

**APS Energy Control Center Supervisor  
Transmission Operator  
Initial Training Program**

1. Introduction to Power Operations Department
2. System Operations Fundamentals
3. Review of Electrical Fundamentals
4. Print Reading
5. APS Power Apparatus – 12kV Applications
6. APS Accident Prevention Manual
7. Transmission System Protection
8. Protective Relaying – 12 kV Applications
9. Communications Monitoring and Control
10. SCADA Fundamentals
11. Siemens EMS - Transmission Operator
12. ECC Policies and Procedures – 12kV Applications
13. Safety in Power Operations Switching – 12 kV Applications
14. System Operator Communication Techniques – 12 kV Applications
15. APS Distribution Operating Centers – 12kV Applications
16. APS Field Operations - 12kV Applications
17. Job Planning and Writing – 12 kV Applications
18. Switching Operations – 12kV Applications
19. 12kV End of Phase Examination
20. AC Power Concepts
21. APS Power Apparatus – 69kV Applications
22. Print Reading – 69kV Applications
23. Protective Relaying – 69kV Applications
24. Power Transmission
25. System Voltage Control
26. Voltage Control
27. System Security
28. Operating under Abnormal Conditions
29. System Restoration
30. Restoration Principles
31. Black Start Drill
32. Emergency Operations w/ Pwr Simulator
33. Transmission
34. Restoration
35. System Frequency & Tie Line Controls
36. Power Dispatching
37. Generation Principles
38. Generation
39. Interchange
40. APS 69kV System Drawings
41. Off-Normal and Emergency Operations
42. Safety in Power Operations Switching –69kV Applications
43. Communication Techniques –69kV Applications
44. ECC Policies and Procedures – 69kV Applications
45. Job Planning and Writing – 69 kV Applications
46. Switching Operations – 69kV Applications
47. 69kV End of Phase Evaluation
48. Effects Of Deregulation on Trans Sys Ops

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49. Power Dispatch Under Deregulation
50. Transmission Control
51. Interconnection Operation
52. AC Power Concepts – EHV Applications
53. Print Reading, EHV Applications
54. APS Power Apparatus, EHV Applications
55. Protective Relaying, EHV Applications
56. APS Seasonal Operating Studies
57. Transfer Path Control
58. Remedial Action Schemes
59. Real Time Ops and Reliability Readiness
60. NERC Certification Studies – Resource and Demand Balancing
61. NERC Certification Studies – Communications
62. NERC Certification Studies – Critical Infrastructure Protection
63. NERC Certification Studies – Emergency Preparedness and
64. NERC Certification Studies – Interchange Scheduling and
65. NERC Certification Studies – Interconnection Reliability Ops &
66. NERC Certification Studies – Personnel Performance, Training and
67. NERC Certification Studies – Protection and Control
68. NERC Certification Studies – Transmission Operations
69. NERC Certification Studies – Voltage and Reactive
70. NERC Certification Examination – RC Level
71. APS EHV System Drawings
72. Generation Control
73. System Voltage Control
74. Transmission Control
75. Off Normal/Emergency Operation
76. Safety in Power Operations Switching – EHV Applications
77. Communication Techniques – EHV Applications
78. ECC Policies and Procedures – EHV Applications
79. Job Planning and Writing – EHV Applications
80. Switching Operations – EHV Applications
81. Oral Board Interview