

## **PROJECT MANAGEMENT PLAN**

Recovery Act – Energy Assurance Planning – State of Connecticut

October 9, 2009

## **WORK PERFORMED UNDER AGREEMENT**

DE-OE0000103

### **SUBMITTED BY**

Office of Policy and Management – Connecticut

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## ACKNOWLEDGEMENT OF FEDERAL SUPPORT AND DISCLAIMER

### Acknowledgement

This material is based upon work supported by the Department of Energy under Award Number(s) *DE-OE0000103*.

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## 1. Executive Summary

The State of Connecticut has been awarded a formulaic grant of \$521,500 from the U.S. Department of Energy (DOE) as part of the American Recovery and Reinvestment Act of 2009 (ARRA), for a project entitled “Enhancing State Government Energy Assurance Capabilities and Planning for Smart Grid Resiliency” (EA). The Connecticut Office of Policy and Management (OPM), housing the State’s Energy Office, is responsible for overseeing this grant award. OPM has retained the services of the Connecticut Academy of Science and Engineering (CASE) to manage the development and completion of tasks and deliverables required by this grant.

This Project Management Plan (PMP) will guide the State of Connecticut’s Energy Assurance planning and training efforts as specified in DOE Funding Opportunity Announcement (FOA): Recovery Act – Enhancing State Government Energy Assurance Capabilities and Planning for Smart Grid Resiliency (DE-FOA-000091), and the associated DOE Assistance Agreement Award (Award): Recovery Act – Energy Assurance Planning – State of Connecticut (DE-OE0000103). The PMP is formatted in the manner prescribed by the FOA and the Award. The PMP is understood by the DOE to be a “living” document, subject to updates and revisions by the State as the work progresses. The PMP provides the framework to manage and monitor the progression and completion of the EA project objectives and tasks.

The objectives, as defined by DOE, of the EA project are to: first, strengthen and expand State and local government energy assurance planning and resiliency efforts by incorporating response actions for new energy portfolios and Smart Grid applications; second, create jobs; and, third, build in-house State and local government energy assurance expertise. Additionally, the project will support the building of regional energy assurance capability to allow the State to better coordinate and communicate state-wide, and with other states, on energy security, reliability and emergency response issues.

The PMP covers the five major tasks required by DOE. The first of these tasks is to prepare this PMP. The second task is to prepare a Workforce Development Plan (WDP). The WDP will inform DOE about how the State intends to address hiring, retaining and training personnel regarding energy assurance planning. The third task is to develop a new, or revise as appropriate, the State’s existing Energy Assurance Plan (EAP). Development of the EAP is the core of the EA project. The fourth task is development of an Energy Supply Disruption Tracking Process (ESDTP) that will allow for tracking the duration, response, restoration and recovery time of energy supply disruption events and associated data before, during and after such an event. The fifth task is for the state to participate in energy assurance exercises (EAE) both within the state and on a multi-state scale. The EAE provides an opportunity for the State to test and evaluate and modify the EAP.

Connecticut’s existing Energy Emergency Plan was last updated in 1994 and, while it addressed major energy sources, e.g., petroleum, natural gas and electricity, it focused primarily on petroleum energy shortages. While this was an adequate approach in its time, the DOE EA project not only requires, but provides an opportunity for, the State to broaden the scope of its energy assurance plans to address existing energy resources as well as the potential role and impact of new and alternative energy portfolios’ (e.g., Smart Grid technology, bio-fuels, combined heat and power, etc.) applications and vulnerabilities, critical infrastructure interdependencies, cyber security, energy supply systems, energy data analysis and communications, and how these impacts can affect the continuity of energy delivery, energy vulnerability and the State energy’s resiliency before, during and after an energy disruption.

## 2. Project Risk Management

Risk is inherent to any project and the State of Connecticut acknowledges that uncertain future events may impede the EA project's success. The State, via OPM, is utilizing the services of CASE to manage this EA project. CASE has an extensive track record of successful project completion. CASE will provide the technical, resource and management oversight to allow for the development and completion of all tasks required by the EA project. Additionally, CASE utilizes a project management method that includes the use of both a project Study Committee and a stakeholder Working Group, each of which is comprised of CASE professionals and other individuals with relevant "real-world" industry experience and project related skills and expertise. These two committees will be a source of input from varied energy assurance stakeholders and will supply valuable feedback on project activity and progress.

OPM will exercise its normal project oversight in accordance with Connecticut's extensive procurement and project management protocols and rules. OPM will work closely with CASE, and contractors retained by CASE for this project, throughout the duration of the project to insure that all tasks are completed in a satisfactory and timely manner.

While the project's organizational structure and the State's commitment to this project should enable successful achievement of all goals and timely completion of all tasks, the following are some issues, organized by task, which may have the potential to impede project progress as well as strategies to mitigate the impacts from these issues:

### Task 2: Work Force Development Plan (WDP):

1. Hiring New Staff
  - a. Issue: Connecticut's fiscal situation may result in a delay in hiring additional staff
  - b. Strategy: Utilize DOE project funding to support the hiring of new staff
2. Staff Training
  - a. Issue: Connecticut's fiscal situation has resulted in a ban/limitations on out-of-state travel and may prevent State personnel from attending certain WDP training programs
  - b. Strategy:
    - i. Utilize DOE project funding to finance out-of-state travel expenses
    - ii. Utilize teleconferencing or video-conferencing in lieu of out-of-state travel

### Task 3: Energy Assurance Plan (EAP)

- a. Issue: CASE/contractors unable to complete development of EAP in a satisfactory and timely manner
- b. Strategy: OPM will work closely with CASE/contractors throughout the duration of EAP development to ensure timely and satisfactorily completion of EAP

### Task 4: Energy Supply Disruption Tracking Process (ESDTP)

1. Data Acquisition Costs
  - a. Issue: Connecticut's fiscal situation may prevent the State from acquiring data that is identified to support the ESDTP
  - b. Strategy:
    - i. Utilize DOE funding to support initial data acquisition during the project period
    - ii. Utilize data, available at no cost, from other sources that may accessible

## 2. Proprietary Data Availability

- a. Issue: Some key data, controlled by private entities, may be considered proprietary and not available for use by the State.
- b. Strategy:
  - i. Develop approaches to extrapolate needed data from publicly available sources
  - ii. Establish agreements with private entities to utilize data only for energy assurance planning purposes

### Task 5.1: Energy Assurance Exercise (EAE) – Intra-state

- a. Issue: It may be difficult to secure full participation in EAE from state agencies, the energy industry, and other stakeholders due to scheduling conflicts
- b. Strategy: Engage stakeholders throughout the project process and begin planning early to maximize participation in EAE by stakeholders

### Task 5.2: Energy Assurance Exercise (EAE) – Inter-state

- a. Issue: Coordinating a complex interstate training exercise may require significant effort among participating states and will be somewhat dependent upon each state's energy assurance project progress and ability to devote resources to EAE planning while working to meet other project task deadlines.
- b. Strategy:
  - i. Select early on the partnering states for the Inter-state EAE
  - ii. Maintain on-going project progress communications with partnering states
  - iii. Establish early on a planning schedule with partnering states
  - iv. Coordinate with DOE and the National Association of State Energy Offices (NASEO) if they schedule suitable Inter-state EAE

### 3. Milestone Log

The following milestones will be utilized to show progression towards project goals. More details regarding project tasks and subtasks are provided in “Section 5. Project Timeline”.

Milestone Title	Planned Completion Date	Verification Method
Task 1.0: Project Management Plan (PMP)	10/11/2009	Submit PMP to DOE
Task 2.0: Workforce Development Plan (WDP)	11/10/2009	Submit WDP to DOE
Task 3.0: Energy Assurance Plan (EAP) - INITIAL	02/12/2011	Submit EAP - INITIAL to DOE
Task 3.0: Energy Assurance Plan (EAP) – FINAL	08/14/2012	Submit EAP - FINAL to DOE
Task 4.0: Energy Supply Disruption Tracking Process (ESDTP)	08/12/2010	Submit ESDTP to DOE
Subtask 5.1: Energy Assurance Exercise (EAE) - INTRA-State	08/12/2011	Participate in EAE-INTRA
Subtask 5.1a: EAE – INTRA – After Action Report (AAR)	09/12/2011	Submit EAE-INTRA-AAR to DOE
Subtask 5.2: Energy Assurance Exercise (EAE) - INTER-State	02/12/2012	Participate in EAE-INTER
Subtask 5.2a: EAE – INTER – After Action Report (AAR)	03/12/2012	Submit EAE-INTER-AAR to DOE

## 4. Funding and Costing Profile (Budget)

Table 1 – Project Funding Profile – Cost Element Projection

Budget Category	Project Year 1 (08/2009 - 07/2010)	Project Year 2 (08/2010 - 07/2011)	Project Year 3 (08/2011 - 07/2012)	Totals
Personnel	\$ 20,300.00	\$ 40,600.00	\$ 40,600.00	\$101,500.00
Fringe	\$ 10,945.00	\$ 21,900.00	\$ 21,900.00	\$ 54,745.00
Travel	\$ 1,800.00	\$ 2,400.00	\$ 2,400.00	\$ 6,600.00
Equipment	\$ -	\$ -	\$ -	\$ -
Supplies	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	\$ 3,000.00
Contractual	\$ 110,500.00	\$ 89,375.00	\$102,050.00	\$301,925.00
Other	\$ -	\$ 2,500.00	\$ 2,500.00	\$ 5,000.00
<b>Total Direct</b>	\$ 144,545.00	\$ 157,775.00	\$170,450.00	\$472,770.00
Indirect	\$ 9,700.00	\$ 19,390.00	\$ 19,390.00	\$ 48,480.00
<b>Grand Total</b>	\$ 154,245.00	\$ 177,165.00	\$189,840.00	\$521,250.00

Table 2 – Project Spending Plan – Monthly Cost Projections

	Project Year 1 (08/2009 - 07/2010)	Project Year 2 (08/2010 - 07/2011)	Project Year 3 (08/2011 - 07/2012)
<b>August</b>	\$ -	\$ 11,405.00	\$ 6,830.00
<b>September</b>	\$ -	\$ 6,830.00	\$ 6,830.00
<b>October</b>	\$ 20,025.00	\$ 60,805.00	\$ 60,805.00
<b>November</b>	\$ 28,500.00	\$ 6,830.00	\$ 6,830.00
<b>December</b>	\$ 10,530.00	\$ 6,830.00	\$ 6,830.00
<b>January</b>	\$ 1,230.00	\$ 10,180.00	\$ 10,180.00
<b>February</b>	\$ 6,830.00	\$ 35,290.00	\$ 25,120.00
<b>March</b>	\$ 6,830.00	\$ 6,830.00	\$ 34,250.00
<b>April</b>	\$ 10,675.00	\$ 10,825.00	\$ 10,825.00
<b>May</b>	\$ 6,830.00	\$ 6,830.00	\$ 6,830.00
<b>June</b>	\$ 55,270.00	\$ 6,830.00	\$ 6,830.00
<b>July</b>	\$ 7,525.00	\$ 7,680.00	\$ 7,680.00
<b>Grand Total</b>	\$ 154,245.00	\$ 177,165.00	\$ 189,840.00

## 5. Project Timeline

[PLEASE SEE PROJECT TIMELINE GANTT CHART ON THE LAST PAGE OF THIS PMP]

A timeline of the EA project, broken down by tasks, sub-tasks, milestones, reporting requirements, start and finish dates, and personnel responsible for each task, can be found on the last page of this PMP in the form of a Gantt chart [please note: this Gantt chart is formatted to be best displayed when printed on legal-size paper]. As DOE has acknowledged in the FOA and the Award, the EA project timeline is very much a work-in-progress and subject to modifications and changes over the life of the project. The following is a brief description of the EA project tasks, and associated subtasks, which are set down on the attached Gantt chart.

The EA project officially commenced on August 12, 2009 with the issuance of the Award by DOE. The EA project will span over 3 years until November 12, 2012 when the last reports regarding the EA project are due to be submitted by OPM to DOE. During the period of the EA project, quarterly ARRA, management and financial reports will be submitted by OPM to DOE regarding the progress of the project.

OPM has engaged the services of CASE to manage the development and completion of tasks and deliverables required by DOE for this EA project. CASE has obtained the additional services of two consultants, who will work under the direction of CASE, to provide technical and resource expertise in the area of energy assurance planning and who will carry out the bulk of the work for this EA project. OPM, CASE and the consultants will work closely to undertake and complete each task. CASE utilizes a project management method that includes the use of both a project Study Committee and a stakeholder Working Group, each of which will meet on an approximately quarterly basis over the life of this project and will be a valuable resource for this EA project. These two committees comprised of CASE professionals and other individuals with relevant industry and project related skills and expertise will be a source of energy assurance stakeholder input and will supply valuable feedback on project activity and progress.

### Task 1.0: Project Management Plan (PMP)

The PMP is due to the DOE not later than October 12, 2009. Sub-tasks include, but are not limited to:

- Development of the PMP
  - Submission by CASE/contractors of draft PMP to OPM for review (10/01/2009)
  - Revisions/corrections to draft PMP as needed by CASE/contractors and OPM
- Submission of PMP to DOE by OPM (MILESTONE)
- Implementation of PMP (including continuing revisions/updates to PMP as work progresses)

### Task 2.0: Workforce Development Plan (WDP)

The WDP is due to the DOE not later than November 10, 2009. The WDP will inform the DOE about how Connecticut plans to train existing, and new, staff to manage energy assurance responsibilities within OPM. Sub-tasks include, but are not limited to:

- Development of the WDP
  - Discussions between OPM and CASE/contractors regarding hiring process, job requirement parameters, training requirements, etc.
  - Submission by CASE/contractors of draft WDP to OPM for review (tentatively 10/13/2009)
  - Revisions/corrections to draft WDP as needed by CASE/contractors and OPM
- Submission of WDP to DOE by OPM (MILESTONE)

- Implementation of WDP
  - Announcement of job opportunity announcement, exams, interviews, hiring, etc.
  - Training and development for existing, and new, staff regarding energy assurance

### Task 3.0: Energy Assurance Plan (EAP)

The EAP has two due dates for submission to the DOE: the Initial EAP is due to DOE not later than February 12, 2011; and the Final EAP is due to DOE not later than August 14, 2012. This task involves developing and significantly revising the existing state energy emergency plan. The development of the EAP is the core of the EA project and serves as the basis for Task 4.0, Task 5.1 and Task 5.2. During the development of both the Initial and Final EAP, CASE will hold meetings, on an approximately a quarterly basis, of the project Study Committee and Working Group to provide valuable feedback on project activity and progress. Sub-tasks include, but are not limited to:

- Development of the initial EAP
  - Acquisition of data (e.g., energy supply, consumption, infrastructure, alternatives, etc.)
  - Development of EAP outline by CASE/contractors
  - Submission by CASE/contractors of draft EAP outline to OPM for review
  - Revisions/corrections of EAP outline as needed by CASE/contractors and OPM
  - Interviews and discussions (on-site/in-person and/or via teleconference) with stakeholders
  - Assessment of data and interview information gathered (including vulnerability and risk factors, use patterns, geographical distinctions, market factors, technological factors, etc.)
  - Development of draft Initial EAP
  - Submission by CASE/contractors of draft Initial EAP to OPM for review
  - Revisions/corrections to draft Initial EAP as needed by CASE/contractors and OPM
- Submission of the Initial EAP to DOE by OPM (MILESTONE)
  - Once the Initial EAP is submitted to DOE, work commences to implement the Initial EAP and examine its efficacy via Subtasks 5.1 and 5.2
- Development of draft Final EAP
  - Submission by CASE/contractors of draft Final EAP to OPM for review
  - Revisions/corrections to draft Final EAP as needed by CASE/contractors and OPM
- Submission of Final EAP to DOE by OPM (MILESTONE)

### Task 4.0: Energy Supply Disruption Tracking Process (ESDTP)

The ESDTP is due to the DOE not later than August 12, 2010. This task involves documenting the process and/or procedure for tracking the duration, response, restoration and recovery time of energy supply disruption events. This will require the identification, collection, and evaluation of data (both public and proprietary as available), prior to, during, and after an energy supply shortage. Data collected and analyzed will be specific to energy supply and consumption by the State of Connecticut as whole, as well as the State of Connecticut itself as a large consumer of energy. The centrality of sound data collection and management, an understanding of the sources of energy data, and, the ability of state personnel to acquire and effectively utilize energy data, improves the State's energy resiliency during emergencies as well as its ability to protect State citizens during an energy shortage. Sub-tasks include but are not limited to:

- Development of the ESDTP
  - Development of ESDTP outline by CASE/contractors
  - Submission by CASE/contractors of draft ESDTP outline to OPM for review
  - Revisions/corrections to ESDTP outline as needed by CASE/contractors and OPM

- Interviews and discussions (on-site/in-person and/or via teleconference) with stakeholders (to occur in conjunction with EAP meetings)
- Submission by CASE/contractors of draft ESDTP to OPM for review
- Revisions/corrections to draft ESDTP as needed by CASE/contractors and OPM
- Submission of ESDTP to DOE by OPM (MILESTONE)

#### Task 5.0: Energy Assurance Exercise (EAE)

The EAE involves the completion of four subtasks for DOE by four corresponding due dates. The EAE requires participation by Connecticut in table-top exercises that simulate energy emergencies/disruptions and serves as a means to exercise the Initial EAP that will have been developed and test the State's ability to respond to energy supply emergencies. Additionally, the results of these exercises will be reviewed and analyzed and After Action Reports (AAR), which will include actionable items and indicate any necessary revisions/corrections to be incorporated into the final EAP, will be prepared and submitted by OPM to DOE. Subtask 5.1: EAE-INTRA-State, which will simulate an energy emergency/disruption within the state, must be completed for DOE not later than August 12, 2011, and the related AAR submitted to DOE not later than September 12, 2011. Subtask 5.2: EAE-INTER-State, which will simulate an energy emergency/disruption on a multi-state basis, must be completed for DOE not later than February 12, 2012, and the related AAR submitted to DOE not later than March 12, 2012. These exercises will allow for lessons learned to be incorporated into the Final EAP. Additionally, these exercises will provide a framework to familiarize stakeholders with the updated initial EAP; allow stakeholders to interact and develop communication networks prior to an actual emergency; assess the ability of EAP to meet emergency management obligations; identify and possibly resolve jurisdictional conflicts and/or other unforeseen conflicts; and, better understand the role of regional energy infrastructure when attempting to mitigate energy emergencies. Subtasks include but are not limited to:

- Development of INTRA-State EAE
  - Identification of state agencies, local governments, industry, Federal partners, other energy stakeholders, etc., for participation in INTRA-State EAE
  - Development of training materials for INTRA-State EAE
  - Arrangements for training venue and associated logistics
- Participation in INTRA-State EAE (MILESTONE)
- Development of INTRA-State EAE – AAR
  - Evaluation and assessment of INTRA-State EAE emergency responses to determine whether emergency management obligations were satisfied
  - Identification of actionable items and revisions/corrections for incorporation into Final EAP
- Submission of INTRA-State EAE to DOE (MILESTONE)
- Development of INTER-State EAE
  - Identification of neighboring states, state agencies, local governments, industry, Federal partners, other energy stakeholders, etc., for participation in the INTER-State EAE
  - Development of training materials for INTER-State EAE
  - Arrangements for training venue and associated logistics
- Participation in INTER-State EAE for DOE (MILESTONE)
- Development of INTER-State EAE – AAR
  - Evaluation and assessment of INTER-State EAE emergency responses to determine whether emergency management obligations were satisfied.
  - Identification of actionable items and revisions/corrections for incorporation into Final EAP
- Submission of INTER-State EAE – AAR to DOE (MILESTONE)

## 6. Success Criteria

Success criteria for the EA project correlate to the performance metrics identified in U.S. DOE Funding Opportunity Announcement (FOA): Recovery Act – Enhancing State Government Energy Assurance Capabilities and Planning for Smart Grid Resiliency (DE-FOA-000091). The results of the ARRA funding provided for the EA project will be assessed by DOE according to the following performance metrics:

- Number of energy assurance plans created or substantially revised
- Number of jobs created within State government agencies for energy assurance planning and response capabilities
- Number of energy assurance training sessions, workshops and/or exercises conducted
- Number of people trained

## 7. Agreement Statement of Project Objectives

The following is the Statement of Project Objectives (SOPO) from the DOE Assistance Agreement Award: Recovery Act – Energy Assurance Planning – State of Connecticut (DE-OE0000103), and is included here as required by the PMP template supplied with the U.S. DOE Funding Opportunity Announcement (FOA): Recovery Act – Enhancing State Government Energy Assurance Capabilities and Planning for Smart Grid Resiliency (DE-FOA-000091):

DE-OE0000103

### THE STATE OF CONNECTICUT, OFFICE OF POLICY AND MANAGEMENT ATTACHMENT 2 – STATEMENT OF PROJECT OBJECTIVES (SOPO)

#### A. OBJECTIVES

The objectives of this initiative are to: 1) strengthen and expand State and local government energy assurance planning and resiliency efforts by incorporating response actions for new energy portfolios and Smart Grid applications; 2) create jobs, and 3) building in-house State and local government energy assurance expertise.

The initiative focuses on building regional energy assurance capability to allow the State to better coordinate and communicate state-wide and with one another, on energy security, reliability and emergency response issues.

#### B. SCOPE OF WORK

The following activities are addressed under this initiative:

- Create in-house expertise at the State level on energy assurance planning and resiliency, focusing on Smart Grid applications and vulnerabilities, critical infrastructure interdependencies, cyber security, energy supply systems, energy data analysis, and communications.
- Develop new, or refine existing, Energy Assurance Plans to incorporate response actions to new energy portfolios, including Smart Grid technologies.
- Revise appropriate State policies, procedures and practices to reflect the Energy Assurance Plans. States should append the Energy Assurance Plan to the State Energy Plan, as appropriate.
- Development and initiation of a process or mechanism for tracking the duration, response, restoration, and recovery time of energy supply disruption events.
- Train appropriate personnel on energy infrastructure and supply systems and the content and execution of energy assurance plans.
- Conduct energy emergency exercises (intra and inter-state) to evaluate the effectiveness of the Energy Assurance Plans.

The results of the funding provided for the projects will be assessed according to the following performance metrics:

- Number of Energy Assurance Plans created or substantially revised
- Number of jobs created within State government agencies for energy assurance planning and response capabilities
- Number of energy assurance training sessions, workshops and/or exercises conducted
- Number of people trained

## C. TASKS TO BE PERFORMED

### Task 1.0 – Project Management Plan

The recipient will prepare a Project Management Plan (PMP) in accordance with the provided PMP template that details the work elements required to manage and report on activities in accordance with the American Recovery and Reinvestment Act (ARRA) and grant requirements. This Plan will also document the 3-year plan and project budget for carrying out all Tasks and completing all Deliverables under this Grant. It is anticipated that this document may be periodically revised during the performance period, but will at all times provide sufficient detail to plan, carry out and monitor all project activities.

### Task 2.0 – Workforce Development Plan

The recipient will prepare and follow a Workforce Development Plan that results in development of in-house expertise at the State level on energy assurance planning with an emphasis on Smart Grid applications and vulnerabilities, critical infrastructure interdependencies, cyber security, energy supply systems, energy data analysis, and communications. The Plan will address hiring, retaining, and training personnel in these areas.

### Task 3.0 – Energy Assurance Planning

The recipient will develop a new, or substantially refine, its existing, Energy Assurance Plan to incorporate response actions for new energy portfolios, including Smart Grid technologies. The Energy Assurance Plan shall address, at a minimum, Smart Grid applications and vulnerabilities, critical infrastructure interdependencies, cyber security, energy supply systems, energy data analysis, and communications. Through Cooperative Agreement Number DE-FC26-07NT43264, NASEO, with DOE, has prepared the State Energy Assurance Guidelines, which may serve as a model for State Energy Offices in developing or revising the Energy Assurance plans under this initiative. (link: [www.naseo.org/eaguidelines](http://www.naseo.org/eaguidelines)) The recipient will revise appropriate State policies, procedures and practices to reflect the State's Energy Assurance Plan. The state will append its Energy Assurance Plan to the State Energy Plan, as appropriate.

### Task 4.0 – Energy Supply Disruption Tracking Process

The recipient will initiate a process or mechanism for tracking the duration, response, restoration and recovery time of energy supply disruption events.

### Task 5.0 – Energy Assurance Exercise

The recipient will develop a strategy to exercise its Energy Assurance Plan, simulating, through table-top exercises, energy emergency/disruptions, both within the state (including municipal and county governments as well as pertinent state agencies such as Public Utility Commissions and Emergency Management Offices) and on a multi-state or regional scale, incorporating local, state and federal agencies and industry as appropriate. The recipient shall conduct, or participate in at least two exercises as described below.

Subtask 5.1 – Conduct at least one intra-State training/exercise that includes players from the State agencies, local governments, industry and Federal partners, as appropriate. The recipient shall prepare an exercise after-action report, which will result in actionable items and any necessary revisions/modifications to the Energy Assurance Plan.

Subtask 5.2 – Participate in and/or conduct at least one inter-State/Regional exercise that includes players from neighboring States, local governments, industry and Federal partners, as appropriate. The recipient shall prepare an exercise after-action report, which will result in actionable items and any necessary revision/modifications to the Energy Assurance Plan.

#### D. DELIVERABLES

Reports shall be submitted in accordance with the “Federal Assistance Reporting Checklist” and the instructions accompanying the checklist included as Attachment 3 to this agreement. In addition, the following deliverables, as well as the deliverables identified/described in the Project Management Plan, are required:

Deliverable 1.0 – Project Management Plan (Plan due 60 days after the award and revised as necessary throughout the performance period.)

Deliverable 2.0 – Workforce Development Plan (Plan due 90 days after the award and revised periodically if necessary throughout the performance period.)

Deliverable 3.0 – Energy Assurance Plan (The initial Energy Assurance Plan is due 18 months after the award and revised (if necessary) following the energy assurance exercises. A final Energy Assurance Plan shall be delivered at the completion of the performance period.)

Deliverable 4.0 – Documented process or procedure for tracking the duration, response, restoration and recovery time of energy supply disruption events. (Due one year after the award.)

Deliverable 5.0 – Energy Assurance Exercise Summary and After-Action Report(s)

Deliverable 5.1 – The intra-state training/exercise(s) must be completed within 24 months after the award, with an after-action report delivered 30 days following the exercise.

Deliverable 5.2 – The inter-state/regional training/exercise(s) must be completed within 30 months after the award, with an after-action report delivered 30 days following the exercise.

ID	Task Name	Start	Finish	Personnel	2009																2010																2011																2012																
					Qtr 3				Qtr 4				Qtr 1				Qtr 2				Qtr 3				Qtr 4				Qtr 1				Qtr 2				Qtr 3				Qtr 4				Qtr 1				Qtr 2				Qtr 3				Qtr 4												
					J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N
1	<b>Energy Assurance (EA) Project</b>	Wed 8/12/09	Mon 11/12/12		[Gantt chart bars for Energy Assurance (EA) Project]																																																																
2	Reporting: American Recovery and Reinvestment Act (ARRA) (1512)	Sat 10/10/09	Wed 10/10/12	OPM	[Gantt chart bar for Reporting: American Recovery and Reinvestment Act (ARRA) (1512)]																																																																
16	Reporting: Management & Financial (SF425/FSR)	Fri 10/30/09	Tue 10/30/12	OPM	[Gantt chart bar for Reporting: Management & Financial (SF425/FSR)]																																																																
30	Reporting: Closeout/Final (8/12/09 - 8/14/09)	Mon 11/12/12	Mon 11/12/12	OPM	[Gantt chart bar for Reporting: Closeout/Final (8/12/09 - 8/14/09)]																																																																
31	Reporting: Property Certification (PF13a) (8/12/09 - 8/14/09)	Mon 11/12/12	Mon 11/12/12	OPM	[Gantt chart bar for Reporting: Property Certification (PF13a) (8/12/09 - 8/14/09)]																																																																
32	<b>Task 1.0: Project Management Plan (PMP)</b>	Wed 8/12/09	Tue 8/14/12		[Gantt chart bars for Task 1.0: Project Management Plan (PMP)]																																																																
33	Develop PMP	Wed 8/12/09	Sun 10/11/09	OPM/CASE/contractors	[Gantt chart bar for Develop PMP]																																																																
34	Submit PMP to DOE (MILESTONE)	Sun 10/11/09	Sun 10/11/09	OPM	[Gantt chart bar for Submit PMP to DOE (MILESTONE)]																																																																
35	Implement PMP	Mon 10/12/09	Tue 8/14/12	OPM/CASE/contractors	[Gantt chart bar for Implement PMP]																																																																
36	<b>Task 2.0: Workforce Development Plan (WDP)</b>	Wed 8/12/09	Wed 6/30/10		[Gantt chart bars for Task 2.0: Workforce Development Plan (WDP)]																																																																
37	Develop WDP	Wed 8/12/09	Tue 11/10/09	OPM/CASE/contractors	[Gantt chart bar for Develop WDP]																																																																
38	Submit WDP to DOE (MILESTONE)	Tue 11/10/09	Tue 11/10/09	OPM	[Gantt chart bar for Submit WDP to DOE (MILESTONE)]																																																																
39	Implement WDP	Wed 11/11/09	Wed 6/30/10	OPM/CASE/contractors	[Gantt chart bar for Implement WDP]																																																																
40	<b>Task 3.0: Energy Assurance Plan (EAP)</b>	Sun 11/1/09	Tue 8/14/12		[Gantt chart bars for Task 3.0: Energy Assurance Plan (EAP)]																																																																
41	Develop INITIAL EAP	Sun 11/1/09	Sat 2/12/11	OPM/CASE/contractors	[Gantt chart bar for Develop INITIAL EAP]																																																																
42	Submit INITIAL EAP to DOE (MILESTONE)	Sat 2/12/11	Sat 2/12/11	OPM	[Gantt chart bar for Submit INITIAL EAP to DOE (MILESTONE)]																																																																
43	Develop FINAL EAP	Sun 2/13/11	Tue 8/14/12	OPM/CASE/contractors	[Gantt chart bar for Develop FINAL EAP]																																																																
44	Submit FINAL EAP to DOE (MILESTONE)	Tue 8/14/12	Tue 8/14/12	OPM	[Gantt chart bar for Submit FINAL EAP to DOE (MILESTONE)]																																																																
45	<b>Task 4.0: Energy Supply Disruption Tracking Process (ESDTP)</b>	Sun 11/1/09	Thu 8/12/10		[Gantt chart bars for Task 4.0: Energy Supply Disruption Tracking Process (ESDTP)]																																																																
46	Develop ESDTP	Sun 11/1/09	Thu 8/12/10	OPM/CASE/contractors	[Gantt chart bar for Develop ESDTP]																																																																
47	Submit ESDTP to DOE (MILESTONE)	Thu 8/12/10	Thu 8/12/10	OPM	[Gantt chart bar for Submit ESDTP to DOE (MILESTONE)]																																																																
48	<b>Task 5.0 Energy Assurance Exercise (EAE)</b>	Fri 1/1/10	Mon 3/12/12		[Gantt chart bars for Task 5.0 Energy Assurance Exercise (EAE)]																																																																
49	<b>Subtask 5.1: EAE - INTRA-State</b>	Fri 1/1/10	Mon 9/12/11		[Gantt chart bars for Subtask 5.1: EAE - INTRA-State]																																																																
50	Develop EAE - INTRA-State	Fri 1/1/10	Fri 8/12/11	OPM/CASE/contractors	[Gantt chart bar for Develop EAE - INTRA-State]																																																																
51	Participate in EAE - INTRA-State for DOE (MILESTONE)	Fri 8/12/11	Fri 8/12/11	OPM	[Gantt chart bar for Participate in EAE - INTRA-State for DOE (MILESTONE)]																																																																
52	Develop EAE - INTRA-State - After Action Report (AAR)	Sat 8/13/11	Mon 9/12/11	OPM/CASE/contractors	[Gantt chart bar for Develop EAE - INTRA-State - After Action Report (AAR)]																																																																
53	Submit EAE - INTRA-State - AAR to DOE (MILESTONE)	Mon 9/12/11	Mon 9/12/11	OPM	[Gantt chart bar for Submit EAE - INTRA-State - AAR to DOE (MILESTONE)]																																																																
54	<b>Subtask 5.2: EAE - INTER-State</b>	Fri 1/1/10	Mon 3/12/12		[Gantt chart bars for Subtask 5.2: EAE - INTER-State]																																																																
55	Develop EAE - INTER-State	Fri 1/1/10	Sun 2/12/12	OPM/CASE/contractors	[Gantt chart bar for Develop EAE - INTER-State]																																																																
56	Participate in EAE - INTER-State for DOE (MILESTONE)	Sun 2/12/12	Sun 2/12/12	OPM	[Gantt chart bar for Participate in EAE - INTER-State for DOE (MILESTONE)]																																																																
57	Develop EAE - INTER-State - AAR (After Action Report)	Mon 2/13/12	Mon 3/12/12	OPM/CASE/contractors	[Gantt chart bar for Develop EAE - INTER-State - AAR (After Action Report)]																																																																
58	Submit EAE - INTER - AAR to DOE (MILESTONE)	Mon 3/12/12	Mon 3/12/12	OPM	[Gantt chart bar for Submit EAE - INTER - AAR to DOE (MILESTONE)]																																																																

Project: Energy Assurance: PMP: Version 1.0  
 Date: Fri 10/9/09

Task Progress Milestone Summary External Tasks External Milestone