Electricity Information Exchange Protocols (EIEP)

Draft Functional Specification

March 2011

Prepared by Momentous Consulting, Chrissy Burrows

Version	Release date	EIEP Ref	Description
1st draft		all	SDFG discussion document

Electricity Information Exchange Protocols Functional Specification

Introduction

Electricity Information Exchange Protocols (EIEPs) have evolved over time to provide standardised formats and reliable information exchange between participants. In some cases, the use of those formats is mandatory, e.g. where there are interfaces with the registry and reconciliation manager, and in others, it is voluntary e.g. interfaces between participants.

Mandatory interfaces are specified under the Electricity Industry Participation Code 2010, and details are contained within service provider functional specifications. Along with these other mandatory interfaces, EIEPs that require consistent and accurate information have also be specified within the code for use by participants.

Voluntary interfaces are contained in the Electricity Information Exchange Protocols (EIEPs), the use of some of which is enforced through contracts between traders and distributors. Voluntary EIEPs may vary in the information that they contain depending on arrangements between the parties or as their systems may dictate.

Background

The Standing Data Formats Group (SDFG) was established in May 2006 reporting to the then Electricity Commission Retail Market Advisory Group for the purpose of considering new Electricity Information Exchange Protocols (EIEPs). This group picked up the work previously done by the Distributor Trader Information Exchange Protocols Subgroup (DRIEPS) that had previously been established under MARIA.

Following several initiatives to evaluate the protocols, the EIEPs included in this document were developed. There are 12 EIEPS that communicate information ranging from consumption information for invoicing, line charges and pricing through to customer information, faults, outage and new connections.

Early in 2011 it was identified that there was a need for mandatory formats that would enable the exchange of information that are low cost, consistent and reliable. The mandatory requirements apply to *(insert).*

This document

This document describes the business functional requirements for the use of EIEPs only. This document should be read in conjunction with requirements for those mandatory EIEPS within the code and “use of system agreements” between participants.

The document has been designed to give guidance for participants to develop their systems to enable the use of the EIEPS. It should be noted that in creating the EIEPS that concepts

that are fundamental to users operations, along with reconciliation and registry information have been taken into account it is therefore requested that no changes are to be made to design and coding when considering implementation.

Contents

Glossary of abbreviations and terms

Act	Electricity Act 1992
Authority	Electricity Authority
Code	Electricity Industry Participation Code
CSV	Comma Separated Values
EIEP	Electronic Information Exchange Protocol
FTP	File Transfer Protocol
ICP	Installation Control Point
RM	Reconciliation Manager
Registry	National database that contains information on every point of connection on a network from which electricity is supplied to a site.
SDFG	Standing Data Formats Group
UFE	Unaccounted For Electricity
UoSA	Use of System Agreement
XML	Extensible Markup Language

Operation of protocol

Concept

1.1.1 EIEPs are designed to be used by traders and distributors to communicate specific information within specified time frames. There are some common data requirements for each of the protocols and these are outlined in more detail in the following sections.

1.1.2 Where a protocol has unique requirements these will be discussed in the sections prior to the file format. With regards to specific sets of codes for use in a protocol these will follow that protocol.

1.1.3 The main functions of protocols are:

Format name	Description	Send → Receive
EIEP1	Detail Consumption Information • As Billed • Normalised	Trader → Distributor Distributor → Trader
EIEP2	Aggregate Consumption Information • As Billed • Normalised	Trader → Distributor
EIEP3	HH Metering Information	Trader → Distributor
EIEP4	Customer Information	Trader → Distributor Distributor → Trader
EIEP5	Service interruptions, planned and unplanned: • Singular • Multiple	Distributor → Trader
EIEP6	Fault and Service Requests: • Initiation • Status update and closure	Trader → Distributor Distributor → Trader
EIEP7	General Installation Status Change	Trader → Distributor
EIEP8	Notification of Network Price Category and Tariff Change	Trader → Distributor Distributor → Trader
EIEP9	Customer Location Address Change Notification	Trader → Distributor Distributor → Trader
EIEP10	Network Trust Rebate – Not Developed	N/A
EIEP11	New Connections: • Request for a new ICP • Provision of a new ICP • Change of ICP information • Provision of metering information by either party	Trader → Distributor Distributor → Trader
EIEP12	Detailed Pricing Information Notification of pricing changes	Distributor → Trader

Terminology

1.1.4 The following terms are equivalent and interchangeable in this document.

- Daily Unmetered kWh = unmetered load capacity
- Distributor = network = line company
- Trader is a class that includes direct purchasers and embedded generators that sell electricity directly to the clearing manager;
- Market administrator = Electricity Commission = Board = EA;
- Meter Equipment Provider = meter owner = primary metering contact = MEP;
- Proposed Trader = first Trader = first requesting Trader;
- Reconciliation Type = connection type;
- replacement = update; and
- reversal = cancellation

1.1.5 The following acronyms have the following meanings:

- Code = Electricity Industry Participant Code 2010
- GXP = grid exit point;
- GIP = grid injection point;
- NSP = network supply point; and
- POC = point of connection
- ICP = Installation control point

1.1.6 Units of measure

Unit	Description
kWh	kilo watt hour energy (real energy)
kW	kilo watt demand (real power)
kVAh	kilo volt ampere hour energy (apparent energy)
kVA	kilo volt ampere demand (apparent power)
kVArh	kilo volt reactive ampere hour energy (reactive energy)
kVAr	kilo volt reactive ampere hour demand (reactive power)
Day	Measure of time for fixed daily charges
Equipment	Fixed charges for specific equipment (eg transformers)

1.1.7 Appendix?? Contains a data dictionary that refers to all other terminology and has been applied throughout this document.

File transport mechanism

1.1.8 File transport mechanisms are to be secure, as recommended by the Authority and agreed between parties.

1.1.9 The actual mechanism used and destination address is to be configurable at file type level as agreed between the parties. In the case of FTP a security mechanism will be necessary to protect confidentiality. The ability to retrieve files from a remote FTP outbox is not part of the Key data field descriptions.

Key Data descriptions consumption information

For those protocols that are for the communication of consumption information the following key data descriptions apply.

1.2 As Billed

1.2.1 The 'as billed' report includes all consumption at ICP tariff level which has been billed by the trader during the month (whether based on an estimate read or an actual read) as extracted from the trader's billing database.

1.2.2 The first file for the bill period should have file status "I" (Initial). Subsequent files should either be "R" (complete replacement) or "X" (partial replacement). On receiving an R the recipient should remove all previous data and replace with the new file. Individual ICP's can be replaced by using an X file status, in which case just those ICP(s) should be removed and replaced. X files can contain replacement data for ICPs included in the initial "I" file or data for ICPs that were not included in the Initial file.

1.3 As billed normalised

1.3.1 The 'as billed normalised' report includes that data which is per how the end-use customer was billed, and then adjusted by algorithm to the current calendar month.

1.3.2 For 'as billed' normalised, the distributor treats the initial month reported data as incremental (as for 'as billed') including where prior period dates are included, and only overwrites previous data if a replacement file is provided.

1.3.3 The "I" file for the 'as billed' normalised report should show the correct start and end dates for any corrections or omissions relating to prior periods already reported. These will be shown as billing reversals, re-bills, and consumption adjustments, as appropriate.

1.3.4 Definition and timing differences between energy reconciliation (NRM) and network (distributor) reports will result in differences between consumption quantities for any particular month. However, over time, the cumulative or moving annual consumption differences should be minimal so long as the various reports or reporting systems process the same base metering information, and account for all corrections.

1.4 RM Normalised

1.4.1 A ‘normalised’ report will contain data which is as per the end-use customer billing, then adjusted by algorithm to consumption submitted to the Reconciliation Manager for the current calendar month.

1.4.2 The normalised data file should always be treated as incremental to the previously reported normalised data file where the file status is ‘I’, and should always overwrite the previous data file where the file status is ‘R’.

1.4.3 The normalised files are to include all ICPs which the registry indicates as active against the trader during part or all of the month being reported, both occupied-energised and vacant-energised periods.

1.4.4 The files are not to include ICPs which the registry indicates as inactive, e.g. where the site is vacant and the ICP de-energised. The active period may be reported as one single date range in the report, or as separate date ranges for the occupied-energised and vacant-energised periods. In most cases the date range will be from the first day to the last day of the calendar month.

1.4.5 Where the ICP has belonged to the trader for only part of the month, then the date range and consumption reported will only be for that part of the month the site was energised and the responsibility of that trader.

1.4.6 For RM normalised, the distributor treats the second and subsequent files for a previously reported period as replacement data and overwrites the previous file for the same period.

1.5 Consumption start date

1.5.1 For ‘as billed’ this will be either;

(a) the previous consumption end date + 1 day;

(b) the date of energisation of the connection or reconnection (if previously vacant de-energised); or

(c) the date the ICP switched to the trader as per the Electricity Industry Participant Code 2010.

1.5.2 For ‘as billed normalised’ and RM Normalises this will be either;

(a) the first day of the month being reported;

(b) The applicable start date for any prior month event requiring a correction;

(c) the date of livening of the connection or reconnection (if previously vacant de-energised); or

(d) the date the ICP switched to the trader, which may be in a prior month if the ICP switched in a previous month but has not been previously reported.

1.6 Consumption end date

1.6.1 For ‘as billed’ this will be either;

(a) the date up to which consumption has been billed;

(b) the date of vacant site disconnection or permanent disconnection; or

(c) the date the ICP switched from the trader (the date that the ICP switched to the new trader – 1 day)

1.6.2 For ‘as billed normalised’ and RM Normalises this will be either;

(a) the last day fo the month being reported;

(b) The applicable end date for any prior month event requiring a correction;

(c) the date of vacant site disconnection or permanent disconnection; or

(d) the date the ICP switched from the trader (the date that the ICP switched to the new trader – 1 day).

1.7 Reversal status

1.7.1 An I file may include adjustments from ‘as billed’ data captured in prior reporting months where the data has subsequently been found to be in error. If an error is found then it may be corrected by the trader in two ways;

(a) by reversing the original retail bill, and rebilling the consumer for the correct amount; or

(b) by processing a new retail bill with an adjustment for the previous retail bill, for the difference between the original value and the recalculated value.

1.7.2 If the original bill is reversed then the number of days should be negative, and the kWh should be the opposite sign to that which was originally billed (as sometimes the original bill will contain negative kWh). Capacity and demand figures should remain positive. It is inferred from the negative days that the capacity and demand are part of a reversal. Start date and end date on the reversal should be the same as shown on the original bill.

1.7.3 If a new bill, with an adjustment for the previous retail bill, is processed, the number of days should be positive, and the kWh negative or positive depending on the direction of the adjustment. Should capacity or demand figures be changed, they should be negative or positive depending on the direction of the adjustment.

1.7.4 Distributor systems should be set up to deal with either circumstance.

1.7.5 Typical examples of prior period correction events are:

(a) cancelled switches;

(b) backdated switches;

(c) late processing of switches;

(d) switch read changes;

(e) late processing of meter changes;

(f) correction for stopped/slow/fast meters;

(g) meter reading errors; and

(h) multiplier errors.

1.7.6 Where a high (low) estimate read results in a high (low) consumption being reported it is expected that this will self correct going forward when an actual read is processed, resulting in a compensating negative/low (high) consumption for that period.

1.7.7 Traders are expected to continue to read meters during vacant periods and ensure any vacant consumption is billed and captured in their reporting.

1.8 Unbilled status

1.8.1 The report is to include all ICPs which the registry indicates as active against the trader during part or all of the month being reported, for all volume information types. For the unbilled ICPs the only detail fields required are ICP and status of UB, all other mandatory fields are to be left blank.

1.9 Final status

1.9.1 If it is known that the reading is at the end of the reporting period and it is final for that consumer, then this status may be used

Comment [C1]: Is this statement really needed?

1.10 Vacant status

1.10.1 To be used if there is currently no consumer registered to the site for the period reported, but the site is the responsibility of the trader according the registry.

1.11 Trading period and daylight savings time

1.11.1 The trading period is the half hour ending based on NZ daylight savings time giving 48 trading periods in the day, with the exception of the winter/summer and summer/winter transition days where there are 46 and 50 (respectively) trading periods in the day. This utilises the RM method as stated in the code for adjusting for NZDT.

Comment [C2]: Wording to be adjusted to reflect that of the code.

Key Data descriptions other information

1.12 Network tariff codes

1.12.1 Tariff codes should be those published by the distributor. A separate line should be used for each tariff, for example, an ICP with one single register meter with and single daily fixed charge will have two lines.

1.12.2

Protocols file formats

EIEP1 Detail consumption information

Sub-process:	**EIEP 1 Detail consumption information**

Process:	Trader/Distributor provides information
Participants:	Trader/Distributor
Rule references:	
Dependencies:	

Description:

This file is used by traders to provide information to distributors to support invoicing of fixed and variable line charges, and by distributors provide information to traders to support their invoice and reconciliation of line charges.
The trader to distributor file formats provide for 'as billed', as 'billed normalised' and 'normalised' consumption information, to be provided as appropriate to the distributor's pricing methodology and associated charging basis.

1. The parties will agree the file transport mechanism and destination address.
2. This report will be delivered by 1600 hours on the 5 business day unless otherwise agreed by parties.
3. Recipient of EIEP1files should be prepared to receive 'I', 'R' and 'X' files.
4. Network price/tariff codes are to be those published by the distributor. Each tariff will be on a separate line.
5. Distributor systems should be set up to deal with different reversal status e.g. the reversal of an original bill or the adjustment to a new bill.
6. The 'as billed" report to include consumption at ICP tariff level which has been extracted from the traders billing database.
7. 'Normalised' files are to include all ICPs indicated on the registry as active for all or part of the month for the relative trader.
8. Where codes are stipulated these must be the EA approved published codes or those determined in the registry and reconciliation functional specifications.
9. Information will be consistent with the terminology used in the EIEP data dictionary.

Data Intputs:

The information is to be provided as a comma delimited text file. Commas are therefore prohibited within fields. Where portions of a field require separation, a tilde character (~) should be used. If commas are present in the fields, use quotation marks to exclude them as separators, as per the DOS CSV format.

Matching of file names, code list values, etc, are to be case insensitive.

NHH or HH submission information.

Each data file will contain one header and one or many detail records.

Document includes XML tags for those participants that have the capacity use.

Attributes	**Format**	**Mandatory /optional**	**XML tag**	**Comments**
Header record type	Char 3	M	<RowType>	HDR – indicates the row is a header record type
File type	Char 7	M	<FileType>	If **'as billed'** consumption then ICPMMAB, ICPHHAB if **normalised** then ICPMMNM
Sender	Char 4	M	<Sender>	Party code of sender
Sent on behalf of	Char 4	M	<OnBehalfOf>	Party code of party on whose behalf consumption data is provided.
Recipient	Char 4	M	<Recipient>	Party code of recipient
Report run date	DD/MM/YYYY	M	<RunDate>	Date the report is run
Report run time	HH:MM:SS	M	<RunTime>	Time the report is run
File intiator unique identifier	NUM 12	M	<Identifier>	Number that uniquely identifies the report
Number of detail records	NUM 8	M	<RecordCount>	Total number of DET records in report
Report period start date	DD/MM/YYYY	M	<ReportStartDate>	Report run start date (inclusive)
Report period end date	DD/MM/YYYY	M	<ReportEndDate>	Report run end date (inclusive)
Report month	YYYYMM	M	<ReportMonth>	The month the report is run for.
Utility type	Char 1	M	<Utility>	G (Gas) or E (Electricity)

File status	Char 1	M	<FileStatus>	I (Initial) or R (Replacement) or X (replace only those ICPs contained in this replacement file)

Attributes	**Format**	**Mandatory /optional**	**XML tag**	**Comments**
Detail record type	Char 3	M	<RecordType>	DET – indicates the row is a detail record.
ICP	Char 15	M	<ICP>	ICP 15 character unique identifier
Start date	DD/MM/YYYY	M	<ICPStartDate>	Consumption or Fixed start date. Null if status equals UB
End date	DD/MM/YYYY	M	<ICPEndDate>	Consumption or Fixed end date. Null if status equals UB
Network price/tariff code description	Char 5	O	<TariffDescription>	Null unless required to further describe the price/tariff code. Null if status equals UB,
Unit Type	Char 25	M/O	<UnitType>	The type of unit in which data is supplied as per Unit of Measure type table. If null then default is KWh for Variable or Days for Fixed. Null if status equals UB. Mandatory unless status = UB.
Units	Num 15	M/O	<Units>	Unit quantity of Consumption (kWh), or Demand (kVAh/kW) or Capacity (kVa or KW), or kWh day, kWh night, or power factor or “1” where (multiplication value non unit reliant prices, such as daily or monthly prices or) any other measure applies. Null if status equals UB. Mandatory unless status = UB.
Status	Char 2	M	<ReadStatus>	**Normalised:** RD = Read, ES = Estimate, FL = Final, RV = Reversal, VA = Vacant **‘as billed’:** RD = Read, ES = Estimate, FL = Final, RV = Reversal, UB = Unbilled
Bus name	Char 8	M	<BusName>	Name of bus on which ICP is connected for the report period.

				Null if status equals UB
Distributor ID	Char 4	M	<Distributor>	Party code of distributor. Null if status equals UB
Spare		O	N/A	Empty
Network price/tariff code	Char 25	O	<TariffCode>	Network price/tariff code published by distributor. Null if status equals UB
Network price/tariff rate	Num 6.6	O	<TariffPrice>	Fixed daily rate or variable per unit rate ($ excl GST and net of prompt payment discount) . Null if status equals UB
Fixed/Variable	Char 1	O	<FixedVariable>	F (Fixed) or V (Variable) relates to figure above. Null if status equals UB
Chargeable days	Int 4	M/O	<ChargeableDays>	Number of days between start date and end date (both dates inclusive). Null if status equals UB
Network charge $	Num 7.2	O	<NetworkCharge>	$ excl GST and net of prompt payment discount. Null if status equals UB
Report month	YYYYMM	M	<ReportMonth>	The month the report is run for. Null if status equals UB
Customer no	Int 15	O	<CustomerNumber>	Trader's customer number. If not available then use null. Null if status equals UB
Consumer no	Int 15	O	<ConsumerNumber>	Trader's consumer number. Defined as the trader's unique ID that links the premises and the customer. If not available then use null. Null if status equals UB
Invoice date	DD/MM/YYYY	O	<InvoiceDate>	For trader to distributor file applicable to 'as billed' report only, Null if not required by distributor. For distributor to trader Invoice Date should be the date the Invoice to the trader was raised Null if status equals UB

Invoice number	Char 20	O	<InvoiceNumber>	For trader to distributor file applicable to 'as billed' report only, Null if status equals UB. or if not required by distributor. For distributor to trader file Invoice number should be the number on the invoice sent to the trader; can be Null.

Processing:
[delete box if no comments]

Data outputs:
The information is to be provided as a comma delimited text file. Commas are therefore prohibited within fields. Where portions of a field require separation, a tilde character (~) should be used. If commas are present in the fields, use quotation marks to exclude them as separators, as per the DOS CSV format. Matching of file names, code list values, etc, are to be case insensitive

EIEP2 Aggregate consumption information

Sub-process:	**EIEP 2 Aggregate consumption information**
Process:	Trader/Distributor provides information
Participants:	Trader/Distributor
Rule references:	
Dependencies:	

Description:
This file is used by traders to provide aggregate consumption information by price/tarrif code by grid exit point (GXP) or pricing region to distributors to support invoicing of fixed and variable line charges, and by distributors provide information to traders to support their invoice and reconciliation of line charges.

Business requirements:

10. The parties will agree the file transport mechanism and destination address.
11. This report will be delivered by 1600 hours on the 5 business day unless otherwise agreed by parties.
12. Recipient of EIEP2 files should be prepared to receive 'I', 'R' and 'X' files.
13. Network price/tariff codes are to be those published by the distributor.
14. The trader to distributor file formats provide for 'as billed', as 'billed normalised' and 'normalised' consumption information, to be provided as appropriate to the distributor's pricing methodology and associated charging basis.
15. The distributor to the trader file formats will support "as billed", 'as billed normalised' and RM normalised consumption depending on the initial type file provided from traders.
16. Distributor systems should be set up to deal with different reversal status.
17. Where distribution charges and transmission charges need to be shown separately they should be entered as separate records in the file with appropriate price/tariff codes.
18. Where codes are stipulated these must be the EA approved published codes or those determined in the registry and reconciliation functional specifications.
19. Information will be consistent with the terminology used in the EIEP data dictionary.

Data Intputs:

1. The information is to be provided as a comma delimited text file. Commas are therefore prohibited within fields. Where portions of a field require separation, a tilde character (~) should be used. If commas are present in the fields, use quotation marks to exclude them as separators, as per the DOS CSV format.
2. Matching of file names, code list values, etc, are to be case insensitive.
3. NHH or HH submission information.
4. Each data file will contain one header and one or many detail records.
5. Document includes XML tags for those participants that have the capacity use.

Attributes	**Format**	**Mandatory /optional**	**XML tag**	**Comments**
Header record type	Char 3	M	<RowType>	HDR – indicates the row is a header record type
File type	Char 7	M	<FileType>	If **'as billed'** consumption then SUMMMAB (mass market) or, SUMHHAB (half hour) If "**normalised"** then SUMMMNM If "**reconciliation**" then

				SUMRECN (for GXP based pricing)
Sender	Char 4	M	<Sender>	Party code of sender
Sent on behalf of	Char 4	M	<OnBehalfOf>	Party code of party on whose behalf consumption data is provided.
Recipient	Char 4	M	<Recipient>	Party code of recipient
Report run date	DD/MM/YYYY	M	<RunDate>	Date the report is run
Report run time	HH:MM:SS	M	<RunTime>	Time the report is run
File intiator unique identifier	NUM 12	M	<Identifier>	Number that uniquely identifies the report
Number of detail records	NUM 8	M	<RecordCount>	Total number of DET records in report
Report period start date	DD/MM/YYYY	M	<ReportStartDate>	Report run start date (inclusive)
Report period end date	DD/MM/YYYY	M	<ReportEndDate>	Report run end date (inclusive)
Report month	YYYYMM	M	<ReportMonth>	The month the report is run for.
Utility type	Char 1	M	<Utility>	G (Gas) or E (Electricity)
File status	Char 1	M	<FileStatus>	I (Initial) or R (Replacement) or X (replace only those ICPs contained in this replacement file)

Comment [C3]: Correct terminology in line with as billed normalised and normalised.

Attributes	**Format**	**Mandatory /optional**	**XML tag**	**Comments**
Detail record type	Char 3	M	<RecordType>	DET – indicates the row is a detail record.
Region	Char 20	M	<Region>	Name of GXP bus or region (group of GXPs). Use “ALL” when information represents a total for the network price/tariff.
Distributor ID	Char 4	M	<Distributor>	Party code of distributor

Network price/tariff code description	Char 25	O	<TariffDescription>	Network price/tariff code published by distributor
Network price tariff code description	Char 50	O	<TariffDescription>	Null unless required to further describe the price/tariff code. Null if status equals UB
Network price/tariff rate	Num 6.5	O	<TariffPrice>	Fixed daily rate or variable per unit rate ($ excl GST and net of prompt payment discount)
Fixed/Variable	Char 1	O	<FixedVariable>	F (Fixed) or V (Variable) relates to figure above.
Number in category	Num 4	O	<CountOfICP>	Count of ICPs in category
Chargeable days	Int 4	M	<ChargeableDays>	Number of days between Start date and End date (both dates inclusive)
Direction	Char 1	M	<Direction>	Indicates direction of flow of units. I indicates injection to the network (eg from embedded generation), X indicates extraction from the network (eg from normal load). Null implies X.
Peak charge date	DD/MM/YYYY	O	<PeakChargeDate>	Where relevant, indicates the date that the load for the peak charge is taken from.
Peak charge trading period	Int (2)	O	<PeakChargeTradingPeriod>	Where relevant, indicates the trading period (of the date above) that the load for the peak charge is taken from.
Unit Type	Char 25	M/O	<UnitType>	The type of unit in which data is supplied as per Unit of Measure type table. If null then default is KWh for Variable or Days for Fixed. Null if status equals UB. Mandatory unless status = UB.
Units	Num 15	M/O	<Units>	Unit quantity of Consumption (kWh), or Demand (kVAh/kW) or Capacity (kVa or KW), or kWh day, kWh night, or power factor or “1” where (multiplication value non unit reliant prices, such as daily or monthly prices or) any other measure applies. Null if status equals UB. Mandatory unless status = UB.

Comment [C4]: I moved this to line up with units.

Network charge $	Num 7.2	O	<NetworkCharge>	$ excl GST and net of prompt payment discount. Null if status equals UB
Report month	YYYYMM	M	<ReportMonth>	The month the report is run for. Null if status equals UB
Invoice number	Char 20	O	<InvoiceNumber>	Optional. Populate where the information supports an invoice to the Trader.

Processing:

The format provides for a number of different file types supporting either;

1. A summary total of an EIEP1 file (with matching total days, kWh, and dollars by GXP-tariff) where the file type corresponds to a total of the file types defined in EIEP 1 as follows;
   (a) File type SUMMMAB provides summary totals for an EIEP 1 ICPMMAB file
   (b) File type SUMHHAB provides summary totals for an EIEP 1 ICPHHAB file
   (c) File type SUMHHNN provides summary totals for an EIEP 1 ICPHHNN file.

   -OR-
2. A summary of chargeable delivery volumes derived from reconciled volumes (the basis of the derivation including adjustments for specific connections or losses is not shown in this report) as file type SUMRECN. This file type is used where the distributor has GXP peak demand and/or GXP volume based pricing.

Data outputs:

The information is to be provided as a comma delimited text file. Commas are therefore prohibited within fields. Where portions of a field require separation, a tilde character (~) should be used. If commas are present in the fields, use quotation marks to exclude them as separators, as per the DOS CSV format.

Matching of file names, code list values, etc, are to be case insensitive

EIEP 3: Half Hour metering information

EIEP 4: Customer information

EIEP 5: Service interruptions

EIEP 6: Fault and service requests

[insert file table]

Codes relative to this file

Job Status codes

It is acknowledged that there are many job related codes utilized within the Industry for the same type of job. It is not intended that this is an exhaustive list of the job types, job status or additional information codes required. The parties will need to agree which job codes they will utilize. The below tables contain codes which are currently widely used in the Industry which may provide a starting point

for those that do not already have legacy systems

EIEP 7: General installation status change

EIEP 8: Notification of network price category and tariff change

EIEP 9: Customer location address change notification

EIEP 10: Network and trust rebate or discount distributions

This EIEP is intended to provide information by traders to distributors or trusts for the purpose of network and trust rebate distributions. As the current process is to for parties to negotiate their individual requirements, and associated costs, on a commercial basis is seen as the preferable process, it has been considered that this EIEP is outside the industry information protocols.

EIEP 11: New Connections information

EIEP 12: Detail consumption information

Sub-process:	**EIEP 12 Detail consumption information**
Process:	Distributor provides information
Participants:	Trader/Distributor
Rule references:	
Dependencies:	

Description:
This file is used by distributors to provide pricing information to traders to support invoicing of fixed and variable line charges.

Business requirements:

20. The parties will agree the file transport mechanism and destination address.
21. This report will be delivered by the date agreed by parties as soon as practical after notification of price change.
22. Network price/tariff codes are to be those to be published by the distributor.
23. Where codes are stipulated these must be the EA approved published codes or those determined in the registry and reconciliation functional specifications.
24. Information will be consistent with the terminology used in the EIEP data dictionary.

Data Intputs:

The information is to be provided as a comma delimited text file. Commas are therefore prohibited within fields. Where portions of a field require separation, a tilde character (~) should be used. If commas are present in the fields, use quotation marks to exclude them as separators, as per the DOS CSV format.

Matching of file names, code list values, etc, are to be case insensitive.

Each data file will contain one header and one or many detail records.

Document includes XML tags for those participants that have the capacity use.

Attributes	**Format**	**Mandatory /optional**	**XML tag**	**Comments**
Header record type	Char 3	M	<RowType>	HDR – indicates the row is a header record type
File type	Char 7	M	<FileType>	Pricing Information - PRICE
Sender	Char 4	M	<Sender>	Party code of sender
Sent on behalf of	Char 4	M	<OnBehalfOf>	Party code of party on whose behalf consumption data is provided.
Recipient	Char 4	M	<Recipient>	Party code of recipient
Report run date	DD/MM/YYYY	M	<RunDate>	Date the report is run
Report run time	HH:MM:SS	M	<RunTime>	Time the report is run

File initiator unique identifier	NUM 12	M	<Identifier>	Number that uniquely identifies the report
Number of detail records	NUM 8	M	<RecordCount>	Total number of DET records in report
Effective start date	DD/MM/YYYY	M	<EffectiveStartDate>	Date that the price changes take effect

Attributes	**Format**	**Mandatory /optional**	**XML tag**	**Comments**
Detail record type	Char 3	M	<RecordType>	DET – indicates the row is a detail record.
Registry Pricing Code	Char 7	M	<Pricing Code>	Pricing code identifier
Fixed / Variable	Char(1)	M	<Fxd_Var>	Identifies a data row as either Fixed or Variable
Register Content Code	Char(6)	M/O	<RegisterContent>	Identifies the meter content of each data row
Hours of Availability	Num(2)	M/O	<RegisterHours>	The available supply hours for each meter content code
Meter Register Code	Char(4)	M	<RegisterCode>	Register code used by Distributors
Tariff Code	Char(12)	M	<Tariff>	The specific tariff code for that load group and meter content code
Tariff Rate	Num(6.6)	M	<Rate>	The specific tariff rate in dollars per unit
Tariff Start Date	DD/MM/YYYY	M	<StartDate>	The start date of the new tariff
Tariff End Date	DD/MM/YYYY	M	<EndDate>	The end date of the new tariff

Processing:

[delete box if no comments]

Data outputs:

The information is to be provided as a comma delimited text file. Commas are therefore prohibited within fields. Where portions of a field require separation, a tilde character (~) should be used. If commas are present in the fields, use quotation marks to exclude them as separators, as per the DOS CSV format.

Matching of file names, code list values, etc, are to be case insensitive

Current valid codes

[insert disconnections codes etc]

Comment [C5]: How much of the registry functional specs and AMI functional spec codes should be duplicated in this document?

Register content codes

Code	Description
D	Day – daytime only, irrespective of whether or not there is any controlled load on the register
N	Night – night-time only, irrespective of whether or not there is any controlled load on the register
EG	Embedded generation
DC	Day register for a fully controlled meter
NC	Night register for a fully controlled meter
CN	Controlled – all load on the register is subject to control via LineCo
UN	Uncontrolled – no load on the register is subject to control via the LineCo ripple relay signal
IN	Inclusive – load on the register is a combination of controlled and uncontrolled loads
KD	kW demand – KW MDI
AD	kVA demand – KVA MDI
RH	KVArh – reactive meter register
AH	KVAh – cumulative KVA register
S	Summer – records consumption during summer
W	Winter – records consumption during winter
WD	Weekday – records consumption during weekdays, ie Mon-Fri
WE	Weekend – records consumption during weekends
SWD	Summer weekday – records consumption during summer weekdays, ie Mon-Fri
DPK	Triple saver peak (0700-1100, 1700-2100)
DOP	Triple saver off peak (1100-1700, 2100-2300)
SWDD	Summer weekday day – records day consumption during summer weekdays
SWDN	Summer weekday night – records night consumption during summer weekdays
SWE	Summer weekend – records consumption during summer weekends, ie Sat-Sun
SWED	Summer weekend day – records day consumption during summer weekends
SWEN	Summer weekend night – records night consumption during summer weekends
WWD	Winter weekday – records consumption during winter weekdays, ie Mon-Fri
WWDD	Winter weekday day – records day consumption during winter weekdays
WWDN	Winter weekday night – records night consumption during winter weekdays
WWE	Winter weekend – records consumption during winter weekends, ie Sat-Sun
WWED	Winter weekend day – records day consumption during winter weekends

Code	Description
WWEN	Winter weekend night – records night consumption during winter weekends
SWDPK	Standard 3 Rate Weekday Peak Summer (0700-1100,1700-2100), 3 step rate
WWDPK	Standard 3 Rate Weekday Peak Winter (0700-1100,1700-2100), 3 step rate
WDOP	Standard 3 Rate Weekday Off Peak (1100-1700, 2100-2300) & Weekend Off Peak (0700-2300)

Meter location codes

Code	Description	Code	Description	Code	Description
0	No ML code	**IN**	INSIDE	**RF**	RH ON FRO
BA	BASEMENT	**INP**	IN PORCH	**RG**	RH ON GAR
BD	BACK DOOR	**IO**	INSIDE OFFICE	**RM**	REMOTE MI
BG	BACK OF GARAGE	**IP**	IN PUMP SHED	**RO**	REAR OF O
BO	BOILER ROOM	**IR**	INSIDE REAR	**RP**	RIGHT POR
BP	BACK PORCH	**IS**	INSIDE STORE	**RS**	REAR SHEI
BR	IN BEDROOM	**ISD**	IN SHED	**RT**	READ THRU
BS	BACK OF SHED	**IT**	IN TRANSFORMER	**RU**	ON REAR U
BW	BACK WALL	**IW**	IN WORKSHOP	**RW**	RIGHT WAL
CM	CENTRAL MTR	**LA**	LAUNDRY	**SA**	SAME
CP	CAR PORT	**LB**	LEFT BACK	**SB**	STABLE
CS	DAIRY SHED	**LF**	LEFT ON FRONT	**SH**	SHED
CT	CELL TOWER	**LG**	LH ON GARAGE	**SQ**	SHEARERS QUARTERS
DE	INST DISCON@ POLE	**LP**	LEFT PORCH	**SR**	IN SWITCH I
DR	DRIVEWAY SIDE	**LR**	IN LUNCH ROOM	**SS**	WOOL SHEI
DS	DEER SHED	**LS**	LEFT SHED	**ST**	SUB STATIC
FB	UNDER FRONT BALCO	**LW**	LEFT WALL	**TR**	TRANSFOR
FD	FRONT DOOR	**MC**	IN CUBICLE	**TS**	IN TEMP SU
FF	FIRST FLOOR	**ME**	MAIN ENTRANCE	**UP**	UPSTAIRS
FG	FRONT GATE	**ML**	MULTIPLE LOCATION	**US**	UNDER STA
FO	FOYER	**MM**	MOTOR ROOM	**UT**	UNDER TRE
FP	FRONT PORCH	**MR**	UP RIGHT OF WAY	**WS**	WORKSHOI
FS	IMPLMENT SHED	**MT**	IN MEN'S TOILET		
FW	FRONT WALL	**MX**	METER ROOM		
GF	GROUND FLOOR	**NM**	NOT METERED		
GH	GLASS HOUSE	**OC**	OUTSIDE CUPBOARD		
GO	GO TO OFFICE	**OF**	ON FENCE		
GW	GARAGE WALL	**OH**	ON HOUSE		
IB	INSIDE BACK DOOR	**OMB**	ON MAIN SW/BOARD		
IC	INSIDE IN CUPBOARD	**OP**	ON PUMP SHED		
ID	IN DINING ROOM	**PB**	POLE BOX		
IF	INSIDE FRONT DOOR	**PD**	PUMP IN OLD DAIRY		
IG	INSIDE GARAGE	**PF**	PLYNTH ON FENCE		
IH	INSIDE HALL	**PL**	IN PLYNTH		
IK	INSIDE KITCHEN	**PM**	PUMP		
IL	INSIDE LIVING ROOM	**PS**	PACKSHED		
		RB	RIGHT BACK		

Appendix 1 Data dictionary