Plant to have Half Hourly Metering installed, if the Exports are to be taken into account in Settlements. It suggests that this will better facilitate competition in the supply and generation of electricity, by removing an obstacle to the use of micro-generation e.g. domestic Combined Heat and Power and photovoltaic cells.

This assessment provides a high level impact assessment of a number of the options for implementing a solution that affects the EAC/AA, NHHDA and SVAA applications. It should be noted that there is no change in the requirement of having separate meters for import and export.

Functional Response

Option 1 - New Export Profile Method

The new export profile method categorises the export MPAN as having a profile class specifically reserved for exports. At present MDD contains only 8 different profile classes. These new export profile classes may or may not have an additional field in the MDD flow(s) to define that they are export. Further options to the solution are defined as the readings for these exports (which are converted into EACs and AAs) being either positive or negative values. Another option is that a new set of Consumption Component Classes are defined for Non-Half Hourly meter Exports. These options are all discussed below:

Negative Meter Reads

This section deals with meter reads for exports as being negative values. These values will be passed by the NHHDC application to the EAC/AA application to provide the Annualised Advance (AA) and next Estimated Annual Consumption (EAC) for the meter. NHHDA will then aggregate these negative values before passing the data onto SVAA for further processing.

EAC/AA is already capable of handling negative meter reads, however a warning is produced for each of these meters. The disadvantage of using negative meter reads for EAC/AA is that these warning messages may hide genuine warning messages for negative meter read for imports. The errors will not distinguish between import and export meters as the meter type will not be known to EAC/AA.

If MDD was changed to distinguish profile classes between import and export, the application could be modified to prevent these erroneous errors by storing the known profile classes within the database. Given the very low volume to profile classes, it would be sensible to enter these through the front end rather than providing a new data flow. A warning could then be generated for positive exports and negative imports based on the profile classes provided in the EAC/AA request file.

NHHDA will not need any changes to cope with negative meter reads. The application aggregates similar meters and it therefore regards new export profile classes as just new data. It will also not care if the profile class is import or export and therefore will not need a change to load a changed MDD flow if the

flag is at the end of the PFC record.

ELEXON may wish to run a number of tests to validate any changes in this area (eg new MDD flow) does not affect NHHDA.

It is assumed that any changes to the system will only be applied for settlement dates after the NETA start date and hence will only affect SVAA and not ISRA. This is fairly important as ISRA ensures that there is no negative spill, which could be produced as a result of negative meter reads. This functionality is not present in SVAA.

The SVAA application will require no changes if the consumption data for export meters is negative. However, this will not allow any reports to be produced from SVAA on export NHH meters as SVAA will not be able to distinguish between import and export consumption for non-half hourly meters.

If a change was made to the MDD data, either by adding a flag to export profile classes or defining a new set of Consumption Component Classes, then a change will need to be made to the application to change both the standing data and the SSR run including the possibility of a new report or the modification of an existing report.

It should be noted that EAC/AA and NHHDA are not aware of Consumption Component Classes and hence any change in this area will not affect these two applications.

The effort required to EAC/AA for these changes is summarised below:

new export PC, negative meter reads, no MDD changes — *0 man-days* (ie. no changes required)
NB. the application would produce a warning for all negative readings

new export PC, negative meter reads, MDD changes — *25 man-days*
NB. the application would produce a warning for all negative import readings and positive export readings

The effort required to NHHDA for these changes is summarised below:

new export PC, negative meter reads, no MDD changes — *0 man-days* (ie. no changes required)

new export PC, negative meter reads, MDD changes — *0 man-days* (ie. no changes required)

The effort required to SVAA for these changes is summarised below:

new export PC, negative meter reads, no MDD changes — *0 man-days* (ie. no changes required)
NB. the application would not be able to report on NHH export consumption

new export PC, negative meter reads, PC flag for export — *40 man-days*

new export PC, negative meter reads, new CCCs — *80 man-days*

Positive Meter Reads

This section deals with meter reads for exports as being positive values. These values will be passed by the NHHDC application to the EAC/AA application to provide the Annualised Advance (AA) and next Estimated Annual Consumption (EAC) for the meter. NHHDA will then aggregate these positive values before passing the data onto SVAA for further processing.

EAC/AA will require no changes for new export profile classes if positive values were used for export meters. EAC/AA will not have to identify export meters in order to limit the warnings and therefore will not require a change if the MDD data was changed to add a flag for export profile classes.

Likewise NHHDA will not require an changes in order to aggregate the new export profile classes.

SVAA will however require changes in order to identify the export consumption values and negate them during its processing. Hence MDD changes will be needed in order to identify the profile classes for export meters. This option will require changes to the creation and amendment of MDD data, the SSR Run and the production of a number of SSR reports. Changes to the SSR Run which is the core functionality of SVAA mean that the change itself has a higher element of risk than other changes to the

application.

The effort required to EAC/AA for these changes is summarised below:

new export PC, positive meter reads, no MDD changes	*0 man-days* (ie. no changes required)
new export PC, positive meter reads, MDD changes	*0 man-days* (ie. no changes required)

The effort required to NHHDA for these changes is summarised below:

new export PC, positive meter reads, no MDD changes	*0 man-days* (ie. no changes required)
new export PC, positive meter reads, MDD changes	*0 man-days* (ie. no changes required)

The effort required to SVAA for these changes is summarised below:

new export PC, positive meter reads, no MDD changes	*unable to implement this option*
NB. positive meter values require MDD change in SVAA	
new export PC, positive meter reads, PC flag for export	*95 man-days*
new export PC, positive meter reads, new CCCs	*105 man-days*

Option 2 - Chunked Profile Method

The chunked profile method removes the need to identify export meters using a new set of profile classes. Instead a new set of SSCs will be created. As for the new export profile method two sub options exist where the SSCs may be marked as export in the MDD flow or the meter reads may be either positive or negative.

In terms of estimating the effort to implement the chunked profile method this is comparable to the new export profile method.

For EAC/AA the MDD changes for negative meter reads would not require a new profile class table and data entry form, however the existing SSC table and form would need to be altered as would the D227 file load. All other changes would be similar to the new export profile method.

No changes would be required to NHHDA.

The changes to SVAA would be comparible to the new export profile method.

The effort required to EAC/AA for these changes is summarised below:

chunked profile, negative meter reads, no MDD changes	*0 man-days* (ie. no changes required)
NB. the application would produce a warning for all negative readings	
chunked profile, negative meter reads, MDD changes	*25 man-days*
NB. the application would produce a warning for all negative import readings and positive export readings	
chunked profile, positive meter reads, no MDD changes	*0 man-days* (ie. no changes required)
chunked profile, positive meter reads, MDD changes	*0 man-days* (ie. no changes required)

The effort required to NHHDA for these changes is summarised below:

chunked profile, negative meter reads, no MDD changes	*0 man-days* (ie. no changes required)
chunked profile, negative meter reads, MDD changes	*0 man-days* (ie. no changes required)
chunked profile, positive meter reads, no MDD changes	*0 man-days* (ie. no changes required)
chunked profile, positive meter reads, MDD changes	*0 man-days* (ie. no changes required)

The effort required to SVAA for these changes is summarised below:

chunked profile, negative meter reads, no MDD changes	*0 man-days* (ie. no changes required)
NB. the application would not be able to report on NHH export consumption	
chunked profile, negative meter reads, SSC flag for export	*35 man-days*
chunked profile, negative meter reads, new CCCs	*85 man-days*
chunked profile, positive meter reads, no MDD changes	*unable to implement this option*
NB. positive meter values require MDD change in SVAA	
chunked profile, positive meter reads, SSC flag for export	*95 man-days*

chunked profile, positive meter reads, new CCCs *105 man-days*

Option 3 – Gross Generation Option

This option would require the meter reader to read three readings: import, export and generation. From these values the NHHDC would be able to calculate a Gross Consumption value from the (Gross Generation value + Net Import value – Net Export value). These four figures should be treated as a unique set of data. The Net Import and Net Export figures should be used to calculate the DUoS charges whereas the Gross Consumption and Gross Generation figures should be used for settlement purposes.

It should be noted that the requirements specification states that SVAA will calculate the Gross Consumption, however this is not possible as SVAA has no way of identifying how these values are linked together.

This is a very complex change which will require significant changes to MDD in order to allow SVAA to identify aggregated data relating to Net Imports and Net Exports as opposed to Gross Generation and Gross Consumption. These MDD changes may well have to be applied to NHHDA and EAC/AA as well. EAC/AA will not be able to calculate EACs and AAs for Gross Generation and Gross Consumption without associated daily profile co-efficients for this data. This data does not currently exist in settlement and therefore careful thought needs to be given on how to calculate and use this data.

Logica do not consider this option to be technically feasible at this stage without major costly changes. Given the fact that the reason for the modification is to reduce cost by allowing small generators not to have half hourly meters, this costly option, whilst possibly being a purist's way of producing settlement results in areas like DUoS billing, does not seem to be the best and most cost effective way to addressing the issue.

Option 4 – Option available to NHH Non-Domestic Premises

The distinction between domestic and non-domestic premises in the NHH market is purely data related. As a result it will not affect the EAC/AA, NHHDA and SVAA applications any differently from utilising this new functionality for non-domestic premises.

Therefore there will be no additional cost to extend this to NHH non-domestic premises.

Risks

The majority of the options discussed above are low risk, however where changes are required to the SSR run the risk is medium to high depending on the type of change required.

Other comments

The man days estimates are approximate and do not include risk, contingency or performance testing. It should also be borne in mind that the exact requirements for each of the options is not known at this stage. Logica have therefore estimated the amount of effort in areas that are likely to change.

Looking at the EAC/AA, NHHDA and SVAA applications by themselves we would recommend that the simplest changes and most effective solution would be to have negative meter reads with either a new profile class(es) or a new SSC(s) which are flagged as export in MDD. Whilst this would require a change to EAC/AA, the change is relatively simple and will improve the warnings for export meters. Changes to SVAA for this data change would be smaller as CCCs are used in a large number of SSR run reports compared to the profile class or SSC. In our estimates we have assumed that positive meter reads will be stored as positive values in SVAA resulting in changes to all areas where consumption is read.

Quotation Price

This is a high level impact assessment and therefore, as agreed with ELEXON, a quotation price is not provided at this stage.

ANNEX 2 BSC PARTY IMPACT ASSESSMENT RESPONSES

A2.1 Detailed Level Impact Assessment BSC Party Responses

The P81 detailed level impact assessment was issued 13 September 2002 with responses due back by the 26 September 2002. Responses were received from the following Parties:

Organisation	**Respondent Role**	**What impact, if any, will the Proposed Modification and the Alternative Modification have on your organisation's systems and processes? Please indicate if there will be any difference between the impact of the Proposed Modification and the Alternative Modification.**	**What implementation timescale would you require for the Proposed Modification and the Alternative Modification? Again, please indicate any differences between the implementation of the Proposed and Alternative Modifications.**	**Any other comments:**
National Grid	Transmission Co.	No impact identified.	N/A	
SEEBOARD Energy	Supplier	Changes potentially required to a number of systems to manage NHH import and export metering. There are no differences with respect to proposed and alternate modification.	We would probably require 6 months notice to make these changes, with no difference between proposed and alternate modification.	
TXU Energy	Supplier	The system changes to accommodate new D0269 and D0270	8 Months	
London Electricity	Supplier	**The St Clements designed system used by the Company will have to be upgraded and new processes initiated at a minimum cost of £15K. Although the changes will be slightly different for the proposed modification and the alternative modification the overall impacts for either modification are similar.	St Clements have given a timescale of 3 months to update the system. Then, in addition we will need to test the system, arrange to make the internal changes necessary to accommodate the new processes and organise training with all affected parties, which is estimated to take another 2 months. With a major change to the system, such this, it would be an advantage to have 1 months prior notice for the system development. Therefore I propose a suggested timescale of 6 months.	The only comment I have is on behalf of the Meter Operator which is:- 'The D0142 flow from Supplier to Meter Operator has a free flow field which could be used for embedded generation but it would be better to use another dedicated field so the process can be automated.'
Aquila Networks	Distributor	Both the Proposed Modification and the Alternative rely on the addition of a new data item to Market Domain Data (MDD) to indicate if a Standard Settlement Class (SSC) is to be for Import or Export meter readings. This will require a change to our registration software (MPRS). The total cost of implementing such a change is likely to be in the region of £3k.	No date has been agreed for the next release of MPRS, although it's likely to be mid 2003. The implementation timescale for this modification depends on it's ultimate approval date (i.e. if that date does not enable the change to be included in the next release of MPRS, implementation could be as late as 2004.)	P81 states that Distributors will be required to create NHH export LLFs. We believe this is an incorrect statement. Instead, Distributors should be required to ensure that NHH export MPANS are allocated to appropriate LLFs.

SEEBOARD Power Networks	Distributor	Both the Proposed Modification and the Alternative Modification will have an impact on our SMRS and DUoS Billing systems. These IT costs are estimated, based upon the information available, at £15k. The response is on the basis that no fundamental changes to Distribution IT systems or business process (other than a significant growth in the numbers of micro-generators with the consequential operational business process volumes) will be required and that any and all validation or process changes that may be identified lie within the supplier domain.	Three (3) months for either option.	The principles behind this modification are sound and the changes to the BSC are relatively uncomplex. However, a growth in micro-generation has the potential to cause significant operation problems in the market. What mechanisms are considered necessary to ensure the robustness of data between suppliers and their agents?, for example in situations where there are different importing and exporting suppliers? or the existing supplier is unaware that his customer has installed micro-generation equipment?. For example; under the principles adopted for meter splitting (BSCP 550) the original incumbent supplier is responsible for registering and trading the secondary MPAN subsequent to which a change of supplier is effected. This principle would appear to lend itself to the situation where a customer installs micro-generation, the incumbent supplier picks up the obligation to register and trade the export MPAN. Then, if necessary, a CoS can take place to the new export purchasing supplier.
Npower Ltd, Npower Direct Ltd, Npower Yorkshire Ltd, Npower Yorkshire Supply Ltd	Supplier/ Data Collector/ Data Aggregator/ Meter Operator	The proposals to change the format of the D0269 & D0270 Market Domain Data flows will obviously have impact on all systems that load MDD, especially the Meter Operator database, Formfill, ECMS and SONET(NEVADA). More detailed information needs to be provided regarding the requirements of the Import and Export flag before an impact assessment can be undertaken for legacy systems, also it is not clear which MDD group it will be added to – we assume the SCI group? We would also seek clarity that the proposal to include this extra data item denoting whether an SSC is linked to an Import or Export register is on the D0269/D0270 alone, and not included on other dataflows (eg D0052, D0149, etc) containing SSC information.	After a high level estimate, St Clements Services advise that a minimum of 50 man days effort would be required. Meter Operator systems would require timescales of 3 months. Other systems which load MDD dataflows would require rigorous testing, therefore test files would be needed as soon as possible for the validation process.	Rather than amending the D0269 and D0270 flows, would it not be easier to produce a table outside of MDD, which lists the agreed SSCs to be used for Export sites? This would avoid the need to make costly changes to systems and business processes

Scottish Power UK plc SP Manweb Ltd SP Transmission Ltd Scottish Power Energy Retail Ltd Scottish Power Energy Trading Ltd Scottish Power Generation Ltd	Supplier/Distributor/ Data Collector/Data Aggregator/Meter Operator/Generator	Either proposal would give rise to systems impact, but we are of the opinion that the alternative proposal should be implemented. The implementation costs of the Alternative Modification Proposal would be in the five-figure bracket, with a minimum of 6 months notice required. However, it should be noted that we are only able to provide indicative costs at this time and that more information regarding the proposed CCCs would be required before a detailed level analysis could be carried out.	A minimum of 6 months notice is required.	
Scottish and Southern	Supplier/Distributor/ Data Collector/ Data Aggregator/ Meter Operator/MPAS	Implementation of either Modification will require significant changes to our systems and will be expensive. SSC is a data item on 32 DTC flows and although the SSC Export/Import indicator may not be included in the flow new validation and processing will still be needed to handle SSCs. The Modification suggests that each Export MPAN could have its own SSC, depending on the time of day the Metering Point generated electricity on to the distribution system, how many variations would there be? Will the SSC's allow for split times? Will new TPRs and MTCs be required? Each MTC has its own description it is difficult to see how the existing values could be used for export. Changes to our settlement volume analysis and reporting systems would also be required to handle the additional mapping of SSC to Measurement Quantity in Market Domain Data and the subsequent link to the additional CCCs proposed, at an indicative cost of £25k. This cost could be mitigated by using flow versioning on any revised version of MDD and allowing participants to take the existing version of MDD for a set number of months after implementation.	For either Modification we will require at least 6 months notice. There is insufficient detail in the Modifications to be precise.	We are concerned that the impact on systems and processes from the proposed modification may turn out to be expensive, unwieldy and lead to inaccuracy in the data entering settlements. Our suggestion is to benchmark these proposals against the most "friendly" version of the half-hourly metering solution that we believe is to meter exports with a simple half-hourly data logger in a M.O.S.T. framework allowing data to be collected and enter settlements up to 14 months in arrears. This would also provide a source of half-hourly data that could be deployed for designing a profiling solution at a later date if expedient. This approach would minimise systems? changes in the short term and enable more analysis to be done to establish the best solution for the future. Although the 16 Amp per phase capacity limit could be more difficult to police than the Domestic criterion. It would help to limit the inaccuracy that would be introduced if there were no capacity restriction.

United Utilities	Distributor	The Modification Proposal Summary Allows NHH metering for domestic generation sites Still requires import/export metering Still requires both import and export MPANs Domestic definition of Profile 1 (and possibly 2) New SSC is required to define import and export times for each generation technique (x2?) DNO Requirements New MTC required in order to identify NHH import export metering New MTCs required for stand-alone and associated modes (x2) New MTCs also required for PPM versions (x2) New MTCs needed for each RTS and T/S group if Profile 2 E7 versions are to be used (x9) (Timescales for new MTCs : 2 months) Actual profiles and EACs of the import will be radically altered following the installation of generation. Spreading the costs of peak demand over less units must mean that DUoS prices increase for these customers. (Timescales for new DUoS tariffs : 6 months – 1 month production and 5 months notice to Ofgem) This will require new LLFCs. New LLFs required for each generation technique and profile and MTC. New LLFs also required for option of being non-meter provider as MAP is currently recovered through DUoS. (Timescales for new LLFCs : 2 months) The Alternative Proposal Defines premises by generation capacity rather than domestic profile This allows 3 phase connections. There could therefore be all NHH profiles (1-8) requiring an additional multiplication of LLFCs. (Timescales for new LLFCs : 2 months). Other issues below will be multiplied if additional non-domestic profiles are allowed.		Other Issues Chunking is bi-polar in nature. Via the SSC, an MPAN will be judged to be either importing or exporting at any one time with import and export EACs being spread via the original import profile i.e. peaking at teatime on a Monday to Thursday between November and Feb. The use of these normal import profiles for generator import will be inaccurate. For CHP actual import during the winter peak periods will be almost nil as heating and electricity demand will be coincident. Use of a normal import profile will weight the much reduced meter readings as if import is at peak at the most expensive times, exaggerating the cost of the imports. The use of normal import profiles for export will be inaccurate. In summer, for PV actual export will peak at lunchtime when it is sunniest. Using a normal import profile, actual exported units as measured on the meter will be weighted towards teatime exaggerating the value of the export.

A2.2 High Level Impact Assessment BSC Party Responses

A high level impact assessment was issued with the P81 Requirements Specification (reference 3) to BSC Parties on 9 August 2002 with responses due by 21 August 2002. Responses were received from ??? BSC Parties. The detailed responses received are attached below, summarised by question and also the original responses received.

A2.2.1 Responses Summarised by question

General Comments:

We are concerned that the impact on systems and processes from the proposed modification may turn out to be expensive, unwieldy and lead to inaccuracy in the data reaching settlements. Our suggestion is to benchmark these proposals against the most "friendly" version of the half-hourly metering solution which we believe is to meter exports with a simple half-hourly data logger in a M.O.S.T. framework allowing data to be collected and enter settlements up to 14 months in arrears. This would also provide a source of half hourly data which could be deployed for designing a profiling solution at a later date if expedient.

Note that any Option that requires new Profiles could entail considerable rework of systems. We are not currently in a position to estimate effort, costs or time scales.

New Export Profiles

<table>
<tr><th>Domestic premises</th><th>“up to 16 Amp per phase capacity”</th></tr>
<tr><td></td><td>Preferred, as it allows for non-domestic NHH small embedded generation
Our second choice for long term option, equal first choice for short term. But NB the stated method of developing the profiles is only acceptable as a short term measure. In the long term, the new profiles need to be as robust as existing profiles.</td></tr>
<tr><td>Ought to be based on adequate load research and ought to vary according to the type of technology being used for generation which could mean long timescales.</td><td>Generally we feel that the 16 Amp per phase capacity limit could be more difficult to implement than the Domestic criterion.</td></tr>
<tr><td colspan="2">The choice of profiling method is of little direct interest to distribution businesses. So long as we receive NHH kWh data aggregated by LLFID, there will be little impact on our current systems and procedures.
The same is practically true for the “threshold-point” used to distinguish between the requirement for NHH or HH metering. The most important thing is being able to identify any NHH export MPANs. To facilitate identification we would recommend inclusion of an “export” label as part of the address at the time of MPAN creation. This measure will have little impact on current systems and procedures.</td></tr>
<tr><td>The creation of extra profiles seems the most sensible choice. It enables the new export class to be readily identified and, of the options offered, it is the best compromise between accurate settlements and ease of implementation.
Creation of new profiles will require updates to standing data held in our SMRS and Distributor systems, and enhancements to the logic used in certain applications but the impact is not large and could be accommodated with three to six months notice.</td><td>Impact is the same irrespective of how the term “domestic” is chosen. This option may though increase the number of customers choosing to export via NHH.</td></tr>
</table>

The proposals appear to be much concerned with the creation of export profiles, designed to help Suppliers derive a buying price for the export they are purchasing. However, the import profiles will also be significantly affected by micro generation. This appears to be being ignored with existing profiles being used for import. This will lead to unnecessary errors in settlements. According to the description given, new import Profiles for profile 1 for each generation method is calculated in order to get to the export profiles. These new import profiles will therefore already exist and the excuse about cost is irrelevant.	More complication as MPANs with non-domestic profiles could be used.
There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.	There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.
£1-2 million per profile with a period of 6 months for changes to our DC, DA, MOA, SMRS and Supplier systems	

Chunked demand Profile

Domestic premises	**"up to 16 Amp per phase capacity"**
May entail shorter timescales than new profiles although some load research information is required to adequately set the timeslots to be used.	Generally we feel that the 16 Amp per phase capacity limit could be more difficult to implement than the Domestic criterion.
No major impact given x 2	Preferred, as it allows for non-domestic NHH small embedded generation Not for export, but we think chunking is appropriate for the import profiles, which must be addressed.
The choice of profiling method is of little direct interest to distribution businesses. So long as we receive NHH kWh data aggregated by LLFID, there will be little impact on our current systems and procedures. The same is practically true for the "threshold-point" used to distinguish between the requirement for NHH or HH metering. The most important thing is being able to identify any NHH export MPANs. To facilitate identification we would recommend inclusion of an "export" label as part of the address at the time of MPAN creation. This measure will have little impact on current systems and procedures.	
With the chunked profile option, the multi-rate option appears to be more accurate. However does it assume that the export profile would have profile coefficients outside the 'export periods'. This doesn't appear to be borne out in the profile method. The method is also suggesting that export readings outside the anticipated 'export periods' will be added to the import profile and visa versa. This will produce additional inaccuracies.	More complication as MPANs with non-domestic profiles could be used.
There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.	There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.

We do not consider it is correct to allocate export based on an import profile. It does not seem prudent to adopt solutions that will produce inherently inaccurate data for settlements. Although the magnitude of the error will initially be limited, increasing use of the technology will exacerbate any problem and may force the introduction of new profiles at a later stage. We would prefer to see a more robust solution introduced at the outset. There are distinct advantages to us if we have new profiles. These easily outweigh any benefits from this option and therefore we do not favour it.	Impact is the same irrespective of how the term "domestic" is chosen.
£100000 with a period of 3-6 months to develop SSC	

Additional costs relating to multi rate rather than single rate metering

Domestic premises	**"up to 16 Amp per phase capacity"**
Additional cost of multi-rate metering compared to single rate import/export meters with development of new electronic meters will not be significant	
Obviously where a meter replacement is required, this will increase costs. If carried out as part of the installation, there will be (small) costs associated with processing the change of meter flows. Ongoing costs to the customer will be incurred for a multi-rate meter as opposed to a single rate. It depends as to who owns the meter whether or not suppliers will have increased charges.	
The choice of profiling method is of little direct interest to distribution businesses. So long as we receive NHH kWh data aggregated by LLFID, there will be little impact on our current systems and procedures. The same is practically true for the "threshold-point" used to distinguish between the requirement for NHH or HH metering. The most important thing is being able to identify any NHH export MPANs. To facilitate identification we would recommend inclusion of an "export" label as part of the address at the time of MPAN creation. This measure will have little impact on current systems and procedures.	
Whatever form of metering is used there will be a certain amount of costs incurred as a result of a customer wanting to export to the network. A site visit fee may be required to fit or reconfigure the meter and there will also be costs of back office tasks to set the customer up on new tariffs and generate data flows etc. When taking all the costs in to account the additional cost of a multi-rate meter instead of single rate is marginal.	Impact is the same irrespective of how the term "domestic" is chosen.

Gross Generation Profiles

Domestic premises	**"up to 16 Amp per phase capacity"**
	Preferred, as it allows for non-domestic NHH small embedded generation Yes, but not as described in 3.2. Our preference is for a much simpler option; Gross Generation and Gross Consumption should be collected – BUT this is not feasible until DUoS issues have been addressed.

It has not been possible to fully quantify this approach. It is believed that difficulties in processing and calculating required volumes would far outweigh the theoretical accuracy obtained.	
No Impact x 2	No Impact x 2
The choice of profiling method is of little direct interest to distribution businesses. So long as we receive NHH kWh data aggregated by LLFID, there will be little impact on our current systems and procedures. The same is practically true for the "threshold-point" used to distinguish between the requirement for NHH or HH metering. The most important thing is being able to identify any NHH export MPANs. To facilitate identification we would recommend inclusion of an "export" label as part of the address at the time of MPAN creation. This measure will have little impact on current systems and procedures.	
There is a requirement to know Gross generation figures especially for photo voltaic generation for our Renewable Obligations, but we don't believe there is a requirement for Gross generation profiles. Also, DUoS requires Net figures, not Gross.	
This will be the most technically complex solution but its impact on us is similar to the "new profiles" option. It will require notice of three to six months to implement. The assessment report for this option states that DUoS charges should be calculated on the import and export of the premises. This is not correct, only the imports will be charged for. (Exported units will be charged for when they are imported at a subsequent system.) Distribution requires notification of the export readings as these are taken in to account when validating GSP group take versus consumption, and for assessment of system losses.	Impact is the same irrespective of how the term "domestic" is chosen.
We feel this is likely to cause undue complication and expense.	Generally we feel that the 16 Amp per phase capacity limit could be more difficult to implement than the Domestic criterion.
£1-2 million per profile with a period of 6-12 months for changes to our DC, DA, MOA, SMRS and Supplier systems	

Negative or positive readings

Domestic premises	**"up to 16 Amp per phase capacity"**
	Should be treated in the same way as exports in the HH market. We believe this means they should be positive values associated with an Export CCC. We hope that "an associated measurement class" is a misprint, as a new NHH measurement class would be catastrophically expensive to implement, and would probably cause serious disruption when implemented (how many systems across the industry are built on the assumption that a measurement class less than C is NHH?) We hope that Measurement Quantity was intended – leading to a Yes answer to the next question.

Consistency with metering set up will need to be maintained. Are export meters expected to run backwards to give negative advances? Or are meter readings and positive advances going to be manipulated to just appear to be negative? Profiled NHH data should be processed through Supercustomer DUoS methodology. As DSO, in order to get positive income from we will need to apply negative prices to any negative consumption whilst applying positive prices to any fixed/standing charge. As Suppliers, they will have to apply positive prices to the export.	
Our systems will accept negative values and this is our preferred option. We do not want to have changes to data flows if it can be avoided.	Impact is the same irrespective of how the term "domestic" is chosen.
To all intents and purposes we are indifferent to this; our billing systems can cope with either. All other things being equal, we would have a slight preference for positive values.	
Treating exports as negative import will potentially create problems when trying to ascertain meter faults and/or tampering. It is much better that exports are accounted for within the appropriate measurement class	
Use of negative values would be preferred.	
We favour treating as positive with an associated measurement class.	Generally we feel that the 16 Amp per phase capacity limit could be more difficult to implement than the Domestic criterion.
We would want to adopt the same principles for consistency between the HH & NHH markets and for simplicity of reporting. To adopt the same principles would then be a positive value with export being identified separately by Consumption Class.	
It would be appropriate to have associated NHH export measurement classes with positive values. This will ensure that export MPANS are dealt with separately in settlement. However if a means were found to ensure NHH Export MPANs were distinct in settlement without the new measurement classes we would be happy with this.	

Additional CCC

Domestic premises	**"up to 16 Amp per phase capacity"**
	They are necessary to identify the data as Import or Export.
Additional CCC classes should be introduced.	
Additional consumption component classes should be created to allow separate identification.	Generally we feel that the 16 Amp per phase capacity limit could be more difficult to implement than the Domestic criterion.
Have not identified any need for them.	
If negative values are not used as an indicator of export then new CCCs will be required.	
We do not believe they are necessary, but consistency of treatment of exports in both the NHH and HH markets is desirable. New CCCs may make settlement and billing easier. Whether new CCCs should be introduced will depend largely upon the central system costs involved.	
We would want to adopt the same principles for consistency between the HH & NHH markets and for simplicity of reporting. To adopt the same principles would then be a positive value with export being identified separately by Consumption Class.	
Yes to ensure accuracy in processing Export MPANs and consistency between HH and NHH markets	

SMRA Validation

Domestic premises	**"up to 16 Amp per phase capacity"**

	Not only unnecessary – UNTENABLE! We should never consider SMRS cross-validation between data items owned by DSO and data items owned by Supplier. They are submitted to SMRS separately, by different bodies – so one must change before the other. Therefore, a change from one valid [but incorrect] combination to another valid [and correct] combination will be made impossible by the introduction of validation. (You cannot change A & A to B & B, if A & B and B & A are invalid combinations.)
Additional validation should be introduced.	
If this modification is implemented it may be desirable to change SMRS. However, the costs involved may outweigh the benefits of implementing this modification. This is one of the reasons why we believe that it would be better to implement the 'friendly' half hour option (see General Comments at the top of this table)	Generally we feel that the 16 Amp per phase capacity limit could be more difficult to implement than the Domestic criterion.
No. It is the responsibility of Suppliers to ensure that data items they are responsible for are correctly submitted. Provided they are, Distribution Business has no difficulty in providing the correct LLF. SMRA is not responsible for validating data submitted other than for ensuring a meter point is registered correctly. SMRA has no interest at all in policing this area. Systems that transmit data to SMRA should be changed, if needed, to ensure that this data is valid.	Impact is the same irrespective of how the term "domestic" is chosen.
We do not believe the additional validation is necessary. It would be the responsibility of suppliers to ensure that correct LLFs were applied to the correct PCs	
We see no need to add to the current *automatic* validation routines in SMRAs for the following reasons: Inclusion of LLFIDs as validation items would be a completely new requirement and would represent a fundamental change in functionality. In short, such changes will be expensive; Additional validation routines could not be implemented until 2003 at the earliest anyway. Questions remain about the effectiveness of such validation, because of the potential for a large number of "errors/rejections" arising simply from temporary timing differences in the different data items owned by DSOs and suppliers. This means that additional automatic validation will cost a lot, will take time to implement and produce little perceivable benefit. Some form of validation will be necessary, but we believe that the current approach of "internal" validations undertaken by suppliers and DSOs on their own data and then by DSOs against SMRA data will be the most cost-effective option.	
No we believe that performing this validation is not necessary	

SMRA Impacts

Domestic premises	**"up to 16 Amp per phase capacity"**
Additional MPANs will need to be created and administered with multiple agents attached. This must result in increased data flow traffic through gateways and increased processing.	

Provided changes are limited to adding new data values, (Profiles, LLFCs etc.), then the impact is NIL. SMRA is kept current with MDD changes so these extra valid values will be accepted automatically. Should extra validation rules be imposed then applications development would be required. We would strongly oppose any additional validation requirements on SMRA.	Impact is the same irrespective of how the term "domestic" is chosen.

NHHDA / NHHDC Impacts

Domestic premises	**"up to 16 Amp per phase capacity"**
Additional NHH meter readings to be recorded, validated and sent out to all interested parties	
Provided new profiles and negative values are used for NHH export we do not see major changes needed to DC systems, at least from a high level review. Otherwise we see more major re-engineering and several months of work. However, despite the relatively low cost of development it is possible that NHHDCs may elect not to offer collection services for this type of meter, on the basis that there will never be enough of them to warrant the investment in system changes. We would therefore expect that it will not be a mandatory requirement for NHHDCs to be able to process NHH export.	Impact is the same irrespective of how the term "domestic" is chosen.

DSO Impacts

Domestic premises	**"up to 16 Amp per phase capacity"**
	[As a Supplier, we would not wish to pay DUoS on gross generation.]
Creation of new profiles will require updates to standing data held in Distributor systems, and enhancements to the logic used in certain applications, (DUoS billing & LLFC calculations), but the impact is not huge and could probably be accommodated within six months. We are not able to provide a properly costed and timed impact assessment within the time available for a high level assessment. If no new profiles are introduced then implementation will be simpler and quicker, probably limited to updating data values.	Impact is the same irrespective of how the term "domestic" is chosen.

More than 1 new MTC will be required. New MTCs will be required for import AND export MPANs. These will have to exist in stand-alone and associated modes (x2). Domestic E7 NHH import/export versions may also be required for each different SSC and RTS group (x9). PPM options may also be required (x2). New LLFs for each generator type (x2) for all existing domestic LLFs (6) for import AS WELL AS export will be required to reflect the different DUoS charges for revised profiles. In UU as we bill for Meter Asset Provision through the standing charge part of the DUoS tariff, new LLFs versions for non Meter Asset Provider will be required for any new MTC (x2). New import tariffs for each generator type will be required foe each LLFD to reflect the effects of the new customer groups on the distribution system. Additional NHH meter readings to be stored. Additional MPANs to be recorded and administered. Errors in maintaining pre-generation EACs and profiles for import MPANs installing generation will distort DUoS billing and Distributed Units reported to the Regulator. This directly affects DSOs allowed revenue, unit forecasting and DUoS price setting. Errors in import profiling will result in larger seasonal Grid Correction Factor resulting in Under/over billing throughout the year. The removal of the current requirement for HH metering will require the DSO as meter provider for the NHH market to acquire new metering stock to cope with the new MTCs that we are supporting in our area and redundant metering assets New Meter Asset Provision prices will be required for the new MTCs.	Even more LLFs for non domestic profiles 3-8 (x6). Even more tariffs for non domestic profiles Even more prices required for 3 phase meters
The greatest impact for DSOs will be on their "bottom line". Increased generation and exports are likely to lead to reductions in units distributed and, because of the nature of current regulation, a consequent reduction in allowed revenues. We recognise that a recent Ofgem consultation paper, "Developing Network Monopoly Price Controls", is addressing this and related issues. However, before East Midlands Electricity can support this proposal fully, we need to be assured of protection to the capital investment in our network assets.	
The greatest impact for DSOs will be on their income. Increased generation is likely to lead to reductions in units distributed and, because of the nature of current regulation, a consequent reduction in allowed revenues. In the longer run, as the numbers of small embedded generators become significant, the way distribution networks are designed and operated will change.	

A2.2.2 Responses

The following responses were received to the HLIA.

British Gas HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles	Systems: None Processes: None Documentation: None	As per Domestic premises
Chunked demand Profile	Systems: None Processes: None Documentation: None	As per Domestic premises
Please include any additional information / costs relating to multi-rate metering rather than single rate metering	Obviously where a meter replacement is required, this will increase costs. If carried out as part of the installation, there will be (small) costs associated with processing the change of meter flows. Ongoing costs to the customer will be incurred for a multi-rate meter as opposed to a single rate. It depends as to who owns the meter whether or not suppliers will have increased charges.	As per Domestic premises
Gross Generation Profiles	Systems: None Processes: None Documentation: None	As per Domestic premises
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	Treating exports as negative import will potentially create problems when trying to ascertain meter faults and/or tampering. It is much better that exports are accounted for within the appropriate measurement class	As per Domestic premises

Please give your views on if you believe the additional Consumption Component Classes are necessary.	We do not believe they are necessary, but consistency of treatment of exports in both the NHH and HH markets is desirable. New CCCs may make settlement and billing easier. Whether new CCCs should be introduced will depend largely upon the central system costs involved.	As per Domestic premises
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.	We do not believe the additional validation is necessary. It would be the responsibility of suppliers to ensure that correct LLFs were applied to the correct PCs.	As per Domestic premises
Please give details of SVAA impacts and further changes that have not been identified.	Systems: N/A Processes: N/A Documentation: N/A	As per Domestic premises
Please give details of SMRA impacts and further changes that have not been identified.	Systems: N/A Processes: N/A Documentation: N/A	As per Domestic premises
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.	None	As per Domestic premises
Please give details of Profile Administrator impacts and further changes that have not been identified.	None	As per Domestic premises
Please give details of DSO impacts and further changes that have not been identified.	None	As per Domestic premises
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes	N/A	As per Domestic premises

Name: Rob Cullender
BCA/~~PACA*~~ _____
Organisation: British Gas
Date: 16/08/2002

SEEBOARD HLIA

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Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles	No major impact	
Chunked demand Profile	No major impact	
Please include any additional information / costs relating to multi-rate metering rather than single rate metering	Additional cost of multi-rate metering compared to single rate import/export meters with development of new electronic meters will not be significant	
Gross Generation Profiles	It has not been possible to fully quantify this approach. It is believed that difficulties in processing and calculating required volumes would far outweigh the theoretical accuracy obtained.	
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	Use of negative values would be preferred.	
Please give your views on if you believe the additional Consumption Component Classes are necessary.	Additional CCC classes should be introduced.	
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.	Additional validation should be introduced.	
Please give details of SVAA impacts and further changes that have not been identified.		

Please give details of SMRA impacts and further changes that have not been identified.		
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.		
Please give details of Profile Administrator impacts and further changes that have not been identified.		
Please give details of DSO impacts and further changes that have not been identified.		
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		

Name: ___Dave Morton_____
BCA _____
Organisation: __SEEBOARD Energy Limited_____
Date: __20th August 2002_

*Please delete as appropriate

TXU HLIA

.

Profiling Option	Domestic premises Impact & Cost / Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Cost / Timescale for implementation
		Preferred, as it allows for non-domestic NHH small embedded generation.
New Export Profiles		Our second choice for long term option, equal first choice for short term. But NB the stated method of developing the profiles is only acceptable as a short term measure. In the long term, the new profiles need to be as robust as existing profiles.
Chunked demand Profile Please include any additional information / costs relating to multi-rate metering rather than single rate metering		Not for export, but we think chunking is appropriate for the import profiles, which must be addressed.
Gross Generation Profiles		Yes, but not as described in 3.2. Our preference is for a much simpler option; Gross Generation and Gross Consumption should be collected – BUT this is not feasible until DUoS issues have been addressed.
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class		Should be treated in the same way as exports in the HH market. We believe this means they should be positive values associated with an Export CCC. We hope that "an associated measurement class" is a misprint, as a new NHH measurement class would be catastrophically expensive to implement, and would probably cause serious disruption when implemented (how many systems across the industry are built on the assumption that a measurement class less than C is NHH?) We hope that Measurement Quantity was intended – leading to a Yes answer to the next question.

Please give your views on if you believe the additional Consumption Component Classes are necessary.		They are necessary to identify the data as Import or Export.
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.		Not only unnecessary – UNTENABLE! We should never consider SMRS cross-validation between data items owned by DSO and data items owned by Supplier. They are submitted to SMRS separately, by different bodies – so one must change before the other. Therefore, a change from one valid [but incorrect] combination to another valid [and correct] combination will be made impossible by the introduction of validation. (You cannot change A & A to B & B, if A & B and B & A are invalid combinations.)
Please give details of SVAA impacts and further changes that have not been identified.		
Please give details of SMRA impacts and further changes that have not been identified.		
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.		
Please give details of Profile Administrator impacts and further changes that have not been identified.		

Please give details of DSO impacts and further changes that have not been identified.		[As a Supplier, we would not wish to pay DUoS on gross generation.]
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes **Other**		**See below for options and key issues not fully addressed.** **Note that any Option that requires new Profiles could entail considerable rework of systems. We are not currently in a position to estimate effort, costs or time scales.**

Name: _____Sarah Ames_____
BCA/PACA* _____
Organisation: _____TXU Energy_____
Date: _____

*Please delete as appropriate

East Midlands Energy HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles Chunked demand Profile	**The choice of profiling method is of little direct interest to distribution businesses. So long as we receive NHH kWh data aggregated by LLFID, there will be little impact on our current systems and procedures.** **The same is practically true for the "threshold-point" used to distinguish between the requirement for NHH or HH metering. The most important thing is being able to identify any NHH export MPANs. To facilitate identification we would recommend inclusion of an "export" label as part of the address at the time of MPAN creation. This measure will have little impact on current systems and procedures.**	
Please include any additional information / costs relating to multi-rate metering rather than single rate metering	**See above.**	
Gross Generation Profiles	**See above.**	
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class		
Please give your views on if you believe the additional Consumption Component Classes are necessary.	**No comment.**	

Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.	**We see no need to add to the current *automatic* validation routines in SMRAs for the following reasons:** ▪ **Inclusion of LLFIDs as validation items would be a completely new requirement and would represent a fundamental change in functionality. In short, such changes will be expensive;** ▪ **Additional validation routines could not be implemented until 2003 at the earliest anyway.** ▪ **Questions remain about the effectiveness of such validation, because of the potential for a large number of "errors/rejections" arising simply from temporary timing differences in the different data items owned by DSOs and suppliers.** ▪ **This means that additional automatic validation will cost a lot, will take time to implement and produce little perceivable benefit.** **Some form of validation will be necessary, but we believe that the current approach of "internal" validations undertaken by suppliers and DSOs on their own data and then by DSOs against SMRA data will be the most cost-effective option.**
Please give details of SVAA impacts and further changes that have not been identified.	**No comment.**
Please give details of SMRA impacts and further changes that have not been identified.	**No comment.**
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.	**No comment.**
Please give details of Profile Administrator impacts and further changes that have not been identified.	**No comment.**
Please give details of DSO impacts and further changes that have not been identified.	**The greatest impact for DSOs will be on their "bottom line". Increased generation and exports are likely to lead to reductions in units distributed and, because of the nature of current regulation, a consequent reduction in allowed revenues.** **We recognise that a recent Ofgem consultation paper, "Developing Network Monopoly Price Controls", is addressing this and related issues. However, before East Midlands Electricity can support this proposal fully, we need to be assured of protection to the capital investment in our network assets.**

If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		

Name: Stuart Turner_____
BCA/PACA* _____
Organisation: East Midlands Electricity
Date: 21 August 2002

*Please delete as appropriate

NEDL/YEDL HLIA

NEDL and YEDL have no comments for the P81 Proposal

Sue Calvert
Distribution Change
System Investment
Gelderd Road

United Utilities HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" generation or export or import? Impact & Timescale for implementation
New Export Profiles	The proposals appear to be much concerned with the creation of export profiles, designed to help Suppliers derive a buying price for the export they are purchasing. However, the import profiles will also be significantly affected by micro generation. This appears to be being ignored with existing profiles being used for import. This will lead to unnecessary errors in settlements. According to the description given, new import Profiles for profile 1 for each generation method is calculated in order to get to the export profiles. These new import profiles will therefore already exist and the excuse about cost is irrelevant With the chunked profile option, the multi-rate option appears to be more accurate. However does it assume that the export profile would have profile coefficients outside the 'export periods'. This doesn't appear to be borne out in the profile method. The method is also suggesting that export readings outside the anticipated 'export periods' will be added to the import profile and visa versa. This will produce additional inaccuracies.	More complication as MPANs with non-domestic profiles could be used.
Chunked demand Profile		
Please include any additional information / costs relating to multi-rate metering rather than single rate metering		
Gross Generation Profiles		

Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	Consistency with metering set up will need to be maintained. Are export meters expected to run backwards to give negative advances? Or are meter readings and positive advances going to be manipulated to just appear to be negative? Profiled NHH data should be processed through Supercustomer DUoS methodology. As DSO, in order to get positive income from we will need to apply negative prices to any negative consumption whilst applying positive prices to any fixed/standing charge. As Suppliers, they will have to apply positive prices to the export.	
Please give your views on if you believe the additional Consumption Component Classes are necessary.	If negative values are not used as an indicator of export then new CCCs will be required.	
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.		
Please give details of SVAA impacts and further changes that have not been identified.		
Please give details of SMRA impacts and further changes that have not been identified.	Additional MPANs will need to be created and administered with multiple agents attached. This must result in increased data flow traffic through gateways and increased processing.	
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.	Additional NHH meter readings to be recorded, validated and sent out to all interested parties	
Please give details of Profile Administrator impacts and further changes that have not been identified.		

Please give details of DSO impacts and further changes that have not been identified.	More than 1 new MTC will be required. New MTCs will be required for import AND export MPANs. These will have to exist in stand-alone and associated modes (x2). Domestic E7 NHH import/export versions may also be required for each different SSC and RTS group (x9). PPM options may also be required (x2). New LLFs for each generator type (x2) for all existing domestic LLFs (6) for import AS WELL AS export will be required to reflect the different DUoS charges for revised profiles. In UU as we bill for Meter Asset Provision through the standing charge part of the DUoS tariff, new LLFs versions for non Meter Asset Provider will be required for any new MTC (x2). New import tariffs for each generator type will be required foe each LLFD to reflect the effects of the new customer groups on the distribution system. Additional NHH meter readings to be stored. Additional MPANs to be recorded and administered. Errors in maintaining pre-generation EACs and profiles for import MPANs installing generation will distort DUoS billing and Distributed Units reported to the Regulator. This directly affects DSOs allowed revenue, unit forecasting and DUoS price setting. Errors in import profiling will result in larger seasonal Grid Correction Factor resulting in Under/over billing throughout the year. The removal of the current requirement for HH metering will require the DSO as meter provider for the NHH market to acquire new metering stock to cope with the new MTCs that we are supporting in our area and redundant metering assets New Meter Asset Provision prices will be required for the new MTCs.	Even more LLFs for non domestic profiles 3-8 (x6). Even more tariffs for non domestic profiles Even more prices required for 3 phase meters
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		

Name: _____Derek Livesey_____
BCA/PACA* _____
Organisation: ___United Utilities Electricity_____
Date: _____21.08/02_____

Npower Ltd, Npower Yorkshire Ltd & Npower Direct Ltd HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles	There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.	There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.
Chunked demand Profile	As above	As above
Please include any additional information / costs relating to multi-rate metering rather than single rate metering		
Gross Generation Profiles	There is a requirement to know Gross generation figures especially for photo voltaic generation for our Renewable Obligations, but we don't believe there is a requirement for Gross generation profiles. Also, DUoS requires Net figures, not Gross.	There is a requirement to know Gross generation figures especially for photo voltaic generation for our Renewable Obligations, but we don't believe there is a requirement for Gross generation profiles. Also, DUoS requires Net figures, not Gross.
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	We would want to adopt the same principles for consistency between the HH & NHH markets and for simplicity of reporting. To adopt the same principles would then be a positive value with export being identified separately by Consumption Class.	We would want to adopt the same principles for consistency between the HH & NHH markets and for simplicity of reporting. To adopt the same principles would then be a positive value with export being identified separately by Consumption Class.
Please give your views on if you believe the additional Consumption Component Classes are necessary.	As above.	As above.
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.		
Please give details of SVAA impacts and further changes that have not been identified.	No Comment	No Comment

Please give details of SMRA impacts and further changes that have not been identified.	No Comment	No Comment
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.		
Please give details of Profile Administrator impacts and further changes that have not been identified.	No Comment	No Comment
Please give details of DSO impacts and further changes that have not been identified.	No Comment	No Comment
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes	No Comment	No Comment

Name: __Ros Parsons_____
BCA/~~PACA~~* _____
Organisation: Npower Ltd, Npower Yorkshire Ltd, Npower Direct Ltd
Date: _21st August 2002
*Please delete as appropriate

Npower Northern Ltd HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles	There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.	There will be minimum impact on the settlement and forecasting systems, however we would require more detailed analysis regarding the registrations systems for identifying domestic and 16 Amp capacity premises.
Chunked demand Profile	As above	As above
Please include any additional information / costs relating to multi-rate metering rather than single rate metering		
Gross Generation Profiles	There is a requirement to know Gross generation figures especially for photo voltaic generation for our Renewable Obligations, but we don't believe there is a requirement for Gross generation profiles. Also, DUoS requires Net figures, not Gross.	There is a requirement to know Gross generation figures especially for photo voltaic generation for our Renewable Obligations, but we don't believe there is a requirement for Gross generation profiles. Also, DUoS requires Net figures, not Gross.
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	We would want to adopt the same principles for consistency between the HH & NHH markets and for simplicity of reporting. To adopt the same principles would then be a positive value with export being identified separately by Consumption Class.	We would want to adopt the same principles for consistency between the HH & NHH markets and for simplicity of reporting. To adopt the same principles would then be a positive value with export being identified separately by Consumption Class.
Please give your views on if you believe the additional Consumption Component Classes are necessary.	As above.	As above.
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.		

Please give details of SVAA impacts and further changes that have not been identified.	No Comment	No Comment
Please give details of SMRA impacts and further changes that have not been identified.	No Comment	No Comment
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.		
Please give details of Profile Administrator impacts and further changes that have not been identified.	No Comment	No Comment
Please give details of DSO impacts and further changes that have not been identified.	No Comment	No Comment
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes	No Comment	No Comment

Name: __Margaret Brunton_____
BCA/~~PACA~~* _____
Organisation: Npower Northern Ltd
Date: _21st August 2002
*Please delete as appropriate

Western Power HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles	The creation of extra profiles seems the most sensible choice. It enables the new export class to be readily identified and, of the options offered, it is the best compromise between accurate settlements and ease of implementation. Creation of new profiles will require updates to standing data held in our SMRS and Distributor systems, and enhancements to the logic used in certain applications but the impact is not large and could be accommodated with three to six months notice.	Impact is the same irrespective of how the term "domestic" is chosen. This option may though increase the number of customers choosing to export via NHH.
Chunked demand Profile	We do not consider it is correct to allocate export based on an import profile. It does not seem prudent to adopt solutions that will produce inherently inaccurate data for settlements. Although the magnitude of the error will initially be limited, increasing use of the technology will exacerbate any problem and may force the introduction of new profiles at a later stage. We would prefer to see a more robust solution introduced at the outset. There are distinct advantages to us if we have new profiles. These easily outweigh any benefits from this option and therefore we do not favour it.	Impact is the same irrespective of how the term "domestic" is chosen.
Please include any additional information / costs relating to multi-rate metering rather than single rate metering	Whatever form of metering is used there will be a certain amount of costs incurred as a result of a customer wanting to export to the network. A site visit fee may be required to fit or reconfigure the meter and there will also be costs of back office tasks to set the customer up on new tariffs and generate data flows etc. When taking all the costs in to account the additional cost of a multi-rate meter instead of single rate is marginal.	Impact is the same irrespective of how the term "domestic" is chosen.

Gross Generation Profiles	This will be the most technically complex solution but its impact on us is similar to the "new profiles" option. It will require notice of three to six months to implement. The assessment report for this option states that DUoS charges should be calculated on the import and export of the premises. This is not correct, only the imports will be charged for. (Exported units will be charged for when they are imported at a subsequent system.) Distribution requires notification of the export readings as these are taken in to account when validating GSP group take versus consumption, and for assessment of system losses.	Impact is the same irrespective of how the term "domestic" is chosen.
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	Our systems will accept negative values and this is our preferred option. We do not want to have changes to data flows if it can be avoided.	Impact is the same irrespective of how the term "domestic" is chosen.
Please give your views on if you believe the additional Consumption Component Classes are necessary.	Have not identified any need for them.	
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.	No. It is the responsibility of Suppliers to ensure that data items they are responsible for are correctly submitted. Provided they are, Distribution Business has no difficulty in providing the correct LLF. SMRA is not responsible for validating data submitted other than for ensuring a meter point is registered correctly. SMRA has no interest at all in policing this area. Systems that transmit data to SMRA should be changed, if needed, to ensure that this data is valid.	Impact is the same irrespective of how the term "domestic" is chosen.
Please give details of SVAA impacts and further changes that have not been identified.		
Please give details of SMRA impacts and further changes that have not been identified.	Provided changes are limited to adding new data values, (Profiles, LLFCs etc.), then the impact is NIL. SMRA is kept current with MDD changes so these extra valid values will be accepted automatically. Should extra validation rules be imposed then applications development would be required. We would strongly oppose any additional validation requirements on SMRA.	Impact is the same irrespective of how the term "domestic" is chosen.

Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.	Provided new profiles and negative values are used for NHH export we do not see major changes needed to DC systems, at least from a high level review. Otherwise we see more major re-engineering and several months of work. However, despite the relatively low cost of development it is possible that NHHDCs may elect not to offer collection services for this type of meter, on the basis that there will never be enough of them to warrant the investment in system changes. We would therefore expect that it will not be a mandatory requirement for NHHDCs to be able to process NHH export.	Impact is the same irrespective of how the term "domestic" is chosen.
Please give details of Profile Administrator impacts and further changes that have not been identified.		
Please give details of DSO impacts and further changes that have not been identified.	Creation of new profiles will require updates to standing data held in Distributor systems, and enhancements to the logic used in certain applications, (DUoS billing & LLFC calculations), but the impact is not huge and could probably be accommodated within six months. We are not able to provide a properly costed and timed impact assessment within the time available for a high level assessment. If no new profiles are introduced then implementation will be simpler and quicker, probably limited to updating data values.	Impact is the same irrespective of how the term "domestic" is chosen.
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		

Name: __Graham Smith_____
BCA/PACA* ____BCA_____
Organisation: Western Power Distribution
Date: _21/08/2002___

East Midlands Electricity HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles Chunked demand Profile	**The choice of profiling method is of little direct interest to distribution businesses. So long as we receive NHH kWh data aggregated by LLFID, there will be little impact on our current systems and procedures.** **The same is practically true for the "threshold-point" used to distinguish between the requirement for NHH or HH metering. The most important thing is being able to identify any NHH export MPANs. To facilitate identification we would recommend inclusion of an "export label" as part of the address at the time of MPAN creation. This measure will have little impact on current systems and procedures.**	
Please include any additional information / costs relating to multi-rate metering rather than single rate metering	**See above.**	
Gross Generation Profiles	**See above.**	
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	**To all intents and purposes we are indifferent to this; our billing systems can cope with either. All other things being equal, we would have a slight preference for positive values.**	
Please give your views on if you believe the additional Consumption Component Classes are necessary.	**No comment.**	

Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.	**We see no need to add to the current *automatic* validation routines in SMRAs for the following reasons:** ▪ **Inclusion of LLFIDs as validation items would be a completely new requirement and would represent a fundamental change in functionality. In short, such changes will be expensive;** ▪ **Additional validation routines could not be implemented until 2003 at the earliest anyway.** ▪ **Questions remain about the effectiveness of such validation, because of the potential for a large number of "errors/rejections" arising simply from temporary timing differences in the different data items owned by DSOs and suppliers.** ▪ **This means that additional automatic validation will cost a lot, will take time to implement and produce little perceivable benefit.** **Some form of validation will be necessary, but we believe that the current approach of "internal" validations undertaken by suppliers and DSOs on their own data and then by DSOs against SMRA data will be the most cost-effective option.**	
Please give details of SVAA impacts and further changes that have not been identified.	**No comment.**	
Please give details of SMRA impacts and further changes that have not been identified.	**No comment.**	
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.	**No comment.**	
Please give details of Profile Administrator impacts and further changes that have not been identified.	**No comment.**	
Please give details of DSO impacts and further changes that have not been identified.	**The greatest impact for DSOs will be on their income. Increased generation is likely to lead to reductions in units distributed and, because of the nature of current regulation, a consequent reduction in allowed revenues.** **In the longer run, as the numbers of small embedded generators become significant, the way distribution networks are designed and operated will change.**	
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		

Name: Ian Burrows
BCA/PACA* _____
Organisation: East Midlands Electricity
Date: 21 August 2002

Scottish & Southern Energy Plc HLIA

General Comments:

We are concerned that the impact on systems and processes from the proposed modification may turn out to be expensive, unwieldy and lead to inaccuracy in the data reaching settlements. Our suggestion is to benchmark these proposals against the most "friendly" version of the half-hourly metering solution which we believe is to meter exports with a simple half-hourly data logger in a M.O.S.T. framework allowing data to be collected and enter settlements up to 14 months in arrears. This would also provide a source of half hourly data which could be deployed for designing a profiling solution at a later date if expedient.

Generally we feel that the 16 Amp per phase capacity limit could be more difficult to implement than the Domestic criterion.

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
New Export Profiles	Ought to be based on adequate load research and ought to vary according to the type of technology being used for generation which could mean long timescales.	See General Comments above
Chunked demand Profile	May entail shorter timescales than new profiles although some load research information is required to adequately set the timeslots to be used.	See General Comments above
Please include any additional information / costs relating to multi-rate metering rather than single rate metering		
Gross Generation Profiles	We feel this is likely to cause undue complication and expense.	See General Comments above
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class	We favour treating as positive with an associated measurement class.	See General Comments above
Please give your views on if you believe the additional Consumption Component Classes are necessary.	Additional consumption component classes should be created to allow separate identification.	See General Comments above

Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.	If this modification is implemented it may be desirable to change SMRS. However, the costs involved may outweigh the benefits of implementing this modification. This is one of the reasons why we believe that it would be better to implement the 'friendly' half hour option (see General Comments at the top of this table)	See General Comments above
Please give details of SVAA impacts and further changes that have not been identified.		
Please give details of SMRA impacts and further changes that have not been identified.		
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.		
Please give details of Profile Administrator impacts and further changes that have not been identified.		
Please give details of DSO impacts and further changes that have not been identified.		
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		

Name: Sue Macklin
BCA/PACA*
Organisation: Scottish and Southern Energy Plc
Date: 21st August 2002

A2.2.3 Late Responses

Scottish Power HLIA

Profiling Option	Domestic premises Impact & Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Timescale for implementation
		We support the view that the scope of the modification should be extended to cover small commercial premises drawing up to 16 amps per phase. The answers provided would, however, apply equally in either case.
New Export Profiles		This would have a significant impact on our systems and processes and would not, in our view, result in sufficiently accurate profiles.
Chunked demand Profile		While this would have a significant impact on our systems and processes, it is our preferred option at this time
Please include any additional information / costs relating to multi-rate metering rather than single rate metering		While we would anticipate that most sites would use a single rate meter at the outset, this could be achieved using existing certified 2 x rate Import / Export metering systems.
Gross Generation Profiles		The impact of implementing this methodology would be very severe in terms of both systems and metering costs.
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class		Firstly, we believe that the term Measurement Class has been mistakenly applied and that it should read Measurement Quantity. The treatment of NHH Exports as negative values would have a significant impact on our systems and, perhaps more importantly, will require greater human intervention in the process. Treating them as positive values, with an associated Measurement Quantity, would mean that these processes would remain unaffected, up to the population of the D0019, and have much less of an impact on Code Subsidiary Documents etc. Nonetheless, it would increase the impact on NHHDA. Therefore, with the information available, we do not, at this time, feel able to reach a decision on this aspect of the proposal and would prefer to see both options being further explored by the VAMG.

Please give your views on if you believe the additional Consumption Component Classes are necessary.		While this will have some systems impact, it does seem sensible.
Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.		No. It seems unlikely to us that such validation could be successfully performed by the SMRA.
Please give details of SVAA impacts and further changes that have not been identified.		N/A
Please give details of SMRA impacts and further changes that have not been identified.		None identified at this time
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.		There will be an issue with regard to register mapping in the D0150 flow.
Please give details of Profile Administrator impacts and further changes that have not been identified.		None identified at this time
Please give details of DSO impacts and further changes that have not been identified.		None identified at this time
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		N/A

Name: ____**James Nixon**_____
BCA/PACA* __**BCA**_____
Organisation: **Utility Group, SAIC (UK) Ltd**
On behalf of: **ScottishPower UK Plc / Scottish Power Energy Retail Ltd / ScottishPower Generation Ltd / Scottish Power Energy Trading Ltd / SP Transmission Ltd**
Date: ___**21/08/02**_____

Aquila Networks HLIA

I know you said you wouldn't accept any late responses but I was actually off sick yesterday.

Could you accept the following response on Aquila Networks Plc behalf:

"Section 5.5 Impact on SMRA

MPAS Systems do not currently validate LLFC against Profile Class/SSC and we do not intend changing ours to do so.

The introduction of such validation would lead to the immediate rejection of a newly submitted Export Profile Class or SSC, since it would conflict with the existing LLFC."

thank you in anticipation
Rachael Gardener

Deregulation Control Group & Distribution Support Office
AQUILA NETWORKS

Addition to YEDL/NEDL HLIA

Late response due to holidays:

Q. Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.

A. We do not believe that additional validation is necessary to support this proposed change, and would resist such change.

Sue Calvert
Distribution Change
System Investment
Gelderd Road

TXU Europe HLIA (Second response – not considered by the VAMG as it was not receive in time for the meeting)

Profiling Option	Domestic premises Impact & Cost / Timescale for implementation	"up to 16 Amp per phase capacity" Impact & Cost / Timescale for implementation
		Preferred, as it allows for non-domestic NHH small embedded generation.
New Export Profiles		Our second choice for long term option, equal first choice for short term. But NB the stated method of developing the profiles is only acceptable as a short term measure. In the long term, the new profiles need to be as robust as existing profiles.
Chunked demand Profile		Not for export, but we think chunking is appropriate for the import profiles, which must be addressed.
Please include any additional information / costs relating to multi-rate metering rather than single rate metering		
Gross Generation Profiles		Yes, but not as described in 3.2. Our preference is for a much simpler option; Gross Generation and Gross Consumption should be collected – BUT this is not feasible until DUoS issues have been addressed.
Please give your views on if you believe NHH Exports should be treated as negative values or as positive values with an associated measurement class		Should be treated in the same way as exports in the HH market. We believe this means they should be positive values associated with an Export CCC. We hope that "an associated measurement class" is a misprint, as a new NHH measurement class would be catastrophically expensive to implement, and would probably cause serious disruption when implemented (how many systems across the industry are built on the assumption that a measurement class less than C is NHH?) We hope that Measurement Quantity was intended – leading to a Yes answer to the next question.
Please give your views on if you believe the additional Consumption Component Classes are necessary.		They are necessary to identify the data as Import or Export.

Please give your views on if you believe the additional validation suggested for SMRA in section 5.5 is necessary.		Not only unnecessary – UNTENABLE! We should never consider SMRS cross-validation between data items owned by DSO and data items owned by Supplier. They are submitted to SMRS separately, by different bodies – so one must change before the other. Therefore, a change from one valid [but incorrect] combination to another valid [and correct] combination will be made impossible by the introduction of validation. (You cannot change A & A to B & B, if A & B and B & A are invalid combinations.)
Please give details of SVAA impacts and further changes that have not been identified.		
Please give details of SMRA impacts and further changes that have not been identified.		
Please give details of NHHDC / NHHDA impacts and further changes that have not been identified.		
Please give details of Profile Administrator impacts and further changes that have not been identified.		
Please give details of DSO impacts and further changes that have not been identified.		[As a Supplier, we would not wish to pay DUoS on gross generation.]
If you are a Core Industry Document owner or Code Subsidiary Document owner please give details of the changes that you believe are necessary and cost and time estimates for making the changes		
Other		**See below for options and key issues not fully addressed.** **Note that any Option that requires new Profiles could entail considerable rework of systems. We are not currently in a position to estimate effort, costs or time scales.**

Name: _____Edward Coleman_____
BCA/PACA* ___BCA_____
Organisation: ____TXU_____
Date: ___23/08/2002_____

Some Key Issues Not Fully Addressed in the Document:

- We are strongly of the opinion that all export must enter settlement. The industry goes to significant lengths to ensure accuracy of settlement and validates even small import quantities. Allowing export simply to spill will make the task of managing overall settlement efficiency and GSPGCF accuracy all but impossible.
- On reasonable assumptions, a hypothetical model suggests that the output of a Domestic CHP unit might be of the order of 2500 kWh pa, of which 1500 would be used within the house and 1000 exported. Given that more is used as a substitute for import than is exported, it is clear that getting the correct import profile is at least as important as getting the export profile correct. The real import shape will be radically different from the consumption shape. Of the options currently put forward, few address the changed import profile, and this seriously undermines their value.
- New profiles must be robustly researched and developed, to provide standards and accuracy comparable with the existing profile suite. Work-rounds such as that described in the Requirements document may be acceptable for the short-term to get this off the ground, but they are not acceptable for an enduring solution. The Profile Administrator therefore needs to be asked for a proposal for including these new technologies within their contract.

Preferred Options

Our preferred choice overall would be the original version of Option 1 (gross consumption and gross generation) with one new profile needed for gross generation, OR Option 8 (not described in P81 Requirements) which has a new export profile and a new import profile. Both would have simple metering solutions (two single rate meters in each case) and minimal impact on current processes and systems. Option 8 is more appropriate in terms of DUoS, but requires an additional profile class to be developed. However, it is thought that the marginal costs of this may not be great. These two options are significantly ahead of the others in accuracy, but represent simple metering options.

Option 9 would probably be our next preferred choice, but implies a SToD meter on import applied to existing profile. The marginal costs of developing a proper import profile, may make a SToD meter solution expensive.

The single rate meter with a Restricted SSC (one for each of export and import) is an interesting idea but is not sufficiently accurate for a long term solution if the market volumes become significant. It could however represent a good short term solution until new profiles are developed and while we can establish real market volumes, particularly as the two single rate meters used imply no on-site change to metering configuration if the long term preference were Option 8. All that would be needed would be reversion to SSC 393 on introduction of the new profile classes.

All the other options fall down on either accuracy or costs.

Possible Alternative Options (not all are in P81 Requirements Document but are included for completeness)

Option 1: New 'Generation' Profile, Simple Meter; Existing Import Meter/MPAN

- *Described in Section 3.2 of P81 Requirements Specification*
- Two MPANs (Import and Export)
- DC/DA collect and process Import and Export and Gross Generation
- SVAA calculates gross consumption and gross generation
- Gross consumption applied to existing consumption profile; gross generation applied to new generation profile
- DUoS calculated on import and export

This is the most accurate settlement option (assuming generation profile is robustly derived), not just for export, but because consumption is basically unchanged from now. Needs two additional single rate registers (export and generation). As described in Section 3.2, we believe that there are significant changes required to NHHDC and NHHDA systems and processes, which make it

unattractive. However this option appears to have developed out of a much simpler technical option of metering the generation and connecting it into the cut-out, thereby leaving the existing import meter to continue to record total consumption. This is much simpler systems/processes wise and we would suggest that this be explored further as it is not obvious that there are any technical, practical or commercial reasons why this could not be made to work, with the possible exception of DUoS charges. In this last respect, what is needed is for the DUoS charging issue to be addressed through the Distribution price review. In the meantime another option would be needed. One of these that might be considered is with-holding the requirement for two separately tradeable MPANs until the DUoS issue is resolved, if that enabled (effectively) a net DUoS charge.

Option 2: New 'Export' Profile, Simple Meter; Import Uses Existing Meter / MPAN

- *Described in Section 2.1 of P81 Requirements Specification*
- Two MPANs (Import and Export)
- Import based on current profile and meter
- Simple meter on export applied to new export profile
- DUoS calculated on import and export

This is considerably less accurate than Option 1, particularly for import. The real import profile will be changed very materially by the existence of mCHP providing a significant proportion of household demand at certain times. The current import profiles will bear little resemblance to reality. The accuracy of the export profile will be determined by the robustness with which it is derived – I am not impressed by the method suggested "to avoid unnecessary cost and delay" in Section 2.1 for other than short term expediency until research can be put on a more rigorous footing. It also needs to be confirmed that such profiles can be expressed in the regression equation format required for daily profile production. The means of derivation of the export profile and the inaccuracy of the import profile are the issues.

Option 3: Chunked Existing Profiles Using Single Rate Meters on both Import and Export

- *Described in Section 3.1 of P81 Requirements Specification as the 'first variant'*
- Two MPANs (import and export), both recording units in all periods, all days
- SSC for import selected with times that match (as far as possible) the times of net import (in principle this can be quite complex, with different times for different day types, seasons etc)
- SSC for export selected with times that match (as far as possible) the times of net export (in principle this can be quite complex, with different times for different day types, seasons etc)
- For each of import and export, the total units between meter readings are 'forced' into the SSC defined 'on' period for that meter; the 'off' period would always be forced to have zero advance.
- It would not be essential for the two SSCs to exactly offset i.e. they could have overlapping 'on' times for import and export e.g, periods when there is no predominance of import or export.
- Both import and export volumes by TPRs are used to chunk existing profiles (export with negative EAC/AA)
- DUoS on import and export

Both import and export profiles are less accurate than Option 1 and Export is less accurate than Option 2. The main plus seems to be ease of implementation and a relatively cheap metering solution (two single rate meters).

Option 4: Chunked Existing Profiles Using SToD Meters on both Import and Export

- *Described in Section 3.1 of P81 Requirements Specification as the 'second variant' (assuming meant to include import as well as export)*
- Two MPANs (import and export), with SToD meters, with SSCs in each case set to match (as far as possible) times of import and export.
- Import and export is captured in all TPR periods

- Both import and export volumes by TPRs are used to chunk existing profiles (export with negative EAC/AA)
- DUoS on import and export

This method has advantages of accuracy over Option 3 but does not match the accuracy of Option 1. It is again simple to implement but carries greater costs than Option 3, using multirate meters rather than single rate ones.

Option 5: Chunked Existing Profiles Using SToD Meter on Export

- *Described in Section 3.1 of P81 Requirements Specification as the 'second variant' (ignoring import – implying leaving it 'as is')*
- Two MPANs (import and export), with SToD meter on export, with SSCs set to match (as far as possible) times of export; existing import meter/MPAN unchanged
- Export is captured in all TPR periods
- Export volumes by TPRs are used to chunk existing profile with negative EAC/AA
- Import profile as currently with lower EAC/AA than historically
- DUoS on import and export

This is more accurate than Option 3. However it is less accurate than Option 4 on the import side (but cheaper because it uses only one SToD meter and the existing single rate meter). Easy to implement. Note that this was the original Option B, and was our preferred choice for the short-term.

Option 6: Simple Profiled Export and Import

- *Not included in P81 Requirements Specification*
- Two MPANs (Import and Export), import with existing meter, export with single rate meter
- Both are profiled using current profiles (Export with negative EAC/AA)
- Import profile as currently with lower EAC/AA than historically
- DUoS on import and export

This is not immensely accurate but is very easy and cheap to implement.

Option 7: Net Settlement Metering

- *Not included in P81 Requirements Specification*
- Single meter and MPAN (and thus Supplier)
- Records import, export and net; only last mentioned enters settlement
- DUoS on net

I am not sure that this is easier to implement than some of the others. Also not sure that the replacement of existing meter with this new beast is any cheaper than say just adding a single rate meter for export as in Option 6. At an aggregate of import and export, this has same accuracy (indeed same net profile) as Option 6. Whilst we like net DUoS, the benefit may be apparent rather than real, if DNO just ups the p/kWh. There are some process advantages in having one MPAN but OFGEM have already come out against this.

Option 8: New Import and New Export Profile

- Not included in P81 Requirements Specification
- Two single rate meters (one import, one export) and MPANs
- Two new profiles (one import, one export) per technology
- DUoS on import and export

Provided the profiles are robustly developed, this is a relatively cheap metering solution, without too many space implications, with an acceptable degree of accuracy. Load research costs for two profiles would not be double that of one profile, as both could be recorded at one customer site.

Option 9: New 'Export' Profile, Simple Meter; SToD meter on Import with existing profile.

- *Not included in P81 Requirements Specification*
- Two MPANs (import and export)
- Simple meter on export applied to new export profile
- SToD meter on import to chunk existing profile class
- DUoS calculated on import and export

This is a combination of Options2 and 4, using the export solution of the former and the import solution of the latter.

ANNEX 3 ASSESSMENT CONSULTATION

The P81 consultation was issued 13 September 2002 with responses due back by the 26 September 2002. Representations were received from the following parties:

No	Company	File Number	No. BSC Parties Represented	No. Non- BSC Parties Represented
1.	TXU Europe	P81_ASS_001	21	
2.	MicroGen – BG Group	P81_ASS_002		1
3.	SEEBOARD Power Networks	P81_ASS_003	1	
4.	YEDL/ NEDL	P81_ASS_004	2	
5.	SEEBOARD Energy	P81_ASS_005	1	
6.	LE Group	P81_ASS_006	8	
7.				
8.	Scottish and Southern	P81_ASS_008	4	
9.	Scottish Power	P81_ASS_009	6	
10.	Npower (late response)	P81_ASS_010	9	
11.	Powergen (late response)	P81_ASS_011	4	
12.	Aquila Networks (late response)	P81_ASS_012	1	
		TOTAL	**57**	**1**

A3.1 Questions and Summary of responses

1. Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?
2. Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?
3. Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?
4. Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?
5. Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?
6. Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?
7. Are there any further requirements on market participants that you believe have not been identified? If so please state.
8. Do you have any further comments on P81 that you wish to make?

Q	No		Yes		Yes/No	
	Responses	BSC Parties (Non BSC Parties)	Responses	BSC Parties (Non BSC Parties)	Responses	BSC Parties (Non BSC Parties)
1	2	5	**8**	**50 (1)**	1	2
2	1	4	**9**	**51 (1)**	1	2
3	1	4	**9**	**51 (1)**	1	2
4	0	0	**9**	**54 (1)**	1	2
5	0	0	**9**	**54 (1)**	1	2
6	2	2	**6**	**52**	2	2 (1)

A3.2 Responses sorted by question

1. Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
1	005	y	1	Supplier	No	
1	008	y	4	?	No	Introduction of a profiling solution for exports will reduce the accuracy of settlements therefore reducing efficiency. The modification has no limitation on capacity thus potentially increasing this inaccuracy.
1	001	Y	21	Supplier	Yes	c) – reduces a barrier to entry for small scale generation by reducing the high fixed costs of installing and collecting from a HH Metering System.
1	002	No	1	developer of Domestic CHP unit	Yes	The proposal will extend competition and reduce overall costs.
1	003	Y	1	Distributor	Yes	Applicable BSC Objective C The costs involved with the provision of half hourly metering would seem to be inappropriate for micro-generation.
1	006	y	8	Supplier/ Distributor Business/ Generator/ Meter Op/ DA/DC	Yes	The modification provides a settlement method that domestic customers can afford and, therefore, will facilitate BSC applicable objective (c) in promoting competition of generation of electricity by removing the requirement for HH metering.
1	009	y	6	Supplier/ Distributor/ Generator/ Meter Op/ DA/DC	Yes	Yes, P81 meets the Applicable Objective promoting effective competition in generation and supply.
1	010	y	9	Supplier/ Generator/ Meter Op/ DA/DC	Yes	
1	011	y	4	Supplier & Generator	Yes	Promotion of effective competition. May cause worse performance under efficiency of balancing and settlement arrangements if not implemented carefully with proper controls to ensure data quality is not adversely affected.
1	004	y	2	Distributor	Yes / No	

2. Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
2	008	y	4	?	No	However it is not as detrimental as the original Mod as at least the issue of capacity is addressed and capped. However policing the capacity limit may be more difficult.
2	001	Y	21	Supplier	Yes	c) – increases the potential scope of the market.
2	002	No	1	developer of Domestic CHP unit	Yes	A capacity-based limit on the use of non-half-hourly meters will allow more competition than would a definition that allowed only domestic premises to be included.
2	003	y	1	Distributor	Yes	Applicable BSC Objective C The costs involved with the provision of half hourly metering would seem to inappropriate for micro-generation.
2	005	y	1	Supplier	Yes	Objective ©, as alternative allows for greater competition by expanding situations where this metering can be installed, i.e. small businesses.
2	006	y	8	Supplier/ Distributor Business/ Generator/ Meter Op/ DA/DC	Yes	As above including commercial premises.
2	009	y	6	Supplier/ Distributor/ Generator/ Meter Op /DA/DC	Yes	Yes, P81 meets the Applicable Objective promoting effective competition in generation and supply.
2	010	y	9	Supplier/ Generator/ Meter Op/ DA/DC	Yes	BSC Objective – promoting effective competition in the generation and supply of electricity. We believe that the risk to settlements would not be any greater as there is no differentiation between small non-domestic and domestic premises, and using a generation capacity limit is therefore a more appropriate measure.
2	011	y	4	Supplier & Generator	Yes	In as much as it would allow business customers to benefit too from the arrangements and there is no reason why it should be constrained to domestic premises.
2	004	y	2	Distributor	Yes / No	

3. Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
3	008	y	4	?	No	Although the Alternative Modification is 'better' than the original we do not agree that either should be recommended.
3	001	Y	21	Supplier	Yes	
3	002	No	1	developer of Domestic CHP unit	Yes	See Q2.
3	003	y	1	Distributor	Yes	The definition in the Alternative Modification is consistent with the proposed Electricity Safety, Quality & Continuity Regulations, Engineering Recommendation G83 and the general definition of micro-generation. The Alternative Modification, therefore, better facilitates the BSC.
3	005	y	1	Supplier	Yes	There is a requirement to limit the capacity of plant installed in domestic premises. Consistency with Distribution Code Panel Review is sensible and will also encourage competition in supply in the small business market.
3	006	y	8	Supplier/ Distributor Business/ Generator/ Meter Op/ DA/DC	Yes	The alternative creates a larger potential market by the inclusion of commercial premises with domestic up to the circuit rating threshold.
3	009	y	6	Supplier/ Distributor/ Generator/ Meter Op / DA/DC	Yes	Yes. While P81 meets the Applicable Objective promoting effective competition in generation and supply, it is our view that the Alternative Modification Proposal better facilitates the BSC objectives than the original.
3	010	y	9	Supplier/ Generator/ Meter Op/ DA/DC	Yes	
3	011	y	4	Supplier & Generator	Yes	Assuming that suppliers will be able to practically identify the sites based on the capacity banding per phase. Little detail on how this could be administered and potentially policed has been provided.
3	004	y	2	Distributor	Yes / No	

4. Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
4	001	Y	21	Supplier	Yes	
4	002	No	1	developer of Domestic CHP unit	Yes	New Consumption Component Classes will help ensure consistency with the half-hourly market for export and will help ensure losses benefits (i.e. reductions) can be identified.
4	003	y	1	Distributor	Yes	
4	005	y	1	Supplier	Yes	
4	006	y	8	Supplier/ Distributor Business/ Generator/ Meter Op/DA/DC	Yes	
4	008	y	4	?	Yes	If meter readings are to be kept as positive values is there any other option?
4	009	y	6	Supplier/ Distributor/ Generator/ MO/DA/DC	Yes	
4	010	y	9	Supplier/ Generator/ Meter Op/DA/DC	Yes	This would ensure consistency between the HH & NHH markets, and aid in subsequent reporting of NHH generation.
4	011	y	4	Supplier & Generator	Yes	Seems sensible.
4	004	y	2	Distributor	Yes / No	

5. Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
5	001	Y	21	Supplier	Yes	
5	002	No	1	developer of Domestic CHP unit	Yes	This seems to offer greatest simplicity (and therefore avoidance of error) for meter readers
5	003	y	1	Distributor	Yes	
5	005	y	1	Supplier	Yes	
5	006	y	8	Supplier/ Distributor Business/ Generator/ Meter Op/DA/DC	Yes	
5	008	y	4	?	Yes	
5	009	y	6	Supplier/ Distributor/ Generator/ Meter Op /DA/DC	Yes	Yes, this would significantly reduce the impact on Parties' systems.
5	010	y	9	Supplier/ Generator/ Meter Op/DA/DC	Yes	
5	011	y	4	Supplier & Generator	Yes	We assume that the necessary detailed level impact assessment will be undertaken.
5	004	y	2	Distributor	Yes / No	

6. Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
6	003	y	1	Distributor	No	The MMD data associated with SSC already includes a free format field "Standard Settlement Configuration Desc". Use of this to describe a SSC as Import or Export negates the requirement for a DTC file format change.
6	005	y	1	Supplier	No	Option specified is one method of implementing this change. However, changes to D0269 and D0270 flows tend to be very expensive for participants. In fact two version of this flow still exist even though version 001 was supposed to be removed several months after version 002 was introduced. Given this problem an alternative should be considered. SSCs are detailed as a four character data item. Presently range of values used for this item is 0003 to 0937, with only 5 new values added since 1996. Instead of adding an export and import flag consideration should be given to setting up rules for these values similar to those used for MTCs. Definition could be, for example, that import SSCs are all in range 0000 to 4999 and export in range 5000 to 9999. However, a different breakdown of these ranges might be considered to reserve certain values for any future requirement. For example 0000 to 2999 for import 3000 to 6999 reserved and 7000 to 9999 for export. These rules can be detailed in DTC, and if required in BSCP 509, to ensure they are understood by all participants. In this scenario systems will only need to be amended to take account of this new logic rather than any new logic and changes to D0269/D0270 flows.
6	001	Y	21	Supplier	Yes	We need to record which ones are Export somewhere.
6	006	y	8	Supplier/Distributor / Generator/ Meter Op/ DA/DC	Yes	
6	008	y	4	?	Yes	Essential to allocate EAC/Aas to correct CCC
6	009	y	6	Supplier/Distributor /Generator/ Meter Op /DA/DC	Yes	Yes, we believe that this is necessary for the SVAA to be able to adequately distinguish between Import and Export SSCs upon receipt of the SPM from NHHDA. The creation of this new flag would facilitate such identification.
6	010	y	9	Supplier/Generator/ Meter Op/ DA/DC	Yes	
6	011	y	4	Supplier /Generator	Yes	We assume that the necessary detailed level impact assessment will be undertaken.
6	002	No	1	developer of DCHP	Yes / No	No view
6	004	y	2	Distributor	Yes / No	

7. Are there any further requirements on market participants that you believe have not been identified? If so please state.

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
7	003	y	1	Distributor	Yes	1. The principles behind this modification are sound and the changes to the BSC are relatively uncomplex. However, a growth in micro-generation has the potential to cause significant operation problems in the market. 2. What mechanisms are considered necessary to ensure the robustness of data between suppliers and their agents?, for example in situations where there are different importing and exporting suppliers? or the existing supplier is unaware that his customer has installed micro-generation equipment?. For example; under the principles adopted for meter splitting (BSCP 550) the original incumbent supplier is responsible for registering and trading the secondary MPAN subsequent to which a change of supplier is effected. This principle would appear to lend itself to the situation where a customer installs micro-generation, the incumbent supplier picks up the obligation to register and trade the export MPAN. Then, if necessary, a CoS can take place to the new export purchasing supplier.

8. Do you have any further comments on P81 that you wish to make?

Q	Response Number	BSC Party	No Parties	Role	Response	Rationale
8	002	No	1	developer of Domestic CHP unit	Yes	For the consumers impacted by this proposal, simplicity, fairness and low cost are the key considerations. Given that the proposal requires import/export metering, the option for either a simple import/export meter, or a multi-rate import/export meter is welcomed. Both of these options must be kept open. We believe that the additional costs of a multi-rate import/export meter over a simple import/export meter may constitute an unnecessary barrier to the market in question, and may deliver no worthwhile accuracy improvement. Any additional metering complexity needs to be justified on a cost benefit basis against the financial worth of the likely increase in accuracy, and any additional value available to the consumer.
8	003	y	1	Distributor	Yes	1. The use of existing Profiles for micro-generation is appropriate in the short term where the expected population of micro-generators is small. However, we consider the principle should be accepted at this time that as the micro-generation population of grows such that a significant volume of energy is being settled that it will be necessary for new generation specific profiles to be created. 2. The response is on the basis that no fundamental changes to Distribution IT systems or business process (other than a significant growth in the numbers of micro-generators with the consequential operational business process volumes) will be required and that any and all validation or process changes that may be identified lie within the supplier domain.
8	004	y	2	Distributor	Yes	There are costs involved, but NEDL and YEDL are happy to accept this change.
8	005	y	1	Supplier	Yes	At present where export and import is measured from one site that site will always have at least two metering points. It is assumed that this will still be case if this modification is implemented although it is not explicitly stated. This would mean that separate parties could trade import and export from that site. In this case would these need to be treated as a shared meter and given that they are NHH meters would new MTCs be required similar to those for shared HH meters?

8	006	y	8	Supplier/ Distributor Business/ Generator/ Meter Op/ DA/DC	Yes	LE Group would like to take this opportunity to iterate our support to this modification, as recommended by the VAMG. We believe that the method used will be sufficiently accurate and inexpensive to implement to justify the current level of micro generation in the market. We would also welcome more accurate methodology for settlement of micro generation when the market develops to a level that will provide cost benefits
8	008	y	4	?	Yes	We are concerned that the impact on systems and processes from the proposed modification may turn out to be expensive, unwieldy and lead to inaccuracy in the data entering settlements. Our suggestion is to benchmark these proposals against the most "friendly" version of the half-hourly metering solution that we believe is to meter exports with a simple half-hourly data logger in a M.O.S.T. framework allowing data to be collected and enter settlements up to 14 months in arrears. This would also provide a source of half-hourly data that could be deployed for designing a profiling solution at a later date if expedient. This approach would minimise systems' changes in the short term and enable more analysis to be done to establish the best solution for the future. Although the 16 Amp per phase capacity limit could be more difficult to police than the Domestic criterion. It would help to limit the inaccuracy that would be introduced if there were no capacity restriction.
8	010	y	9	Supplier/ Generator/ Meter Op/ DA/DC	No	When are the BSCP509 changes going to be progressed to support the increased Panel/SVG role in agreeing the SSCs? The fundamental problem with using a 'net' metering arrangement with the existing profiles is that for the CHP case, net import is likely to be a completely different shape from the standard profile. If this technology is gong to have the potential market penetration suggested by the DTI, there is going to be a need to create a new profile for the generation element and a method for combining it with consumption profiles.

A3.3 Responses

P81_ASS_001 – TXU Europe

Respondent:	Philip Russell
BSC Party	Yes
Responding on Behalf of	21 Parties
Role of Respondent	Supplier

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	c) – reduces a barrier to entry for small scale generation by reducing the high fixed costs of installing and collecting from a HH Metering System.
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	c) – increases the potential scope of the market.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes	
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes	
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes	
6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes	We need to record which ones are Export somewhere.
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	Yes / No	
8	Do you have any further comments on P81 that you wish to make?	Yes / No	

P81_ASS_002 - MicroGen

Respondent:	*Name* **Graham Roberts**
BSC Party	**No**
Responding on Behalf of	*Please list all Parties responding on behalf of (including the respondent company if relevant)* **MicroGen – BG Group**
Role of Respondent	*(Supplier/Distribution Business/Generator/Meter Operator/DA/DC/Other – please state* ***Error! Bookmark not defined.****)* **Other – developer of Domestic CHP unit**

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes ~~/ No~~	The proposal will extend competition and reduce overall costs .
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes ~~/ No~~	A capacity-based limit on the use of non-half-hourly meters will allow more competition than would a definition that allowed only domestic premises to be included.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes ~~/ No~~	See Q2.
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes ~~/ No~~	New Consumption Component Classes will help ensure consistency with the half-hourly market for export and will help ensure losses benefits (i.e. reductions) can be identified.
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes ~~/ No~~	This seems to offer greatest simplicity (and therefore avoidance of error) for meter readers
6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes / No	No view

7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	Yes / No	No view
8	Do you have any further comments on P81 that you wish to make?	Yes ~~/ No~~	For the consumers impacted by this proposal, simplicity, fairness and low cost are the key considerations. Given that the proposal requires import/export metering, the option for either a simple import/export meter, or a multi-rate import/export meter is welcomed. Both of these options must be kept open. We believe that the additional costs of a multi-rate import/export meter over a simple import/export meter may constitute an unnecessary barrier to the market in question, and may deliver no worthwhile accuracy improvement. Any additional metering complexity needs to be justified on a cost benefit basis against the financial worth of the likely increase in accuracy, and any additional value available to the consumer.

P81_ASS_003 – SEEBOARD Power Networks

Respondent:	*Seeboard Power Networks*
BSC Party	Yes/~~No~~
Responding on Behalf of	*Please list all Parties responding on behalf of (including the respondent company if relevant).*
Role of Respondent	*(~~Supplier/~~Distribution Business~~/Generator/Meter Operator/DA/DC/Other – please state~~)*

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes / ~~No~~	Applicable BSC Objective C The costs involved with the provision of half hourly metering would seem to be inappropriate for micro-generation.
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes / ~~No~~	Applicable BSC Objective C The costs involved with the provision of half hourly metering would seem to inappropriate for micro-generation.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes / ~~No~~	The definition in the Alternative Modification is consistent with the proposed Electricity Safety, Quality & Continuity Regulations, Engineering Recommendation G83 and the general definition of micro-generation. The Alternative Modification, therefore, better facilitates the BSC.
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes / ~~No~~	
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes / ~~No~~	
6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or	~~Yes~~ / No	The MMD data associated with SSC already includes a free format field "Standard Settlement Configuration Desc". Use of this to describe a SSC as Import or

Q	Question	Response	Rationale
	Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?		Export negates the requirement for a DTC file format change.
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	Yes / No	3. The principles behind this modification are sound and the changes to the BSC are relatively uncomplex. However, a growth in micro-generation has the potential to cause significant operation problems in the market. 4. What mechanisms are considered necessary to ensure the robustness of data between suppliers and their agents?, for example in situations where there are different importing and exporting suppliers? or the existing supplier is unaware that his customer has installed micro-generation equipment?. For example; under the principles adopted for meter splitting (BSCP 550) the original incumbent supplier is responsible for registering and trading the secondary MPAN subsequent to which a change of supplier is effected. This principle would appear to lend itself to the situation where a customer installs micro-generation, the incumbent supplier picks up the obligation to register and trade the export MPAN. Then, if necessary, a CoS can take place to the new export purchasing supplier.
8	Do you have any further comments on P81 that you wish to make?	Yes / ~~No~~	3. The use of existing Profiles for micro-generation is appropriate in the short term where the expected population of micro-generators is small. However, we consider the principle should be accepted at this time that as the micro-generation population of grows such that a significant volume of energy is being settled that it will be necessary for new generation specific profiles to be created. 4. The response is on the basis that no fundamental changes to Distribution IT systems or business process (other than a significant growth in the numbers of micro-generators with the consequential operational business process volumes) will be required and that any and all validation or process changes that may be identified lie within the supplier domain.

P81_ASS_004 – YEDL/ NEDL

Respondent:	*Sue Calvert*
BSC Party	Yes
Responding on Behalf of	*Please list all Parties responding on behalf of (including the respondent company if relevant).* *NEDL and YEDL*
Role of Respondent	Distribution Business

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes / No	
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes / No	
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes / No	
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes / No	
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes / No	
6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes / No	
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	Yes / No	
8	Do you have any further comments on P81 that you wish to make?	Yes	There are costs involved, but NEDL and YEDL are happy to accept this change .

P81_ASS_005 – SEEBOARD Energy

Respondent:	*Dave Morton*
BSC Party	Yes
Responding on Behalf of	*SEEBOARD Energy Limited*
Role of Respondent	*Supplier*

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	No	
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	Objective (c), as alternative allows for greater competition by expanding situations where this metering can be installed, i.e. small businesses.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes	There is a requirement to limit the capacity of plant installed in domestic premises. Consistency with Distribution Code Panel Review is sensible and will also encourage competition in supply in the small business market.
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes	
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes	

6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	No	Option specified is one method of implementing this change. However, changes to D0269 and D0270 flows tend to be very expensive for participants. In fact two version of this flow still exist even though version 001 was supposed to be removed several months after version 002 was introduced. Given this problem an alternative should be considered. SSCs are detailed as a four character data item. Presently range of values used for this item is 0003 to 0937, with only 5 new values added since 1996. Instead of adding an export and import flag consideration should be given to setting up rules for these values similar to those used for MTCs. Definition could be, for example, that import SSCs are all in range 0000 to 4999 and export in range 5000 to 9999. However, a different breakdown of these ranges might be considered to reserve certain values for any future requirement. For example 0000 to 2999 for import 3000 to 6999 reserved and 7000 to 9999 for export. These rules can be detailed in DTC, and if required in BSCP 509, to ensure they are understood by all participants. In this scenario systems will only need to be amended to take account of this new logic rather than any new logic and changes to D0269/D0270 flows.
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	No	
8	Do you have any further comments on P81 that you wish to make?	Yes	At present where export and import is measured from one site that site will always have at least two metering points. It is assumed that this will still be case if this modification is implemented although it is not explicitly stated. This would mean that separate parties could trade import and export from that site. In this case would these need to be treated as a shared meter and given that they are NHH meters would new MTCs be required similar to those for shared HH meters?

P81_ASS_006 – LE Group

Respondent:	*Name* LE Group
BSC Party	Yes
Responding on Behalf of	*Please list all Parties responding on behalf of (including the respondent company if relevant).* London Electricity Group Plc, London Electricity Plc, Jade Power Generation Ltd, Sutton Bridge Power Ltd, West Burton Power, London Power Network Plc, Eastern Power Network Distribution Ltd and ECS.
Role of Respondent	*Supplier/Distribution Business/Generator/Meter Operator/DA/DC*

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	The modification provides a settlement method that domestic customers can afford and, therefore, will facilitate BSC applicable objective (c) in promoting competition of generation of electricity by removing the requirement for HH metering.
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	As above including commercial premises.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes	The alternative creates a larger potential market by the inclusion of commercial premises with domestic up to the circuit rating threshold.
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes	
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes	

6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes	
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	No	
8	Do you have any further comments on P81 that you wish to make?	Yes	LE Group would like to take this opportunity to iterate our support to this modification, as recommended by the VAMG. We believe that the method used will be sufficiently accurate and inexpensive to implement to justify the current level of micro generation in the market. We would also welcome more accurate methodology for settlement of micro generation when the market develops to a level that will provide cost benefits

P81_ASS_008 – Scottish and Southern

Respondent:	*Name*
BSC Party	Yes/No
Responding on Behalf of	*Please list all Parties responding on behalf of (including the respondent company if relevant).*
Role of Respondent	*(Supplier/Distribution Business/Generator/Meter Operator/DA/DC/Other – please state **Error! Bookmark not defined.**)*

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	No	Introduction of a profiling solution for exports will reduce the accuracy of settlements therefore reducing efficiency. The modification has no limitation on capacity thus potentially increasing this inaccuracy.
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	No	However it is not as detrimental as the original Mod as at least the issue of capacity is addressed and capped. However policing the capacity limit may be more difficult.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	No	Although the Alternative Modification is 'better' than the original we do not agree that either should be recommended.
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes	If meter readings are to be kept as positive values is there any other option?
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes	
6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes	Essential to allocate EAC/AAs to correct CCC

7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	No	
8	Do you have any further comments on P81 that you wish to make?	Yes	We are concerned that the impact on systems and processes from the proposed modification may turn out to be expensive, unwieldy and lead to inaccuracy in the data entering settlements. Our suggestion is to benchmark these proposals against the most "friendly" version of the half-hourly metering solution that we believe is to meter exports with a simple half-hourly data logger in a M.O.S.T. framework allowing data to be collected and enter settlements up to 14 months in arrears. This would also provide a source of half-hourly data that could be deployed for designing a profiling solution at a later date if expedient. This approach would minimise systems' changes in the short term and enable more analysis to be done to establish the best solution for the future. Although the 16 Amp per phase capacity limit could be more difficult to police than the Domestic criterion. It would help to limit the inaccuracy that would be introduced if there were no capacity restriction.

P81_ASS_009 – Scottish Power

Respondent:	James Nixon
BSC Party	Yes
Responding on Behalf of	Scottish Power UK plc / SP Manweb Ltd / SP Transmission Ltd / Scottish Power Energy Retail Ltd / Scottish Power Energy Trading Ltd / Scottish Power Generation Ltd
Role of Respondent	Supplier/Distribution Business/Generator/Meter Operator/DA/DC

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes / No	Yes, P81 meets the Applicable Objective promoting effective competition in generation and supply.
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes / No	Yes, P81 meets the Applicable Objective promoting effective competition in generation and supply.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes / No	Yes. While P81 meets the Applicable Objective promoting effective competition in generation and supply, it is our view that the Alternative Modification Proposal better facilitates the BSC objectives than the original.
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes / No	Yes.
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes / No	Yes, this would significantly reduce the impact on Parties' systems.
6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes / No	Yes, we believe that this is necessary for the SVAA to be able to adequately distinguish between Import and Export SSCs upon receipt of the SPM from NHHDA. The creation of this new flag would facilitate such identification.
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	Yes / No	No.
8	Do you have any further comments on P81 that you wish to make?	Yes / No	No.

P81_ASS_010 – Npower

Respondent:	Richard Harrison
BSC Party	Yes
Responding on Behalf of	Innogy plc, Innogy Cogen Limited, Innogy Cogen Trading Limited, Npower Limited, Npower Direct Limited, Npower Northern Limited, Npower Northern Supply Limited, Npower Yorkshire Limited and Npower Yorkshire Supply
Role of Respondent	Supplier/Generator/Meter Operator/DA/DC

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	BSC Objective – promoting effective competition in the generation and supply of electricity. We believe that the risk to settlements would not be any greater as there is no differentiation between small non-domestic and domestic premises, and using a generation capacity limit is therefore a more appropriate measure.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes	
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes	This would ensure consistency between the HH & NHH markets, and aid in subsequent reporting of NHH generation.
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes	

6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes	
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	No	
8	Do you have any further comments on P81 that you wish to make?	No	When are the BSCP509 changes going to be progressed to support the increased Panel/SVG role in agreeing the SSCs? The fundamental problem with using a 'net' metering arrangement with the existing profiles is that for the CHP case, net import is likely to be a completely different shape from the standard profile. If this technology is gong to have the potential market penetration suggested by the DTI, there is going to be a need to create a new profile for the generation element and a method for combining it with consumption profiles.

P81_ASS_011 – Powergen

Respondent:	Powergen
BSC Party	Yes
Responding on Behalf of	Powergen UK plc, Powergen Retail Limited, Cottam Development Centre Limited & Diamond Power Generation Limited
Role of Respondent	Supplier & Generator

Q	Question	Response	Rationale
1	Do you believe that the Modification Proposal P81 better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	Promotion of effective competition. May cause worse performance under efficiency of balancing and settlement arrangements if not implemented carefully with proper controls to ensure data quality is not adversely affected.
2	Do you believe that the Alternative Modification Proposal as detailed in the consultation document better facilitates achievement of the Applicable BSC Objectives, if so, which one(s) and why?	Yes	In as much as it would allow business customers to benefit too from the arrangements and there is no reason why it should be constrained to domestic premises.
3	Do you agree with the VAMG view that the Alternative Modification should be recommended for approval and that the original Modification Proposal should be rejected (i.e. that the Alternative is better at facilitating the BSC Objectives than the original Modification Proposal)?	Yes	Assuming that suppliers will be able to practically identify the sites based on the capacity banding per phase. Little detail on how this could be administered and potentially policed has been provided.
4	Do you agree with the VAMG view that it is necessary to implement new NHH CCCs as described in this document? If not, why?	Yes	Seems sensible.
5	Do you agree with the VAMG view that NHH Export readings should be treated as positive numbers? If not, why?	Yes	We assume that the necessary detailed level impact assessment will be undertaken.
6	Do you agree with the VAMG view that a new flag is required to mark SSCs as Import or Export and in doing so that a change to the D0269/D0270 is required? Why? If not, why?	Yes	We assume that the necessary detailed level impact assessment will be undertaken.
7	Are there any further requirements on market participants that you believe have not been identified? If so please state.	No	
8	Do you have any further comments on P81 that you wish to make?	No	

P81_ASS_012 – Aquila Networks

Please find that Aquila Networks Plc response to P81 Assessment Consultation is 'Accept'.

regards
Rachael Gardener

Deregulation Control Group & Distribution Support Office
AQUILA NETWORKS

PLEASE NOTE FOR THE PURPOSE OF INTERPRETING THIS RESPONSE IT HAS BEEN ASSUMED THAT "ACCEPT" INDICATES A POSITIVE RESPONSE TO Q1, Q2 AND Q3 ONLY.

ANNEX 4 TERMS OF REFERENCE

Modification Proposal P81 will be considered by the Volume Allocation Modification Group in accordance with the Volume Allocation Modification Group Terms of Reference.

Definition Procedure

The Modification Group will carry out a Definition Procedure in respect of Modification Proposal P81 pursuant to section F2.5 of the BSC.

The Modification Group will produce a Definition Report for consideration at the BSC Panel Meeting on 18 July 2002.

The Modification Group shall consider and/or include in the Definition Report as appropriate:

- Clarification is needed of the metering requirements for Export e.g. should the current BSC requirement for separate metering of Imports and Exports (as specified in Section K1.2.1) apply to Export with Non Half Hourly metering equipment.
- Clarification is needed of the method to be used in profiling Non Half Hourly Export meter readings. (It should be noted that the choice of the best option may require detailed assessment of the profiling errors associated with each one, and may therefore have to wait until the Assessment Procedure).
- Clarification is needed of the scope of the Modification Proposal e.g. does it apply to all 'domestic premises' (as defined in the standard Supply Licence), or are additional restrictions appropriate (e.g. a limit on the capacity of the generation)?
- The Modification Group may also wish to consider whether it is appropriate to define a long-term solution for profiling of micro-generation, or whether (given that field trials are still at an early stage, and the ultimate level of take-up remains uncertain) it is more appropriate to define an interim solution, which could then be revisited when and if the volume of micro-generation becomes significant.

Assessment Procedure

The Modification Group will carry out an Assessment Procedure in respect of Modification Proposal P81 pursuant to section F2.6 of the BSC.

The Modification Group will produce an Assessment Report for consideration at the BSC Panel Meeting on 17 October 2002.

The Modification Group shall consider and/or include in the Assessment Report as appropriate:

- The impact on distribution businesses and Distribution Use of System (DUOS) charging and consequently any changes to Meter Timeswitch Codes and Line Loss Factor Classes that would be necessary;
- An assessment of the costs associated with the metering requirements for the revised profiling options;
- The impact on Core Industry Documents;
- A cost benefit analysis of P81;
- A consultation with meter manufacturers on whether it is possible for Seasonal Time of Day (STOD) meters to record multiple Import and Export readings; and
- Consideration of whether an Alternative Modification based on a Capacity based limit rather than 'domestic premises' better facilitates the applicable BSC Objectives.