**Change Request Form**

## Change Request details

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| Change Request details |
| Change Request Title | *Change to interface MHHS-IF-165 P0210 TUoS reporting* |
| Change Request Number | *CR032* |
| Originating Advisory / Working Group | *DAG* |
| Risk/issue reference |  |
| Change Raiser | *Andrew Dudkowsky, National Grid ESO*   | Date raised: | *11/09/2023* |

***For further guidance on how to complete this document please see the supporting Change Request Form Guidance for Programme Participants. The guidance will support raising a change and responding to a change request via Impact Assessment. The Change Raiser should consider sharing the draft Change Request Form with impacted programme parties, prior to submission to PMO. The guidance, as well as other key documents are referenced below and can be found via the MHHS website.***

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| Change Request to be read in conjunction with: |
| MHHS Change Request Form Guidance for Programme Participants |
| MHHS Change Control Approach |
| MHHS Governance Framework |
| Ofgem’s MHHS Transition Timetable |

### Part A – Description of proposed change

**Guidance *– This section should be completed by the Change Raiser when raising the Change Request.***

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| Part A – Description of proposed change |
| **Issue statement:***(what is the issue that needs to be resolved by the change)*The P0210 file is currently generated by Elexon’s Supplier Volume Allocation Agent (SVAA) system and is used by the ESO for the purpose of TNUoS and BSUoS charging, reporting and forecasting. **The ESO is the sole recipient of this file.**This artefact is in scope of the interfaces impacted by MHHS. The Programme has proposed a revised P0210 file. This is linked below and described as report ELEX-REP-080 / Interface MHHS-IF-165 in Programme documentation. This proposed file would be used to report migrated consumption only. Non-migrated consumption would continue to be reported using the existing P0210 file layout. The ESO would be required to load both versions of the P0210 and combine the data for the purpose of TNUoS and BSUoS reporting.This proposal would require significant changes to ESO and Elexon software systems and consequently introduce additional effort, cost and risk for Elexon, ESO and the wider Programme. The Helix Programme has confirmed the proposal would not be ready for the start of SIT testing unless there was a significant change to the Helix programme priorities.This CR proposes an alternative design - based on the existing P0210 file structure - which could be delivered at significantly lower delivery time, cost, effort and risk.Elexon has been consulted on this CR and are supportive of this proposal. |
| **Description of change:****Overview of Change**In brief, this change will consist of two elements.1. Elexon / ESO will jointly define the layout and the business rules for deriving ELEX-REP-080 / P0210 file.
	1. The existing P0210 design will be unchanged.
	2. For non-migrated MPANs the file will be built on the existing P0210 business rules.
	3. Consumption associated with migrated MPANs will not be associated with a measurement class. For migrated consumption the measurement class in the P0210 will be derived using a set of business rules developed between Elexon and the ESO.

 1. Interface MHHS-IF-165 will no longer be required as there will just be a single P0210 file for migrated and non-migrated MPANs.

**Elexon - Change Detail**The production of the P0210 is currently a two-stage process: 1. Create the L0055 (internal file)
2. Create the P0210 by adding BM Unit Gross Non-Final Demand to the L0055

 The current L0055 and the P0210 contain the “Measurement Class” Data Item, which is currently mastered by LDSOs when first registering an MPAN.  The MHHS design does not include Measurement Class, so there will be no “Measurement Class” value for migrated MPANs. During the Transition Period, non-migrated MPANs will still have a mastered “Measurement Class” value.The new Volume Allocation Service must be able to derive a “pseudo-Measurement Class” value for migrated MPANs for inclusion in the P0210. The proposed algorithm for the derivation of the “pseudo-Measurement Class” provided by Elexon is based on two data items that will be available for migrated MPANs: ‘Domestic Indicator’ and ‘Connection Type’: * + 1. Measurement Class A: will not be derived for migrated MPANs, as they will be half-hourly
		2. Measurement Class B: will not be derived for migrated MPANs, as they will be half-hourly
		3. Measurement Class C: will report the sum of Measurement Classes C and E\*, which will be determined as ‘all migrated MPANs with Domestic Indicator = N and Connection Type = L, H or E’
		4. Measurement Class D: will be determined as ‘all migrated MPANs with Domestic Indicator = N and Connection Type = U’
		5. Measurement Class E will be set to “0MWh” for migrated MPANs\* (see Measurement Class C above)
		6. Measurement Class F: will be determined as ‘all migrated MPANs with Domestic = Y and Connection Type ≠ U’
		7. Measurement Class G: will be determined as ‘all migrated MPANs with Domestic = N and Connection Type = W’

The data items in the P0210 which will be populated according to the above algorithm for MSIDs with ‘Migrated MPAN’ status - note that each of the data items will be populated with the sum of the data for migrated MPANs and for non-migrated MPANs (which will still be associated with actual MCs):* Period BMU Gross HH Demand
* Period BMU Gross HH Embedded Export
* Period BMU HH Allocated Volume
* Period BMU NHH Allocated Volume
* Period BMU Gross Non-Final Demand

Then the following ‘Daily’ data items will be calculated from the ‘Period’ data items above (so are indirectly calculated using the algorithm)* Corrected Period BMU Gross HH Demand
* Corrected Daily BMU Gross HH Demand
* Daily Gross HH Demand
* Daily Gross HH Embedded Export
* Daily HH Allocated Volume
* Daily NHH Allocated Volume
* Daily BMU Gross HH Non-Final Demand

**ESO – Change Detail**Please see the diagram below describing the Elexon / ESO integration and middleware ecosystem.The following systems are likely to need minor configuration changes:* LIMS
* CIS/MFT

**Testing**The P0210 file will be formally tested by Elexon and ESO, building on our experience of other recent P0210 file changes. ESO will produce the following documentation: A test strategy, test cases and test exit report. The ESO plans to adopt the following approach to testing:* Unit/system testing of any ESO configuration changes. This will include processing samples of the new P0210 file.
* Regression testing: ensuring samples of the new P0210 files can be processed successfully by ESO’s downstream systems.
* Integration smoke testing: the transmission of representative sample files from Elexon to recipient ESO systems using existing test environments.
* Integration testing and User Acceptance Testing (UAT). Transmission of a representative number of new P0210 files from Elexon to ESO’s recipient systems. Formal approval by ESO stakeholders that the new file has been ingested and processed as expected.

Discussions have already taken place between the MHHS Programme. P0210 testing will be managed within MHHS Programme SIT. Elexon and the ESO support this approach on the condition that the change is approved in December 2023.    **Elexon / ESO Integration and Middleware Systems**The following diagram outlines the current P0210 integration architecture. Other than Elexon’s system changes and ESO’s minor configuration changes the architecture will remain unchanged. A copy of the latest P0210 file layout can be found in the SVA data catalogue. A link to that file can be found here:-<https://www.elexon.co.uk/csd/sva-data-catalogue-volume-1-data-interfaces/> |
| **Justification for change:***(please attach any evidence to support your justification)*Using a design based on the existing P0210 file structure will significantly reduce delivery timelines, cost and risk.The original design would require:* Elexon build a new routine to generate the content of the ELEX-REP-080 report
* Elexon / ESO Build a new interface to ingest the ELEX-REP-080 report.
* The ESO modify all of its integration and middleware systems to process the new interface. From the integration and middleware diagram above, it is anticipated that five integration / middleware systems (LIMS, ION / Globalscape / CIS/MFT, SAP PI/PO and Mulesoft will need to be modified to process the new interface.
* The ESO modify the TNUoS and BSUoS reporting in its Revenue Systems to process both the content of the ELEX-REP-080 and P0210 reports.
* Functional testing of all changes / regression testing of legacy functionality

The revised design would require:* Elexon revise the build of the P0210 to include both non-migrated and migrated consumption.
* The format and structure will not change.
* The ESO ingest the P0210, ensuring that its integration and middleware systems can process the file. As per the the integration and middleware diagram, two systems (LIMS and CIS/MFT) will need configuration changes.
* The ESO regression test its Revenue systems based on the revised P0210 to ensure it continues to meet the requirements for TNUoS and BSUoS reporting.

After the end of the Transition Period, if the ELEX-REP-080 report was developed, the existing P0210 file and associated processing of that file would become redundant. There would be a cost in retiring that file and removing redundant code from legacy systems.  |
| **Consequences of no change:***(what is the consequence of no change)*The issue that the original ELEX-REP-080 design cannot be delivered prior to the start of SIT testing unless there is significant change to the current priorities within the Helix programme would need to be addressed. |
| **Alternative options:***(What alternative options or mitigations that have been considered)*None |
| **Risks associated with potential change:***(what risks related to implementation of the proposed change have been identified)*None identified |
| **Stakeholders consulted on the potential change:***(Please document the stakeholders, or stakeholder groups that have been consulted to date on this change. The Change Raiser should consult with relevant programme parties in the drafting of the request, prior to submission to PMO).*Colin Berry – Elexon Market DesignJames Lee – CGI Helix programmeKevin Spencer – MHHS programme |
| **Target date by which a decision is required:** | December 2023 |

### Part B – Initial Impact of proposed change

**Guidance *– This section should be completed by the Change Raiser before being submitted to the MHHS PMO.***

***Please document the benefits of the change and to delivery of the programme objectives***

***‘’***

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| What benefits does the change bring |
| *(list the benefits of the change and how this improves the business case)*This change does not reduce programme benefits. Helix / Elexon would continue to produce a version of the P0210 file, and the ESO will continue to use that file for TNUoS and BSUoS reporting. However, including both migrated and non-migrated consumption in a single file based on the legacy P0210 format gives the following benefits:-* Reduced delivery timescales
* Reduced risk to the wider Helix programme
* Significantly reduced delivery costs.
* Reduced risk by reducing the amount of change to legacy systems.
* Removes the need for post MPAN migration delivery effort to remove references to redundant files and associated processing associated with the file.

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| Programme Objective | Benefit to delivery of the programme objective |
| To deliver the Design Working Group’s Target Operating Model (TOM) covering the ‘Meter to Bank’ process for all Supplier Volume Allocation Settlement meters | None |
| To deliver services to support the revised Settlement Timetable in line with the Design Working Group’s recommendation | None |
| To implement all related Code changes identified under Ofgem’s Significant Code Review (SCR) | None |
| To implement MHHS in accordance with the MHHS Implementation Timetable | Yes – reduced delivery time, effort and cost; reduced risk.  |
| To deliver programme capabilities and outcomes to enable the realisation of benefits in compliance with Ofgem’s Full Business Case | Yes – reduced delivery time, effort and cost; reduced risk.  |
| To prove and provide a model for future such industry-led change programmes | None |

**Guidance *– Please document the known programme parties and programme deliverables that may be impacted by the proposed change.***

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| Impacted areas | Impacted items |
| Impacted Parties | Elexon – Helix programme; CGI Helix development parties. ESO revenue and settlement teams. |
| Impacted Deliverables |      Report id ELEX-REP-80 / Interface id MHHS-IF-165 |
| Impacted Milestones | *M10* |

**Note *– Please refer to MHHS DEL174 Change Request Guidance for Programme Participants for information on how to score the initial assessment.***

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| Initial assessment |
| Necessity of change |  | Expected lead time |  |
| Rationale of change |  | Expected implementation window |  |
| Expected change impact |  |  |  |

**Guidance *– Please include a reference and link to any additional documentation which the change relates to.***

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| Change Request to be read in conjunction with: |
| **Title** | **Reference** |
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### Part C.1 – Summary of Impact Assessment

### Note – *This section will be completed initially by the Change Raiser and then by Programme Participants as part of the full Impact Assessment.*

### *All Impact Assessment responses will be considered public and non-confidential unless otherwise marked. If there are any specific elements of the response (e.g. costs) that are confidential, please mark the specific sections as confidential rather than the response as a whole. The MHHS Programme will publish all Impact Assessment responses and redact any confidential information as noted.*

**Guidance – Programme Participants are required to:**

**Respond with ‘Agree’, ‘Disagree’ or ‘Abstain’, deleting as appropriate. If the respondent agrees, they can provide additional evidence to further support the assessment. If the respondent disagrees or abstains, they should provide a detailed rationale as to why.**

**Add any additional effects that have not already been identified. In doing so, they should provide as much detail as possible to allow a robust assessment to be made.**

**Proceed to Part C.2 for Impact Assessment Recommendation response once completed.**

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| Part C.1 – Summary of Impact Assessment (complete as appropriate) |
| **Effect on benefits**This change will not impact the benefits attributed to MHHS however it will deliver those benefits at lower cost and reduced risk. |
| *<Delete as appropriate>:* **Agree Disagree Abstain**  |
| **Effect on consumers**This change will not impact consumers. |
| *<Delete as appropriate>:* **Agree Disagree Abstain** |
| **Effect on schedule**The complexity of developing and testing the proposed ELEX-REP-080 interface cannot easily be delivered prior to the start of SIT testing unless there is a significant re-prioritising of resources elsewhere within the Helix programme. This proposal reduces the effort and risk to develop this change, and as a consequence allows testing of the change to be performed as a collaboration between Helix and ESO based on existing test schedules and resources.This CR assumes the revised design is approved in December DAG. This would provide an opportunity to test the changes in SIT Cycle 2 (circa May / June 2024). Any delay in approving this CR would increase the risk that this development would not be completed prior to this timeline. |
| *<Delete as appropriate>:*  **Agree Disagree Abstain**  |
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| **Effect on costs**This will reduce the delivery costs for both the ESO and Elexon’s Helix programme and this is explained above.The effect on costs has not been formally estimated but this modification will reduce costs in the order of magnitude of hundreds of thousands of pounds. |
| *<Delete as appropriate>:* **Agree Disagree Abstain**  |
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| **Effect on resources**This change will reduce both Helix / Elexon and ESO resource required to deliver this functionality. |
| *<Delete as appropriate>:* **Agree Disagree Abstain**  |
| **Effect on contract**This change will have no impact on contracts. |
| *<Delete as appropriate>:* **Agree Disagree Abstain**  |
| **Risks**This change delivers the same outcome with lower complexity and effort compared to the original proposal. It therefore should reduce the overall delivery risk. |
| *<Delete as appropriate>:* **Agree Disagree Abstain** |
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### Part C.2 – Impact Assessment Recommendation

### Note – *This section must be completed initially by the Change Raiser and then by Programme Participants as part of the full Impact Assessment.*

**Guidance – The primary reporting metric of the Impact Assessment is the recommendation response. The consolidated response will be presented to the relevant governance group(s) and decision maker(s) with the totals for ‘Agree’, ‘Disagree’ or ‘Abstain’. As such, please ensure this section is completed before the form is returned to MHHS PMO. Provide detailed rationale and evidence in the commentary field.**

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| Part C.2 – Impact Assessment Recommendation (mandatory) |
| **Recommendation***Change Raiser to provide initial recommendation.***It is recommended by the Change Raiser the change is approved.** |
| *<Delete as appropriate>:* **Agree Disagree Abstain** |
| *Impact Assessment respondents to add supporting commentary to support their selection.* |

**Impact assessment done by:** <Name>

**Guidance*: If you are a third party responding on behalf of another Programme Participant, please state this in your response.***

**Impact assessment completed on behalf of:** <Name>

### Part D – Change approval and decision

**Guidance*: The approvals section will be completed by the MHHS PMO once the Impact Assessment has been reviewed.***

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| Part D - Approvals |
| **Decision authority level**<Based on the impact assessment, state who is required to make a decision concerning this change> |

**Guidance** - ***This section will be completed by the MHHS PMO and Change Owner following the review of the impact assessment and decision reached by the SRO.***

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| Part D – Change decision |
| Decision: |       | Date |       |
| Approvers: |       |  |  |
| Change Owner: |       |
| Action: |       |
| **Changed Items** | **Pre-change version** | **Revised version** |
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### Part E – Implementation completion

**Guidance *- This section will be completed by the MHHS PMO at the end of the post-implementation process.***

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| Part E – Implementation completion |
| Comment |       | Date |       |

**Guidance *– The Closure Checklist in MHHS DEL175 Change Log must also be completed by MHHS PMO at this stage.***

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|      Checklist Completed | Completed by      |
| Yes/No |  |

**Guidance – *This section will be completed by the MHHS PMO at the end of the post-implementation process and should be* used to add any appropriate references of the change once it has been completed.**

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| References |
| **Ref** | **Document number** | **Description** |
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