



Electric Reliability and Security for the West

WECC Criterion  
INT-020-WECC-CRT-2.1

## Interchange Schedule Backup Process

### Introduction

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1. **Title:** Interchange Schedule Backup Process
2. **Number:** INT-020-WECC-CRT-2.1
3. **Purpose:** The purpose of this document is to establish a coordinated backstop scheduling process that protects the reliability of the grid during Interchange-software failure that prevents the distribution of e-Tag information.
4. **Applicability:**
  - 4.1. **Functional Entities:**
    - 4.1.1. Reliability Coordinators
    - 4.1.2. Balancing Authorities
    - 4.1.3. Transmission Service Providers
5. **Effective Date:** July 1, 2017

## Requirements and Measures

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- WR1.** Each Transmission Service Provider shall maintain a record of the transactions on its paths for the current hour plus the next four consecutive hours.
- WM1.** Each Transmission Service Provider will have a record of all transactions on its paths for the hour reviewed in accordance with WR1 plus the following four consecutive hours.
- WR2.** Each Balancing Authority shall maintain a record of its interchange schedules for the current hour plus the next four consecutive hours.
- WM2.** Each Balancing Authority will have a record of all of its interchange schedules for the hour reviewed in accordance with WR2 plus the following four consecutive hours.
- WR3.** Each Balancing Authority shall maintain a duplicate copy of its aggregate Net Scheduled Interchange (NSI) as previously confirmed with the interchange software for the current hour plus the next four consecutive hours.
- WM3.** Each Balancing Authority will have evidence that it retained a duplicate copy of its aggregate NSI as previously confirmed with the interchange software for the hour reviewed in accordance with WR3 and the following four consecutive hours.
- WR4.** Each Balancing Authority shall store a duplicate copy of its aggregate NSI on a storage system independent from the interchange software tool.
- WM4.** Each Balancing Authority will have evidence that storage of its aggregate NSI takes place on a storage system independent from the interchange software tool, per WR4.
- WR5.** Each Balancing Authority shall report atypical operation of the interchange software to the Reliability Coordinator and the interchange software provider within 15 minutes of that determination, or in accordance with the reporting times established by the software provider, whichever is longer.
- WM5.** Each Balancing Authority will have evidence of reports made per WR5. Evidence may include, but is not limited to, any electronic or hard copy documentation between the parties containing the prescribed report and the time windows associated with that communication.
- For purposes of WR5, what constitutes atypical operation of interchange software is interchange software performance other than that which the software was designed to create. (Please see Guidance Section.)
- WR6.** Each Reliability Coordinator shall notify its Balancing Authorities within 15 minutes of confirming that the interchange software has failed, and again within 15 minutes of receiving notification that operation of the interchange software has been restored.



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**WM6.** Each Reliability Coordinator will have evidence that it notified its Balancing Authorities within 15 minutes of confirming interchange software failure, and again within 15 minutes of receiving notification that operation of the interchange software has been restored.

**The following requirements only apply during failure of the software system(s) designed to distribute interchange information within the Western Interconnection.**

**WR7.** Each Balancing Authority shall operate to the most recent duplicate copy of its aggregate NSI as last confirmed with the interchange software (net of all individual adjacent NSIs).

**WM7.** Each Balancing Authority will have evidence that it operated to the data contained in its most recent duplicate copy of its aggregate NSI as last confirmed with the interchange software (net of all individual adjacent NSIs) or as adjusted by changes allowed in this criterion for each specified period covered during interchange software failure, per WR7.

**WR8.** Each Balancing Authority shall exhaust all of its internal and dynamically scheduled or pseudo-tied external resources before requesting new interchange.

**WM8.** Each Balancing Authority will have evidence that it exhausted all of its internal and dynamically scheduled or pseudo-tied external resources before it requested a new interchange for each specified period covered during interchange software failure, per WR8.

**WR9.** Each Sink Balancing Authority shall implement new interchange transactions when necessary to maintain load-to-generation balance, reserve requirements, or to maintain reliability.

**WM9.** Each Sink Balancing Authority will have evidence that it implemented new interchange transactions that were necessary to maintain load-to-generation balance, reserve requirements, or to maintain reliability, for each specified period covered during interchange software failure, per WR9.

**WR10.** Each Sink Balancing Authority shall create new interchange by verbally communicating and confirming with the Source Balancing Authority and the Transmission Service Providers that are parties to the transaction.

**WM10.** Each Sink Balancing Authority will have evidence that the Sink Balancing Authority created and confirmed new interchange with the Source Balancing Authority and the Transmission Service Providers that were parties to the newly created transaction for each specified period covered during interchange software failure, per WR10.

**WR11.** Each Sending Balancing Authority that is a party to the newly created interchange transaction shall verbally communicate and confirm with each Receiving Balancing Authority and



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Transmission Service Provider involved in the transaction created by the Sink Balancing Authority.

**WM11.** Each Sending Balancing Authority that is a party to the newly created interchange transaction will have evidence that it communicated and confirmed the newly created interchange transaction with each Receiving Balancing Authority and Transmission Service Provider involved in the transaction created by the Sink Balancing Authority for each specified period covered during interchange software failure, per WR11.

**WR12.** Each Balancing Authority shall verbally communicate upward adjustments to existing non-dynamic transactions with each Balancing Authority and each Transmission Service Provider that is a party to the transaction, as if those adjustments were a new transaction.

**WM12.** Each Balancing Authority will have evidence that upward adjustments to existing non-dynamic transactions were arranged by verbally communicating with each Balancing Authority and each Transmission Service Provider that is a party to the transaction, as if the upward adjustment were a new transaction, for each specified period covered during interchange software failure, per WR12.

**WR13.** Each Balancing Authority and each Transmission Service Provider shall verbally communicate downward adjustments or curtailments to existing non-dynamic transactions with each Balancing Authority and each Transmission Service Provider that is a party to the transaction.

**WM13.** Each Balancing Authority and each Transmission Service Provider will have evidence that downward adjustments or curtailments to existing non-dynamic transactions were arranged by verbally communicating with each Balancing Authority and each Transmission Service Provider that is a party to the transaction for each specified period covered during an interchange software failure, per WR13.

**WR14.** Each Balancing Authority and each Transmission Service Provider shall complete the Transaction Data Template (Attachment A) for each new transaction.

**WM14.** Each Balancing Authority and each Transmission Service Provider will have evidence that it completed the Transaction Data Template (Attachment A) for each new transaction created during each specified period covered during an interchange software failure, per WR14.

**The following requirements only apply after restoration of software system(s) designed to distribute interchange information within the Western Interconnection.**

**WR15.** Each Sink Balancing Authority shall submit or cause to have submitted an after-the-fact e-Tag, after termination of each interchange software failure and before the end of the after-the-fact



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e-Tag submission deadline, for each transaction implemented during each interchange software failure.

**WM15.** Each Sink Balancing Authority will have evidence that it submitted an after-the-fact e-Tag, after termination of each interchange software failure and prior to the end of the after-the-fact e-Tag submission deadline, for each transaction implemented during each interchange software failure, per WR15.

**WR16.** Each Sink Balancing Authority shall update or cause to have updated its dynamic tags, after termination of each interchange software failure and before the end of the dynamic tag adjustment deadline, using the actual interchange values that occurred during the interchange software failure.

**WM16.** Each Sink Balancing Authority will have evidence that it updated or caused to be updated its dynamic tags, after termination of the interchange software failure and before the end of the dynamic tag adjustment deadline, using the actual interchange values that occurred during the interchange software failure, per WR16.



## Version History

Version	Date	Action	Change Tracking
1	June 10, 2010	Operating Committee Approved	Developed as WECC-0054. Initial version
1	July 29, 2010	WECC Board of Directors Approved	Initial version
1	September 5, 2012	WECC Board of Directors changed designation from "CRT" to "RBP"	Designation change
1.1	January 16, 2013	Errata	In Attachment A, the word "Western" was changed to "WECC" in regard to the "WECC Interchange Tool." In the Purpose statement, the term "Criterion" was changed to "document." Attachment A was reformatted from landscape to portrait. Conformed to current template.
1.1	June 25, 2014	WECC Board of Directors changed designation from "RBP" to "CRT"	Designation change
1.2	January 28, 2016	Errata	"WIAB" was added to the title to match the header. In Attachment A, references to INT-020-WECC-RBP-1 and its location on the WECC websites were removed as they are out of date. Reference to the project tracking number was removed from the attachment and relocated into the document header to match the current template.
2	June 21, 2017	WECC Board of Directors Approved	Developed as WECC-0118. This project: 1) deleted defined terms "Interchange Authority Emergency" and "Interchange Authority Software Provider," 2) deleted the Purchasing-Selling Entities from the Applicability section, and 3) added a Guidance section to address the generic terms for software. Replaces Interchange Tool (WIT) Checkout.
2.1	June 18, 2019	Errata	Converted to newest template.  In Version 2.1: 1) WM3 "Net Scheduled Interchange" was abbreviated, 2) apostrophes were eliminated from "NSI's", 3) unnecessary commas were removed from WM10, WM11, WM13, WR15 and the Guidance section, 4) quotations were added to "Interchange Software", 5) dashes were removed from "time-to-time", and 6) Version History syntax was corrected.

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**Attachments**

**Attachment A**

**Transaction Data Template  
WECC Interchange Authority Back-Up (WIAB)**

TagID: \_\_\_\_\_ DateTime Prepared: \_\_\_\_\_ TimeZone: \_\_\_\_\_

StartDate: \_\_\_\_\_ StopDate: \_\_\_\_\_ Transaction Type: \_\_\_\_\_

Contact: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Comment: \_\_\_\_\_

WECC Reserve Requirements Entity: \_\_\_\_\_ WECC Reserve Requirement Percent: \_\_\_\_\_

**Generation**

Source BA	GEN PSE	SourcePoint	MW Point	Contract	GenProduct

**Transmission Segments**

S. Entity	TransOwner	POR	POD	MW Profiles	TP	TransProduct	Oasis Number

**Load**

Sink BA	Load PSE	Sink Point	Product	Contracts

**Market Path**

PSE	Product	Contract	Misc.

**Expanded Energy Profiles**

StartDate	StartTime	StopDate	StopTime	Cur.MW	RampDur

**Stacked Transmission Allocation Profiles**

TP:		POR:		POD:			
StartDate	StartTime	StopDate	StopTime	MWLevel		TC	Oasis#



### Rationale

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A Rationale section is optional. If Rationale Boxes were used during the development of this project, the content of those boxes appears below.

### Guidance Section

#### Generic use of the Term “Interchange Software”

Throughout the Western Interconnection, the interchange software used is colloquially known as the WECC Interchange Tool (WIT), even though WECC neither owns, controls, nor contracts for the software package. The interchange software currently falls under the purview of Peak Reliability. Further, there is an expanded spectrum of the services offered under the contract that is not specifically contemplated in this document.

This document recognizes that the name and attributes of the interchange software, its origin, and its vendor will change from time to time. To ensure the viability of this document, the generic term “interchange software” has been used instead of the specific name (proper noun) of the interchange software package.

It is this interchange software package that is used to authorize the implementation of valid and balanced Interchange Schedules between Balancing Authority Areas, and ensures communication of Interchange information for reliability assessment purposes.

### Requirements

WR5 is designed to create an early warning system that incorporates the variable of informed judgment. Ideally, this communication loop enhances the ability to identify and remedy interchange software anomalies before they result in complete software failure. To accommodate this variable, the standard-of-review threshold for adherence to WR5 is to be based on the knowledge and experience of the specific software user at the time the determination was made.

The Requirement, and particularly the associated Measure, also recognize that although the typical or designed performance of the software can objectively be measured by comparison to the software’s specifications: 1) not all users will have the same knowledge depth regarding the software’s performance specifications, and 2) the specific software provider may have its own established communication protocols through which a suspected failure or observation of atypical performance should be reported. In the latter case, the Requirement is designed to default to the reporting time windows of the software provider should the reporting time windows exceed the prescribed 15-minute window.



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Unlike WR5 that is designed for early warning, WR6 addresses confirmed failure of the interchange software. The 15-minute time window was added to Version 2 to ensure a timely dissemination of information.

