



## 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	--	1	--	--	--	--	--	Yes	Yes	Yes	Yes	Yes	--
OL DOE Reporting Requirements (ONLMSCDE4)	1	1	--	1	--	--	--	--	--	--	--	--	--	--	--
OL Wind Generation Operating Considerations (ONLMSCWG4)	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2022 Fall System Restoration Refresh (DRLSRF22P)	1	1	--	1	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	--
2022 Winter Emergency Procedures Refresh (DRLEPF22P)	1	1	--	1	--	Yes	Yes	--	--	--	--	--	--	--	--
2023 Spring System Restoration Refresh (DRLSRD23P)	1	1	--	1	--	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	--
2023 Summer Emergency Procedures Refresh (DRLEPS23P)	1	1	--	1	--	Yes	Yes	--	--	--	--	--	--	--	--
OL NERC Standards (ONLNERC17)	8	8	--	8	--	--	--	--	--	--	--	--	--	--	--
OL Electrical Theory (ONLFUNET1)	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--
OL NUC-001 (JITOPS143)	1	1	--	1	--	--	--	--	--	--	--	--	--	--	--
Transmission ITP	OL Intro to PJM & Comm, Op Para 1 (T) (ONLTRN17A)	3	0.5	--	--	--	--	Yes	--	--	--	--	--	--	--
	OL Ops Parameters 2 & 3 (T) (ONLTRN17B)	1.5	0.5	--	1.5	--	--	--	--	--	--	--	--	--	--
	OL Ops Parameters 4 & 5 (T) (ONLTRN17C)	1	0.5	--	0.5	--	--	--	--	--	--	--	--	--	--
	OL Stability, BES & Outages (T) (ONLTRN17D)	2	--	--	--	Yes	--	--	--	--	--	--	--	--	--
	OL Emergency Procedures (T) (ONLTRN17E)	2.5	0.5	--	2.5	--	Yes	Yes	--	--	--	--	--	--	--
	OL System Restoration (T) (ONLTRN17F)	2.5	0.5	--	2.5	--	--	--	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Generation ITP	OL Intro to PJM & Communications (G) (ONLGEN16A)	2	0.5	--	--	--	--	--	--	--	--	--	--	--	--
	OL PJM Markets & Real-Time Ops (G) (ONLGEN16B)	2	--	0.5	--	--	--	--	--	--	--	--	--	--	2
	OL Outage Scheduling (G) (ONLGEN16C)	1.5	0.5	--	--	--	--	--	--	--	--	--	--	--	--
	OL Emergency Procedures (G) (ONLGEN16D)	3	1	0.5	3	--	--	--	--	--	--	--	--	--	--
	OL System Restoration (G) (ONLGEN16E)	1.5	1	--	1.5	--	--	--	--	--	--	--	--	--	--
Governor Control and ACG (ONLMSCGC)	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HEMP/GMD (ONLMSCHMP)	1	0.5	--	1	--	--	--	--	--	--	--	--	--	--	--
Unit Dispatch-Normal & Off-SCED (JITOPS201)	1	--	--	1	--	--	--	--	--	--	--	--	--	--	1
Reserve Performance (JITOPS231)	1	--	--	1	--	--	--	--	--	--	--	--	--	--	1
Blackout Lessons Learned (PJMVTSO12)	2	--	--	2	--	--	--	--	Yes	--	--	--	--	--	--
IROL Simulation Exercises (PJMSIMOL1)	1	1	1	1	--	--	--	--	--	--	--	--	--	--	--
2023 Seminar - Online Training (SEM23S001)	6.5	2	1	2	--	Yes	Yes	--	--	--	--	--	--	--	2
2023 Seminar - Transmission Topics (SEM23S002)	3.5	3	0.5	2	--	--	--	--	--	--	--	--	--	--	--
2023 Seminar - Generation & Market Topics (SEM23S003)	3.5	--	--	--	--	--	--	--	--	--	--	--	--	--	3.5
2023 Seminar - Ops Update (SEM23S004)	1	1	--	1	--	--	--	--	--	--	--	--	--	--	--
Operating Concepts Self-Study* (PJMSIMOC2)	2	--	1.5	--	--	--	--	--	--	--	--	--	--	--	--
Voltage Control Self-Study* (PJMSIMVC2)	2	--	1.5	--	--	--	--	--	--	--	--	--	--	--	--



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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		
Synching Islands Self-Study* (PJMSIMSR2)	2	2	1.5	2	--	--	--	--	Yes	--	Yes	Yes	--	--	
Dynamic Reserves Self-Study* (PJMSIMSR1)	2	2	1	2	--	--	--	--	Yes	--	--	--	--	--	
Ops-X Simulations Self-Study* (PJMSIMOX2)	4	4	4	4	Yes	Yes	--	--	--	--	--	--	--	--	

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

## Task to Training Matrix - PJM Virtual 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		
Locational Marginal Pricing (LMP) (PJMVTSM01)	2	--	--	--	--	--	--	--	--	--	--	--	--	2	
Generator Energy Schedules & Parameters (PJMVTSM05)	1.5	--	--	--	--	--	--	--	--	--	--	--	--	1.5	
ARR/FTR Basics (PJMVTSM06)	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	
ARR/FTR Advanced (PJMVTSM16)	--	--	--	--	--	--	--	--	--	--	--	--	--	2.5	
Regulation Market Overview (PJMVTSM07)	1.5	--	--	--	--	--	--	--	--	--	--	--	--	1.5	
Reserve Market Overview (PJMVTSM08)	1.5	--	--	--	--	--	--	--	--	--	--	--	--	1.5	
Day Ahead Market Simulation (PJMVTSM14)	1.5	--	1.5	--	--	--	--	--	--	--	--	--	--	1.5	
Real-Time Market Simulation (PJMVTSM15)	1.5	--	1.5	--	--	--	--	--	--	--	--	--	--	1.5	
Transmission Line Protection (PJMVTSO01)	2	--	1.5	--	--	--	--	--	--	--	--	--	--	--	
Voltage Control with Generators & LTCs (PJMVTSO02)	2	--	1.5	--	--	--	--	--	--	--	--	--	--	--	
Capacitors, Ferranti Rise & Surge Impedance Loading (PJMVTSO03)	2	--	1.5	--	--	--	--	--	--	--	--	--	--	--	
Synching Islands (PJMVTSO04)	2	2	1.5	2	--	--	--	--	Yes	--	Yes	Yes	--	--	
Dynamic Reserves (PJMVTSO05)	2	2	1	2	--	--	--	--	Yes	--	--	--	--	--	
Communications (PJMVTSO07)	1.5	1.5	--	1.5	--	--	--	--	--	--	--	--	--	--	
Stability (PJMVTSO08)	2	2	--	2	--	--	--	--	--	--	--	--	--	--	
Overview of Emergency Procedures (PJMVTSO09)	1.5	1.5	--	1.5	--	Yes	Yes	--	--	--	--	--	--	--	
Reporting Transmission Outages via eDART (PJMVTSO10)	1.5	1.5	--	--	Yes	--	--	--	--	--	--	--	--	--	
System Restoration (PJMVTSO14)	4	3.5	4	4	--	--	--	--	Yes	Yes	Yes	Yes	--	--	
Balancing and Frequency Control (PJMVTSO15)	1	1	--	--	--	--	--	--	--	--	--	--	--	--	
Governor Control and AGC (PJMVTSO16)	2	--	--	--	--	--	--	--	--	--	--	--	--	--	
Three-Phase Power Basics (PJMVTSO17)	1	--	--	--	--	--	--	--	--	--	--	--	--	--	
Transformer Theory Basics (PJMVTSO18)	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	



## Task to Training Matrix - PJM Instructor-Led 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	
Transmission ITP	Intro to PJM & Comm, Op Para 1 (T) (PJMTRN17A)	5	0.5	1	--	--	--	--	Yes	--	--	--	--	--	--
	Ops Parameters 2 & 3 (T) (PJMTRN17B)	6	2.5	1.5	6	--	--	--	--	--	--	--	--	--	--
	Ops Parameters 4 & 5 (T) (PJMTRN17C)	7	3	4	2.5	--	--	--	--	--	--	--	--	--	--
	Stability, BES & Outages (T) (PJMTRN17D)	5	--	0.5	--	Yes	--	--	--	--	--	--	--	--	--
	Emergency Procedures (T) (PJMTRN17E)	5	2	--	5	--	Yes	Yes	--	--	--	--	--	--	--
	System Restoration (T) (PJMTRN17F)	6	2.5	--	6	--	--	--	--	Yes	Yes	Yes	Yes	Yes	--
	System Restoration Simulation (T) (PJMTRN17G)	4	3.5	4	4	--	--	--	--	Yes	Yes	Yes	Yes	--	--
Generation ITP	Intro to PJM & Communications (G) (PJMGEN16A)	5.5	0.5	1	--	--	--	--	--	--	--	--	--	--	2.5
	PJM Markets & Real-Time Ops (G) (PJMGEN16B)	8	--	3	--	--	--	--	--	--	--	--	--	--	3.5
	Outage Scheduling (G) (PJMGEN16C)	2.5	0.5	0.5	--	--	--	--	--	--	--	--	--	--	2.5
	Emergency Procedures (G) (PJMGEN16D)	5.5	4	--	5	--	--	--	--	--	--	--	--	--	1
	System Restoration (G) (PJMGEN16E)	3	2	--	3	--	--	--	--	--	--	--	--	--	--
	System Restoration Simulation (G) (PJMGEN16F)	1.5	1.5	1.5	1.5	--	--	--	--	--	--	--	--	--	--
Electrical Theory (PJMFUNET2)		17.5	--	4	--	--	--	--	--	--	--	--	--	--	--
Power System Elements (PJMFUNPS2)		14	--	1	--	--	--	--	--	--	--	--	--	--	--
Market Optimization Workshop (PJMMKTOPT)		20	--	8	--	--	--	--	--	--	--	--	--	--	20
System Restoration Workshop (PJMSRW131)		10	6	4	10	--	--	--	--	Yes	Yes	Yes	Yes	Yes	--
Day Ahead & Real-Time Market Simulation (PJMSIMDRT)		3	--	3	--	--	--	--	--	--	--	--	--	--	3
Ops-X Simulations (PJMSIMOPX)		4	4	4	4	Yes	Yes	--	--	--	--	--	--	--	--
Protective Relaying Simulations (PJMSIMPRS)		1	--	1	--	--	--	--	--	--	--	--	--	--	--

# DRAFT Training Calendar

# 2023

## 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				

- 1/10 Communication
- 1/17 ARR/FTR Basics
- 1/18 ARR/FTR Advanced
- 1/25 Transmission Line Protection

## 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				

- 2/2 Stability
- 2/16 Load Management Registrations

## 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	

- SEMINAR**
- 3/7-10 Wk 1 - Baltimore, MD
  - 3/13 PJM 101 - Baltimore, MD
  - 3/14-17 Wk 2 - Baltimore, MD
  - 3/15 Demand Response Overview
  - 3/21-24 Wk 3 - Baltimore, MD
  - 3/27-28 Wk 4 Session 1 - Virtual
  - 3/30-31 Wk 4 Session 2 - Virtual

## 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						

- SEMINAR**
- 4/3-4 Wk 5 Session 1 - Virtual
  - 4/5-6 Wk 5 Session 2 - Virtual
  - 4/10-11 Wk 6 Session 1 - Virtual
  - 4/13-14 Wk 6 Session 2 - Virtual
  - 4/17-18 Wk 7 Session 1 - Virtual
  - 4/18 DR LM & PRD Testing for 23/24 Del Yr
  - 4/20-21 Wk 7 Session 2 - Virtual
  - 4/25-28 Wk 8 - 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			

- SEMINAR**
- 5/2-5 Wk 9 - Audubon, PA
  - 5/8 Economic DR in Energy Mkts
  - 5/9-12 Wk 10 - 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	

- 6/5-9 Transmission ITP - CTC
- 6/8-9 System Rest. Workshop - CTC
- 6/13 DR Economic Offers in MG
- 6/15 Load Mgmt Dispatch
- 6/22 Stability
- 6/28 Load Mgmt Settlements & Compliance

## 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					

- 7/10 Market Settlements 101 - CTC
- 7/11-13 Market Sett. Advanced - CTC
- 7/18-20 Power System Elements - CTC
- 7/25 Governor Control and AGC
- 7/31-8/4 Generation ITP - CTC

## 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		

- 7/31-8/4 Generation ITP - CTC
- 8/8-10 Market Optimization Workshop - CTC
- 8/24 Three-Phase Power Basics
- 8/29 Transformer Theory Basics

## 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 PJM 101 - CTC
- 9/13 Load Serving Entity - CTC
- 9/19-21 Power System Elements - 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				

- 10/2-6 Transmission ITP - CTC
- 10/5-6 System Rest. Workshop - CTC
- 10/18 Demand Response Overview
- 10/30 Generator Energy Schedules and Parameters

## 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		

- 11/1 Economic DR in Ancillary Services
- 11/7-9 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						

- 12/4-8 Generation ITP - CTC
- 12/13 Load Management Registrations
- 12/14 Performance Assessment Intervals

LEGEND	
<span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Virtual Training	<span style="background-color: #D2B48C; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Company Holiday
<span style="background-color: #E0E0E0; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> In-Person Training	<span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Non-PJM Holiday
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Curriculum	
<span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Seminar	