

**Failure to Comply Failure to
Comply Penalty Charge**

BPA Transmission Business Practice

Version 1314

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DRAFT

Failure to Comply Penalty Charge

Version 4314

The Failure to Comply Penalty Charge Business Practice addresses the consequences of non-compliance with Dispatch Orders and how the Failure to Comply Penalty Charge is determined.

BPA Policy Reference

- [Transmission Rate Schedules/Provisions](#): Failure to Comply Penalty Charge

For more information, visit the [BPA Transmission Business Practices webpage](#) or submit questions to techforum@bpa.gov.

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A. General Criteria

1. Generators within the BPA Balancing Authority Area or which directly interconnect to the FCRTS (e.g., through an Interconnection Agreement, or a Balancing Authority Area Service Agreement) are subject to a Failure to Comply Penalty Charge.

2. Failure to shed load or modify generator output in response to a Dispatch Order will result in a Failure to Comply Penalty Charge, except as provided in the following criteria:-

~~3. The Higher of Rule and Touch Line Rule~~

a. Higher of Rule – The level used to determine FTC during ramping periods between a resource’s schedules shall be the higher of the approved sum of schedules at the start of the ramp or the approved sum of schedules at the end of the ramp from the immediately preceding or to the immediately subsequent schedule interval (the ramp times into or out of the current schedule interval).

i. The Higher of Rule will apply at the start of the ramp to the resource’s next scheduled interval or after completion of the Touch Line ~~Rule~~ (~~See~~ Section A.~~32~~.b), whichever is later.

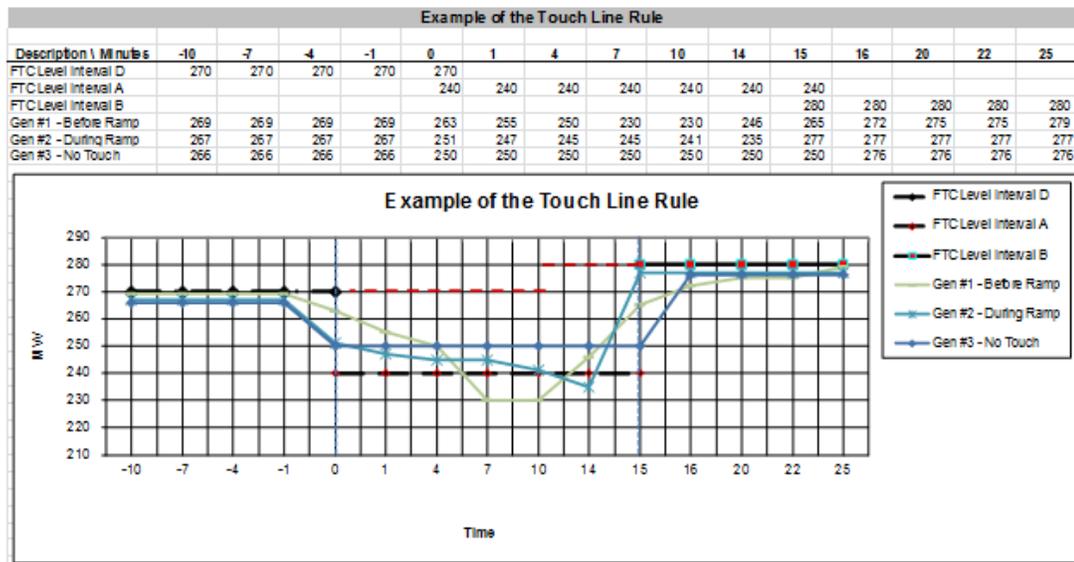
- ii. The following table illustrates the Higher of Rule periods of time for each schedule interval.

Schedule for Interval	Ramp From Interval	Higher of Period	Non-Ramp Periods	Ramp to Interval	Higher Of Period
A	D	xx:00 - xx:10	NA	B	xx:10 - xx:15
B	A	xx:15 - xx:20	xx:20 - xx:25	C	xx:25 - xx:30
C	B	xx:30 - xx:35	xx:35 - xx:40	D	xx:40 - xx:45
D	C	xx:45 - xx:50	NA	A	xx:50 - xx:60

Schedule for Interval	Ramp From Interval	Higher of Rule Period	Non-Ramp Periods	Ramp to Interval	Higher of Rule Period
A	D	xx:00 – xx:10	N/A	B	xx:10 – xx:15
B	A	xx:15 – xx:20	xx:20 – xx:25	C	xx:25 – xx:30
C	B	xx:30 – xx:35	xx:35 – xx:40	D	xx:40 – xx:45
D	C	xx:45 – xx:50	N/A	A	xx:50 – xx:60

- b. Touch Line Rule - A resource must have at least 1-minute average generation reading (see Section B.5.a) at or below the FTC Level at any time during the FTC Window (see Section B.1.c.iii) for the Higher of Rule to apply when the FTC Level, as described in Section B.5.b for generation and Section C.2 for load, of the resource’s next scheduled interval is lower than the resource’s current schedule (a down ramp between intervals).

4.3. Examples of the Touch Line Rule:



a. Graph characteristics:

- i. Negative numbers are minutes before the hour, positive numbers are minutes after the hour.
- ii. The dashed red line is the Higher of Rule period of time.

- iii. Intervals D (xx:45 – xx:00), A (xx:00 – xx:15), and B (xx:15- xx:30) are curtailed.
- iv. Gen #1 – Before Ramp – This generator met the requirements of the Touch Line Rule by having 1-minute average generation reading below the current intervals FTC ~~U~~level from minutes 7 to 10. The generator gets the full benefit of the Higher of Rule ~~P~~period (xx:10 – xx:15) when ramping out of Interval A and into Interval B.
- v. Gen #2 – During Ramp – This generator met the requirements of the Touch Line ~~R~~Rule by having 1-minute average generation reading below the current interval's FTC ~~U~~level during minute 12 to 13. The generator gets the benefit of the Higher of Rule ~~P~~period starting at xx:13 (to xx:15) when ramping out of Interval A and into Interval B.
- vi. Gen #3 – No Touch – This generator did not meet the requirements of the Touch Line Rule because it did not have a 1-minute average generation reading below the FTC ~~U~~level at any point during the current interval. The Higher of Rule period (xx:10 – xx:15) when ramping out of Interval A and into Interval B does not apply. FTC will be charged from xx:10 – xx:15.
- 5.4. Any generator or Customer that is unable to comply with a Dispatch Order due to a Force Majeure may not be subject to a Failure to Comply ~~p~~Penalty ~~Charge~~ provided that the said generator or Customer notifies BPA Transmission ~~Services~~ Dispatch of the situation immediately (within the 10-minute ramp window) upon the occurrence of the Force Majeure.
- 6.5. BPA ~~Transmission Services~~ may request documentation in support of the generators or Customer's assertion of a Force Majeure, and the generator or Customer shall provide such documentation within 30 ~~Calendar Days~~ days of BPA's ~~Transmission Services~~ request.
- 7.6. After notifying BPA Transmission ~~Services~~ Dispatch of a Force Majeure on their system, the generator or Customer must use best efforts to comply with the Dispatch Order as soon as practicable.
- 8.7. Information to support BPA's ~~Transmission Services~~ determination of a Failure to Comply ~~p~~Penalty ~~Charge~~ will be made available, upon request, for up to one (1) year, to a generator or Customer subject to a Failure to Comply ~~P~~penalty ~~Charge~~.

B. Assessing Generator Penalty for Failure to Modify Generation Output

1. The effective time of a Dispatch Order establishes the amount of time available for a resource to respond to the Dispatch Order (Response Time). The effective time of a Dispatch Order is specified below (rounded up to the next minute).
 - a. Dispatch Orders communicated by phone, such as orders to redispatch generation up or down, ~~will~~shall include a statement from the BPA Transmission ~~Services~~ ~~d~~Dispatcher specifying the time of the Dispatch Order ~~which~~ shall signal the start of the 10-minute window.

- b. Dispatch Orders communicated by electronic signal, such as direct telemetry or web applications, to limit generation shall use the time stamp of the signal to start the 10-minute window.
- c. Dispatch Orders communicated by NERC e-Tagging system, such as eCurtailments of transmission schedules and generation using those schedules, shall use the later of the Start-Time of the Energy Profile of the eCurtailment or the time stamp of when the eCurtailment achieves its final state and is APPROVED by all approval parties. An example of an e-Tag's profile and approval history are shown in the screen shots below.
 - i. If the start time of the Dispatch Order is at the start of a scheduling interval, parties have until the later of the end of the scheduling interval ramp or 10 minutes from the time stamp of when the eCurtailment achieves its final state and is APPROVED by all parties to shed load or modify generation as directed.
 - ii. If the start time of the Dispatch Order is not at the start of a scheduling interval, parties have 10 minutes from the time stamp of when the eCurtailment achieves its final state and is APPROVED by all parties to shed load or modify generation as directed.
- d. Examples of the Response Times to the Start Time of the FTC Window:

#	Issue Time of Directive	Start Time of Directive	APPROVED Time of Directive	Start Time of FTC Window	FTC Rule for Response Time
1	:40	:00	:45	:10	Section B.1.c.i - End of Ramp
2	:55	:15	:00	:20	Section B.1.c.i - End of Ramp
3	:38	:45	:40	:50	Section B.1.c.i - 10 Minute Window
4	:38	:45	:42	:52	Section B.1.c.i - 10 Minute Window
5	:12	:12	:13	:23	Section B.1.c.ii - 10 Minute Window
6	:24	:24	:29	:39	Section B.1.c.ii - 10 Minute Window

#	Issue Time of Directive	Start Time of Directive	APPROVED Time of Directive	Start Time of FTC Window	FTC Rule for Response Time
1	:40	:00	:45	:10	Section B.1.c.i – End of Ramp
2	:55	:15	:00	:20	Section B.1.c.i – End of Ramp
3	:38	:45	:40	:50	Section B.1.c.i – 10 Minute Window
4	:38	:45	:42	:52	Section B.1.c.i – 10 Minute Window
5	:12	:12	:13	:23	Section B.1.c.ii – 10 Minute Window
6	:24	:24	:29	:39	Section B.1.c.ii – 10 Minute Window

Example 1: The Response Time to the start of the FTC Window was applied as follows:

- a. _____ Is the start time at the start of an interval? Yes = :00
- b. _____ What time was the directive approved? At :45
- c. _____ What time does the ramp end for interval :00? At :10
- d. _____ What time does the 10-min window end? At :55 (before the start of Interval A)

h-e. _____ Which available **fResponse tTime** is later, c (:10) or d (:55 before the start of **iInterval A**)? c is later (:10) – end of ramp

Example 2: The **fResponse tTime** to the start of the FTC Window was applied as follows:

- Is the start time at the start of an interval? Yes = :15
- What time was the directive approved? At :00
- What time does the ramp end for interval :15? At :20
- What time does the 10-min window end? At :10 (before the start of **iInterval B**)
- Which available **fResponse tTime** is later, c (:20) or d (:10 before the start of **iInterval B**)? C is later (:20) – end of ramp

Example 3: The **fResponse tTime** to the start of the FTC Window was applied as follows:

- Is the start time at the start of an interval? Yes = :45
- What time was the directive approved? At :40
- What time does the ramp end for interval :45? At :50
- What time does the 10-min window end? At :50
- Which available **fResponse tTime** is later, c (:50) or d (:50)? They are the same – 10-min window rule will apply

Example 4: The **fResponse tTime** to the start of the FTC Window was applied as follows:

- Is the start time at the start of an interval? Yes = :45
- What time was the directive approved? At :42
- What time does the ramp end for interval :45? At :50
- What time does the 10-min window end? At :52
- Which available **fResponse tTime** is later, c (:50) or d (:52)? D is later – 10-min window rule will apply

Example 5: The **fResponse tTime** to the start of the FTC Window was applied as follows:

- Is the start time at the start of an interval? No = :12
- What time was the directive approved? At :13
- What time does the ramp end for interval :15? Not applicable
- What time does the 10-min window end? At :23
- What time does the FTC Window start? :23 – 10-minute window

Example 6: The **fResponse tTime** to the start of the FTC Window was applied as follows:

- Is the start time at the start of an interval? No = :24
- What time was the directive approved? At :29
- What time does the ramp end for interval :30? Not applicable
- What time does the 10-min window end? At :39
- What time does the FTC Window start? :39 – 10-minute window

Screen Shots of e-Tag profiles

Energy and Transmission Profiles MW (out of)						
	Energy	Transmission				
Start Time	2009-09-03 00:00	2009-09-03 00:00	<input checked="" type="checkbox"/> MW <input checked="" type="checkbox"/> Reservation <input checked="" type="checkbox"/> Trans Total			
Stop Time	2009-09-04 00:00	2009-09-04 00:00	<input type="button" value="Enter"/>			
Date	Start	Stop	Gen	BPAT		
			MW	Trans	14711	MW
9/03	00:00	15:12	65	65	65	65
9/03	15:12	15:27	53	65	65	53
9/03	15:27	16:00	37	65	65	37
9/03	16:00	00:00	65	65	65	65
Display MWH Total:			1542	1560	1560	1542

Approval Status History							
Req ID	Request	Company	Type	Origin	Action	Action Time (PDT)	User
1	Curtailment	BPAT	CA	INT	CREATE	2009-09-03 15:12:55	WD.OATI
1	Curtailment	BPAT	CA	INT	APPROVE	2009-09-03 15:12:56	WD.OATI
1	Curtailment				APPROVED	2009-09-03 15:12:56	

2. In the event that multiple Dispatch Orders are in effect simultaneously (for example, an Operational Control for Balancing Reserves limit and a Dispatch Order to reduce output), a Failure to Comply Penalty Charge will be based on the lowest Dispatch Order.
3. Under circumstances where a ~~wind turbine~~ generating facility is under-generating and BPA ~~Transmission Services~~ curtails that facility's e-Tags under Operational Control for Balancing Reserves, the generator will not be ~~charged~~ subject to a Failure to Comply Penalty Charge if it generates above the sum of the approved e-Tags for the remainder of the interval, unless there are multiple Dispatch Orders (~~see~~ Section B.2).
4. Curtailments:
 - a. In the event of a ~~e~~Curtailment, the generator may submit additional schedules (i.e. replacement schedules) or increase current schedules to other Points of Delivery.
 - i. Each approved replacement schedule ~~must~~ shall state the curtailed e-Tag number (last 7 digits) in the reason field.
 - ii. The replacement schedules and increases will be processed in accordance with the Scheduling Transmission Service Business Practice.
 - iii. The stated ~~e~~Curtailment will not generate an FTC for an interval when a resource:
 1. ~~is~~ is subject to a curtailed ~~e-t~~Tag; ~~and;~~
 2. ~~has~~ has designated non-curtailed replacement schedules; ~~and;~~
 3. ~~The~~ The sum of those replacement schedules are greater than or equal to the sum of the amounts that were curtailed.
 - b. When a resource terminates or cancels a curtailed ~~e-T~~tag 20 minutes or less before the start of the first curtailed hour or during the ~~e~~Operating ~~h~~Hour on an approved 15-minute schedule interval:
 - i. ~~t~~The resource ~~will need to~~ shall submit a replacement schedule, in accordance with the rules in Section B.4.a ~~above;~~ or;

- ii. ~~t~~The original curtailed schedule will continue to be included in the sum-of-approved schedules and over generation will be subject to ~~FTC penalty charges~~ the Failure to Comply Penalty Charge.
- c. When a resource terminates or cancels a curtailed ~~e-T~~tag more than 20 minutes before the start of the curtailed hour then ~~n~~that ~~e-T~~tag will not be included in the FTC calculation and FTC will not apply.
- d. Examples:

#	Curtailed Approved a At:	Curtailed Starts A at:	Terminated E -Tag Starts A at:	FTC Applies	Why Reason
E x m p e 1	12:30 PM	1:00 PM	Interval A	No	E -Tag terminated prior to close of top of hour schedule interval of xx:40.
E x m p e 2	12:30 PM	1:00 PM	Interval C	Interval A, B	E -Tag terminated prior to close of top of hour schedule interval of xx:40.
E x m p e 3	12:45 PM	1:00 PM	Interval B	Interval A, B, C, D	E -Tag terminated after the close of the top of hour schedule interval.
E x m p e 4	1:20 PM	1:20 PM	Interval D	Interval C, D	E -Tag terminated after the close of the top of hour schedule interval.
Chart characteristics: <ul style="list-style-type: none"> • Examples are independent of each other. • Terminated e-tTags occur prior to the close of applicable schedule interval. 					

- e. E-Tag ~~e~~Curtailments initiated by other Balancing Authorities and approved by BPA ~~Transmission Services~~ are ~~e~~Curtailed Dispatch Orders subject to the Failure to Comply Penalty Charge. For more information on ~~e~~Curtailments, please refer to the Redispatch and Curtailment Business Practice.
5. Calculating the Failure to Comply Penalty Charge Billing Factor:
- a. Average generation data for FTC is collected at 1-minute intervals (unless that granularity is not available, in which case the data that is available will be used).

- b. After the 10-minute window until the top of the next interval, for each interval, the actual generation will be compared with the FTC Level. The FTC Level for generation is:
 - i. the sum of the approved, non-curtailed e-Tag(s) and the reliability level of curtailed e-Tag(s); or,
 - ii. In the case of generator limitation events, such as Operational Control for Balancing Reserves Limitation events, the generator limit for that interval; or
 - iii. In the case of congestion management procedures, the generator limit for that interval.
- c. With the exception of instances where a resource submits replacement schedules pursuant to sSection B.4.a ~~above~~, any power generated in excess of the generator limit or in excess of the total approved, non-curtailed e-Tag(s) and the reliability level of curtailed e-Tag(s) after 10 minutes will be converted to kWh (by summing the excess kW for each scheduling interval and dividing by the applicable number of scheduling intervals per hour). The resultant kWh is and that power will be the bBilling fFactor for the Failure to Comply pPenalty Charge.
- d. The bBilling fFactor for a generator's failure to generate the amount specified in a redispatch order after 10 minutes will be converted to kWh by summing the deficit kW for each interval and dividing by the applicable number of intervals per hour.
- e. If a generator's bBilling fFactor for any interval is less than or equal to 100-kWh, then that generator will be deemed to have fully complied with the Dispatch Order and will not be subject to the Failure to Comply Penalty Charge for that interval.
- f. For examples relating to this section, ~~please refer to the examples in~~ Section E.

C. Customer's Failure to Shed Load

1. The start time of the 10-minute window is the Effective Time of the Dispatch Order (rounded up to the next minute).
 - a. Load Shedding Dispatch Orders are communicated by phone and will include a statement from the BPA Transmission ~~Services d~~Dispatcher specifying the time of the Dispatch Order.
2. Load data is collected at the most granular level provided (typically at two (2)-second intervals). After the Effective Time of the Dispatch Order, until the top of the next interval, for each interval, the actual load data will be compared with the FTC Level. The FTC Level for load is the modified schedule or limit for that interval.
3. Any load in excess of the curtailed or limited schedule after 10 minutes will be converted to kWh (by summing the excess kW for each interval and dividing by the most granular level provided (typically at two (2)-second intervals) and that energy will be the billing factor for the Failure to Comply Penalty Charge.

D. Assessment of Reliability Penalty & Other Costs

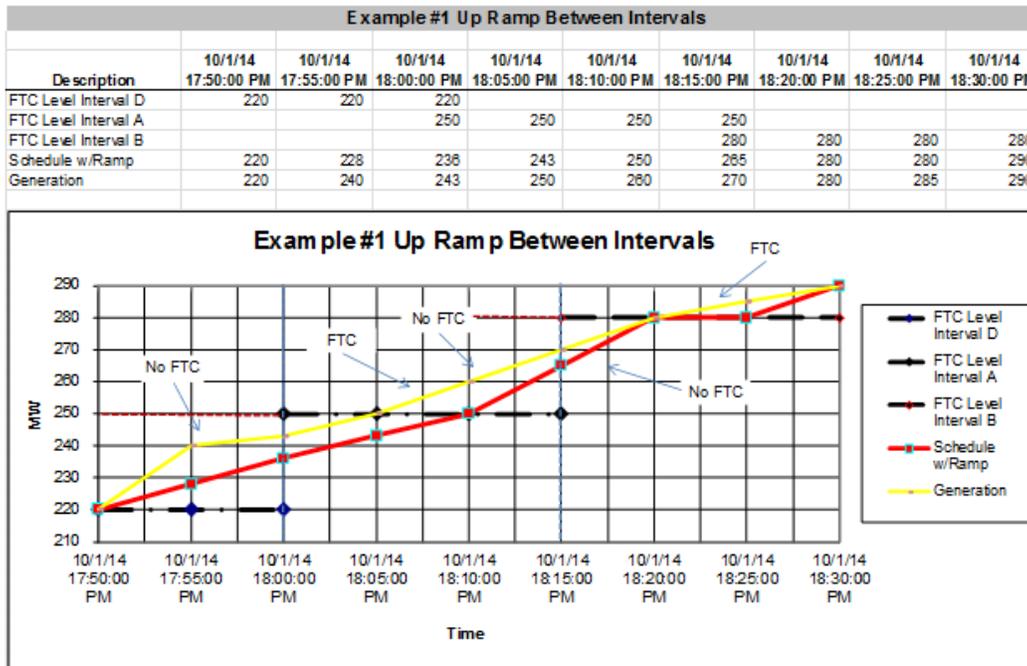
1. A generator's or Customer's ~~F~~failure to ~~C~~comply with a Dispatch Order from BPA ~~Transmission Services~~ may cause BPA ~~Transmission Services~~, as the Registered Entity responsible for compliance, to violate certain ~~R~~reliability ~~S~~standards. If the Regional Reliability Organization (currently the Western Electricity Coordinating Council, or WECC), Electric Reliability Organization (currently the North American Electric Reliability Corporation, or NERC), or the Federal Energy Regulatory Commission (FERC) assesses a monetary penalty against BPA ~~Transmission Services~~ as the ~~R~~registered Entity for a violation of a ~~R~~reliability ~~S~~standard, and a generator's or Customer's ~~F~~failure to ~~C~~comply contributed to or caused the ~~R~~reliability ~~S~~standard violation at issue, then BPA ~~Transmission Services~~ will directly assign such penalty amount or a portion thereof to such generator or Customer based on the extent of its contribution. In order to directly assign costs associated with a monetary penalty to a generator or Customer, BPA ~~Transmission Services~~ shall use ~~by~~ the following procedures:
 - a. If BPA ~~Transmission Services~~ determines that any ~~R~~reliability ~~S~~standards have been violated, and that a generator's or Customer's ~~F~~failure to ~~C~~comply caused or contributed to the violation(s), BPA ~~Transmission Services~~ will self-report the violation(s) pursuant to WECC's Compliance Monitoring and Enforcement Program (CMEP). Within ~~thirty (30) e~~calendar ~~d~~days of such self-report, BPA ~~Transmission Services~~ will provide notice to the generator or Customer that BPA ~~Transmission Services~~ intends to directly assign all or a portion of the potential monetary penalty to the generator or Customer and set forth the factual basis supporting BPA's ~~Transmission Services'~~ determination that the generator's or Customer's ~~F~~failure to ~~C~~comply caused or contributed to the ~~r~~Reliability ~~s~~Standard violation(s).
 - b. BPA ~~Transmission Services~~ will notify the generator or Customer when a Notice of Alleged Violation is issued pursuant to the CMEP, and the penalty amount proposed.
 - c. BPA ~~Transmission Services~~ will not oppose any attempts by the generator or Customer to intervene in the CMEP proceedings conducted by WECC, NERC, or FERC. Failure by the generator or Customer to successfully intervene in the CMEP proceedings will not prevent BPA ~~Transmission Services~~ from directly assigning costs associated with a monetary penalty to that generator or Customer.
 - d. BPA ~~Transmission Services~~ shall have the sole discretion to decide whether to proceed through the Settlement Process or the Hearing Process under the CMEP. Regardless of whether BPA ~~Transmission Services~~ chooses to proceed through the Settlement Process or Hearing Process, BPA ~~Transmission Services~~ will present to WECC, NERC, or FERC the factual basis supporting BPA's ~~Transmission Services'~~ determination that the generator's or Customer's failure to comply caused or contributed to the ~~R~~reliability ~~S~~standard violation(s).
 - e. Regardless of BPA's ~~Transmission Services'~~ determination that a generator or Customer caused or contributed to the ~~R~~reliability ~~S~~standard violation(s), BPA shall be bound by the findings of WECC, NERC, or FERC regarding whether the generator or Customer caused or contributed to the ~~R~~reliability ~~S~~standard violation(s).

- f. Based on the findings of WECC, NERC, or FERC, BPA ~~Transmission Services~~ will directly assign the appropriate amount of the monetary penalty to the generator or Customer. In the case where the generator's or Customer's ~~F~~failure to ~~C~~comply only contributed to the ~~R~~eliability ~~S~~standard violation(s), and the findings of WECC, NERC, or FERC do not allocate a specific percentage of contribution, BPA ~~Transmission Services~~ shall determine the appropriate contribution percentage. Should the generator or Customer disagree with BPA's ~~Transmission Services'~~ determination of the appropriate contribution percentage in such a situation, BPA ~~Transmission Services~~ and the generator or Customer shall resolve the dispute in accordance with the Internal Dispute Resolution and External Arbitration Procedures set forth in Section 12 of the BPA ~~Transmission Services'~~ OATT.
2. The costs of any alternative measures taken by BPA ~~Transmission Services~~ to maintain the reliability of the ~~Federal Columbia River Transmission System (FCRTS)~~ as a result of a generator's or Customer's ~~f~~Failure to ~~C~~comply will be assessed to the non-~~c~~ompliant generator or Customer.
 - a. BPA ~~Transmission Services~~ will notify the Customer within 30 ~~e~~Calendar ~~d~~Days if BPA ~~Transmission Services~~ determines that the generator's or Customer's ~~F~~failure to ~~C~~comply resulted in BPA's ~~Transmission Services'~~ incurrence of costs of alternative measures to maintain the reliability of the FCRTS.
 - b. Information to support BPA's ~~Transmission Services'~~ determination will be available to the affected generator or Customer, upon request, for up to one (1) year after the date the generator or Customer received notice under ~~step~~Section D.2.a above.
 - c. Any dispute regarding BPA's ~~Transmission Services'~~ determination will be resolved in accordance with the Internal Dispute Resolution and External Arbitration Procedures set forth in Section 12 of the BPA ~~Transmission Services'~~ OATT.

E. Examples of Failure to Comply Generation Output

1. In the following examples:
 - a. The schedule can be any of the FTC Levels as described in Section B.5.b for generation and Section C.2 for load.
 - b. Each interval is curtailed to the FTC Level.
 - c. The schedule submitted to BPA ~~Transmission Services~~ is flat for the interval at the same level as the FTC Level
 - d. The Schedule with Ramp is the ramp basepoints for the schedule submitted to BPA ~~Transmission Services~~ for the interval.
 - e. The thin dashed red line represents the applicable "higher of" schedule for establishing the sum of schedules to determine the application of the Failure to Comply ~~p~~Penalty ~~e~~Charge during a ramp.
2. Example 1 - Ramping Up Across Intervals
 - a. Example 1 shows a ~~e~~Curtailed order being issued at 40-minutes into the hour to start at 40-minutes into the hour, and approved at 40-minutes into the hour.

There is then a 10-minute period, from the time the eCurtailment order was approved, for a generator to comply. After the 10-minute period, the Failure to Comply pPenalty Charge will be assessed if a generator has not complied with the eCurtailment (Ssee Section B.1). In an up ramp, the resource must be below the next schedule intervals FTC Level during the Higher of Rule period (Ssee Section A.43.a) to not be assessed the Failure to Comply pPenalty eCharge.



Example 1:

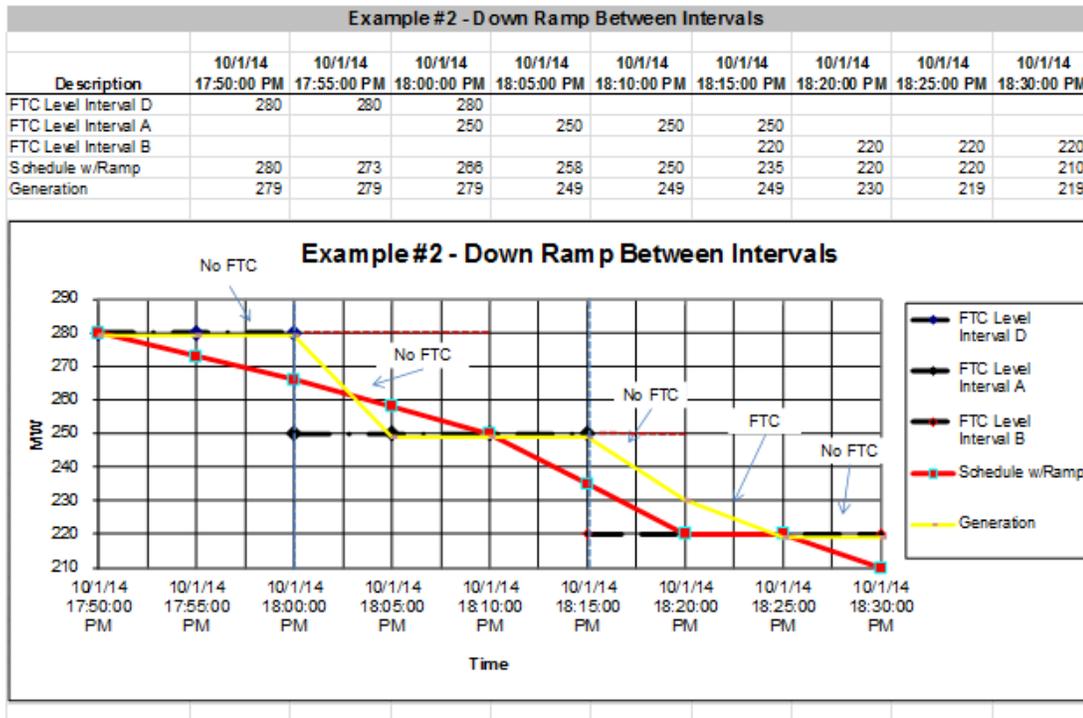
Interval D – No FTC because the resource is below the “Higher of” FTC Level.

Interval A – There is FTC from 18:05 to 18:10 for exceeding the FTC Level before the start of the ramp period to the next schedule interval. There is no FTC from 18:10 to 18:15 because the resource is below the “Higher of” FTC Level.

Interval B – There is no FTC from 18:15 to 18:20 because the resource is below the “Higher of” FTC Level. There is FTC from 18:20 to 18:25 because the resource has exceeded the FTC Level during the non-ramp period (See Section A.4.a.ii).

3. Example 2 - Ramping Down Across Intervals

- a. Example 2 shows a eCurtailment order being issued at 40_-minutes into the hour to start at 40_-minutes into the hour, and approved at 40_-minutes into the hour. There is then a 10-minute period, from the time the eCurtailment order was approved, for a generator to comply. After the 10-minute period, the Failure to Comply pPenalty Charge will be assessed if a generator has not complied with the eCurtailment (Ssee Section B.1). In a down ramp, the resource must be below the current intervals FTC Level during the the-Higher of Rule period (Ssee Section A.43.a) to not be assessed the Failure to Comply pPenalty eCharge.



Example 2:

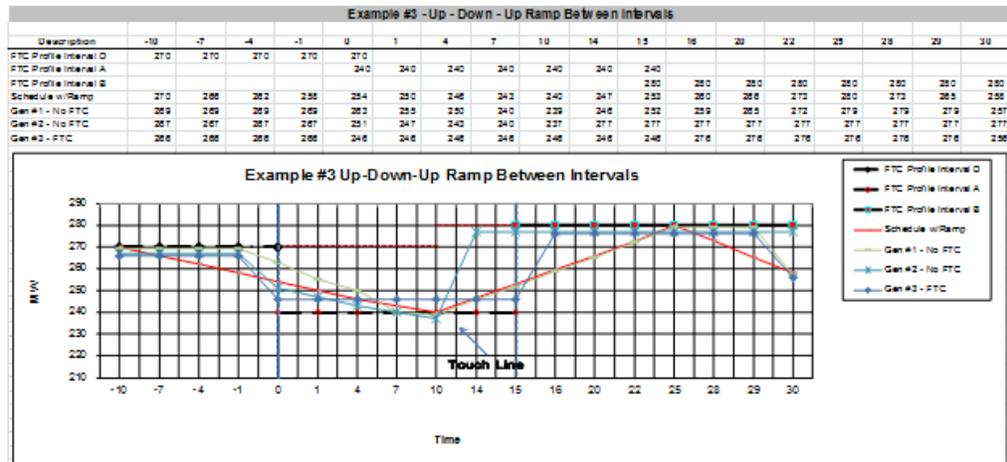
Interval D – No FTC because the resource is below the “Higher Of” FTC Level.

Interval A – There is no FTC from 18:00 to 18:10 because the resource is below the “Higher Of” FTC Level. There is no FTC from 18:10 to 18:15 because the resource is below the “Higher Of” FTC Level.

Interval B – There is no FTC from 18:15 to 18:20 because the resource is below the “Higher Of” FTC Level. There is FTC from 18:20 to 18:25 because the resource has exceeded the FTC Level during the non-ramp period (See Section A.43.a.ii). There is no FTC from 18:25 to 18:30 because the resource is below the “Higher Of” FTC Level.

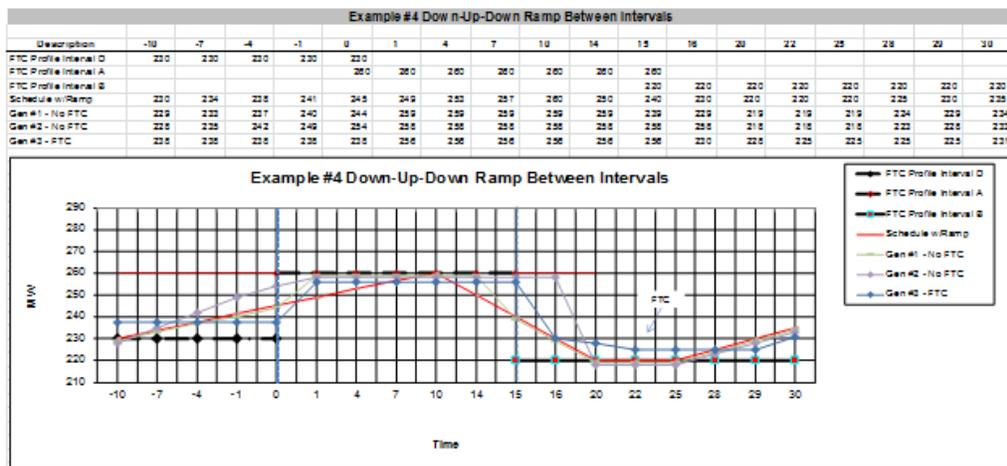
4. Example 3 - Up then Down then Up Ramping Between Intervals

- a. Example 3 shows a Curtailment order being issued at 40_-minutes into the hour to start at 40_-minutes into the hour and approved at 40_-minutes into the hour. There is then a 10-minute period, from the time the Curtailment order was approved, for a generator to comply. After the 10-minute period, the Failure to Comply Penalty Charge will be assessed if a generator has not complied with the Curtailment (See Section B.1). This example shows the generation of three generators. Generator #3 is assessed Failure to Comply Penalty Charge for not complying with the Touch Line Rule (See Section A.43.b).
- b. The x-axis is minutes. Negative numbers are minutes before the top of the next hour and positive numbers are minutes into the next hour.



5. Example 4 - Down then Up then Down Ramping Between Intervals

- a. Example 4 shows a **e**Curtailed order being issued at 40_-minutes into the hour to start at 40_-minutes into the hour and approved at 40_-minutes into the hour. There is then a 10-minute period, from the time the **e**Curtailed order was approved, for a generator to comply. After the 10-minute period, the Failure to Comply **p**Penalty **C**harge will be assessed if a generator has not complied with the **e**Curtailed (**S**see Section B.1). This example shows the generation of three generators. Generator #3 is assessed Failure to Comply **P**enalty **C**harge for not operating at or below the FTC Level during the non-ramp period for **i**Interval B (**S**see Section A.43.a.ii).
- b. The x-axis is minutes. Negative numbers are minutes before the top of the next hour and positive numbers are minutes into the next hour.



F. Energy Index

- 1. The Failure to Comply Penalty Charge shall be the greater of 500 mills per kilowatt_hour or 150 percent of an hourly energy index in the Pacific Northwest. BPA shall use the

PowerDex Mid-Columbia Hourly Energy Index to calculate the Failure to Comply Penalty Charge.

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