

# Operations Training Working Group (OTWG)

June 15th, 2017

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

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 – May 2017
* Virtual Instructor Led Training Pilot
	+ The course will be on the afternoon of first day of the Winter Storm Drill (Winter Storm Preparation).
	+ Format
		- Introduction
		- Group Breakout (TOs, GOs)
			* 5 day hotline call
			* Discuss actions each company is taking
		- Review actions as one group
		- Group Breakout (TOs, GOs)
			* 3 day hotline call
			* Discuss actions each company is taking
		- Review actions as one group
		- Group Breakout (TOs, GOs)
			* Next day hotline call
			* Discuss actions each company is taking
		- Review actions as one group
		- Review
	+ Will be a pilot
* Winter Storm Drill (Oct 18/19)
	+ CEHs may be available from ERCOT if requirements met by participants
	+ Initial Narrative
		- Freezing temperatures and icing in West
			* Natural Gas Well Heads icing
			* Natural Gas Pipeline pressure issues
			* Natural Gas Restrictions
		- High winds and icing in Panhandle
			* High Output from wind
			* Large number of wind units tripping
		- High winds and icing throughout the ERCOT region
			* Line trips due to icing and high winds
			* Unit trips due to low temperatures
	+ Goal
		- Transmission events
		- Localized blackout and restoration (West only)
		- Capacity Emergency
	+ Event Input Due June 15, 2017
		- Event Input Sheet
	+ CEHs may be available
		- At least one event per hour
		- Facilitator present
		- Assessment would be provided
		- Presentation would be provided for the major objectives / timeline.
		- Presentation should be customized for Market Participant use. (Facilitator should add event and expected operator response)
		- To Receive CEHs the following would be required to be 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)
	+ CEHs may be available from ERCOT if requirements met by participants
	+ Registration
		- Send your organization’s Lead Planner name and email address to GridEx\_Registration@bah.com
		- Once vetted, Lead Planner will receive credentials for the Grid Ex IV Portal
		- Access pertinent information regarding exercise planning and attend regular planning calls (Only one representative from each industry organization will be granted access to the Grid Ex IV Portal, <https://pmev2.bah.com/ecs/Gridex/GridEx_IV/default.aspx>)
	+ Will use the Winter Storm Drill events (lite), with different causes
	+ Specific Grid Ex IV events due June 15, 2017
* Sync and Beyond
	+ Initial Restoration Outage(s) and Island Scenario Input from Participants due
	+ When to transition to CFC
	+ Operating Principles for Multi-TOP CFC island
	+ All Hazards Restoration Stages Framework
* 2018 OTS (130 Responses)
	+ Topic Suggestions (2017 Seminar Suggestions)
		1. Explain the Operating Guide and Protocol process and how that affects the Operators and their duties. Changes to the ERCOT SOPs (such as the introduction of the phase angle and the steps for IROL mitigation, etc) and the Guides and Protocols.
		2. Emergency training for the operators.
		3. Tools or data that are in the ERCOT MIS Portal like wind forecast.
		4. Discussion on how rooftop solar and potential PUC decisions and utilities could create growth in ERCOT depending on future decisions. Describe how this growth will impact Transmission and Generation operations in relation to real time.
		5. DER and how each company is dealing with it.
		6. Summer preparation.
		7. Ancillary coverage: trades, scheduling, SASM and purchases to cover shortages.
		8. Generator VSS requirements, TSP managing static devices to maintain SOLs and keeping generator dynamic to respond to an event, voltage stability as it relates to dependence on imports rather than native generation, etc. Voltage setpoints
		9. Demand side management, EEAs, tools
		10. Loss of LCC, SCADA, EMS (Theory and Philosophy) (Interface with ERCOT and neighboring TO’s) How do we operate without our tools? EOP 008, Loss of Situational Awareness (Panel discussion)
		11. Electric Fundamentals topic
		12. Weather forecasting with a focus on solar and wind forecasting
		13. Resource Adequacy and Performance
		14. Ergonomic Presentation / Human Performance Improvement / Human Performance and Skilled Workforce
		15. How Market Results (DAM & RT / CRR auctions) pertain to system reliability. There are results, every now and again, that do not line up with Economics and System Health. Where does system infrastructure fit into Reliability.
		16. Asset Management and Maintenance
		17. Extreme Natural Events
		18. Market Training Topic for QSEs
		19. History of ERCOT over the course of several years and explaining the operational differences that ERCOT has undergone as the system started expanding and growing operational focus.
		20. Physical Security / Cyber Security Vulnerabilities
	+ Theme
	+ Length / CEHs
* 2018 Black Start Training
	+ All Hazards Restoration Stages Framework
	+ Extra Day of Black Start and Restoration Training (CEHs)
		- Generator Dynamics (Voltage and Frequency)
		- Transmission System Dynamics (Voltage)
		- Strongly Recommended for Operators with less than 5 years, Recommended refresher for everyone
		- 10 additional CEHs
		- Limited availability (50)
* Black Start and OTS Future
	+ Vision
	+ Ideas
	+ When
* New Business
* Adjourn
* Next Meeting Dates

Jul 20 TCC 1 Room 253, WebEx

Aug 17 TCC 1 Room 253, WebEx

Sep 21 TCC 1 Room 253, Web Ex

Trainer Development – Sep 20 (1300), TCC 1 Room 253

Oct 5 TCC 1 Room 253, WebEx

Nov 9 TCC 1 Room 253, WebEx

Dec 14 TCC 1 Room 253, WebEx

* WebEx Info

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

**OTWG Meeting**

Thursday, June 15, 2017

8:45 am  |  Central Daylight Time (Chicago, GMT-05:00)  |  3 hrs 30 mins

Meeting number (access code): 621 814 675

Meeting password: otwg0615

[Add to Calendar](https://urldefense.proofpoint.com/v2/url?u=https-3A__ercot.webex.com_ercot_j.php-3FMTID-3Dmc6619a0ede94c61b17e139fcc0d1f963&d=DwMGaQ&c=trp9rTvIdyEWh1VWB5x8_2JiPaB5oGZOtWPDws2_VoY&r=T0m5Jg90hX6QBKd0dyCgfRQSppFZ4x_43N_zqr-h2HU&m=i2BlkT2nIB7j-4InNyn2dsCgZIp6mHVGBhvnj2yYvFY&s=V64__z02oFHk2o05o3nq7YU8pUhJ5dmaMDnUVKdKRU4&e=)

When it's time, [start your meeting](https://urldefense.proofpoint.com/v2/url?u=https-3A__ercot.webex.com_ercot_j.php-3FMTID-3Dm5b52afbc5e26a00bde6a71b3d5bdc31c&d=DwMGaQ&c=trp9rTvIdyEWh1VWB5x8_2JiPaB5oGZOtWPDws2_VoY&r=T0m5Jg90hX6QBKd0dyCgfRQSppFZ4x_43N_zqr-h2HU&m=i2BlkT2nIB7j-4InNyn2dsCgZIp6mHVGBhvnj2yYvFY&s=SPJJZyGVoTBh-Av_0IDIw67Kw2ZTPE-oBqxtM6ffFTQ&e=).

**Join by phone**

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

**1-650-479-3208** Call-in toll number (US/Canada)

[Global call-in numbers](https://urldefense.proofpoint.com/v2/url?u=https-3A__ercot.webex.com_ercot_globalcallin.php-3FserviceType-3DMC-26ED-3D511256832-26tollFree-3D1&d=DwMGaQ&c=trp9rTvIdyEWh1VWB5x8_2JiPaB5oGZOtWPDws2_VoY&r=T0m5Jg90hX6QBKd0dyCgfRQSppFZ4x_43N_zqr-h2HU&m=i2BlkT2nIB7j-4InNyn2dsCgZIp6mHVGBhvnj2yYvFY&s=r5O8jZTfqfP7YqBpg1wqpQIO3EiJmPTNuBekQIJc9ag&e=)  |  [Toll-free calling restrictions](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.webex.com_pdf_tollfree-5Frestrictions.pdf&d=DwMGaQ&c=trp9rTvIdyEWh1VWB5x8_2JiPaB5oGZOtWPDws2_VoY&r=T0m5Jg90hX6QBKd0dyCgfRQSppFZ4x_43N_zqr-h2HU&m=i2BlkT2nIB7j-4InNyn2dsCgZIp6mHVGBhvnj2yYvFY&s=WicHMBUYxTLSKRjHp_n0LX3gk22rhrZbQe7d_wYkn-A&e=)

Can't join the meeting? [Contact support.](https://urldefense.proofpoint.com/v2/url?u=https-3A__ercot.webex.com_ercot_mc&d=DwMGaQ&c=trp9rTvIdyEWh1VWB5x8_2JiPaB5oGZOtWPDws2_VoY&r=T0m5Jg90hX6QBKd0dyCgfRQSppFZ4x_43N_zqr-h2HU&m=i2BlkT2nIB7j-4InNyn2dsCgZIp6mHVGBhvnj2yYvFY&s=613eybtoz9Cf5GE0CEBuKKNxlt4EWpeqo9_XSJBz7zo&e=)

IMPORTANT NOTICE: Please note that this WebEx service allows audio and other information sent during the session to be recorded, which may be discoverable in a legal matter. You should inform all meeting attendees prior to recording if you intend to record the meeting.