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Discussion of PRR818

August 14, 2009
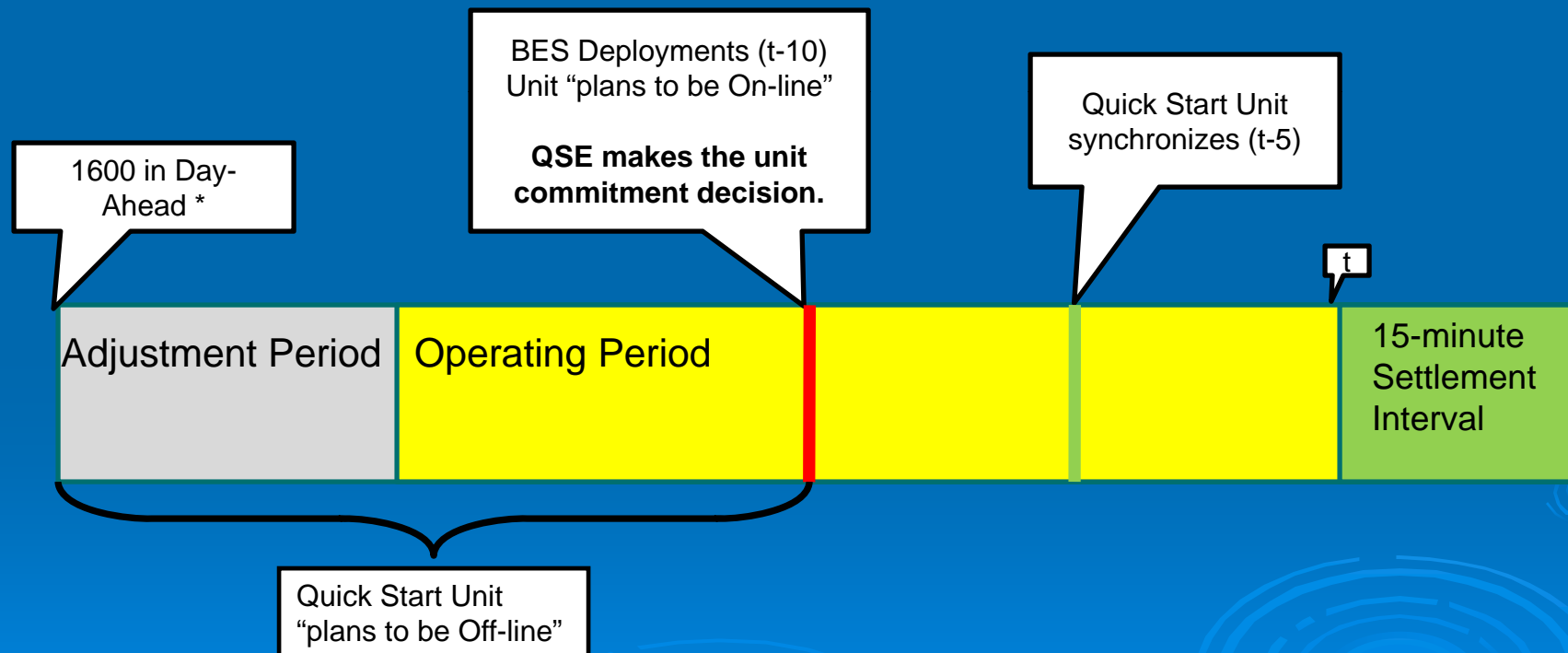
Austin MET Center

Room 168

PRR818

➤ Clarifies that OOME to Quick Start Units that are available and planning on being Off-line should be settled as OOMC.

➤ Allows QSE to dispute instances that PC_{OOM} is a charge for a series of consecutive OOMC Dispatch Instructions.

➤ Introduces clawback to RCGSC during OOMC Dispatch Instruction.

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Topaz Solution

➢ Justifies RCGSC for Quick Start Units

➢ Subjects RCGSC to Protocol-defined eligibility and clawback

➢ <u>Prevents multiple RCGSC payments</u> for contiguous OOMC/OOME

➢ Remains entirely consistent with current language of the Protocols and other ERCOT documents

➢ Introduces capped compensation, which PRR818 addresses

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Quick Start BES: the Physical

ERCOT workaround procedure

- Since 2007

- Absent from Protocols

- Requires QSE representing Quick Start Unit selling QSBES to show in the Resource Plan:
  - Available
  - On-line
  - Scheduled generation = 0
  - Low Sustainable Limit = 0

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Procedure Problems

- ➢ On-line
  - ● Section 2: The status of Resources that are synchronously interconnected to the ERCOT system.
  - ● Inaccurate: QS Unit is Off-line until after receiving and instructed deviation.

- ➢ Low Sustainable Limit = 0
  - ● Section 2: The minimum net capability of a Resource that may be delivered for an indefinite period.
  - ● Inaccurate: Resource submits non-zero LSL in RARF in advance.
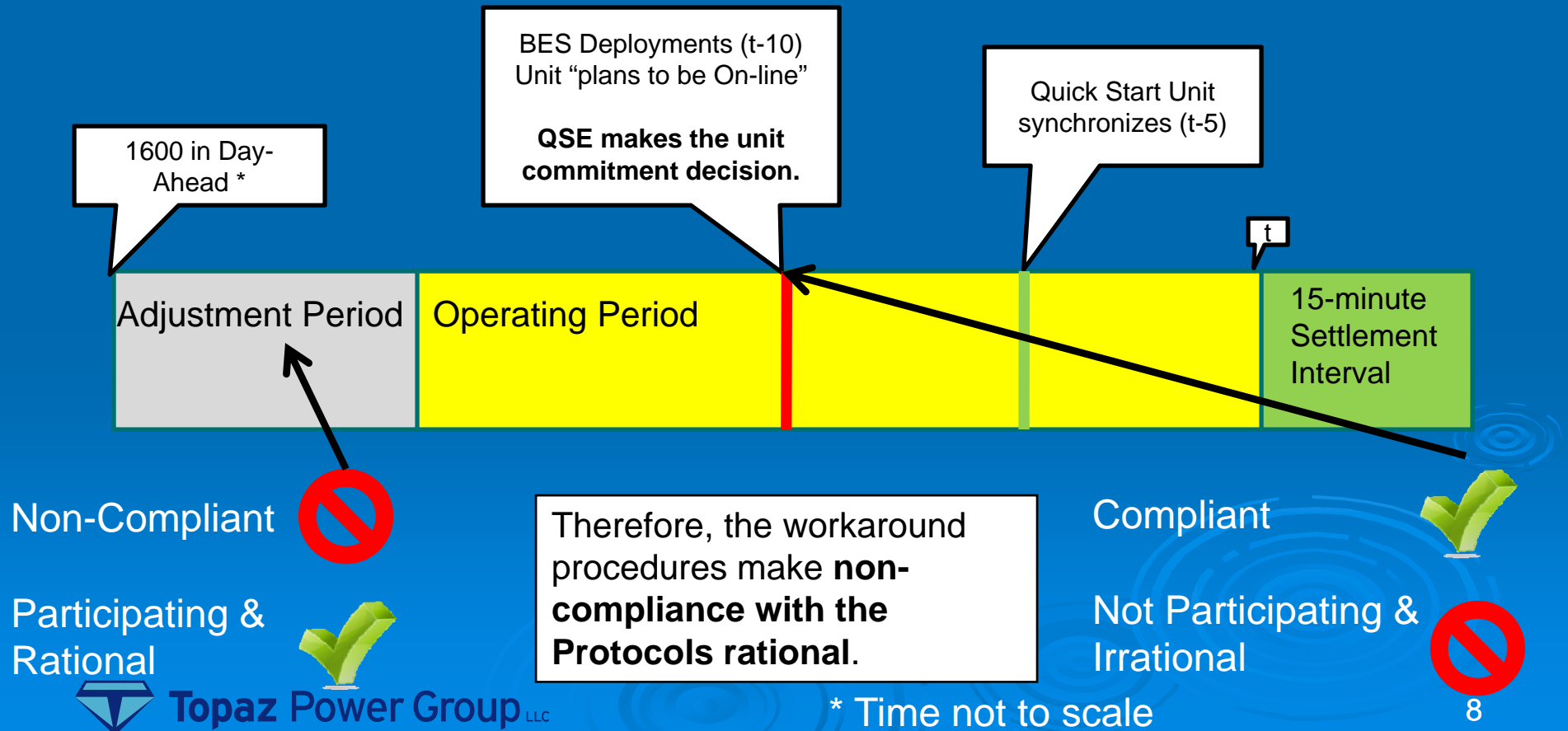
- ➢ Scheduled Generation = 0 & On-line
  - ● Physically impossible, except for Synchronous Condensers.

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Protocol Problems

➤ The workaround procedure requires inaccurate and physically impossible information in the Resource Plan.

➤ This prevents the QSE from fulfilling a Protocol-defined duty:

  ● 4.4.15: … QSE shall use best efforts, consistent with Good Utility Practice, to continually update their Resource Plans to reflect the current and anticipated operating conditions of the Resources. …

➤ Inaccurate and physically impossible information *cannot be construed* as reflective of "current and anticipated operating conditions".

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Protocols 4.4.15 Compliance

… QSE shall use best efforts, consistent with Good Utility Practice, to continually update their Resource Plans to reflect the current and anticipated operating conditions of the Resources. …

BES Deployments (t-10)
Unit "plans to be On-line"

QSE makes the unit commitment decision.

Quick Start Unit synchronizes (t-5)

1600 in Day-Ahead *

t

| Adjustment Period | Operating Period | | | | 15-minute Settlement Interval |

Non-Compliant 🚫

Participating & Rational ✅

Therefore, the workaround procedures make **non-compliance with the Protocols rational**.

Compliant ✅

Not Participating & Irrational 🚫

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* Time not to scale

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Protocol Problems

➢ The workaround procedure conflicts with the Protocols because it prevents the QSE from fulfilling a Protocol-defined duty.

➢ Protocols prevail

- Section 1.1: … ERCOT staff may develop procedures, forms and applications for the implementation of and operation under the Protocols. … Except as provided below, if the provisions in any attachment to these Protocols or in any of the above-described procedures, forms and applications are in conflict with the provisions of Protocols Section 1, Overview through Section 21, Process for Protocols Revision, the provisions of Protocols Section 1 through Section 21 shall prevail to the extent of the inconsistency. …

➢ Therefore, ERCOT's obligation to "act in a reasonable, nondiscriminatory manner" [Section 1.2] requires consideration of how the Resource Plan would be shown in the absence of the non-Protocol compliant procedure.

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OOMC Protocol Language

➢ 6.8.2.2 includes extensive language regarding unit commitment, minimum energy, Startup eligibility, clawback, etc.

➢ 6.8.2.2(1) …All Generation Resources that are available and plan to be Off-line during the Settlement Interval for which Ancillary Services are being procured are eligible to be selected to provide OOMC Service. …

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OOMC Protocol Language

➢ 6.8.2.2(2) and (3) determine eligibility for RCGSC

➢ 6.8.2.2(2) and (4) specify clawback of RCGSC based on energy before and after the OOMC Dispatch Instruction

➢ 6.8.2.2(6) specifies the formulas for PS and PO

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OOME Protocol Language

➢ 6.8.2.3 relates to Out-of-Merit Energy

➢ 6.8.2.3(1) establishes the minimum payment of RCGFC-Up or MCPE for OOME, utilizing Resource Imbalance.

➢ 6.8.2.3 includes no language regarding unit commitment or Startup payments.

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OOMC and OOME

➢ OOMC and OOME have *identical purposes*

  ● 6.5.10(1) ERCOT will use OOMC and OOME Services to procure additional capacity and energy required to provide reliable ERCOT System operation, or to effectively manage Local Congestion as determined by ERCOT.

➢ OOMC and OOME are *Resource-specific*

  ● 6.5.10(2) ERCOT may call on any Generation Resource to provide OOMC or OOME Service, in any time frame that the Resource is listed as available in the Resource Plan.

  ● 6.5.10(4) … ERCOT will Dispatch Resources for OOMC and OOME Service in such a way as to minimize the use of these services as much as practicable.

  ● 6.5.10(9) The QSE associated with the Generation Resources receiving a Dispatch Instruction to provide OOMC and/or OOME Service(s) and/or LaaRs providing OOME Service(s) only must use all commercially reasonable efforts to provide the request service(s). …

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ERCOT OOM Procedure

➤ ERCOT issues OOMC Dispatch Instructions to Quick Start Units accurately showing "Off-line" in Adjustment Period.

➤ ERCOT issues OOME Dispatch Instructions and OOMEVDI to Quick Start Units inaccurately but rationally showing "On-line".

● ERCOT utilizes OOMCADJ to compensate RCGSC.

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OOM Procedure Problems

➤ RCGSC

- OOMCADJ is undefined in the Protocols.
- Protocols include no language for RCGSC in response to OOME or OOMEVDI.
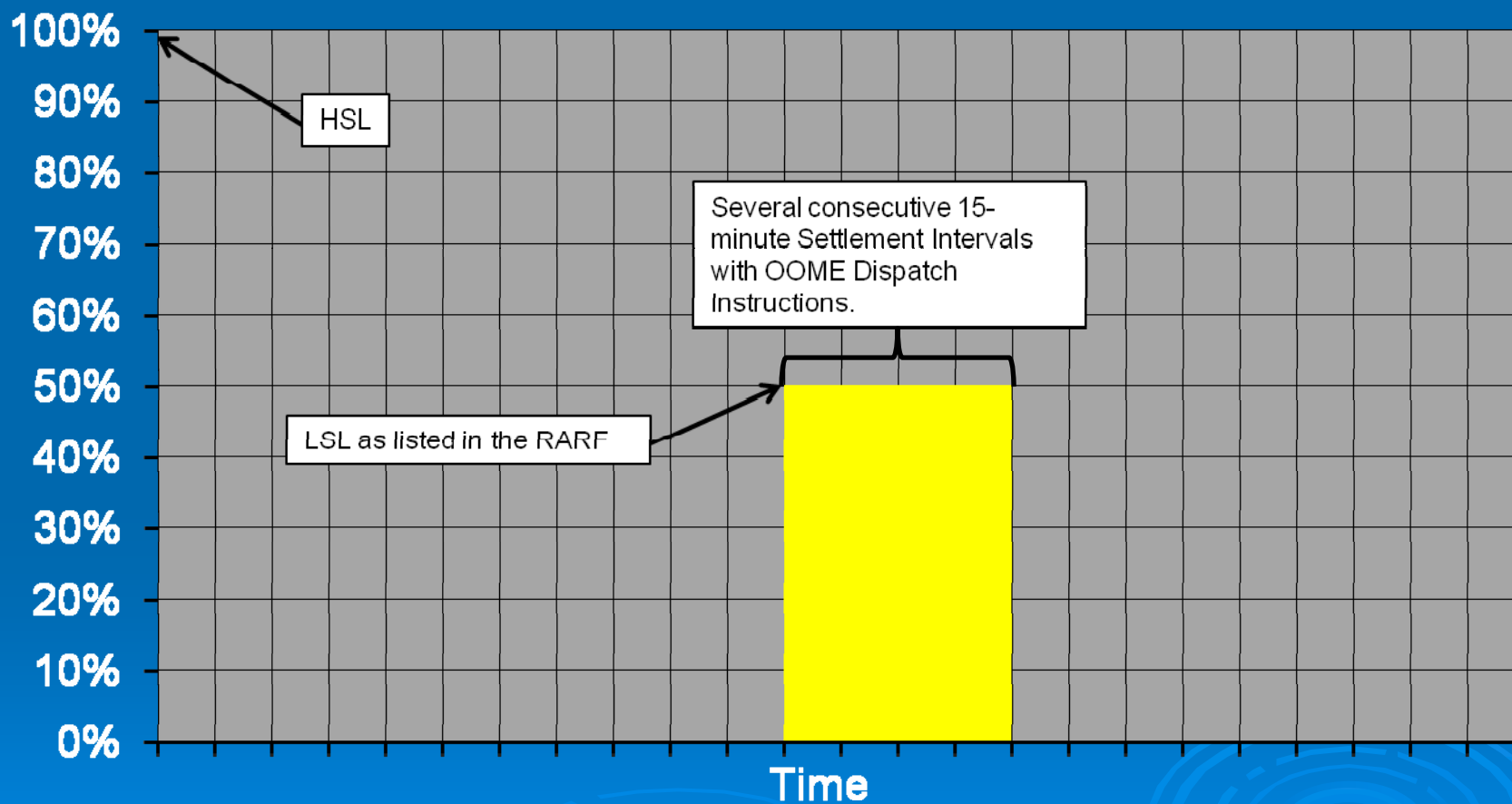- RCGSC is NOT subject to the Protocol-defined eligibility or clawback.

➤ Unit commitment

- ERCOT incorrectly treats the "On-line" field as a unit commitment decision.
- In the absence of scheduled energy, "On-line" or "Off-line" is physically meaningless.
- The decision to sell QSBES is **NOT** a unit commitment decision. Only upon receiving an instructed deviation does the QSE make the unit commitment decision.

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Empirical Evidence

➤ ERCOT treats OOME to QS Units like OOMC

➤ ERCOT issues OOME Dispatch Instructions to Quick Start Units to operate at the RARF LSL.

➤ Observed at:

- Decker
- DCSES
- Leon Creek
- MGSES
- Sandhill
- Topaz Units

OOME to RARF LSL

Topaz Solution

- ➤ OOME and OOMEVDI to Quick Start Units "plan[ning] to be Off-line" are OOMCVDI.
- ➤ Operating Procedure Manual References (OPM)
  - Transmission & Security OPM
    - 2.1.4 OOME – VDI Guidelines, Step 6
    - 2.2.2 Real Time Constraint Activity Manager, Step 7
  - Frequency Control Desk OPM
    - 2.6.6 Provide Advance Notice of Diminishing Responsive Reserve, Step 7

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OPM History

- ➤ Language
  - "OOMC VDI"
  - "OOMC for Quick-start" on the VDI form
  - The references clearly indicate "that a unit has been procured for OOMC through a verbal dispatch instruction."
- ➤ History
  - Created in May 2007 in T&S and Frequency Control OPM
    - Over 2 years
  - Created in August 2008 in Frequency Control OPM
    - Over 1 year

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OOMCVDI

➢ Market Operations Bulletin #25 (March 31, 2005)

  ● … OOMCVDIFLAG indicates that a unit has been procured for OOMC through a verbal dispatch instruction.

➢ OOMCVDIFLAG creates an OOMRPQ, thereby settling the Dispatch Instruction as OOMC.

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T&S Desk Operating Procedure OOME-VDI Guidelines

Section	Dates/Version	Language (**emphasis added**)
2.1.4, Step 6	May 29, 2007 V3R84 Created	If issuing an OOME instruction on quick-start CTs that are showing "On" and "Plan MW" = 0, follow up with an OOMC VDI for settlements.
2.1.4, Step 6	April 23, 2009 V4R0 Absent from any POB	If issuing an OOME instruction on quick-start CTs that are showing "On" and "Plan MW" = 0, follow up with a Settlements only VDI stating "OOMC for Quick-start" on the VDI form.
	June 26, 2009	Topaz submits PRR818.
2.1.3, Step 6	July 29, 2009 V4R4 POB #432	If issuing an OOME instruction on quick-start CTs that are showing "On" and "Plan MW" = 0, follow up with a Settlements only VDI stating "**OOME for Quick-start**" on the VDI form.

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T&S Desk Operating Procedure RTCAM

Section	Dates/Version	Language (**emphasis added**)
2.2.1, Step 7	August 15, 2008 V3R95 Created	When an OC3 deploys quick start units for congestion, do one of the following: •Issue an OOMC VDI for settlements on the quick start unit(s) that are required to mitigate congestion, or •Issue a VDI to disregard the unit specific deployment and write "instructed deviation" on the VDI if congestion can be resolved without unit(s) or •Issue OOME for quick start unit(s), keep the OC3 active, and issue an OOMC VDI or •Use OOM Tool instead of activating an OC3 OOMC VDI for quick start units will only be given under the local congestion scenario, balancing and zonal deployments are not included.
2.2.1, Step 7	April 23, 2009 V4R0 Absent from any POB	Same language with following sentence added: Follow up with a Settlements only VDI stating "OOMC for Quick-start" on the VDI form.
	June 26, 2009	Topaz submits PRR818.
2.2.2, Step 7	July 29, 2009 V4R4 POB #432	When an OC3 deploys quick start units for congestion, do one of the following: •Issue an "OOME VDI" for settlements on the quick start unit(s) that are required to mitigate congestion •Issue an OOME for quick start unit(s) using the OOM tool and keep the OC3 active, or •Use OOM tool to OOME for quick start unit(s) instead of activating an OC3, or •Issue a VDI to disregard the unit specific deployment and write "instructed deviation" on the VDI if congestion can be resolved without unit(s) OOME VDI for quick start units will only be given under the local congestion scenario, balancing and zonal deployments are not included. Follow up with a Settlements only VDI stating "OOME for Quick-start" on the VDI form.

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Frequency Desk OPM
Diminishing Responsive Reserve

Section	Dates/Version	Language (emphasis added)
2.6.9, Step 2	May 08, 2007 V3R54 Created	… **NOTE:** If issuing an OOMC instruction in quick-start CTs that are showing "On" and "Plan MW" = 0, follow up with an OOMC VDI for settlements. …
2.6.8, Step 7	April 9, 2009 V4R0	If issuing an OOME instruction on quick-start CTs that are showing "On" and "Plan MW" = 0. Follow up with a settlements only VDI stating :OOMC for Quick-start" on the VDI form.
	June 26, 2009	Topaz submits PRR818.
2.6.6, Step 7	July 29, 2009 V4R4 Absent from any POB	If issuing an OOME instruction on quick-start CTs that are showing "On" and "Plan MW" = 0, follow up with a Settlements only VDI stating "**OOME for Quick-start**" on the VDI form.

Current Operating Procedure Manuals

- ➢ Recent Changes
  - ● ERCOT amended the OPMs, effective August 04, 2009, to refer to OOME.
  - ● <u>ERCOT amended the OPMs **after** Topaz submitted PRR818.</u>

- ➢ Problems
  - ● "OOME for Quick Start" is not defined in the Protocols.
  - ● "OOME for Quick Start" does not distinguish the Dispatch Instruction from OOME.
  - ● OOME includes no provisions for RCGSC.

Topaz Solution

➢ Justifies RCGSC for Quick Start Units

➢ Subjects RCGSC to Protocol-defined eligibility and clawback

➢ <u>Prevents multiple RCGSC payments</u> for contiguous OOMC/OOME

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