Case 98-M-0667

Technical Operating Profile

For

Electronic Data Interchange In New York

Processing Architecture; Phase I & Connectivity Testing

Ver 1.3
January 29, 2016

Table of Contents

		Summary of Changes
July 23, 2001 Version 1.0		**Initial Release**
February 21, 2003 Version 1.1		**Version 1.1 Issued**
		Phase I test scenarios added for 867 PTD*BK and PTD*PM loops. The test scenario for PTD*BK (Interim Bill Notice) is required for Utilities offering Bill Ready Consolidated billing. Test scenarios for the PTD*PM loop (meter reading data) are required for Single Retailer Utilities and MDSPs, and are optional for other Utilities.
October 23, 2014 Version 1.2		**Version 1.2 Issued**
		• Replaced references to Marketer and ESCO with ESCO. • Broadening of GISB EDM Version 1.4 Standard to include utility implementations of GISB EDM Versions 1.5 and 1.6.
January 29, 2016		**Version 1.3 Issued**

16 Version 1.3		
		Replaced references to Staff Phase I testing with Phase I testing through utilities.

I. Overview

This document describes and defines the technical operating profile for electronic data interchange (EDI) use in New York's deregulated retail energy marketplace. It was completed by the New York EDI Collaborative group (or the Collaborative),[1] in accordance with policies developed by the New York Public Service Commission (PSC or Commission) in Case 98-M-0667. This document is intended to serve as the primary, comprehensive source of technical information on the EDI environment in New York.

This document encompasses material from documents previously published by the Collaborative. Transaction set data standards for customer enrollments, drops and exchange of historical and current usage information were filed with the Commission on October 10, 2000 and November 21, 2000 (along with other EDI related documents). Test scenarios for these transaction sets are therefore included in this document. As additional transaction set standards and related documents are developed by the Collaborative (and approved as necessary by the Commission), additional test scenarios will be appended to the *Technical Operating Profile* document as supplements.

Among the topics addressed in this document is the New York Phase I EDI test plan. The test plan describes the requirements that must be met by each market participant in order to achieve Phase I certification and to advance to Phase II and/or Phase III trading partner testing. Phase II & III test specifications are NOT included in this document. See TOP Supplement 1 for details on Phase II and III testing.

Document Scope

This document is organized by the following topics:

- General Assumptions
- Transaction Processing Architecture
- Phase I Testing Program
- Phase I - X12 Syntax Test Specifications
- Phase I - Data Transfer Mechanism Test Specifications
- Attachments

[1] The specifications were reviewed and updated by the Case 12-M-0476 EDI Working Groups.

II. General Technical Assumptions

1. Utilities and ESCOs (ESCOs) will need to document, preferably in a written agreement, the technical specifics of agreed upon data exchange parameters. A trading partner agreement could be utilized for this purpose.

2. All Utilities and ESCOs should complete internal tests of their systems, including the requisite tests defined in the NY EDI test plan phases. This will ensure that disruptions to other companies are minimized and that testing progresses in a timely and orderly fashion.

3. All companies are encouraged to resolve technical (EDI and/or Data Transfer Mechanism) problems with their trading partners. A dispute is a problem where the two trading partners cannot agree on who is responsible for the problem and/or how to fix the problem. Any unresolved disputes should be pursued in the manner described in the New York Uniform Business Practices for Dispute Resolution.

4. It is each company's responsibility to ensure it receives incoming transactions. If a company's server/systems are temporarily unable to receive data, it is that company's responsibility to request re-transmission when their server/systems return to service.

5. There are two levels of acknowledgement involved in data exchange. The Hyper Text Transport Protocol (HTTP) response acknowledges receipt of a communication (i.e. that some file was received at a specified time). An EDI X12 997 acknowledgement verifies that a file could be decrypted and/or that it is a valid readable EDI X12 file with regard to content and structure. These acknowledgements serve two separate purposes; thus both are required.

6. Department of Public Service (DPS) Staff will intervene, as needed, in any dispute resolution situations.

III. Transaction Processing Architecture

New York's *Transaction Processing Architecture* document (Attachment B), submitted to the Commission as part of the October 10, 2000 filing, defines specific attributes of New York's EDI transaction processing environment. Attributes addressed are:

- processing flow
- response guidelines
- processing rules (e.g. first-in rule)
- enveloping
- tracking transactions (identifiers)
- archiving & auditing

In this document the Collaborative clarifies the enveloping/transport guidelines first presented in the October 10 filing as follows[2]:

- One data file will be transmitted in an HTTP session.[3]
- Only one ISA (envelope) may be transmitted in a data file
- Only one functional group (GS) will be used within an envelope (ISA).
- Multiple transactions (ST) of the same type will be allowed within functional group (GS). For example, multiple 814 transactions can be included in one functional group/envelope.

The intent of these recommendations is to facilitate ease of processing, error identification and correction as well as preserve New York's "First In" rule by easily and unequivocally being able to associate the "server post" time stamp with an ISA (envelope).

[2] These clarifications have been reflected in the updated *Transaction Processing Architecture* document contained in Attachment B.

[3] The Gas Industry Standards Board (GISB) recommends that only one file be transmitted per HTTP session. The New York Collaborative adopts this recommendation, however, companies may, by bilateral agreement, agree to send multiple files during a single HTTP session.

IV. Phase I Testing Program

In developing the Phase I test program, the Collaborative was guided by the *New York Electronic Data Interchange Test Plan Overview* (or *Test Plan Overview*), presented to the Commission for approval as part of the October 10, 2000 filing. Accordingly, it is important that the reader review the *Test Plan Overview* (Attachment A) for a general understanding of New York's approach to testing.

A. General Requirements

The four primary requirements for Phase I Testing were developed as part of the *NY EDI Test Plan Overview* (Attachment A). The sub-bullets further define these four primary requirements.

1. All companies are required, as necessary, to create EDI transactions and submit them to the utility-directed testing party for syntactical verification.
    - Consistent with Uniform Business Practices 2. B.2 and 2.C, utilities conduct ESCO Phase I testing as a part of the application process[4] and report the result to DPS Staff.
    - Section V of this document, *Phase I - X12 Syntax Test Specifications,* lists the Phase I test scenarios that each ESCO and Utility must demonstrate.
2. All companies are required to establish Data Transfer Mechanism (DTM) communications capability.
3. All companies are required to successfully complete all Phase I requirements to progress to Phase II or Phase III testing. Phase II and III test schedules will be based on the order that Phase I certified ESCOs contact and coordinate with each Utility. Each Utility will have responsibility to manage test schedules and queues.
4. DPS Staff will maintain and publish the list of companies that have satisfied Phase I testing requirements for each approved transaction set standard.

B. Phase I Exit Criterion

All participants must satisfy the following exit criterion to fulfill the Phase I general requirements and to progress to Phase II and/or Phase III testing.

- Demonstration to and certification by utilities to DPS Staff that all required EDI transactions are compliant with NY transaction set standards (includes X12 compliance).
- Establish DTM communications capability.

[4] Order Approving Modifications to the Electronic Data Interchange Standards, Issued and Effective December 7, 2015, replaces the DPS Staff "Test Moderator" role with utility-directed testing of applicant ESCOs. Phase I Testing rules are detailed further in Technical Operating Profile (TOP) – Supplement 1.

C. Phase I Testing Assumptions

- All Utilities and ESCOs will be required to pass Phase I test requirements.
- ESCOs must meet all PSC requirements established in the Uniform Business Practices regarding ESCO eligibility, prior to entering Phase I EDI testing.
- Participants will use automated processes when testing (i.e., an EDI translator).

D. Phase I Critical Success Factors

- Apply objective criteria to ensure companies are creating transactions as defined by applicable New York State business practices and technical standards.
- Companies have an EDI translator and associated "maps" in place to create EDI transactions that adhere to New York State standards.
- Companies are prepared to move into Phase II or III EDI testing (trading partner testing) using the New York State approved EDI transactions.
- Companies have the New York Internet Data Transfer Mechanism implemented and working properly.

E. Phase I Testing Scope

- The test scenarios for Phase I reflect all requests and responses associated with both gas and electric commodity services. However, companies will only be required to complete test scenarios for the commodities they currently offer.
- The EDI Phase I test scenarios reflect the variety of meter configurations which currently exist. These meter configurations are of particular interest with regard to the exchange of consumption or meter reading data and include single, multiple (including summarized) and unmetered configurations. Participants are required to test all transactions for the business processes they will be engaged in. The Test Moderator will determine the relevant test scenarios for the participant.
- Volume testing is not be within the scope of Phase I testing.
- The following transaction set standards will be tested (Phase I test scenarios for some standards are contained in this document; scenarios for other standards are contained in various TOP Supplements that have been approved by the Commission):
  - TS 814 Enrollment Request/Response (includes requests for secondary services)
  - TS 814 Consumption History Request & Response
  - TS 814 Drop Request & Response
  - TS 814 Account Maintenance
  - TS 814 Reinstatement
  - TS 820 Remittance (Utility Bill Billing and Utility Rate Ready Billing)
  - TS 824 Application Advice
  - TS 824 Positive Notification
  - TS 867 Consumption History/Gas Profile
  - TS 867 Monthly Usage
  - TS 810 Invoice (Utility Bill Ready, Utility Rate Ready, and Single Retailer billing)
  - TS 248 Account Assignment
  - TS 568 Payment Advisement
  - TS 568 Accounts Receivable Advisement

V. Phase I - X12 Syntax Test Specifications

A. Organization of X12 Tests

The New York EDI Phase I tests can be referred to as "base" or "unit" tests. These tests will be used as building blocks in growing levels of integrated or "string" tests during subsequent testing phases. Phase I tests are syntactical tests of the outbound EDI transaction. Thus Phase I tests have been categorized by Utility and ESCO.

In Phase I testing, each party will create a test data set that represents an EDI transaction source. This data set will then be processed through the company's translator to create the outbound EDI data file. DPS Staff will then verify and/or certify the outbound file created by the company is a valid New York X12 transaction file.

Tests for incoming transactions and transaction processing will be handled in Phase II and Phase III testing phases.

B. Utility Tests

The Test Moderator will provide request scenarios to the Utility. Utility response tests will be based on these request scenarios. Utilities are required to engage in these tests for the commodities they provide:

TEST ID	UNIT	TEST NAME
Single Meter Tests [5]		
SM-EA	814	Enrollment Accept
SM-EAHA	814	Enrollment Accept, History Accept
SM-EAHR	814	Enrollment Accept, History Reject
SM-HA	814	History Accept
Multiple Meter Tests [3]		
MM-EA	814	Enrollment Accept
MM-EAHA	814	Enrollment Accept, History Accept
MM-EAHR	814	Enrollment Accept, History Reject
Unmetered Tests [3]		
UM-EA	814	Enrollment Accept
UM-EAHA	814	Enrollment Accept, History Accept
UM-EAHR	814	Enrollment Accept, History Reject

[5] Utilities are required to demonstrate the capability to provide an appropriate billing option code in their enrollment accept responses.

TEST ID	UNIT	TEST NAME
Reject Transaction Tests		
ER	814	Enrollment Reject
ER-HR	814	Enrollment Reject, History Reject[6]
HR	814	History Reject
Utility Drop Tests		
U-DREQ	814	Utility Drop Request
U-DRES-A	814	Utility Drop Response Accept
U-DRES-R	814	Utility Drop Response Reject

Consumption History Test (primary or secondary request responses)		
CH-A-SM	867	Consumption History - Single Meter
CH-A-MM	867	Consumption History - Multiple Meter
CH-A-UM	867	Consumption History - Unmetered
CH-GP	867	Gas Profile History [7]
Current Consumption/Usage Tests		
CC-SM	867	Current Billed Consumption – Single Meter
CC-MM	867	Current Billed Consumption – Multiple Meter
CC-UM	867	Current Billed Consumption – Unmetered
CU-SM	867	Current Meter Reading Data - Single Meter (required for Single Retailer, optional for other models)
CC-MM	867	Current Meter Reading Data - Multiple Meter (required for Single Retailer, optional for other models)
CC-UM	867	Current Meter Reading Data – Unnmetered (required for Single Retailer, optional for other models)
CC-UM	867	Interim Bill Indicator (required for Utility Bill Ready model)
Functional Acknowledgment Test		
FA	997	Functional Acknowledgment

[6] If the enrollment request (LIN=CE) is rejected, all secondary services requested coincident with that enrollment will also be rejected (from the *New York 814 Enrollment Request & Response Implementation Guide*).
[7] Utilities, through their Utility Maintained EDI Guides, indicate whether they support gas profile requests.

C. ESCO Tests

The Test Moderator will provide request scenarios to the ESCO. ESCO tests will be simulated based on these request scenarios. ESCOs are required to engage in these tests for the commodities they provide:

TEST ID	UNIT	TEST NAME
Enrollment & Historical Usage Request Tests		
ER-DB	814	Enrollment Request – Dual Billing Option
ER-UR	814	Enrollment Request – Utility Rate Ready Option
ER-UB	814	Enrollment Request – Utility Bill Ready Option
ER-EE	814	Enrollment Request – ESCO Bill Ready Option
ER-AG	814	Enrollment Request – Agency Billing Option
ER-HR	814	Enrollment Request, History Request[8]
HR	814	Stand alone History Request
ESCO Drop Tests		
EM-DREQ	814	ESCO Drop Request
EM-DREJ	814	ESCO Drop Reject
Usage - Negative Response Test		
U-NEG	824	Application Advice (negative response to 867 Current or Historical Usage)
Functional Acknowledgment Test		
FA	997	Functional Acknowledgment

[8] These tests must include an appropriate billing option.

VI. Phase I - Data Transfer Mechanism Test Specifications

A. DTM Protocol Specification

The Internet HTTP mechanism will be used by all parties engaged in EDI commerce in New York. Further, the Internet HTTP mechanism is based on, and aligned with, GISB's Electronic Data Mechanism (EDM), and the Internet Engineering Task Force's (IETF) EDIINT AS2 data exchange specification. The choice of this DTM meets the requirements of the Commission's April 12, 2000 EDI Order, which specified that an interoperable Internet-based protocol be utilized.

The GISB EDM version 1.4 (November 15, 1999)[9] will provide the baseline detail specification (i.e. 'profile') defining all attributes required for trouble free, interoperable transport of X12 EDI messages between trading partners. New York specific attributes are denoted herein, thus defining the New York specific DTM profile. This profile is designed to achieve interoperability and satisfy the critical success factors defined in the June 30, 1999 Collaborative Report. It provides details of the necessary technical specifications (i.e. encryption standards, security standards), best operational practices (i.e. transmission failure retries, timing) and DTM testing guidelines.

1. Internet EDI data exchanges will follow the rules defined in sections of the GISB EDM Version 1.4 standard (outlined in Attachment C) unless explicitly stated in this document. Some key attributes are:

    - Data exchanges will be timestamp anchored on Eastern Prevailing Time (EST, utilizing Daylight Savings Time). All New York utilities operate in EST and neighboring jurisdictions are using EST, thereby providing compelling justification for this practice (GISB specifies the use of Central Time for its time stamp anchors).

    - Encryption depends on the PGP versions used by each trading partner being compatible. The recommendation is to use the most current PGP version, however both parties do not require the same version, as newer versions provide backward-compatibility. Parties should confer and document PGP versions being used in the trading partner agreement.

    - Use of the RSA algorithm is required

    - Use of 1024-bit public key is recommended

2. Archiving – Rather than comply with the GISB EDM 2 year archival guideline, companies must meet all archival and auditing conditions including financial record keeping requirements, PSC requirements, and any other jurisdictional or internal company requirements. The following points should be considered in a company's archiving plan: archive the data file as received at the GISB server; archive the associated PGP public key used to decrypt the data file; and optionally archive the EDI transaction map used to 'de-map' the data file.

[9] While GISB EDM Version 1.4 is the standard for New York EDI, use of GISB EDM Versions 1.5 and 1.6, where supported by the utility, are permissible..

3. Utilities and ESCOs are encouraged, although not required, to provide redundant capabilities for the 'last mile' of Internet connectivity to ensure a higher level of operability for their trading partners (i.e. backup web servers, alternate pathway(s) from the servers to the Internet via a second ISP connection, etc.).

4. Each party should maintain one production URL and one test URL, at a minimum, to clearly separate production-destined transactions from test-destined transactions.

5. Public keys should be changed annually. Notice should be given to a trading partner when changing keys. It is recommended that regularly scheduled non-emergency public key changes should include a 30-day notice.

6. Utilities have agreed to communicate web server maintenance schedules to their trading partners. This will be done via posting to the utilities' scheduled web site interruptions section of their retail access web page (this is in accordance with the recommendations of the New York Web Site Design Task Force recommendations filed with the Commission on October 10, 2000). At their option, utilities may additionally email server maintenance schedules to their trading partners. ESCOs may also post on their web page, or email, any scheduled server maintenance schedules to their trading partners.

Summary of Failures and Fail-over Standards

1. A **protocol failure** occurs any time a sending party's web server cannot connect to the receiving party's web server. For example, if a server fails to connect, or tries to post a file and fails, this is a protocol failure.

2. An **exchange failure** is when a sending party's server has had continual protocol failures over a two-hour period. Each party is required to try at least 3 times over the two-hour period before flagging an exchange failure.

3. Email will be used to notify partners of protocol failures. The email should be initiated as close to the time of failure as reasonably possible (i.e. within 5 minutes). This will assist in rectifying and documenting problems.

4. When a protocol failure occurs, it is recommended that the sending party wait 60 minutes, then retry the transfer. If a second protocol failure occurs, the sending party should wait another 60 minutes, then retry the transfer. For example, the first protocol failure happens at 1:00am, the second happens at 2:00am, and the third happens at 3:00am.

5. Email will be used to notify partners of exchange failures. This notification may occur on the next business day should the exchange failure occur during non-business hours. The exchange failure notification alerts partners that repeated attempts to connect to a partner's web server failed. The intended receiving party, upon receipt of an email message notifying it of an exchange failure, is responsible for requesting a retry of the connection.

6. When a trading partner's Internet EDI solution is not functioning for 5 consecutive business days, an alternative secure electronic medium will be utilized. This could be the equivalent of posting unencrypted EDI data to a diskette, tape, or CD-ROM and having that medium overnight delivered to the recipient trading partner. The specifics of the alternate mechanism will be defined in the trading partner agreement. Automatic failover systems are not required by this plan.

Example of failure

For example:

- At 4 PM Trading Partner X's (TP-X) web server tries to post a file to Trading Partner Z's (TP-Z) web server, which is down.
- TP-X notes a Protocol failure at 1AM and sends email to TP-Z.
- TP-X waits 60 minutes and tries again.
- If TP-Z's server is still down, TP-X notes another Protocol failure and sends email to TP-Z.
- TP-X waits another 60 minutes.
- If TP-X still cannot connect (3rd attempt over a consecutive two hour period),
- TP-X notes an Exchange failure and sends email to TP-Z.

As soon as TP-X notes a Protocol failure, TP-X sends a Protocol Failure email to TP-Z's specified DTM technical contact. This gives TP-Z a notification that there is a problem and offers some insight that can be used to troubleshoot and fix the problem prior to an Exchange failure.

As soon as TP-X notes an Exchange failure, TP-X sends an Exchange Failure email to TP-Z's specified DTM technical contact. This gives TP-Z notification that there is a problem, and manual or automated processes required to rectify the problem can be initiated.

B. DTM Testing Guidelines

The purpose and scope of DTM Testing is to test and verify that data is transmitted from point to point via the prescribed data transfer standards. It is a test of the technical infrastructure and not a test of the business processing or the EDI X12 syntactical formatting.

Parties to the test will substantiate that they have received data as intended by the sending party and vice versa. Testing will address:

- typical operational problems
- trading partner's server does not respond
- retries of transmissions via a prescribed time interval (wait) and number of times
- encrypted file cannot be interpreted (parties not using proper PGP public keys)
- varying payload sizes (i.e. large files as well as small)

Testing Assumptions

- All companies are required to establish DTM communications capability prior to entering Phase II or III Testing.

- DTM testing will be performed with several size outbound data files. Data file size is to be measured in characters prior to encryption and compression (by PGP) and should range from 1Mb (small) to 50Mb (large).

- Each Utility will document DTM specifications such as: GISB server URL's, port restrictions, protocol/exchange failure process and contacts, test exceptions on their WEB site or written documentation (i.e. trading partner agreement).

Testing Goals

- Establish DTM connectivity, including HTTP connections and encryption compatibility.
- Validate that a data file can be sent and that the recipient, upon receipt and decryption of the file can authenticate the data file content with the sender.
- Validate that HTTP (GISB) acknowledgements are being delivered.
- Validate that protocol failures are handled properly.
- Validate that exchange failures are handled properly.
- Validate that decryption (PGP) failures are handled properly.

C. Detailed DTM Testing Specification

The test specification described herein is the test plan model for the DTM testing to be conducted during Phase I testing. DTM testing should be targeted for completion within one week.

Internal Testing

Purpose: The parties, prior to any testing with a trading partner, should conduct internal testing. This internal test can be used to identify and rectify problem areas before working with a trading partner. This test is intended as a guideline only and is not meant to replace any internal acceptance testing used by a particular company.

Expected Results: Ensure all functions will operate as required.

Test Script:

1. Functionality of the Internet connections including the firewall. These tests can be performed by attempting to access the GISB server via a workstation attached to a network other then the company's internal private network. Two valid methods of performing these tests are:

- Provide an IP subnet, or set of IP addresses which reside on a network segment defined as a public segment and residing outside the firewall.
- A workstation that is not connected to the organization's private network could dial an ISP and act as a client workstation.

2. Files should be sent to and retrieved from this public segment. Files can be 'clear text' files at this point.

3. Automated processes should be tested. These should include, but not necessarily be limited to:

   - Notification of Protocol and Exchange failure(s)
   - Redundant connections
   - Automated parsing of GISB acknowledgment and error messages

4. These tests should also be used to create an internal notification process and test the monitoring capability of the company. Tests should look to answer the question: what actions are required in the event of a failure and who is responsible for initiating these actions? Failures that should be tested are:

   - Catastrophic failure of the GISB server.
   - Failure of primary Internet connection.
   - Failure of User ID / Password combinations
   - Failure of PGP decryption (invalid or missing key)
   - Mailbox full conditions (If you are limiting mailbox sizes)

5. Stress testing can be performed at this stage. A large file (i.e. 50Mb) should be transferred to the GISB server.

6. Encryption/decryption methods, certificates and keys will be tested. An envelope should be created and encrypted from the test user id. The file should then be decrypted, processed, encrypted and returned to the test id.

Attachment A: NY EDI Test Plan Overview

I. SUMMARY

(from Section 7, June 30, 1999 Report of the New York EDI Collaborative)

"Prior to implementation of the EDI standards in New York, testing of both EDI transactions and the data transfer mechanism must occur. Testing ensures that the internal programming necessary for receipt and transmission of EDI transactions, the medium to be used for the electronic exchange, and the EDI transactions themselves are functioning properly. Sending and receiving a variety of test (sample) transactions enables the parties to identify and resolve problems in advance of live operations and ensures that the system interfaces are working properly. To satisfy these objectives it will be necessary for each individual party to engage in testing with all trading partners, to test all EDI transactions and to send and receive a number of EDI files that vary in size."

II. GOALS

- Ensure companies have internal systems and processes in place to create EDI transactions that adhere to State and industry standards.
- Ensure companies have internal systems and processes that enable high volume levels of EDI activity.
- Ensure companies have the New York Internet Data Transfer Mechanism implemented and working properly.

III. ASSUMPTIONS

- EDI testing in New York will follow a multi-phased approach, designed to facilitate a smooth EDI implementation for all companies.
- Companies must demonstrate they have implemented automated interfaces to support EDI, in accordance with the PSC's Order and industry standards, prior to beginning testing activities.
- Utilities will conduct ESCO Phase I transaction syntactical certification and report the result to DPS Staff.
- The New York EDI Collaborative will develop detailed testing requirements based on the published, accepted NY EDI transactions. Utilities will individually determine the test bed of data that will be used for testing purposes with ESCOs.

- Utilities will provide supplementary information as necessary to communicate known testing issues to all involved trading partners.

- A list of testing contacts for all companies engaged in testing will be maintained and made available through the PSC's web site.

- Each utility will determine the number of trading partners that it is able to test with simultaneously

- Consistent with the DPS Order, parties that employ VAN solutions (Value Added Networks) do so at their cost and are required to utilize the New York Internet data transfer mechanism at the point of transaction delivery.

IV. DEFINITIONS

- **Experienced, volunteer ESCOs** – For Phase II testing, an ESCO who has been actively involved in EDI activities for more than 1 year in a deregulated energy environment. Further, these ESCOs must have the ability to engage in varying levels of volume testing, depending on each utility's needs. These volumes are expected to range from a minimum of 500 to a maximum of 10,000 transactions per day.

V. TESTING PHASES

Phase I – X12 Syntactical Verification & Demonstration of Internet DTM Capability

Description:

- All companies are required to create EDI transactions and submit them to the Test Moderator for syntactical verification (reference: NY EDI Testing Scenarios spreadsheet, Phase I Test Scenarios). DPS Staff will serve as Test Moderator and will intervene as needed in any dispute resolution situations.
- All companies are required to demonstrate Data Transfer Mechanism (DTM) communications capability.
- All companies are required to successfully complete all Phase I requirements to progress to Phase II or Phase III testing. Phase II and III test schedules will be based on the order that Phase I certified ESCOs contact and coordinate with each utility. Each Utility will have responsibility to manage test schedules and queues.
- DPS Staff will maintain and publish a list of companies that have met Phase I testing requirements.

Phase I Participants:

- All utilities and ESCOs.

Entry Criterion:

- ESCOs determined to be eligible suppliers by the DPS Staff.

Exit Criterion:

- Demonstration to and certification by Test Moderator that all required EDI transactions are X12 compliant.
- Establishment of New York's Internet DTM.

Phase II – Verification of Utility EDI Readiness

Description:

- Testing between Phase I certified New York utilities and sufficiently experienced, volunteer ESCOs (also Phase I certified) to ensure utility systems are prepared for EDI production environment.
- Testing of transactions for all required business scenarios
- Volume testing of requisite transactions.
- Volume testing will be done in incremental stages from a low number of transactions to the maximum.
- DPS Staff will coordinate Phase II testing schedules and provide dispute resolution as needed.

Participants:

- All Phase I certified utilities and several experienced, Phase I certified ESCOs.

Entry Criterion:

- Phase I certification for all utilities & ESCOs.

Exit Criterion:

- Demonstration of utility and ESCO readiness through successful fulfillment of Phase II testing scenarios.

Phase III – Verification of ESCO Readiness

Description:

- Testing between Phase I certified New York utilities and ESCOs to ensure each ESCO's system is prepared for EDI production environment.
- Testing of transactions for all required business scenarios (reference: NY EDI Testing Scenarios spreadsheet, Phase III Test Scenarios).
- Volume testing of requisite transactions.
- Volume testing will be done in incremental stages from a low number of transactions to the maximum.

- Eligible ESCOs will contact the utility to be assigned to a position in a testing queue.
- Disputes may be escalated to the DPS for resolution.

Participants:

- All utilities and all ESCOs (successful Phase II ESCO's exempt from any Phase II test scenarios required for Phase III certification).

Entry Criterion:

- Phase I certification.

Exit Criterion:

- Demonstration of ESCO readiness through successful fulfillment of Phase III testing scenarios with the utility.

- Utility provides written confirmation to ESCO of successful completion of Phase III testing, including the date testing is completed and ESCO is ready for production.

VI. TEST PLANS

- Phase I tests are included in this document
- See various TOP Supplements for Phase I tests for other standards and for all Phase II and III test plans.

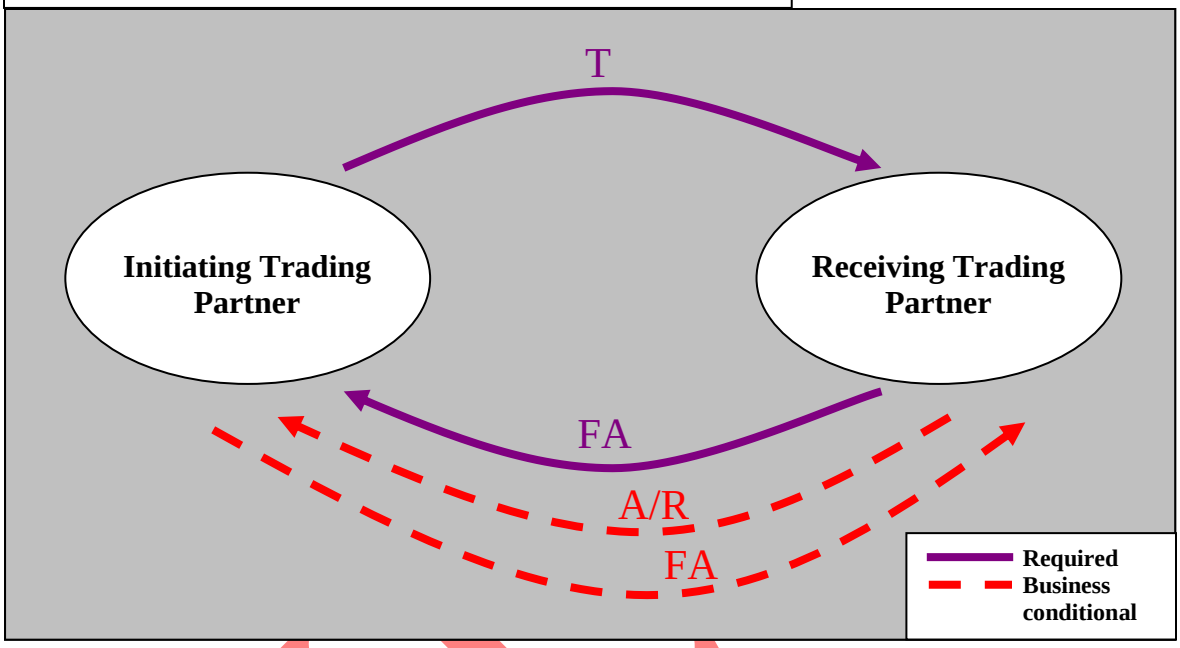
VII. TRADING PARTNER PROFILE INFORMATION

- Companies may voluntarily exchange trading partner profile information in support of EDI testing and implementation.

Attachment B: Transaction Processing Architecture

I. Overview

Figure 1. Generic transaction flow diagram



Event Order

1. **T** – initiating transaction
2. **FA** – Functional Acknowledgment response to the initiating transaction (always a 997)
3. **A/R** – Application Response, if required, to the initiating transaction (see Transaction Response Matrix below for specific A/R requirements)
4. **FA** – Functional Acknowledgment response to the Application Response (always a 997)

Transaction Response Matrix

Indicates transaction identifier, functional and application responses and response time frames. Note, positive responses are not required for some standards and should not be sent.

T	***ID****	***A/R***	***A/R Response Time***	***FA (1 business day response)***
814 Enrollment	BGN	814e *(required on reject or accept)*	2 business days	997
814 Drop (Utility to ESCO)	BGN	814d *(required on negative response)*	2 business days	997
814 Drop (ESCO to Utility)	BGN	814d *(required on negative or positive response)*	2 business days	997
814 Account Maintenance	BGN	814c *(required on negative or positive response)*	2 business days	997
814 Reinstatement	BGN	814r *(required on negative or positive response)*	2 business days	997
814 Historical Usage (ESCO request)	BGN	814 *(required on negative or positive response)*	2 business days	997
867 Historical Usage	BGN	824AA	2 business days	997
867Monthly Usage	BGN	824AA	2 business days	997
810 Invoice - Utility Bill Ready (ESCO to Utility)	BIG	824 PN *(required on all positive responses)* 824 AA *(used for all negative responses)*	1 business day	997
810 Invoice - Utility Rate Ready (Utility to ESCO)	BIG	824 AA)	1 business day	997
810 Invoice - Single Retailer (Utility to ESCO)	BIG	824 AA	1 business day	997
820 Remittance Advice	BPR	824 AA	1 business day	997
248 Account Assignment	BHT	824 AA	1 business day	997
568 Payment Advisement	BGN	824 AA	1 business day	997
568 Accounts Receivable Advisement	BGN	824 AA	1 business day	997

* Transaction segment containing the unique identifier

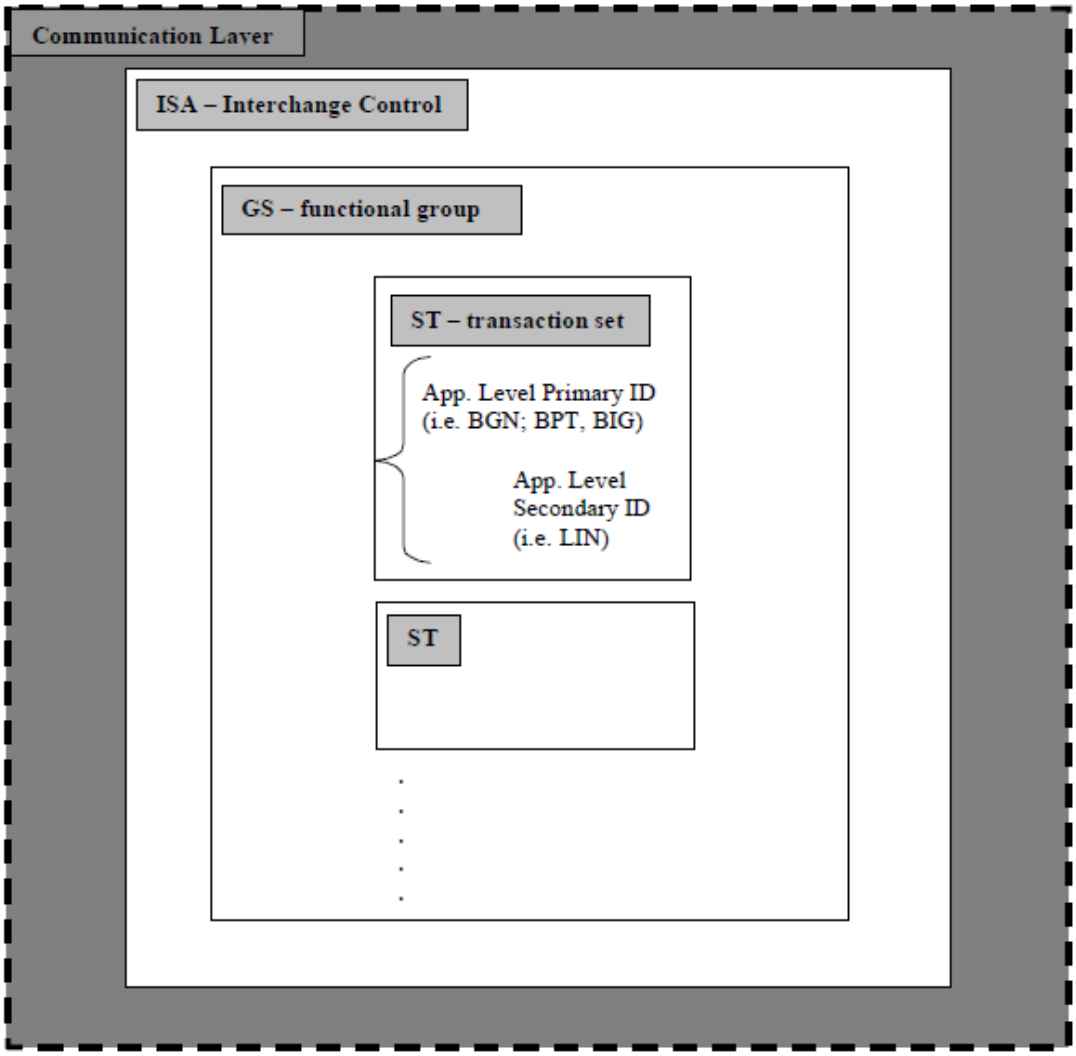
II. TRANSACTION PROCESSING RULES

- New York follows a "First-In" approach to transaction processing. "First In" will be the first valid transaction that was processed and accepted by the application system. Transactions must be processed by the recipient in the order they are received. Receipt of a transaction is considered the date and time the server post function is complete.

- The 997 FA is required as a response to every transaction received. The 997 will only be used as a functional response, issued by the EDI translator, to verify receipt of a valid X12 document. No application error conditions will be communicated in the 997. Each 997 FA will be returned within one business day of receipt of the initiating transaction.

- Application Responses will be used on a business conditional basis as specified for each transaction.

III. ENVEOLPING



Enveloping Rules:

All EDI enveloping shall conform to ANSI X12 standards. The following are additional rules endorsed by the New York EDI Collaborative. However, parties may enter into trading partner arrangements in which variations of these rules may be agreed to.

- One data file will be transmitted in an HTTP session.
- Only one ISA (envelope) may be transmitted in a data file
- Only one functional group (GS) will be used within an envelope (ISA).
- Multiple transactions (ST) of the same type will be allowed within functional group (GS). For example, multiple 814 transactions can be included in one functional group/envelope (e.g. enrollments can be grouped together, drops can be grouped together).

IV. TRACKING MECHANISMS AND IDENTIFIERS

- Envelopes/transactions can be fully identified using identifiers from each communications and enveloping layer. This information will be used on a discretionary basis by operational staff for transaction control.

- The following table describes the logical unique identifier string by concatenating the key values of each layer (i.e. TP#||TIMSTAMP||ISA#||GS#||ST#||*xxx*#||*yyy*#). The Collaborative recommends maintaining the GS# in the logical identifier string for future use and scalability.

TP#	Trading Partner identifier	Communications layer
TIMSTAMP	Date & Time stamp	Communications layer
ISA#	Interchange control #	ISA
GS#	Group Control #	GS
ST#	Transaction set control #	ST
xxx# (transaction specific)	Application level primary identifier	Ex. 814 – BGN 810 – BIG 867 – BPT
yyy# (transaction specific as required)	Application level secondary identifier	Ex. 814 – LIN

- Application back end systems require only the application level identifiers for transaction identification and control at the applications level.

- The application level primary and secondary identifiers must also guarantee uniqueness at the application level. The transaction initiator has responsibility for assigning unique identifiers.

- Identifier length: UIG X12 specifies only maximum length; lengths can vary up to the maximum.

IV. OTHER

Archiving & Auditing

- Companies must meet all archival and auditing conditions including financial record keeping requirements, PSC requirements, and any other jurisdictional or internal company requirements.

Attachment C: Relevant Sections of GISB EDM V. 1.4

Based on review of the GISB EDM Version 1.4, the following sections were determined to be relevant and controlling for implementation of New York's DTM:

1. In the Section entitled BUSINESS PROCESS AND PRACTICES, Subsection C. Electronic Delivery Mechanism Related Standards, the Sub-Subsection entitled Standards: Standards 4.3.7 through 4.3.15 inclusive.

2. The Section entitled TECHNICAL IMPLEMENTATION - INTERNET EDI/EDM & BATCH FF/EDM, subject to the following modifications and clarifications:

   2.1 - Ignore all references to "BATCH FF/EDM", "FF/EDM", "deadlines", "pipelines", and "nominations".
   2.2 - In the *Data Dictionary For Internet EDI*, the Format of the Business Name transaction-set refers to specific 8-character codes which are not relevant for our purposes
   2.3 - Under the Subsection entitled SENDING TRANSACTIONS, Sub-Subsection entitled Client Specifications, the reference to Central Time (Central Standard / Central Daylight) should be changed to Eastern Time (Eastern Standard / Eastern Daylight).
   2.4 - Under the Subsection entitled RECEIVING TRANSACTIONS, the Sub-Subsection entitled URL/CGI Implementation Guidelines is informational in nature only and has no force and effect. This Sub-Subsection shall not be construed as to impose any requirements on any UTILITY or ESCO.
   2.5 - Under the Subsection entitled RECEIVING TRANSACTIONS, Sub-Subsection entitled Server Specifications, the reference to Central Time (Central Standard / Central Daylight) should be changed to Eastern Time (Eastern Standard / Eastern Daylight).

3. Appendix A

4. Appendix B

The GISB EDM Version 1.4 is available at http://www.naesb.org.