

# Operations Training Working Group (OTWG)

November 9th, 2017

ERCOT 800 Airport Drive, Taylor, Building TCC 1, Room 253/WebEx

0900-1200

* Anti-trust Admonition

To avoid raising concerns about antitrust liability, participants in ERCOT activities should refrain from proposing any action or measure that would exceed ERCOT’s authority under federal or state law. For additional information, stakeholders should consult the Statement of Position on Antitrust Issues for Members of ERCOT Committees, Subcommittees, and Working Groups, which is posted on the ERCOT website.

* Disclaimer

All presentations and materials submitted by Market Participants or any other Entity to ERCOT staff for this meeting are received and posted with the acknowledgement that the information will be considered public in accordance with the ERCOT Websites Content Management Operating Procedure.

* Approval of Meeting Notes – September 2017
* Winter Storm Drill (Oct 18/19)
  + CEHs may be administered by ERCOT provided the following is returned to ERCOT no later than November 17, 2017:
    - * Learner(s) contract(s)
      * Facilitator Participation Form (Facilitator also receivs CEHs)
      * Feedback Form(s)
      * Sign in Sheet
      * Assessment(s)
      * Presentation with Market Participants customizations
* Grid Ex IV Registration (Nov 15/16)
  + Participants/Observers
    - American Electric Power (TO)
    - Austin Energy (TO)
    - Avangrid (QSE)
    - Calpine (TO)
    - City of Garland, TX (TO)
    - CPS Energy (TO/QSE)
    - Lower Colorado River Authority (TO/QSE)
    - Formosa Utility Venture, Ltd (QSE)
    - MP2 Energy (QSE)
    - NRG (QSE)
    - Oncor (TO)
    - Rayburn Electric Cooperative (TO)
    - Sharyland Utilities, L.P (TO)
    - TNMP (TO)
* 2018 Black Start Training
  + Early registration begins on November 13 and ends on December 15, 2017.
  + All Hazards Restoration Stages Framework
  + Black Start Primer (10 CEHs)
    - ERCOT Black Start Restoration Strategy, basic system restoration principles, and TOP & GOP fundamentals.
    - Strongly Recommended for Operators with less than 5 years, Recommended refresher for everyone
    - 10 additional CEHs
    - Limited availability (50)
    - **Attendance to just the Primer course will not meet NERC Standard EOP-005-2 requirements R10, R12, or R18. Black Start and Restoration Training meets these NERC Standard Requirements.**
  + Black Start and Restoration Training Schedule
    - Pilot
      * Generator and Transmission System Dynamics (10 CEHs) January 8th 12 pm – 5 pm and January 9th 7 am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

January 9th 1pm to 5pm, January 10th 7am – 5pm, January 11th 7 am – 12 pm.

* + - Session 1
      * Generator and Transmission System Dynamics (10 CEHs) January 29th 12 pm – 5 pm and January 30th 7 am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

January 30th 1pm to 5pm, January 31st 7am – 5pm, February 1st 7 am – 12 pm.

* + - Session 2
      * Generator and Transmission System Dynamics (10 CEHs) February 5th 12 pm – 5 pm and Februatry 6th 7 am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

February 6th 1pm to 5pm, February 7th 7am – 5pm, February 8th 7 am – 12 pm.

* + - Session 3
      * Generator and Transmission System Dynamics (10 CEHs) February 12th 12 pm – 5 pm and February 13th 7 am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

February 13th 1pm to 5pm, February 14th 7am – 5pm, February 15th 7 am – 12 pm.

* + - Session 4
      * Generator and Transmission System Dynamics (10 CEHs) February 19th 12 pm – 5 pm and January 20th 7 am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

February 20th 1pm to 5pm, February 21st 7am – 5pm, February 22nd 7 am – 12 pm.

* + - Session 5
      * Generator and Transmission System Dynamics (10 CEHs) February 26th 12 pm – 5 pm and February 27th 7am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

February 27th 1pm to 5pm, February 28th 7am – 5pm, March 1st 7 am – 12 pm.

* + - Session 6
      * Generator and Transmission System Dynamics (10 CEHs) March 5th 12 pm – 5 pm and March 6th 7 am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

March 6th 1pm to 5pm, March 7th 7am – 5pm, March 8th 7 am – 12 pm.

* + - Inclement Weather Session
      * Generator and Transmission System Dynamics (10 CEHs) March 12th 12 pm – 5 pm and March 13th 7 am to 12 pm
      * Black Start and Restoration Course (19 CEHs)

March 13th 1pm to 5pm, March 14th 7am – 5pm, March 15th 7 am – 12 pm.

* 2018 OTS (Length 18 hours / 16 CEHs)
  + Theme

Generators, Markets and Transmission, Working Together to Ensure Reliability

* + Topics
    - **CEO Introduction** (Bill Magness / ERCOT)
    - **Extreme Natural Events** (1 CEH) (Kristi Hobbs / ERCOT)
    - **Hurricane Harvey** (3 CEH)
      * Hurricane Harvey Weatherman Perspective (Chris Coleman) (50 min)
      * Hurricane Harvey Centerpoint Perspective (CNP) (30 min)
      * Hurricane Harvey AEP Perspective (AEP) (30 min)
      * Hurricane Harvey NRG Perspective (Kevin Matt) (30 min)
      * Hurricane Harvey ERCOT Perspective (Aaron Ballew, Jerry Gaddy, Jimmy Hartmann (30 min)
    - **Summer/Winter Preparation** (1 CEH) (Dan Woodfin/Sandip Sharma / ERCOT)
    - **Grid Scale Renewables: Planning, Operations and Forecasting** (1 CEH) (Nitika Mago / ERCOT)
    - **Markets and Reliability** (1 CEH) (David Maggio / ERCOT)
    - **RUC Process (2 CEH)** (John Adams / ERCOT)
    - **Trends in Markets and Policy: Texas and Beyond!** (1 CEH) (Paul Wattles)
    - **Distributed Energy and Demand Response** (1 CEH) (Clayton Stice / ERCOT / Shane Thomas / ERCOT)
    - **Loss of SCADA, EMS, or LCC** (1 CEH) (Dave Penney / TRE, Mark Henry / TRE, Ray Manzanilla / ERCOT)
    - **Coordinated Voltage Control** (1 CEH) (Stephen Solis / ERCOT)
    - **Human Performance Improvement** (1 CEH) (Brian Legg / ERCOT)
    - **Physical and Cyber Security** (1 CEH)(Joshua Aldridge / ERCOT)
    - **Australian Black Out Event** (1 CEH) (Alex Lee / ERCOT)
  + Schedule (Austin Airport Hilton)
    - Pilot – January 23rd – 25th
    - Session 1 – March 27th – 29th
    - Session 2 – April 3rd – 5th
    - Session 3 – April 10th – 12th
    - Session 4 – April 17th – 19th
    - Session 5 April 24th – 26th
    - Session 6 May 1st – 3rd
* Harvey Report
  + TRE will be publishing a study/report on the impacts of Hurricane Harvey in December.
* 2019 Black Start and Restoration Training and Operator Training Seminar
  + Both events would be held in the new Training Building at ERCOT
  + Black Start and Restoration Training moved to March - April timeframe (Pilot in February)
  + Operator Training Seminar moved to Mid October to November timeframe. (Pilot in August)
  + Coincide with the Biennial Winter Storm Drill and Grid Ex events.
  + Winter Storm Drill will be one year and Grid Ex would be following year.
  + Will continue doing Hurricane drills in the Grid Ex years.
  + Reasons for the move
    - This would allow company specific training to happen earlier in the year.
    - This would allow all operators to participate in the Drill events each year.
    - More CEHs each year
    - More Simulation each year
    - Better value to Market Participants
* New Business
* Adjourn
* Next Meeting Dates

Dec 14 TCC 1 Room 253, WebEx

* Web Ex Information Next Page

[**WebEx Conference**](https://ercot.webex.com/ercot)

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| **OTWG Meeting** |
| Thursday, November 9, 2017 |
| 8:45 am  |  Central Standard Time (Chicago, GMT-06:00)  |  3 hrs 30 mins |

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| Meeting number (access code): 623 917 606 | |
| Meeting password: otwg1109 |

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| **1-877-668-4493** Call-in toll-free number (US/Canada) | | |
| **1-650-479-3208** Call-in toll number (US/Canada) | | |
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