



Item 4: Market Training Update

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Urgent Human Resources and Governance
Committee Meeting

ERCOT Public
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Market Training Courses - 2020

Instructor Led Training (ILT)

- Wholesale 101
- Retail 101
- MarkeTrak/ Inadvertent Gain
- Texas SET
- Load Serving Entities 201
- Congestion Revenue Rights
- Credit Management
- Market Settlements 301
- Resources 301
- **Resources and Day-Ahead Operations**
- **Resources and Real-Time Operations**
- Intermittent Renewable Resources
- Wholesale Markets 201
- **Wholesale Market Operations: Day-Ahead**
- **Wholesale Market Operation: Real-Time**

Market Training Courses - 2020

Web Based Training (WBT)

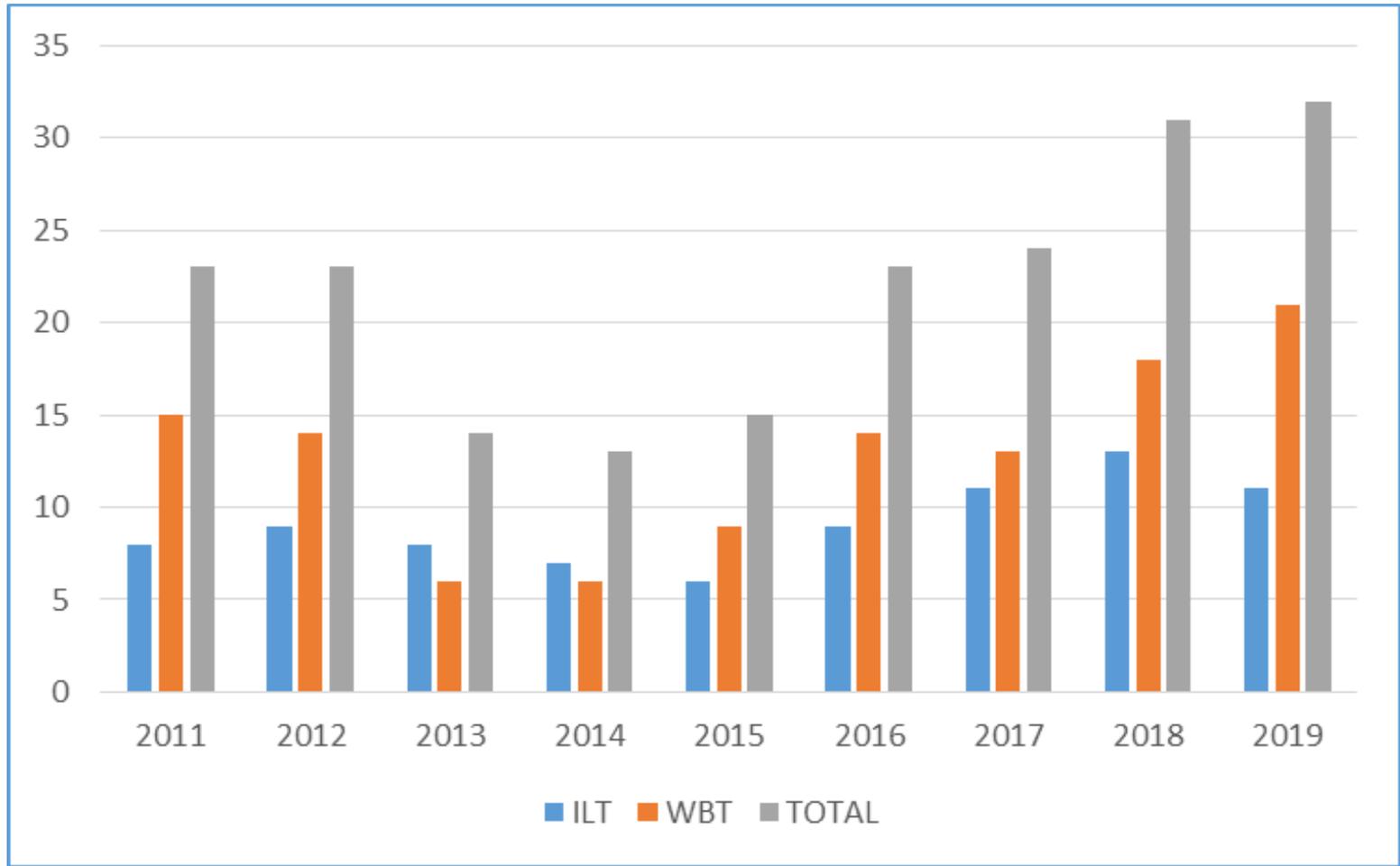
- ERCOT Foundations
- Market Participant Relationships
- Locational Marginal Pricing
- Wholesale Markets 101
- Retail 101
- Load Serving Entities 201
- Wholesale Markets 201
- Resource 301
- Intermittent Renewable Resources
- Credit Management
- **Day-Ahead Market eFactors**
- Congestion Revenue Rights
- Emergency Operations and Communications
- Intro to Data Extracts
- **ORDC**
- Outage Scheduler
- Market Manager
- MarkeTrak
- Inadvertent Gain and Loss
- CRR Market User Interface
- Market Info. System (MIS)
- Resource Indicator Start-up Shut-Down
- **Resource Responsibilities**
- **Resources in ERCOT**



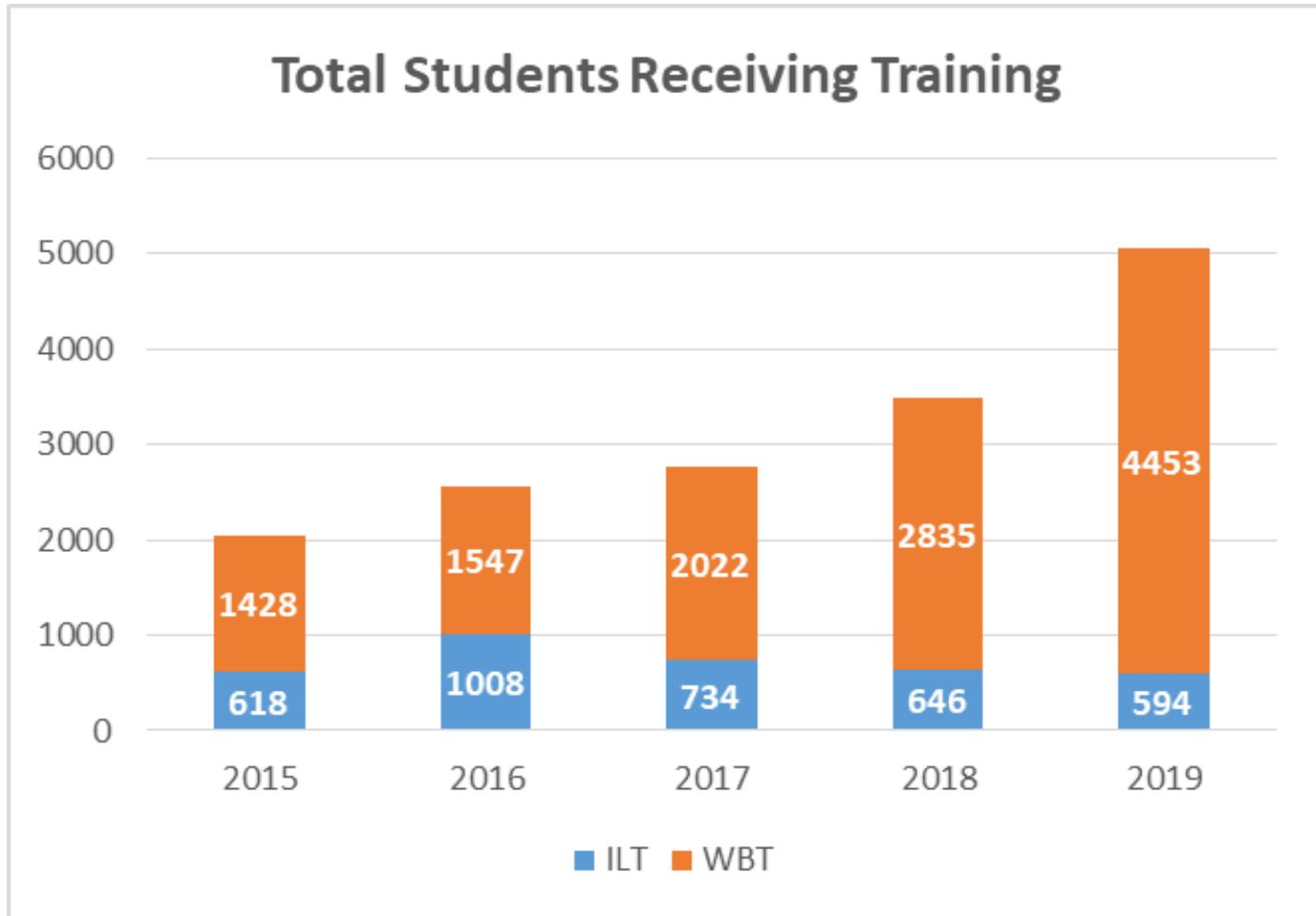
Accomplishments – 2019/2020

- Continued update of older courses
- Incorporated new PowerPoint class template
- Continued to develop new, more focused content
- Shifted to online delivery of courses

Courses Offered



2019 Training Attendance



Response to Pandemic of 2020

- Market Training ceased travel for classes on Mar 3, 2020, conducting Resource 301 via Webex
- Conducted 11 Webex classes to date – 278 attendees
- Already exceeded 2018 total for WBT attendance
- 7 more classes through December
- Modifying existing ILT classes for Webex

What we learned?

- Trend was already away from in-person classes
- Multi-day Webexs are not optimum
- Shorter classes are the way to move forward
- Interaction is more difficult, but not impossible
- Classes around 3-4 hours would be ideal
- Survey indicates we continue with Webex

What we are doing

- Re-Writing multi-day classes into multiple, stand-alone courses with Webex and WBT components:

Wholesale Markets 201

3 day in-person class



1 WBT + 2 Webex classes

Resource 301

2 day in-person class



2 WBT + 2 Webex classes

Former Wholesale 201

Format	Title	Topics
WBT	On Demand	Wholesale Markets Overview for QSEs
ILT	Wholesale Market Operations - Day-Ahead	Day-Ahead Market Inputs
		Day-Ahead Market Clearing
		Day-Ahead Market Financial Impacts
		RUC and its Financial Impacts
	Wholesale Market Operations - Real-Time	The Adjustment Period
		Real-Time Dispatch and AS Deployments
		Real-Time Financial Impacts



Former Resource 301

Format	Title	Topics
WBT	Resources in ERCOT	Resources in ERCOT
	Resource Responsibilities in ERCOT	Resource Responsibilities in ERCOT
ILT	Resources and Day-Ahead Operations	Resource Constraints in the DAM
		Resource Commitment in the DAM
		Resource Commitment after the DAM
	Resources and Real-Time Operations	Resource Dispatch in Real-Time
		Resource Reserve Deployment in Real-Time
		Resources and their Financial Impacts

Former Settlements 301

Format	Title	Topics
WBT	Settlement: Basic Process	Terminology, Statements and Invoices
ILT	Settlement: Energy and PTP Obligations	DAM Energy Bids & Offers, RT Energy Imbalance, DC Tie, PTP Obligations
	Settlement: Ancillary Services	Day-Ahead, Real-Time, Imbalance
	Settlement: Congestion Revenue Rights	Auctions, Ownership, Balancing Account
	Settlement: Related to Resources	DAM Make-Whole, RUC Make-Whole, RUC Clawback, Base Point Deviation
WBT	Settlement: Revenue Neutrality	Energy and Ancillary Services

What's next?

- Produce smaller 3-4 hour classes to be delivered via Webex.
 - Classes will cover one topic
 - Can be strung together to cover broader subjects
- Flexible delivery, continue Webex for greater accessibility.