Data Standards Body

Technical Working Group

Decision 198 - Candidate Billing & Invoicing Endpoints

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Decision Approved By Chairman: 29th October 2021

Context

This proposal describes the payloads for the Billing data cluster and Invoicing data cluster included in the energy sector designation instrument.

The data clusters covered by this consultation have been iterated on with the industry since April 2020 and this decision brings the result of this ongoing consultation into the CDR standards.

Decision To Be Made

Define the candidate end point URIs and payloads for Billing data and Invoicing data.

Feedback Provided

The original proposal and the associated feedback can be found at: https://github.com/ConsumerDataStandardsAustralia/open-banking/issues/198

This proposal includes feedback obtained in response to the following consultation activities that occurred previously:

- Decision Proposal 116 Billing Data Payloads
 - This consultation proposed a series of URIs for the Energy Billing data payloads. Feedback provided in response to this consultation can be found at:
 - https://github.com/ConsumerDataStandardsAustralia/standards/issues/116
- Decision Proposal 149 Energy Draft Feedback Cycle 1
 - This consultation thread raised and allowed for holistic feedback to be provided on the draft energy standards. Feedback provided in response to this consultation can be found at: https://github.com/ConsumerDataStandardsAustralia/standards/issues/149
- Decision Proposal 173 Energy Draft Feedback Cycle 2
 - This consultation thread raised and allowed for second round of holistic feedback to be provided on the draft energy standards. Feedback provided in response to this consultation can be found at:
 - https://github.com/ConsumerDataStandardsAustralia/standards/issues/173
- Decision Proposal 180 Energy Draft Feedback Cycle 3

This consultation thread raised and allowed for third round of holistic feedback to be provided on the draft energy standards as a whole. Feedback provided in response to this consultation can be found at:

https://github.com/ConsumerDataStandardsAustralia/standards/issues/180

The feedback provided in this consultation was very detailed which is very helpful. Unfortunately, some of the detailed feedback conflicted between respondents and was also provided very late in the consultation process so there was minimal opportunity to clarify specific positions.

As a result, an effort has been made to incorporated as much of the feedback as possible but it is likely that some minor modifications will need to be made using the standards maintenance process. To this end a series of change requests will be raised in standards maintenance on the following topics:

- Modification of billing and invoicing enumeration values This change request will be intended to validate the existing enumeration values and expand the list as needed. This would include time of use types, transaction types, etc.
- Review of demand charges in billing transactions This change request will be targeted at the inclusion of demand charges in billing transactions to ensure the fields included are comprehensive and accurately described

Decision For Approval

The URIs and Payloads for electricity billing and statement data are to be included in the CDR standards as presented in the following sections.

Billing End Points Summary

A summary of the account end points:

- GET /energy/accounts/balances
- POST /energy/accounts/balances
- GET /energy/accounts/{accountId}/balance
- GET /energy/accounts/invoices
- POST /energy/accounts/invoices
- GET /energy/accounts/{accountId}/invoices
- GET /energy/accounts/billing
- POST /energy/accounts/billing
- GET /energy/accounts/{accountId}/billing

Common Object Types

These structures are used multiple times in the usage payloads and are therefore documented separately.

Invoice Common Type

Field	Туре	Mandatory	Description
{			
accountId	String	Mandatory	The ID of the account for which the invoice was issued
invoiceNumber	String	Mandatory	The number assigned to this invoice by the energy Retailer
issueDate	DateString	Mandatory	The date that the invoice was actually issued (as opposed to generated or calculated)
dueDate	DateString	Optional	The date that the invoice is due to be paid
period	Object	Conditional	Object containing the start and end date for the period covered by the invoice. Mandatory if any usage or demand based charges are included in the invoice
{			
startDate	DateString	Mandatory	The start date of the period covered by this invoice
endDate	DateString	Mandatory	The end date of the period covered by this invoice
}			

Field	Туре	Mandatory	Description
invoiceAmount	AmountString	Optional	The net amount due for this invoice regardless of previous balance. If absent then zero is assumed
gstAmount	AmountString	Optional	The total GST amount for this invoice. If absent then zero is assumed
payOnTimeDiscount	Object	Optional	A discount for on time payment
{			
discountAmount	AmountString	Mandatory	The amount that will be discounted if the invoice is paid by the date specified
gstAmount	AmountString	Optional	The GST amount that will be discounted if the invoice is paid by the date specified. If absent then zero is assumed
Date	DateString	Mandatory	The date by which the invoice must be paid to receive the pay on time discount
}			
balanceAtIssue	AmountString	Mandatory	The account balance at the time the invoice was issued, including the current bill amount and adjustments on the account
servicePoints	Array of Strings	Mandatory	Array of service point IDs to which this invoice applies
gas	Object	Mandatory	Object contain charges and credits related to gas usage
{			
totalUsageCharges	AmountString	Mandatory	The aggregate total of usage charges for the period covered by the invoice
totalOnceOffCharges	AmountString	Mandatory	The aggregate total of any once off charges arising from gas usage for the period covered by the invoice
total Once Off Discounts	AmountString	Mandatory	The aggregate total of any once off discounts or credits arising from gas usage for the period covered by the invoice
otherCharges	Array of Objects	Optional	Optional array of charges that may be part of the invoice (for e.g. environmental charges for C&I consumers)
[{			
amount	AmountString	Mandatory	The aggregate total of charges for this item (exclusive of GST)
description	String	Mandatory	A free text description of the type of charge
}]			

Field	Туре	Mandatory	Description
totalGst	AmountString	Optional	The total GST for all charges gas usage charges. If absent then zero is assumed
}			
electricity	Object	Mandatory	Object contain charges and credits related to energy usage
{			
totalUsageCharges	AmountString	Mandatory	The aggregate total of usage charges for the period covered by the invoice (exclusive of GST)
total Generation Credits	AmountString	Mandatory	The aggregate total of generation credits for the period covered by the invoice (exclusive of GST)
totalOnceOffCharges	AmountString	Mandatory	The aggregate total of any once off charges arising from electricity usage for the period covered by the invoice (exclusive of GST)
totalOnceOffDiscounts	AmountString	Mandatory	The aggregate total of any once off discounts or credits arising from electricity usage for the period covered by the invoice (exclusive of GST)
otherCharges	Array of Objects	Optional	Optional array of charges that may be part of the invoice (for e.g. environmental charges for C&I consumers) (exclusive of GST)
[{			
amount	AmountString	Mandatory	The aggregate total of charges for this item (exclusive of GST)
description	String	Mandatory	A free text description of the type of charge
}]			
totalGst	AmountString	Optional	The total GST for all electricity usage charges. If absent then zero is assumed
}			
accountCharges	Object	Optional	Account level charges and discounts for the period covered by the invoice
{			
totalCharges	AmountString	Mandatory	The aggregate total of account level charges for the period covered by the invoice (exclusive of GST)
totalDiscounts	AmountString	Mandatory	The aggregate total of account level discounts or credits for the period covered by the invoice (exclusive of GST)
totalGst	AmountString	Optional	The total GST for all account level charges. If absent then zero is assumed

Field	Туре	Mandatory	Description
}			
paymentStatus	Enum	Mandatory	Indicator of the payment status for the invoice. May be one of: PAID PARTIALLY_PAID NOT_PAID
}			

Billing Transaction Common Type

Billing Transaction Common Type			
Field	Туре	Mandatory	Description
{			
accountId	String	Mandatory	The ID of the account for which transaction applies
executionDateTime	DateTimeString	Mandatory	The date and time that the transaction occurred
gst	AmountString	Optional	The GST incurred in the transaction. Should not be included for credits or payments. If absent zero is assumed
transactionUType	Enum	Mandatory	Indicator of the type of transaction object present in this record. May be one of: usage demand onceOff payment otherCharge
usage	Object	Conditional	Represents a usage charge or generation credit. Mandatory if transactionUType is equal to usage
{			
servicePointId	String	Optional	The ID of the service point to which this transaction applies
invoiceNumber	String	Optional	The number of the invoice in which this transaction is included if it has been issued
timeOfUseType	Enum	Mandatory	The time of use type that the transaction applies to. Must be one of: PEAK OFF_PEAK OFF_PEAK_DEMAND_CHARGE SHOULDER SHOULDER1 SHOULDER2 CONTROLLED_LOAD SOLAR AGGREGATE

Field	Туре	Mandatory	Description
description	String	Optional	Optional description of the transaction that can be used for display purposes
isEstimate	Boolean	Optional	Flag indicating if the usage is estimated or actual. True indicates estimate. False or absent indicates actual
startDate	DateTimeString	Mandatory	Date and time when the usage period starts
endDate	DateTimeString	Mandatory	Date and time when the usage period ends
usage	Number	Mandatory	The usage for the period in kWh. A negative value indicates power generated
amount	AmountString	Mandatory	The amount charged or credited for this transaction prior to any adjustments being applied (exclusive of GST)
calculationFactors	Array of Objects	Optional	Additional calculation factors that inform the transaction
[{			
value	Number	Mandatory	The value of the calculation factor
type	String	Mandatory	The type of the calculation factor. Valid values are: DLF MLF
}]			
adjustments	Array of Objects	Optional	Optional array of adjustments arising for this transaction due to standing fees, concessions, rebates or discounts to usage charges
[{			
amount	AmountString	Mandatory	The amount of the adjustment (exclusive of GST)
description	String	Mandatory	A free text description of the adjustment
}]			
}			
demand	Object	Conditional	Represents a demand charge or generation credit. Mandatory if transactionUType is equal to demand
{			
servicePointId	String	Optional	The ID of the service point to which this transaction applies
invoiceNumber	String	Optional	The number of the invoice in which this transaction is included if it has been issued

Field	Туре	Mandatory	Description
time Of Use Type	Enum	Mandatory	The time of use type that the transaction applies to. Must be one of: PEAK OFF_PEAK OFF_PEAK SHOULDER SHOULDER1 SHOULDER2 CONTROLLED_LOAD AGGREGATE
description	String	Optional	Optional description of the transaction that can be used for display purposes
is Estimate	Boolean	Optional	Flag indicating if the usage is estimated or actual. True indicates estimate. False or absent indicates actual
startDate	DateTimeString	Mandatory	Date and time when the usage period starts
endDate	DateTimeString	Mandatory	Date and time when the usage period ends
rate	Number	Mandatory	The rate for the demand charge in kVA. A negative value indicates power generated
amount	AmountString	Mandatory	The amount charged for this transaction prior to any adjustments being applied
calculationFactors	Array of Objects	Optional	Additional calculation factors that inform the transaction
[{			
value	Number	Mandatory	The value of the calculation factor
type	String	Mandatory	The type of the calculation factor. Valid values are: DLF MLF
}]			
adjustments	Array of Objects	Optional	Optional array of adjustments arising for this transaction due to standing fees, concessions, rebates or discounts to demand charges
[{			
amount	AmountString	Mandatory	The amount of the adjustment
description	String	Mandatory	A free text description of the adjustment
}]			
}			

Field	Туре	Mandatory	Description
onceOff	Object	Conditional	Represents a once off charge or credit. Mandatory if transactionUType is equal to onceOff
{			
servicePointId	String	Optional	The ID of the service point to which this transaction applies
invoiceNumber	String	Optional	The number of the invoice in which this transaction is included if it has been issued
amount	AmountString	Mandatory	The amount of the charge or credit. A positive value indicates a charge and a negative value indicates a credit
description	String	Mandatory	A free text description of the item
}			
otherCharge	Object	Conditional	Represents charge other than usage and once off. Mandatory if transactionUType is equal to otherCharge
{			
servicePointId	String	Optional	The ID of the service point to which this transaction applies
invoiceNumber	String	Optional	The number of the invoice in which this transaction is included if it has been issued
amount	AmountString	Mandatory	The amount of the charge
description	String	Mandatory	A free text description of the item
}			
payment	Object	Conditional	Represents a payment to the account. Mandatory if transactionUType is equal to payment
{			
amount	AmountString	Mandatory	The amount paid
method	enum	Mandatory	The method of payment. Must be one of: DIRECT_DEBIT CARD TRANSFER BPAY CASH CHEQUE OTHER

Field	Туре	Mandatory	Description
}			
}			

Bulk Account Balance Data

High Level Information

Title	Obtain the current balance for all accounts
HTTP Method	GET
URI	/energy/accounts/balances
Security Scope	energy:billing:read
Pagination	Not Supported
Path Parameters	None
Query Parameters	None

Request Payload

Not applicable

Response Payloads

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
balances	Array	Mandatory	Array of account balances
[{			
accountId	String	Mandatory	The ID of the account
balance	AmountString	Mandatory	The current balance of the account. A positive value indicates that amount is owing to be paid. A negative value indicates that the account is in credit
}]			
}			
links	Object	Mandatory	
{			
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	

Field	Туре	Mandatory	Description
{			
}			

Balance Data For Specific Accounts

High Level Information

Title	Obtain the current balance for a specified set of accounts
HTTP Method	POST
URI	/energy/accounts/balances
Security Scope	energy:billing:read
Pagination	Not Supported
Path Parameters	None
Query Parameters	None

Request Payload

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
accountlds	Array[String]	Mandatory	Array of specific accountlds to obtain balances for.
}			
meta	Object	Mandatory	
{			
}			

Response Payloads

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
balances	Array	Mandatory	Array of account balances
[{			
accountId	String	Mandatory	The ID of the account

Field	Туре	Mandatory	Description
balance	AmountString	Mandatory	The current balance of the account. A positive value indicates that amount is owing to be paid. A negative value indicates that the account is in credit
}]			
}			
links	Object	Mandatory	
{			
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			

HTTP Response Code: 422 Unprocessable Entity

If one of the specified accountIds is invalid or inaccessible then a 422 response should be returned with an error payload. The structure of this error payload will be aligned to the equivalent error for the bank account end points.

This is currently under review as part of another consultation.

Balance Data For A Specific Account

High Level Information

Title	Obtain the current balance for a specific account
HTTP Method	GET
URI	/energy/accounts/{accountId}/balance
Security Scope	energy:billing:read
Pagination	Not Supported
Path Parameters	accountId ID of the account for which a balance is requested. This is a tokenised ID previously obtained from another account end point.
Query Parameters	None

Request Payload

Not applicable

Response Payloads

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
balance	AmountString	Mandatory	The current balance of the account. A positive value indicates that amount is owing to be paid. A negative value indicates that the account is in credit
}			
links	Object	Mandatory	
{			
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			

Bulk Invoice Data

High Level Information

Title	Obtain the invoices for all accounts
HTTP Method	GET
URI	/energy/accounts/invoices
Security Scope	energy:billing:read
Pagination	Supported
Path Parameters	None
Query Parameters	oldest-date Constrain the request to invoices with publish date at or after this date. If absent defaults to newest-date minus 24 months. Format is aligned to DateString common type newest-date Constrain the request to invoices with publish date at or before this date. If absent defaults to current date. Format is aligned to DateString common type page Page of results to request (standard pagination) page-size Page size to request. Default is 25 (standard pagination)

Request Payload

Not applicable

Response Payloads

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
invoices	Array of Invoice Common Type	Mandatory	Array of invoices sorted by date in descending order
}			
links	Object	Mandatory	
{			

Field	Туре	Mandatory	Description
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			

Invoices For Specific Accounts

High Level Information

Title	Obtain invoices for a specified set of accounts
HTTP Method	POST
URI	/energy/accounts/invoices
Security Scope	energy:billing:read
Pagination	Supported
Path Parameters	None
Query Parameters	oldest-date Constrain the request to invoices with publish date at or after this date. If absent defaults to newest-date minus 24 months. Format is aligned to DateString common type
	newest-date Constrain the request to invoices with publish date at or before this date. If absent defaults to current date.
	Format is aligned to DateString common type
	page Page of results to request (standard pagination)
	page-size Page size to request. Default is 25 (standard pagination)

Request Payload

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
accountids	Array[String]	Mandatory	Array of specific accountlds to obtain invoices for.
}			
meta	Object	Mandatory	
{			
}			

Response Payloads

|--|

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
invoices	Array of Invoice Common Type	Mandatory	Array of invoices sorted by date in descending order
}			
links	Object	Mandatory	
{			
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			

HTTP Response Code: 422 Unprocessable Entity

If one of the specified accountIds is invalid or inaccessible then a 422 response should be returned with an error payload. The structure of this error payload will be aligned to the equivalent error for the bank account end points.

This is currently under review as part of another consultation.

Invoices For A Specific Account

High Level Information

Title	Obtain the invoices for a specific account
HTTP Method	GET
URI	/energy/accounts/{accountId}/invoices
Security Scope	energy:billing:read
Pagination	Supported
Path Parameters	accountId ID of the account for which transactions are requested. This is a tokenised ID previously obtained from another account end point.
Query Parameters	oldest-date Constrain the request to invoices with publish date at or after this date. If absent defaults to newest-date minus 24 months.
	rewest-date Constrain the request to invoices with publish date at or before this date. If absent defaults to current date. Format is aligned to DateString common type
	page Page of results to request (standard pagination) page-size Page size to request. Default is 25 (standard pagination)

Request Payload

Not applicable

Response Payloads

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
invoices	Array of Invoice Common Type	Mandatory	Array of invoices sorted by date in descending order
}			
links	Object	Mandatory	

Field	Туре	Mandatory	Description
{			
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			

Bulk Billing Transaction Data

High Level Information

Title	Obtain billing transactions for all accounts
HTTP Method	GET
URI	/energy/accounts/billing
Security Scope	energy:billing:read
Pagination	Supported
Path Parameters	None
Query Parameters	oldest-time Constrain the request to transactions with date and time at or after this date and time. If absent defaults to newest-time minus 12 months. Format is aligned to DateTimeString common type newest-time Constrain the request to transactions with date and time at or after this date and time. If absent defaults to current date and time. Format is aligned to DateTimeString common type page
	Page of results to request (standard pagination) page-size Page size to request. Default is 25 (standard pagination)

Request Payload

Not applicable

Response Payloads

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
transactions	Array of Billing Transaction Common Type	Mandatory	Array of transactions sorted by date and time in descending order
}			
links	Object	Mandatory	
{			

Field	Туре	Mandatory	Description
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			

Billing For Specific Accounts

High Level Information

Title	Obtain billing for a specified set of accounts
HTTP Method	POST
URI	/energy/accounts/billing
Security Scope	energy:billing:read
Pagination	Supported
Path Parameters	None
Query Parameters	oldest-time Constrain the request to transactions with date and time at or after this date and time. If absent defaults to newest-time minus 12 months. Format is aligned to DateTimeString common type newest-time Constrain the request to transactions with date and time at or after this date and
	time. If absent defaults to current date and time.
	Format is aligned to DateTimeString common type
	page Page of results to request (standard pagination)
	page-size Page size to request. Default is 25 (standard pagination)

Request Payload

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
accountids	Array[String]	Mandatory	Array of specific accountlds to obtain invoices for.
}			
meta	Object	Mandatory	
{			
}			

Response Payloads

Field Type Mandatory Description

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
transactions	Array of Billing Transaction Common Type	Mandatory	Array of transactions sorted by date and time in descending order
}			
links	Object	Mandatory	
{			
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			

HTTP Response Code: 422 Unprocessable Entity

If one of the specified accountIds is invalid or inaccessible then a 422 response should be returned with an error payload. The structure of this error payload will be aligned to the equivalent error for the bank account end points.

This is currently under review as part of another consultation.

Billing For A Specific Account

High Level Information

Title	Obtain the billing transactions for a specific account
HTTP Method	GET
URI	/energy/accounts/{accountId}/billing
Security Scope	energy:billing:read
Pagination	Supported
Path Parameters	accountId ID of the account for which invoices are requested. This is a tokenised ID previously obtained from another account end point.
Query Parameters	oldest-time Constrain the request to transactions with date and time at or after this date and time. If absent defaults to newest-time minus 12 months.
	Format is aligned to DateTimeString common type
	newest-time Constrain the request to transactions with date and time at or after this date and time. If absent defaults to current date and time.
	Format is aligned to DateTimeString common type
	page Page of results to request (standard pagination)
	page-size Page size to request. Default is 25 (standard pagination)

Request Payload

Not applicable

Response Payloads

Field	Туре	Mandatory	Description
data	Object	Mandatory	
{			
transactions	Array of Billing Transaction Common Type	Mandatory	Array of transactions sorted by date and time in descending order
}			
links	Object	Mandatory	

Field	Туре	Mandatory	Description
{			
self	URIString	Mandatory	Fully qualified link to this API call
}			
meta	Object	Mandatory	
{			
}			