

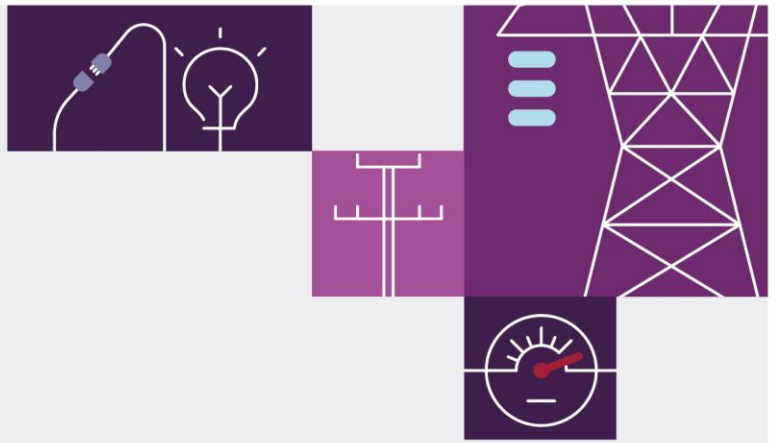
Industry Data Exchange - ~~Technical Specification~~ Basic Power Quality Data - June 2026 0.040.05 November-January 2026

Pre-production: Sunday 19 April 2026

Production: Sunday 21 June 2026

Rules effective: Monday 1 July 2026





Important notice

Purpose & audience

This document describes the technical changes required to participant's systems for the (Release). The Australian Energy Market Operator (AEMO) provides this information as a service targeting business analysts and IT staff in participant organisations. It provides guidance about the changes to their market systems under the Electricity Rules (Rules), as at the date of publication.

How to use this document

- If you have questions about the business aspects of these changes, please see Consultations on AEMO's website.
- The references listed throughout this document are primary resources and take precedence over this document.
- Unless otherwise stated, you can find resources mentioned in this guide on AEMO's website.
- **Text in this format** is a link to related information. Some links require access to MarketNet.
- **Text in this format**, indicates a reference to a document on AEMO's website.
- **Text in this format** is an action to perform in the Markets Portal.
- This document is written in plain language for easy reading. Where there is a discrepancy between the Rules and information or a term in this document, the Rules take precedence.
- Glossary Terms are capitalised and have the meanings listed against them in the Glossary.
- Rules Terms have the meaning listed against them in the [National Electricity Rules](#) (Rules).

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Distribution

Available to the public.

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Prepared by: AEMO Digital

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Version History

~~0.040.05~~ Initial creation

Documents made obsolete

The release of this document changes only the version of ~~Industry Data Exchange – Technical Specification – June 2026~~ [Industry Data Exchange – Basic Power Quality Data – June 2026](#).

Support Hub

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1 Introduction

1.1 Audience

AEMO provides this information as a service targeting business analysts and IT staff in Registered Participant companies.

The primary audiences are:

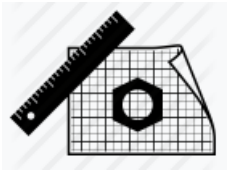
- [Local Network Service Provider \(LNSP\)](#) – Recipients of Basic Power Quality Data (BPQD).
- Metering Coordinator [\(MC\)](#) – Responsible for sending BPQD.
- Metering Data Provider [\(MDP\)s](#) – Send BPQD on behalf of the MC.

1.2 Objective

The (Release) describes the projects planned by AEMO from a participant perspective and includes any system related changes for participants.

1.3 Status

Version	Status
0.04 0.05	The Power Quality Data API design is now available for participants’ builds. AEMO anticipates design updates to the Markets Portal interfaces, access information, and API specification details including authentication mechanisms and responses
0.04	The Power Quality Data API design is now available for participants’ builds. AEMO anticipates design updates to the Markets Portal interfaces, access information, and API specification details including authentication mechanisms and responses
0.03	In progress. The design is not ready for participants’ builds
0.02	In progress. The design is not ready for participants’ builds

Version	Status
0.01	<div><p>Initial draft for review. The design is not ready for participants' builds</p><p>Presents the evolving design.</p><p>Please send feedback to Contact Us. In the Details of your enquiry section, mention the EAS Knowledge Management team as the Resolver group.</p></div>

1.4 Release dates

Scheduled for implementation in:

- Pre-production: Sunday 19 April 2026
- Production: Sunday 21 June 2026 (TBC)

1.5 Projects and enhancements

Changes and enhancements for this Release include:

No.	Functionality	Change	Affected interface	Reference
1	Power Quality Data (PQD)	New interface for managing Basic Power Quality Data (BPQD) and participant controls	Markets Portal	Markets Portal
2	PQD	API for BPQD submission and retrieval	API	Power Quality Data API
3	WebSockets	WebSockets for event notification and flow control events	IDX	Industry Data Exchange Platform Standard

1.6 Rule and procedure changes

The following rules and procedures take precedence over technical specifications and guides.

Title	Version	Effective date
National Electricity Amendment (Accelerating smart meter deployment) Rule 2024 No. 20	2025/01	Final
Guide to the role of Metering Coordinator	1.41	1 July 2026
Basic Power Quality Data Procedure	1	1 July 2026
Retail Electricity Market Procedures- Glossary and Framework	4.4	1 December 2025
Metrology Procedure: Part A	7.9	1 July 2026
Metrology Procedure: Part B	7.9	1 July 2026
B2B Procedure: Data Posting Process	4.0	1 July 2026
B2B Procedure: Customer and Site Details Notification Process	4.0	1 July 2026
B2B Procedure: Service Order Process	4.0	1 July 2026
B2B Procedure: Meter Data Process	4.0	1 July 2026
B2B Procedure: One Way Notification Process	4.0	1 July 2026
B2B Procedure: Technical Delivery Specification Process	4.0	1 July 2026

1.7 Related technical specifications

None.

1.8 Related documents

Once published, these resources take precedence over this technical specification

These guides and resources are updated according to this technical specification and published for the pre-production Release Date.

Title	Description	Status
Industry Data Exchange Platform Standard	Describes the technical standards, protocols, and payloads for data exchange on the Industry Data Exchange (IDX) platform	Draft
API portal	Information about the PQD API	Not started

Title	Description	Status
Basic Power Quality Data	Online help for managing BPQD	Not started
Retail Electricity Market Glossary and Framework	Assists Retail Electricity Market participants to understand the overall MSATS framework, NEM procedures, and procedure terms	Not started

1.9 Approval to change

No approval or agreement to change required from participant change controllers.

1.10 Market systems user group meetings

The Market Systems User Group (MSUG) is an industry user group established to discuss NEM wholesale and retail IT systems releases. Its purpose is to facilitate the continuing improvement of AEMO's IT systems by seeking feedback and collaboration from participants.

MSUG meetings are open to all interested parties, with invitations sent to all included on the distribution list. If you have a technical question for a project and want to attend the MSUG ask your company's support team to include your email address in their **AEMO Help Desk Bulletin (CRM)** distribution list.

1.11 Version numbers

AEMO releases new versions of this document as the technical requirements are streamlined.

Incremental version numbers such as 1.01, 2.01 and so on mean there is a minor change to the technical specification.

Major version numbers such as 1.00, 2.00 means there are substantial changes to the technical specification. Participants must carefully review these changes, detailed below.

1.12 Changes in this version

This version has the following changes:

- [Renames this technical specification from Industry Data Exchange – Technical Specification – June 2026 to Industry Data Exchange – Basic Power Quality Data – June 2026.](#)
- [Updates message TTL \(Time to Live\) expiry period to 10 business days.](#)

- Updates Participant Impact.
- Adds FAQs.
- ~~Revises PQD API validation.~~
- ~~Revises PQD API 400 series response codes.~~
- ~~Adds cursor based pagination information.~~
- **Power quality data openapi specification:**
 - Updates transactionID pattern attribute
 - Adds messageDateTime to expanded properties in BPQD response
 - Removes traceability-id from body or responses
 - Adds x-traceability in the response header to retrieve BPQD messages
 - Adds x-signature in the response header when retrieving BPQD messages
 - Adds x-schema-version property to the PQD schema
 - Updates query parameters
 - Adds error code examples
 - —
 - ~~Updates security scope name.~~
 - ~~Updates ResourceID descriptor to be 8 characters.~~
 - ~~Revises listMetaData schema.~~
 - ~~Revises HTTP response codes.~~

72 Proposed Timeline

The dates for the Market System User Group Meetings (MSUG) are tentative. We will provide an invitation one week prior to the meeting.

<u>Milestone</u>	<u>Date</u>	<u>Description</u>
<u>Approval required</u>	<u>n/a</u>	<u>See Approval to change</u>
<u>Revised Technical Specification</u>	<u>February 2026</u>	<p><u>AEMO releases new versions of this document as the technical requirements are streamlined.</u> <u>During the project this document is the source of truth</u></p> <p><u>From the production release, the technical specification becomes final and the related documents become the source of truth</u></p> <p><u>Technical Specification Portal</u></p>
<u>Related documents publication</u>	<u>20 April 2026</u>	<u>Release of guides and resources mentioned in Related on page 13</u>
<u>MSUG meeting</u>	<u>11 February 2026</u>	<p><u>Market Systems User Group Meeting (MSUG) to review the technical specification and ask AEMO technical SMEs questions</u></p> <p><u>This date is tentative. The Knowledge Management Team provides the invitation prior to the meeting</u></p>
<u>Pre-production refresh</u>	<u>7 April 2026 – 10 April 2026</u>	<u>Refresh of the retail pre-production system with data from the production system. For more information, see Pre-production Refresh</u>
<u>Pre-production implementation</u>	<u>Sunday 19 April 2026 (TBC)</u>	<p><u>AEMO implements components of the Release to pre-production for participant testing</u></p> <p><u>AEMO has full access to the system during this period</u></p> <p><u>Participant access is not restricted; however, the data content or system availability is not guaranteed</u></p>
<u>Pre-production available</u>	<u>Sunday 19 April 2026 (TBC)</u>	<u>Testing period begins for participants</u>
<u>Participant testing</u>	<u>20 April 2026 - 29 May 2026 (TBC)</u>	<u>Unstructured participant testing in the pre-production environment</u>
<u>Production implementation</u>	<u>19 June 2026 – Sunday 21 June 2026</u>	<u>AEMO implements the release to production</u>
<u>Production systems available</u>	<u>Sunday 21 June 2026</u>	<u>Production systems available to participants</u>

Proposed Timeline

Milestone	Date	Description
Approval required	n/a	See Approval to change
Revised Technical Specification	January 2026	<p>AEMO releases new versions of this document as the technical requirements are streamlined. During the project this document is the source of truth</p> <p>From the production release, the technical specification becomes final and the related documents become the source of truth</p> <p>Technical Specification Portal</p>
Related Documents publication	20 April 2026	Release of guides and resources mentioned in Related on page 7
MSUG meeting	10 December 2025	<p>Market Systems User Group Meeting (MSUG) to review the technical specification and ask AEMO technical SMEs questions</p> <p>This date is tentative. The Knowledge Management Team provides the invitation prior to the meeting</p>
Pre-production refresh	7 April 2026 — 10 April 2026	Refresh of the retail pre-production system with data from the production system. For more information, see Pre-production Refresh
Pre-production implementation	Sunday 19 April 2026 (TBC)	<p>AEMO implements components of the Release to pre-production for participant testing</p> <p>AEMO has full access to the system during this period</p> <p>Participant access is not restricted; however, the data content or system availability is not guaranteed</p>
Pre-production available	Sunday 19 April 2026 (TBC)	Testing period begins for participants
Participant testing	20 April 2026 — 29 May 2026 (TBC)	Unstructured participant testing in the pre-production environment
Production implementation	19 June 2026 — Sunday 21 June 2026	AEMO implements the release to production
Production systems available	Sunday 21 June 2026	Production systems available to participants

83 Participant Impact

~~To comply with this Release~~From 1 July 2026, Metering Coordinators (MCs), Metering Data Providers (MDP), and Local Network Service Providers (LNSP) need to schedule staff and resources to accommodate the delivery ~~and or~~ receipt of Basic Power Quality Data (BPQD) on the Industry Data Exchange (IDX) platform.

3.1 Industry data exchange

BPQD is the first business function on the Industry IDX platform. BPQD from smart meters are submitted by MCs and MDPs using a Fire and Forget API Channel, an asynchronous API channel that does not require formal acknowledgements. IDX queues messages for LNSPs, who retrieve them using the Power Quality Data (PQD) API.

3.2 Power quality data API

The PQD API provides endpoints for submitting, retrieving, and managing Basic Power Quality Data (BPQD) messages. See **Power Quality Data API**.

MCs and MDPs must bundle daily BPQD readings for multiple NMIs into single payloads (up to 10 MB uncompressed) and apply JSON minification to maximise efficiency. See **Submission requirements**.

3.3 IDX web interfaces

New IDX interfaces in the Markets Portal to manage and troubleshoot BPQD processes.

<u>Interface</u>	<u>Description</u>	<u>Role for BPQD</u>
<u>Transaction Log</u>	<u>Provides logs for BPQD transactions</u>	<u>LNSP</u> <u>MDP</u>
<u>Outbound Archive</u>	<u>Allows LNSPs to search, view, and retrieve archived outbound messages</u>	<u>LNSP</u>
<u>Event Subscription</u>	<u>Enables Participants to subscribe to real-time event notifications for business functions</u>	<u>LNSP</u>
<u>Flow Control</u>	<u>Enables participants to monitor and manage message flows for B2B business functions</u>	<u>LNSP</u>

<u>Interface</u>	<u>Description</u>	<u>Role for BPQD</u>
<u>Participant Status</u>	<u>Displays the current and historical operational status of all business functions and resources</u>	<u>LNSP</u> <u>MDP</u>

3.4 WebSocket API

The WebSocket API is provided by the IDX platform. It enables Participant systems to maintain a persistent, bi-directional connection to AEMO to receive instant business function event notifications.

3.5 IDX APIs

For this Release, IDX provides the following APIs:

- Flow Control - Monitors and controls message delivery across B2B Business Functions on IDX.
- Business Function - Gets Business Functions and Business Function Resources.
- Translog - Gets message and transaction logs associated with your Participant ID.
- Archive - Gets archived Business Function payloads in outbound messages for the receiving Participant.

3.6 User rights management

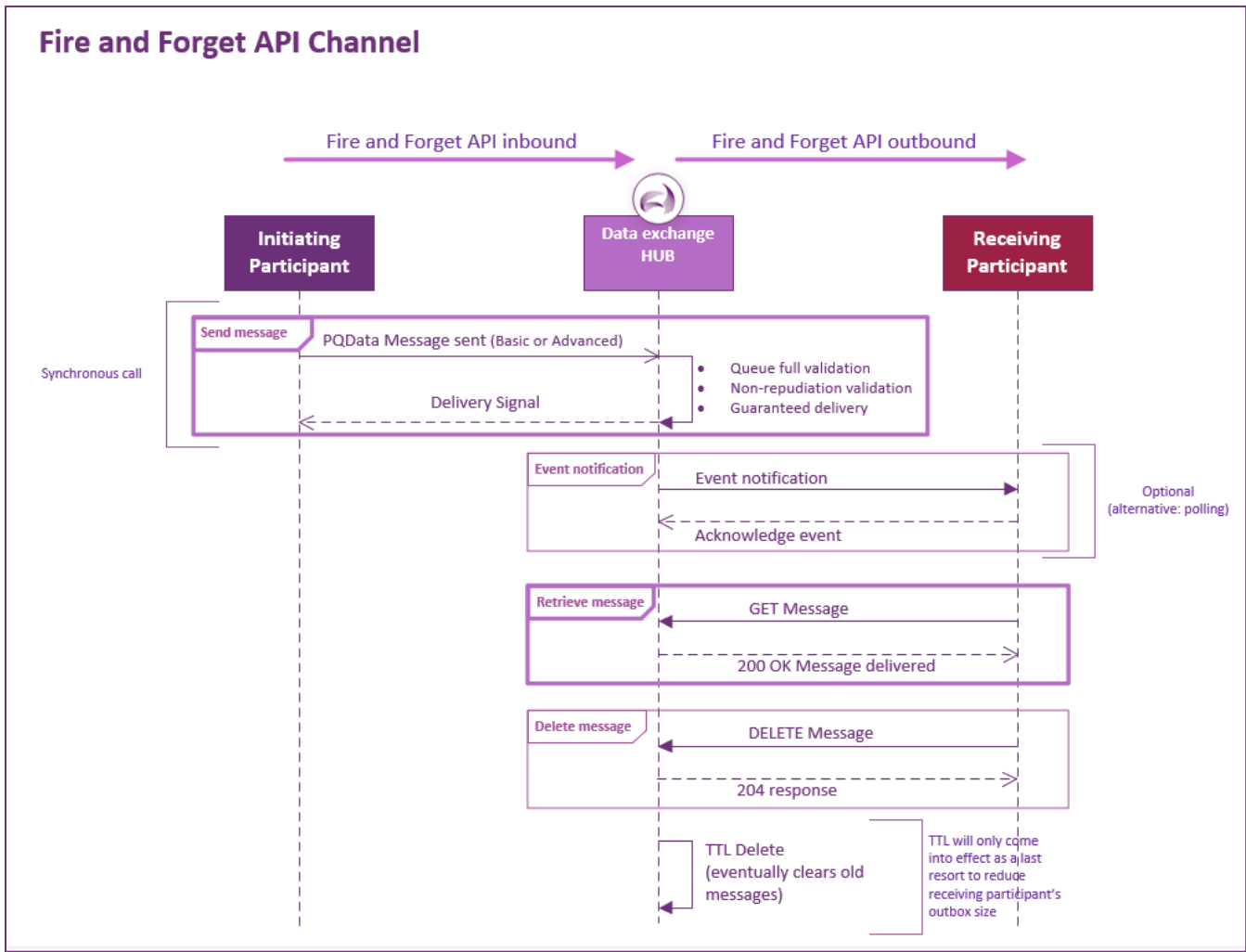
Participant administrators have new User Rights Management (URM) entities for managing their Participant User access to APIs and Markets Portal interfaces. More details to follow.

9.4 Basic Power Quality Data

Basic Power Quality Data (BPQD) consists of voltage, current, and phase angle. From 1 July 2026, The National Electricity Amendment Rule 2024 No. 20, mandates the delivery of this data from smart meters (except Type 4A and Type 8B meters). BPQD is delivered by Metering Coordinators (MCs) to Local Network Service Providers (LNSPs) using AEMO’s Industry Data Exchange (IDX), a data exchange hub for all markets.

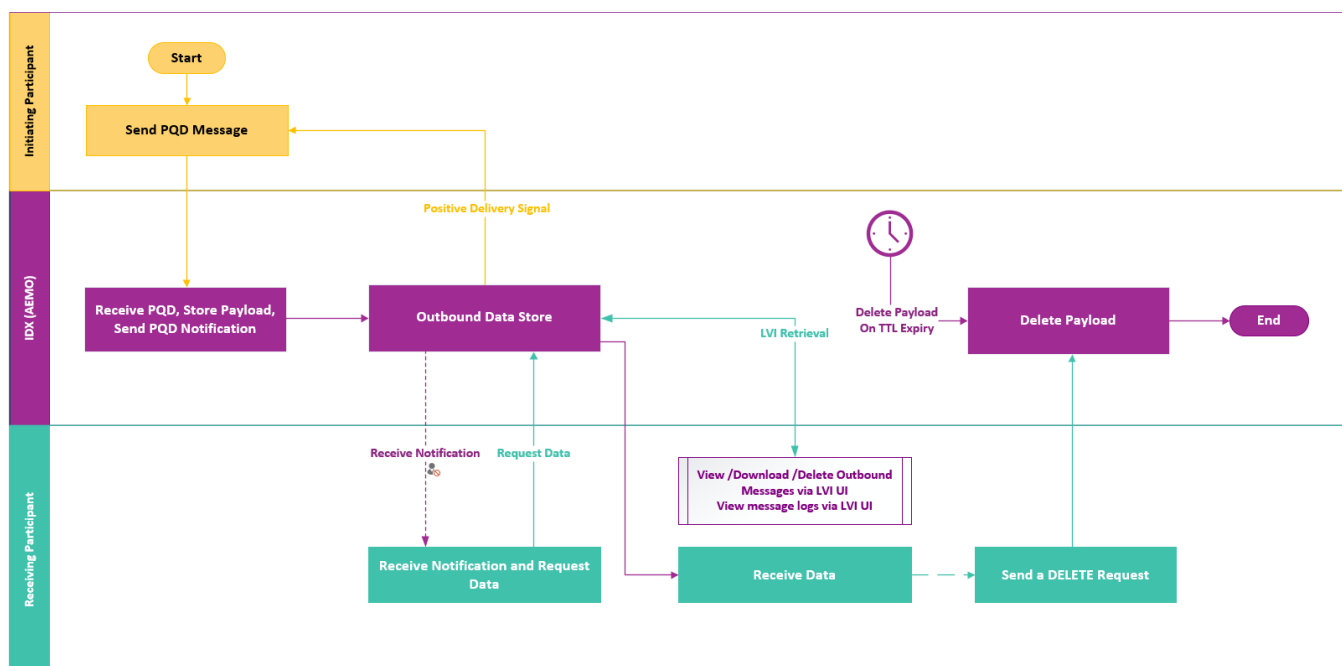
9.14.1 Delivery mechanism

MCs deliver BPQD to Local Network Service Providers LNSPs using the Fire and Forget API Channel on the IDX platform. This asynchronous data delivery mechanism does not require formal acknowledgements from the receiving party.



The process flow is described below:

1. Submission by the metering party: The Metering Coordinator (MC) or their delegate (for example, Metering Data Provider) submits a BPQD payload according to the [PQD schema](#) using the POST /bpqd API endpoint. IDX only returns an HTTP 200 OK response. No MACK or TACK acknowledgements are issued.
2. Message queuing: Upon successful submission, IDX places the BPQD message into the recipient LNSP's queue. The message remains in the queue for up to 105 business days, unless deleted earlier by the LNSP.
3. Event notification with WebSockets: IDX sends a WebSocket event notification to the LNSP, indicating a new message is available.
4. Retrieval by LNSP: The LNSP uses the GET /bpqd API endpoint to retrieve metadata for all queued messages. To retrieve the full payload, GET /bpqd/{messageContextId} API endpoint is used. For troubleshooting purposes, messages can be downloaded from the IDX interface in the Markets Portal.
5. Message deletion: After successful retrieval, the LNSP sends a DELETE /bpqd/{messageContextId} API request to remove the message from IDX outbound queue. They can also delete the message in the IDX interface in the Markets Portal. If the message is not deleted, IDX automatically removes it after the TTL (Time to Live) expiry period of 105 business days.



9.24.2 High-level changes

Function	Description	Reference
PQD API	API for submitting and retrieving basic power quality data in the NEM	Power Quality Data API
IDX WebSocket	Websocket for receiving BPQD event notifications and flow control events	Industry Data Exchange Platform Standard
<u>IDX APIs</u>	<u>APIs to manage message flows, discover and inspect available business functions, view message and transaction history, and retrieve archived outbound payloads</u>	<u>TBC</u>
Markets Portal	New Markets Portal interface ^s for LNSPs to assist troubleshooting PQD transactions, Participant accreditation and controls	Markets Portal

105 Event Notifications

The [Industry Data Exchange \(IDX\)](#) Hub uses WebSockets to establish a persistent, full-duplex communication channel between AEMO and Market Participants. This enables real time event notifications for [BPQD](#) messages ~~used in the BPQD delivery.~~

An event notification includes metadata such as:

- `messageContextId`
- `messageType`
- `priority`
- `initiatingParticipantId`

IDX can also send Flow Control Events using WebSockets to inform participants of:

- Full recipient queues
- Insufficient delete rates
- Outage notifications

You can subscribe ~~to BPQD event notifications to WebSockets~~ in the [Markets Portal's Event Subscription](#) ~~IDX interface in the Markets Portal.~~

For more information, see the [Industry Data Exchange Platform Standard](#).

116 Power Quality Data Payload Schema

The Basic Power Quality Data (BPQD) payload schema is designed to support AEMO's IDX Fire and Forget API pattern. It is a data object consisting of three main sections:

- **Header:** The header contains metadata about the message and its routing.
- **Transaction:** Transaction provides the transaction details and the associated NMI data.
- **NMI details:** Each transaction contains one or more NMI data objects containing metering and interval data. Each interval data object contains a timestamp and a Reads object with BPQD data.

Schema details are provided in the [Power Quality Data OpenAPI specification](#)~~Power-quality-data openapi specification.~~

BPQD payload example

```

{
  "data": {
    "header": {
      "initiatingParticipantId": "VLPJIRQALQ",
      "receivingParticipantId": [
        "WDFLPIIGUQ"
      ],
      "messageId": "XQYUEU8265RUVPVQGFMG-MSG-07092012797",
      "messageDateTime": "2025-08-26T05:29:43.778+10:00",
      "businessFunctionId": "PQD",
      "priority": "Low",
      "market": "NEM"
    },
    "transactions": [
      {
        "transactionId": "UBOXV5BKPOCZG6Q93OCH-TNS-1723075664114",
        "transactionType": "BasicPowerQualityData",
        "transactionDateTime": "2025-08-26T05:29:43.778+10:00",
        "nmiDetails": [
          {
            "nmi": "388DOUCRLR",
            "nmiChecksum": 9,
            "meterSerialNumber": "1M44G1B7FHUZ",
            "intervalLength": "300",
            "intervalData": [
              {
                "time": "2025-08-26T05:29:43.778+10:00",
                "reads": [
                  {
                    "V1": 9999999999999.99,
                    "C1": 9999999999999.99,
                    "A1": 999.99,
                    "V2": 9999999999999.99,
                    "C2": 9999999999999.99,
                    "A2": 999.99,
                    "V3": 9999999999999.99,
                    "C3": 9999999999999.99,
                    "A3": 999.99
                  }
                ]
              }
            ]
          }
        ]
      },
      {
        "nmi": "123ABCXYZ9",
        "nmiChecksum": 5,
        "meterSerialNumber": "2N88H2C3JKLQ",
        "intervalLength": "300",
        "intervalData": [
          {
            "time": "2025-08-26T05:29:43.778+10:00",

```

```

    "reads": [
      {
        "V1": 88888888888888.88,
        "C1": 88888888888888.88,
        "A1": 888.88,
        "V2": 88888888888888.88,
        "C2": 88888888888888.88,
        "A2": 888.88,
        "V3": 88888888888888.88,
        "C3": 88888888888888.88,
        "A3": 888.88
      }
    ]
  }
}

```

11.16.1 Header

data.header object contains the message metadata.

Field	Type	Required	Requirements	Description
initiatingParticipantId	string	Yes	Maximum 10 characters	The ID of the participant sending the message
receivingParticipantId	string	Yes	Maximum 10 characters	The ID of the participant receiving the message
messageId	string	Yes	^[A-Z0-9]{20}-MSG-\d{13}\$, len 1–36	A unique identifier for the message. For example, PARTICIPANT...-MSG-1234567890123
messageDateTime	string	Yes	YYYY-MM-DDTHH:mm:ss.SSS±hh:mm ±hh:mm is UTC offset (+ or -)	Date and time the message is created 2025-07-21T17:39:04.547+10:00
businessFunctionId	string	Yes	PQD	The business function or transaction group identifier
priority	string	Yes	high, medium, or low	The message priority level

Field	Type	Required	Requirements	Description
market	string	Yes	Enum includes NEM, state ELEC/GAS variants; default NEM	The energy market that applies to the message

11.26.2 Transactions

data.transactions is a list of transaction objects.

Field	Type	Required	Requirements	Description
transactionId	string	Yes	Format: [A-Z0-9]{20}-TNS-\d{13}	A unique identifier for the transaction
transactionType	string	Yes	For BPQD, it must be BasicPowerQualityData	The type of transaction
transactionDateTime	string	Yes	ISO 8601 with UTC offset	Timestamp of the transaction
nmiDetails[]	array	Yes	NMI details	An array of NMI data objects. See NMI details

11.36.3 NMI details

Data.transactions.nmiDetails is a nested array of NMI objects in the transaction object containing meter and interval data.

Field	Type	Required	Requirements	Description
nmi	string	Yes	10 characters	National Metering Identifier
nmiChecksum	string	Yes	Integer 0-9	The checksum for the NMI
meterSerialNumber	string	Yes	≤ 12 chars	The meter serial number

Field	Type	Required	Requirements	Description
intervalLength	string	No	300 for BPQD	Time in seconds for the length of the interval period
intervalData[]	array	Yes	intervalData	Interval data objects containing measurements for the time period

~~11.3.16.3.1~~ Interval data

data.transactions.nmiDetails.intervalData contains a timestamp and a set of readings for each interval.

Field	Type	Required	Requirements			Description
time			String	Yes	YYYY-MM-DDTHH:mm:ss.SSS±hh:mm ±hh:mm is UTC offset (+ or -)	Interval end date and time
reads			Array	Yes	basicReadItem objects	An array of basicReadItem objects for each interval element

Basic read item

A vector-style object containing voltage, current, and phase angle readings.

Schema object	Type	Required	Requirements	Description
basicReadItem	Vector-style named attributes	Yes	V1, V2, V3, C1, C2, C3 Minimum: -999999999999.99 Maximum: 999999999999.99 A1, A2, A3 minimum: -999.99 maximum: 999.99	anyOf: At least one of V1, C1, A1, V2, C2, A2, V3, C3, A3 must be present in each basicReadItem

~~12.7~~ Power Quality Data API

This API provides an interface for submitting and retrieving structured basic power quality data within the NEM. For details about the API endpoints, server, payload and response schemas, and security details, see [Power Quality Data OpenAPI specification](#).

~~12.17.1~~ Authentication

The API uses OAuth 2.0 with the client credentials grant type. A bearer token is returned and used to authenticate API requests. See securitySchemes in the [Power Quality Data OpenAPI specification](#)~~power quality data openapi specification~~.

~~12.27.2~~ User rights access

Participant administrators provide access to the PQD API using the entity TBC. For more information, see [Guide to User Rights Management](#).

~~12.37.3~~ API gateway

Participants can connect to the AEMO API Gateway through MarketNet.

All communications between AEMO's API gateway and participants' gateways use HTTPS. AEMO APIs do not support HTTP.

~~12.47.4~~ Compression

For details, see the [Industry Data Exchange Platform Standard](#).

~~12.57.5~~ Submission requirements

MCs and MDPs must implement BPQD bundling and JSON minification as part of their BPQD submission workflow.

~~12.5.17.5.1~~ BPQD bundling

Bundling is providing the daily Basic Power Quality Data (BPQD) readings for multiple NMIs into a single payload, up to 10 MB uncompressed. Bundling reduces message volume, connection overhead, and queue management complexity. It applies to all BPQD submissions using the Fire and Forget API Channel.

Participants must ensure their systems are designed to automatically bundle BPQD readings, rather than sending individual messages for each NMI or interval.

~~12.5~~**12.5.2** **JSON minification**

JSON minification must be applied to all outbound BPQD payloads. Minification involves removing unnecessary whitespaces, line breaks, and comments from JSON data prior to submission. Payloads must be minified to maximise the number of records per submission and minimise network utilisation.

Automated JSON minification should be integrated into the BPQD outbound process.

~~12.7~~**12.7.6** **Submission size**

A submission request has a payload limit of 10 MB uncompressed. For more details, see [Submission requirements](#).

~~12.9~~**12.9.7** **Validation**

Validation is applied only to HTTP headers in the request. The BPQD submission schema and content are not validated.

~~12.10~~**12.10.8** **Endpoints**

Endpoint	Method	Description	Success response
/bpqd	POST	Submit BPQD. Payload contains data at the 5-minute trading resolution. For payload details, see PQD payload format and structure	201 202 (Accepted)
/bpqd	GET	A list of metadata for BPQD messages in the queue	200 (OK)
/bpqd/{messageContextId}	GET	Retrieve a BPQD payload	200 (OK)
/bpqd/{messageContextId}	DELETE	Delete a BPQD payload	204 204 (Deleted)
/bpqd/first	GET	Retrieve the first message by a given priority	200 (OK)

12.117.9 Pagination

Cursor-based pagination is supported for GET requests.

For the first API request, use `itemCount` as a query parameter without a cursor to retrieve the first set of data. In the following example, the request specifies to return 2 records on a page:

```
https://apis.nem.marketnet.net.au/pqd/v1/bpqd?itemCount=2&fromDateTime=2025-10-16T08:56:45+00:00&toDateTime=2025-10-17T08:56:45+00:00
```

The response provides a meta object with the `nextCursor` value. For example:

```
meta:
  itemCount: 2
  nextCursor: pqd_partid_m_actew_9c1e2d3a-4b5f-6c7d-8e9f-0a1b2c3d4e22
  totalRecords: 4
  totalPages: 2
```

For subsequent requests, use the `nextCursor` value provided in the previous response in the cursor query parameter to request the next set of data. For example:

```
https://apis.nem.marketnet.net.au/pqd/v1/bpqd?itemCount=2&cursor=pqd_bpqd_m_partid_9c1e2d3a-4b5f-6c7d-8e9f-0a1b2c3d4e22&fromDateTime=2025-10-16T08:56:45+00:00&toDateTime=2025-10-17T08:56:45+00:00
```

12.127.10 PQD payload format

The PQD payload format is JSON. For schema details, see [PQD schema](#).

A BPQD payload contains data at the 5-minute trading resolution.

12.137.11 Payload limit

The payload limit is 10 MB uncompressed.

12.147.12 Rate limiting

~~Each Participant ID is limited to~~The PQD API enforces a rate limit of 50 requests per minute per endpoint~~per Participant ID~~.

Exceeding the limit results in a 429 Too Many Requests response, and further requests are rejected.

~~12.15~~**12.157.13 Validation**

HTTP headers for all API requests are validated. However, the BPQD payload schema and content is not validated.

~~12.16~~**12.167.14 Base urls**

Environment	Base URLs
MarketNet pre-production	https://apis.nem.ppd.marketnet.net.au/pqd/v1
MarketNet production	https://apis.nem.marketnet.net.au/pqd/v1

~~12.17~~**12.177.15 HTTP response codes**

The table below lists HTTP response codes when submitting PQD. For more details, see the [power quality data openapi specification](#).

Scenario	Status code	Message
Success	201 Created	Success
Message Context ID Validation Failure	400 Bad Request	The message context ID in the header does not match the values in the payload. Please ensure both values are aligned and retry the request.
Missing HTTP header field	400 Bad Request	Missing mandatory HTTP header.
HTTP header is in the incorrect format	400 Bad Request	Invalid HTTP header format.
OAuth token has expired	401 Unauthorized	The access token provided has expired.
Digital signature is not valid	403 Forbidden	The digital signature provided in the request could not be validated or did not match the expected hash.
MessageContextID is incorrect	404 Error	The MessageContextID [MessageContextID] could not be found.
Incorrect HTTP method used in the request	405 Method Not Allowed	The HTTP method used by the participant is not supported.

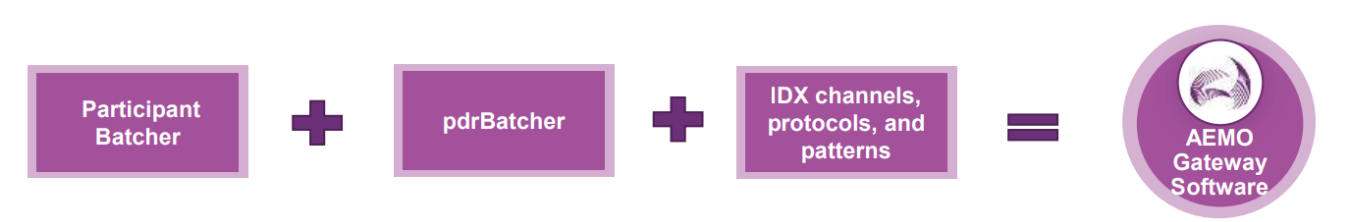
Scenario	Status code	Message
Payload exceeds the limit of 10MB uncompressed	413 Payload Too Large	The request payload exceeds the maximum size limit.
Unsupported payload format	415	The payload type is not supported.
Schema payload validation errors	422 Unprocessable Entity	The payload is not in a valid schema format for the business function.
Payload cannot be processed	422 Unprocessable Entity	The request payload was rejected because it contains content that failed threat detection scanning.
Exceeded request limit	429 Too Many Requests	There are too many requests to this resource in the given time window. Please wait before making further requests. Retry after <TBC> seconds.
Exceeded request limit	429 Too Many Requests	You have exceeded your allowed quota of requests to this resource. Please wait before making further requests. Quota limit resets in <x> seconds.
AEMO backend error	500 Internal Server Error	An unexpected error occurred while processing your request. Please try again later.
Message queue outbound error	503 Service Unavailable	The receiving participant's server cannot handle the request due to flow control restrictions or scheduled maintenance.

~~138~~ Markets Portal

The Markets Portal includes IDX user interfaces for LNSPs to troubleshoot ~~B~~PQD transactions, Participant accreditation, and Participant controls. More details to follow.

9 AEMO Gateway Software

The AEMO Gateway Software combines the **MSATS Participant Batcher**, **pdrBatcher** applications, and also connect Participant systems to the Industry Data Exchange (IDX).



More details to follow.

1410 FAQs

14.110.1 When is the technical specification final?

The technical specification is updated monthly and is source of truth during the project lifecycle. It is final at the production release. From this point, [related content](#) such as Markets Portal Help and API references become the source of truth.

10.2 Is the AEMO Gateway Software available for BPQD on 1 July 2026?

Yes. The AEMO Gateway is available for BPQD and works with the new Industry Data Exchange (IDX) platform.

10.3 Does the BPQD API use TLS certificates like the bidding system?

Yes. The API requires TLS certificates.

10.4 Does the PQD API require an AEMO VPN connection?

Yes, the API is only accessible over MarketNet.

~~15.1~~ 15.1 Implementation

~~15.1.1~~ 15.1.1 Transition

There is no transition required as BPQD is operating on the IDX platform.

~~15.2~~ 15.2 Implications

To maintain systems in-line with AEMO's market systems, participants need to:

- Review and assess the impact on their market systems with respect to the changes implemented as part of this Release.
- Change their systems prior to the implementation of this Release.
- Schedule staff and resources to upgrade their market systems for the production implementation of this Release.

~~15.3~~ 15.3 Risks

TBC

12 Terms

12.1 Rules Terms

You can find the following terms defined in the [National Electricity Rules \(NER\)](#) and the [Settlements Residue Auction Rules](#).

Term	Term	Term
AEMO	AEMO Website	Product
AEMO Markets Portal	Market Participants	
	NEM	

12.2 Glossary

You can find a full list of AEMO glossary terms in [Industry Terminology](#) on AEMO’s website.

Abbreviation/Term	Explanation
API	Application Protocol Interface
AEST	Australian Eastern Standard Time
B2B	Business-to-business
<u>Business function</u>	<u>A grouping of related business transactions</u>
BPQD	Basic Power Quality Data
<u>Fire and Forget</u>	<u>Data exchange pattern where the initiator sends a message without a detailed acknowledgement from the recipient</u>
IDX	Industry Data Exchange
<u>LNSP</u>	<u>Local Network Service Provider</u>
<u>MDP</u>	<u>Metering Data Provider</u>
NER	National Electricity Rules
NMI	National Metering Identifier
<u>Outbound</u>	

Abbreviation/Term	Explanation
PQD	Power Quality Data
Release	Industry Data Exchange – Technical Specification – June 2026 <u>Industry Data Exchange – Basic Power Quality Data - June 2026</u>
Release Dates	Pre-production: Sunday 19 April 2026 Production: Sunday 21 June 2026
TBC	To be confirmed

1713 References

Guide to AEMO's e-Hub APIs: Provides details about using AEMO's e-Hub as an interface to communicate information with AEMO. It assists Wholesale electricity and gas participants developing their own APIs.

Guide to Information Systems: Provides guidance for *Registered Participants* and interested parties about AEMO's participant electricity market systems.

Guide to User Rights Management: Assists participant administrators (PAs) to use the user rights management functions in the MSATS Web Portal.

Retail Electricity Market Glossary and Framework: assist participants of the Retail Electricity Market to understand the overall framework. It also contains a list of terms used in the Retail Electricity Market Procedures and a full list of NEM procedures, guidelines, and documents.

A1. Version history

V0.04

- Revises PQD API validation.
- Revises PQD API 400 series response codes.
- Adds cursor-based pagination information.
- **Power quality data openapi specification:**
 - Updates security scope name.
 - Updates ResourceID descriptor to be 8 characters.
 - Revises listMetaData schema.
 - Revises HTTP response codes.

V0.03

- Renames technical specification to Industry Data Exchange – Technical Specification – June 2026
- Adds note about bundling BPQD readings when submitting BPQD
- Adds FAQs
- Adds PQD API rate limit
- Power Quality Data OpenAPI Specification:
 - Submit Basic Power Quality Data: Updates 201 response
 - List Basic Power Quality Data metadata: Updates 200 response
 - List Basic Power Quality Data metadata: Changes fromDateTime and toDateTime query parameters to optional

v0.02

- Adds link to PQD OpenAPI specification
- Minor updates to Power Quality Data Schema
- Update HTTP response codes