

## 1. Examples of Data Files to Transfer

### 1.1. Outage Data

CIRCUIT ID	KV	OUT DT	RES DT	CAUSE	DELIVERY POINTS	DELIVERY POINT HOURS	CUSTOMERS	CUSTOMER HOURS	SCHEDULED
8103	115	1/8/01 10:46	1/8/01 10:46						1
9534	230	2/18/01 16:07	2/18/01 17:08	3	5	5	12500	12500	0
7617	69	4/28/01 13:57	4/28/01 14:27	6	1	1	2500	2500	0
8103	115	4/8/01 0:27	4/8/01 0:27						1
10097	500	7/22/01 0:03	7/22/01 2:00	3					0
8103	115	7/24/01 15:00	7/24/01 15:00	5					0
7182	69	8/21/01 7:36	8/21/01 7:36	6	1		2500		0
9534	230	8/21/01 9:21	8/22/01 15:53						1
8103	115	8/26/01 19:04	8/26/01 19:04	5					0
7182	69	9/18/01 6:37	9/18/01 6:37	6	3		7500		0
7182	69	9/26/01 10:31	9/26/01 10:34	9	3		7500		0
10097	500	10/24/01 18:45	10/24/01 21:13	3					0
9508	230	10/24/01 23:19	10/24/01 23:19	8					0
9534	230	10/29/01 9:02	10/30/01 13:31						1
8103	115	11/14/01 9:29	11/14/01 9:29						1
7182	69	12/15/01 7:26	12/15/01 7:26	6	3		7500		0
7182	69	1/4/02 10:25	1/4/02 14:44						1
8103	115	4/12/02 15:11	4/12/02 15:11	6					0
8103	115	5/13/02 3:14	5/13/02 3:14	5					0
8103	115	5/13/02 3:15	5/13/02 3:16	5					0
7182	69	5/26/02 20:58	5/26/02 20:58	6	2		500		0
8103	115	6/16/02 3:26	6/16/02 3:26	5					0
7182	69	6/28/02 13:51	6/28/02 13:51	6					0
8103	115	7/10/02 12:53	7/10/02 15:00	4					0
7915	69	8/6/02 16:36	8/6/02 17:06	5	2	1	500	2500	0
7915	69	8/6/02 16:36	8/6/02 17:36	5	1	1	2500	2500	0
7915	69	8/6/02 16:42	8/6/02 17:42	5	3	3	7500	7500	0
8103	115	8/7/02 9:54	8/7/02 9:54						1
7915	69	9/13/02 23:01	9/14/02 1:06						1
7915	69	9/21/02 23:47	9/22/02 1:23	5	3	6.6	7500	16500	0
7915	69	10/11/02 21:15	10/12/02 6:41						1
10097	500	10/28/02 9:34	10/31/02 16:36						1
7915	69	11/10/02 23:31	11/11/02 0:33	4					0
7182	69	11/23/02 0:38	11/23/02 0:38	3	1		2500		0
7182	69	11/24/02 0:02	11/24/02 2:58						1
9508	230	12/2/02 8:53	12/2/02 8:53						1
9508	230	12/5/02 8:19	12/5/02 15:23						1
7182	69	12/9/02 3:58	12/9/02 4:01	3	1		2500		0
7182	69	12/11/02 8:22	12/16/02 13:48						1
10097	500	12/13/02 15:29	12/13/02 18:54	3					0
7915	69	12/24/02 15:17	12/24/02 16:46	9	3	4.2	7500	1500	0

- **Black Headings** indicate **Mandatory** fields. Outage data does not have to look *exactly* like this example, but it should contain all mandatory information in an easily convertible text, database or spreadsheet format.
- Internal **Outage Causes** are assigned the following 1-9 SGS Study Categories: 1. Equipment, 2. System Protection, 3. Lines, 4. Weather, other than lightning, 5. Lightning Only, 6. Unknown, 7. Vegetation, 8. External, 9. Other
- **Optional** fields are in **RED** font
- Combined outages are **highlighted in yellow** (these are usually stepped restorations or successive outages and are combined by SGS prior to analysis)
- Voltage is included in **gray** font, which should NOT be included in outage data and is displayed for information purposes only.

## 1.2. Circuit Definition Table

The circuit definition table contains one record for each valid circuit with any supporting or informational variables. This table is used to validate outage records. Additional identifiers may also be included, such as company region. Column or row ordering is not required.

The following **Circuit Definition Table** is for the above outage data. This system used 01JAN1990 as the “date of earliest know good outage data” and uses it as the in-service date. Some important attributes to examine:

- This system has a number of radial subtransmission lines (7915, 7182 and retired 7617). Also, circuit 9534 has directly tapped load. These circuits have the number of customers and delivery points.
- **Not all systems will have a direct mapping of customers or delivery points to specific circuits.**
- The **EXCLUDE** field indicates a tie line which this system does not own a majority portion.
- All other circuits do not directly serve load.
- One circuit was placed in service after 20APR1999 and another circuit was retired in 2001.
- Circuit 9534 serves both Load and Bulk purposes, so it has importance values for both. Other circuits serve only one purpose.

**IMPORTANT NOTE:** This example assumes a *constant* customer and delivery point count for the entire time period of customer data submitted. If your system has a high growth rate or has major circuit changes, it may be desirable to have a separate row for each year, with customer and delivery point count. Alternatively, you could have a separate column for each year’s customer and delivery point count.

### Circuit Definition Example

Circuit ID	Circuit Name	Voltage	Length	Load Import	Bulk Import	In-Service Date	Retirement Date	Exclude	Customers	Delivery Points
7915	STONE-HOMETOWN	69	13.01	75		01-Jan-90		0	7500	3
7182	HOMETOWN-INLAWS	69	30.71	50		01-Jan-90		0	5000	2
7617	HOMETOWN-VACATION	69	15.82			01-Jan-90	30-Jun-01	0	2500	1
8103	XYZ P&L TIE	115	25.25		60	20-Apr-99		1		
9508	BIG CITY-SMALL TOWN	230	28.63		65	01-Jan-90		0		
9534	WHITEHOUSE-CONGRESS	230	10.71	67	57	01-Jan-90		0	12500	5
10097	TERTIARY-QUATERNARY	500	40.20		90	01-Jan-90		0		

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