IS-812: ESF #12 – Energy
Instructor Guide

February 2009

Topic	Course Overview

Display Visual 1

Instructor Notes: Present the following key points.

Purpose: The purpose of this course is to familiarize participants with the function and composition of ESF #12 – Energy.

Approximate Time: 1 hour

Content Outline: This module includes the following major topics:

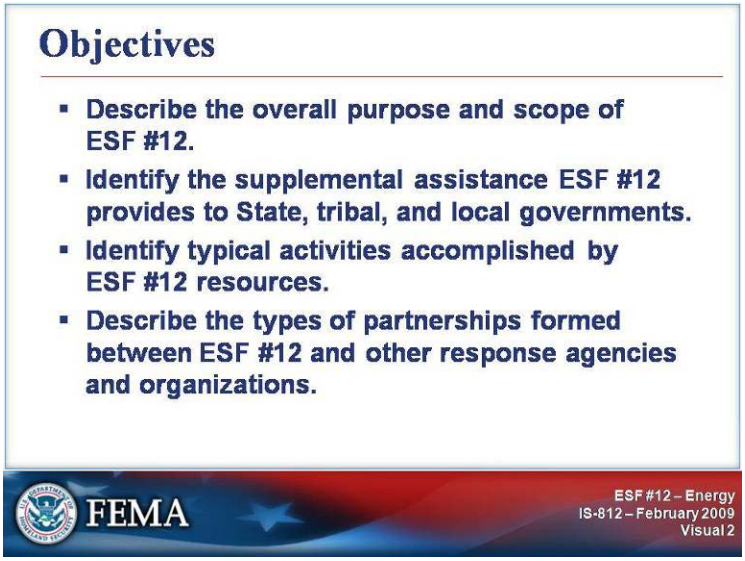
- ESF Overview
- ESF #12 Purpose and Scope
- ESF #12 Coordinator and Primary Agency
- ESF #12 Support Agencies
- ESF #12 Actions
- Concept of Operations
- DOE Emergency Operations Center
- Interagency Teams
- National Energy Technology Laboratory
- Summary

Materials:

- Instructor Guide
- Student Manual (including the ESF #12 – Energy Annex)

Topic	Course Overview

Display Visual 2



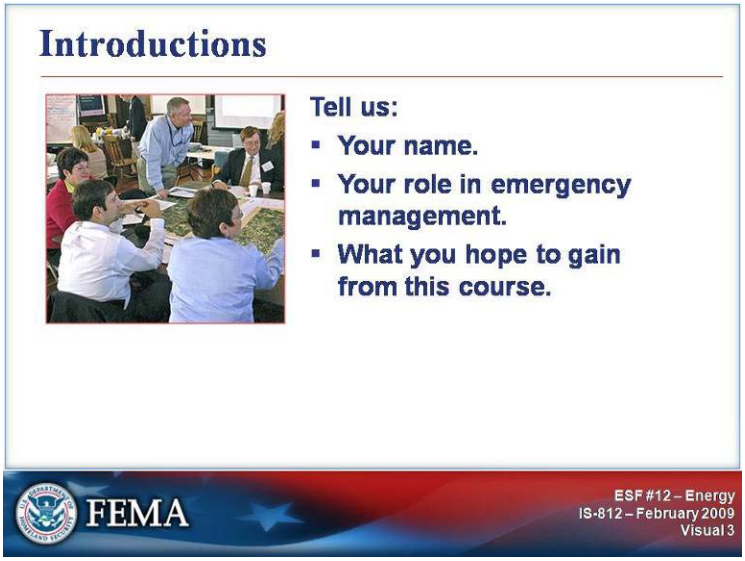
Instructor Notes: Present the following key points.

At the end of this course, participants will be able to:

- Describe the overall purpose and scope of ESF #12.
- Identify the supplemental assistance ESF #12 provides to State, tribal, and local governments.
- Identify typical activities accomplished by ESF #12 resources.
- Describe the types of partnerships formed between ESF #12 and other response agencies and organizations.

Topic	Course Overview

Display Visual 3



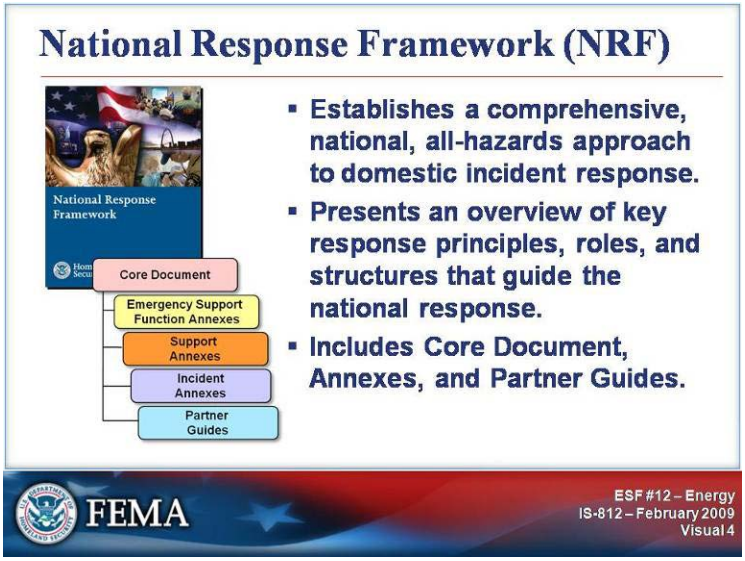
Instructor Notes: Present the following key points.

Welcome the participants and introduce yourself. Then ask the participants to introduce themselves to the members of their table groups. Ask for:

- Their names.
- Their roles in emergency management.
- What they hope to gain from this course.

Topic	ESF Overview

Display Visual 4



Instructor Notes: Present the following key points.

The National Response Framework (NRF):

- Is a guide to how the Nation conducts all-hazards response.
- Builds upon the National Incident Management System (NIMS) coordinating structures to align key roles and responsibilities across the Nation, linking all levels of government, nongovernmental organizations, and the private sector.

The NRF is comprised of:

- The Core Document, which describes the doctrine that guides our national response, roles and responsibilities, response actions, response organizations, and planning requirements to achieve an effective national response to any incident that occurs.
- Emergency Support Function Annexes, which identify Federal resources and capabilities that are most frequently needed in a national response (e.g., transportation, firefighting, mass care).
- Support Annexes, which describe essential supporting aspects that are common to all incidents (e.g., financial management, volunteer and donations management, private-sector coordination).
- Incident Annexes, which address the unique aspects of how we respond to seven broad categories or types of incidents (e.g., biological, nuclear/radiological, cyber, mass evacuation).
- Partner Guides, which provide ready references describing key roles and actions for local, tribal, State, Federal, and private-sector response partners.

Topic	ESF Overview

Display Visual 5

Instructor Notes: Present the following key points.

The Federal Government and many State governments organize many of their resources and capabilities—as well as those of certain private-sector and nongovernmental organizations—under Emergency Support Functions (ESFs).

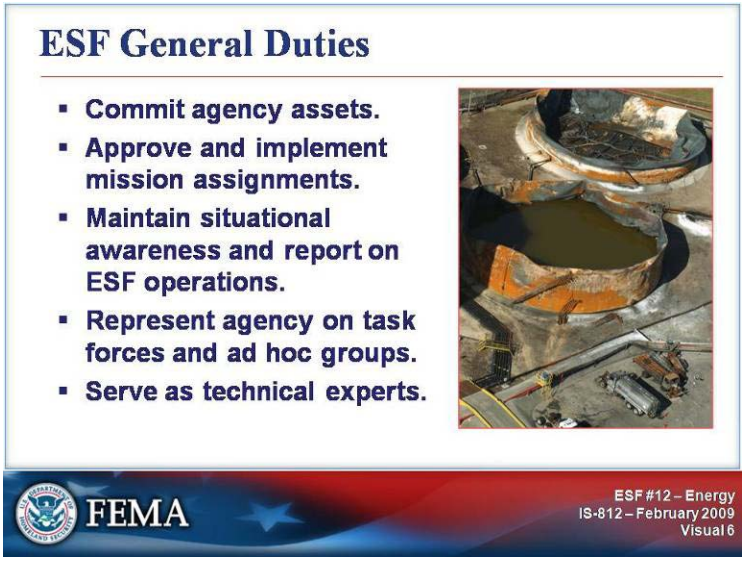
The ESFs:

- Are coordinated by the Federal Emergency Management Agency (FEMA) through the National Response Coordination Center (NRCC), Regional Response Coordination Centers (RRCCs), and Joint Field Offices (JFOs).
- Are a critical mechanism to coordinate functional capabilities and resources provided by Federal departments and agencies, along with certain private-sector and nongovernmental organizations.

Note that some States also have organized an ESF structure along this approach.

Topic	ESF Overview

Display Visual 6



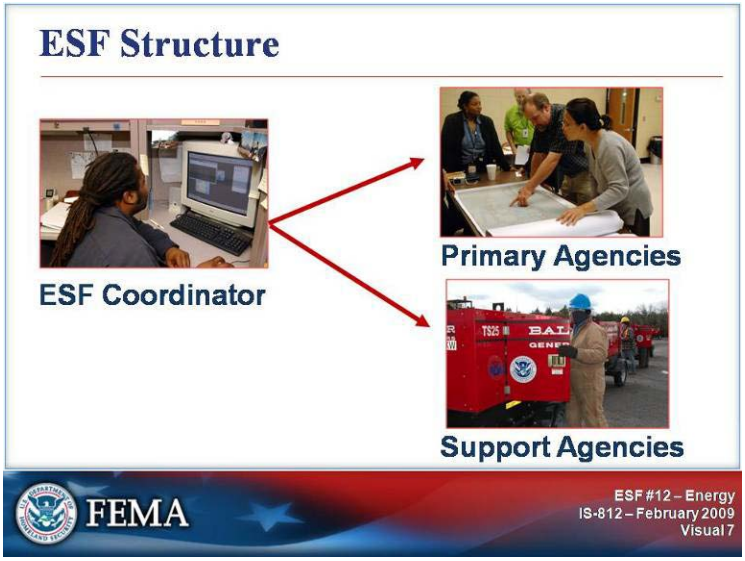
Instructor Notes: Present the following key points.

Review the general ESF duties listed on the visual.

Why is it important that ESFs have the authority to commit agency assets?

Topic	ESF Overview

Display Visual 7



Instructor Notes: Present the following key points.

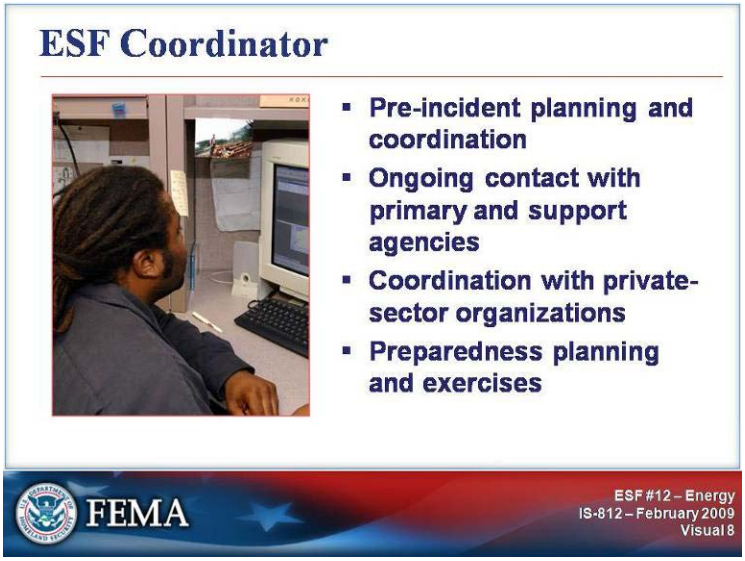
The ESF structure includes:

- ESF Coordinator. The entity assigned to manage oversight for a particular ESF.
- Primary Agencies. ESF primary agencies are Federal agencies with significant authorities, resources, or capabilities for a particular function within an ESF. A Federal agency designated as an ESF primary agency serves as a Federal executive agent under the Federal Coordinating Officer (or Federal Resource Coordinator for non-Stafford Act incidents) to accomplish the ESF mission.
- Support Agencies. Support agencies are those entities with specific capabilities or resources that support the primary agencies in executing the mission of the ESF.

ESFs provide support to other ESFs. For example: ESF #3 – Public Works and Engineering may support rural ESF #5 – Emergency Management forces to obtain heavy equipment and/or demolition services as needed to suppress incident-related fires.

Topic	ESF Overview

Display Visual 8



Instructor Notes: Present the following key points.

The ESF coordinator has management oversight for that particular ESF.

Note that, as described on the visual, the ESF coordinator has a role throughout the incident management cycle.

Topic	ESF Overview

Display Visual 9

Instructor Notes: Present the following key points.

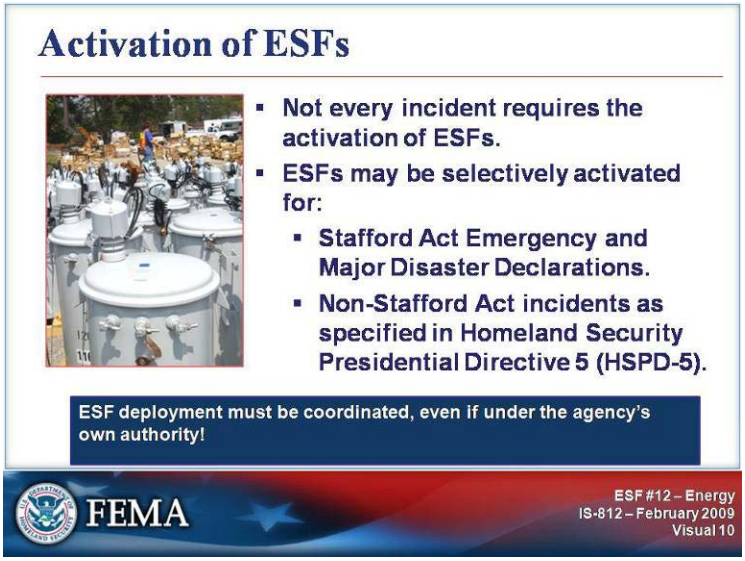
When an ESF is activated in response to an incident:

- The **primary agency** is responsible for:
  - Serving as a Federal executive agent under the Federal Coordinating Officer (or Federal Resource Coordinator for non-Stafford Act incidents) to accomplish the ESF mission.
  - Orchestrating Federal support within its functional area for an affected State.
  - Providing staff for the operations functions at fixed and field facilities.
  - Notifying and requesting assistance from support agencies.
  - Managing mission assignments and coordinating with support agencies and appropriate State agencies.
  - Working with appropriate private-sector organizations to maximize use of all available resources.
  - Supporting and keeping other ESFs and organizational elements informed of ESF operational priorities and activities.
  - Maintaining trained personnel to support interagency emergency response and support teams.

- **Support agencies** are responsible for:
  - Conducting operations, when requested by the Department of Homeland Security (DHS) or the designated ESF primary agency, using their own authorities, subject-matter experts, capabilities, or resources.
  - Participating in planning for short- and long-term incident management and recovery operations and the development of supporting operational plans, standard operating procedures (SOPs), checklists, or other job aids, in concert with existing first-responder standards.
  - Assisting in the conduct of situational assessments.
  - Furnishing available personnel or other resource support as requested by DHS or the ESF primary agency.
  - Providing input to periodic readiness assessments.
  - Participating in training and exercises aimed at continuous improvement of response and recovery capabilities.
  - Identifying new equipment or capabilities required to prevent or respond to new or emerging threats and hazards, or to improve the ability to address existing threats.

Topic	ESF Overview

Display Visual 10



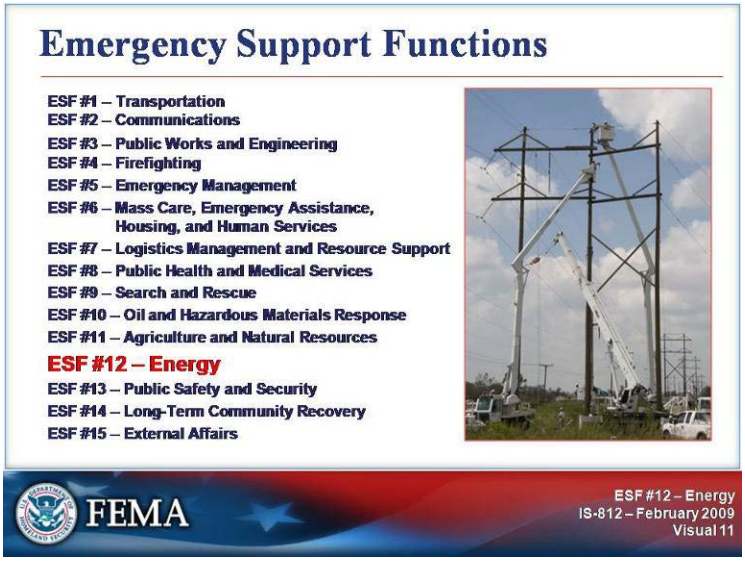
Instructor Notes: Present the following key points.

ESFs may be selectively activated for both Stafford Act and non-Stafford Act incidents under circumstances as defined in Homeland Security Presidential Directive 5 (HSPD-5). Not all incidents requiring Federal support result in the activation of ESFs.

FEMA can deploy assets and capabilities through ESFs into an area in anticipation of an approaching storm or event that is expected to cause a significant impact and result. This coordination through ESFs allows FEMA to position Federal support for a quick response, though actual assistance cannot normally be provided until the Governor requests and receives a Presidential major disaster or emergency declaration.

Topic	ESF Overview

Display Visual 11



Instructor Notes: Present the following key points.

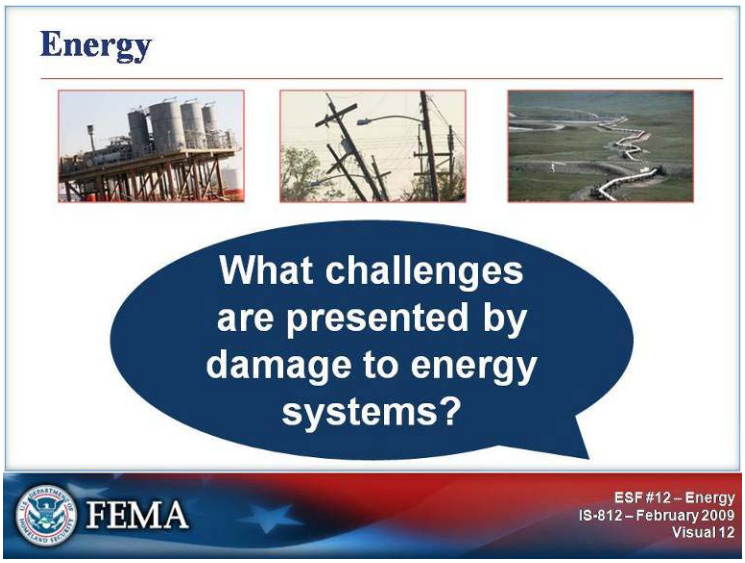
The 15 ESFs are listed on the visual. The complete ESF Annexes are available at the NRF Resource Center at www.fema.gov/nrf.

This course focuses on ESF #12 – Energy.

Describe your roles or associations with ESF #12.

Topic	ESF Overview

Display Visual 12



Instructor Notes: Present the following key points.

What challenges are presented by damage to energy systems?

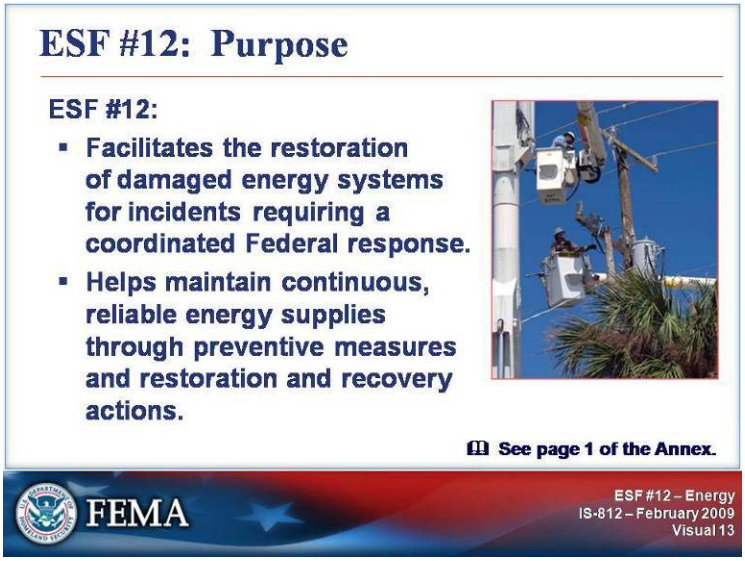
Facilitate a discussion. If not mentioned by participants, explain that:

- Loss of power can have devastating immediate and long-term effects on individuals and the community, both in terms of quality of life and economic stability. We rely on power to heat and cool our homes, supply potable water, get us to and from our jobs, keep us in communication, complete credit card and ATM transactions, and provide all of the health and safety resources we need—especially after a disaster.
- We also rely on power to respond to disaster: to get fire, police, and other emergency workers to the incident and to fuel their equipment once they get there.
- Incidents like hurricanes, earthquakes, ice storms, lightning strikes, accidents, and intentional acts of destruction—including terrorism—can also shut down refineries and halt pipeline deliveries of gasoline, diesel, jet fuel, and propane supplies.

This course explains how ESF #12 – Energy works with private industry and local, State, and Federal governments to maintain the critical power infrastructure in our communities.

Topic	ESF #12 Purpose and Scope

Display Visual 13



Instructor Notes: Present the following key points.

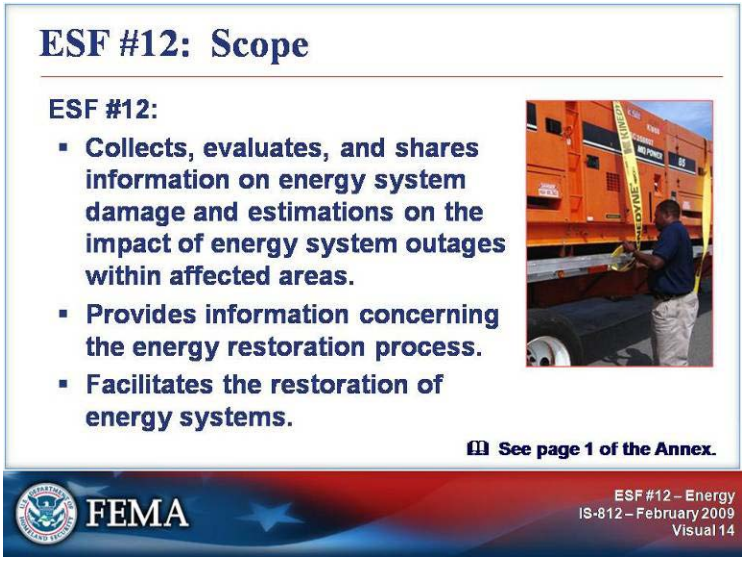
ESF #12 – Energy is intended to facilitate the restoration of damaged energy systems for incidents requiring a coordinated Federal response.

Under Department of Energy (DOE) coordination, ESF #12 is an integral part of the larger DOE responsibility of maintaining continuous and reliable energy supplies for the United States through preventive measures and restoration and recovery actions. This function is coordinated by DOE's Office of Electricity Delivery and Energy Reliability.

Refer to the purpose statement on page 1 of the ESF #12 – Energy Annex.

Topic	ESF #12 Purpose and Scope

Display Visual 14



Instructor Notes: Present the following key points.

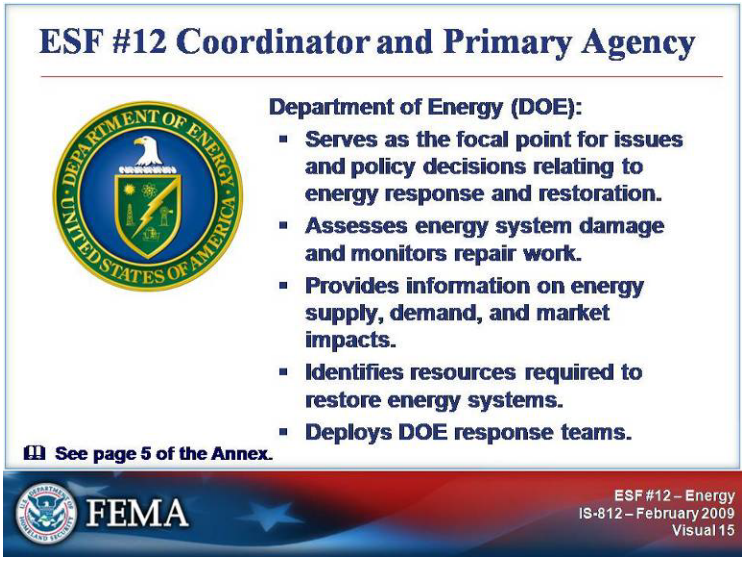
ESF #12:

- Collects, evaluates, and shares information on energy system damage and estimations on the impact of energy system outages within affected areas.
- Provides information concerning the energy restoration process such as projected schedules, percent completion of restoration, and geographic information on the restoration.
- Facilitates the restoration of energy systems through legal authorities and waivers.
- Provides technical expertise to the utilities, conducts field assessments, and assists government and private-sector stakeholders to overcome challenges in restoring the energy system.

The scope information can be found on page 1 of the ESF #12 – Energy Annex.

Topic	ESF #12 Coordinator and Primary Agency

Display Visual 15



Instructor Notes: Present the following key points.

ESF #12 coordinator and primary agency, DOE:

- Serves as the focal point for issues and policy decisions relating to energy response and restoration efforts.
- Assesses energy system damage and monitors repair work.
- Provides information on energy supply, demand, and market impacts.
- Identifies resources required to restore energy systems.
- Deploys DOE response teams as needed.

More information can be found on page 5 of the ESF #12 – Energy Annex.

Topic	ESF #12 Support Agencies

Display Visual 16

Instructor Notes: Present the following key points.

ESF #12 partners represent a variety of resources, such as specialized information and technical support:

- Department of Commerce provides weather forecasting for planning and response activities.
- Department of Homeland Security (DHS) manages the National Infrastructure Coordinating Center (NICC). The National Communications System (a DHS agency) coordinates restoration of telecommunications for the energy sector.
- Department of Labor provides worker safety technical assistance during energy restoration.
- Department of State coordinates with foreign nations and implements international energy agreements.
- Environmental Protection Agency issues enforcement waivers to address fuel shortages and identifies water systems for priority power restoration.

Topic	ESF #12 Support Agencies

Display Visual 17

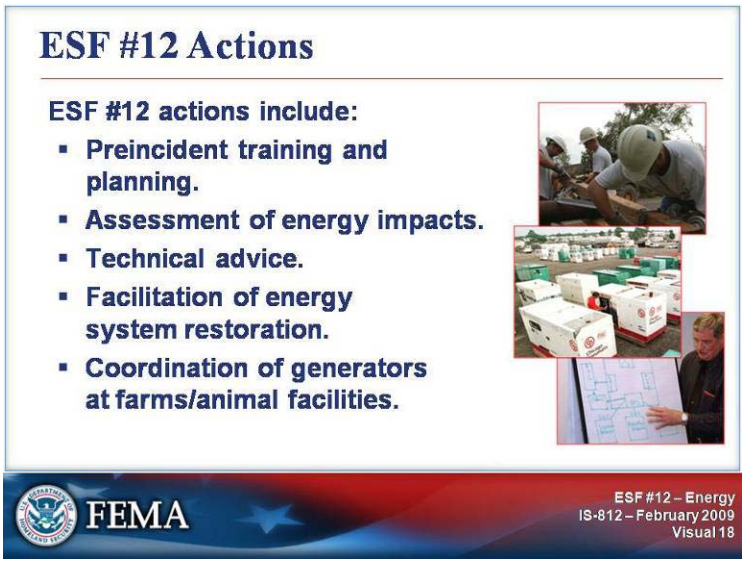
Instructor Notes: Present the following key points.

Other ESF #12 partners have an energy restoration role in specific environments or situations:

- Department of Agriculture restores power for rural utilities service facilities.
- Department of Defense/U.S. Army Corps of Engineers coordinates/prioritizes emergency generator installation.
- Department of the Interior maintains information on energy systems within its jurisdiction and assists with repair of hydropower facilities.
- Department of Transportation ensures safety of natural gas pipeline and coordinates maritime movement of energy supplies.
- Nuclear Regulatory Commission regulates civilian use of nuclear fuels.
- Tennessee Valley Authority (TVA) assesses damage within TVA and supplies surplus power and other resources as required.

Topic	ESF #12 Actions

Display Visual 18



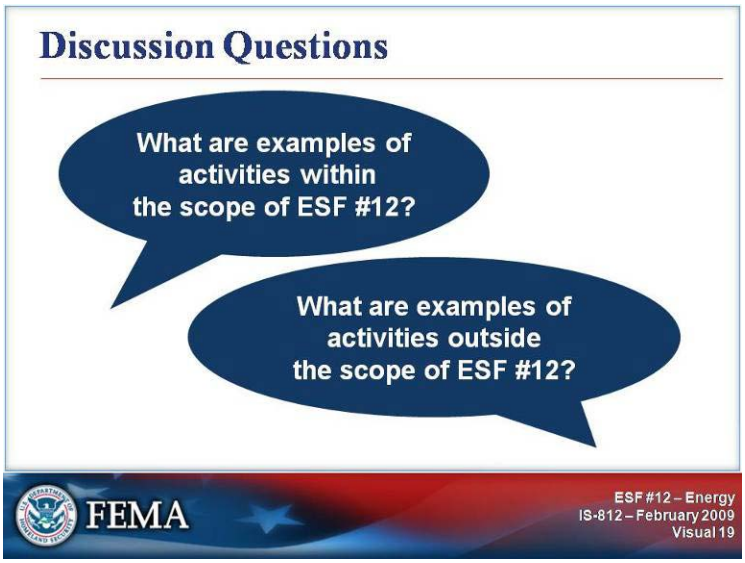
Instructor Notes: Present the following key points.

Federal assistance through ESF #12 may include:

- Preincident training and planning.
- Assessment of energy impacts.
- Technical advice to local, tribal, State, and Federal partners.
- Facilitation of energy system restoration.
- Coordination of generators at farms/animal facilities.

Topic	ESF #12 Actions

Display Visual 19



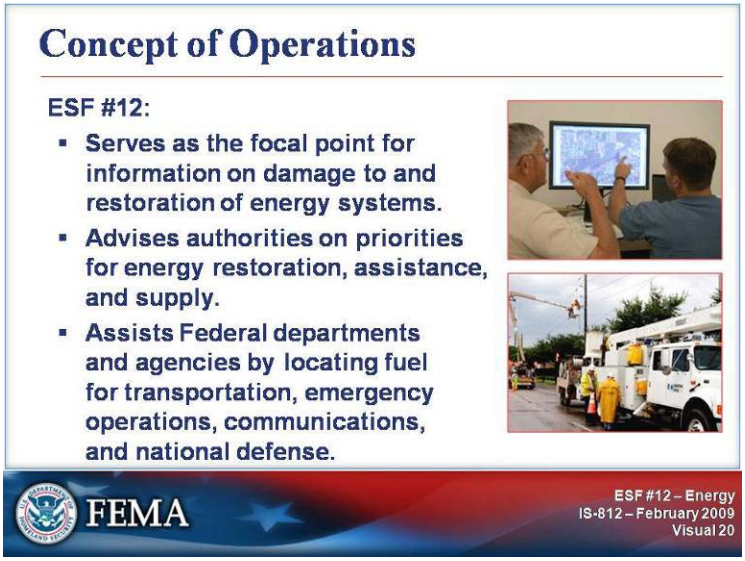
Instructor Notes: Present the following key points.

Conduct the activity as follows:

- Tell the participants to work in their table teams.
- Ask the participants to think about activities that DO and DO NOT fall within the scope of ESF #12. Instruct the participants to list the examples on chart paper.
- Give the teams approximately 5 minutes to complete their lists. Ask spokespersons from each team to present their answers.
- If necessary, suggest the following responses:
  - The following activities are **included** in the scope of ESF #12:
    - Analyze impact on the economy of disruption to the energy sector.
    - Use legal authorities and waivers to facilitate restoration of energy systems.
    - Coordinate generator usage at farms when power is disrupted.
  - The following activities are **not included** in the scope of ESF #12:
    - Exert temporary ownership and decisionmaking over privately owned energy infrastructure.
    - Deploy DOE work crews to repair damaged energy infrastructure.
    - Issue ruling to State and local governments on priority actions to restore power.

Topic	Concept of Operations

Display Visual 20



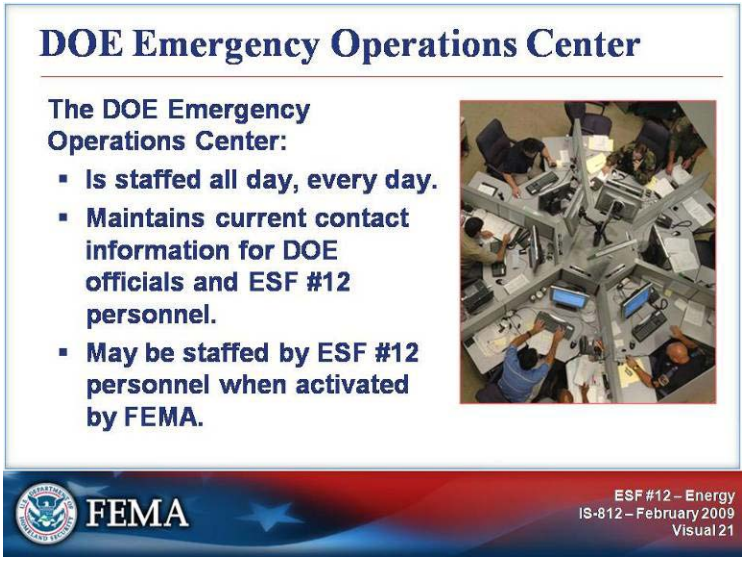
Instructor Notes: Present the following key points.

Collectively, the primary and support agencies that comprise ESF #12:

- Serve as the focal point within the Federal Government for receipt of information on damage to and restoration of energy systems.
- Advise Federal, State, tribal, and local authorities on priorities for energy restoration, assistance, and supply.
- Assist Federal departments and agencies by locating fuel for transportation, communications, emergency operations, and national defense.

Topic	DOE Emergency Operations Center

Display Visual 21



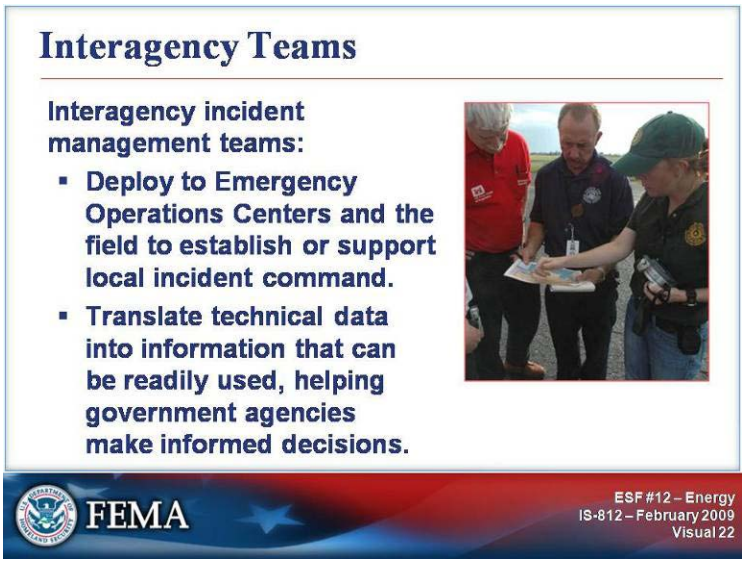
Instructor Notes: Present the following key points.

DOE operates a 24-hour Emergency Operations Center at its Headquarters in Washington, DC. The Center:

- Is staffed every day.
- Maintains current contact information for DOE officials and ESF #12 personnel.
- May be staffed by ESF #12 personnel when activated by FEMA.

Topic	Interagency Teams

Display Visual 22



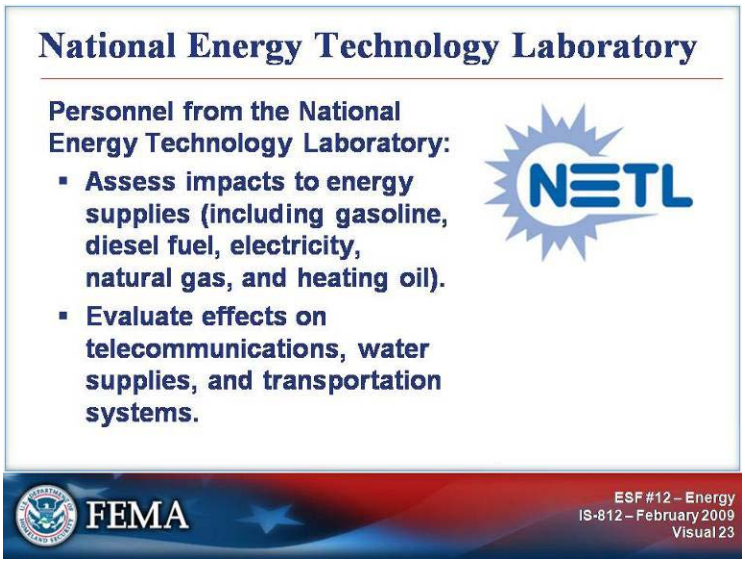
Instructor Notes: Present the following key points.

When an incident requires a coordinated Federal response, representatives from ESF #12 may deploy to national, regional, and State Emergency Operations Centers, and to the field as part of an interagency incident management team to establish or support local incident command. These subject-matter experts translate technical data into information that can be readily used, helping government agencies make informed decisions.

In the event of a catastrophic disaster, the State may request a Rapid Needs Assessment Team to deploy to the site and provide information about immediate needs, such as life-threatening situations and imminent hazards. ESF #12 representatives may be part of the Rapid Needs Assessment Team, assessing damage to the energy infrastructure and its potential impact on the affected area.

Topic	National Energy Technology Laboratory

Display Visual 23



Instructor Notes: Present the following key points.

The effort to collect, analyze, and share information begins before a natural event. DOE's National Energy Technology Laboratory (NETL) coordinates modeling, visualization, and analytical work to predict the impact of an approaching event on the energy system.

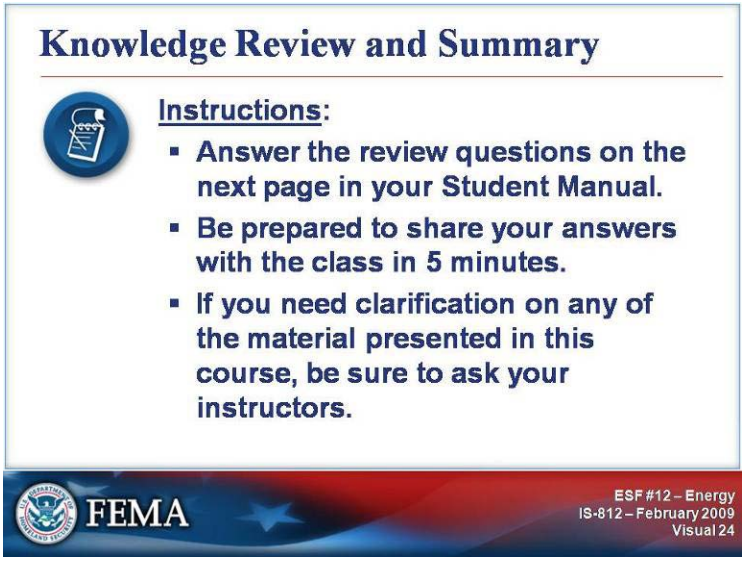
The NETL coordinates state-of-the-art technologies to offer predictive information—for example, potential impacts to energy systems when a hurricane threatens.

NETL personnel are deployed to Emergency Operations Centers and provide information about critical infrastructure by:

- Assessing impacts to energy supplies (including gasoline, diesel fuel, electricity, natural gas, and heating oil).
- Evaluating effects on telecommunications, water supplies, and transportation systems.

Topic	Summary

Display Visual 24



Instructor Notes: Present the following key points.

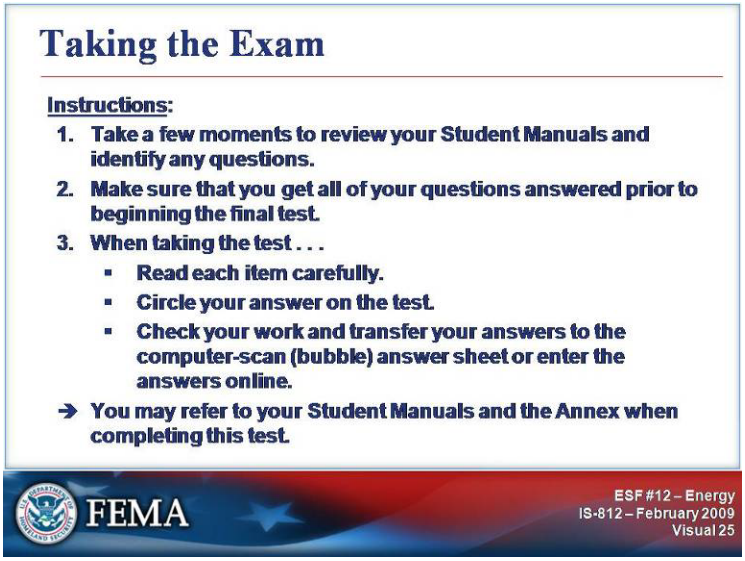
Conduct the review as follows:

- Direct the participants to the Knowledge Review located at the end of their Student Manuals.
- Allow 5 minutes for the participants to answer the questions.
- Monitor the time. When 5 minutes have passed, ask for volunteers to provide their answers.
- If not mentioned by participants, provide the correct responses from the answer key on the next page.
- Ask the participants if they have any questions on the material covered in this course. Be sure to answer all questions before moving on to the exam.

Additional information about the National Response Framework and Emergency Support Functions may be obtained at the NRF Resource Center at www.fema.gov/nrf.

Topic	Summary

Display Visual 25



Instructor Notes: Present the following key points.

Present the following instructions:

1. Take a few moments to review your Student Manuals and identify any questions.
2. Make sure that you get all of your questions answered prior to beginning the final test.
3. When taking the test . . .
    1. Read each item carefully.
    2. Circle your answer on the test.
    3. Check your work and transfer your answers to the computer-scan (bubble) answer sheet or enter the answers online.

Tell the participants that they may refer to their Student Manuals and the annex when completing this test.

Important Instructor Note: It is important that you allow the participants enough time for them to review the course materials prior to taking the exam. If time permits, you can facilitate a structured review of the materials using the following techniques:

- Assign each team a lesson and have them summarize and present the key points to remember.
- Select five to seven of the most critical points from each lesson. Present a brief review of these points. Ask questions to ensure that the participants remember the most important information.

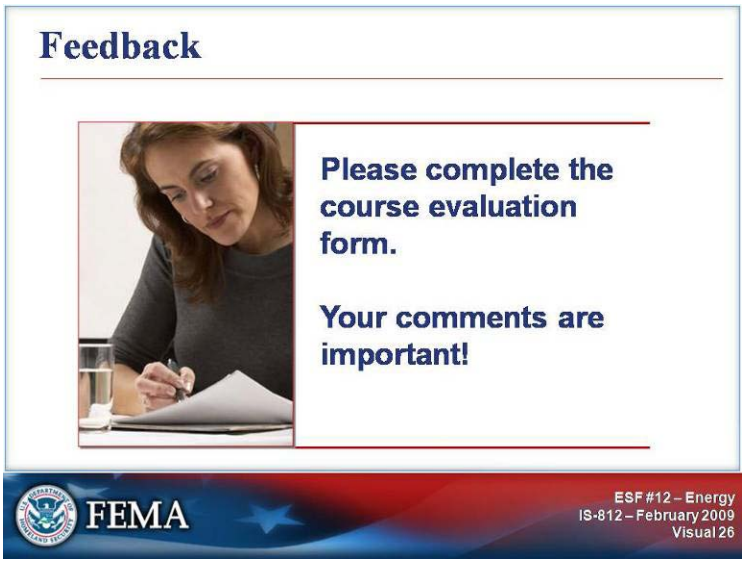
When the review is completed, distribute the exams. Remain in the room to monitor the exam and to be available for questions. Collect the completed exams.

Instructor Note: To receive a certificate of completion, students must take the 10-question multiple-choice posttest, submit an answer sheet (to EMI's Independent Study Office), and score 75% on the test. Explain that students may submit their tests online, and receive a certificate in the mail. Direct them to:

- Go to http://training.fema.gov/EMIWeb/IS/ and click on the link for IS-801.
- Click on "Download Final Exam Questions" (found at the bottom of the page). You may want to print the test.
- Click on "Take Final Exam" (found at the bottom of the page).

Topic	Summary

Display Visual 26



Instructor Notes: Present the following key points.

Ask the participants to complete any course evaluation/feedback forms. Use standard course evaluation forms from your agency or jurisdiction.

ESF #12 – Knowledge Review

1. Who serves as the coordinator and primary agency for ESF #12?

   Answer: Department of Energy

2. Read the following scenario, and then list three priority actions for ESF #12.

   Scenario: An ice storm has caused extensive power outages throughout the Northeast States. Below-freezing temperatures are expected for the next 3–5 days. Governors of all the affected States have already requested Federal assistance.

   Sample Answers:

   a. **Coordinate conference calls with industry reps in the affected area to begin assessing the situation.**
   b. **Coordinate resources of the National Energy Technologies Laboratory and other facilities to analyze data.**
   c. **Coordinate conference calls with the ESF #12 supporting departments and agencies, the energy industry, and energy/emergency services representatives from State, tribal, and local governments, to discuss the situation and determine the appropriate initial response actions.**
   d. **Deploy subject-matter experts as part of incident management teams and the Rapid Needs Assessment Team, as needed.**
   e. **Provide subject-matter experts at the NRCC, RRCC, JFO, and State emergency operations centers, as needed.**
   f. **Continue to analyze situation and damage assessment information, and provide situation reports.**
   g. **Work with Federal, State, tribal, and local agencies to identify energy restoration priorities (including the energy needs of responders) and other response priorities (e.g., shelter) influenced by power outages.**

3. Decide whether the following statement is **TRUE** or **FALSE**: ESF #12 normally takes the lead in the rapid restoration of infrastructure-related services after an incident occurs.

   Answer: False

4. Match the activities with the ESF #12 support agencies that perform them.

	Activities	Support Agencies
B.	Coordinates modeling, visualization, and analytical work to predict the impact of an approaching event on the energy system.	A. Department of Agriculture
C.	Trains and deploys Infrastructure Liaisons and Advisors to support incident management activities.	B. Department of Energy – National Energy Technology Laboratory
A.	Provides assistance in restoring power for Rural Utilities Service facilities.	C. Department of Homeland Security
D.	Ensures the safety of the Nation's natural gas and hazardous liquid pipelines and liquefied natural gas facilities.	D. Department of Transportation
E.	Issues enforcement waivers to address fuel shortages and identifies water systems for priority power restoration.	E. Environmental Protection Agency

5. Use the space below to make note of any questions you have about the material covered in this course.