Planned Transmission Outage Readers' Guide

Last Updated: 4th May 2016
Version: 3.3

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1 Disclaimer

The data provided in this Readers' Guide is provided for informational purposes only and does not contain information related to the settlement of the MISO's Energy Markets and shall not be relied upon for such purpose. Any party relying on the data provided in this report is doing so at its own risk. MISO shall not be liable for any consequences or damages to any party relying on the data provided herein.

2 Introduction

The document provides an explanation or Readers' Guide to understanding the MISO Planned Transmission Outage reports and YTD Historical Outage Reports. For questions or comments regarding the report please contact Client Relations at 866-296-6476 or email at clientrelations@midwestiso.org.

3 Glossary

Item	Description
KV	Kilovolt
IDC	Interchange Distribution Calculator

4 Report

4.1 Description

The Planned Transmission Outage Report is produced on an hourly basis and depicts the "planned" transmission outages that are within the MISO footprint. This report will show the planned start, planned end, actual start and actual end times of a given outage when it is updated by transmission owners as well as outage coordinators in the MISO CROW application. Please note that only valid active outages and planned outages that are forward looking at the time of the report execution will be shown in the report. The completed outages for the last 72 hours from the time of execution shall also be displayed on the report. Forced outages or equipment that have been brought back into operation without updates in the MISO CROW application by the Transmission Owners will not be shown in this report. The reports will be published both in .PDF and .XML formats at each hourly execution.

The Yearly Historical Outage report will contain transmission outages that occurred within the MISO footprint that were actually closed during the year. For example the "2006_HistoricalOutages.xml" file will contain outages that were closed during the 2006 calendar year. The historical outage file for the current year will contain transmission outages that have been closed since 1/1 of the current year through 12:00 am EST of the previous day.

4.2 Report Availability Time

The Planned Transmission Outage reports will be available on the MISO OASIS site, every hour, 7 days a week, 365 days a year. The report will be available on an hourly basis at the top of every hour. The MISO OASIS site will present a rolling 24 hours set of .PDF and .XML files. Once a file has aged more than 24 hours it will be removed from the OASIS web site for housekeeping reasons. Older files can be obtained by contacting MISO as described in the section 1 overview.

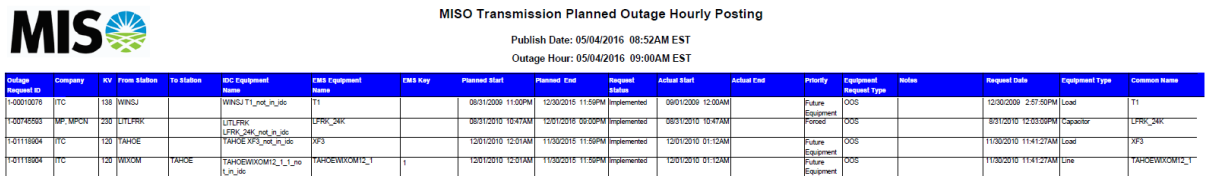
The current year's historical outage file will be produced each day after 12:01 am EST. This file will be available after 12:30 am EST on the MISO OASIS web site.

4.3 How to use this Report

The guide includes an example of the Planned Transmission Outage reports in an Excel format in the Report Layout section of the document. The column headers are defined in the Data Definitions section of the document.

4.4 Report Layout

Figure 1 Example Report



MISO Transmission Planned Outage Hourly Posting

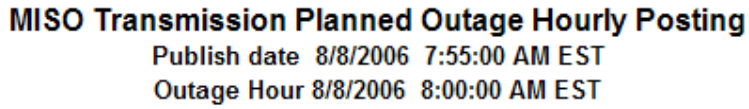
Publish Date: 05/04/2016 08:52AM EST

Outage Hour: 05/04/2016 09:00AM EST

Outage Request ID	Company	KV	From Station	To Station	IDC Equipment Name	EMS Equipment Name	EMS Key	Planned Start	Planned End	Request Status	Actual Start	Actual End	Priority	Equipment Request Type	Notes	Request Date	Equipment Type	Common Name
1-00010076	ITC	138	WINSJ		WINSJ T1_not_in_idc	T1		08/31/2009 11:00PM	12/30/2015 11:59PM	Implemented	09/01/2009 12:00AM		Future Equipment	OOS		12/30/2009 2:57:50PM	Load	T1
1-00745503	MP, MPCN	230	LITLFRK		LITLFRK LFRK_24K_not_in_idc	LFRK_24K		08/31/2010 10:47AM	12/01/2016 09:00PM	Implemented	08/31/2010 10:47AM		Forced	OOS		8/31/2010 12:03:00PM	Capacitor	LFRK_24K
1-01118904	ITC	120	TAHOE		TAHOE XF3_not_in_idc	XF3		12/01/2010 12:01AM	11/30/2015 11:59PM	Implemented	12/01/2010 01:12AM		Future Equipment	OOS		11/30/2010 11:41:27AM	Load	XF3
1-01118904	ITC	120	WIXOM	TAHOE	TAHOEWIXOM12_1_1_not_in_idc	TAHOEWIXOM12_1	1	12/01/2010 12:01AM	11/30/2015 11:59PM	Implemented	12/01/2010 01:12AM		Future Equipment	OOS		11/30/2010 11:41:27AM	Line	TAHOEWIXOM12_1

4.5 Data Definitions - Heading

Figure 2 – Heading



MISO Transmission Planned Outage Hourly Posting

Publish date 8/8/2006 7:55:00 AM EST

Outage Hour 8/8/2006 8:00:00 AM EST

Column Name	Definition / Description / Calculation
Publish Date	This is the date and hour in EST that the report was produced.
Outage hour	Outages that have been reported up to the publish time are report on this report. This outage report is for the hour ending 8:00 AM EST.

4.6 Data Definitions - Outage Request ID, Company, KV, From Station, To Station and IDC Equipment Name

Figure 3 – Section 1

Outage Request ID	Company	KV	From Station	To Station	IDC Equipment Name
1-001312	AMRN	345	ARP 345 345	EAU CL 3 345	_TIPTON 8582 OOS
1-001234	CIN	765	ARP 345 346	EAU CL 3 346	3HOUND3AIKEI_1 OOS
1-001235	IPL	345	ARP 345 347	EAU CL 3 347	3SOSIDE 3SOS11PLQL OOS
1-001236	IPL	345	ARP 345 348	EAU CL 3 348	EMSSOSHORT35_1 OOS
1-001237	IPL	345	ARP 345 349	EAU CL 3 349	_TIPTON 8582 OOS
1-001239	IPL	345	ARP 345 350	EAU CL 3 350	3HOUND3AIKEI_1 OOS
1-001210	IPL	345	ARP 345 351	EAU CL 3 351	3SOSIDE 3SOS11PLQL OOS
1-001564	IPL	345	ARP 345 352	EAU CL 3 352	EMSSOSHORT35_1 OOS
1-001987	IPL	345	ARP 345 353	EAU CL 3 353	5KERR_MC 5KERR_MC_8 OOS
1-004566	IPL	345	ARP 345 354	EAU CL 3 354	5KERR_MC 5KERR_MC_8 OOS

Column Name	Definition / Description / Calculation
The Outage Request ID	The Outage Request number assigned to the given outage in the Control Room Operations Window (CROW) application
Company	The Entity Operating the Outage Equipment.
KV	The kilovolt rating of the equipment if known. This field may be blank.
From Station	The location or beginning station on the network where the equipment is located that will be on outage
To Station	The location or ending station on the network where the equipment is located that will be on outage. For point items such as transformers, this field may be blank.
IDC Equipment Name	The IDC name of the equipment that is on outage.

4.7 Data Definitions - EMS Equipment Name, EMS Key, Planned Start, Planned End, Request Status

Figure 4 – Section 2

EMS Equipment Name	EMS Key	Planned Start	Planned End	Request Status
T1		08/31/2009 11:00PM	12/30/2015 11:59PM	Implemented
LFRK_24K		08/31/2010 10:47AM	12/01/2016 09:00PM	Implemented
XF3		12/01/2010 12:01AM	11/30/2015 11:59PM	Implemented
TAHOEWIXOM12_1	1	12/01/2010 12:01AM	11/30/2015 11:59PM	Implemented

Column Name	Definition / Description / Calculation
EMS Equipment Name	The EMS name of the equipment that is on outage.
EMS Key	The EMS key of the equipment that is on outage.

Planned Start	The time in EST that the outage is planned to start.
Planned End	The time in EST that the outage is planned to end
Request Status	The status of the outage. The valid statuses for the report are Proposed, Submitted, Study, Pre-Approved, Approved, Implemented, Completed.

4.8 Data Definitions - Actual Start, Actual End, Priority, Equipment Request Type, Notes

Figure 5 - Section 3

Actual Start	Actual End	Priority	Equipment Request Type	Notes
8/1/2006 14:15		Urgent	Economy	
8/2/2006 14:15		Urgent	Out of Service	
		Forced	Derate	
		Urgent	Economy	
		Urgent	Out of Service	
8/6/2006 14:15	8/8/2006 5:00	Forced	Derate	
8/6/2006 14:15	8/6/2006 17:00	Urgent	Economy	
		Urgent	Out of Service	
		Forced	Derate	
		Emergency	Economy	

Column Name	Definition / Description / Calculation
Actual Start	The time in EST that the outage actually started
Actual End	The time in EST that the outage actually ended
Priority	Outage Requests have evolved from a single Outage Request Type to a two-part Request Type in CROW Application. The two parts are: Outage Priority & Equipment Request Type. In CROW Application, Suppose a facility was to be "outaged" for maintenance. Currently, it would be submitted as "Maintenance". Under the new process, it would be "Planned", "Out of Service". The following are the Outage Priorities • Forced • Opportunity • Emergency • Planned • Urgent • Future Equipment • Retired • Discretionary
Equipment Request Type	The Equipment Request Type defines the Type of Outage Request. The following are the Request Types: • Out Of Service • Normally Open • Informational • HLW – Hot Line Work • General System Protection
Notes	This is a user entered Field called as OASIS Posting on the CROW

	Application. This field may be blank.
Equipment Type	The Type of Equipment defined in the MISO system. The following equipment types are available on the report. Load Line Capacitor Transformer Circuit Breaker Not in Model
Common Name	The Equipment name as entered by the Transmission Owners or Equipment Owners.
From CA	The From Control Area of the Equipment. This column is available only on the XML posting.
To CA	The To Control Area of the Equipment. This column is available only on the XML posting.

4.1 Data Definitions - Outage Scenarios

Figure 6 - Outage Scenarios

Planned Start	Planned End	Request Status	Actual Start	Actual End	P
8/1/2006 14:00	8/2/2006 8:00	Implemented	8/1/2006 14:15		U
8/2/2006 14:00	8/2/2006 8:01	Implemented	8/2/2006 14:15		U
8/7/2006 14:00	8/12/2006 8:02	Proposed			F
8/7/2006 14:00	8/12/2006 8:03	Approved			U
8/5/2006 14:00	8/8/2006 6:00	Approved			U
8/6/2006 14:00	8/12/2006 8:05	Completed	8/6/2006 14:15	8/8/2006 5:00	F
8/6/2006 14:00	8/8/2006 8:06	Completed	8/6/2006 14:15	8/6/2006 17:00	U
8/8/2006 21:00	8/12/2008 8:07	Propsed			U
8/8/2008 21:00	8/12/2008 8:08	Approved			F
8/10/2009 14:00	8/25/2008 8:09	Submitted			E

Condition	Definition / Description / Calculation
1 (Rows 1,2)	This section of the report displays the Active Outages. Active Outages are the outages which started but did not complete as per the CROW system. If the outage is completed it follows the Condition 3 of this table before it is removed from the report.
2 (Rows 3-5)	This section of the report displays the outages "Planned to Start" or "Planned to End" in the 24 hour period. For example if the Outage Hour on the report is 8-8-2006 8:00 AM EST, all the outages which "Planned to start" or "Planned to end" between **8-7-2006 8:00 AM EST** through **8-8-2006 8:00 AM EST** will be reported in this section. These outages drop off the report if outage does not start during this time period. If these outages start and have an "Actual Start Date" they will stay on the report as per condition 1.
3 (Rows 6,7)	This section of the report displays the completed outages in the last 72 hours before they drop off the report. The "Completed Outages" are then available on the daily Historical Outages Report available at Outage_summary link.
4 (Rows 8-10)	This section of the report contains all the planned future outages. Future outages are the outages which are planned to start after the current outage hour on the report.

5 References

BPM 008 – Outage Operations at
https://www.misoenergy.org/Library/BusinessPracticesManuals/Pages/BusinessPracticesManuals.aspx

Version	Date	Description
0	10-3-2006	Initial Draft
1.0	10-9-2006	Revised Draft after revisions by Deepal Rodrigo
1.1	10-17-2006	Updated link
1.2	2-8-2007	Updated to included information on historical outage files.
1.3	10-24-2007	Updated to include the Not In Model Outage Information.
3.0	12-28-2009	Updated to include the CROW changes
3.1	01-08-2010	Updated to new template
3.2	05-31-2013	Updated to included additional column information
3.3	05-04-2016	Updated to include additional column (EMS Key) information