



**Course:** Photovoltaic Training (2010)  
**Hours:** 8  
**Designed For:** All fire service personnel  
**Description:** This course is designed specifically to provide fire protection and fire prevention personnel with background information regarding photovoltaic technology so that they can make informed decisions at the scene of an emergency or in the plan review and construction inspection of photovoltaic system installation.  
**Prerequisites:** None  
**Certification:** None  
**Standard:** OSFM (2010); Fire Operations for Photovoltaic Emergencies Handbook  
**Max. Class Size:** 30  
**Restrictions:** None

REQUIRED STUDENT MATERIALS	EDITION	VENDORS
<ul style="list-style-type: none"> <li>Fire Operations for Photovoltaic Emergencies Handbook</li> </ul>	2010	SFT Website
REQUIRED INSTRUCTOR MATERIALS		
<ul style="list-style-type: none"> <li>Fire Operations for Photovoltaic Emergencies Handbook</li> </ul>	2010	SFT Website
VENDORS		
SFT Website	<a href="http://osfm.fire.ca.gov/training/SFTCurriculum.php">http://osfm.fire.ca.gov/training/SFTCurriculum.php</a>	

### PHOTOVOLTAIC COURSE PLAN

**Course Objectives:**

- Have a working knowledge of a Photovoltaic System
- Be able to identify component parts of a Photovoltaic System
- Identify and mitigate potential hazards
- Identify occupancies and locations for Photovoltaic Systems
- Perform size-up and develop response strategies and tactics

**Total Course Hours** ..... **8:00**

**Unit 1: Course Introduction**..... **0:30**

Terminal Learning Objective (TLO): At the conclusion of this module students will be able to recognize types of photovoltaic systems and components

Enabling Learning Objective:

1. Describe a photovoltaic system
2. Identify system components

**Unit 2: Photovoltaic History, Distribution and regulation** ..... **1:00**

Terminal Learning Objective (TLO): At the conclusion of this module students will have knowledge of the basic parts of a PV system.

Enabling Learning Objective (ELO):

1. Describe the basic parts of a PV panel
2. Identify system components
3. Understand basic design considerations



### PHOTOVOLTAIC COURSE PLAN

#### **Unit 3: Photovoltaic Components; Modules, Wiring and Inverters** ..... 1:00

Terminal Learning Objective (TLO): At the conclusion of this module students will be understand hazards and related factors necessary for operations involved in emergency response.

Enabling Learning Objective (ELO):

1. Recognize PV systems
2. Identify system locations
3. Identify hazards with PV systems
4. Perform size up
5. Have knowledge of strategies and tactics

#### **Unit 4: Photovoltaic Operation and Tactical Considerations**..... 2:00

Terminal Learning Objective (TLO): At the conclusion of this module students will be able to recognize common attributes & hazards of a typical residential PV system.

Enabling Learning Objective (ELO):

1. Identify residential PV system components
2. Identify unique hazards associated with residential PV Systems
3. Identify Strategic & Tactical Considerations

#### **Unit 5: Residential and Suburban Applications**..... 1:00

Terminal Learning Objective (TLO): At the conclusion of this module students will be able to recognize common attributes and hazards of typical commercial photovoltaic systems.

Enabling Learning Objective (ELO):

1. Identify commercial system components
2. Identify unique hazards associated with commercial PV systems
3. Identify strategy and tactical considerations

#### **Unit 6: Large and Small Commercial Applications** ..... 1:00

Terminal Learning Objective (TLO): At the conclusion of this module students will understand what are ground mounted photovoltaic systems, hazards, size-up, strategy and tactics and the limited resources available in rural areas.

Enabling Learning Objective (ELO):

1. Identify and learn what is ground mounted and where they may be located
2. Identify hazards for ground mounted and rural PV systems
3. Size-up, strategy and tactics may be different for ground mounted & rural areas compared to roof mounted PV systems

#### **Unit 7: Battery Hazards for Off-Grid Systems**..... 1:00

Terminal Learning Objective (TLO): At the conclusion of this module students will be able to recognize types of photovoltaic systems, components, hazards and related factors when systems are involved in emergency response and recognize and understand mitigation.

Enabling Learning Objective (ELO):

1. Identify system components
2. Identify hazards with PV systems
3. Identify system locations

#### **Unit 8: Photovoltaic Technologies Underdevelopment**..... 0:30

Terminal Learning Objective (TLO): At the conclusion of this module students will be able to recognize types



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of photovoltaic systems, components, hazards and related factors when systems are involved in emergency response and recognize and understand mitigation.

Enabling Learning Objective (ELO):

1. Identify system components
2. Identify hazards with PV systems
3. Identify system locations