

ATTACHMENT A - Instruction failures on re-appointment of a Data Aggregator

Issue

Metering System EAC/AA Data (D0019) flows from a NHH Data Collector to a NHH Data Aggregator can be rejected under the following circumstances:-

- a concurrent change of Supplier and NHHDA takes place;
- on termination of appointment the outgoing NHHDA receives both an AA and an EAC from the NHHDC, where the EAC is effective from the Supply Start Date of the new Supplier's registration (i.e. the day after the de-appointment date of the NHHDA) and should have been sent to the new NHHDA only;
- no registration record is included for the new Supplier on the above D0019 flow;
- the NHHDA is re-appointed to the Metering System after an interval;
- the first D0019 received by the NHHDA on re-appointment, contains data (e.g. a Supplier Registration) that does not correspond to the data held in the NHHDA database as at the day after the effective date of the latest EAC starting before the Significant Date (i.e. the one sent erroneously in the earlier D0019).

This is illustrated in the example at the end of this attachment.

Impact

Instructions which fail as a result of superfluous EACs in previous instructions, should not normally cause subsequent D0019 flows to be rejected. It is likely that the failed instruction will be superseded when a forward EAC calculated from the change of Supplier reading is processed. However, this will present the NHHDC with problems in clearing the failed instructions.

The failed instruction can only be resolved, if the NHHDC:-

- re-sends the previous instruction without the extraneous EAC (plus all subsequent consumption data); or
- re-sends the previous instruction with the registration details associated with the extraneous EAC; or
- re-sends the failed instruction with an amended Significant Date.

The NHHDC that reported this issue, quoted approximately 3,000 rejected flows. Taking into account other NHHDCs and allowing for an increase in the number of NHHDA re-appointments, as levels of agent competition increase, there are likely to be tens of thousands of such exceptions.

Alternative Solutions

The proposed solution to this issue is to clarify the AA / EAC data to be sent by the NHH Data Collector when a meter advance spans a change of NHHDA.

A further alternative would be a change to the rules by which the NHHDA validates NH09 (NHH EAC/AA and MS Details) instructions. However, this would be a departure from the current design philosophy of the NHHDA system. If consumption data is received from a NHHDC that relates to a period for which the NHHDA is not appointed, any subsequent data is validated in the same way as it would be had the NHHDA been appointed for this period. The rationale for this, is that the NHHDC and SMRS interfaces to the NHHDA are asynchronous, and the receipt of consumption data from the NHHDC implies that an appointment may follow.

Example

SMRS INSTRUCTION 1 - APPLIED

The NHHDA is appointed by Supplier A with effect from 2 Sep 1999.

```
ZIN|720403|NH01|9901234567890||  
ISD|19990902  
SUP|19990902|SUPA  
DAA|19990902|19990902|  
DCA|19990902|19990902|DC01  
PSS|19990902|19990902|2|0205  
MCL|19990902|19990902|A  
EST|19990902|19990902|E  
LLF|19960401|DB01|4  
GGP|19960401|_X
```

SMRS INSTRUCTION 2 - APPLIED

The NHHDA is de-appointed by Supplier A as at 26 Feb 2001, following a change of Supplier to Supplier B. Supplier B appoints a different NHHDA.

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ZIN|2292203|NH01|9901234567890||  
ISD|20010226  
DAA|19990902|19990902|20010226
```

SMRS INSTRUCTION 3 - APPLIED

The NHHDA is appointed by Supplier C at 21 Dec 2001.

```
ZIN|3157666|NH01|9901234567890||  
ISD|20011221  
SUP|20011221|SUPC  
DAA|20011221|20011221|  
DCA|20011221|20011221|DC01  
PSS|20011221|20011221|2|0205  
MCL|20011221|20011221|A  
EST|20011221|20011221|E  
LLF|19960401|DB01|4  
GGP|19960401|_X
```

DC INSTRUCTION 1 - APPLIED

The NHHDC sends an AA with an effective to date of 26 Feb 2001, which is the last day of the NHHDA's appointment. However, the NHHDC also includes the associated EAC, which has an effective date of 27 Feb 2001. This EAC does not overlap with the NHHDA's appointment. Moreover, since the EAC starts on 27 Feb 2001, the Supplier as at this date is Supplier B. There is no REG record for Supplier B in this instruction.

ZIN|20030877|NH09|9901234567890||
ISD|20010213
AAH|20010213|20010226
AAD|01273|2012.2
AAD|01274|8716.5
EAH|20010227
EAD|01273|2011.7
EAD|01274|8716.9
REG|19990902|SUPA
PSC|19960401|2|0205
IMC|19960401|A
GSP|19960401|_X
IES|19960401|E

DC INSTRUCTION 2 - FAILED

The NHHDC sends an EAC with an effective from date of 21 May 2001 and sets the Significant Date to 21 May 2001.

ZIN|24574056|NH09|9901234567890||
ISD|20010521
EAH|20010521
EAD|01273|1990.6
EAD|01274|8167.4
REG|20010227|SUPB
PSC|19960401|2|0205
IMC|19960401|A
GSP|19960401|_X
IES|19960401|E

This instruction fails with the message "Regn before Sig Date not latest on dB 27/02/2001" [Error Code NMR"].

The NHHDA system checks that, if any item in the instruction set has an Effective From Settlement Date earlier than the 'Control Date', it matches the latest data already on the database before the 'Control Date'. The 'Control Date', in this instance, is set to the day after the Effective From Settlement Date of the latest EAC which starts before the Significant Date. The Significant Date is defined by the NHHDC as 21 May 2001, so the latest EAC prior to this date is the one sent in the previous instruction - i.e. the EAC effective from the 27 Feb 2001. The NHHDA system sets the 'Control Date' to one day after the effective date of the EAC i.e. 28 Feb 2001.

It is thus the EAC in the previous NH09 instruction (DC Instruction 1) that causes DC Instruction 2 to fail.

The instruction fails because:-

- the effective from date of the Supplier registration (27 Feb 2001) is prior to both the Control Date and the Significant Date
- the Supplier registration details in the instruction (i.e. Supplier B) are not the same as those already held on the database before 28 Feb 2001 (i.e. Supplier A).

If the superfluous EAC had not been included in DC Instruction 1, the Control Date would have been set to the day after the effective to date of the Annualised Advance - i.e. 27 Feb 2001. As the effective from date of the Supplier registration (also 27 Feb 2001) is not prior to the Control Date, the instruction would not have been rejected.

If an additional REG record had been included in DC Instruction 1:-

REG | 19990902 | SUPA

REG | 20010227 | SUPB

the instruction would have been applied. However, the DC should not be providing the old DA with the identity of a Supplier with which the old DA has no contractual relationship, so this remains a theoretical, rather than practical, solution to the issue.

If the Significant Date in DC Instruction 2 had been set to 27 Feb 2001 (the date of the Supplier Registration), the instruction would have been applied successfully. This is because, although the effective date of the registration is prior to the Control Date, it wouldn't be prior to the Significant Date (it would be equal to the Significant Date). However, setting the Significant Date in DC Instruction 2 to the effective from date of the EAC (21 May 2001) is entirely consistent with the NHH Instruction Processing Specification, so this is again a theoretical solution to the issue.

DC INSTRUCTION 3 - APPLIED

The NHHDC sends an EAC with an effective from date of 21 Dec 2001 and sets the Significant Date to 21 Dec 2001. This is the EAC calculated from the CoS reading on change of Supplier from SUPB to SUPC. The instruction is applied to the NHHDA database, superseding DC Instruction 2, but leaving the NHHDC and NHHDA with a Failed Instruction (D0023) to address.

ZIN|24607994|NH09|9901234567890||

ISD|20011221

EAH|20011221

EAD|01273|1989.5

EAD|01274|8167.1

REG|20011221|SUPC

PSC|19960401|2|0205

IMC|19960401|A

GSP|19960401|_X

IES|19960401|E