

Assessment Procedure Consultation Responses

P302 'Improving the Change of Supplier Meter read process for smart Meters'

This Assessment Procedure Consultation was issued on 18 July 2014, with responses invited by 8 August 2014.

ELEXON

What stage is this document in the process?

- 01 Initial Written Assessment
- 02 Definition Procedure
- 03 Assessment Procedure
- 04 Report Phase

Consultation Respondents

| Respondent | No. of Parties/Non-Parties Represented | Role(s) Represented |
|--------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------|
| Siemens Operational Services | 0/2 | NHHDC, NHHMOA, NHHDA |
| SSE Energy Supply Ltd | 0/1 | Supplier |
| TMA Data Management Ltd | 0/1 | NHHDA, NHHDC, HHDC and HHDA |
| Electricity North West Limited | 1/0 | Licensed Distribution Systems Operator |
| IMServ Europe Ltd | 0/1 | Supplier Agents |
| Opus Energy Ltd | 1/0 | Supplier |
| EDF Energy | 10/ | Supplier, Generator, Non-physical Trader, ECVNA, MVRNA, Supplier Agent and Consolidator |
| Scottish Power | 2/2 | NHHDC, NHHDA, NHHMOA |
| E.ON | 5/5 | Generator, Supplier, Supplier Agents |
| RWE Npower | 10/ | Generator, Supplier, NHHDC, NHHDA, NHHMOA, HHMOA, HHDC and HHDA. |
| British Gas | 1/0 | Supplier |

Question 1: Do you agree with the Workgroup's initial unanimous view that P302 does better facilitate the Applicable BSC Objectives than the current baseline?

Summary

| Yes | No | Neutral/No Comment | Other |
|-----|----|--------------------|-------|
| 9 | 2 | 0 | 0 |

Responses

| Respondent | Response | Rationale |
|--------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | Yes | - |
| SSE Energy Supply Ltd | Yes | P302 better facilitates Applicable BSC Objective C inasmuch that it will realise some of the benefits of Smart metering at a CoS event. Furthermore, Objective D is better facilitated because P302 should lead to a more streamlined and efficient transfer of relevant Settlements data at a CoS event and so brings efficiencies to the BSC arrangements. |
| TMA Data Management Ltd | Yes | - |
| Electricity North West Limited | Yes | P302 better facilitates objectives C and D as it reduces costs and the time it takes to complete activities associated with the CoS process. It will also provide timely accurate data resulting in efficiencies in the settlement process. |
| IMServ Europe Ltd | Yes | With regard to objective c) this change will enable Old and New Suppliers to operate more independently of each other and remove the dependencies on their DC agents to exchange history, so this will be better facilitated. As it stands, we believe that objective d) will be less well facilitated with this proposed solution, as to have one solution for non-DCC operated meters, and another solution for DCC-operated meters, which can then switch to the non-DCC operated solution will be confusing for both Suppliers and DC agents and in our view less efficient. However once all the meters become DCC-operated then the newly proposed solution would better achieve objective d) – hence overall we believe this would better facilitate BSC objectives c) and d) |
| Opus Energy Ltd | Yes | - |

| Respondent | Response | Rationale |
|----------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EDF Energy | Yes | <p>We agree that the proposed changes are an improvement to the current baseline for the generation of CoS readings for smart meters.</p> <p>We believe that P302 better facilitates objective (c) because it will reduce the complexity of the process compared to the current baseline and will therefore make customer switching a simpler and more cost effective process, supporting competition in the supply of electricity.</p> <p>We believe that P302 better facilitates objective (d) because it will improve the efficiency of the process by reducing data transfers which would otherwise increase as a result of smart metering, also increasing failure and intervention rates. P302 should enable CoS reads to be generated more quickly and cost effectively, improving the efficiency of the process.</p> |
| Scottish Power | Yes | <p>BSC Objective (c) is better facilitated as the Modification would make switching Suppliers a quicker and more efficient process for Customers and would potentially reduce the Supplier costs associated with the Disputed Reads process. In addition, Objective (d) would also be better facilitated as accurate CoS reads would be obtained more quickly. This would provide the opportunity for consumption data to be entered into Settlement more quickly and reduce financial uncertainty since this initial consumption data is less likely to be amended as a result of a subsequent Disputed Read process.</p> |
| E.ON | No | <p>We understand the need to implement a solution for smart COS to ensure maximum benefit is realised from the new smart framework, however, we are concerned that P302 has been raised prematurely, given that the full DCC solution has not yet been confirmed. The current processes for COS, whilst not designed for smart meters, are being used for smart and are benefiting from the more timely retrieval of data. We believe that the conclusion on the most appropriate solution could be deferred until further clarity is obtained on DCC delivery.</p> <p>We do not believe it is possible to state whether the solution better meets the applicable objectives given the processes for which the changes are meant to support are not yet fully defined.</p> <p>We would agree that any appropriate solution to support the COS process in the smart framework</p> |

| Respondent | Response | Rationale |
|-------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | once fully defined, would better facilitate Applicable BSC Objectives C and D. |
| RWE Npower | No | In theory this process could work but our initial review shows there are gaps in the process. We are not able to support this change until those gaps have been addressed and at this time cannot state this modification better facilitates the BSC objectives. |
| British Gas | Yes | Yes, however the running of dual CoS processes for DCC and legacy meters needs to be robust and not cause additional complexity in the CoS process for both suppliers and their agents. It is essential to be able enact legacy CoS processes without the need for full legacy CoS interactions i.e. new to old agent requests & old to new agent responses, which could slow the process down, add additional complexity and exceptions and / or drive down data quality. |

Question 2: Do you agree with the Workgroup that the draft legal text in Attachment A delivers the intention of P302?

Summary

| Yes | No | Neutral/No Comment | Other |
|-----|----|--------------------|-------|
| 11 | 0 | 0 | 0 |

Responses

| Respondent | Response | Rationale |
|--------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | Yes | |
| SSE Energy Supply Ltd | Yes | |
| TMA Data Management Ltd | Yes | |
| Electricity North West Limited | Yes | The legal text clarifies the new obligations on parties. |
| IMServ Europe Ltd | Yes | |
| Opus Energy Ltd | Yes | |
| EDF Energy | Yes | We agree with the proposed amendments to the legal text. However we note that the majority of the changes required to support P302 will need to be made to the relevant subsidiary documents (specifically BSCPs 504 and 514) and that these more detailed changes have not yet been made available. It will need to be ensured that the detailed changes to the subsidiary documents deliver the appropriate outcomes before this modification can be progressed. |
| Scottish Power | Yes | The draft legal text would deliver the intention of P302. |
| E.ON | Yes | The draft legal text would deliver the intention of P302. |
| RWE Npower | Yes | The legal text does facilitate the intention. |
| British Gas | Yes | For this proposal yes, however we have raised an alternative proposal below where the supplier is unable to communicate with the meter which would require different changes to the legal text. It would be useful in the scenario where the old supplier has failed to obtain a read but the new |

| Respondent | Response | Rationale |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | supplier has successfully retrieved the read from the daily read log, to define the mechanism through which the gaining supplier would share this information. |

Question 3: Do you agree that the scope of the D0311 data flow should be extended and made mandatory for this solution?

Summary

| Yes | No | Neutral/No Comment | Other |
|-----|----|--------------------|-------|
| 9 | 1 | 1 | 0 |

Responses

| Respondent | Response | Rationale |
|--------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | No comment | No Comment. As a Supplier Agent we do not see the D0311 data flow. |
| SSE Energy Supply Ltd | Yes | By mandating that the cumulative reading is provided on the D0311 on or after the CoS date suitably enables the new supplier to validate their opening reading against the old supplier closing read. This validation would need to be mandatory given each supplier is independently collecting their reads. |
| TMA Data Management Ltd | Yes | The D0311 is a good solution to communicate COS read between the old and new Supplier. It should therefore be made mandatory for Smart Meters serviced by the DCC and extended to non-domestic sites. We would like clarity on whether this extension would be applicable to the instance of the flow received by the NHHDC |
| Electricity North West Limited | Yes | This assists the Suppliers in making sure the opening and closing reads are the same and the Customer has been billed correctly and also ensures the accuracy of settlement. |
| IMServ Europe Ltd | Yes | It has to be to make this solution work. |
| Opus Energy Ltd | Yes | Use of the D0311 'Notification of Old Supplier Information' data flow, sent by the Old Supplier to the New Supplier, would be helpful because the New Supplier will be able to validate the SSD opening read that it has obtained against the Old Supplier's reading/EAC and so avoid the risk of the Old and New Suppliers working to different CoS reads. If there is a discrepancy between the New Supplier's read and that provided by the Old Supplier, this would trigger the New/Old Supplier to instigate follow-up action which could ultimately enhance the integrity of Settlement together with CoS billing accuracy and customer experience. Without the D0311, there is a risk that if the Old |

| Respondent | Response | Rationale |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | and New Suppliers' CoS reads differ that any discrepancy could be picked up in the GSP Correction Factor rather than being accurately allocated to the relevant Supplier. |
| EDF Energy | Yes | <p>We agree that some form of reconciliation is required to ensure that the old and new Suppliers are both using readings that have been taken at the same point in time. This will ensure that there is no over or under settlement of energy, and that customers are not being over or under billed.</p> <p>We believe that the most appropriate mechanism for carrying out this reconciliation would be through the use of the D0311 dataflow. This would mean that a change would be required under the MRA to mandate that the losing Supplier send a D0311 dataflow for every metering system that is covered by the proposed P302 process, currently the D0311 is only mandated to be sent where the metering system is for a domestic customer.</p> <p>The use of the D0311 will mean that a disputed/agreed reads process will need to be initiated where the reading received by the gaining Supplier on the D0311 does not match the information they have taken from the smart meter. It will need to be considered whether any tolerance should be applied above which a dispute will be initiated, or whether any discrepancy between the two reads should trigger the disputed/agreed reads process.</p> <p>Where the D0311 is being sent as part of the P302 process it would need to be sent within a specified number of days of the CoS date (we would suggest a maximum 5 working days) and would contain the actual reading taken from the smart meter in place of the Old Supplier Estimated CoS Readings which would not be relevant in these circumstances. However where an actual reading can not be obtained from the smart meter (for example due to communications issues, the losing Supplier should still send a D0311 but including an estimate of the CoS reading. This will effectively notify the gaining Supplier that the losing Supplier was not able to obtain an actual reading from the meter. If the gaining Supplier has been able to obtain a remote reading and is notified by the losing Supplier that they were not able to, then communication between Suppliers will be required to resolve this.</p> |

| Respondent | Response | Rationale |
|----------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>We believe that the sending of a D0311 by the losing Supplier could improve the accuracy of CoS readings even where the meter is not going to be operated as smart by the gaining Supplier (i.e. the meter is going „dumb“ on CoS). The actual reading obtained by the losing Supplier could be passed on to the NHHDC by the gaining Supplier using a D0071 dataflow, this actual reading would be more accurate than the Old Supplier Estimated CoS Readings or a deemed reading generated by the gaining Suppliers NHHDC. This would also mitigate the need for the losing Supplier to determine whether the gaining Supplier will be operating the meter as „smart“, specifically during the transition period where some Suppliers are not yet DCC Users. The losing Supplier would send a D0311 irrespective of whether the gaining Supplier was able to operate the meter as smart or not, the gaining Supplier would then determine how that information would be used based on the process they chose to follow.</p> <p>It is worth noting that the D0311 may also contain EAC details provided by the losing Supplier which the gaining Supplier may wish to use on the D0052 that they send to their NHHDC as part of the P302 process. However we believe that this should be the Supplier choice as to whether they use this EAC information, or a class average, the use of the EAC from the D0311 should not be mandated.</p> |
| Scottish Power | Yes | <p>ScottishPower believes there needs to be a mechanism for ensuring under or double-billing has not taken place in order to protect central Settlement and we consider the proposed inclusion of the cumulative register reading on the D0311 will enable comparison between the old and new Suppliers' SSD reads.</p> |
| E.ON | Yes | <p>We believe that the use of the D0311 data flow is the most appropriate method of communicating the 'Old Supplier Information', however, only the cumulative reading is required in order to ensure that that the customer is not over or under billed and that data entering settlements is correct. We appreciate that where the new supplier is using the same time of use registers as the old supplier, having the closing reads for these registers offers a further check to confirm that they align, but we believe that this should not be required and given that suppliers are under no obligation to use the same registers it would seem limited in its</p> |

| Respondent | Response | Rationale |
|-------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>usefulness.</p> <p>It is also unclear how, in the event that the old supplier fails to access the daily read log but the new supplier is successful, the new supplier would communicate the information it has gained to the old supplier.</p> <p>We would support the extension and mandated use of the flow in the proposed process. A single, clearly defined flow ensures no added complexity in supporting multiple communication types and allows for easier auditing/reporting. It also means that the new supplier knows to expect the D0311 and can chase the old supplier in the event of non-receipt in a timely manner.</p> |
| RWE Npower | No | As we are able to get the cumulative read direct from the daily read log, adding it to this flow seems to be unnecessary cost and effort. It is likely that if this information is added to the D0311 flow, parties would not always utilise it and would choose to use the information in the daily read log instead. |
| British Gas | Yes | However, we must ensure that this is only extended to those meter points within the DCC only and should not be a requirement for non-domestic sites that have opted out of DCC. If and when all meter points are required within DCC then we agree with a blanket mandating of this flow. |

Question 4: What are your views on the use of the D0155 and D0151 data flows?

Responses

| Respondent | Response |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | <p>We believe that the implication of having to revert to the 'legacy' process has not been fully considered from the view point of Supplier Agents – NHHDC and NHHMOA.</p> <p>The legacy process will be triggered by the New Supplier sending a second D0155 appointment data flows to both its NHHDC and NHHMOA agents with the flag setting that the Metering Systems cannot be serviced by the DCC. Once the legacy CoS process has been successfully completed and communications has been established with the DCC and routine readings are being retrieved from the Metering System then the Supplier must send a third D0155 to both the NHHDC and NHHMOA this time with flag setting that the meter is being serviced by the DCC. This will provide explicit confirmation to the NHHDC the meter is DCC serviced instead of it having to rely on whether it is receiving regular readings from the Supplier.</p> <p>The third D0155 is required by the NHHMOA as it is the only way that the NHHMOA can determine if the meter is now being serviced by the DCC. This will be supportive of the SEC 3 outcome whereby MOAs now has access to some DCC services. The D0155 information will let the MOP know if the DCC services are available for the mpan.</p> <p>There is a danger that without the third D0155 that either or both the NHHDC and NHHMOA assume that the Metering System is still not DCC serviced where in reality it is, this is potential risk to Settlement.</p> <p>No D0151 data flows would be required if the same NHHDC and NHHMOA are used for both smart and legacy CoS. The second and third D0155 data flows would have the same effective from dates as the original one, being updates to the terms of the appointment.</p> |
| SSE Energy Supply Ltd | Happy to support but would still be open to options if a party wanted to respond with alternative proposals. |
| TMA Data Management Ltd | <p>We agree that adding data item J1833 would improve CP1395 rather than undermine it. We also agree with the use of the D0155 to update the NHHDC to use the legacy COS process rather than the DCC serviced COS process, without receiving a D0151 to close off the initial D0155. Finally we agree that once the legacy process has started it should be completed. However, as the new NHHDC can become an old NHHDC, it is important to ensure that it is updated a third time once the DCC serviced MPAN issue has been resolved. When the site changes Supplier, the de-appointed NHHDC will then be in a position to know to follow the DCC serviced COS process. The 3 possible flags for J1833 are A active, S suspended and W withdrawn. We would suggest that the flag would go from A</p> |

| Respondent | Response |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | to S and back to A once the issue is resolved. |
| Electricity North West Limited | It seems sensible to send an updated D0155 than to de-appoint and re-appoint, but could cause confusion for both Supplier and their Agents. |
| IMServ Europe Ltd | We are indifferent as to whether the new Supplier backs out the original D0155 and then re-appoints with another D0155 and a new DCC-operated flag, or whether there is a 2nd D0155 with the same REGI but a later DCA EFD. We would also expect to receive the 3rd D0155 flow as DCC0-operated once comms has been re-established – as this would be the trigger to stop any manual visits planned. D0151s are not necessary to be sent with contract update D0155s. |
| Opus Energy Ltd | We agree that, in the event of a communications failure, a second D0155 data flow should be sent by the New Supplier to communicate to its agents that the Metering System could not be serviced by the DCC and so the legacy metering process would need to be followed. We do not believe that use of a D0151 data flow is necessary to back out of the original D0155 because it is already common practice for subsequent D0155s to be sent to replace previous D0155s. |
| EDF Energy | <p>We believe that the Supplier has the best view as to whether the meter that is being gained is smart (and will be operated as such) and so should be informing its agents as to the process that they will need to follow. The most sensible mechanism for doing this would be via the D0155 dataflow. A smart indicator on the D0155 could also be used not only for CoS but also when the smart meter is fitted to notify agents that an MPAN is smart; for example this could be used to stop NHHDC issuing read requests for a smart meter.</p> <p>We believe that this can be achieved through the use of existing data items within the D0155, such as Contract Reference, and that a new specific data item would not be necessary. However if it is the case that a new data item is introduced for this purpose then this should be included as an optional data item within an existing group within the flow to minimise the cost of flow changes.</p> <p>Where the gaining Supplier has notified its agents that they need to follow a smart process they would need to send flows to agents in time to ensure that they follow the appropriate process, which we would expect to be by SSD as now.</p> <p>Where the NHHDC or NHHMOA have been notified by the gaining Supplier that the meter will be operated under the „smart“ process but they have not received the relevant dataflows from the gaining Supplier (for example the configuration details that should be sent to the NHHMOA) within a specified number of days then they should send a D0170 dataflow to the gaining Supplier. This will prompt the gaining Supplier to take the relevant action, which would either be to send/re-send the missing dataflows, or to send a second D0155</p> |

| Respondent | Response |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | to notify its agents that they need to follow the non-smart process. |
| Scottish Power | <p>Where a Supplier uses different Agents depending on whether a meter is SMART (DCC Serviced) or Legacy, Scottish Power sees no other option to those Suppliers using the D0151 flow if there is a change between SMART and Legacy CoS arrangements.</p> <p>However, if the same Agents are used regardless of SMART functionality, in principle we support the intention to use the D0155 in a similar way as it is currently used to update the Reading Cycle however would prefer the flexibility to have our own arrangements with our appointed agents. We consider there to a risk that, with so many appointment and de-appointment flows being sent and received between the same agents for a single site in a short timeframe, agent appointment processes could fail or not complete correctly. We have seen this occur within the current agent appointment processes where the old Supplier raises a registration objection and removes it on the same day and by using the D0155 to notify SMART/non-SMART functionality it reduces the likelihood of a similar situation arising, reducing risk to Settlement.</p> |
| E.ON | We see the logic and agree that the use of the D0155 and D0151 data flows would support the proposed changes, however, it is unclear what would happen in the event that one supplier was not using the DCC (not mandated to in the initial period) and the other was or where one supplier believed the meter to be DCC serviced and the other did not. Actions required where these circumstances arise need to be clarified. |
| RWE Npower | We are in agreement with the process covered in the document, but we think there is a gap where the meter is non DCC serviced but is still considered to be a smart meter i.e. the current foundation Smart meters. This could be addressed by including the SMSO id in the D0155, this would make it possible to identify if this was a DCC service smart meter or non DCC serviced smart meter |
| British Gas | <p>We would question the intention of the use of the DCC Service Flag in the D0155 as the driver for whether NHHDCs enact Smart or Legacy processes as we understand that this is a DCC maintained data item that will only change based on the enrolment status of meters in the DCC and will not reflect a temporary loss of service – i.e. communications failures. Therefore, we'd question the value of including the J1833 data item in the flow or would suggest its inclusion and use alongside the Contract Reference as proposed in CP1395. Point of clarification with the DCC perhaps?</p> <p>We believe it could add complexity by requiring the sending of multiple D0155's (and potentially D205's to MPAS if a CoNHHDC is enacted) for different events at different times within a short "windowed" process, which already requires the transfer of several flows already – more to go wrong, be missed or delay processes. We need re-assurance that delivery of an opening read from the</p> |

| Respondent | Response |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>NHHDC to the new supplier within current timescales is achievable based upon the sending of a 2nd D0155 at D+4 to revert to legacy and subsequent processing of other relevant flows (D0170s etc). If it is not, then we would like to consider alternative arrangements described below through extended use of the D0311.</p> |

Question 5: What are your views on the potential Alternative Modifications whereby one Supplier leads the smart CoS process?

Responses

| Respondent | Response |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | We believe that the Alternatives would not meet the requirements of the relevant BSC Objectives as well as the Proposal due to for their processes potentially taking longer to complete than that of the Proposal, especially when Ofgem's goal of one day switching is taken into consideration. |
| SSE Energy Supply Ltd | A benefit to the proposed solution is there is a natural incentive for each Supplier to obtain a reading from the Smart meter. The proposed solution better utilises the smart infrastructure and reduces the unintended consequences and complications that maintaining a single supplier lead process in a smart context could result in. |
| TMA Data Management Ltd | For Smart Metering serviced by the DCC, access to meter readings should be easy and timely; there is therefore no reason to limit the COS to one lead Supplier. It is in the interest of both Suppliers to obtain an accurate closing and opening read. The solution of using the D0311 flow to pass information from the Old to the New Supplier will ensure that there is a reconciliation and issue resolution should there be discrepancies or issues obtaining a read from the new Supplier. Smart Metering is the opportunity to move away from dependency between previous and new Supplier hubs. |
| Electricity North West Limited | This solution could also work but then one party is dependent on the other regarding receiving this information and the accuracy of this data. Which party should have this obligation Old or New Supplier; it reduces the timescale of the process if the New Supplier obtains the information but could introduce complexities if the Old Supplier does not agree. |
| IMServ Europe Ltd | Without seeing a full proposal on how the Alternatives would fully work, we are not against the idea proposed. It would however leave one Supplier with a dependency on the other Suppliers in the majority of CoS events, whereas the proposed solution only has this dependency for the ones that switch to "legacy processes", so as such, the Alternative would appear to be less attractive for this reason alone. |
| Opus Energy Ltd | We do not support the alternative proposal whereby one Supplier would be responsible for retrieving the midnight readings from the daily log and passing these to the other Supplier. This is because Old and New Suppliers will have priority actions for their element of the process which could potentially result in a delay of transfer of information to the other Supplier, for which there is no contractual relationship. Although there are proposed timescales for this activity to be completed by New or Old Supplier (SSD+1 if the New Supplier takes the read and SSD+4 if the Old Supplier takes the read) it |

| Respondent | Response |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>appears likely that the read process would be swifter as well as more robust with the 'original' proposal, for which both the New and Old Supplier are directly incentivised to gain timely opening and closing CoS reads respectively.</p> |
| EDF Energy | <p>We believe that the alternate change has a significant drawback in that it means that the losing Supplier is still dependent on the gaining Supplier to provide them with information, which removes some of the benefits to be gained by making these changes.</p> <p>However the proposed alternative does have a number of merits in that it does ensure that both Suppliers will be using the same reading, while still removing the need to transfer reading and consumption data between NHHDCs. It also removes the need to implement the proposed changes to the D0311 dataflow as both Suppliers will be using the same reading, as obtained by the gaining Supplier.</p> <p>The proposed alternative also reduces the risk associated with the gaining Supplier not being able to configure the smart meter until some time after midnight. If the gaining Supplier were to take a snapshot of the reading registers at the time that it successfully configures the meter then this would avoid the need for the gaining Supplier to account for any consumption on the smart meter between the midnight snapshot stored in the daily read log, and the time at which it configures the meter to its new tariff settings.</p> <p>This would help to resolve the issue that arose in the discussion in the P302 workgroup about the time at which CoS occurs. The Daily Read Log that is proposed to be used as the source of the CoS reading stores readings taken at midnight UTC, however CoS occurs at midnight local time. This means that during the summer Suppliers will set configuration at 23:00 UTC (i.e. before the midnight snapshot is taken) which will lead to a mismatch between the time of the reading and the configuration of the meter by the gaining Supplier. The proposed alternative could avoid this risk.</p> <p>The alternative could be to make CoS on a smart meter occur at midnight UTC to enable the Daily Read Log on the meter to also be used, however this might require changes to the DCC's access control rules. A further alternative would be to change SMETS to take Daily Read Log read at midnight local time rather than UTC.</p> <p>We believe that the proposed alternative warrants further investigation, specifically in relation to the issues noted above in regards to the use of UTC and local time.</p> |
| Scottish Power | <p>The single supplier solution is simpler with a supplier to supplier transfer of a non-NHHDC validated reading than with the current NHHDC to NHHDC transfer of a validated CoS reading. It would also increase the likelihood that both the old and new Supplier use the same CoS read, alleviating concerns surrounding under or double-billing. We would prefer the losing supplier to pass readings</p> |

| Respondent | Response |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>forward rather than for the gaining supplier to pass reads back.</p> <p>The main drawback with a single Supplier led solution is where the suppliers have differing meter configurations. In these circumstances, the CoS read of Supplier A may be of no use to Supplier B if it does not include the TOU meter reads that B uses. This could add unnecessary complexity to the CoS process for Supplier B (that which does not lead the process).</p> <p>The proposed P302 solution aligns with the principle of reducing the interdependency between suppliers and would appear to be the simpler option: both Suppliers obtain their own CoS reads and a check is performed to ensure the total cumulative reads match (or are within a specified tolerance of each other).</p> |
| E.ON | <p>There needs to be a balance between complexity and risk to settlements in answering this question. The removal of the dependency between suppliers at COS would simplify the process but only if confidence that the smart framework would reduce disputed reads is high. If confidence is low it will result in the desire for complicated agreed read validation and disputed reads processes which would then result in a procedure by which one supplier leading the COS would be the most efficient.</p> <p>Given the stringent SLA's on the DCC for successful communications, the instances of either supplier being unable to communicate with a meter for an extended period of time should be minimal, as should instances of suppliers getting reads which do not align. We therefore believe that the Alternative Modification is not the most appropriate proposal.</p> |
| RWE Npower | <p>We do not support the alternate Modifications. Whilst the alternate removes potential duplication in the process, it retains the reliance one party has on another for the reads. If both suppliers are responsible for getting a reading there is an element of duplication, but no supplier is reliant on waiting for the other, and any dispute can be resolved as long as data is available in the daily read log for the minimum period as defined by current specifications.</p> |
| British Gas | <p>We do not believe this is a viable option as it means only one supplier will attempt to get a read via the DCC compared to both suppliers trying in the current proposal. If the single supplier approach proves unsuccessful then legacy CoS process would have to be initiated anyway. Also if responsibility for this was with the new supplier, how would the old supplier know what to expect and in what timeframe? What would happen if the new supplier changed the tariff on SSD, how would the reads be displayed? Would there be any issues with the new supplier sending the old supplier their correct reads pre-tariff change? if it was the responsibility of the old supplier, would that impact the new suppliers ability to change tariff on SSD?</p> |

Question 6: What are the potential risks to Settlement for the proposed solution and the potential alternative?

Responses

| Respondent | Response |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | The risk with the Proposal should be less than with the Alternative because both Suppliers have independently obtained readings which can be compare if required are a later date. |
| SSE Energy Supply Ltd | On the basis that the consequential changes to the BSCPs receive fully industry assessment and outline a robust process then we do not envisage the proposed solution should present a risk to Settlement. This would include maintaining established processes that parties undertake in validating and assuring CoS events, such as monitoring abnormal EACs. |
| TMA Data Management Ltd | The potential risk to Settlement is a discrepancy between the old Supplier closing read and New Supplier opening read leading to inaccurate data entering settlement. This risk is for P302 and is mitigated by the issuance of the D0311 flow between the Old and New Supplier, followed by a comparison by the New Supplier to ensure that the data is aligned. The potential alternative does not have that particular risk but has a higher risk of missing data in settlement has only one party is responsible for obtaining the COS read. |
| Electricity North West Limited | <p>The potential risk of the proposed solution is if the Suppliers take the readings at different times units may have been consumed in between the readings which will not be counted in settlement.</p> <p>The potential risk of the alternative solution is that a party is using data collected by the other party and if it is incorrect then it adds complexities to rectify.</p> |
| IMServ Europe Ltd | Although there is mention of the exchange of reads between old Supplier and new Supplier and an obligation on the new Supplier to resolve issues if the opening and closing reads do not match, our experience of the existing Disputes process leads us to the view that a supplier led resolution process does not work. In the instances where this is successful currently, it is due to the policing of agents (often independent) whose practices are to not issue amended D0086s without receipt of the relevant agreed D0300 flows. Once this agreement between Suppliers is a retrospective activity, as opposed to the current pre-requisite, then this will likely only occur if driven by the customer. In the instance that the Old Supplier's closing read is higher than the New Supplier's opening read and the customer is being "double-billed," then it is likely that the customer will complain and eventually force one Supplier to use the other Supplier's read. However, if the Old Supplier's closing read is lower than the New Supplier's opening read and the customer is being "under-billed" then there is no incentive on anyone to resolve this, and settlements will be impacted. Group Correction Factor will |

| Respondent | Response |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | eventually address this however DUoS billing will remain incorrect. |
| Opus Energy Ltd | <p>For the proposed solution there is a risk that the Old and New Suppliers could use different Change of Supplier reads.</p> <p>For the alternative solution there is a risk is that if one supplier is responsible for retrieving the midnight readings from the daily read log and passing these to the other supplier that the reads may not be forwarded to start the Settlement process for their period of supply.</p> <p>For each of the potential risks above, there are possible Settlement integrity and customer billing implications.</p> |
| EDF Energy | We believe that the key risk introduced by P302 is that the opening and closing reads used by the old and new NHHDCs might not be the same, creating a settlement imbalance through gaps or overlaps in the volume of energy settled. We believe the risk of this would be minimised to an acceptable level by use of the D0311 process as described in the proposal and elsewhere in this response. |
| Scottish Power | <p>As suggested in the answer above, the inherent risk associated with the proposed solution is under or double-billing caused by Suppliers not using the same CoS read resulting in group take volumes being under or over stated. The materiality of this risk was discussed briefly at the Issue 53 meetings and was considered to be low however there is obviously no data to support or disprove this opinion as yet and we would expect the materiality of this risk to be monitored if the proposed solution is implemented.</p> <p>With regard to the potential alternative, the differences between Suppliers' meter configurations as set out in the answer to Q5, above, could add complexity for the read-receiving Supplier in deriving an accurate CoS read which, in turn, could cause unnecessary delays in consumption data being entered into Settlement.</p> <p>For both the proposed and potential alternative solutions, the potential issues with universal time outlined in the APC could, if not addressed, create misunderstandings both within the Industry and for Customers.</p> |
| E.ON | <p>The risk to settlement from the proposed solution would be removing the dependency between suppliers in agreeing the COS read and thus creating the possibility of gaps in energy settled between closing and opening reads. However, not only would the smart framework and the use of the DCC mean that instances of this happening are minimal, the sharing of the cumulative read between the old and new supplier should be sufficient mitigation to ensure that the risk is insignificant.</p> <p>The alternative solution which follows the existing agreed reads process would remove this risk, but at the expense of a less complex and efficient procedure. We do not believe that the risk</p> |

| Respondent | Response |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | would be so great it would outweigh the benefits of the proposed solution. |
| RWE Npower | We have significant concerns that without a process walkthrough we are unable to understand how these changes will impact the settlement processes. The current lack of clarity means that we are not confident there are no significant risks to settlements. |
| British Gas | <p>We do not believe the proposed solution would pose a risk to settlement.</p> <p>We do however have concerns with the proposed alternative solution and believe this could cause potential issues particularly if the solution is reliant on the old supplier collecting readings.</p> |

Question 7: Do you agree with the Workgroup that there are no other potential Alternative Modifications within the scope of P302 which would better facilitate the Applicable BSC Objectives?

Summary

| Yes | No | Neutral/No Comment | Other |
|-----|----|--------------------|-------|
| 3 | 1 | 1 | |

Responses

| Respondent | Response | Rationale |
|--------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | No comment | - |
| SSE Energy Supply Ltd | Yes | - |
| TMA Data Management Ltd | Yes | - |
| Electricity North West Limited | Yes | - |
| IMServ Europe Ltd | No | <p>Potential alternative solution.</p> <p>Follow the proposed solution for the situation where it is a DCC-operated meter and the comms are working and the midnight reads are available</p> <p>Where the old Supplier does not get a midnight read by SSD+4, and informs the New Supplier, if the New Supplier has the midnight read he passes it to the Old Supplier who will pass it on to the Old DC</p> <p>If the New Supplier also does not have a midnight read, rather than send a D0155 to the DC to trigger the "legacy process", could we allow the old DC to deem the CoS read at SSD+8 from its existing history, and then when they send this D0086 to the Old Supplier, the Old Supplier can pass it on to the New Supplier in group 08D in the D0311, who can then pass it on the new DC as a D0010 to use as the D0086. This replicates the proposed solution as much as possible and prevents the need for DC to DC exchanges, meaning the D0170/D0152/D0010/D0086DC to DC flow exchanges are purely for legacy meters rather than also for the legacy fallback on DCC-operated meters, so a nice clear distinction. It will also help in the situation of Change of SSC on CoS, where, in the current proposed solution the New DC may only</p> |

| Respondent | Response | Rationale |
|-----------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | receive MTDs on the new SSC and hence will generate the D0086 on the new SSC (and send this to the old DC), but the old DC and Old Supplier require it on the old SSC to match the history. If the old DC generates something on the old SSC that is of no use to the new Supplier and new DC, then when the comms start working again the new DC will then be able to derive an Opening CoS on that new SSC (P176). |
| Opus Energy Ltd | Yes | A potential alternative is a centralised single DC and DA that would collect and control all Change of Supplier reads, rather than suppliers. This could facilitate no break in Settlement and because data would not be transferred between agents, reads could be created more swiftly. This could also help to reduce levels of disputed reads. |
| EDF Energy | Yes | We have not identified any other alternative modifications within the scope of P302. |
| Scottish Power | Yes | - |
| E.ON | No | We are concerned that P302 has been raised prematurely, given that the full DCC solution has not yet been confirmed it is difficult to assess whether there are more appropriate solutions. Whilst we can see that P302 could work, there are a number of areas which we are unclear on and until they are fully assessed it is difficult to know whether there are other 'flavours' of P302. |
| RWE Npower | No | We are not aware of any alternatives at this stage, currently we believe, notwithstanding our concerns and request for a process walkthrough, that there are no alternatives to this modification. |
| British Gas | No | <p>As per the response to Q4, to mitigate the risk of delays in receiving an opening read from the NHHDC following reversion to legacy processes, we believe an alternative solution to the sending of multiple D0155s could be achieved through extending the sue of the D0311 flow and have suggested an alternative proposal where the supplier is unable to communicate with the meter. See our proposed solution below:</p> <p>New Process:</p> <ul style="list-style-type: none"> • Old Supplier is unable to get read via DCC • Old Supplier sends D0311 to New Supplier at SSD+4 (may be earlier to allow NS time to |

| Respondent | Response | Rationale |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>send it on their NHHDC?)</p> <ul style="list-style-type: none"> ○ Contains last actual read or customer register reading ○ Contains EAC from latest NHHDC view ○ Contains Old Supplier estimated CoS read ○ Contains new "DCC service flag" showing meter is serviced. <ul style="list-style-type: none"> • New Supplier sends D0311 to new NHHDC by SSD+5 • New NHHDC identifies from DCC service flag and absence of SSD midnight Read Log entries that legacy CoS process required so will wait for the CoS window to close at SSD+5 before enacting legacy coS process and create a D0086 read following hierarchy rules : <ul style="list-style-type: none"> ○ Use DCC read received as D0010 from New Supplier ○ Use Old Supplier estimate ○ Use last actual read + EAC value to estimate • New NHHDC passes D0086 to Old NHHDC • Old NHHDC passes D0086 to old Supplier. <p>Role of D0311:</p> <ul style="list-style-type: none"> • D0311 will be used by the suppliers to: <ol style="list-style-type: none"> 1. advise the new Supplier that the old supplier was able to get a read from DCC – read present in flow and DCC service flag "A" 2. New Supplier notify the New NHHDC of the old supplier CoS read if the New Supplier was unable to get a read from the DCC (**If NS was able to get a read by SSD+3 or 4 then this flow is not sent to the DC 3. advise the new supplier that the old supplier was not able to get a read from DCC – EAC / Old supplier Estimated Read / Last actual read |

| Respondent | Response | Rationale |
|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>4. New Supplier to notify the New NHHDC of the estimated reads / EAC's and DCC Service flag so CoS legacy process should be followed</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Avoids the need for a new data item in the D0155 • Avoids the need for multiple D0155's to change contractual terms - could result in no D0086 being generated • Avoids the need for D0170's / D0152 / D0010's to be sent • Minimal change as D0311 flow from New supplier to New DC already exists. • CP1395 use of service reference to inform agents of smart meters can still used as the main indicator of a sites metering • Legacy CoS flag (DCC Service Reference) driven by Old supplier not new supplier and their agents <p>Amendments:</p> <ul style="list-style-type: none"> • Add the J1833 data item "DCC service flag" to the D0311 • Timings of when the D0311 is issued need to be reviewed – should it be sent at SSD –X and SSD+4 (up to the when the old supplier will attempt to get a read from DCC)? • NHHDC changes to adopt 2 CoS processes <ul style="list-style-type: none"> ○ DCC CoS – does not send d0086 to old DC then to old supplier? ○ Legacy CoS – does send d0086 to DC |

Question 8: What controls do you believe should be put in place to mitigate any associated risks?

Responses

| Respondent | Response |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | - |
| SSE Energy Supply Ltd | <p>Further to our response to Question 6, we recognise that during the smart rollout and later, when addressing Smart meters operating as dumb meters (e.g. network issues), the legacy process for exchanging CoS information may need to be retained in cases where smart meters are not installed or cannot be operated as smart. Under these scenarios suppliers will need to know what the trigger is for invoking the legacy process, where this is through a timescale, as noted by the Issue 53 work group, of SSD+4 (or similar) and/or the use of the D0311 to confirm when an intermittent communications problem would be resolved.</p> <p>Given Ofgem's view on next day switching, through the Smarter Markets Programme, we must note the impact that any delays in the collection or exchange of CoS reads will have upon the ability for a Supplier to accurately and promptly produce an opening/ closing statement.</p> |
| TMA Data Management Ltd | The controls suggested in P302 are adequate to mitigate the associated risk. The D0311 flow between the Old and New Suppliers will act as the reconciliation flow. It is then the new Supplier's responsibility to compare the reads and ensure there is no discrepancy as well as initiating the Disputed COS read process if necessary. |
| Electricity North West Limited | The Suppliers Old/New should take the opening and closing readings at the same time period to mitigate any risks and ensure they have the same reading. |
| IMServ Europe Ltd | A targeted TA check to review the processes and controls which the Supplier has implemented to manage the process. |
| Opus Energy Ltd | <p>Mandating use of the D0311 'Notification of Old Supplier Information' data flow, for use by both domestic and non-domestic customers, to be sent by the Old Supplier to the New Supplier, would be helpful because the New Supplier would be able to validate the SSD opening read that it has obtained against the Old Supplier's reading/EAC. There would be a need to ensure that an appropriate mechanism is in place if one or both Suppliers have opted out of DCC.</p> <p>A disaster recovery plan should be put in place for potential loss of DCC gateway.</p> |
| EDF Energy | We believe that the settlement imbalance risk noted previously |

| Respondent | Response |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>should be mitigated by the use of the proposed D0311 process. This will ensure that both Suppliers are aware of the reading used by the other Supplier, and that a disputed/agreed reads process is initiated where there is any discrepancy.</p> <p>We believe that this process should also be subject to sampling as part of the BSC audit to assure the process is delivering the appropriate settlement outcomes.</p> |
| Scottish Power | <p>To mitigate the under/double billing issue inherent in the proposed solution, ScottishPower agree that a requirement (although not explicitly detailed in the consultation document) should be placed upon the New Supplier to compare the D0311 (Old Supplier) total cumulative CoS read to the total cumulative CoS read obtained directly from the DCC.</p> <p>In addition, we would believe that a meter register mapping convention should be adopted across the industry so that suppliers using the same SSC (e.g. 0393) have the opportunity to use the same meter register and the new NHHDC can take advantage of the EAC/AA and historical readings provided by the old NHHDC.</p> <p>Any variance could be monitored at MPAN level to determine whether a CoS Read Dispute is required to be raised with the other Supplier and at an aggregated level to ascertain whether any variances pose a risk to Settlement.</p> <p>With regard to the risks associated with use of universal time, we believe examination of this issue should be undertaken by Elexon to assess any impact on BSC processes and by Ofgem on the wider customer-facing impacts outside of the BSC.</p> |
| E.ON | <p>Again, until all elements of the solution are understood it is difficult to assess the full control requirements. Once defined, settlement risk can be more accurately identified and controls formed. We can see the requirement for controls around metering issues, incorrectly held data around whether or not the meter is DCC serviced etc, but would need more time and detail before fully assessing the controls required.</p> |
| RWE Npower | <p>Without a thorough walkthrough of the proposed process, we are currently unable to fully identify and quantify any associated risks, once we have completed the walkthrough we will have a clearer understanding and be able to identify controls for identified risks.</p> |
| British Gas | <p>We feel that controls should be put in place to ensure that the appropriate data flows and relevant content is being sent per agreed SLAs. In particular, we feel there needs to control surrounding the use of the D0311 for reconciliation of reads utilised by the new and old supplier – i.e. validation of cumulative reads to ensure no customer detriment.</p> |

Question 9: Will P302 impact your organisation?

Summary

| Yes | No | Neutral/No Comment | Other |
|-----|----|--------------------|-------|
| 11 | 0 | 0 | 0 |

Responses

| Respondent | Response | Rationale |
|--------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | Yes | We will have to undertake a full detailed Impact Assessment of the changes that will be required. System modifications will be necessary; some of these will have to be done by the system vendor. There will be detailed project plan for all the development and testing that will be required. A detailed plan for the implementation will be required by Change Management. We will have to determine the resource required to execute the changes, and how these resources are going to be provided. There will be financial costs associated with the above. |
| SSE Energy Supply Ltd | Yes | There will be a number of impacts to our customer system and relevant documented processes. A combination of our lack of support for the alternative solution and its level of detail mean we have not fully assessed the impacts of the alternative, however from an operational business perspective we are of the view the alternative would be a more complex and less efficient process than the proposed solution. |
| TMA Data Management Ltd | Yes | Our systems and processes are impacted by P302, the level of activity is similar between the proposed P302 and its alternatives in terms of development, testing and training. |
| Electricity North West Limited | Yes | As a Distributor we receive and process the D0086, therefore the proposed solution would mean we process a closing D0086 and an opening D0086. Receiving two D0086 will add complexities to the process with no benefit for Distributors. |
| IMServ Europe Ltd | Yes | Significant changes to NHHDC systems to accept the new D0155s, to send D0086s to different parties, to know when and when not to expect D0170 / D0152 / D0010 flows to be sent / received – and all associated documentation updates and staff training |

| Respondent | Response | Rationale |
|-----------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Opus Energy Ltd | Yes | System, process and training changes will be required. |
| EDF Energy | Yes | <p>P302 will impact EDF Energy in a number of ways.</p> <p>Changes will need to be made to our Supplier, NHHMOA and NHHDC systems as a result of the implementation of P302. We will also need to ensure that these system changes are robustly tested.</p> <p>Updates will need to be made to internal process documentation to reflect the changes to the process, and we will need to ensure that the relevant teams have received training. As the legacy processes will stay in place until the end of the smart metering rollout and use of the P302 process will increase over time, this will be a continual process through to the end of the smart metering rollout rather than a “big bang” cutover to the new processes.</p> <p>Should the alternative solution be progressed the impacts would broadly be the same. The system impacts would be slightly different for our Supplier systems but the changes required for our NHHMOA and NHHDC systems should be the same.</p> |
| Scottish Power | Yes | <p>If implemented P302 will precipitate MDD changes to various flows used in Registration and CoS processes and will therefore require change to the internal processes which utilise these flows. These changes will require amendment of existing SMART blueprint processes many of which are at a significantly advanced stage and potentially the development of new processes. In addition, we will be required to retain the ability to progress the legacy CoS arrangements and switch between both CoS arrangements which obviously adds further complexity.</p> <p>As noted in the Consultation, MRA MAP08 processes will have to be adapted and therefore changes/additions and training will be required to the recognised processes used when dealing with CoS disputes. There is likely, however, to be a marked reduction in the volume of CoS Read Disputes related to DCC serviced sites and in Large EACAA Settlement Error caused by a CoS event.</p> |
| E.ON | Yes | The proposed solution would require significant changes to our Supplier and DC systems to handle both Gains and Losses. As the COS processes would |

| Respondent | Response | Rationale |
|-------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | vary dependent on whether the meter was DCC serviced or not, each affected system would need to understand this, and until all MPANs were serviced by the DCC we would effectively have two sets of COS settlement/read processes. The changes to dataflow routings between parties would need to be updated, with corresponding changes to outbound flow generation and inbound flow validation & processing. Also corresponding changes to how we trigger EAC/AA calculations. There would be inevitable changes to business process which would need to be implemented and trained out. |
| RWE Npower | Yes | <p>These changes will have a major impact on our systems and processes. The CoS process is reliant on the swift exchange of data flows and their responses. Adding variants of flows based on new logic, including rules around what response to send depending on who initiates the flow, will mean changes to our Supplier, DC & MOP systems.</p> <p>In addition, introducing a new CoS process for Smart meters will see all systems running dual CoS processes for Smart and existing traditional meters at a time of already intense change. This adds further complexity to both process and systems.</p> |
| British Gas | Yes | P302 will impact our organisation and will require numerous changes, including but not limited to system changes, business process changes, agent training, KPI and reporting surrounding CoS processes. |

Question 10: Will your organisation incur any costs in implementing P302?

Summary

| Yes | No | Neutral/No Comment | Other |
|-----|----|--------------------|-------|
| 11 | 0 | 0 | 0 |

Responses

| Respondent | Response | Rationale |
|--------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | Yes | <p>Yes. At the present time it is not possible to quantify the costs but would include the following.</p> <p>One-off - System changes so that current (legacy) CoS process is not automatically triggered on receipt of a D0155 appointment (check if DCC serviced mpan).</p> <p>Switch on Legacy CoS process when receiving second D0155 and the DCC serviced flag is off.</p> <p>Update appropriate process maps. Training of staff.</p> |
| SSE Energy Supply Ltd | Yes | There would be upfront costs to make changes to our customer system, process documents and training, where required. There would be ongoing costs in managing both the proposed and legacy solutions across the smart rollout periods and beyond, depending upon ongoing/ intermittent network and communications issues. |
| TMA Data Management Ltd | Yes | The cost of P302 implementation is likely to be medium. |
| Electricity North West Limited | Yes | We expect the implementation of P302 would have a medium impact on us from a cost perspective. |
| IMServ Europe Ltd | Yes | Mainly one off costs of system specification development, test and implement – and associated documentation and training – rough estimate circa 180 man days effort. On going costs may initially be higher as we run the DCC-operated and non-DCC operated in parallel, but then may well be lower as we run DCC-operated only post 2020. |
| Opus Energy Ltd | Yes | One-off system, process and training costs would be incurred. There would also be costs associated with enhancing Agent contracts. PARMs requirement for additional reporting. |
| EDF Energy | Yes | Due to internal resourcing constraints and a lack of definition of the detailed changes to be made to the |

| Respondent | Response | Rationale |
|----------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | relevant BSCPs we have only been able to take a very high level view of the costs of implementing these changes. We have also only been able to assess the system related costs; however these costs should make up the significant majority of the costs of these changes. While the costs related to process changes and training should be much lower than the system costs, as noted above these costs would be ongoing as the new processes would be rolled out to our staff progressively in line with the smart metering rollout. |
| Scottish Power | Yes | <p>ScottishPower operates as a Supplier, NHHDC and MOP and as such will require IT changes to identify smart meters that are operated via the DCC, significant amendments to its existing industry processes within the supplier and NHHDC systems, and wider changes to the business processes for first bill production, final bill production, and agreed readings.</p> <p>The cost of implementing these changes should not be impacted by the choice to implement P302 within a normal BSC system release or as an extraordinary release, provided there is some flexibility regarding the timing of any industry testing required, to fit with ScottishPower's existing IT development plans.</p> |
| E.ON | Yes | We have been unable to fully cost the implementation of P302 due to the size of the change required and its consequential impact on associated systems and processing. It will require a full project to implement and is likely to be of medium/large size. Its impact and costs will be significant. |
| RWE Npower | Yes | <p>Significant costs will be incurred by npower as a result of implementing this Mod. These costs are not quantified as we have been unable to perform a detailed Impact Assessment. However it is clear that changes to DC, MOP and Supplier systems will be required to implement this change.</p> <p>The workgroup need to be mindful of the likely need to re-qualify after such a material change, this will add cost and time to the implementation. This could have a bearing on how quickly the change is implemented in the industry .</p> |
| British Gas | Yes | We do not have the full answer to this question but there would be a cost for developing new processes / amendments to existing flows / new data items |

| Respondent | Response | Rationale |
|------------|----------|----------------------------------------------------------------------------------------------------------------------------------|
| | | and mandating of D0311 if this is approved – we would need to assess cost once the change has been grounded and formally raised. |

Question 11: How long (from the point of Ofgem approval) would you need to implement P302?

Responses

| Respondent | Response |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | We would look for a period of a year following Ofgem approval to implement P302. This implementation could be outside a normal BSC Systems Release without major inconvenience. |
| SSE Energy Supply Ltd | A 12-18 month lead time would be appropriate for this change. This will impact our main customer systems and as such a timescale any less than 12 months would not be achievable. |
| TMA Data Management Ltd | The lead time of 12 months listed in the P302 APC document is sufficient for us to carry out the necessary system updates, testing, training and procedure updates. |
| Electricity North West Limited | The proposed implementation date of February 2016. |
| IMServ Europe Ltd | We would require a minimum of 6 months to undertake these system changes, irrespective of what type of Release plus 3 months lead time. |
| Opus Energy Ltd | Minimum of 12 months lead time. |
| EDF Energy | <p>We believe that we would need at least 12 months from the point that the changes are approved in order to be able to implement the changes. The key drivers for these timescales are the level of system changes required, and the need to robustly test those changes prior to implementation.</p> <p>Suppliers are already under a lot of pressure on resources to achieve the timescales for DCC go-live as well as other upcoming changes (such as faster switching and Nexus); trying to fit these changes in within shorter timescales could increase costs or risk DCC delivery.</p> |
| Scottish Power | It is anticipated that at least 1 year will be required from the point of Ofgem approval to design, build and implement the system and process changes necessary to accommodate P302. |
| E.ON | <p>Again it has been difficult to assess given the scale of effort required to support P302, we are also conscious of the number of other modifications the industry has to deliver over the next few years which are putting immense pressure on our change functions.</p> <p>We believe that as an absolute minimum this change would require 12 months, but that would be based on our ability to secure resource which is tight due to other regulatory changes that have already been agreed and scheduled.</p> |
| RWE Npower | Minimum of 12 month from Authority decision. This is a complex change, with a significant amount of system impact as a time where many other system and process changes are being implemented |

| Respondent | Response |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | <p>across our business. We would expect the change to be delivered in an industry release, at least 12 months after authority decision.</p> <p>As above the workgroup need to be mindful of the likely need to re-qualify after such a material change, this will add cost and time to the implementation. This could have a bearing on how quickly the change is implemented across the industry.</p> |
| British Gas | We agree with the proposal to allow 12 months from Ofgem approval. |

Question 12: Do you agree with the Workgroup's recommended Implementation Date?

Summary

| Yes | No | Neutral/No Comment | Other |
|-----|----|--------------------|-------|
| 9 | 1 | 0 | 1 |

Responses

| Respondent | Response | Rationale |
|--------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | Yes | <p>We would agree with the proposed implementation of February 2016 assuming that the DCC is implemented in December 2015.</p> <p>Any solution resulting from P302 is dependent on the DCC being operational and available. We would propose a gap of several months for the DCC to bed in and resolve any start up operational issues before adding the additional requests relating to the CoS process to the DCC system. Therefore if the implementation date of the DCC goes back then the implementation of P302 should go back by a corresponding period of time.</p> |
| SSE Energy Supply Ltd | Yes | February 2016 is a sensible implementation date for P302. This date takes into account that SMETS 2 meters should be enrolled in DCC and will tie in with an implementation lead time of around 12-18 months. |
| TMA Data Management Ltd | Yes | We agree but would like to see clarity on what process would be followed if P302 implementation date falls after the DCC go live date. |
| Electricity North West Limited | Yes | This allows for parties to implement the solution. |
| IMServ Europe Ltd | Yes | This is realistically when the first DCC operated CoS events will happen and allows enough time for our implementation. |
| Opus Energy Ltd | Yes | Yes – we support the recommended 25 February 2016 implementation date because, based upon current expected dates, this would allow some months for the DCC to be up and running and for any potential initial issues to be resolved rather than implementing both simultaneously under a 'Big Bang' approach. This is assuming that DCC Initial Live Operations takes place on 1 December 2015. |
| EDF Energy | Yes | We agree with the proposed implementation date of |

| Respondent | Response | Rationale |
|----------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | the 25th February 2016 as part of the February 2016 release, as noted above we believe that we would need 12 months from Ofgem approval and that the changes should be made around 3 months after DCC go-live; the proposed implementation date meets these criteria. |
| Scottish Power | Yes | Yes, subject to agreement regarding the testing required for P302 and the associated timescales for this. |
| E.ON | No | <p>If the February 2016 release date resulted in the need of a further complex and interim solution we could not be supportive of a post DCC implementation. However, we do not believe that an interim solution would be required. The DCC could be introduced to the current arrangements and whilst that may not fully maximise the benefits of the smart framework, it would improve the speed and quality of data and not be of detriment.</p> <p>We believe that a decision on P302 should be deferred until more of the DCC arrangements are defined to minimise the risk of implementing a solution which may need amending early in its introduction.</p> |
| RWE Npower | Yes | See above [response to Q11] |
| British Gas | Other | P302 implementation in Feb 2016 is only 3 months after DCC go live (Dec 2015). This means that if any problems are identified with DCC then there could be a risk to data / processes / customers by deploying P302. A lot of assumptions have been made about minimum performance levels of 99% for read collection. This is good in principle but may not be the case on day 1 of implementation and it is this performance level that will make DCC CoS a success or a risk (as we would have to enact legacy CoS more frequently). |

Question 13: Do you have any further comments on P302?

Summary

| Yes | No |
|-----|----|
| 9 | 2 |

Responses

| Respondent | Response | Comments |
|--------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Siemens Operational Services | No | - |
| SSE Energy Supply Ltd | Yes | <p>(1) We are seeking clarification on whether the DC will solely use the cumulative read for validation. Could the work group please advise?</p> <p>(2) We are minded to consider the disputed reads process may fall away once smart metering has sufficiently bedded in. The process could be retained in instances where a meter cannot exist in smart mode, but where this is not the case we would expect the accuracy and use of the smart readings to negate most requirements for the disputed reading process to exist.</p> |
| TMA Data Management Ltd | No | - |
| Electricity North West Limited | Yes | Distributors do not need to receive the closing and opening read D0086, we believe Distributors only require the opening D0086 from the New Supplier. |
| IMServ Europe Ltd | Yes | How does the New Supplier provide the Daily Read Log it has retrieved to the Old Supplier if this is necessary? This is a sort of D0311 in reverse. |
| Opus Energy Ltd | Yes | <p>What considerations are there regarding speeding up the Change of Supplier read process for SMETS1 and AMR meters?</p> <p>Currently, the key reason for lack of receipt of D0086 reads by SSD+8 is due to Meter Technical Details not being received from the Meter Operator. What considerations are there for bringing this SLA into line if a SMET2 meter needs to go down the dumb Change of Supplier route?</p> |
| EDF Energy | Yes | We believe that changes should be made to the CoS reading process to take advantage of the new functionality available through smart meters. As discussed in the Issue 53 group meetings the |

| Respondent | Response | Comments |
|----------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | <p>current process will actually involve more data transfer between agents and will be more likely to fail for smart meters, we therefore need to be taking some action to ensure that we have a process that is fit for purpose, which is why we raised P302.</p> <p>Following the discussions at the working group our main concern is about to make sure that the readings that are used for settlement and for customer billing are taken at the right time and ensure that settlement is accurate and doesn't create any gaps or overlaps. The issues related to the timing of the configuration of the meter and to the use of UTC and local time may mean that the alternate solution proposed might enable this process to be simpler and more accurate, and is worth further detailed consideration.</p> |
| Scottish Power | Yes | <p>At the Issue 53 meetings DECC were asked to confirm whether both old and new Suppliers would be able to access the CoS read at 00:00. DECC stated in response that this was indeed the case.</p> <p>However, it is our understanding from discussion within SEC workgroups that the losing and gaining supplier cannot access the same reading from the daily read log:</p> <ul style="list-style-type: none"> • The daily read log records readings at 00:00. • The latest reading available to the losing supplier from the daily read log will be taken at 00:00 on the Supply End Date (SED). • The first reading available to the gaining supplier from the daily read log will be taken at 00:00 on the Supply Start Date (SED+1 day) • The losing supplier can mitigate the impact of this by scheduling the retrieval of an instantaneous register reading on the evening of the SED. • The decision to trigger an agreed reading where there is a gap or overlap between the CoS readings should be based on a tolerance. <p>We would welcome further clarification on this issue (perhaps from the DCC) as there appears to be mixed messages between the various Industry</p> |

| Respondent | Response | Comments |
|-------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | forums. |
| E.ON | Yes | <p>We understand the drivers for this change but feel that it is still too early to fully appreciate what it is that this proposal is trying to support. The DCC is not yet fully defined and small changes to our current understanding could result in alterations to o the P302 proposal.</p> <p>Areas which we would like clarity or believe more analysis is required are</p> <ul style="list-style-type: none"> • How meters which move between DCC serviced and non DCC due to differing obligations on suppliers are handled • What the communication method is between new and old supplier in the event that the new supplier successfully retrieves the daily log and the old supplier did not • More work is required on understanding process assurance as the resulting requirement may have significant impact on our systems and processes <p>Responsibilities and timescales are not firm which may result in issues with parties interpreting the processes differently.</p> |
| RWE Npower | Yes | <p>Currently we have no further comments. We do however feel a process walkthrough of the meter reading journey is crucial to enabling a full and detailed picture of issues, risks, mitigation and ensure we protect settlements.</p> <p>The addition of a new CoS process for Smart meters will add complexity to BSC audit requirements.</p> |
| British Gas | Yes | <p>Does this proposal remove the steps "the New NHHDC to send the old NHHDC the D0086 (who in turn updates the Old Supplier)." From the DCC CoS process?</p> <p>Page 8 last paragraph – New process step requirement. Where D0311 is not received "New Supplier will contact old supplier". Has an enhancement of the D0170 – for Supplier to Supplier – been considered?</p> <p>Have there been any discussions on how the New Supplier could send the Old supplier the daily read log? Is this a new flow / existing process?</p> <p>There are a lot of statements in the proposal that</p> |

| Respondent | Response | Comments |
|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | mention "contact between old and new suppliers" but it does not go into any detail on the solution. It would be good to see how these processes would work as there may be the need to develop new flows and processes which could add additional costs to the industry participants. |