Public

ASR Frequency Response System Set-up for Ancillary Service Provider (DM/DR/DC)_v2.0

NESO
National Energy System Operator

Public

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Document History

Version	Date	Comment/Changes
1.0	13/01/2022	Business Logic for ASR Frequency Response Products – (DM/DR/DC)
1.1	15/02/2022	Removal of Gate Closure rules and allowing the Service Providers to submit Availability per 30-minute settlement period of the window for DM/DR/DC.
1.2	03/03/2022	Added Error code for Availability MW validation
1.3	13/07/2022	Added PN Service, PN Confirmation, Heartbeat Service, Heartbeat NAck, Disarm/ARM Instruction Service and Disarm/ARM Instruction Confirmation Service Updated Error code AS_Error31 definition for Availability Service.
1.4	26/09/2022	Updated definition for PN_Error01 for Physical Notification Service Deprecated PN_Error03 for Physical Notification Service
1.5	18/10/2022	Deprecated the error codes for Physical Notification service PN_Error99 and PN_Error10
1.6	16/01/2023	Added new Error code PN_Error13 under Physical Notification Service
1.7	17/09/2023	Added a point in PN redeclaration validation rule
1.8	19/06/2024	Updated AS_Error31 definition for Availability Service.
2.0	28/08/2025	**Document for OBP Integration only. ASDP integration remains on 1.8 (above)** Changes for File level validation rejections (Availability and PN), Error codes (PN and Heartbeat), Service Type change (Heartbeat and Heartbeat NAck), new error code for service provider unit ownership.

1. Introduction

The Open Balancing Platform (OBP) is a flexible dispatch platform, capable of sending and receiving data, such as provider availability submissions and dispatch notifications for multiple services and unit types. This document will focus on the addition of Non-BM Ancillary Service Reforms (ASR) Frequency Response products namely, Dynamic Moderation (DM), Dynamic Regulation (DR) and Dynamic Containment (DC). For Service Providers to communicate with NESO for these services, they are required to develop the appropriate web services as per the web service specifications v4.

This document explains the Business Rules Service Providers should implement, including the initial set up of the system and the exception rules for the service.

1.1. Scope

This document applies to non-BM providers only and covers the business rules and exceptions that Dynamic Response (DM/DR/DC) service providers must implement.

1.2. Changes for Existing Providers on ASDP

As part of the implementation of OBP, existing Dynamic Response providers and units integrated with the Ancillary Service Dispatch Platform (ASDP), also known as Platform for Ancillary Services (PAS), will need transition to OBP.

Whilst the drive was to minimise impacts to existing providers, there has been some changes necessitated as part of the new OBP solution to realise the full benefits of a flexible dispatch platform. The changes are summarised in the table below, and where applicable highlighted in **blue** in the main body of the document.

Change	Details	Applicable Messages
Domain Name Change	Webservice schema URL domain name modified to reflect new NESO organisation	All Message Types
File Level Validation Rejection	Current window level rejection rules will be changed to file level rejection - if one window has validation errors, the whole file will be rejected, not just that window Aligns to EDT/EDL BM and NBM Reserve submissions	PN, Availability
Unit Error Codes	For unit level messages, error codes used in ASDP will be replaced by error codes used in OBP for NBM unit	PN, Heartbeat

Change	Details	Applicable Messages
	messages. All other NBM Dynamic Response service specific error codes will remain unchanged	
Validation for Service Provider Unit ownership	If a unit submission is received from a Service Provider who is not "registered owner" in SMP for that unit, NESO will reject that submission. This covers scenarios where a unit ownership has been transferred from one service provider to another	All Message Types
Ignore Service Type	Service Type is ignored for unit level messages	Heartbeat

2. Initial System Set-up Business Rules

Once a provider and unit have pre-qualified for a specific service, NESO will enter the relevant data into the Open Balancing Platform (OBP) system. Each web service URL will be tagged against a Unit ID to facilitate dynamic routing by NESO.

The Unit ID will be agreed between NESO and Provider. This will act as an identifier for which unit or aggregation of units the messages will pertain to. All prequalified Response contracts map to DMH/DML, DRH/DRL, DCH/DCL Service Types in the webservices.

3. Web Services Business Rules and Exceptions

3.1. General business rules and exceptions

In all the web services and for all the data tags, the data should be trimmed and should be without any spaces before or after the data. For example, NESO would expect 'DMH' instead of 'DMH ' or ' DMH' in the service type.

The web service will not be accepted if mandatory tags are not supplied. If optional tags are supplied blank, OBP will replace with 'NULL' value. This is applicable for all the optional fields. The NESO preference is that for the Service Provider excludes the optional tags completely from the xml unless mentioned in this document for a particular web service.

NESO will wait for 2 minutes from OBP send time to get confirmation response back from Service Providers before the system times out.

NESO has provisioned for its systems and Service Providers' systems to be out of sync by only 1 minute. This is reflected in all the DateTimeStamp validations for all web services.

The operational day for DM, DR and DC is defined to be between 23:00 D to 23:00 D+1 local time.

The Response services will be procured via a day-ahead auction to secure firm capacity (for the next Operational Day), termed the 'Contracted Service'.

3.2. Web Service Versioning

To assist with onboarding response, we have introduced a web service version. The web service version for Response Services is **Version 4**. Any changes will be communicated by updating the web specification and this business logic document as appropriate. Pre-qualified providers will be notified by email of any new documentation.

3.3. Availability Service

This web service is used for declaration and redeclaration of a unit's availability MW. Declarations and any re-declarations from Service Providers should be submitted for any given settlement period. NESO will reject any (re)declarations which are sent past current settlement period end datetime.

Provider are required to redeclare the availability per 30-minute settlement period granularity.

A unit will be deemed fully available for its contracted position once OBP has received the contracts data.

A change in the availability can be submitted only after a contract is awarded by NESO. This is expected to be by D 16:00 hrs every day for the next operational day starting at D 23:00 to D+1 23:00 local time.

Availability can be redeclared (0 MW or Contracted MW) any time after D 16:00 hrs for the next operational day per 30-minute settlement period granularity of the window.

The following fields are required to be populated by Service Providers in the xml payload. ServiceType, UnitID, AUI, StartDateTime, EndDateTime, BreakPoint, OfferBid_Number (always 1), and DateTimeStamp in the xml. No other details should be provided, refer to the sample payloads in Appendix section of the web service specification v4.

AUI should be unique for every declaration or redeclaration sent by Service Providers and should follow the logic mentioned in the web service specification.

Note - Service Provider should send the redeclarations only by exceptions.

Post Tender Declarations/Redeclarations:

Service Providers may send a change in availability declarations for a Non-BM Dynamic Response unit after the contract is awarded and loaded into OBP system.

- Availability declarations for a particular operational day must be submitted from

Service Providers only after the contract is awarded by NESO.

- Window timings are defined as per the contract tendered for the unit and an availability should be submitted on a 30-minute settlement period granularity within the window.
- A declaration/redeclaration should contain only BreakPoint value 0MW or Contracted MW for OfferBid_Number 1 in the payload.
- The EndDateTime of any declaration/redeclaration must not be in the past for all contracts. i.e., No settlement period in the past should be redeclared.

As mentioned in the Web Service V4, Service Providers can submit multiple availability declarations and/or re-declaration per settlement period for a single operational day within the same xml.

Following are the exceptions and the appropriate error responses that would be expected when the xml is sent by Service Provider to NESO.

XSD Rejections (Complete file):

1. If ServiceType is missing in the xml, NESO rejects it via XSD validation with an appropriate error message.
2. If UnitID is missing in the xml, NESO rejects it via XSD validation with an appropriate error message.
3. If StartDateTime is missing in the xml, NESO rejects it via XSD validation with an appropriate error message.
4. If EndDateTime is missing in the xml, NESO rejects it via XSD validation with appropriate error message.
5. If DateTimeStamp is missing in the xml, NESO rejects it via via XSD validation with an appropriate error message.
6. If ServiceType is not from the list of acceptable values and/or not matching with the contracted service type of the unit in the OBP application, NESO rejects the same with a message as 'Invalid Service Type'.

File Level Rejections (Complete file):

1. If the absolute difference between Service Provider DateTimeStamp and NESOs current system time (in UTC) is greater than one minute, NESO will send availability confirmation rejection with the error code 'AS_Error9'.
2. If the UnitID value differs to what has been set up in OBP application (or NULL value in the tag), does not exist in the OBP application, NESO will send availability confirmation rejection with the error code 'AS_Error33'.
3. If the Unit Id value does not belong to the corresponding service provider, NESO will send an availability confirmation rejection with the error code error code 'AS_Error34'.

Window level validations (Complete file rejection, window level errors):

1. If StartDateTime and EndDateTime is not matching to the 30-minute settlement period, NESO will send window validation as INVALID with the WindowReason 'AS_Error3'
2. If EndDateTime is in the past, NESO will send window validation as INVALID with the WindowReason 'AS_Error4'.
3. If StartDateTime and EndDateTime is outside of Service term (Unit pre-qualified activation end date), NESO will send window validation as INVALID with the WindowReason 'AS_Error24'
4. If OfferBid_Number is not 1 or is Null for the window, NESO will send window validation as INVALID with the WindowReason 'AS_Error25'.
5. If the BreakPoint value for OfferBid_Number 1 (MW values) is not 0 or Contracted MW, NESO will send availability confirmation rejection with the WindowReason 'AS_Error31'.
6. If more than one OfferBid array or OfferBid_Number is provided for a single AvailabilityWindow array in a file NESO will send window validation as INVALID for the affected windows with the WindowReason 'AS_Error26'
7. If there is a repetition / duplicate of StartDateTime and EndDateTime across two or more AvailabilityWindow arrays in a single file, NESO will send window validation as INVALID for the affected windows with the WindowReason 'AS_Error27'.
8. If the OfferBid Number 1 does not have a BreakPoint, NESO will send window validation as INVALID with the WindowReason 'AS_Error32'.
9. In the case of an unspecified error, NESO will send window validation as INVALID with the WindowReason 'AS_Error99'.

It should be noted that the multiple error codes have a limit of 200 characters. In the case of error codes exceeding 200 characters, the reasons will be trimmed to 200 characters

3.4. Availability Confirmation Service

This web service is primarily used to validate the declaration / re-declaration data submitted by Service Providers.

There are two levels of data validation done by NESO – one at file level and the other at a window level.

If any of the exceptions mentioned in the above section occur for File level rejection, the availability confirmation will be marked as 'REJECTED' with appropriate reason code as mentioned in the above section in the FileReason tag. If the confirmation is marked as 'REJECTED' all settlement periods should be considered as rejected for the availability file submission.

For window level rejections the whole file will also be rejected for all windows however, the response from NESO will contain the window level information to identify which submissions are invalid. The file should be identified by the AUI which will correspond to the AUI which is sent in availability web service. If the file is rejected for window level validations the confirmation message will not contain the file reason.

The Service Provider is expected to resend the entire request payload if the Confirmation is "REJECTED" by NESO.

Availability confirmation will only be marked as 'ACCEPTED' if all the windows in the request are 'VALID'.

Following are the exceptions and the appropriate error responses that would be expected when the xml is sent by Service Provider to NESO:

XSD Rejections:

1. If ServiceType is not from the list or missing, NESO expects Service Provider to send XSD validation failure.
2. If UnitID is missing or not valid, NESO expects Service Provider to send XSD validation failure.
3. If UnitID is not valid, NESO expects Service Provider to send XSD validation failure with appropriate message.
4. If either StartDateTime or EndDateTime is missing, NESO expects Service Provider to send XSD validation failure with appropriate message.
5. If DateTimeStamp is missing, NESO expects Service Provider to send XSD validation failure with appropriate message.
6. If Confirmation is not from the list or missing, NESO expects Service Provider to send XSD validation failure with appropriate message.
7. If Validation is not from the list or missing, NESO expects Service Provider to send XSD validation failure with appropriate message.

Other Rejections :

1. If StartDateTime and EndDateTime is different to the window provided by Service Provider in Availability request, NESO expects Service Provider to send an error with a message 'Invalid StartDateTime and EndDateTime'.
2. If File or Window Reason is different to the rejection codes mentioned in the above section, NESO expects Service Provider to an error with a message 'Invalid Reason in File or Window'.

Using availability confirmation web service, NESO can send error codes for different windows in a single availability confirmation xml. NESO can also send multiple error codes for a single availability window. These error codes will be separated by semicolons.

3.5. DISARM/ARM Service

This service which is also referred as Availability Nomination Service in Web Specification Document, is used to send the DISARM and ARM instruction request for DM/DR/DC units by NESO to Service Provider.

The NUI is used for both DISARM and ARM instruction. At any point in time, there will be only one active NUI per Unit ID per service. A unit per service is by default considered as armed by NESO for its activation period unless the unit is instructed (or has been previously instructed) to DISARM.

The instruction request will be sent by NESO per Unit ID and Service to Service Provider as per Web Specification- Availability Nomination V4 service.

Nomination disarm instruction will have 'DISARM', and ARM instruction will have 'ARM' in the Nomination tag.

NESO will send the current DateTimeStamp (Now time) and StartDateTime in the DISARM/ARM instruction request to Service Provider. The StartDateTime will always be 2 minutes after the current DateTimeStamp time in xml request being sent to Service Provider. Please note additional 2mins in StartDateTime is added to generalise the response from all Service Providers.

For example, if NESO sends a DISARM/ARM instruction for a unit to Service Provider at 10:30, the instruction request would have a StartDateTime of 10:32.

XSD Rejections for Service Providers:

1. If ServiceType is not from the list or is missing, NESO expects the Service Provider to throw an XSD validation error.
2. If UnitID is missing, NESO expects the Service Provider to throw XSD validation failure.
3. If NUI is missing, NESO expects the Service Provider to throw XSD validation failure.
4. If value of the Instruction tag is different to that of XSD or missing, NESO expects the

Service Provider to throw XSD validation failure.

5. If DateTimeStamp is missing in the xml, NESO expects the Service Provider to throw XSD validation failure.

Error Code Responses from Service Providers:

1. UnitID is not valid, NESO expects Service Provider to send confirmation response with a FileReason error code 'NS_Error1'.
2. If UnitID is not mapped to the appropriate ServiceType (ServiceType that the unit is contracted to deliver during the time period of the request), NESO expects Service Provider to send confirmation response with a FileReason error code 'NS_Error2'
3. If the absolute difference between NESO DateTimeStamp and Service provider's current system time (in UTC) is greater than 1 min, NESO expects Service Provider to send confirmation response with a FileReason error code 'NS_Error3'.
4. If StartDateTime is in the past or incorrect, NESO expects Service Provider to send Confirmation tag as REJECTED with a Reason error code 'NS_Error4'
5. If there is an unspecified error in the Arm/Disarm, NESO expects Service Provider to send confirmation response with a FileReason error code 'NS_Error99'.

3.6. DISARM/ARM Confirmation Service

This service which is also referred as Availability Nomination Confirmation Service in Web Specification Document, is used by Service Provider to confirm the DISARM/ARM request sent by NESO for DMH/L, DR H/L, DC H/L services.

Service Providers can only reject a request in case of an error in the request sent by NESO.

If NESO do not get a confirmation (after receiving a 200 ok response to the Disram instruction that has been sent by NESO) 2 minutes from the **Disarm** instruction, it will be deemed that the Service Provider has rejected the DISARM request and unit will be available back to send DISARM instruction again by NESO.

If NESO do not get a confirmation (after receiving a 200 ok response to the ARM instruction that has been sent by NESO) 2 minutes from the **ARM** instruction it will be deemed that the Service Provider has rejected the ARM request and unit will be available back to send ARM instruction again by NESO.

XSD Rejections from NESO:

1. If ServiceType is not from the list or missing/null in the xml, NESO rejects the same via XSD validation with appropriate error message.

2. If Unit ID is missing/null in the xml, NESO rejects the same via XSD validation with appropriate error message.
3. If NUI is missing in the xml, NESO rejects the same via XSD validation with error message.
4. If Confirmation is not from the list (ACCEPTED or REJECTED) or missing value, NESO will reject the same via XSD validation and Service Provider should be getting a 500 Internal Server Error response back. The response will also provide the details of the error.
5. If DateTimeStamp is missing in the xml, NESO rejects the same via XSD validation with appropriate error message.

Other Rejections from NESO:

1. If Unit ID is not matching to the Disarm/ARM request payload sent be NESO, NESO rejects the same via XSD validation with a message 'Invalid UnitID' in the response.
2. If NUI is not matching to the request payload NESO has sent, NESO will reject the confirmation with a message 'Invalid NUI' in the response.
3. If StartDateTime is in the past (SLA breach), NESO will reject the confirmation with a message 'SLA Breach' in the response.
4. If StartDateTime does not match the values NESO has sent, NESO will reject the confirmation with a message 'Invalid StartDateTime' in response.
5. If the absolute difference between Service Provider DateTimeStamp and NESO's current system (in UTC) is greater than 1 min, NESO rejects the same via XSD validation with a message 'Invalid DateTimeStamp in the response.

Note: If Disarm / Arm confirmation is received after defined SLA, NESO will reject the confirmation with a message 'SLA breach' in the response.

3.7. Heartbeat Service (Connection Indicator)

Service Providers will use this service to send the heartbeat signal to NESO.

NESO expects to get heartbeat signal for each unit every 5 minutes.

NESO expects the heartbeat signal from the provider for an operational day where they are providing any service contractually within that operational day.

Heartbeat service is at Unit level, hence NESO does not expect to get service type as part of the Heartbeat request and if received, it will be ignored. The only required fields for all Reserve units are; **UnitID, DateTimeStamp**, all other fields should not be submitted.

As this API service is used by NESO to gauge the heartbeat of Service Provider's comms, we would consider the unit to be unavailable if unit missed 2 consecutive Heartbeat signals.

If NESO does not receive any Heartbeat signal in the last 10 minutes, when one is expected, a Heartbeat NAck (Negative Acknowledgement) would be sent with an error code 'OHB_Error1'.

Until the point NESO gets a heartbeat signal back, the unit will be unavailable for electronic instructions (Disarm/Arm).

Note- NESO expects Heartbeat signals from only those units which are successfully pre-qualified. Heartbeat is at unit level so if lost all services for the unit will be considered unavailable for electronic instructions.

The other exceptions are handled as follows.

XSD Rejections:

1. If UnitID is missing/null, NESO rejects the same via XSD validation and Service Provider should be getting a 500 Internal Server Error Response. The response will also provide the details of the error.
2. If DateTimeStamp is missing/null, NESO Middleware rejects the same via XSD validation and Service Provider should be getting a 500 Internal Server Error response back. The response will also provide the details of the error.

Other Rejections:

1. If UnitID does not exist in OBP application, NESO will reject the Heartbeat signal with appropriate error message in synchronous response.
2. If the absolute time difference between Service Provider DateTimeStamp and NESO's current system time (in UTC) is greater than 1 min, NESO will reject the Heartbeat signal with appropriate error message in synchronous response.
3. If the Unit Id value does not belong to the corresponding service provider, NESO will send rejection synchronously with appropriate error message.

3.8. Heartbeat Negative Acknowledgement Service

Heartbeat Negative Acknowledgement (NAck) is a message to communicate that NESO has not received the heartbeat signal for the last 10 minutes for that unit or there is some issue with the unit's Heartbeat that has been sent. The unit will be considered unavailable until the heartbeat signal is resumed.

Heartbeat NAck is also at unit level and no service type will be included in NAck message to provider.

Exceptions:

1. If UnitID is missing, NESO expects Service Provider to throw 500 Internal Server Error as XSD validation failure.
2. If UnitID is not valid, NESO expects Service Provider to send a non 200 http status code back with a message 'Invalid UnitID'
3. If StartDateTime or EndDateTime is missing, NESO expects Service Provider to throw 500 Internal Server Error as XSD validation failure.
4. If ErrorCode not in the list as mentioned in the previous section, NESO expects Service Provider to send a non 200 http status code back with a message 'Invalid ErrorCode'
5. If DateTimeStamp is missing, NESO expects Service Provider to throw 500 Internal Server Error as XSD validation failure.
6. If the absolute difference between NESO DateTimeStamp and Service Provider's current system time (in UTC) is greater than 1 min, NESO expects Service Provider to send a non 200 http status code back with a message 'Invalid DateTimeStamp'.

3.9. Physical Notification Service

This service will be implemented by NESO to receive the Physical Notification data from Service Providers.

- Service Provider can send the PNs data, after the unit is pre-qualified.
- Service Provider must send the PNs for the period when the unit is contracted.
- Units should submit PNs even if not contractual for the whole operational day(s), with this being the NESO preference.
- Service Provider must send the PN data at Unit level and once the PN is received for a Unit, the same PN would be applicable for all the active services of the Unit.
- The expected time format for all the date time fields is UTC.
- Service Providers should send the StartDateTime and EndDateTime for PN at a minute level..
- PNs data would be accepted for current as well as future 5 operational days. The Service Provider can submit multiple PN declarations and/or re-declaration for a Unit for an operational day within the same request xml.
- If a provider fails to update PNs for the following (D+1) operational day by 18:30, NESO will use a default PN of 0 for any unsubmitted PNs for any periods in the following (D+1) operational day.

- Service Providers can update PNs as more accurate information becomes available up to gate closure (60 mins) before the start of a settlement period.
- Service Provider to ensure at least 1-minute time gap between the submission of a PN redeclaration and a subsequent update for the same Settlement Period.
- PNs should cover the complete half hour settlement period in the same request payload.
  e.g.

UnitID	Start TIME	End Time	Start MW	END MW
Unit-1	10:00	10:30	5	20
Unit-1	14:00	14:20	10	20
Unit-1	14:20	14:30	20	10

- The following fields are required to be populated by Service Providers in the xml payload. UnitID, PUI, StartDateTime, EndDateTime, PN_Start_MW, PN_End_MW and DateTimeStamp in the xml. No other details should be provided, refer the latest web service specification v4 document.

XSD Rejections:

1. If UnitID is missing/null in the xml, NESO rejects the same via XSD validation and will also provide the details of the error.
2. If PUI is missing/null/invalid (not 20 chars) in the xml, NESO rejects the same XSD validation and will also provide the details of the error.
3. If StartDateTime is missing in the xml, NESO rejects the same via XSD validation and will also provide the details of the error.
4. If EndDateTime is missing in the xml, NESO rejects the same via XSD validation and will also provide the details of the error.
5. If PN_Start_MW is missing in the xml, NESO rejects the same via XSD validation and will also provide the details of the error.
6. If PN_End_MW is missing in the xml, NESO rejects the same via XSD validation and will also provide the details of the error.
7. If DateTimeStamp is missing in the xml, NESO rejects the same via XSD validation and will also provide the details of the error.

File Level Rejections (Complete file)

1. If the UnitID does not exist in OBP application, or unit is expired (not within Unit's activation period), NESO will send confirmation rejection with the FileReason 'OPN_Error1'.

2. If the Unit Id value does not belongs to the corresponding service provider, NESO will send the availability confirmation rejection with appropriate error code 'OPN_Error2'.
3. If the absolute difference between Service Provider DateTimeStamp and NESOs current system time (in UTC) is greater than one-minute, NESO will send confirmation rejection with the FileReason 'OPN_Error3'.

If one or more windows in the request message are invalid or have failed the validations, NESO will send individual error codes for those windows as below (note the File Reason in the SOAP xml will be null):

Window Level Validations (Complete file, window level error codes):

1. If the request payload contains the data outside of future 5 operational days from the current date, NESO will send the PN Confirmation rejection with the FileReason 'OPN_Error4'.
2. If the Physical Notification "date/time from" is not earlier than its "date/time to" , NESO will send the PN Confirmation rejection with the FileReason 'OPN_Error5'.
3. If StartDateTime and EndDateTime is overlapping with other windows StartDateTime and EndDateTime in the same file, NESO will send PN Confirmation rejection with the FileReason 'OPN_Error6'.
4. If PN_Start_MW and PN_End_MW values are not within the range of -9999 MW to maximum generation capacity of the unit NESO will send PNValidation as INVALID with PNReason 'OPN_Error7'.
5. If DateTimeStamp and StartDateTime of the settlement period is less than 60mins, NESO will send PNValidation as INVALID for the affected windows with PNReason 'OPN_Error8'.
6. The submitted Physical Notification must cover the complete half hour settlement periods in addition a subset of the records must have StartDateTime fields corresponding to the start of each half hour period covered or NESO will send the PNValidation as INVALID with PNReason 'OPN_Error9'.
7. If StartDateTime and EndDateTime received are in seconds (For example: 2022-12-07 13:30:25), NESO will send the PNValidation as INVALID with PNReason 'OPN_Error10'.

3.10. Physical Notification Confirmation Service:

This service will be implemented by Service Providers to receive Confirmation for the Physical Notification from NESO.

This web service is primarily used to validate the PN data submitted by the Service Providers and to send the confirmation back. There are two levels of data validation done by NESO – one at file level (File Rejections) and the other at a window level (Window Rejections) as mentioned above.

If the file has been REJECTED at file level validation with errors – OPN_Error1, OPN_Error2, OPN_Error3, the whole file will be rejected and windows marked as invalid (without NESO validation carried out).

For window level rejections the whole file will also be rejected for all windows however , the response from NESO will contain the window level information to identify which submissions are invalid. The file should be identified by the PUI which will correspond to the PUI which is sent in Physical Notification web service. If the file is rejected for window level validations the confirmation message will not contain the file reason.

The Service Provider is expected to resend the entire request payload if the Confirmation is "REJECTED" by NESO.

Following are the exceptions and the appropriate error responses that would be expected when the xml is sent by Service Provider to NESO:

XSD Rejections:

1. If UnitID is missing, NESO expects Service Provider to throw XSD validation failure.
2. UnitID is not valid, NESO expects Service Provider to throw XSD validation failure.
3. If either StartDateTime or EndDateTime is missing when Confirmation tag is ACCEPTED, NESO expects Service Provider to throw XSD validation failure.
4. If PNValidation is not from the list or missing when Confirmation tag is ACCEPTED, NESO expects Service Provider to throw XSD validation failure.
5. If DateTimeStamp is missing, NESO expects Service Provider to throw XSD validation failure.
6. If Confirmation is not from the list or missing, NESO expects Service Provider to throw XSD validation failure.

Other Rejections:

1. If StartDateTime and EndDateTime is different to the window provided by Service Provider, NESO expects Service Provider to send rejection with a message 'Invalid StartDateTime and EndDateTime'.
2. If FileReason is different to the rejection codes mentioned in the above section, NESO expects Service Provider to send rejection with a message 'Invalid Reason in File or Window'.
3. PNReason is different to the rejection codes mentioned in the above section, NESO expects Service Provider to send rejection with a message 'Invalid Reason in File or Window'.

Using Physical Notification Confirmation web service, NESO can send error codes for different window periods in a single Physical Notification Confirmation xml. NESO can also send multiple error codes for a single window period. These error codes will be separated by semicolons.