To: Electronic Data Interchange (EDI) Partners:

Following are our Utility Industry Group compliant EDI 997 version 4010 guidelines for your use in implementing EDI.   Page 16 contains a sample 997 for your reference.

Should you have questions regarding EDI, contact Southern Company EDI Support at edisupp@southernco.com. We look forward to helping you improve your business and meeting your energy needs.

EDI
Implementation Guideline

997
Functional Acknowledgement

Version 004010

997

Functional Acknowledgment

Functional Group=FA

This Draft Standard for Trial Use contains the format and establishes the data contents of the Functional Acknowledgment Transaction Set (997) for use within the context of an Electronic Data Interchange (EDI) environment. 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.

Not Defined:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes
	ISA	Interchange Control Header	M	1		
	GS	Functional Group Header	M	1		

Heading:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes
010	ST	Transaction Set Header	M	1		N1/010
020	AK1	Functional Group Response Header	M	1		N1/020
LOOP ID - AK2					**999999**	**N1/030L**
030	AK2	Transaction Set Response Header	O	1		N1/030
LOOP ID - AK3					**999999**	
040	AK3	Data Segment Note	O	1		
050	AK4	Data Element Note	O	99		
060	AK5	Transaction Set Response Trailer	M	1		N1/060
070	AK9	Functional Group Response Trailer	M	1		N1/070
080	SE	Transaction Set Trailer	M	1		

Not Defined:

Pos	Id	Segment Name	Req	Max Use	Repeat	Notes
	GE	Functional Group Trailer	M	1		
	IEA	Interchange Control Trailer	M	1		

Notes:

1/010   These acknowledgments shall not be acknowledged, thereby preventing an endless cycle of acknowledgments of acknowledgments. Nor shall a Functional Acknowledgment be sent to report errors in a previous Functional Acknowledgment. The Functional Group Header Segment (GS) is used to start the envelope for the Functional Acknowledgment Transaction Sets. In preparing the functional group of acknowledgments, the application sender's code and the application receiver's code, taken from the functional group being acknowledged, are exchanged; therefore, one acknowledgment functional group responds to only those functional groups from one application receiver's code to one application sender's code.
There is only one Functional Acknowledgment Transaction Set per acknowledged functional group.

1/020   AK1 is used to respond to the functional group header and to start the acknowledgement for a functional group. There shall be one AK1 segment for the functional group that is being acknowledged.

1/030L   AK2 is used to start the acknowledgement of a transaction set within the received functional group. The AK2 segments shall appear in the same order as the transaction sets in the functional group that has been received and is being acknowledged.

1/030   AK2 is used to start the acknowledgement of a transaction set within the received functional group. The AK2 segments shall appear in the same order as the transaction sets in the functional group that has been received and is being acknowledged.

1/060   Codes for elements AK503, AK504, AK505 and AK506 are the same as for AK502.

1/070   Codes for elements AK906, AK907, AK908 and AK909 are the same as for AK905.

ISA   Interchange Control Header

Pos:			**Max: 1**
Not Defined - Mandatory			
Loop: N/A			**Elements: 16**

To start and identify an interchange of zero or more functional groups and interchange-related control segments

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
ISA01	I01	**Authorization Information Qualifier**	M	ID	2/2

Code	Name
00	No Authorization Information Present (No Meaningful Information in I02)

Ref	Id	Element Name	Req	Type	Min/Max
ISA02	I02	**Authorization Information**	M	AN	10/10
ISA03	I03	**Security Information Qualifier**	M	ID	2/2

Code	Name
00	No Security Information Present (No Meaningful Information in I04)

Ref	Id	Element Name	Req	Type	Min/Max
ISA04	I04	**Security Information**	M	AN	10/10
ISA05	I05	**Interchange ID Qualifier**	M	ID	2/2

Code	Name
01	Duns (Dun & Bradstreet)
02	SCAC (Standard Carrier Alpha Code)
09	X.121 (CCITT)
12	Phone (Telephone Companies)
14	Duns Plus Suffix
16	Duns Number With 4-Character Suffix
17	American Bankers Association (ABA) Transit Routing Number (Including Check Digit, 9 Digit)
ZZ	Mutually Defined

Ref	Id	Element Name	Req	Type	Min/Max
ISA06	I06	**Interchange Sender ID**	M	AN	15/15
ISA07	I05	**Interchange ID Qualifier**	M	ID	2/2

Code	Name
01	Duns (Dun & Bradstreet)
02	SCAC (Standard Carrier Alpha Code)
09	X.121 (CCITT)
12	Phone (Telephone Companies)
14	Duns Plus Suffix
16	Duns Number With 4-Character Suffix
17	American Bankers Association (ABA) Transit Routing Number (Including Check Digit, 9 Digit)
ZZ	Mutually Defined

Ref	Id	Element Name	Req	Type	Min/Max
ISA08	I07	**Interchange Receiver ID**	M	AN	15/15
ISA09	I08	**Interchange Date**	M	DT	6/6
ISA10	I09	**Interchange Time**	M	TM	4/4
ISA11	I65	**Repetition Separator**	M		1/1
ISA12	I11	**Interchange Control Version Number**	M	ID	5/5

Code	Name
00401	Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997

Ref	Id	Element Name	Req	Type	Min/Max
ISA13	I12	**Interchange Control Number**	M	N0	9/9
ISA14	I13	**Acknowledgment Requested**	M	ID	1/1

Code	Name
0	No Interchange Acknowledgment Requested
1	Interchange Acknowledgment Requested (TA1)

Ref	Id	Element Name	Req	Type	Min/Max
ISA15	I14	**Interchange Usage Indicator**	M	ID	1/1

Code	Name
P	Production Data
T	Test Data

Ref	Id	Element Name	Req	Type	Min/Max
ISA16	I15	**Component Element Separator**	M		1/1

GS Functional Group Header

Pos: **Max: 1**
Not Defined - Mandatory
Loop: N/A   **Elements: 8**

To indicate the beginning of a functional group and to provide control information

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
GS01	479	**Functional Identifier Code**	M	ID	2/2

Code	Name
FA	Functional Acknowledgment (997)

Ref	Id	Element Name	Req	Type	Min/Max
GS02	142	**Application Sender's Code**	M	AN	2/15
GS03	124	**Application Receiver's Code**	M	AN	2/15
GS04	373	**Date**	M	DT	8/8
GS05	337	**Time**	M	TM	4/8
GS06	28	**Group Control Number**	M	N0	1/9
GS07	455	**Responsible Agency Code**	M	ID	1/2

Code	Name
X	Accredited Standards Committee X12

Ref	Id	Element Name	Req	Type	Min/Max
GS08	480	**Version / Release / Industry Identifier Code**	M	AN	1/12

Code	Name
004010	Standards Approved for Publication by ASC X12 Procedures Review Board through October 1997

Comments:

1. A functional group of related transaction sets, within the scope of X12 standards, consists of a collection of similar transaction sets enclosed by a functional group header and a functional group trailer.

ST — Transaction Set Header

			Pos: 010	Max: 1
			Heading - Mandatory	
			Loop: N/A	**Elements: 2**

To indicate the start of a transaction set and to assign a control number

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
ST01	143	**Transaction Set Identifier Code**	M	ID	3/3

Code	Name
997	Functional Acknowledgment

Ref	Id	Element Name	Req	Type	Min/Max
ST02	329	**Transaction Set Control Number**	M	AN	4/9

AK1 Functional Group Response Header

Pos: 020   Max: 1
Heading - Mandatory
Loop: N/A   Elements: 2

To start acknowledgment of a functional group

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
AK101	479	**Functional Identifier Code**	M	ID	2/2
		The Functional Identifier Code found in the GS segment (GS01) of the functional group being acknowledged			
AK102	28	**Group Control Number**	M	N0	1/9
		The Group Control Number found in the GS segment (GS06) of the functional group being acknowledged			

AK2   Transaction Set Response Header

			Pos: 030	Max: 1
			Heading - Optional	
			Loop: AK2	**Elements: 2**

To start acknowledgment of a single transaction set

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
AK201	143	**Transaction Set Identifier Code**	M	ID	3/3
		The Transaction Set Identifier Code found in the STsegment (ST01) of the transaction being acknowledged			
AK202	329	**Transaction Set Control Number**	M	AN	4/9
		The Transaction Set Control Number found in the ST segment (ST02) of the transaction being acknowledged			

AK3 **Data Segment Note**

To report errors in a data segment and identify the location of the data segment

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
AK301	721	**Segment ID Code**	M	ID	2/3
		Code defining the segment ID of the data segment in error			
AK302	719	**Segment Position in Transaction Set**	M	N0	1/6
		The numerical count position of this data segment from the start of the transaction set: the transaction set header is count position 1			
AK303	447	**Loop Identifier Code**	O	AN	1/6
		The loop ID number given on the transaction set diagram is the value for this data element in segments LS and LE			
AK304	720	**Segment Syntax Error Code**	O	ID	1/3

Code	Name
1	Unrecognized segment ID
2	Unexpected segment
3	Mandatory segment missing
4	Loop Occurs Over Maximum Times
5	Segment Exceeds Maximum Use
6	Segment Not in Defined Transaction Set
7	Segment Not in Proper Sequence
8	Segment Has Data Element Errors

AK4　Data Element Note

To report errors in a data element or composite data structure and identify the location of the data element

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
AK401	C030	**Position in Segment**	M	Comp	
	722	**Element Position in Segment**	M	N0	1/2
	1528	**Component Data Element Position in Composite**	O	N0	1/2
AK402	725	**Data Element Reference Number**	O	N0	1/4
AK403	723	**Data Element Syntax Error Code**	M	ID	1/3

Code	Name
1	Mandatory data element missing
2	Conditional required data element missing.
3	Too many data elements.
4	Data element too short.
5	Data element too long.
6	Invalid character in data element.
7	Invalid code value.
8	Invalid Date
9	Invalid Time
10	Exclusion Condition Violated

Ref	Id	Element Name	Req	Type	Min/Max
AK404	724	**Copy of Bad Data Element**	O	AN	1/99

AK5 Transaction Set Response Trailer

Pos: 060   **Max: 1**
Heading - Mandatory
Loop: AK2   **Elements: 6**

To acknowledge acceptance or rejection and report errors in a transaction set

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
AK501	717	**Transaction Set Acknowledgment Code**	M	ID	1/1

Code	Name
A	Accepted
E	Accepted But Errors Were Noted
R	Rejected

Ref	Id	Element Name	Req	Type	Min/Max
AK502	718	**Transaction Set Syntax Error Code**	O	ID	1/3

Code	Name
1	Transaction Set Not Supported
2	Transaction Set Trailer Missing
3	Transaction Set Control Number in Header and Trailer Do Not Match
4	Number of Included Segments Does Not Match Actual Count
5	One or More Segments in Error
6	Missing or Invalid Transaction Set Identifier
7	Missing or Invalid Transaction Set Control Number
23	Transaction Set Control Number Not Unique within the Functional Group

Ref	Id	Element Name	Req	Type	Min/Max
AK503	718	**Transaction Set Syntax Error Code**	O	ID	1/3
AK504	718	**Transaction Set Syntax Error Code**	O	ID	1/3
AK505	718	**Transaction Set Syntax Error Code**	O	ID	1/3
AK506	718	**Transaction Set Syntax Error Code**	O	ID	1/3

AK9 **Functional Group Response Trailer**

Pos: 070   Max: 1
Heading - Mandatory
Loop: N/A   Elements: 9

To acknowledge acceptance or rejection of a functional group and report the number of included transaction sets from the original trailer, the accepted sets, and the received sets in this functional group

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
AK901	715	**Functional Group Acknowledge Code**	M	ID	1/1

Code	Name
A	Accepted
E	Accepted, But Errors Were Noted.
P	Partially Accepted, At Least One Transaction Set Was Rejected
R	Rejected

Ref	Id	Element Name	Req	Type	Min/Max
AK902	97	**Number of Transaction Sets Included**	M	N0	1/6
AK903	123	**Number of Received Transaction Sets**	M	N0	1/6
AK904	2	**Number of Accepted Transaction Sets**	M	N0	1/6
AK905	716	**Functional Group Syntax Error Code**	O	ID	1/3

Code	Name
1	Functional Group Not Supported
2	Functional Group Version Not Supported
3	Functional Group Trailer Missing
4	Group Control Number in the Functional Group Header and Trailer Do Not Agree
5	Number of Included Transaction Sets Does Not Match Actual Count
6	Group Control Number Violates Syntax

Ref	Id	Element Name	Req	Type	Min/Max
AK906	716	**Functional Group Syntax Error Code**	O	ID	1/3
AK907	716	**Functional Group Syntax Error Code**	O	ID	1/3
AK908	716	**Functional Group Syntax Error Code**	O	ID	1/3
AK909	716	**Functional Group Syntax Error Code**	O	ID	1/3

Comments:

1. If AK901 contains the value "A" or "E", then the transmitted functional group is accepted.

SE

Transaction Set Trailer

Pos: 080   **Max: 1**
Heading - Mandatory
Loop: N/A   **Elements: 2**

To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
SE01	96	**Number of Included Segments**	M	N0	1/10
SE02	329	**Transaction Set Control Number**	M	AN	4/9

Comments:

1. SE is the last segment of each transaction set.

GE Functional Group Trailer

Pos: **Max: 1**
Not Defined - Mandatory
Loop: N/A   **Elements: 2**

To indicate the end of a functional group and to provide control information

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
GE01	97	**Number of Transaction Sets Included**	M	N0	1/6
GE02	28	**Group Control Number**	M	N0	1/9

Comments:

1. The use of identical data interchange control numbers in the associated functional group header and trailer is designed to maximize functional group integrity. The control number is the same as that used in the corresponding header.

IEA   Interchange Control Trailer

To define the end of an interchange of zero or more functional groups and interchange-related control segments

Element Summary:

Ref	Id	Element Name	Req	Type	Min/Max
IEA01	I16	**Number of Included Functional Groups**	M	N0	1/5
IEA02	I12	**Interchange Control Number**	M	N0	9/9

SAMPLE 997 VERSION 4010 TRANSACTION

```
ISA*00*          *00*          *01*xxxxxxxxx     *01*xxxxxxxxx     *030814*0046*U*00401*000000557*0*P*;~
GS*FA*xxxxxxxxx*xxxxxxxxx*20030814*0046*557*X*004010~
ST*997*0001~
AK1*IN*241~
AK2*810*0584~
AK5*A~
AK9*A*1*1*1~
SE*6*0001~
GE*1*557~
IEA*1*000000557~
```