



## Task to Training Matrix - PJM Online Training

Course Title (LMS Code)	CEH	Stand	Sim	EOP	Transmission Task Associations										Market Cert Hour
					Task 02	Task 07	Task 08	Task 10	Task 11	EOP-005 R8.2	EOP-005 R8.3	EOP-005 R8.4	EOP-005 R8.5		
OL Annual System Restoration Training (ONLEOPR13)	1	1	0	1	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	--
OL DOE Reporting Requirements (ONLMSCDE4)	1	1	0	1	--	--	--	--	--	--	--	--	--	--	--
OL Wind Generation Operating Considerations (ONLMSCWG4)	1	0	0	--	--	--	--	--	--	--	--	--	--	--	--
2021 Fall System Restoration Refresh (DRLSRF21P)	1	1	0	1	--	--	--	--	--	Yes	Yes	Yes	--	Yes	--
2021 Winter Emergency Procedures Refresh (DRLEPF2021)	1	1	0	1	--	Yes	Yes	--	--	--	--	--	--	--	--
2022 Spring System Restoration Refresh (DRLSRD22P)	1	1	0	1	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	--
2022 Summer Emergency Procedures Refresh (DRLEPS22P)	1.5	1.5	0	1.5	--	Yes	Yes	--	--	--	--	--	--	--	--
OL NERC Standards (ONLNERC17)	8	8	0	8	--	--	--	--	--	--	--	--	--	--	--
OL Electrical Theory (ONLFUNET1)	3	0	0	--	--	--	--	--	--	--	--	--	--	--	--
OL NUC-001 (JITOPS143)	1	1	0	--	--	--	--	--	--	--	--	--	--	--	--
Transmission ITP	OL Intro to PJM & Comm, Op Para 1 (T) (ONLTRN17A)	3	0.5	0	--	--	--	--	Yes	--	--	--	--	--	--
	OL Ops Parameters 2 & 3 (T) (ONLTRN17B)	1.5	0.5	0	1.5	--	--	--	--	--	--	--	--	--	--
	OL Ops Parameters 4 & 5 (T) (ONLTRN17C)	1	0.5	0	0.5	--	--	--	--	--	--	--	--	--	--
	OL Stability, BES & Outages (T) (ONLTRN17D)	2	0	0	--	Yes	--	--	--	--	--	--	--	--	--
	OL Emergency Procedures (T) (ONLTRN17E)	2.5	0.5	0	2.5	--	Yes	Yes	--	--	--	--	--	--	--
	OL System Restoration (T) (ONLTRN17F)	2.5	0.5	0	2.5	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes
Generation ITP	OL Intro to PJM & Communications (G) (ONLGEN16A)	2	0.5	0	--	--	--	--	--	--	--	--	--	--	--
	OL PJM Markets & Real-Time Ops (G) (ONLGEN16B)	2	0	0.5	--	--	--	--	--	--	--	--	--	--	2
	OL Outage Scheduling (G) (ONLGEN16C)	1.5	0.5	0	--	--	--	--	--	--	--	--	--	--	--
	OL Emergency Procedures (G) (ONLGEN16D)	3	1	0.5	3	--	--	--	--	--	--	--	--	--	--
	OL System Restoration (G) (ONLGEN16E)	1.5	1	0	1.5	--	--	--	--	--	--	--	--	--	--
Governor Control and ACG (ONLMSCGC)	1	0	0	--	--	--	--	--	--	--	--	--	--	--	--
HEMP/GMD (ONLMSCHMP)	1	0.5	0	1	--	--	--	--	--	--	--	--	--	--	--
Unit Dispatch-Normal & Off-SCED (JITOPS201)	1	0	0	1	--	--	--	--	--	--	--	--	--	--	1
Blackout Lessons Learned (PJMVTSO12)	2	0	0	2	--	--	--	--	--	Yes	--	--	--	--	--
IROL Simulation Exercises (PJMSIMOL1)	1	1	1	1	--	--	--	--	--	--	--	--	--	--	--
System Restoration - Dynamic Reserve (ONL21S001)	1	1	0	1	--	--	--	--	--	Yes	--	--	--	--	--
Importance of 3-Part Communication (ONL21S002)	1	0.5	0	--	--	--	--	--	--	--	--	--	--	--	--



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					Task 02	Task 07	Task 08	Task 10	Task 11	EOP-005 R8.2	EOP-005 R8.3	EOP-005 R8.4	EOP-005 R8.5		
Nuclear Bus Vltg Limits & Capacity Mrkt (ONL21S003)	1	0.5	0	--	--	--	--	--	--	--	--	--	--	--	0.5
Remedial Action Schemes (ONL21S005)	1	1	0.5	1	Yes	--	--	--	--	--	--	--	--	--	--
Transmission Topics (ONL21S006)	1	0.5	0	--	Yes	--	--	Yes	--	--	--	--	--	--	--
The Cyber Hurricane (Cyber Sec for Ops) (ONL21S007)	1	0	0	1	Yes	--	--	--	--	--	--	--	--	--	--
Energy Market Updates (ONL21S008)	1.5	0	0	--	--	--	--	--	--	--	--	--	--	--	1.5
Emerging Technologies (ONL21S009)	2	0	0	--	--	--	--	--	--	--	--	--	--	--	--
Capacity & Voltage Emergency Procedures (ONL21S011)	1	1	0	1	--	Yes	Yes	--	--	--	--	--	--	--	--
2022 Seminar - Online Training (SEM22S001)	7.5	3.5	0.5	5	--	Yes	Yes	--	Yes	Yes	Yes	--	Yes	--	1
2022 Seminar - Transmission Topics (SEM22S002)	2.5	2.5	1	2.5	Yes	--	--	--	--	--	--	--	--	--	--
2022 Seminar - Market Updates (SEM22S003)	2.5	0	0	0	--	--	--	--	--	--	--	--	--	--	2.5
Operating Concepts Self-Study* (PJMSIMOC2)	2	0	1.5	--	--	--	--	--	--	--	--	--	--	--	--
Voltage Control Self-Study* (PJMSIMVC2)	3	0	2	--	--	--	--	--	--	--	--	--	--	--	--
Synching Islands Self-Study* (PJMSIMSR2)	2	2	1.5	2	--	--	--	--	Yes	--	Yes	Yes	--	--	--
Dynamic Reserves Self-Study* (PJMSIMSR1)	2	2	1	2	--	--	--	--	Yes	--	--	--	--	--	--

\*Available for self-study, pre-registration required

## Task to Training Matrix - PJM Virtual Training

PJM Virtual Training Sessions	CEH	Stand	Sim	EOP	Transmission Task Associations										Market Cert Hour
					Task 02	Task 07	Task 08	Task 10	Task 11	EOP-005 R8.2	EOP-005 R8.3	EOP-005 R8.4	EOP-005 R8.5		
Locational Marginal Pricing (LMP) (PJMVTSM01)	2.0	0	0	--	--	--	--	--	--	--	--	--	--	--	2
Operating Reserve Settlements Part 1 (PJMVTSM02)	1.5	0	0	--	--	--	--	--	--	--	--	--	--	--	1.5
Operating Reserve Settlements Part 2 (PJMVTSM03)	1.5	0	0	--	--	--	--	--	--	--	--	--	--	--	1.5
Generation BLIs Part 1 (PJMVTSM04)	1.5	0	0	--	--	--	--	--	--	--	--	--	--	--	1.5
Generation BLIs Part 2 (PJMVTSM17)	1.0	0	0	--	--	--	--	--	--	--	--	--	--	--	1
Generator Energy Schedules & Parameters (PJMVTSM05)	1.5	0	0	--	--	--	--	--	--	--	--	--	--	--	1.5
ARR/FTR Basics (PJMVTSM06)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5
ARR/FTR Advanced (PJMVTSM16)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5
Regulation Market Overview (PJMVTSM07)	1.5	0	0	--	--	--	--	--	--	--	--	--	--	--	1.5
Reserve Market Overview (PJMVTSM08)	1.5	0	0	--	--	--	--	--	--	--	--	--	--	--	1.5



## Task to Training Matrix - PJM Virtual Training

PJM Virtual Training Sessions	CEH	Stand	Sim	EOP	Transmission Task Associations										Market Cert Hour
					Task 02	Task 07	Task 08	Task 10	Task 11	EOP-005 R8.2	EOP-005 R8.3	EOP-005 R8.4	EOP-005 R8.5		
Load BLIs Part 1 ( <i>PJMVTSM09</i> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5
Load BLIs Part 2 ( <i>PJMVTSM10</i> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5
PJM Settlement Tools ( <i>PJMVTSM11</i> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2
Load Parameters ( <i>PJMVTSM12</i> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1
Objective Function and Production Cost ( <i>PJMVTSM13</i> )	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5
Day Ahead Market Simulation ( <i>PJMVTSM14</i> )	1.5	0	1.5	--	--	--	--	--	--	--	--	--	--	--	1.5
Real-Time Market Simulation ( <i>PJMVTSM15</i> )	1.5	0	1.5	--	--	--	--	--	--	--	--	--	--	--	1.5
Transmission Line Protection ( <i>PJMVTSO01</i> )	2	0	1.5	--	--	--	--	--	--	--	--	--	--	--	--
Voltage Control with Generators & LTCs ( <i>PJMVTSO02</i> )	2	0	1.5	--	--	--	--	--	--	--	--	--	--	--	--
Capacitors, Ferranti Rise & Surge Impedance Loading ( <i>PJMVTSO03</i> )	2	0	1.5	--	--	--	--	--	--	--	--	--	--	--	--
Synching Islands ( <i>PJMVTSO04</i> )	2	2	1.5	2	--	--	--	--	Yes	--	Yes	Yes	--	--	--
Dynamic Reserves ( <i>PJMVTSO05</i> )	2	2	1	2	--	--	--	--	Yes	--	--	--	--	--	--
Impedance & Power Flow on AC Transmission Lines ( <i>PJMVTSO06</i> )	2	0	0	--	--	--	--	--	--	--	--	--	--	--	--
Communications ( <i>PJMVTSO07</i> )	1.5	1.5	0	1.5	--	--	--	--	--	--	--	--	--	--	--
Stability ( <i>PJMVTSO08</i> )	2	2	0	2	--	--	--	--	--	--	--	--	--	--	--
Overview of Emergency Procedures ( <i>PJMVTSO09</i> )	1.5	1.5	0	1.5	--	Yes	Yes	--	--	--	--	--	--	--	--
Reporting Transmission Outages via eDART ( <i>PJMVTSO10</i> )	1.5	1.5	0	--	Yes	--	--	--	--	--	--	--	--	--	--
System Restoration Overview Part 1 ( <i>PJMVTSO11</i> )	2	2	0	2	--	--	--	--	Yes	Yes	--	--	--	--	--
Blackout Lessons Learned ( <i>PJMVTSO12</i> )	2	0	0	2	--	--	--	--	Yes	--	--	--	--	--	--
System Restoration Overview Part 2 ( <i>PJMVTSO13</i> )	2	2	0	2	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	--
System Restoration ( <i>PJMVTSO14</i> )	4	3.5	4	4	--	--	--	--	Yes	Yes	Yes	Yes	Yes	--	--

Please note this is for planning purposes only and may be subject to change

# DRAFT Training Calendar

# 2022

## January

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

- 1/6 ARR/FTR Basics
- 1/6 Overview of PJM Emergency Procedures
- 1/12 Capac, Ferranti Rise & SIL
- 1/12 ARR/FTR Advanced
- 1/18 Gen Energy Sched & Parameters
- 1/18 Stability
- 1/20 Communication
- 1/24 Synching Islands
- 1/24 Day Ahead Market Simulation

## February

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

- 2/1 Real-Time Market Simulation
- 2/1 DR Load Mgmt Registrations
- 2/3 Load BLIs Part 1
- 2/3 Transmission Line Protection
- 2/9 System Restoration Part 2
- 2/9 Load BLIs Part 2
- 2/22 System Restoration Part 2
- 2/22 Reserve Market Overview
- 2/28 Regulation Market Overview
- 2/28 Voltage Cntrl w/Gen & LTCs

## March

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

- 3/1 Demand Response Overview
- 3/8-11 Seminar - Wk 1 - Baltimore, MD
- 3/15-18 Seminar - Wk 2 - Baltimore, MD
- 3/22-25 Seminar - Wk 3 - Baltimore, MD
- 3/29-4/1 Seminar - Wk 4 - Columbus, OH

## April

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

- 4/5-8 Seminar - Wk 5 - Columbus, OH
- 4/11-14 Economic DR in Energy Markets
- 4/11-14 Seminar - Wk 6 - Columbus, OH
- 4/19-22 Seminar - Wk 7 - Columbus, OH
- 4/26-27 Seminar - Wk 8 Session 1 - Audubon, PA
- 4/28-29 Seminar - Wk 8 Session 2 - Audubon, PA

## May

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

- 5/3-4 Seminar - Wk 9 Session 1 - Audubon, PA
- 5/5-6 Seminar - Wk 9 Session 2 - Audubon, PA
- 5/10-11 Seminar - Wk 10 Session 1 - Audubon, PA
- 5/12-13 Seminar - Wk 10 Session 2 - Audubon, PA

## June

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

- 6/3 DR Economic Offers in MG
- 6/17 DR (Load Mgmt) in the Cap Mkt

## July

Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

## August

Su	Mo	Tu	We	Th	Fr	Sa
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

- 8/9 MS 101
- 8/22-26 Trans ITP - CTC
- 8/25-26 Sys Restoration Wrksp - CTC

## September

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

- 9/12-16 Gen ITP - CTC

## October

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

- 10/3 LSE Basics
- 10/5 Energy Markets for LSEs
- 10/19 Demand Response Overview
- 10/24-28 Trans ITP - CTC
- 10/27-28 Sys Restoration Wrksp - CTC

## November

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

- 11/2 Economic DR in Ancillary Services
- 11/7-11 Gen ITP - CTC
- 11/15-17 Market Opt. Workshop - CTC

## December

Su	Mo	Tu	We	Th	Fr	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

- 12/7 DR Load Mgmt Registrations

### LEGEND

- Virtual Training
- Company Holiday
- In-Person Training
- Non-PJM Holiday
- Curriculum
- Seminar

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