

BP8 # 1121942
M-00960890F0015

February 2, 2017

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, Pennsylvania 17120

Dear Ms. Chiavetta:

As per order of the Pennsylvania Public Utility Commission, Docket Number M-00960890F.0015, find within version 2.8 with revision and clarification to the February 15, 2012 version of the ***Revised Plan for Electronic Data Exchange Standards for Electric Deregulation in The Commonwealth of Pennsylvania*** ("Revised Plan"), as prepared by the Electronic Data Exchange Working Group ("EDEWG").

These revisions and clarifications reflect the high level of commitment expended by EDC's and EGS's who devote substantial time and resources complying with the requests of the Commission and meeting the needs of Customer Choice in Pennsylvania.

The changes in this document encompass the Commission's Orders and Secretarial Letters issued with respect to the Revised Plan as well as the revisions agreed upon by EDEWG membership.

EDEWG has publicly posted via the EDEWG List Server interim drafts of this version of the Revised Plan.

EDEWG appreciates the support and commitment of its members and the Commission in developing and maintaining data exchange standards in the Commonwealth.

Sincerely,

Christine Hughey
Christine Hughey, EDEWG EGS Co-chair
Sperian Energy

Susan Scheetz
Susan Scheetz, EDEWG EDC Co-chair
PPL Electric Utilities

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Electronic Data Exchange Standards for Electric Deregulation in The Commonwealth of Pennsylvania

Revised Plan v2.8

February 2, 2017

**By Order of the
Pennsylvania Public Utility Commission**

(Docket No. M-00960890, F.0015)

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PA PUBLIC UTILITY COMMISSION
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Prepared by the
Electronic Data Exchange Working Group
(EDEWG)

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0. Document History

0. Document History

Version 2.8 Notes

Added Seamless Move transaction to the 814 transaction set.
Removed reference to the 5-day waiting period.
Removed Rescission since there is no rescission any longer with accelerated switching.
Added Seamless Move to the Glossary of Terms.
Added the Seamless Move steps to section B.
Added notation under Enrollment section about accelerated 3 business day switching and Instant Connect.
Added Web Portal Historical Interval Data solution information to section Non-EDI Data Requirements section

Version 2.7 Notes

On February 15, 2012, the EDEWG submitted the Version 2.6 of the Revised Plan for Electronic Data Exchange Standards for Electric Deregulation in the Commonwealth of Pennsylvania.

Payment Scenarios. Removed references to 'Assumption of Receivables' and the 'Duquesne POR pilot' and replaced with 'Purchase of Receivables' (POR) section.

Transaction Sets Used by EDEWG Standards. Removed references to the 650 Meter Information transaction which was never adopted by PA. Added the 867 Historical Interval Usage transaction and clarified the 814 Historical Usage request.

EDI Transaction Timelines. Removed the 650 Meter Information transaction and clarified the timeline for the 820 Remittance/Payment Advice transaction.

Customer confirmation period. All references to the 10 day confirmation period have been changed to 5 days.

Glossary of EDEWG and EDI terms. Several items were updated/removed for clarification and consistency.

Customer Billing Scenarios. Provided clarification to the transactions sent for Interval-metered Customers. Added paragraph detailing the requirement for the metering party to cancel/restate previously issued 867 Usage data.

Customer Disputes. Removed section as there are no EDEWG standards in place. Each EDC and the PUC have processes in place to address customer disputes.

All web links have been updated accordingly

0. Document History

Version 2.6 Notes

On June 30, 2008, the EDEWG submitted the Version 2.6 of the Revised Plan for Electronic Data Exchange Standards for Electric Deregulation in the Commonwealth of Pennsylvania.

Re-Certification. In response to queries by market participants, EDEWG clarified its policies regarding certification and re-certification.

Change Control. The Change Control process has been modified to mirror the more-accurate and more-current Change Control process used in New Jersey

Payment and Customer Billing Scenarios. A table was added to clarify the Payment scenarios, and the Customer Billing scenarios, including cross-references between Section 2 and Section 3.

Metering. Early efforts to define metering standards in Pennsylvania were never completed, and as a result there are no EDEWG metering standards. References to these metering scenarios – including unbundled metering, competitive metering, and EGS meter reading – have been either removed or moved to an Appendix B. Each year EDEWG will revisit the need for competitive metering business rules and transaction standards.

Third-Party Billing. EDEWG standards support both billing by the EDC and the EGS. While some discussions were held regarding third-party billing (neither EDC nor EGS sends bills), no EDEWG standards were ever developed for this scenario. References to these scenarios have been removed. Each year EDEWG will revisit the need for third-party billing business rules and transaction standards.

Utility Industry Group (UIG). The Utility Industry Group played a major role in the early formulation of EDEWG transactions. The UIG promoted implementation conventions for the use of ASC X12 standards as the recommended method of EDI, in order to promote the growth and timely implementation of EDI within the utility industry. The UIG represented the Edison Electric Institute (EEI) on the ASC X12 committee to facilitate implementation of EDI in the utility industry. The UIG did not set standards. Several attempts to contact that organization indicate that it no longer is active. Also, other organizations like the North American Energy Standards Board (NAESB) have taken up similar charters. All references to UIG have been removed.

First Regional EDI (FREDI). FREDI played a role in the formulation of regional standards from 2001 through 2004, including regulatory, utility, supplier, and service provider representation from the states of PA, DE, DC, MD, NJ, OH, and VA. This organization no longer functions, and other organizations like the North American Energy Standards Board (NAESB) have taken up their charter. All references to FREDI have been removed.

NAESB. The North American Energy Standards Board is the current standard-bearer for retail and wholesale electric and natural gas marketplaces. EDEWG uses NAESB standards for the

0. Document History

Internet Plan. Where appropriate and where no substantive changes occur to EDEWG standards, terms were changed to mirror the terms used by NAESB. These include:

- Billing Party (was 'billing party')
- Non-Billing Party (was non billing party)
- AOR (was 'making the party whole')
- Pay-As-You-Get-Paid (was 'pay as you get paid')

Duquesne AOR Market. A section was added that summarizes the market changes Duquesne rolled out 1/1/08.

Consistency. The document was reviewed and edited for consistency of terms (e.g. 'EGS' versus 'supplier'). Several terms were added to the glossary, which now comprises both EDEWG and EDI terms.

Web links. All web links have been moved into Appendix A.

Section 1	<ul style="list-style-type: none"> • Added notes about Metering and Third Party Billing standards • Move 'Issues' to this section
Section 2	<ul style="list-style-type: none"> • Move EDI transaction timing to this section
Section 3	<ul style="list-style-type: none"> • Eliminated all 'EGS Meter read' options • Move web links to Appendix A • Merged section I 'Multiple Energy Coordinator' with section J 'Energy Scheduling and Reconciliation'; • Renamed K to J, L to K
Section 4	<ul style="list-style-type: none"> • Updated narrative to reflect current state
Section 5	<ul style="list-style-type: none"> • No material change
Section 6	<ul style="list-style-type: none"> • Added re-certification plan here
Section 7	<ul style="list-style-type: none"> • Refreshed EDEWG Operations & Continuation
Section 8	<ul style="list-style-type: none"> • Now Section 7 • Revised to mirror NJ Change Control plan
Appendix	<ul style="list-style-type: none"> • Added Appendix A Web Links • Added Appendix B for Competitive Metering •

Version 2.5 Notes

On February 27, 2005, the EDEWG submitted the Version 2.5 of the Revised Plan for Electronic Data Exchange Standards for Electric Deregulation in the Commonwealth of Pennsylvania. As a result of the EDEWG 2003/2004 Internet ET/EDM report, section 4 has been revised to reflect the correct references.

Section 4	Revised section to reference the 2003/2004 Internet ET/EDM report
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0. Document History

Version 2.4 Notes

On August 10, 2001, the EDEWG submitted the Version 2.4 of the Revised Plan for Electronic Data Exchange Standards for Electric Deregulation in the Commonwealth of Pennsylvania. Revisions have been made to document data exchanges necessary to support EGS Consolidated Billing, to document the use of multiple scheduling coordinators, to document use of the Internet to exchange EDI data, and to improve clarity, where necessary.

Section 1	No material changes
Section 2	<ul style="list-style-type: none"> • Clarified Unbundled Billing and Metering transactions • Add clarification of 568 transaction
Section 3	<ul style="list-style-type: none"> • Clarified Unbundled Billing and Metering transactions • Ensure Unbundled Billing flows are reflective of process • Added section for Multiple Scheduling Coordinator • Correct responsibility on sending of 568 • Correct responsibility for sending of 248
Section 4	Revised section to refer to Internet EDI plan.
Section 5	No material changes
Section 6	No material changes
Section 7	Split section into ongoing EDEWG responsibilities and specific future items.
Section 8	Made several changes to more accurately reflect Change Control process being used. Add references to FREDI.

Version 2.3 Notes

On November 22, 1999, the EDEWG submitted the Version 2.3 of the Revised Plan for Electronic Data Exchange Standards for Electric Deregulation in the Commonwealth of Pennsylvania. Specific revisions to Version 2.2 of the Revised Plan were ordered at Docket M-00960890F.0015 on March 18, 1999; June 10, 1999; and October 15, 1999. Additional revisions have been made to improve clarity, where necessary.

Section 1	No material changes
Section 2	<ul style="list-style-type: none"> • Delete 814 volunteer scenario from 814 transaction
Section 3	<ul style="list-style-type: none"> • Deleted 814 volunteer transaction • Updated 867IU language to be consistent with requirements of the 10/17/1998 Order. • Updated 568 language to be consistent with requirements of the 3/18/1999 Order. • Added language to specify the use of the 824 transaction • Added language on the use of the Web Site Interval Data Format
Section 4	Revised language to reflect implementation of internet transmission protocols per the Commission 6/10/1999 and 10/15/1999 Orders.
Section 5	No material changes

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Section 6	No material changes
Section 7	<ul style="list-style-type: none">• Timetables have been updated• Language was added to the open items list to reflect the Commission Order relative to communications when multiple EGSs serving a single customer.
Section 8	No material changes

Version 2.2 Notes

On December 11, 1998, the EDEWG submitted the Version 2.2 of the Revised Plan for Electronic Data Exchange Standards for Electric Deregulation in the Commonwealth of Pennsylvania.

1. Business Relationships

1. Business Relationships

The relationships described herein are intended to serve as a general guide for the purpose of establishing information standards. In order to establish a set of mutually agreed upon standards, there first must be a mutual understanding of the business relationships to which the standards will be applied in accordance with the Commission's orders. The following represents the current understanding of these relationships.

For the purposes of this document, the term 'enrollment' is used for the transaction involving a Customer signing up or canceling retail electric supply services from an Electric Generation Supplier (EGS).

Market Participant Responsibilities

Customers will:

- Give authorization for enrollment.
- Give authorization to restrict the release of historical usage information.
- Be responsible for evaluating and securing services from EGS.
- Be responsible for notifying the EGS, Electric Distribution Company (EDC), and/or Public Utility Commission (PUC or Commission) for any concerns regarding energy supply.
- Notify EDC of move or disconnect.

Electric Generation Suppliers (EGS's) will:

- Obtain authorization from Customers for Customer enrollment and release of restricted customer information.
- Exchange information electronically with EDC for enrollment, changes or discontinuance of service, etc.
- Render bills for service when a Customer selects separate bills.
- Provide the EDC with the necessary billing information when the Customer selects one bill.
- Resolve Customer payment problems for relevant EGS charges.
- Maintain records on Customer payments and fees.
- Participate in electronic systems testing as defined herein.
- Provide a point of contact to facilitate business and technical communications.
- Abide by applicable rules issued by the Commission.
- Implement and maintain data transmission standards as recommended within this document.
- Render bills for the EDC as specified in supplier coordination tariffs where EGS consolidated billing is provided.
- Provide Customer payment data and amounts billed on behalf of the EDC to the EDC when EGS provides consolidated billing unless an exception was granted by the Commission.

1. Business Relationships

- Forward funds collected on behalf of the EDC to the EDC as specified in the EDC supplier coordination tariff and in accordance with Commission orders.
- Forward funds to the EDC according to Commission-prescribed payment rules when the EGS is the Billing Party in the Supplier Consolidated Billing scenario.
- Provide beginning and ending meter readings as well as kilowatt-hour consumption, and demand information (if appropriate) to the EDC when the EGS is the meter reading entity.
- Communicate and resolve Customer disputes.

Electric Distribution Companies (EDC's) will:

- Provide Customers with the Commission's list of EGS's as per Commission orders.
- Provide Customer information to EGS's when not restricted by Customer.
- Exchange information electronically with EGS for enrollment, changes or discontinuance of service, etc.
- Maintain an Internet site for Customer choice information for access by licensed EGS's.
- Release rate class load profiles to EGS's where available.
- Provide billing information to EGS's.
- Provide Customers with the bill option that has been communicated by the EGS's.
- Provide a point of contact to facilitate business and technical communications.
- Implement and maintain data transmission standards as recommended within this document.
- Provide beginning and ending meter readings as well as kilowatt-hour consumption, and demand information (if appropriate) to the EGS.
- Provide Customer payment data and amounts billed on behalf of the EGS to the EGS unless an exception was granted by the Commission.
- Forward funds collected on behalf of the EGS to the EGS in accordance with each EDC supplier coordination tariff.
- Forward funds to the EGS according to Commission-approved tariff payment rules when the EDC is the Billing Party in Consolidated Billing scenarios,
- Communicate and resolve Customer disputes.

Customer Billing Scenarios

EDEWG standards support 4 billing scenarios:

Billing Scenario	# Bills Received By Customer	Sends Bill	Calculates EGS Charges	Calculates EDC Charges
BS1: EDC Consolidated Billing/Rate-Ready	1	EDC	EDC	EDC
BS2: EDC Consolidated Billing/Bill-Ready	1	EDC	EGS	EDC
BS3: Dual Billing	2	EDC and EGS	EGS	EDC
BS4: EGS Consolidated Billing/Bill-Ready	1	EGS	EGS	EDC

1. Business Relationships

Payment Scenarios

EDEWG standards support the following Billing-Party to Non-Billing Party payment scenarios:

Payment Scenario	Description
Pay-As-You-Get-Paid (PAYGP)	The Billing Party pays the Non-Billing Party as the Billing Party gets paid by the Customer, using a payment allocation algorithm for partial payment.
Purchase Of Receivables (POR)	The Billing Party pays the Non-Billing Party regardless of payment by the Customer.

*NOTE: EDC divides accounts into PAYGP and POR based on rate class.

Pay-As-You-Get-Paid Payment (PAYGP) Scenario

The PAYGP payment scenario was introduced in the original PA marketplace in 1998. Rules of PAYGP:

- Each PAYGP EDC applies PAYGP payment scenarios to all accounts in their territory
- Each PAYGP EDC provides 568 payment notifications to keep an EGS informed of actual Customer payment history. An EDC may have a waiver from the PUC eliminating need for EDC to send a 568.
- Each PAYGP EDC charges a 0% 'discount off receivables', and does not send discount information on payment transactions.
- Each PAYGP EDC may terminate BS1 or BS2 billing services for a Customer, switching the Customer to BS3 Dual Bill scenario after 90 days in arrears.
- PAYGP follows PUC rules for applying partial payments.

Purchase of Receivables (POR) Scenario

The POR payment scenario was introduced in the PA marketplace in 2009. Rules of POR::

- EDC charges a rate class based discount to EGS receivables.
- Discount rates and remittance schedules are based upon EDC specific tariff.
- EDC sends with payment the amount actually paid to the EGS; the amount invoiced and placed on bill for EGS; and the discount amount.
- EDC may change a POR Customer to BS3 Dual Bill after 90 days in arrears according to their ESP Coordination Tariff.
- If an account service is terminated for non-payment, but service is restored before the account is closed for non-payment, then the EGS of record will retain the customer for active service period. (assuming no EGS activity to the contrary...i.e. drop)

1. Business Relationships

Exclusion of Third-Party Metering and Billing

While Competitive Metering is required by PA code, efforts to define third-party metering standards (e.g. Metering Agent, unbundled metering, competitive metering, and EGS meter reading) in Pennsylvania were never completed. EDEWG standards do not currently support these business scenarios.

EDEWG standards support dual billing and consolidated billing by both the EDC and the EGS. While some discussions were held regarding a third-party billing option, no EDEWG standards were ever developed for these business scenarios. If you are interested in pursuing these options, you should (a) review the existing high-level business processes defined in Appendix B, and/or (b) contact the Commission.

Issues and Exceptions

EDEWG transactions are intended to resolve most questions about the anticipated business relationships. However, there are many unusual and irregular situations that will occur in the normal course of business. In those instances where standard transactions do not resolve a specific situation, the business and/or business contact provided by the EDC/EGS and/or the Customer will be contacted directly in an effort to resolve the situation. Furthermore, it is recognized that unanticipated situations may surface as Customer choice progresses. In an ongoing effort to resolve any issue that may arise, the EDEWG has committed to continue their efforts (see Section 7).

2. EDI Concepts and EDEWG Standard Formats

EDEWG establishes practical, operational, electronic standards for the transaction of business between EDC's and EGS's for the implementation and operations of Customer Choice in Pennsylvania.

EDEWG adopted ASC X12 Electronic Data Interchange (EDI) Standards in 1998 after a careful review of options available. Implementation Guides were developed for each transaction set adopted and can be found on the Pennsylvania Public Utility Commission's Web Site (see Appendix A).

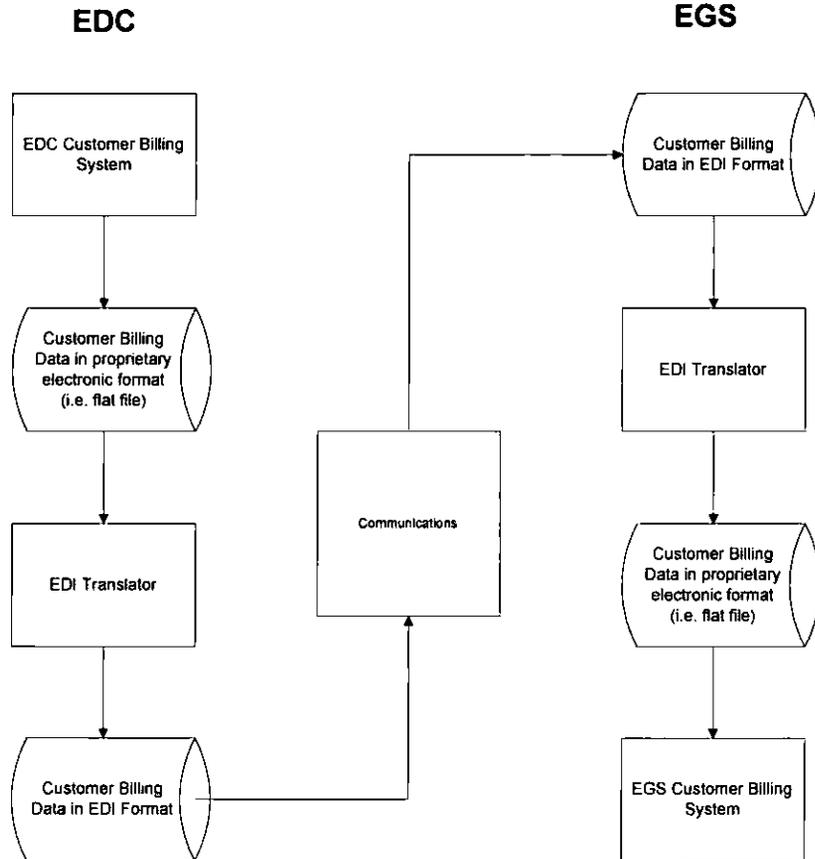
What is ASC X12?

The American National Standards Institute (ANSI) chartered the Accredited Standards Committee (ASC) X12 to develop uniform standards for inter-industry electronic interchange of business transactions. ASC X12 develops, maintains, interprets, publishes and promotes the proper use of American National Electronic Data Interchange Standards. The X12 standards facilitate transactions by establishing a common, uniform business language for computers to communicate.

What is EDI?

Electronic Data Interchange (EDI) enables computer-to-computer exchange of business documents in standard, machine-readable formats. The following diagram depicts a simple example of a one-way exchange using EDI for Customer billing information:

2. EDI Concepts and EDEWG Standard Formats



The use of standard formats allows all parties to develop the business processes and automated systems needed to facilitate the exchange of business information in the restructured electric industry.

Proven benefits of EDI include:

- Uniform communications with trading partners
- Reduced errors, improved error detection
- Better audit-ability and control
- More timely communications
- Rapid exchange of business information
- Reduced paperwork and associated costs
- One time data entry
- On-line data storage
- Faster management reporting
- Reduced clerical workload

2. EDI Concepts and EDEWG Standard Formats

Transaction Sets Used by EDEWG Standards

'Transaction Set' is an EDI term for an electronic business document, such as an invoice. There are nine EDI transaction sets used to transact business in Pennsylvania for Customer Choice. The table below provides a list of X12 transaction used by EDEWG, and the implementation guides available from EDEWG.

Transaction Set	EDEWG Implementation Guides
248 Account Assignment/Inquiry and Service/Status	<ul style="list-style-type: none"> • Write-Offs: IG248
568 Contract Payment Management Report	<ul style="list-style-type: none"> • Collections: IG568
810 Invoice	<ul style="list-style-type: none"> • EDC Consolidated Billing: IG810EDC • EGS Consolidated Billing: IG810ESP
814 General Request, Response or Confirmation	<ul style="list-style-type: none"> • Enrollment: IG814E • Customer Maintenance (Change): IG814C • Drop: IG814D • Reinstatement: IG814R • Customer Information/Historical Usage: IG814E(HU/HI request inside 814E IG • Advance Drop Notice: IG814ND • Seamless Move IG814M
820 Payment Order/Remittance Advice	<ul style="list-style-type: none"> • Payment: IG820
824 Application Advice	<ul style="list-style-type: none"> • Application Advice: IG824
867 Product Transfer and Resale Report	<ul style="list-style-type: none"> • Monthly and Summarized Interval: IG867MU • Interval Detail: IG867IU • Customer Information/Historical Usage: IG867HU • Customer Information/Historical Interval Usage: IG867HI
997 Functional Acknowledgment	No Implementation Guide

248 Account Assignment/Inquiry and Service/Status

ASC X12 definition: "The transaction set can be used for two-way, multi-transactional purposes of assigning accounts for collection, reporting status inquiries and inquiry responses and to update accounts between entities."

This transaction set is used by the Billing Party to notify the party on whose behalf they are collecting that they will no longer pursue remittance activities for the Customer's outstanding EGS charges.

The 248 is only used in the PAYGP payment scenario. The 248 transaction is not applicable to POR scenario.

2. EDI Concepts and EDEWG Standard Formats

568 Contract Payment Management Report

ASC X12 definition: "This transaction set can be used to enable the transmission of a management report to provide the details of payments and collections made against funds obligated on contracts, orders, and other services."

The Billing Party sends a 568 to the party on whose behalf they are collecting payment to detail how much was paid by the Customer. The 568 contains remittance/financial information and credit/credit adjustment information by account. The EDC may request a waiver from the Commission for this transaction.

The 568 is used in the following billing scenarios:

- BS1: EDC Consolidated Billing/Rate-Ready
- BS2: EDC Consolidated Billing/Bill-Ready
- BS4: EGS Consolidated Billing/Bill-Ready

810 Invoice – Between EGS and EDC

ASC X12 definition: "The transaction set can be used to provide for customary and established business and industry practice relative to the billing for goods and services provided."

The 810 provides applicable monthly usage and billing components, and charges used to generate the charges for the Non-Billing Party on the Customer invoice.

The 810 is used in the following billing scenarios:

- BS1: EDC Consolidated Billing/Rate-Ready
- BS2: EDC Consolidated Billing/Bill-Ready
- BS4: EGS Consolidated Billing/Bill-Ready

The 810 is not necessary in Dual Billing since each party is invoicing the Customer separately.

2. EDI Concepts and EDEWG Standard Formats

814 General Request, Response or Confirmation

ASC X12 definition: "This standard can be used to request actions to be performed, to respond to a request for actions to be performed or to confirm information related to actions performed."

The 814 transaction is used to communicate enrollment information in addition to Customer/EGS relationship information between the EDC and the EGS. Responses to 814 requests initiated by the EGS are mandatory, whereas 814 responses to EDC initiated 814s are optional as noted in Change Control 118.

EDEWG 814 standards address the following scenarios:

A. Enrollment

1. Customer Contacts EGS to Initiate EGS Selection
2. Customer Contacts New EGS to Switch EGS's
3. Customer Contacts EDC to Drop an EGS
4. Customer Contacts EGS to Drop EGS
5. EGS Drops Customer

B. Customer Account Maintenance

1. Customer Contacts EDC to Relocate – Seamless Move
2. Customer Data Changes from EDC
3. Customer Data Changes from EGS

C. Historical Usage / Historical Interval Usage Requests

1. EGS Request Historical Usage for an Eligible Customer prior to Enrollment (EGS Selection)
2. EGS Request Historical Usage on an 814 Enrollment Request (EGS Selection)
3. EGS Requests Historical Usage after Enrollment (EGS Selection)

D. Advanced Notice of Potential Drops (where required by PUC Order)

1. EGS Provides Notice of Potential Drop to EDC
2. EDC Provides Notice of Potential Drop to EGS

2. EDI Concepts and EDEWG Standard Formats

3. 820 Payment Order/Remittance Advice

ASC X12 definition: "The transaction set can be used to make a payment, send a remittance advice, or make a payment and send a remittance advice. This transaction set can be an order to a financial institution to make a payment to a payee. It can also be a remittance advice identifying the detail needed to perform cash application to the payee's accounts receivable system. The remittance advice can go directly from payer to payee, through a financial institution, or through a third party agent."

The Billing Party sends an 820 to the party on whose behalf they are collecting payment. The 820 contains remittance/financial information and credit/credit adjustment information by account, with funds transfers as defined in the EDC supplier coordination tariff and/or contract.

The 820 is used in the following billing scenarios:

- BS1: EDC Consolidated Billing/Rate-Ready
- BS2: EDC Consolidated Billing/Bill-Ready
- BS4: EGS Consolidated Billing/Bill-Ready

824 Application Advice

ASC X12 definition: "The transaction set can be used to provide the ability to report the results of an application system's data content edits of transaction sets. The results of editing transaction sets can be reported at the functional group and transaction set level, in either coded or free-form format. It is designed to accommodate the business need of reporting acceptance, rejection or acceptance with change of any transaction set."

This transaction set is used to automate the communication of application problems occurring with the rejection of EDI transactions other than the 814s.

- Rejection of 810 Rate Ready and 810 Bill Ready
- Rejection of 867 MU and 867 IU
- Rejection of 867 HU and 867HI
- Rejection of 248 Write Off
- Rejection of 568 Collections
- Rejection of 820 Payment transaction

867 Product Transfer and Resale Report

ASC X12 definition: "The transaction set can be used to: (1) report information about product that has been transferred from one location to another, (2) report sales of product from one or more locations to an end customer, or (3) report sales of a product from one or more locations to an end customer, and demand beyond actual sales (lost orders). Report may be issued by either buyer or seller."

The 867 provides Customer usage information needed for billing for all Customers regardless of the billing scenario. This transaction set also communicates monthly or totalized historical usage between the EDC, and EGS.

The following scenarios have been addressed:

1. EDC provides usage history upon request to EGS

2. EDI Concepts and EDEWG Standard Formats

2. EDC provides usage information (a) as captured from the meter for both monthly-metered and interval-metered data, and (b) unmetered usage for non-metered accounts (c) monthly net metered accounts

997 Functional Acknowledgment

ASC X12 definition: "The transaction set can be used to define the control structures for a set of acknowledgments to indicate the results of the syntactical analysis of the electronically encoded documents. The encoded documents are the transaction sets, which are grouped in functional groups, used in defining transactions for business data interchange. This standard does not cover the semantic meaning of the information encoded in the transaction sets."

The Functional Acknowledgment provides for verification of receipt of data and reports the extent to which the syntax complies with the standards. This, in addition to the archiving of all EDI transmissions, provides the audit trail necessary to verify receipt of all EDI transmissions by EGS and EDC. This information may be used to resolve Customer, EDC, or EGS inquiries or disputes.

EDI Transaction Timelines

The following represents the maximum allowable time standards that an EDC or EGS has to respond to any EDI transmission.

- 997 within 1 business day or receipt of transmission
- 810 within 3 business days from billing process
- 814 within 1 business day of receipt
- 867 Historical Usage within 1 business day (subject to data availability) of receipt of request
- 867 Interval Usage within 2 business days of meter reading (or according to EDC supplier coordination tariff if different)
- 568 within 1 business day from payment receipt
- 820 within 1 business day from EDC payment to EGS (payment schedules as defined by EDC tariff)
- 248 within 1 business day from write-off
- 867 Monthly Usage within 1 business day of meter reading (or according to EDC supplier coordination tariff if different)
- 824 within 1 business day of receipt of rejected non-814 transaction

2. EDI Concepts and EDEWG Standard Formats

Glossary of EDEWG and EDI Terms

Term	Definition
Attribute	Characteristic of data element or segment. <i>Mandatory (M)</i> : A data element/segment requirement designator, which indicates that the presence of a specified data element/segment is required; <i>Optional (O)</i> : A data element/segment requirement designator which indicates that the presence of a specified data element/segment is at the option of the sending party or is based on the mutual agreement of the interchange parties; <i>Conditional (X)</i> : A data element/segment requirement designator, which indicates that the presence of a specified data element is dependent on the value or presence of other data elements in the segment.
Billing Party	The party performing billing services for one or more parties.
Bill-Ready	A Consolidated Billing practice in which the Billing Party receives the calculated charge amount(s) directly from the Non-Billing Party in lieu of the Billing Party calculating it directly from the rate.
Consolidated Billing	The billing option in which the Distribution Company or Supplier renders a Customer bill consolidating the energy, transmission/transportation and distribution charges of the Distribution Company and the Supplier, for which a single payment from the Customer is expected.
Customer	Any entity that takes electric service for its own consumption.
Data Element	One or more characters that represent numeric or alphanumeric fields of data. A related group of elements make up a segment.
Data Element Separator	A special character used to separate elements in a segment.
Delimiter	A special character used to separate fields of data.
Document	A transaction set.
Dual Billing	The billing option in which the Distribution Company and Supplier render separate Customer bills for the products and services each provides.
EDI Standard/Format	A format for transmitting business documents between business entities in a non-proprietary environment.
EDI Translator	Computer software used to perform the conversion of application data to and from the X12 standard format.
Electric Distribution Company (EDC)	A regulated entity which provides distribution services and may provide energy and/or transmission/transportation services in a given area.
Electric Generation Supplier (EGS)	Persons engaged in the competitive sale of energy to end-users.
Electronic Data Interchange (EDI)	The computer application to computer application exchange of business information in a standard format.
Electronic Envelope	An electronic envelope consists of codes that mark the boundaries of electronic documents. The electronic envelope contains the EDI documents and sender/receiver information.
Electronic Mailbox	A term used to refer to the place where an EDI transmission is stored for pick-up or delivery within a third party service system, such as a Value Added Network (VAN).
Functional Acknowledgment	A transaction set (997) transmitted by the receiver of an EDI transmission to the sender, indicating receipt and syntactical acceptability of data transmitted according to the ASC X12 standards. The functional acknowledgment allows the receiving party to report back to the sending party any problems encountered by the syntax analyzer as the data is interpreted. It is not intended to serve as an acknowledgment of data content.
Implementation Guide ("IG")	The narrative document that describes how an EDI transaction set is used in a business process
Inactive	An EDC can move an EGS to 'inactive' status if no 867MU Monthly Usage was sent in the past 12 months, and after providing 30-days notice. EDC's can extend the window beyond 12 months. Once inactive, an EGS may be required by the EDC to re-test/re-certify prior to

PA Electronic Data Exchange Standards for Electric Deregulation Revised Plan v2.8

2. EDI Concepts and EDEWG Standard Formats

Term	Definition
	resuming business in an EDC's marketplace.
Industry Guideline	Defines the EDI environment for using conventions within an industry. It provides assistance on how to implement the X12 standard. The Utility Industry Group (UIG) establishes Industry Guidelines for the utility industry.
Instant Connect	When an enrollment is sent at least three business days prior to the account going active, the EDC will accept the enrollment under the Instant Connect rules and the EGS will begin supply effective on the connect date.
Interchange Control Structure	The interchange header and trailer segments envelope one or more functional groups or interchange related control segments and perform the following functions: (1) define the data element separators and the data segment terminators, (2) identify the sender and receiver, (3) provide control information for the interchange, and (4) allow for authorization and security information.
Internet File Transfer	Internet File Transfer is the communication method for transferring X12 files between the EDCs and EGSs.
Mapping	The process of identifying the relationship of standard data elements to application data elements.
Metering Agent	EGS licensed to provide metering services to a Customer.
Non-Billing Party	The party whose charges are being combined into a statement (or invoice) prepared and rendered by another party.
Pay As You Get Paid	The payment processing method in which the Billing Party forwards payment to the Non-Billing Party for the Non-Billing Party charges only after receiving payment.
Provider of Last Resort (POLR)	The POLR is a company that provides electricity generation to a Customer when no EGS's have that Customer enrolled. In Pennsylvania, each EDC serves the function of POLR in their territory. (also referred to as Default Service)
Purchase of Receivables	The payment processing method in which the Billing Party assumes the Non-Billing Party's receivables and sends the Non-Billing Party payment at predetermined intervals for all Non-Billing Party amounts that are billed, payable to the Non-Billing Party, and do not have a status of In Dispute, in accordance with the EDC tariff, Billing Services Agreement or other Governing Document regardless of when (or whether) the Customer pays the Billing Party.
Qualifier	A data element that identifies or defines a related element, set of elements, or a segment. The qualifier contains a code taken from a list of approved codes.
Rate-Ready	Refers to the practice in which the Non-Billing Party provides rate information to the Billing Party sufficient to calculate the Non-Billing Party's charges.
Restricted Customer Information	Information which a customer voluntarily restricts from the Eligible Customer List.
Seamless Move	The sending of an EDI transaction to the EGS when a customer moves to a new premise within the same operating company.
Segment	A combination of related data elements in a specific sequence. A segment consists of a segment identifier, one or more data elements, each preceded by an element separator, and a segment terminator.
Segment Identifier	A unique identifier for a segment, composed of a combination of two or three uppercase letters and digits. The segment identifier occupies the first character position of the segment.
Segment Terminator	A unique character appearing at the end of a segment to indicate the termination of the segment.
Trading Partner	The sending and/or receiving party involved in the exchange of electronic data interchange transmissions.
Transaction Set	The EDI term for a business document, such as an invoice.
Transaction Set ID	A three digit numerical representation that identifies a transaction set.
Translation Software	Software that is used to translate EDI data to a corporate proprietary format and vice versa.
Version/Release	Identifies the edition of the standard being used for the generation or the interpretation of

2. EDI Concepts and EDEWG Standard Formats

Term	Definition
	data in the X12 standard format.

3. EDEWG Business Processes and EDI Transactions

This section details the business processes and EDI transactions corresponding to the business relationships described in Section 1.

In cases where other Electric Choice requirements (such as 5-day waiting period letters to Customers) affect EDEWG transactions, they are included in these scenarios. There are other Electric Choice requirements not included in these scenarios.

An EGS always serves 100% of a Customer's load: multiple EGS's CANNOT serve a single Customer.

A Functional Acknowledgment (997, FA) will follow all EDI transmissions. The FA provides for verification of receipt of data and reports the extent to which the syntax complies with the standards. This, in addition to the archiving of all EDI transmissions, provides the audit trail necessary to verify receipt of all EDI transmissions by EGS and EDC. This information may be used to resolve Customer, EDC, or EGS inquiries or disputes. FA's can be sent at the EDI group, set, and segment levels. The X12 best-practice is to send an FA at the segment level for rejected transactions.

Some scenarios also provide for a response transaction to be sent after a request. The response provides for further validation of the contents of the request against the standard and indicates whether the request was successfully processed. The response contains a code indicating whether the request was accepted or rejected. If rejected, the response also provides reason(s) why.

A. Enrollment (EGS Selection)

The following is a list of scenarios and procedures to be followed to ensure proper management of Customer Electricity EGS selections and changes to those selections. Several variations of the 814 transaction are used for these scenarios. A Customer contract effective date/time has been included in each variation as a required data element and is critical to assure that the Customer is enrolled with the last EGS with which the Customer has entered into a contractual relationship.

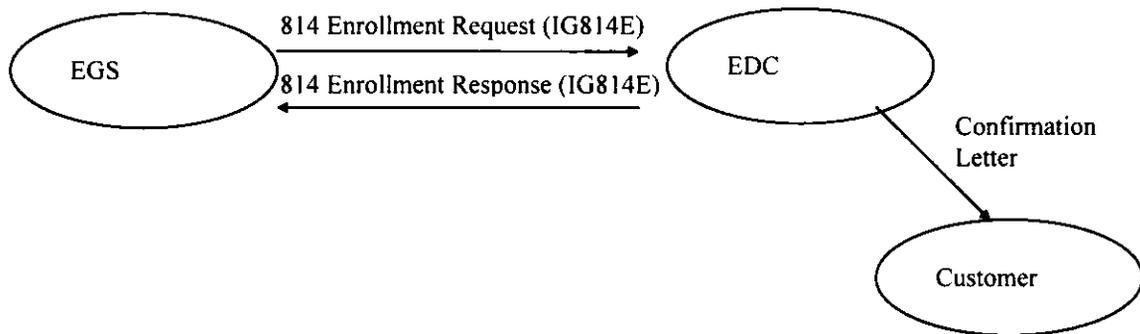
In all following scenarios, the Customer can at any time choose to go back to their Provider of Last Resort (POLR).

Enrollments follow a three business day accelerated switching rule. The effective date of the enrollment or drop is within three business days. If an enrollment is sent at least three business days prior to the account going active, the EDC will accept the enrollment under the Instant Connect rules. The confirmation letter for the Instant Connect will be sent once the account goes active.

3. EDEWG Business Processes and EDI Transactions

A.1. Customer Contacts EGS to Initiate EGS Selection

The following represents the steps necessary for an EDC to process a Customer's request for service from a specific EGS when the EGS initiates the request electronically and the Customer isn't currently receiving service or doesn't have any pending service with another EGS. Should the Customer contact the EDC to initially enroll with an EGS, the EDC will tell the Customer to contact that EGS.

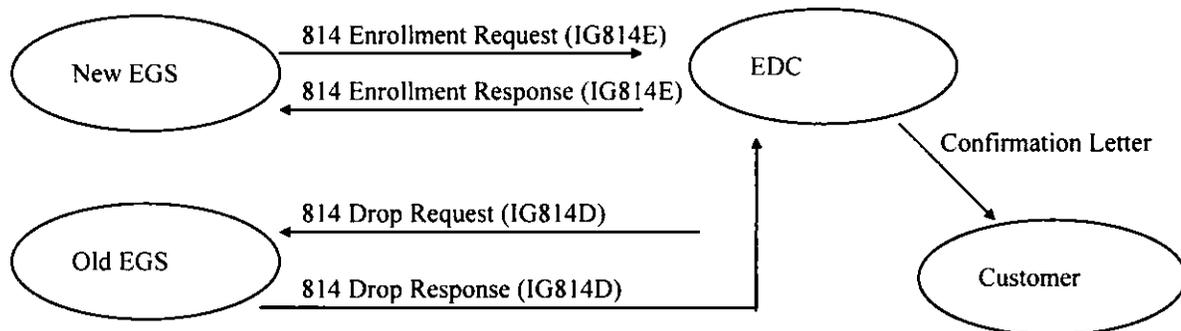


- a) EGS sends 814 Enrollment Request (IG814E) to EDC
- b) EDC sends 814 Enrollment Response (IG814E) to EGS. If accepted, the response will include the expected start date (anticipated date the Customer will start receiving generation from the new EGS) and other information the EGS needs to prepare to do business with that Customer.
- c) If accepted, the EDC sends the Customer a confirmation letter notifying them of their selected EGS and the expected start date.

3. EDEWG Business Processes and EDI Transactions

A.2. Customer Contacts New EGS to Switch EGS's

The following represents the steps necessary for an EDC to process a Customer's request to switch service from an EGS when the Customer is currently receiving service from another EGS, or has pending service with another EGS. In this scenario, the Customer must contact the new EGS to initiate the change. Should the Customer contact the EDC to switch to another EGS, the EDC will tell the Customer to contact the new EGS.



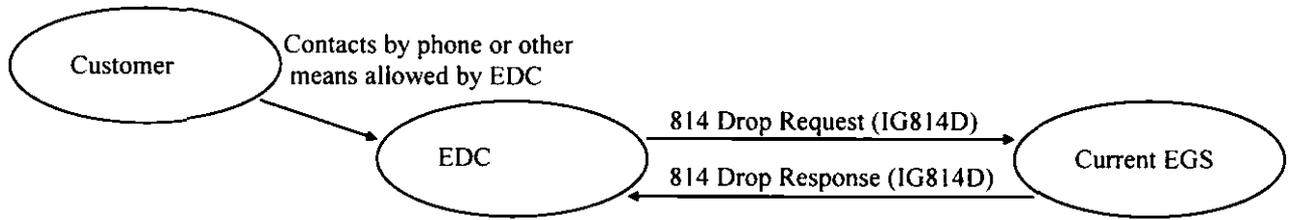
- a) New EGS sends 814 Enrollment Request (IG814E) to EDC
- b) EDC sends 814 Enrollment Response (IG814E) to New EGS. If accepted, the response will include the expected start date (anticipated date the Customer will start receiving generation from the new EGS) and other information the EGS needs to prepare to do business with that Customer.
- c) If accepted, EDC sends 814 Drop Request (IG814D) to the old EGS
- d) If accepted, the EDC sends the Customer a confirmation letter notifying them of their selected EGS and the expected start date.
- e) If the old EGS receives an 814 Drop Request (IG814D), they will send an 814 Drop Response (IG814D) to the EDC.

The old EGS should only reject a Drop Request if the old EGS couldn't determine the Customer to be dropped either because the Customer account number is invalid or the Customer is not in their system.

3. EDEWG Business Processes and EDI Transactions

A.3. Customer Contacts EDC to Drop an EGS

The following represents the steps necessary for an EDC to process a Customer's request to cancel service from a specific EGS when the Customer contacts the EDC. In this case, the EDC will return the Customer to the POLR. If the Customer wishes to select another EGS, they must contact that EGS. Some EDCs may not send the drop request but instead refer the customer to contact their current EGS to request to return to the POLR.



- a) Customer contacts EDC to drop EGS
- b) EDC sends 814 Drop Request (IG814D) to EGS
- c) EGS sends 814 Drop Response (IG814D) to EDC

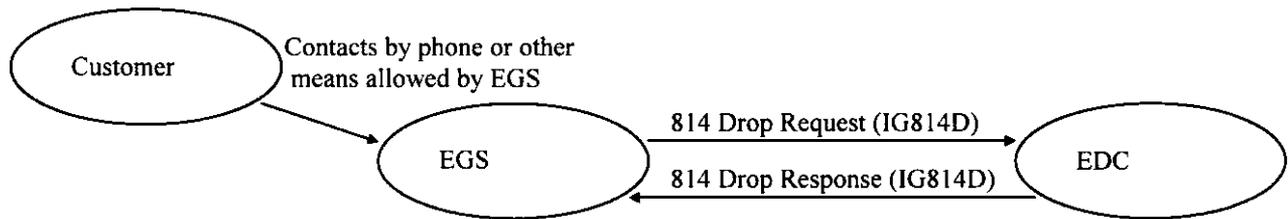
A rejection should only occur if the EGS couldn't determine the Customer to be dropped, either because the Customer account number is invalid or the Customer is not in their system.

A Customer cannot rescind a drop. Should the Customer wish to reinstate the EGS, they must contact the EGS and enter a new agreement. The EGS should then submit an 814 Enrollment Request (IG814E) as described in #3.A.1 above.

3. EDEWG Business Processes and EDI Transactions

A.4. Customer Contacts EGS to Drop EGS

The following represents the steps necessary for an EDC to process a Customer's request to cancel service from a specific EGS when the Customer initiates the request through the EGS. In this case, the EDC will return the Customer to the POLR. If the Customer wishes to select another EGS, they must contact that EGS.



- a) Customer contacts EGS to drop that EGS
- b) EGS sends 814 Drop Request (IG814D) to EDC
- c) EDC sends 814 Drop Response (IG814D) to EGS

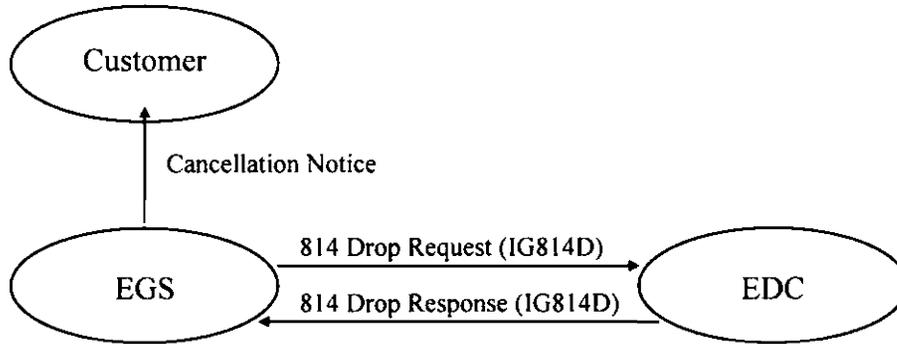
The Drop Request should only be rejected if the EGS could not determine the Customer to be dropped either because the Customer account number is invalid or the Customer is not in their system.

A Customer cannot rescind a drop. Should the Customer wish to reinstate the EGS, they must contact the EGS and enter a new agreement. The EGS should then submit an 814 Enrollment Request (IG814E) as described in #3.A.1 above.

3. EDEWG Business Processes and EDI Transactions

A.5. EGS Drops Customer

The following represents the steps necessary for an EDC to process an EGS's request to cancel supply for a Customer. In this case, the EDC will return the Customer to the POLR.



- a) EGS sends cancellation notice to Customer in accordance with Commission regulations for residential and small business Customers, as applicable
- b) EGS sends 814 Drop Request (IG814D) to EDC
- c) EDC sends 814 Drop Response (IG814D) to EGS

The Drop Request should only be rejected if the EDC couldn't determine the Customer to be dropped either because the Customer account number is invalid or the Customer is not in their system.

A Customer cannot rescind a drop by an EGS. Should the Customer wish to reinstate the EGS, they must contact the EGS and enter a new agreement. If the EGS accepts the Customer, they should then submit an 814 Enrollment Request (IG814E) as described in #3.A.1 above.

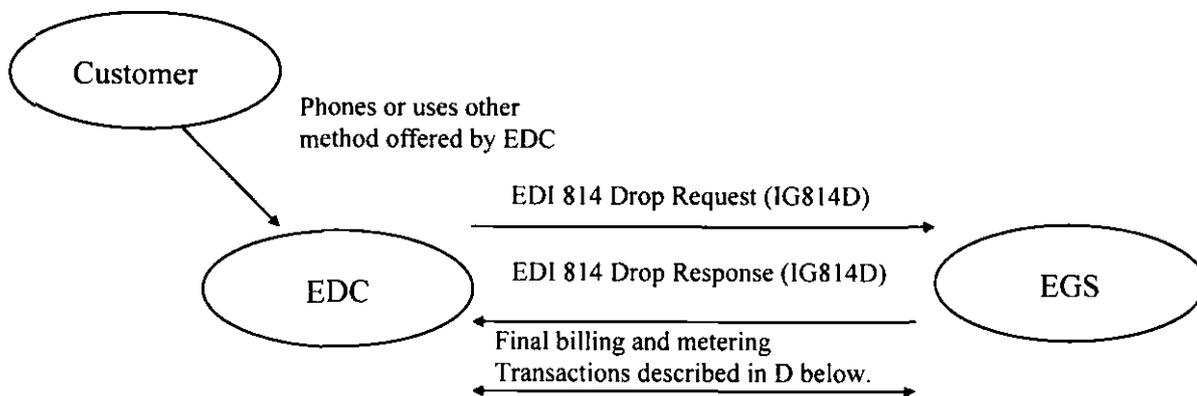
3. EDEWG Business Processes and EDI Transactions

B. Customer Account Maintenance

The following scenarios describe changes to a Customer's account that require information exchange between the EDC and EGS.

B.1. Customer Contacts EDC to Relocate Outside Service Territory

The following represents the steps necessary to final an account for a Customer when the Customer relocates outside the EDC's service territory.

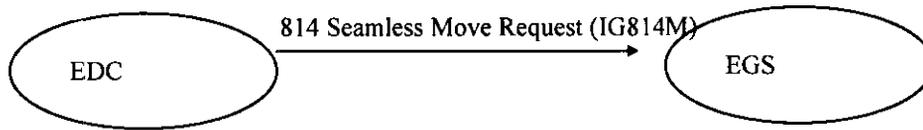


- a) Customer contacts EDC to Relocate
- b) EDC sends 814 Drop Request (IG814D) to EGS
- c) EGS sends 814 Drop Response (IG814D) to EDC
- d) Final billing and usage information is exchanged between EDC and EGS as described in 3.C below.

B.2. Customer Contacts EDC to Relocate Within Service Territory

The following represents the steps necessary for an EDC to process a Customer's request for a move within the operating company. The EDC initiates the seamless request electronically if the Customer is currently receiving service. The EGS does not send a response. The EGS would need to send in a drop request once the account goes active if they do not wish to serve the customer.

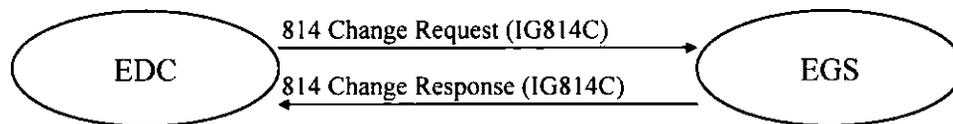
3. EDEWG Business Processes and EDI Transactions



- a) EDC sends 814 Seamless Move Request (IG814M) to EGS)

B.3. Customer Data Changes from EDC

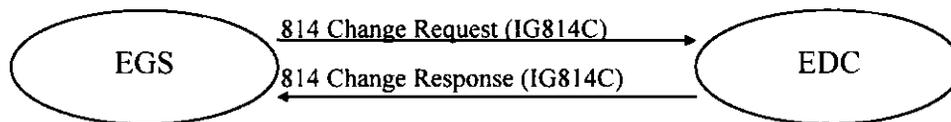
The following represents the steps necessary for an EDC to notify an EGS of a change in Customer information.



- a) EDC sends 814 Change Request (IG814C) to EGS
- b) EGS sends 814 Change Response (IG814C) to EDC

B.4. Customer Data Changes from EGS

The following represents the steps necessary for an EDC to process a request to change Customer information when it is initiated by the EGS.



- a) EGS sends 814 Change Request (IG814C) to EDC
- b) EDC sends 814 Change Response (IG814C) to EGS

3. EDEWG Business Processes and EDI Transactions

C. Customer Billing Scenarios

EDEWG standards support 4 billing scenarios:

Billing Scenario	# Bills Received By Customer	Sends Bill	Calculates EGS Charges	Calculates EDC Charges
BS1: EDC Consolidated Billing/Rate-Ready	1	EDC	EDC	EDC
BS2: EDC Consolidated Billing/Bill-Ready	1	EDC	EGS	EDC
BS3: Dual Billing	2	EDC and EGS	EGS	EDC
BS4: EGS Consolidated Billing/Bill-Ready	1	EGS	EGS	EDC

The 867 transaction is used to transmit usage information as captured from the meter for both monthly- and interval-metered Customers, and to transmit un-metered usage for non-metered accounts. The 867 is sent in all cases, and must contain billing summary information.

- Monthly-metered Customers: an IG867MU will be sent.
- Interval-metered Customers: The EDC has the capability to provide an 867IU containing the detail or an 867MU summarizing monthly usage, dependent upon EGS preference and/or EDC business rules employed in the absence of a specified EGS preference.

The IG867IU will contain interval values with the following rules being met (as a minimum):

- Actual Hourly KW Demand by Account is provided when measured. (For a Customer account with multiple meters the data may be combined).
- Each interval data will be date stamped. Intervals will be estimated or reported as unavailable where data gaps exist and will be so marked.
- Interval data will be bill quality.
- Interval readings will be raw meter data at the minimum interval recorded by the meter or reported as per the tariff rate.

Note: The charts below state “867 Usage”. This will be an IG867MU for summarized interval or non-interval meters, or an IG867IU for interval meters when interval detail is being sent.

The 810 transaction is used to transmit monthly usage and billing components used to generate a Customer invoice. The following is a list of scenarios and procedures to ensure proper sharing of billing, sales tax, and consumption information. The scenarios incorporate the possibility of either the EDC or EGS doing any of the following: metering, calculating the bill, or providing a bill to the Customer.

The scenarios below use the terms “Bill-Ready” and “Rate-Ready”.

- “Bill-Ready” means the company doing the billing receives calculated results from the other party for the other party’s charges and prints them on a consolidated bill.
- “Rate-Ready” means the company doing the billing knows the rates of the other party, calculates the other party’s charges, and prints them on a consolidated bill.

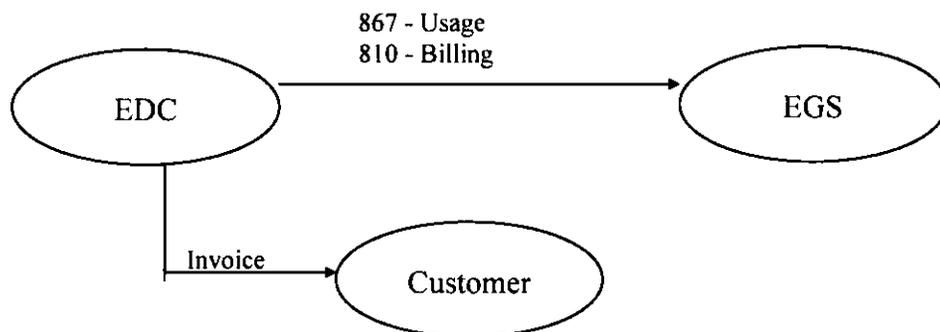
3. EDEWG Business Processes and EDI Transactions

Under all of the scenarios listed below, when a Customer receives a final bill or a final meter reading, the 810 and/or 867 should indicate that it is a final billing.

Under all consolidated billing scenarios below, when the Billing Party is converting the Customer from the consolidated bill to a dual bill option for non-payment, the Billing Party transmits an 814 change to the Non-Billing Party and a letter of notification to the Customer. In the event the metering party determines previously issued 867 Usage Data was incorrect or sent to the wrong EGS, the metering party must send 867 Usage Cancel transaction(s) to the EGS. In order to restate usage for a period, the metering party must first completely cancel all usage for that period; then send the full set of restatement transactions. The 867 Usage cancel may or may not be followed up with restated 867 Usage.

C.1. BS1: EDC Consolidated Billing/Rate-Ready

EDC reads meter, EDC calculates both EDC and EGS charges, and EDC provides a consolidated bill to Customer.

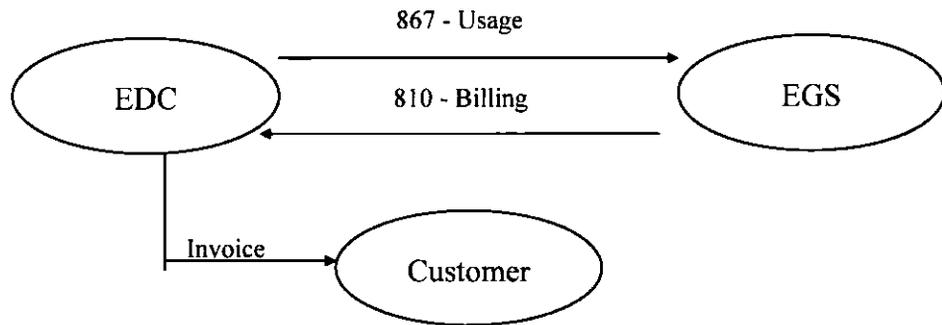


- a) EDC sends 867 Usage Data to EGS
- b) EDC sends 810 Billing to EGS containing EGS portion of charges
- c) EDC invoices Customer

3. EDEWG Business Processes and EDI Transactions

C.2. BS2: EDC Consolidated Billing/Bill-Ready

EDC reads meter, EDC and EGS each calculate their own charges, EDC provides a consolidated bill to Customer.

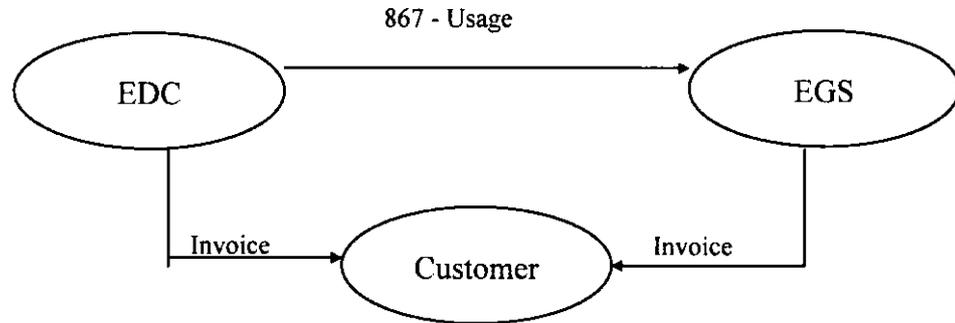


- a) EDC sends 867 Usage to EGS
- b) EGS sends 810 Billing to EDC containing EGS portion of charges
- c) EDC invoices Customer

3. EDEWG Business Processes and EDI Transactions

C.3. BS3: Dual Billing (Customer receives 2 bills)

EDC reads meter, EDC and EGS each calculate their own charges, EDC and EGS each provide a bill to Customer with their own charges.

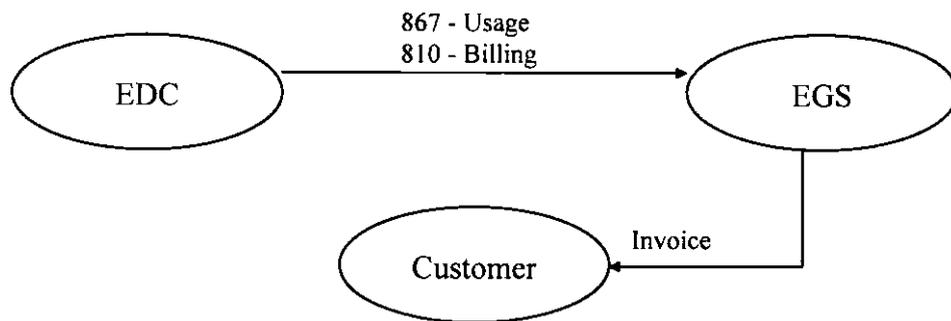


- a) EDC sends 867 Usage to EGS
- b) EDC Invoices Customer for EDC portion of bill
- c) EGS Invoices Customer for EGS portion of bill

C.4. BS4: EGS Consolidated Billing/Bill-Ready with EDC Meter Read

The scenario below addresses when the EGS of record is providing a consolidated bill including EGS and EDC charges, only available in PECO's territory.

EDC reads meter, EDC and EGS each calculate their own charges, EGS provides consolidated bill to Customer.



- a) EDC sends 867 Usage to EGS.
- b) EDC sends 810 Billing to EGS with EDC portion of charges
- c) EGS invoices Customer

D. Customer Payment and Remittance

For transfer of payment and remittance information, the 820 and 568 transactions are used. The 820 is used for the Billing Party to pay the Non-Billing Party on whose behalf they are billing and collecting payments. There are two options available:

- PAYGP: the Billing Party remits to the Non-Billing Party only payments actually received;
- POR: the Billing Party remits to the Non-Billing Party all undisputed charges on behalf of the Non-Billing Party regardless of whether the Billing Party has been paid in full. The Billing Party may charge a rate class based discount to the Non-Billing Party's receivables. Since the Billing Party "makes the other party whole" and is unaware of customer payment history, the Billing Party uses a 568 to report to the Non-Billing Party what they have actually collected from the Customer on the Non-Billing Party's behalf.

Payment consists of Payment remittance, sent via the 820 directly from Billing Party to Non-Billing Party followed by ACH payment. The 820 provides Customer- level detail of payments remitted in the payment order.

Billing Parties using PAYGP (that is, not making the Non-Billing Party whole) may request a waiver exempting them from sending the 568 transaction if they are issuing the 820 transaction in a Commission-prescribed timeframe. Under POR, the 568 transaction is required to be sent by the billing party to the non-billing party.

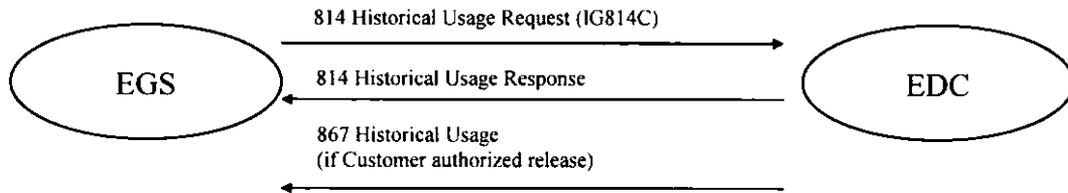
3. EDEWG Business Processes and EDI Transactions

E. Historical Usage Request by EGS

The EGS may request Historical Usage for a Customer in any of the scenarios listed below. In each case, the data returned contains values for the previous 12 months or up to 24 months depending upon EDC, regardless of the way the Customer is metered. If the EDC does not have 12 months of data for the Customer, the EDC will send the EGS data for the number of months the Customer has been in their service.

Similar to Historical Usage, the EGS may request Historical Interval Usage (IG814HI) for a Customer in any of the scenarios listed below.

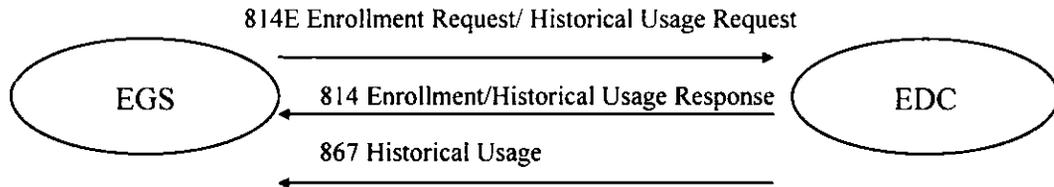
E.1. EGS Requests Historical Usage for an Eligible Customer Prior to Enrollment (EGS Selection).



- a) EGS sends 814 Historical Usage (IG814HU) Request to EDC
- b) EDC sends 814 Historical Usage Response (IG814HU) to EGS stating whether historical usage will be sent to the EGS.
- c) If accepted and data is available, the EDC sends an 867 Historical Usage (IG867HU) to EGS.

3. EDEWG Business Processes and EDI Transactions

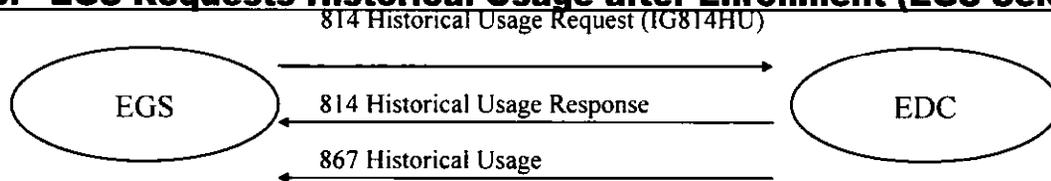
E.2. EGS Requests Historical Usage on an 814 Enrollment (EGS Selection) Request



- a) EGS includes the applicable LIN loops when sending the 814 Enrollment/Historical Usage Request (IG814E) to EDC (see A.1 and A.2 above)
- b) The EDC will send an 814 Enrollment/Historical Usage Response (IG814E) to EGS indicating acceptance of the enrollment (as described in A.1 and A.2 above) and whether Historical data will be sent for this Customer
- c) If the enrollment request is accepted and historical data is available for this Customer, the EDC sends an 867 Historical Usage (IG867HU) to EGS

Upon acceptance of an enrollment, Historical usage will be sent to the EGS if available regardless of whether the Customer chose to release usage to third parties. Once a Customer is enrolled with an EGS, that EGS is no longer considered a third party and is entitled to the Customer's Historical Usage unless the customer unauthorized the release of the data directly with the EDC.

E.3. EGS Requests Historical Usage after Enrollment (EGS Selected)



- a) EGS sends 814 with applicable LIN loop for Historical Usage Request to EDC
- b) EDC sends 814 Response. If historical data is available for this Customer, the request will be accepted
- c) If accepted, the EDC sends an 867 Historical Usage to EGS

Since the Customer is enrolled with this EGS, historical usage will be sent to the EGS if available regardless of whether the Customer chose to release usage to third parties. Once a Customer is enrolled with an EGS, that EGS is no longer considered a third party and is entitled to the Customer's Historical Usage unless the customer unauthorized the release of the data directly with the EDC.

3. EDEWG Business Processes and EDI Transactions

F. Meter Information Request by EGS (For Competitive Metering)

There are currently no Meter Information business process flows or transaction standards.

An electronic transaction set may be developed for use in competitive metering scenarios to provide technical description of meters, and provide information regarding installation of a non-EDC meter. The following scenarios have been tentatively addressed:

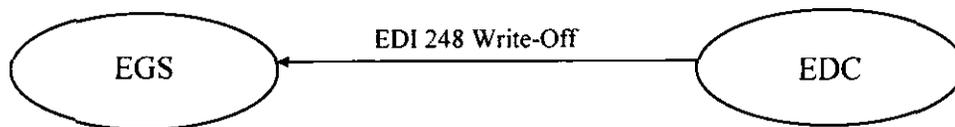
1. EDC Provides Meter Information to EGS when requested by EGS
2. EGS Provides Meter Information to EDC when Meter is Changed Out

If you are interested in pursuing Meter Information standards, you should contact the Commission.

G. Write-Offs

The following represents the steps necessary for the Billing Party to notify the Non-Billing Party that they will no longer pursue remittance activities for the Non-Billing Party's charges. The 248 Write-Off is only used in the PAYGP payment scenario, not the POR scenario.

G.1. EDC Provides Consolidated Bill, PAYGP



- a) EDC sends EDI 248 Write-Off to EGS

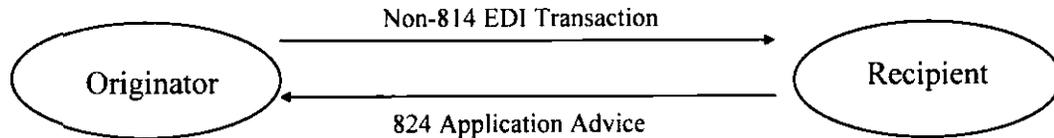
G.2. EGS Provides Consolidated Bill

EGS billing is only available in markets with Purchase of Receivables requirements (i.e. "make the other party whole"), so there is no need for an EGS to write-off a balance to an EDC. The EGS would convert the Customer to a dual bill by sending an 814 Change to the EDC.

3. EDEWG Business Processes and EDI Transactions

H. Application Advice

If an EDI transaction other than an 814 transaction is rejected by the recipient's application system, the recipient will issue an 824 Application Advice transaction to the sender of the original transaction. The original recipient may request the document in error be corrected and resent or may indicate they are issuing the 824 Application Advice as information only.



- a) Originator sends Non-814 EDI Transaction in error
- b) Recipient responds with 824 Application Advice indicating rejection of Non-814 EDI Transaction

I. Energy Scheduling and Reconciliation

Each EDC and EGS must exchange Customer usage data to advance schedule energy capacity and to reconcile actual metered usage. PA utilities use standard PJM processes.

Energy Scheduling and Reconciliation Energy Scheduling and Multiple Scheduling Coordinator

An EGS is authorized to have up multiple scheduling coordinators subject to the limitations of each EDC. The EDC will use each Scheduling Coordinator's distinct DUNS+4 to create a separate identity for the Scheduling Coordinator in the EDC system. The EGS will have to perform connectivity testing for each Scheduling Coordinator. If an EGS wishes to move a Customer from one scheduling coordinator to another, the EGS must send a new enrollment to the EDC under the new scheduling coordinator identification. The new enrollment will follow Pennsylvania's designated switching rules. EDC's will add logic to suppress the printing of the Confirmation Letter.

The EDC will **not** perform any aggregation of the separate Scheduling Coordinators data.

3. EDEWG Business Processes and EDI Transactions

K. Non-EDI Data Requirements

The following guidelines will be used regarding non-EDI information. The below listed information is posted on the Internet and will be available in a standard format on each EDC's website. Contact each EDC for the specific information maintained by that EDC.

The release of Customer-specific information will be consistent with Commission orders or supplier coordination tariffs.

#	Title	Where	Description
1	Load Profiles	posted on web	Contains historical load information relating to a specific class of Customer. Information may include typical week, day, and average weekend day load information by class, by month.
2	Eligible Customer List	posted on web	Contains a list of Customers that are eligible to select a licensed EGS. The EDC will post a Master Eligible Customer List on their Web site as ordered by the Commission.
3	Meter Reading Schedules	posted on web	Contains lists of scheduled monthly meter reading dates.
4	Daily Operations Schedule	posted on web	Specifies dates and times incoming Enrollment, and Customer Change requests are processed. Specifies dates and times billing and remittance transactions are processed. Also specifies date and times the information posted on their Web site is updated. Schedules indicate when normal processes will not occur such as holidays or non-work day, etc. EDC's shall post their Daily Operations Schedule on their Web sites. EGS' who do one bill or metering are required to do the same.
5	EDC rates	posted on web	EDC rates per EDC supplier coordination tariffs
6	Other codes	posted on web	A variety of EDC codes are posted for general use (e.g. EDC Rate Class Codes, Strata Codes, etc)
7	Web Data Solution	posted on web	EDC hosted web based solution to obtain customer Historical Interval Usage information. Three options are available: 1. Single User-Multiple Request: secure portal providing user interval usage data for one or more accounts. 2. System to System – Historical Interval Usage: system level access using XML transactions to request/receive interval usage data.

3. EDEWG Business Processes and EDI Transactions

3. System to System Rolling 10-day – system level access to obtain file containing 10 days of interval data for set of accounts served by a particular EGS.

4. Electronic Transmission

4. Electronic Transmission

EDEWG recommends that data transmission protocols be standardized so that all parties can develop business processes and automated systems that insure an efficient and flexible business environment.

Beginning in 1998, EDEWG considered numerous standards, technologies and services available for transport mechanisms, including developments in energy markets in other regions of the country (e.g. California, New England markets, etc.)

For a data transfer method to be recommended, it must be shown that it meets certain minimum criteria in the following key areas:

- Security and/or encryption of transactions and Customer information
- Proof of transmission and receipt
- Positive identity of sender and recipient (non-repudiation)
- Reliability
- Data and file integrity
- Network performance and availability
- Recoverability and archiving of data

During the initial implementation of Retail Choice in 1998, EDEWG standards called for Value Added Network (VAN) data transmission.

Subsequently, EDEWG recommended, and the PUC Ordered, that the default transmission protocol to be an Internet File Transfer. The rules governing the use of the Internet File Transfer are documented in the Internet EDI Plan and Internet ET/EDM report as prescribed on the Pennsylvania Public Utility Commission's Web Site (see Appendix A).

5. Computer Operations Considerations

5. Computer Operations Considerations

Other sections of this document address essential standards for business transactions, data formats and electronic transmission of data. This section deals with the operational issues (both manual and automated) that, while primarily technical in nature, can have a significant effect on the efficiency and consistency of business processes. The EDEWG identified the following principles for computer operations:

- Processing of data must be reliable, predictable, accurate and efficient
- Transaction processing must be equitable and verifiable
- Trading partners' daily operational schedules should be accommodated
- The entire process must be designed to detect and report errors without intervention
- There must be a clear assignment of responsibility

Scheduling

Each EDC will have daily schedules that should be accommodated to the extent possible. Operating schedules cannot be standardized because of differences in daily transaction volumes, processing techniques, technology, etc. At the same time, there should be a baseline schedule that all trading partners can rely on that does not place an undue burden on any trading partner.

The EDEWG has reviewed the daily computer operation schedules of the EDC's in order to develop a proposed baseline schedule. Section 3 reviews the maximum acceptable time frames for electronic transactions.

Each EDC will publish their daily operation schedule as a guideline to EGS's. The schedule should include cycle reading and billing dates, processing "work days" and "no work" days (i.e., holidays, weekends).

File Handling

The operational guidelines pertaining to file handling are based on the recommendations elsewhere in this document concerning transaction standards and data transmission. It should be considered that changes to those recommendations could impact file handling. The EDEWG agreed that:

- EDC's will attempt to process all files sent by EGS's unless specific action is taken by the EGS's to avert processing (i.e., delete files, replace files). Refer to the Error Handling section for additional information.
- The creator of a file is responsible for the accuracy and authenticity of the contents.
- The recipient of a file has the right to reject the file in whole or in part due to format or protocol errors. In the event that a file is rejected, the recipient will provide reasons for the rejection.

5. Computer Operations Considerations

- All data exchanges will be done in a pre-established manner to ensure data security and integrity (see Section 4 Electronic Transmission).
- Each file will have one recipient, and should contain transactions intended only for that recipient. A file may contain multiple transactions of the same or different type for the same Customer account as permitted in the guidelines.
- Files will be processed by the recipient according to the recipient's operating schedule. The recipient will sweep the input queue at least once each business day and will process all files that are available by the cut-off and up to the time of the last sweep.
- Files will be processed in chronological order. To ensure accurate and consistent posting of individual transactions files will be processed in date/time sequence as presented on the input files.
- Errors and confirmations will be returned in accordance to the timelines contained herein.
- Transaction exchanges between EGS's and EDC's will generally not be limited in terms of the total number of files or transactions processed on a daily basis.

Error Handling

EDEWG recommends each EGS and EDC provide a point of contact to facilitate business and technical communications. A list of EDI Contacts is maintained by EDEWG and may be found at the Commission's Web Site (see Appendix A). Each EGS and EDC will establish appropriate procedures for problem resolution in a timely manner.

Recovery

A sound operation includes data recovery procedures that can be invoked in the event of unexpected situations that require transactions to be recreated or resubmitted for any reason. The primary purpose of these recovery procedures is to protect the originator of a file from damages related to loss of the data.

Regardless of the specific transmission method used, the originator must have the ability to recreate a file, retransmit a file, and simply omit a file from a job stream (unreadable data, invalid header, file control error, etc.). EGS's will have to coordinate with the EDC's in order to omit a file (dictated by EDC operational schedules); re-submit a file or handle other atypical conditions.

EDEWG agreed that it is the responsibility of the originator of a file to maintain the ability to recover or recreate the data. In light of current regulations, each trading partner will retain four years of transaction files, which may be used for re-transmission or complaint resolution.

6. Testing & Certification Requirements

6. Testing & Certification Requirements

Among other requirements, EDC's and EGS's must demonstrate their capability and readiness to participate in the deregulated marketplace using the electronic business transactions and standards described in this plan.

The purpose of testing is to verify that EGS's and EDC's are capable of complying with the data transfer standards specified in this document and have the necessary software and hardware required to send, receive, and translate the standard transactions required to do business in the Commonwealth.

New Market Participants

New market participants need to test and certify with each trading partner in accordance with:

- the “**Internet EDI Plan**” and
- the “**Test Plan for Electronic Data Exchange for Electric Generation Deregulation**”.

Both of these documents can be found on the PUC website. See Appendix A.

Re-Certification

This section details the EDEWG guidelines for re-certification and re-testing, including re-testing requirements, suggested procedures, definitions and timelines. This section should be used as a guideline for EDC's and EGS's, and it does not address new EDC's coming into the market or PA EDI version changes.

“**Inactivity**” is defined as a minimum of 12 months since the last 867 Monthly Usage transaction regardless of billing scenarios. EDC's can choose to extend this period. An active party is considered active for all features successfully tested. For example, if an active EGS has tested but has not used consolidated billing, they cannot be forced to re-test consolidated billing prior to using that feature.

EDC's will give written notification (e.g. mail, email) with confirmation of receipt to an EGS thirty (30) days in advance of moving an EGS to inactive status.

When making changes to systems, including systems outsourced to vendors (EDI, billing), EDC's and EGS's must give written notification (e.g. mail, email) with confirmation of receipt to trading partners 60 days in advance, and offer to test with up to 2 trading partners.

Compliance testing for EGS's will be accomplished by exchanging a set of applicable test transactions as agreed upon by EGS and EDC. This re-testing process may be a full set of testing, or a subset/streamlined test as mutually agreed by the trading partners.

7. EDEWG Operations & Continuation

The Electronic Data Exchange Working Group (EDEWG) was formed in 1997 to establish standards to support electric deregulation. In 2012, EDEWG adopted a 'Guidelines and Principles' document to clearly define the scope, roles, and responsibilities of EDEWG.

The following Issues are addressed by EDEWG on an ongoing basis.

- Integrate ideas (via Change Control documents) from members into the standards.
- Upgrade the standards as needed.
- Coordinate timing for changes in any of the protocols.
- Form EDEWG Compliance Review Team.
- Participate in NAESB initiatives.
- Convene and manage working sub-groups to address issues, review documentation, or special projects.

EDEWG meets monthly when there are issues to address. Emergency issues should be forwarded to EDEWG co-chairs for priority treatment per Commission orders.

EDEWG has identified unresolved issues below and is committed to the resolution of these issues as time and commitment is made available.

- Standards to address competitive metering, including Meter Information - Validate scenarios for installation of meters by competitive meter service providers.
- Standards to address competitive default supplier
- Standards to address the 'seamless move' process (e.g. customer moves within a territory and wishes to continue services with the existing EGS without interruption in service). The current process describes a non-seamless interim solution provided for moves within service territory.
- Standards for a universal customer node identifier, as appropriate.
- Standards for third-party billing.

Each fall EDEWG establishes an annual plan to direct group priorities for the following year.

As per the Commission's Smart Meter Data order (Docket No. M-2009-2092655) entered December 6th, 2012 the EDEWG has convened a Web Portal Working Group. This EDEWG sub-group will remain open until all EDEWG deliverables under the Smart Meter Data order are complete.

8. Standards Change and Version Control Process

This Change Control process accomplishes the objective of an established Change Control process that accommodates changes within the EDEWG standards. This replaces the original Change Control process developed by EDEWG.

EDEWG standards may be expanded and modified to accommodate market or regulatory requirements on an ongoing basis. Change Control provides market participants a process to modify, test and implement changes in an efficient, effective, timely, and well-coordinated manner. This Change Control document provides the process by which changes to the standards may be discussed, reviewed, accepted and implemented.

EDEWG with support from the PUC maintains, publishes, and posts the standards and the ongoing modifications/enhancements to these standards on the PUC website.

EDEWG notifies each market participant – via postings to the EDEWG List Server (See Appendix A) – of anticipated modifications or enhancements and timing.

Pennsylvania participates – along with Delaware, Maryland, and New Jersey – in maintaining consolidated standards documents. A consolidated new release of the regional standards is published electronically as needed. EDEWG will ensure any approved Change Controls are included in a redlined document which will be updated and posted to the PUC website within one month of approval. It is the intent of the PUC and EDEWG to have any new request comply with the North American Energy Standards Board (NAESB) guidelines as the industry and the data standards evolve.

When new modifications and/or enhancements are introduced to the group, the proponent of said modification/enhancement should strive to build consensus for the change among all EDEWG participants.

Process to be followed:

- The interested party creates a Change Control and posts it to the EDEWG list server at least 5 days in advance of the scheduled call on which it is to be discussed. The Change Control form should be available on the PUC website.
- The Change Control will be discussed at the next scheduled conference call or meeting.
- Participants should strive to either approve or cancel a Change Control within 1-2 meetings.
- If the Change Control is approved, a timeline should be established as to when the Change Control should be implemented. This timeline should be a consensus of the market participants.

8. Standards Change and Version Control Process

- Each implementation guide affected by the change should be updated as a redlined document and made available to all market participants by posting to PUC website within 30 days of approval.
- EDEWG will determine the level of testing needed prior to the agreed upon implementation date.
- Unresolved issues relating to proposed changes will be forwarded by the Change Control Manager to the PUC for resolution.

Priority Classifications

All modifications and enhancements should be classified in one of the following three categories:

Classification	Description
Emergency Priority	Changes must be implemented within 10 days or as otherwise directed by the EDEWG
High Priority	Changes/Enhancements implemented within 30 days, the Next Release, or as otherwise directed by the EDEWG.
Low Priority	Changes/Enhancements implemented no earlier than 90 days, Future Release, or as otherwise directed by the EDEWG.

Emergency Priority

For a change to be classified as *Emergency Priority*, the initiating party must demonstrate in writing to the EDEWG that:

- The current standards cannot accommodate Customer Choice
- If the problem is left unattended, it could have a detrimental affect to an EDEWG participant, or Customer Choice in general
- Bilateral agreements between EGS's and EDC's cannot solve the problem efficiently
- An urgent modification of the standards is required
- All EDEWG participants affected by the problem will accommodate said modification

In addition the initiating party must:

- Document in advance the scope of the modification and the affected standards
- Document why the modification should not be classified as Next Release or a Low Priority change
- Provide cost justification if appropriate
- Document the proposed amendments and provide a test plan, test cases, and standards. This documentation shall be presented to the EDEWG.

High Priority

For a change to be classified as *High Priority*, the initiating party must demonstrate in writing to the EDEWG that the suggested modifications/enhancements:

- Will better the industry as a whole
- Bilateral agreements between EGS's and EDC's cannot solve the problem efficiently
- Addresses immediate regulatory and competitive market issues and mandates

8. Standards Change and Version Control Process

- Affects all participants.

In addition the initiating party must:

- Document in advance the scope of the modification/enhancements and the affected standards
- Document why the modification should not be classified as Low Priority
- Provide cost justification if appropriate
- Document the proposed amendments and provide a test plan, test cases and standards. This documentation shall be presented to the EDEWG.

Low Priority

For a change to be classified as future release *Low Priority*, the initiating party must demonstrate in writing to the EDEWG that the suggested modifications/enhancements:

- Will meet changes as prescribed by NAESB, or
- Bilateral agreements between EGS's and EDC's cannot solve the problem, or
- Will address regulatory and competitive market issues and mandates, which affects all participants and have not been prescribed by the UIG.

In addition the initiating party must:

- Document in advance, the scope of the modification/enhancements and the affected standards
- Document the proposed amendments and provide a test plan, test cases, and standards. This documentation shall be presented to the EDEWG.

Notification Requirements

Emergency Priority

The party proposing the change/modification shall notify the EDEWG chairperson(s) who will verify that the change/modification is an Emergency Priority in accordance with the Change Control Process. The EDEWG Chairperson(s) will notify by phone and/or email, both EGS's and EDC's, in as expeditious a manner as feasible.

High and Low Priority

The initiating party will notify by phone or email the EDEWG Chairperson(s) and both EGS's and EDC's prior to the next scheduled EDEWG meeting. The EDEWG Chairperson(s) shall add the change/modification request to the meeting agenda.

Appendices

Appendices

Appendix A – PUC Website Links

PUC Resource	Web Link
PUC Home	http://www.puc.pa.gov/
EDEWG Contact Info	http://www.puc.pa.gov/utility_industry/electricity/edewg_files_for_downloading.aspx
Electronic Data Exchange Standards for Electric Deregulation Revised Plan	http://www.puc.pa.gov/utility_industry/electricity/edewg_files_for_downloading.aspx
Test Plan	http://www.puc.pa.gov/utility_industry/electricity/edewg_files_for_downloading.aspx
Internet Plan	http://www.puc.pa.gov/utility_industry/electricity/edewg_files_for_downloading.aspx
Implementation Guides	http://www.puc.pa.gov/utility_industry/electricity/edewg_files_for_downloading.aspx
Non-EDI Guides	See each EDC's website.
EDEWG List Server	Contact Jeff McCracken of the PUC at McCracken, Jeffrey <jmccracken@pa.gov> to be added or removed from the list server.

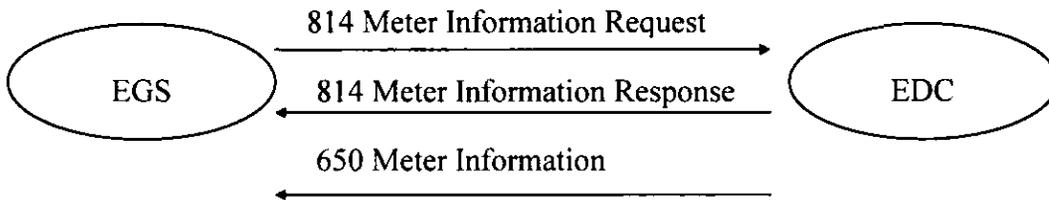
Appendices

Appendix B – Competitive Metering Processes

Note: As of 12/2012, the Competitive Metering Working Group has not established the business practices for competitive metering. The scenarios portrayed below are the probable methods that this working group defined in 2001, and still remain subject to change.

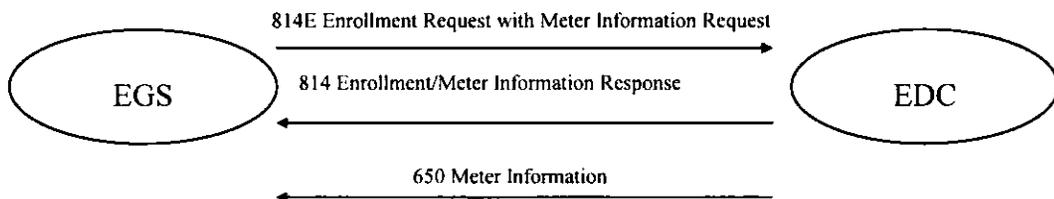
Meter information request may be combined with the Historical Usage Requests in 1, 2, or 3 above.

1. EGS Requests Meter Information for an Eligible Customer prior to Enrollment (Supplier Selection).



- a) EGS sends EDI 814 Meter Information Request to EDC
- b) EDC sends EDI 814 Meter Information Response to EGS stating whether meter information will be sent to the EGS.
- c) If accepted, the EDC sends an EDI 650 Meter Information to EGS

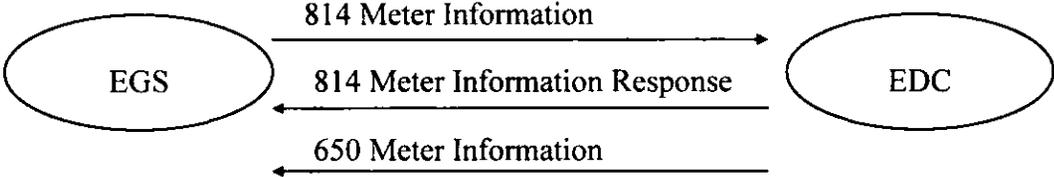
2. EGS Requests Meter Information on an 814 Enrollment (Supplier Selection) Request



- a) EGS includes the applicable LIN loops when sending the EDI 814 Enrollment/Meter Information Request (PA814E) to EDC (see A.1. and A.2. above)
- b) The EDC will send an EDI 814 Enrollment/Meter Information Response (PA814) to EGS indicating acceptance of the enrollment (as described in A.1. and A.2. above) and whether meter data will be sent for this customer
- c) If the enrollment request is accepted and meter information is available for this customer, the EDC sends an EDI 650 Meter Information to EGS

Appendices

3. EGS Requests Meter Information for a Customer after Enrollment (Supplier Selected).



- a) EGS sends EDI814Meter Information to EDC
- b) EDC sends EDI 814Meter Information to EGS. If meter information is available for this customer, the request will be accepted.
- c) If accepted, the EDC sends an EDI 650 Meter Information to EGS

4. EGS Changes Out Their Customer's Existing EDC Meter

To be added at a later date.

5. EGS Changes Out Their Own Existing Meter

To be added at a later date.

ORIGIN ID: ABEA (610) 737-7440
SUSAN SCHEETZ
PPL ELECTRIC UTILITIES
827 HAUSMAN ROAD
LEHSC
ALLENTOWN, PA 18104
UNITED STATES US

SHIP DATE: 06FEB17
ACTWGT: 0.50 LB
CAD: 105861116/NET3850

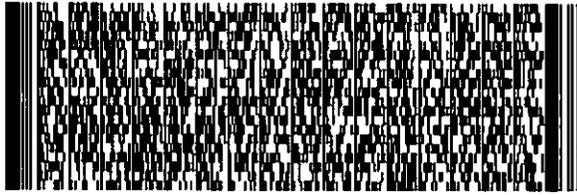
BILL SENDER

TO ROSEMARY CHIAVETTA, SECRETARY
PA PUBLIC UTILITY COMMISSION
400 NORTH STREET
COMMONWEALTH KEYSTONE BUILDING
HARRISBURG PA 17120

(717) 237-5290
INV.
PO

REF: 0736 706239 003 SCHEETZ
DEPT

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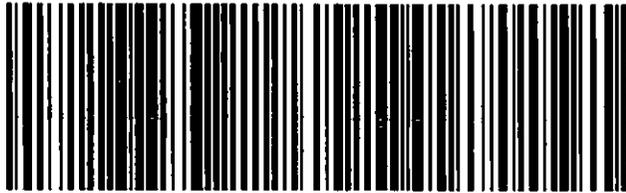
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