Peoria Draft Energy Assurance Plan

ESF 12 – Energy

Peoria Office of Emergency Management
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City of Peoria Energy Assurance Plan

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City of Peoria Energy Assurance Plan

PEAP Coordinator
Peoria Emergency Manager

Primary Department
Peoria Office of Emergency Management

Supporting Departments
Peoria Department of Public Works
Peoria Public Information Officer
Peoria Police Department
Peoria Fire Department
Ameren

Governmental Supporting Agencies
Peoria County Emergency Management Agency
Illinois Commerce Commission
Illinois Energy Office
Illinois Emergency Management Agency
US Department of Energy

I. Introduction

A. Purpose

1. The Peoria Energy Assurance Plan (PEAP) provides guidance in responding to, coordinating and recovering from natural or human caused energy disruptions; measures to manage energy supply shortages; and strategies to reduce energy demand. Information about energy supply and usage, critical facilities and resources, and long-term energy assurance strategies are also addressed. This plan is a support annex to the City of Peoria Emergency Operations Plan (EOP).
2. The purpose of this plan is to facilitate and coordinate preparedness, response, recovery and mitigation activities of the city of Peoria and energy suppliers in restoration and management of energy systems, supplies and services during emergency situations through maximized use of available resources and capabilities.

B. Scope

This plan identifies the key policies, concepts of operations, roles and responsibilities, and capabilities associated with energy emergencies in the City of Peoria. Specific operating procedures and protocols are addressed in documents maintained by supporting departments and organizations. This plan applies to all city governmental and private sector organizations that may be involved in the response and/or management of an energy emergency.

The identified primary and supporting departments play an active role in responding to an energy emergency and will be referenced throughout the plan as the **PEAP Team**. The Energy Assurance Team will monitor, coordinate and assist in the restoration of damaged energy systems and components within the City of Peoria and implement measures to manage and reduce the impacts of energy shortages. Coordination and assistance activities include:

- Energy infrastructure assessment, repair, and restoration.
- Energy industry and utilities coordination.
- Energy demand reduction measures.
- Energy forecast monitoring (supply versus demand).
- Identification and implementation of mitigation and risk reduction measures.
- Prioritize restoration of utility service to vital facilities and other facilities.
- Arrange for the provision of emergency power sources where required.
- Identify requirements for emergency drinking water and portable toilets to the department or agency responsible for mass care.
- Assess damage to, repair, and restore public utilities.
- Monitor recovery activities of privately owned utilities.

Governmental departments, non-governmental organizations, and private sector groups that are responsible for critical services, vulnerable populations, or infrastructure, or are major energy consumers were identified as Key Stakeholders. Key Stakeholders were involved in plan development due to the significant impacts that energy disruptions could have on their operations. During energy emergencies, Key Stakeholders will be coordinated with and provided information and direction to facilitate response and recovery efforts.

KEY STAKEHOLDERS

City Government

Greater Peoria Sanitary District
Tri-County Regional Planning Commission
Peoria City/County Health Department

Private Sector/Non-governmental Organizations

American Red Cross of Central Illinois
Illinois-American Water Co.
Bradley University
Proctor Hospital
Methodist Hospital
Saint Francis Hospital
General Wayne A. Downing Peoria International Airport
Caterpillar Inc.
Cady Oil Co.
Peoria Chamber of Commerce

II. Situational Overview

A. Energy Profile Summary

Illinois is the fifth most populous state in the US. The population of Peoria has decreased in the past several decades dropping off from a 126,000 residents high in 1970 to 112,000 in 2000. Since 2000 the population has increased slightly to 115,000 as of the 2010 census.

The City of Peoria experienced a sharp economic downturn in 2008. A slow recovery began in late 2009 and has continued, with a 1% growth rate between May of 2010 and May of 2011. Unemployment rates are on par with the national average at 9.5%. Employment is lead by healthcare (29,321), followed by manufacturing (28,231), retail trade (25,036), and professional services (23,454). The median household income is $48,913, slightly below the national average.

The State used just over 4 trillion Btu of total energy in 2008 (Energy Information Administration) which is 4.1% of the US total, while producing just over 2 trillion Btu of energy making it a net importer of energy. Illinois is also ranked 5th in the country in industrial manufacturing but ranked 29th for per capita energy use indicating its industrial base may not be energy intensive. The state

has limited reserves of petroleum and natural gas and must import these from other States or countries. The State, however, is a net exporter of electricity with an active nuclear generation industry. Illinois has 11 operating reactors at 6 facilities and ranks 1st in the nation in nuclear electrical generation.

Ameren supplies Peoria with both electricity and natural gas. The Illinois Commerce Commission governs reliability and safety standards. The state of Illinois is seeing significant growth of wind generated electricity. Infrastructure improvements are being implemented to increase the effectiveness and efficiency of this growing renewable energy source.

B. Hazards

Peoria is exposed to many hazards, all of which have the potential to threaten the health, safety and welfare of the citizens of the community. These hazards are classified as natural and human caused. All disasters create the threat of injuries, death, property damage, and disruption to a community.

There are two main categories of hazards that could trigger an emergency in Peoria;

1. Natural Hazards are naturally occurring events that are caused by nature (e.g. floods, tornadoes, or earthquakes).

2. Human-Caused Hazards are manmade hazards that originate from human activity. These hazards may be deliberate (e.g. terrorists, criminals, hackers, delinquents, or employees) or accidental (e.g., pipeline rupture, levee breaches, chemical spills, nuclear, or biological contamination).

Energy assets can be vulnerable to natural and manmade hazards energy generation and delivery infrastructure. These assets include:

- Electric generation, transmission and local distribution facilities;
- Natural gas wells, collection systems, gas processing plants, inter- and intra-state pipelines and storage; and
- Petroleum production, refining, inter- and intra-state pipelines, over-the-road delivery systems and storage.

The Illinois 2010 Hazard Mitigation Plan identifies and addresses seven natural hazards that the State of Illinois is vulnerable to: floods, severe storms, tornadoes, severe winter storms, drought, extreme heat, and earthquakes. During the same year, the Tri-County Regional Planning Commission updated its natural hazard mitigation plan for the cities of Peoria, Pekin, Chillicothe and Washington, the Villages of Peoria Heights and Roanoke and the unincorporated areas within the counties of Peoria, Tazewell and Woodford. The Tri-County Plan identified twelve natural hazards that the region was vulnerable to: floods, severe thunderstorms, high winds, tornadoes, winter storms, land subsidence, landslides, droughts, heat waves wildfires and earthquakes. The hazard rankings of severe, high, elevated, and guarded, were based on the probability that the hazard would affect the community and the potential impacts should the hazard event occur. Because the

Plan did not provide hazard rankings for individual cities (due to lack of data and/or information), the City of Peoria's overall risk score was included within the ranking for Peoria County. Following is an overview of some of the hazards documented in the hazard mitigation plan.

Peoria County has experienced eight presidentially declared disasters in the past 40 years; the most recent was in 2008 for severe storms and flooding. Regardless of their ranking, any hazard event has the potential to cause prolonged energy disruptions with cascading effects due to infrastructure interdependencies. These effects could also lead to extensive, adverse impacts on public health, safety and Peoria's economy. In some instances, these hazards could cause major damage to gas and electric transmission and distribution systems and facilities, with widespread service reductions that could take weeks to restore. In instances where new or highly-specialized energy components or equipment are required (for example, transformers and circuit breakers), replacement could take months, and could require special arrangements for transporting the equipment over roads, bridges, and rail lines.

Additionally, natural hazards occurring anywhere in the United States can also result in energy shortages in Peoria by damaging transmission and supply infrastructure or reducing production capabilities. The concentration of energy production, supply and distribution facilities along the northern Gulf of Mexico make the nation's petroleum and natural gas energy supply vulnerable to hurricane damage and disruption, and can result in increased fuel costs. The 2005 hurricane season saw multiple hurricanes causing significant damage to Gulf of Mexico offshore and onshore petroleum production and processing facilities, significant threats to major natural gas transmission hubs, and disruption of fuel supplies across the southeastern United States. This situation did not directly result in energy supply shortages in Peoria, however, the reduced supply nationally resulted in higher prices for natural gas and gasoline in the city and nationally. A more extreme event causing damages to critical supply infrastructure could result in more severe and direct energy shortages.

Electricity production in Illinois is particularly vulnerable to a disruption in coal supply or nuclear processing which provided over 95 percent of all fuel for electric power generation in Illinois in 2005.

Peoria and Illinois in general are not as vulnerable to energy shortages as some areas of the United States due to the state's central location, enabling it to receive energy resources from across the nation. The state also has its own robust and diverse energy resources. Most energy shortages will be shorter term and often be visible weeks if not months in advance, providing energy suppliers some time to stockpile resources and identify alternative sources. Like most of the US, Peoria is less resilient to a national energy crisis such as the gasoline shortages of the 1970's.

The City of Peoria has a number of facilities and services that are critical to maintaining and ensuring public health, safety, security and continuity of government that are vulnerable to an energy disruption (see Attachment A Critical Facilities). Energy disruptions can inhibit emergency response and recovery efforts as well as communications and can cause emergencies when critical services

such as natural gas for heating homes, water or sewer services are disrupted to special needs households.

Longer-term (72+ hours) electrical disruptions can severely disrupt communications, continuity of government, public services and public self-sufficiency. Many of the life sustaining and public safety facilities in the City of Peoria such as Methodist Medical Center, OSF Saint Francis Medical Center, Proctor Hospital, fire and police stations, water and sewage plants, have some form of emergency power generation and fuel supplies to sustain their critical operations for at least a week. Most government facilities do not have adequate backup power generation to maintain normal operations and services. Additionally, the public will likely become more dependent on city assistance the longer power is out. Private sector services that the public depends on such as grocery stores, banks, and gas stations may not be able to meet demands given their reduced capabilities in an energy emergency. Many national businesses such as banks and major retailers have robust business continuity plans in place and even national response teams prepared to go into disaster struck communities to reestablish services quickly, however few small businesses have the necessary plans and resources in place.

1. Natural Hazards

SEVERE STORMS AND TORNADOS

Severe Storms Ranking for Peoria – Severe
Tornado Ranking for Peoria – Elevated

Peoria has a history of severe thunderstorms causing damaging hail, tornadoes and straight-line winds, and flash flooding. Severe thunderstorms and high wind events have occurred throughout Peoria and at varying times throughout the year.

Wind related effects from these storms can range from extremely localized to widespread and their impacts can be anywhere from moderate to devastating. Damages can include damaged power, cable, and telephone lines and radio, television, and communication towers, destroyed homes and businesses, broken tree branches and uprooted trees. Downed trees and power lines can fall across roadways and block key access routes and cause extended power outages.

Based on tornado data from 1950 to 1994, the State of Illinois ranked 7th nationally in highest number of tornadoes, 8th in total dollar damages and 9th in the number of injuries (High Plains Regional Climatic Center). Historic records and documents compiled as part of this study indicate over 85 specific high wind events have occurred in the Tri-County area since 1933, including reports of 107 tornadoes.

Based on Tri-County area records, it is not uncommon to have sustained winds between 30 and 50 mph during these events with gusts between 50 and 70 mph. Recorded damages have included broken branches, uprooted trees, damaged buildings and homes, small structures leveled, and boats and planes flipped over.

In June 2010 an EF2 tornado stuck Elmwood causing $85 million in damages. The tornado caused significant property damage but resulted in no injuries.

On September 14th, 1966 a F3 tornado moved through the City of Peoria. This event caused a significant amount of damage because of its high intensity and its occurrence within in a highly developed area. This tornado completely destroyed a number of buildings including a school and a manufacturing plant, affected 144 homes, and injured 28 people.

Two F4 tornados occurred within the Tri-County region in the last 40 years. The first struck Peoria County in June of 1976 and the second struck Woodford County in July of 2004.

The hazards associated with severe storms can damage generation and relay stations, highways, power lines, pipelines and other structures. Damage can be widespread and response and recovery can be hampered by debris obstructing access.

WINTER STORMS

Winter Storms Ranking for Peoria – Severe

Historically, winter storms produce more total damages than any other form of short-term severe weather statewide. A winter storm is an event that occurs during the winter season that causes substantial physical damages and includes snow, ice, high winds, blizzard conditions, and/ or other wintry conditions. The effects of winter storms can continue anywhere from several hours to several days, depending on the severity of the event.

Heavy snow and ice can cause power lines to snap, leaving citizens without power and heat for hours or even days. Frozen water pipes can rupture in people's homes, and water and sewer mains can also freeze and leak or rupture if not properly maintained. These ruptures can lead to flooding and property damage. The thaw that occurs after a severe winter storm can result in flooding in some communities located along waterways and communities with low base floodplain elevations.

Extremely cold weather can result in such high energy service demands that capacity is exceeded and supply shortages threaten or occur. This can result in "rolling blackouts" in electrical distribution systems, and in the case of natural gas distribution systems, a loss of pressure that can disrupt service

The effects on natural gas transmission lines from winter storms are minimal. Severe winter storms can bring down power lines when large amounts of snow and ice fall on them and when tree limbs break and fall on them.

EXTREME HEAT

Extreme Heat Ranking for Peoria – High

Extreme heat is defined as temperature that hovers at least ten degrees above the average high temperature for an area that lasts for several weeks. Severe heat waves have caused catastrophic crop failures, thousands of deaths and widespread power outages due to increased use of air conditioning. Because of its nature, heat waves are easier to predict than more short-lived and highly localized weather events like tornadoes.

In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the disastrous heat wave of 1980, more than 1,250 people died.

During the July 1995 heat wave in Chicago a record heat index of 118°F degrees was recorded. Peoria's record is a heat index of 121°F on July 13, 1995 (temperature 99°F, relative humidity 53%). The summer of 2011 was the second hottest on record for the United States and the hottest in 75 years. Heat indices in late July reached 121°F in Taylorville, Illinois and the entire Midwest experienced sustained temperatures in the upper 90's.

Extreme heat can result in such high energy service demands that capacity is exceeded and supply shortages threaten or occur. This can result in "rolling blackouts" in electrical distribution systems, and in the case of natural gas distribution systems, a loss of pressure that can disrupt service

FLOOD

Flood Ranking for Peoria County – Guarded

A majority of the floodplain in the City of Peoria is along the Illinois River. The most vulnerable areas of Peoria are those most affected by floodwaters in terms of potential loss of life, damages to structures, and disruption of community services and utilities. The area along the riverfront in Peoria is a combination of commercial, industrial, and residential facilities. Many of the structures and much of the infrastructure is located below the base flood elevation in the older areas of the city.

Flash floods can also impact the City of Peoria. These floods occur when a significant amount of rain falls in a short amount of time. Flash floods typically result in road and bridge closings, but they also have the potential to inflict significant damage upon structures and crops.

Floods can inundate electrical relay stations and render them inoperable. . Floodwaters can damage buildings, highways, power lines, pipelines and other structures that become inundated.

2. Human-caused Hazards

Human-Caused Hazards are manmade hazards that originate from human activity. These hazards may be deliberate (e.g. terrorists, criminals, hackers, delinquents, or employees) or

accidental (e.g., pipeline rupture, levee breaches, chemical spills, nuclear, or biological contamination).

The 2007 Illinois Human-Caused Hazard Mitigation Plan identifies three categories of human-caused hazards that the State of Illinois is vulnerable to: Terrorism (Chemical, Biological, Radiological, Nuclear, and Explosive), Civil Disturbances, and Cyber Attacks. The hazard rankings were identified as "hazards extremely unlikely to occur in Illinois, those with a low probability and minimal impact, and hazards that have in the past and in all probability will continue to impact Illinois at various levels of severity and frequency". The Plan did not provide hazard rankings for the City of Peoria but did provide generalized risk scores for Peoria County. The hazards were classified using the same categories as the Natural Hazard Mitigation Plans.

CHEMICAL, RADIOLOGICAL, BIOLOGICAL, NUCLEAR, AND EXPLOSIVES (CRBNE) TERRORISM

CRBNE Ranking for Peoria – High

Chemical, radiological, biological, nuclear, and explosives (CRBNE) terrorism is the systematic use of violence to achieve a political goal. While the methods of terrorists may vary, terrorists usually threaten or attack government facilities, businesses, and even ordinary citizens of the target countries.

Approximately 80% of all terrorist events involve the use of explosives; persons and property within the impacted area(s) may experience effects from chemical exposures (that would result in serve injury and or death.) Events that include the use of biological agents may not present clinical symptoms to the impacted population for up to 24-48 hours. Biological impacts are largely determined on where the release occurs, but potential targets include releases into the air, water supplies, crops and livestock.

The impact and source of a radioactive materials release or dirty bomb would be dependent on the type of material being released. Sources involving a significant amount of shielding or that are in solid form would result in a small impact, if used in a dirty bomb. Powder form materials would pose the highest impact when released in air.

Electro-magnetic pulses (EMPs) as a result of high energy explosions (nuclear and non-nuclear) have the potential to destroy sensitive electronics and photovoltaic cells critical for power generation and disrupt electrical transmission.

Peoria is home to a large chemical industry, financial district, river system, livestock and agricultural community. The impact on the aforementioned industries would have a large impact on economic and financial status based on the target.

Energy infrastructure (gas or power lines) is very vulnerable to physical attacks, given numerous sources of public information on the location and the accessibility of energy facilities to the public.

CIVIL DISTURBANCES

Civil Disturbances Ranking for Peoria – Elevated

Any incident that disrupts a community where intervention is required to maintain public safety is a civil disturbance. Examples are demonstrations, riots, strikes, public nuisances, and criminal activities.

Large-scale sporting and entertainment events, along with conferences, provide the potential for demonstrations and possible civil unrest. The opportunity for the hazard to emerge can exist anywhere there are gatherings of people, on a scale from small to large.

Riots, strikes, and other forms of civil disturbance that continue for extended periods of time have the potential to delay shipments of coal, grain and other energy supplies. Electrical infrastructure in an area experiencing riots is vulnerable to being damaged or destroyed.

CYBER ATTACKS

Cyber Attack Ranking for Peoria – Elevated

Threats to cyberspace pose one of the most serious economic and national security challenges. Cyber terrorism is an increasing threat to the security of computer, communications, infrastructure, utilities and service industries; especially as we become increasingly dependent on information and support provided through extensive computer systems. The Supervisory Control and Data Acquisition (SCADA) systems utilized by many utility companies are particularly vulnerable to cyber-attacks.

Infrastructure damage and interruptions including power, communication, and gas lines could be significantly impacted by cyber threats. Areas of concern include but are not limited to, water treatment, waste treatment/management, safety and effluent control systems at processing plants, and land management systems (dams, locks, flow control devices). The effects of these attacks may result in the loss of life or injury, and the inability to provide essential services and continue the production of goods and deliverables.

C. Assumptions

- The city will continue to be exposed to and subject to the impact of those hazards described above and as well as lesser hazards and others that may develop in the future.
- It is possible for a major disaster to occur at any time and at any place. In many cases, dissemination of warning to the public and implementation of increased readiness measures may be possible. However, some emergency situations occur with little or no warning.
- Outside assistance will be available in most emergency situations, affecting our city. Since it takes time to summon external assistance, it is essential for us to be prepared to carry out the initial emergency response on an independent basis.

- Proper mitigation actions prevent or reduce disaster-related losses. Detailed emergency planning, training of emergency responders and other personnel, and conducting periodic emergency drills and exercises can improve our readiness to deal with emergency situations.
- Emergency incidents impacting energy systems, services and supplies can occur in multiple locations or impact the entire city of Peoria with or without warning.
- Disruption of energy systems and services may pose a significant threat to health and safety of the citizens of the city of Peoria and can create cascading effects of disruption or failure of other critical infrastructure and systems both public and private.
- Impacts of identified hazards could cause disruption of critical infrastructure and to resources needed to maintain energy systems and services such as access, supplies and personnel availability.
- Continuous coordination and collaboration with energy providers is essential to ensure priority restoration and efficient recovery of energy services.
- The City of Peoria has a limited capability to provide emergency power with fixed and portable generators in maintaining critical facilities and services. Portable generators are available for rent through private companies in the Peoria area.
- The City of Peoria maintains fuel supplies for daily operations that could be exceeded in emergency situations or longer term fuel shortages. Additional fuel supplies may be accessed through private companies in the Peoria area.
- The Peoria County Office of Emergency Management will coordinate county and state emergency support and provide access to mutual aid and additional needed resources if local capabilities are exceeded in an incident.
- Ameren provides electrical and natural gas service to the City of Peoria and is responsible for providing a liaison to the Peoria EOC as requested to coordinate and provide information and status on restoration efforts.

III. Concept of Operations

A. Organization

The City of Peoria Energy Assurance Plan (PEAP) is conducted in accordance with the City of Peoria Emergency Operations Plan (EOP) and is consistent with county and state emergency planning documents. The Peoria Emergency Operations Center (EOC) utilizes the nationally-adopted Incident Command System (ICS) model for command, control and coordination of response efforts organized in a functional support structure. The functional structure provides a method for preparing and fulfilling emergency missions and functions to address hazards of all types. This plan for the City of Peoria is designed to provide guidance about procedures, roles and responsibilities, and critical infrastructure and key resources in response to an energy emergency.

The Peoria Office of Emergency Management (OEM) is primarily responsible for the PEAP plan. The OEM *coordinates* energy restoration assistance-related activities across all phases of emergency

management*, facilitates collaboration* among supporting departments and private sector partners, and serves as the lead for communication and coordination within the EOC. The OEM and supporting departments and partners engage in preparedness activities to improve response and recovery capabilities and participate in efforts to reduce damage impacts through mitigation. The OEM and supporting departments/partners, the PEAP Team, will work together to provide for an expedient response to an incident that appropriately *leverages and manages* the resources of the city.

In the event of an emergency, this PEAP will be activated at the discretion of the City Manager or the Peoria OEM. The EOC will ordinarily be fully activated in any emergency situation that would require the mobilization of additional elements of local government other than those principally involved in emergency services on a day-to-day basis. Upon activation of the PEAP, requests for support by other functional support groups and departments will be coordinated by the EOC and fulfilled by the PEAP Team. During disaster operations, the OEM will direct information management and reporting of functional support activities according to ICS guidance, documented in the EOP, within the EOC.

B. Phases of Energy Emergency

1. Preparedness

PEAP departments and organizations identify personnel, assess resources and capabilities and evaluate potential gaps in capabilities in response to identified hazards. OEM and supporting departments and private sector partners will coordinate, review, update or develop emergency and department specific response plans. The PEAP Team participates in ongoing planning, training and exercise activities.

During the preparedness phase, PEAP team members should also coordinate interdependencies with other functional support groups such as: **Public Works**, to plan for coordination with utilities providers to access areas blocked by debris; **Public Safety** to provide crowd control in areas where recovery operations are occurring; **Mass Sheltering**, to ensure backup energy at shelters; and **Public Information** to coordinate public education, outreach and notification plans during energy disruptions or energy shortages where voluntary or mandatory energy usage reduction measures are implemented. This is not an exhaustive list and coordination should be pursued as support requirements are identified.

2. Response

PEAP departments and organizations provide personnel, assets and services to support emergency response operations as directed/coordinated by the EOC and/or incident command in the field. The PEAP Team collects and provides damage assessment information regarding critical infrastructure, assets, and services and coordinates with other functional support groups to execute missions as assigned.

3. Recovery

PEAP Team members identify critical infrastructure and assets that are priorities in recovery of impacted areas and communicate information to OEM and the EOC coordination group. The PEAP Team continues to provide personnel, assets and services to support emergency recovery operations as directed/coordinated by the EOC or incident command in the field.

4. Mitigation

The PEAP Team identifies and communicates to the Hazard Mitigation planning group, measures that can improve resilience of energy systems and services infrastructure and reduce damage from future incidents. The PEAP Team will finalize reporting and make recommendations for mitigation measures. Measures could include actions to protect facilities, resources, and mitigate the effects of future incidents. Viable recommendations should be formulated and proposed for acceptance and funding through the appropriate process. Measures to mitigate known critical infrastructure interdependencies that fall outside of the responsibility of PEAP Team organizations will also be identified and provided to the responsible organization for consideration in mitigation planning.

C. Levels of Energy Emergency

Many emergencies follow some recognizable build-up period during which actions can be taken to achieve a gradually increasing state of readiness. The City of Peoria uses a four-tier system which has been adopted herein to establish levels of energy emergency. Energy Emergency Levels will be determined by the Mayor/City Manager or, for certain circumstances, the OEM director or his/her designate. General actions to be taken at each readiness level are outlined in the plan.

Levels of Energy Emergency

Level 1: Normal Operations/Monitoring

Level 2: Elevated Monitoring/Implement Preparedness Measures

Level 3: Emergency – Recovery from Event/Voluntary Conservation Measures Implemented

Level 4: Critical – Recovery from Disaster/Mandatory Conservation Measures Implemented

The following tables describe conditions or triggers and associated actions that may be taken for each energy emergency level.

Level 1: Normal Operations/Monitoring		
Conditions/Triggers	Potential Impacts	Actions
No perceived threats or shortage indicators.	No impacts to energy supply.	• Maintain normal monitoring and preparedness activities.

Level 2: Elevated Monitoring/Implement Preparedness Measures		
Conditions/Triggers	Potential Impacts	Actions

Identified significant natural hazard threat from reliable source such as the National Weather Service (thunderstorm, ice/snow storm, tornado watch).	• No immediate impacts to energy supply • Forecast conditions have the potential to disrupt service and or supply	• Initiate coordination with energy providers regarding potential impacts.
		• Notify PEAP Team of threat to energy supply.
		• Assess need to place supporting departments on stand-by for response.
		• Initiate City preparedness measures, Section IV.B of PEAP and appropriate energy specific plan.
		• Assess need to initiate coordination with key stakeholders to implement preparedness measures.
Identified threat to energy supply either regionally or nationally. Threat could be human or a natural hazard threat to national infrastructure.	• No immediate impact to energy supply • Situation warrants close monitoring and initiation of preparedness activities.	• Initiate coordination with State and Federal ESF 12 agencies, monitor status updates and recommended preparedness measures in accordance with Section IV.B.
		• Coordinate information to EOC for dissemination as appropriate.
Spike in energy prices or other indicator of possible energy shortage such as forecast energy shortage by energy industry.	• No immediate impact to energy supply • Situation warrants close monitoring and initiation of preparedness activities. • Rising energy prices • Customers may adjust buying or usage habits as a result of increased costs.	• Initiate coordination with State and Federal ESF 12 agencies monitor status updates and recommended preparedness measures in accordance with Section IV.B.
		• Coordinate with local energy suppliers to determine local status in accordance with Section IV.B and energy specific plan.
		• Report status to city officials.
		• Review and update resource lists and contracts.
		• Review public information strategies and pre-scripted notices.

Level 3: Emergency – Recovery from Event/Voluntary Conservation Measures Implemented		
Conditions/Triggers	Potential Impacts	Actions
Unplanned energy disruption has occurred due to a natural hazard or human caused event locally, disruption will exceed 24 hours.	• Widespread energy outages affecting critical facilities and residences. • Gas stations without back-up power unable to pump gas.	• Activation of PEAP Team. Notification of city officials and relevant stakeholders.
		• Coordination with energy provider to determine impact area and expected duration.
		• Anticipate the activation of EOC and prepare to staff EOC position.
		• Assess need for implementation of emergency measures.
		• Proceed with energy emergency response and recovery as documented in Section IV.B of PEAP and appropriate energy specific plan.
Energy suppliers and/or state and federal ESF 12 agencies notify of	• Energy costs increase. • Low income customers having difficulty	• Coordinate with state and federal ESF 12 agencies as documented is Section IV.B of PEAP and appropriate energy specific plan.

impending energy shortage. (USDOE, ICC, American Petroleum Institute) Local energy suppliers indicate difficulty in fully filling all orders. Interruptions in service delivery. Fuel prices rise at a rate of 10% or more per week.	purchasing or paying energy bills. • Increased media interest/coverage • Interruptible contract customers experiencing service interruptions. • Gasoline deliveries may be delayed. Public may begin hording fuel.	• Coordinate with local energy suppliers to determine local status, supplies and delivery schedules.
		• Notify PEAP Team, city officials and EOC of impending shortage. • Consider the need to partially activate EOC.
		• Meet with city officials (with energy provider if appropriate) to discuss the need for voluntary energy conservation.
		• Implement city energy conservation measures.
		• Implement voluntary conservation measures. • Refine public message and ensure wide dissemination of information.
		• As monitoring indicates that the shortage is easing and will be ending, conservation measures can be suspended and Energy Emergency Level can recede.

Level 4: Critical – Recovery from Disaster/Mandatory Conservation Measures Implemented		
Conditions/Triggers	Potential Impacts	Actions
Energy shortage continues with no indication of end or worsens. Fuel prices continue to rise rapidly. Local fuel supplies are extremely low or exhausted. Energy shortage is regional or possibly national. Health and safety issues are evident.	• Energy shortage is widespread, public panic may be occurring. • Energy disruptions may be occurring (brownouts and rolling blackouts). • Suppliers unable to meet contract commitments. • Public services disrupted. • Long lines at fuel stations, stations running out of fuel.	• Coordinate with State and Federal ESF 12 agencies as documented is Section IV.B of PEAP and appropriate energy specific plan. • Coordinate with local energy suppliers to determine local status, supplies and delivery schedules.
		• Activate EOC.
		• Meet with city officials to discuss the need for mandatory energy conservation.
		• Maintain coordination with PEAP Team, city officials and EOC of shortage status.
		• Proceed with energy emergency response and recovery as documented in Section IV.B of PEAP and appropriate energy specific plan.
		• As monitoring indicates that the shortage is easing and will be ending, conservation measures can be suspended and Energy Emergency Level can recede.
Catastrophic natural disaster occurs locally and severely damages energy infrastructure. Widespread outages expected to exceed 48 hours.	• Widespread energy disruption and infrastructure damage. • Debris issues slow response capabilities.	• EOC fully activated with PEAP team staffing, PEAP team participating in response and recovery. Energy providers staffing EOC.
		• Full activation of PEAP response plans, Section IV.B and appropriate energy specific plan.
		• Resource monitoring and coordination of requests and allocations within EOC.
		• Resource requests elevated to state as described in Section IV.B of PEAP and the City EOP.

The EOC may be activated to monitor a potential emergency situation or to respond to or recover from an emergency situation that is occurring or has occurred. The EOC will be activated at a level necessary to carry out the tasks that must be performed. The level of activation may range from a situation monitoring operation with minimal staff; to a limited activation involving selected departmental representatives, to a full activation involving all departments, agencies, volunteer organizations, and liaison personnel.

The principal function of the EOC is to:

- Monitor potential threats.
- Support on-scene response operations.
- Receive, compile, distribute and display data on the emergency situation and resource status and commitments as a basis for planning.
- Analyze problems and formulate options for solving them.
- Coordinate among local agencies and between the City/County of Peoria and state and federal agencies, if required.
- Develop and disseminate warnings and emergency public information through the Public Information Officer (PIO).
- All information coming into the EOC will be evaluated and as needed passed on to the Joint Information Center (JIC) for further evaluation and dissemination as needed.
- Prepare and disseminate periodic reports.
- Coordinate damage assessment activities and assess the impacts on health and welfare of the public, public safety, local facilities, and the local economy.
- Request external assistance from other jurisdictions, volunteer organizations, businesses, or from the County/State.

D. Resource Management

In an incident, all resource requests, tracking, and disposition will be managed through the Peoria EOC and the Resource Management group in accordance with NIMS principles and EOP. If/when city, county and immediately available mutual aid resources are exhausted, the EOC will make a request to the Peoria County Emergency Operations Center. In the event all local resources have been expended or committed, the EOC will be responsible for coordinating with the Illinois Public Works Mutual Aid Network or the Illinois Emergency Management Agency for additional state resources.

Management of resources will be documented using city policies and procedures and will meet requirements of FEMA 322, Public Assistance Guide, and FEMA 323, Public Assistance Applicant's Handbook.

Resources needed for ongoing preparedness and mitigation activities, including training, drills, and exercises, and responsibility for identification of emergency response-related resource shortfalls (pre-incident), are handled by individual departments and organizations with responsibilities assigned in this plan.

The Peoria EOP requires documentation of response activities to support after-action requirements and justify actions taken by primary and support department. Any required resources to support this plan must be coordinated, allocated, and managed through each support group if possible.

E. Communications

For non-emergency communications, during the performance and coordination of preparedness, mitigation and plan maintenance, testing and training activities, OEM will be responsible to facilitate and coordinate communications between the PEAP Team, supporting agencies, private sector partners, and stakeholders. OEM maintains an Energy Emergency Points of Contact list for agencies, departments, partners and stakeholders involved in energy emergencies.

OEM should be included in all PEAP related communications and coordination between Supporting Departments and Private Sector Partners. It is important that Supporting Departments and Private Sector Partners provide timely updates of emergency contacts, plans and resources.

F. Security

1. Physical

Security of energy infrastructure and facilities is important at all times. The OEM will maintain situational awareness of security issues with private sector partners and ensure coordination with City and County Police and other appropriate law enforcement. During energy emergencies coordination with Pubic Safety and Security will be necessary to ensure coordination of access for necessary staff and response personnel, provide traffic control to facilitate restoration efforts, and to coordinate security of energy providers' staging areas for restoration equipment and resources.

2. Cyber Security

Technology is increasingly being utilized to improve efficiency and management of energy resources. Cyber-Security will become increasingly important as more and more of energy systems management is integrated into a real-time, Smart Grid computer environment that is susceptible to computer viruses, hacking and cyber-terrorism. Cyber-security requires close partnerships between private sector utilities and local, state and federal government and is an area of energy assurance that is recognized as still being a new frontier requiring identification of issues, standards and best practices.

The Department of Homeland Security and Department of Energy will play key roles in establishing standards of cyber-security and national energy assurance policy. At the present time there are no Smart Grid pilot programs active in Peoria. It is the responsibility of the PEAP Team to maintain situational awareness of Smart Grid technology as it is implemented and the associated cyber-security standards required.

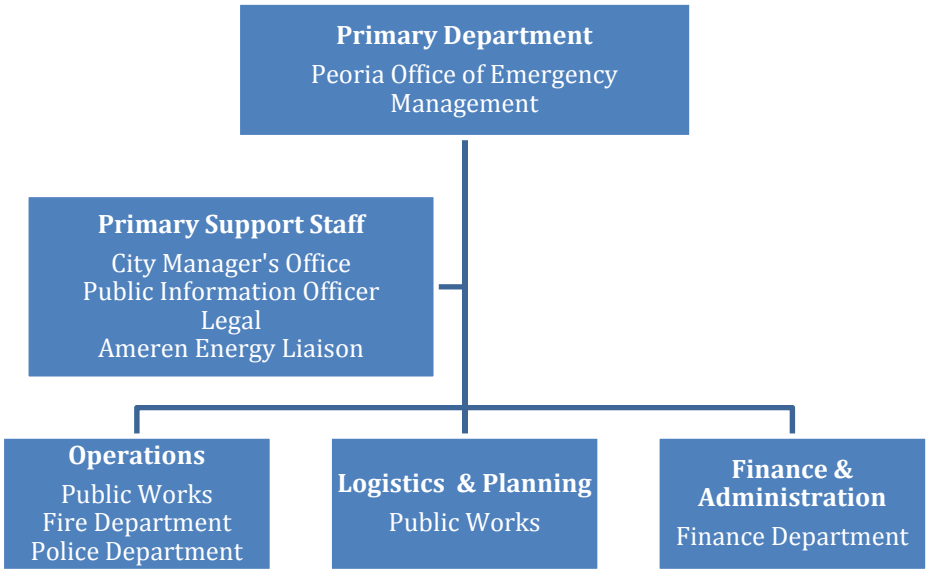
The Illinois Commerce Commission (ICC) requires all public utilities to establish a security policy that includes on-site safeguards to restrict physical or electronic access to critical infrastructure and computerized control and data systems. The Commission maintains a record of and requires

each regulated entity provide to the Commission an annual affidavit signed by a representative of the regulated entity that states:

(1) that the entity has a security policy in place;
(2) that the entity has conducted at least one practice exercise based on the security policy within the 12 months immediately preceding the date of the affidavit; and
(3) With respect to any entity that is an electric public utility, that the entity follows, at a minimum, the most current security standards set forth by the North American Electric Reliability Council.
(Source: P.A. 94-480, eff. 1-1-06; 94-735, eff. 5-1-06.)

IV. Responsibilities

A. Organizational Structure



B. Responsibilities of Lead Department

The City of Peoria EAP is coordinated through the Peoria OEM. They will serve as the primary coordinator with supporting departments, energy suppliers and stakeholders for preparedness and mitigation activities regarding the PEAP. During emergencies the team will be incorporated into the EOC organizational structure as described in the Peoria EOP consistent with ICS protocols. Notification of activation will come from the OEM or the EOC. The OEM will staff the EOC and notify supporting city departments if additional representatives are required to staff the EOC.

Additional responsibilities are listed in the following tables.

LEAP Primary Department – OEM
Preparedness
Oversee development of PEAP and departmental supporting procedures and checklists.

	Oversee PEAP planning efforts, training and exercises. Review roles and responsibilities.
	Oversee the development and maintenance of an inventory of departmental/ organizational assets, infrastructure and capabilities.
	Coordinate the identification and prioritization of critical energy dependent populations, facilities, systems and processes in the planning area and continuously monitor those resources to identify and correct vulnerabilities to energy facilities.
	Coordinate as necessary to identify primary and back-up sources of fuel and power generation for critical city facilities and emergency operations.
	Monitor local, regional, national, and international events and energy forecasts that may affect the city's energy supply.
	Assist with the development of fuel plans.
	Compile and maintain PEAP Team and stakeholder notification rosters.
	Coordinate follow-up on PEAP related corrective actions.
	Continuously coordinate planning with support departments, private sector partners and stakeholders to include but not limited to Peoria County EM, Ameren, Illinois Energy Office, Peoria Hospitals, Public Works, American Red Cross, Caterpillar, etc.
	Response
	Staff a support position in the Peoria EOC, coordinate additional city department, Ameren supporting staff as needed.
	Monitor the guidelines followed by the individual utilities during a generating capacity shortage on their systems and the guidelines followed by utilities to promote coordinated statewide action and communication.
	Maintain communication with Ameren and energy representatives to determine emergency response and recovery needs.
	Immediately following the occurrence of a disaster, assess the overall status of the areas within the city and determine potential needs and resource requirements.
	Initiate and manage tasks as defined by operational plans in support of Energy Assurance and the EOC.
	Notify and request assistance from supporting departments in order to manage mission assignments. Work with private sector organizations to maximize use of resources.
	Assess the need for, and request goods and services as needed. Promote financial and property accountability for PEAP activities.
	Coordinate with the American Red Cross to identify emergency shelter power generation status/needs; and coordinate with other EOC Support Groups with assistance in providing resources for emergency power generation.
	Support and keep other EOC support groups and organizational elements informed of PEAP operational priorities and activities.
	Collect and analyze information on status of the city critical infrastructure, including damage assessment.
	Collect and analyze information on the status of energy systems and services.
	Continuously coordinate response with support departments, private sector partners and stakeholders as appropriate for energy supply, delivery and/or restoration status information.
	Provide support and technical assistance for energy restoration operations.
	Provide personnel, assets and services to meet emergency operational requirements as directed by the EOC.

	Maintain and provide up-to-date information on availability of personnel, assets and services during an incident.
	Recovery
	Coordinate within the PEAP team and with stakeholders to identify critical infrastructure and service priorities for resumption and recovery.
	Continue with activities as directed by the Incident Command and initiate any additional recovery activities assigned by EOC.
	Recommend strategies for restoration of energy service and assets.
	Continuously coordinate recovery with support departments, private sector partners and stakeholders as appropriate for energy supply, delivery and/or restoration status information.
	Provide personnel, assets and services to support recovery activities.
	Participate in EOC and PEAP after-action review.
	Mitigation
	Work with other PEAP departments and program-wide to identify opportunities to reduce vulnerability, improve community resilience and enhance energy assurance capability in preparation for future incidents.
	Coordinate compilation of Peoria energy assurance mitigation and resilience building opportunities and provide mitigation measures to OEM for incorporation into the Regional Hazard Mitigation Plan.

C. Responsibilities of City Departments

PEAP Supporting City Departments

Peoria Public Works Department

Peoria City Manager's Office

Peoria Public Information Officer

Finance Department

	Peoria Public Works Department
	Specific Responsibilities
	Maintain inventories of Peoria energy emergency resources to include generators and fuel supplies.
	Ensure maintenance, fueling, transport and installation of generators.
	Maintain current organization contact information.
	Provide staff for energy emergency response and recovery efforts.
	Assess energy emergency related damages to city facilities and infrastructure.
	Identify measures to reduce impacts of energy disruptions.

	Peoria City Manager's Office
	Specific Responsibilities
	Maintain situational awareness of energy shortages and participate in development and maintenance of city and public energy conservation measures and strategies.
	Investigate the need for and development of city policies and ordinances necessary to

	implement severe energy shortage conservation measures.
	Facilitate identification of emergency contracting needs and coordinate implementation of alternate supplier stand-by emergency contracts as required.
	Provide staff for energy emergency response and recovery efforts.
	Communicate status of City energy resiliency and efficiency efforts to LEAP participants and stakeholders.
	Ensure proper documentation and record keeping of emergency related city employee time and purchases in accordance with Peoria EOP to facilitate FEMA reimbursement.

	Peoria Public Information Office
	Specific Responsibilities
	Responsible for public information officer activities.
	Facilitate the development of energy emergency public messages and standard language.
	Coordinate development and update of strategies and measures for managing energy shortages and associated public outreach messages and strategies.
	Coordinate public education and outreach activities on implementing energy efficiency measures at home as well as associated grants and incentives provided by state and federal government.
	Coordinate outreach and education focused on businesses on implementing energy efficiency measures and car/vanpooling opportunities for state and federal funding and incentives.

	Peoria Finance Department
	Specific Responsibilities
	Responsible for purchasing requested resources and executing contracts for equipment or services.
	Document time and expenditures in accordance with city and FEMA guidance.
	Develop procedures for emergency contracts or purchases consistent with city and FEMA guidance.

General activities for all support departments are listed in the following table.

	PEAP Supporting Departments General Activities
	Preparedness
	Develop or refine procedures to carry out department's PEAP responsibilities such as generator refueling and maintenance and public outreach.
	Participate in PEAP specific and overall planning, training and exercises for emergency events.

	Participate in PEAP capability assessments and gap analysis against potential hazard scenarios.
	Participate in the identification and prioritization of critical energy dependant populations, facilities, systems and processes in the planning area.
	Develop and maintain inventory of departmental/organizational assets, infrastructure, and capabilities.
	Participate in the identification of primary and back-up sources of fuel and power generation for critical city facilities and emergency operations.
	Assist with the development of fuel plans and procedures to coordinate debris removal to facilitate utility access for energy restoration.
	Develop and maintain notification rosters.
	Provided day-to-day maintenance of PEAP infrastructure and assets.
	Train departmental personnel for PEAP assignments.
	Address PEAP after-action issues, as appropriate.
	Participate in the development of pre-scripted messages to reduce public energy demand during supply shortages.
	Response
	Participate in PEAP damage assessment and report as requested.
	Support Energy Assurance staffing in Peoria EOC as requested by OEM or EOC.
	Collect and analyze information on the status of energy systems and services.
	Provide support and technical assistance for energy restoration operations.
	Provide personnel, assets and services to meet emergency operational requirements as directed by primary department or Peoria EOC.
	Maintain and provide up-to-date information on availability of personnel, assets and services.
	Assist in coordination with volunteer groups, non-profits, and private sector to identify the availability of needed resources.
	Provide maintenance support for Energy Assurance assets and infrastructure.
	Coordinate with PEAP departments, energy providers, and Public Communications support group to develop consistent message and guidance to the public notifying them of disruption recovery status, restoration efforts, or demand reduction measures as appropriate, consistent with EOP guidance.
	Maintain records of expenditures and document resources utilized during recovery in accordance with Resource Management group policies and guidelines and report these records to the OEM.
	Recovery
	Coordinate within the PEAP team and with stakeholders to identify critical infrastructure and service priorities for resumption and recovery.
	Participate in PEAP and EOC after action review.
	Mitigation
	Work with other PEAP departments and program-wide to identify opportunities to reduce vulnerability, improve community resilience, and enhance energy assurance capability in preparation for future incidents.
	Participate in local and county recovery and mitigation planning and implementation.

D. Private Sector Responsibilities

Private Sector Partners

Ameren

Private sector partners will provide staff to the EOC as requested during energy emergencies to facilitate coordination and distribution of information on damages, number of people affected, and estimated duration of disruptions; prioritization of critical facility service restoration will be closely coordinated with PEAP team and EOC. They will also communicate assistance requirements to the EOC such as escort, traffic control, debris removal, and staging area requirements. Energy providers are regulated by the ICC and any issues will be coordinated through the EOC to county and state emergency management and the State ESF-12 primary agency ICC as dictated by ICS.

During planning and mitigation periods, private sector partners will participate in PEAP activities to include meetings, facilitate and coordinate development and refinement of plans and procedures and coordinate identification of critical needs populations, critical facilities and services. In particular plans, procedures and coordinated public messages addressing energy shortages and public conservation measures will be assess and updated annually with PEAP.

Private sector partners will consistently communicate key energy information to the Primary Department to include scheduled disruptions and impacted areas, security issues, opportunities and plans for implementation of new technologies such as smart grid, particular weaknesses in the infrastructure, mitigation opportunities, and early identification of possible energy shortages. General activities for energy providers are listed in the following table

	LEAP Energy Providers
	Preparedness
	Participate as requested in PEAP preparedness activities.
	Provide PEAP team with publicly available annual reports or other documents regarding reliability, infrastructure, and improvement plans (i.e. Ameren Annual 411 Report).
	Maintain inventory of organization resources.
	Maintain current organization emergency contact information as well as alternates.
	Participate in identification and prioritization of critical energy dependent populations, facilities, systems and processes in the planning area and coordinate restoration priorities with the PEAP team.
	Participate in the development of pre-scripted messages to reduce public energy demand during supply shortages.
	Response
	Provide Energy Group support staff to Peoria EOC as requested.
	Coordinate response activities and status with the EOC in support of the Energy Group mission, work with PEAP team and EOC to assess and modify as necessary restoration priorities.
	Communicate response and recovery resource shortfalls or issues that could delay response and recovery efforts to EOC to coordinate possible assistance.

	If possible, provide EOC and/or first responders with information, maps and imagery to facilitate response as requested.
	Conduct damage assessments and report back to the EOC damages, population impacted, and estimated duration.
	Coordinate with PEAP, Direction and Control Functional Group and Public Information Functional Group to develop consistent message and guidance to the public notifying them of disruption recovery status, restoration efforts, or demand reduction measures as appropriate.
	Recovery
	Coordinate the status of energy restoration and recovery efforts to the PEAP team and EOC.
	Communicate response and recovery resource shortfalls or issues that could delay response and recovery efforts to the EOC to coordinate possible assistance.
	Participate in recovery planning and activities.
	Prepare documentation required to facilitate reimbursement eligibility.
	Participate in after action review.
	Mitigation
	Identify and implement mitigation activities to prevent or lessen the impact of future incidents.

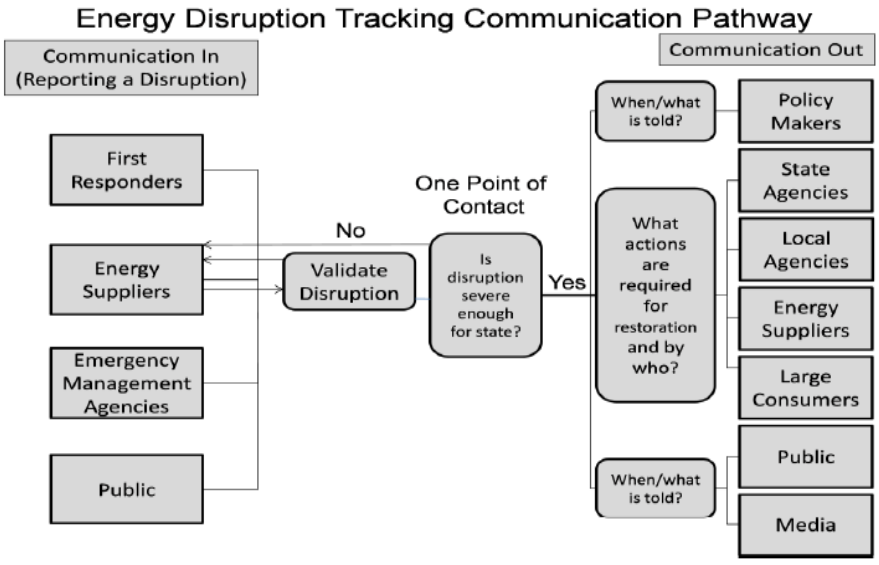
E. Peoria County Department of Emergency Management

During preparedness and mitigation phases, the Peoria OEM will coordinate with County Emergency Management Agency to ensure plans are consistent, data is current and efforts are coordinated. If city resources are exceeded in the course of an emergency response, Peoria County will provide resource assistance and facilitate additional assistance in accordance with the Peoria EOP and ICS protocols.

F. State and Federal Government

The Illinois Division of Emergency Management and Federal agencies provide support to the city of Peoria as resources available are exceeded due to an emergency. Energy emergencies that are widespread or national in extent may require legislative or policy changes that are beyond the authority of the city of Peoria. Resource allocation may also reach a point that state or national interests become a primary consideration. State and Federal Government Agencies are responsible for providing status and policy updates during statewide or national energy emergencies and coordination of information for public release. The Illinois Energy Assurance Plan details responsibilities of state and federal agencies.

Communications and coordination of energy disruption information is captured in the following diagram from the Illinois Energy Assurance Plan.



V. Strategy for Incorporating New Technologies and Renewable Energy Resources

As the designated Local Energy Assurance Planning Coordinator, the City of Peoria Emergency Manager maintains awareness of Department of Energy, Local Energy Assurance Program initiatives, workshops, webinars, exercises and publications that focus on new technologies and renewable energy resources. The coordinator is responsible for distributing information and educational opportunities as appropriate and encouraging participation of supporting departments and private sector partners. Coordination with utility providers to update the PEAP and to incorporate the status of implementation of new and smart grid technologies will occur annually during plan maintenance.

Reducing energy usage and/or utilizing alternative forms of energy is beneficial for the City by decreasing energy dependency and reducing energy costs. Some measures to be considered include:

- Building weatherizing improvements such as insulation, weatherproofing and upgraded windows and doors can produce significant savings in energy usage.
- Upgrading heating, ventilating and air-conditioning systems and replacing other electric powered equipment (vending machines, water coolers, appliances, office equipment) with more efficient (ENERGY STAR®) equipment.
- Upgrade streetlights and traffic signals to energy efficient designs.
- Energy usage policy implementation:
    - Turn off power to unused equipment or lights.
    - Manage air temperature settings to save energy.
    - Limit building occupancy hours to save on lighting and heating/cooling.
    - Install motion detecting switches in less-used areas.

- Upgrade building lighting to energy efficiency bulbs and fixtures such as compact fluorescent lights.
- Maximize usage of natural light.
- Explore implementation of alternative energy sources such as solar panels or wind turbines.
- Upgrade roofing systems to reduce energy usage.

The Illinois Commerce Commission maintains a list of websites with information to reduce residential and business energy usage
at: http://www.icc.illinois.gov/consumer/energy/controllingyourenergybill.aspx .

The EPA also provides community government energy efficiency information at their website: http://www.epa.gov/statelocalclimate/resources/strategy-guides.html

The City of Peoria should continue to pursue state and federal grants and incentives to invest in an energy efficient future. Funding for city building energy audits could be particularly effective in identifying the most effective energy efficiency measures as well as compiling data regarding how quickly the investment would pay for itself and continue on to save the city money. Grants and incentives are available from the state and federal government to pursue energy audits on city facilities and systems. The city can continue to promote residential and commercial energy efficiency by publicizing state and federal programs and working to get the message out at community sponsored events. The Illinois Energy Office is also available to assist in these efforts as is Ameren.

Fuel efficient and/or alternative fuel city vehicles are an area that the City has not invested in heavily and can be explored as the popularity, reliability and cost effectiveness improves. There are many options to explore including electric, hydrogen or fuel cell vehicles, biodiesel, ethanol or hybrid vehicles. Benefits can include both reduced energy or fuel demand and reducing emissions. Most alternative fuel vehicles have a tradeoff, either high costs up front and with repairs or a lack of refueling/recharging locations. Future vehicle purchases should be looked at closely for opportunities to expand alternative fuel use in the city.

In response to concerns over air quality and meeting EPA requirements the TCRPC has implemented a Clean Air Action program focused on educating the public on measures to reduce ground level ozone. Many of these measures, such as car pooling, public transportation and energy efficient appliances and lighting also reduce energy demands.

VI. Plan Maintenance

The OEM will be responsible for maintenance of the PEAP and will regularly engage PEAP Team members in review and update of the plan and supporting documents. The OEM will establish an annual review and update schedule for the plan.

As the primary coordinating department, the Peoria Emergency Manager will initiate and encourage participation in plan training and exercise opportunities and will notify supporting departments of

training and exercise events. The Emergency Manager will coordinate after action reviews following plan activations; maintain a list of corrective actions; and implement timelines and responsibilities for addressing corrective actions.

VII. Authorities and References

A. Federal

1. Robert T. Stafford Disaster Relief & Emergency Assistance Act, (as amended), 42 U.S.C. 5121
2. Emergency Planning and Community Right-to-Know Act, 42 USC Chapter 116
3. Emergency Management and Assistance, 44 CFR
4. Hazardous Waste Operations & Emergency Response, 29 CFR 1910.120
5. Homeland Security Act of 2002
6. Homeland Security Presidential Directive. *HSPD-5,* Management of Domestic Incidents
7. Homeland Security Presidential Directive, *HSPD-3,* Homeland Security Advisory System
8. National Incident Management System
9. National Response Plan
10. National Strategy for Homeland Security, July 2002
11. Nuclear/Radiological Incident Annex of the National Response Plan

B. State

1. Illinois Emergency Management Agency Act
2. Title III – Emergency Planning and Community Right-to Know
3. Illinois state EA Plan

C. Local

1. City of Peoria Code Chapter 7 Dated April 2006.
2. Joint Resolution between the County of Peoria and the City of Peoria.
3. Inter-local Agreements & Contracts as documented in Peoria EOP attachment 6.

Attachment A – Critical Facilities

Energy Assurance Critical Facility Database – Government Facilities		
Sector	Facility Name/Type	Address
Emergency Services	Emergency Operations Command Center	419 Fulton St.
Emergency Services	Fire Central	505 NE Monroe St
Emergency Services	Fire Station #3	1204 W. Armstrong Ave
Emergency Services	Fire Station #4	2711 SW Jefferson Ave
Emergency Services	Fire Station #8	832 W. Hurlburt St.
Emergency Services	Fire Station #10	3316 N. Wisconsin Ave.
Emergency Services	Fire Station #11	1025 W. Florence Ave.
Emergency Services	Fire Station #12	3004 NE Adams St.
Emergency Services	Fire Station #13	2114 W. Richwoods Blvd.
Emergency Services	Fire Station #15	717 W. Detweiller Dr.
Emergency Services	Fire Station #16	2105 W. Northmoor Rd.
Emergency Services	Fire Station #19	5719 Frostwood Pkwy.
Emergency Services	Fire Station #20	2020 W. Wilhelm Rd.
Law Enforcement	Police Station	600 Southwest Adams St.
Government	City Hall	419 Fulton St.
Public Works	Sanitary District Treatment Plan	2322 South Darst St.
Public Works	City of Peoria Public Works Facility	3505 N. Dries Ln.
Transportation	Greater Peoria Regional Airport (General Wayne A. Downing Peoria International Airport) [PIA]	6100 Everett M Dirksen Parkway
Law Enforcement	Peoria County Jail	301 N. Maxwell Road

Energy Assurance Critical Facility Database – Private Sector		
Sector	Facility Name/Type	Address
Heavy Equipment/Alt. Facility for EM use	Caterpillar Inc.	100 Northeast Adams Street
Fuel	Huck's Convenience	101 Farmdale Rd
Fuel	Huck's Convenient Food Store	1015 West Camp Street
Fuel	Freedom Oil Company	1023 North Main Street
Fuel	Thorntons	107 W. Spring Creek Road
Fuel	Mac Donald Shell	1108 West Main Street
Fuel	Mac Donald's Shell	1200 W Pioneer Pkwy
Fuel	Robbie's 66 Service Center	1302 West Bradley Avenue
Fuel	Dependable Towing & Auto Services	1302 West Bradley Avenue
Fuel	Huck's	1415 W Alta Rd
Fuel	Auto Gas of Spring Bay	1510 Spring Bay Road
Fuel	Shell	1900 North Knoxville Avenue
Fuel	Gale Gasoline Inc	1930 West Forrest Hill Avenue
Fuel	Mac Donald Shell	200 North MacArthur Highway
Fuel	S K Short Shop	2000 Springfield Road
Fuel	Jumers BP & Food Shop	211 N Western
Fuel	Illico Inc	2136 Airport Road
Fuel	Thorntons	2255 East Washington Street
Fuel	Circle K	2312 North Knoxville Avenue
Fuel	Clark Refining & Marketing	2412 N Sheridan Rd
Fuel	BP - Mac'S Convenience Stores, Llc	2416 N University
Fuel	Circle K	2416 North University Street
Fuel	Circle K	2427 West Northland Avenue
Fuel	Shell Gas Station	2519 North Main Street
Fuel	Freedom Oil Co	2631 West Farmington Road
Fuel	Mobil	2900 Northeast Adams Street
Fuel	BP - Mac'S Convenience Stores, Llc	301 N Main
Fuel	Circle K	3016 West Farmington Road
Fuel	Harper Oil Company	3020 West Lincoln Avenue
Fuel	Harper Oil Co	3203 Southwest Adams Street
Fuel	Clark Refining & Marketing	3508 West Harmon Highway
Fuel	BP - Mac'S Convenience Stores, Llc	3623 N University
Fuel	Santok Inc	3701 East Washington Street

Energy Assurance Critical Facility Database – Private Sector		
Sector	Facility Name/Type	Address
Fuel	Huck's Convenient Food Store	3819 West War Memorial Drive
Fuel	MacDonald Shell Station	3903 Baring Trace
Fuel	Clark	3907 North Sheridan Road
Fuel	Ameri Gas	3916 Southwest Adams Street
Fuel	Downtown 66	400 NE Adams St
Fuel	BP - Mac'S Convenience Stores, Llc	4245 Knoxville
Fuel	Circle K	4245 North Knoxville Avenue
Fuel	BP	4430 North Prospect Road
Fuel	Macdonald Shell	4709 North Sterling Avenue
Fuel	BP - Yoder Oil Inc	505 Northeast Jefferson Avenue
Fuel	Big Hollow Convient	6023 North Big Hollow Road
Fuel	M & G One	640 West Main Street
Fuel	Mac Donald's Shell	710 West Detweiller Drive
Fuel	Elite Oil Co	721 East Camp Street,
Fuel	Huck's Convenient Food Store	7225 N Allen Rd
Fuel	Convenient Food Mart	725 North Western Avenue
Heavy Equipment/Alt. Facility for EM use	Caterpillar Inc.	AD Building-West Washington Street
Energy	Electric SubStations	
Energy	Natural Gas Storage	
Energy	Propane Locations	
Fuel	Suburban Gas	3311 West Farmington Road
Fuel	Cady Oil	5023 N. Galena Rd. Peoria Heights 309-688-2111
Transportation	Mt. Hawley Auxilary Airport	1320 West Bird Boulevard

Energy Assurance Critical Facility Database – Health Care/Vulnerable Populations		
Sector	Facility Name/Type	Address
Healthcare	OSF Hospital	530 N.E. Glen Oak Avenue
Healthcare	Methodist Hospital	900 Main St.
Healthcare	Proctor Hospital	5409 North Knoxville Ave
Nursing Home	Apostolic Christian Skylines	7023 Northeast Skyline Drive
Nursing Home	Bel-Wood Nursing Home	6701 West Plank Road
Nursing Home/Healthcare	Heartland of Peoria	1701 West Garden Street
Nursing Home	Liberty Village - Manor Court	6900 N Stalworth Dr
Nursing Home	Sharon Health Care	3614 North Rochelle Lane
Nursing Home	The Lutheran Home	7019 N Galena Rd
Nursing Home	Rosewood Care Center	1500 West Northmoor Road and 900 Centennial Dr
Public Health	Peoria City/County Health Department	2116 North Sheridan Road
PubHealth	Homeless Shelters	
PubHealth	Daycare Facilities	
PubHealth	Public Health State/Local	
Adult Daycare	Senior World	719 300 North William Kumpf Boulevard
Child Care	Westminster Infant Care Center	1420 West Moss Avenue
Child Care	Florence KinderCare	1125 West Florence Avenue
Child Care	Illinois Central Clg Child Cr	115 Southwest Adams Street
Child Care	Kid's Care America	2715 North Main Street
Child Care	Hansel & Gretel Day Care Center	154 East Washington Street
Child Care	PCCEO Headstart-Health Center	923 West Millman Street
Child Care	Ms B's Daycare	412 East Archer Avenue
Child Care	Crittenton Centers	442 W John H Gwynn Jr Ave
Child Care	ABC You & Me Day Care	1314 Southwest Adams Street
Child Care	Children's Home	2130 North Knoxville Avenue
Child Care	Christ Lutheran Child Care	2020 W Malone St
Child Care	Tonee's Tender Care	2407 North Peoria Avenue
Child Care	Leeann's Day Care	2608 North Bigelow Street
Child Care	Bright Futures	500 E Glen Ave # 1

Energy Assurance Critical Facility Database – Health Care/Vulnerable Populations		
Sector	Facility Name/Type	Address
Child Care	Mrs Marcia's Little Wonders	729 West Corrington Avenue
Child Care	Day Care Alternative	4026 North Illinois Avenue
Child Care	Everyday Discoveries Preschool & Daycare	8823 North Industrial Road
Child Care	Child Care Connection	5407 North University Street
Child Care	Ready Care Inc	4906 North Prospect Road
Child Care	New Horizon Child Care Inc	5409 North Knoxville Avenue
Child Care	You & Me Kid	1106 South Pierce Avenue
Child Care	Bright Futures	4906 North Prospect Road
Child Care	Illinois Central College Child Care Connection	5407 N University
Child Care	St John Lutheran Child Care	6614 West Smithville Road
Child Care	Polliwogs Child Care	6521 North Sheridan Road
Child Care	Jesu Children's Enrichment Center	2900 West Heading Avenue

Energy Assurance Critical Facility Database - Education		
Sector	Facility Name/Type	Address
High School	Manual	811 S. Griswold St.
High School	Peoria	1615 N. North St.
High School	Richwoods	6301 N. University St.
Middle School	Calvin Coolidge	2708 W. Rohmann Ave.
Middle School	Lincoln	700 Mary St.
Middle School	Lindbergh	6327 N. Sheridan Rd.
Middle School	Mark Bills	6001 N. Frostwood Pkwy.
Middle School	Rolling Acres	5617 N. Merrimac Dr.
Middle School	Sterling	2315 N. Sterling Ave.
Middle School	Von Steuben	801 E. Forrest Hill Ave.
Primary School	Charter Oak	5221 Timberedge Dr.
Primary School	Franklin	807 W. Columbia Ter
Primary School	Glen Oak Community Learning Center	2100 N Wisconsin Ave.
Primary School	Harrison Community Learning Center	2727 W Krause Ave.
Primary School	Hines	4603 N. Knoxville Ave.
Primary School	Irving	519 N. E. Glendale Ave.
Primary School	Kellar	6413 N. Mt. Hawley Rd.
Special School	Jamieson	2721 W. Richwoods Blvd.
Special School	Knoxville Center for Student Success	2628 N. Knoxville Ave.
Special School	Roosevelt Magnet	704 W. Aiken Ave.
Special School	Valeska Hinton Early Childhood Center	800 W. R.B. Garrett Ave.
Special School	Washington Gifted School	3706 N. Grand Blvd.
Special School	Woodruff Career and Technical Center	800 N.E. Perry Ave.
Higher Education	Illinois Central College	5407 North University Street
Higher Education	Bradley University	1501 West Bradley Avenue
Higher Education	Midstate College	411 West Northmoor Road
Special School	Myah's Just 4 Kids Learning	415 Southwest Adams Street
Special School	Rogy's Learning Place	1221 Northeast Glen Oak Avenue
Special School	Rogy's Learning Place	1010 West Johnson Street
Special School	Montessori School of Peoria	3601 North North Street
Special School	Community Action Headstart	923 West Millman Street

Energy Assurance Critical Facility Database - Education		
Sector	Facility Name/Type	Address
Special School	PALS Pre School & Kindergarten	700 Northeast Greenleaf Street
Special School	Rogy's Learning Place	3006 North Main Street
Special School	Community Action Head Start	2219 South Idaho Street
Special School	123 You-N-Me Preschool	809 W Detweiller Dr # A
Special School	Rogy's Learning Place	702 East Lake Avenue
Special School	Peoria Academy	2711 W Willow Knolls Dr
Special School	A Plus Children's Academy Inc	6431 North Big Hollow Road
Special School	Early Learning Center	7411 North University Street
Special School	Rogy's Learning Place	144 Thunderbird Lane
Special School	Little Friends Learning Center	1715 West Alta Road
Special School	AppleTree Academy	1601 West Alta Road
Special School	Montessori Academy of Peoria	5901 North Prospect Road
Special School	Aletheia Classical Christian School	7229 North Knoxville Avenue
Special School	Rogy's Learning Place	2900 West Heading Avenue
Special School	PALS Pre School & Kindergarten	2000 W Pioneer Pkwy
Special School	Rogy's Learning Place	1010 North Hilltop Road
Special School	Rogy's Learning Place	1523 West Candletree Drive

Attachment B - Resources

Energy Assurance Resource Database - Generators

Ownership	Location	Portable/Stationary	Voltage 120/240/480	Phase Single/3	KW	Amps	Notes
Peoria	Fire OEM	Stationary					
Emergency Services	Fire Central	Stationary					Partial Supply - No other Fire Stations have generators.
Emergency Services	911 Dispatch	Stationary					
Police Station	600 SW Adams						Partial Supply
Peoria Sanitary Dist.	2322 South Darst						
Peoria Pulibc Works	3505 Dries Lane						Partial Supply
Peoria County Jail	301 N. Maxwell Rd						Partial Supply
Caterpillar	AC Building	Stationary					12-16 hours of power for the facilities critical infrastructure. Other generator specs are not available in the notes
Caterpillar	LC Building						24 hours of back up power. Other generator specs are not available in the notes
Peoria International Airport	Main Terminal/ Old Terminal/ Runway Lights						
National Guard							

Energy Assurance Resource Database - Fuels				
Resource Type	Quantity	Location	Ownership	Notes
Diesel/Gasoline	100,000 gallons	Cady Oil Company Fuel Farm	Cady Oil Company	Information obtained from Caterpillar stakeholder interview. Amounts of each fuel type not certain.
Diesel/Gasoline	40,000 gallons		Peoria Public Works	
Jet Fuel	40,000 gallons	6100 Everett M Dirksen Pkwy	Peoria International Airport	
Gasoline			Ameren Corporation	
Diesel	150,000 gallons		Caterpillar Corporation	
Diesel/Gasoline		101 Farmdale Rd	Huck's Convenience	
Diesel/Gasoline		1015 West Camp St	Huck's Convenient Food Store	
Diesel/Gasoline		1023 North Main St	Freedom Oil Company	
Diesel/Gasoline		107 W. Spring Creek Rd	Thorntons	
Diesel/Gasoline		1108 West Main St	Mac Donald Shell	
Diesel/Gasoline		1200 W Pioneer Pkwy	Mac Donald's Shell	
Diesel/Gasoline		1302 West Bradley Ave	Robbie's 66 Service Center	
Diesel/Gasoline		1302 West Bradley Ave	Dependable Towing & Auto Services	
Diesel/Gasoline		1415 W Alta Rd	Huck's	
Diesel/Gasoline		1510 Spring Bay Rd	Auto Gas of Spring Bay	
Diesel/Gasoline		1900 North Knoxville Ave	Shell	
Diesel/Gasoline		1930 West Forrest Hill Ave	Gale Gasoline Inc	
Diesel/Gasoline		200 North MacArthur Highway	Mac Donald Shell	
Diesel/Gasoline		2000 Springfield Rd	S K Short Shop	
Diesel/Gasoline		211 N Western	Jumers BP & Food Shop	

Energy Assurance Resource Database - Fuels				
Resource Type	Quantity	Location	Ownership	Notes
Diesel/Gasoline		2136 Airport Road	Illico Inc	
Diesel/Gasoline		2255 East Washington St	Thorntons	
Diesel/Gasoline		2312 North Knoxville Ave	Circle K	
Diesel/Gasoline		2412 N Sheridan Rd	Clark Refining & Marketing	
Diesel/Gasoline		2416 N University	BP - Mac'S Convenience Stores, Llc	
Diesel/Gasoline		2416 North University St	Circle K	
Diesel/Gasoline		2427 West Northland Ave	Circle K	
Diesel/Gasoline		2519 North Main St	Shell Gas Station	
Diesel/Gasoline		2631 West Farmington Rd	Freedom Oil Co	
Diesel/Gasoline		2900 Northeast Adams St	Mobil	
Diesel/Gasoline		301 N Main St	BP - Mac'S Convenience Stores, Llc	
Diesel/Gasoline		3016 West Farmington Rd	Circle K	
Diesel/Gasoline		3020 West Lincoln Ave	Harper Oil Company	
Diesel/Gasoline		3203 Southwest Adams St	Harper Oil Co	
Diesel/Gasoline		3508 West Harmon Highway	Clark Refining & Marketing	
Diesel/Gasoline		3623 N University	BP - Mac'S Convenience Stores, Llc	
Diesel/Gasoline		3701 East Washington St	Santok Inc	
Diesel/Gasoline		3819 West War Memorial Dr	Huck's Convenient Food Store	
Diesel/Gasoline		3903 Baring Trace	MacDonald Shell Station	
Diesel/Gasoline		3907 North Sheridan Rd	Clark	

Energy Assurance Resource Database - Fuels				
Resource Type	Quantity	Location	Ownership	Notes
Diesel/Gasoline/Propane		3916 Southwest Adams St	Ameri Gas	
Diesel/Gasoline		400 NE Adams St	Downtown 66	
Diesel/Gasoline		4245 Knoxville	BP - Mac'S Convenience Stores, Llc	
Diesel/Gasoline		4245 North Knoxville Ave	Circle K	
Diesel/Gasoline		4430 North Prospect Rd	BP	
Diesel/Gasoline		4709 North Sterling Ave	Macdonald Shell	
Diesel/Gasoline		505 Northeast Jefferson Ave	BP - Yoder Oil Inc	
Diesel/Gasoline		6023 North Big Hollow Rd	Big Hollow Convient	
Diesel/Gasoline		640 West Main St	M & G One	
Diesel/Gasoline		710 West Detweiller Dr	Mac Donald's Shell	
Diesel/Gasoline		721 East Camp St	Elite Oil Co	
Diesel/Gasoline		7225 N Allen Rd	Huck's Convenient Food Store	
Diesel/Gasoline		725 North Western Ave	Convenient Food Mart	
Propane		3311 West Farmington Rd	Suburban Gas	

Attachment C – Information Resources

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
Local Government Energy Assurance Guidelines	Public Technology Institute	The publication helps city and county officials to address energy assurance and security concerns for mission-critical government facilities.	http://www.pti.org/index.php/ptiee1/more/410/
Miscellaneous Data re: Energy in the United States	U.S. Energy Information Administration	The U.S. Energy Information Administration (EIA) collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.	http://www.eia.gov/
Information regarding programs services, hearings and workshops, as well as legal authorities and rules as they pertain to electricity, natural gas, and other public utilities.	Illinois Commerce Commission	Public Utility work focuses on financial and operational analysis, policy development, public safety and enforcement activities related to electric, natural gas, water, sewer and telecommunications companies.	http://www.icc.illinois.gov/
Information regarding grid modernization, regulatory reform, and other energy improvement efforts in the State of Illinois.	Smart Energy Illinois	Resource for information about Illinois' efforts to modernize our energy infrastructure, deliver valuable benefits to customers and businesses and drive job growth and economic development in Illinois	http://www.kcc.state.ks.us/energy/index.htm
Sector Specific Plans-including Energy	U.S Department of Homeland Security	The Energy Sector-Specific Plan: An Annex to the National Infrastructure Protection Plan	http://www.dhs.gov/files/programs/gc_1179866197607.shtm
Energy Planning Bulletins, Energy Assurance Guidelines, LEAP Cities and Regions, and other news and information	Local Government Energy Assurance	Along with the Public Technology Institute, LEAP has identified cities in the US with the DOE to establish a plan and program to have complete assurance of energy to the city no matter the disaster or emergency.	http://www.energyassurance.us/
Background, resources, uses, and regulations pertaining to natural gas.	Natural Gas	The website created and maintained by the Natural Gas Supply Association to provide unbiased details on all forms of Natural Gas.	www.naturalgas.org

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
Smartgrid information clearing house	Smart Grid	This Website describes the Smart Grid, as was set out by Energy Independence and Security Act of 2007. The Smart grid is advancement on the current system by allowing rural natural renewable to power out of state. This will also improve on preventing blackouts.	http://www.sgiclearinghouse.org/
Information resources regarding energy economy, national security safety, energy usage and efficiency. Also contains state energy assurance information and documents.	Department of Energy	The Department of Energy is for developing programs and resources to protect America and reduce dependence on fossil and foreign fuels.	http://energy.gov
Information regarding regulatory and governmental issues pertaining to petroleum marketers.	Petroleum Marketers Association of America	PMAA represents all major players in the Petroleum market. They represent the more than 8000 distributors nationwide.	http://pmaa.org/govtregaffairs/regulatory.asp
Information on programs for energy efficiency, clean energy, and renewable fuel.	Illinois Department of Commerce and Economic Development	The Bureau of Energy and Recycling works to create jobs and stimulate economic development through programs and policies that invest in Green Economy efforts.	http://www.ildceo.net/dceo/Bureaus/Energy_Recycling/
Resources regarding oil and gas rules, guidance documents, standards, and legislation	Illinois Oil and Gas Association	The Illinois Oil and Gas Association represent all distributors, owners, landowners, or interested parties in the state of Illinois.	http://www.ioga.com/
Provides general and state specific information regarding public works mutual aid and emergency management training.	Illinois Public Works Mutual Aid Network	The network was established to help Public Works departments throughout the state for a disaster.	http://ipwman.org/
Provides a list of helpful links to various governmental agencies and insurance information.	Illinois Petroleum Marketers Association/ Illinois Association of C-Stores	Association which promotes profitable marketing environment for petroleum marketers and convenience store operators in the State of Illinois.	http://www.ipma-iacs.org/i4a/pages/index.cfm?pageid=3282

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
DHS iCAV infrastructure GIS connection site	U.S Department of Homeland Security	The Integrated Common Analytical Viewer, or iCAV, is a secure, web-based, geospatial visualization suite of tools that integrates commercial and government-owned data and imagery from multiple sources.	http://www.dhs.gov/files/programs/gc_1217445858859.shtm
EIA Energy Assurance Daily	U.S. Department of Energy	Energy Assurance Daily provides a summary of public information concerning current energy issues. Published Monday through Friday to inform stakeholders of developments affecting energy systems, flows, and markets, it provides highlights of energy issues rather than a comprehensive coverage.	http://www.oe.netl.doe.gov/ead.aspx
EIA – Illinois Energy Profile	U.S Energy Information Administration	Website provides state specific energy sector and infrastructure information regarding power production and distribution capacity.	http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=IL
EIA – Short Term Energy Outlook	U.S Energy Information Administration	Projects Fuel Expenditures by Fuel and Region, as well as fuel market projections.	http://www.eia.doe.gov/emeu/steo/pub/contents.html?featureclicked=1&
EIA – Annual Energy Outlook	U.S Energy Information Administration	Projects annual Fuel Expenditures by Fuel and Region, as well as fuel market projections.	http://www.eia.doe.gov/oiaf/aeo/index.html
Electric Power Monthly Use Report	U.S Energy Information Administration	Contains statistics on electric power plants, capacity, generation, fuel consumption, sales, prices and customers.	http://www.eia.doe.gov/cneaf/electricity/epm/epm_sum.html
DOE Quarterly Coal Report	U.S Energy Information Administration	The Quarterly Coal Report (QCR) provides detailed quarterly data on U.S. coal production, exports, imports, receipts, prices, consumption, and coal quality and stocks.	http://www.eia.doe.gov/cneaf/coal/quarterly/qcr_sum.html
US EPA eGRID electrical grid information website	U.S. Department of Environmental Protection	The Emissions & Generation Resource Integrated Database (eGRID) is a comprehensive source of data on the environmental characteristics of almost all electric power generated in the United States. eGRID is unique in that it links air emissions data with electric generation data for United States power plants.	http://cfpub.epa.gov/egridweb/
EIA – Illinois' Electricity Profile	U.S Energy Information Administration	Provides information of state electricity profiles	http://www.eia.doe.gov/cneaf/electricity/st_profiles/illinois.html
NERC Electric Sector Threat Advisory Level	U.S Energy Information Administration	The Electricity Sector Information Sharing and Analysis Center (ES-ISAC) shares critical information with industry participants regarding infrastructure protection.	http://www.nerc.com/page.php?cid=6|69|312

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
NERC Awareness Bulletins	North American Electrical Reliability Corporation	NERC provides programs and services designed to support owners, operators and users of the bulk power system. NERC shares information on best practices, supporting training and education, and monitoring the international electric grid.	http://www.nerc.com/page.php?cid=6|69|313
American Petroleum Institute Statistics Page	American Petroleum Institute	The website contains information on the average price of gasoline at the pump, the countries the U.S. imports of oil and product from, state motor fuel tax rates and information on subscribing to API statistical reports and packages.	http://www.api.org/statistics/
AAA Fuel Gauge Report	AAA	Contains national average fuel price information and daily fuel gauge report.	http://www.fuelgaugereport.com/
EIA Natural Gas Monthly Report	U.S Energy Information Administration	Natural and supplemental gas production, supply, consumption, disposition, storage, imports, exports, and prices in the United States.	http://www.eia.doe.gov/oil_gas/natural_gas/data_publications/natural_gas_monthly/ngm.html
Illinois Commerce Commission Annual Report on Natural Gas Use and Companies	Illinois Commerce Commission	Eclectic, Gas, Water, and Sewer Utilities Annual Reports	http://www.icc.illinois.gov/reports/Results.aspx?t=1
Illinois Commerce Commission Annual Report on Natural Gas Prices	Illinois Commerce Commission	Annual comparisons of sales statistics based upon information filed by the electric and gas utilities in each utility's Form 21 ILCC.	http://www.icc.illinois.gov/publicutility/salesstatistics.aspx?t=g
NYMEX Henry-Hub Natural Gas Price	NYMEX Henry-Hub	Daily Natural Gas Prices and Trends	http://www.oilnergy.com/1gnymex.htm
Henry Hub Gas Futures & City Gate Physical Gas Prices	NYMEX Henry-Hub	Daily Report of Natural Gas Storage and Market Information	http://www.enerfax.com
EIA State Renewable Energy Profiles	U.S Energy Information Administration	Capacity and generation of electricity from renewable sources in the United States. Profiles provided by state.	http://www.eia.doe.gov/cneaf/solar.renewables/page/state_profiles/r_profiles_sum.html
Biorefinery locations	Renewable Fuels Association	Map of Biorefinery locations throughout the United States.	http://www.ethanolrfa.org/bio-refinery-locations/

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
Potential Electricity Generation from Wind Map	U.S. Department of Energy	The Department of Energy's Wind Program and the National Renewable Energy Laboratory (NREL) published a wind resource map for states. The wind resource map shows the predicted mean annual wind speeds at 80-m height.	http://www.windpoweringamerica.gov/wind_resource_maps.asp?stateab=il
DOE – OE ISER Report Energy Assurance Daily (EAD)	U.S. Department of Energy	Energy Assurance Daily provides a summary of public information concerning current energy issues.	http://www.oe.netl.doe.gov/ead.aspx
Energy Assurance Guidelines, Volume 3.1	National Association of State Energy Officials	*Version 3.1 of the Guidelines is an update to version 3 released in June 2009. It reflects a number of minor clarifications and updates and includes additional discussion on Cyber Security issue*	http://www.naseo.org/eaguidelines/
Geographic Information System (GIS) – iCAV & DHS Earth	U.S. Department of Homeland Security	iCAV is a secure, Web-based, geospatial visualization tool that integrates commercial and government-owned data and imagery from multiple sources.	https://icav.dhs.gov/ https://icav.dhs.gov/dhsearth/
NOAA National Weather Service Heating & Cooling Degree Days	National Climatic Data Center	NCDC produces numerous climate publications.	http://www.ncdc.noaa.gov/oa/documentlibrary/hcs/hcs.html
Hurricane Information – Bureau of Ocean Energy Management, Regulation, & Enforcement	Bureau of Ocean Energy Management	Information regarding the effects of tropical storms and hurricanes on petroleum production.	http://www.gomr.mms.gov/homepg/whatsnew/hurricane/index.html
FERC Midwest Electric Power Markets	Federal Energy Regulatory Commission	Information on electric power markets in the Midwest.	http://www.ferc.gov/market-oversight/mkt-electric/midwest.asp
NERC Alerts	North American Electrical Reliability Corporation	NERC provides “alerts” designed to provide concise, actionable information to the electricity industry regarding actions deemed to be “essential” to bulk power system reliability and potential issues.	http://www.nerc.com/page.php?cid=5|63
NERC Energy Emergency Alerts	North American Electrical Reliability Corporation	Reports on energy emergency alerts.	http://www.nerc.com/page.php?cid=5|65
NERC Reliability Assessments	North American Electrical Reliability Corporation	Long-term reliability assessments, summer and winter assessments, and special assessments as they pertain to energy.	http://www.nerc.com/page.php?cid=4|61

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
NERC System Performance Indicators	North American Electrical Reliability Corporation	The Risk Assessment of Reliability Performance Report analyzes the historical risks to the bulk electric system with a view towards developing a risk-based approach to solving important problems on the bulk electric system.	http://www.nerc.com/page.php?cid=4|37
NERC Annual System Disruption Reports	North American Electrical Reliability Corporation	Summary reports on disturbances that occur on the bulk electric systems in North America, including electric service interruptions, voltage reductions, acts of sabotage, unusual occurrences that can affect the reliability of the bulk electric systems, and fuel problems.	http://www.nerc.com/page.php?cid=5|66
EIA – Electric Power Flash	U.S Energy Information Administration	Data published in the Flash Estimates are compiled from the following sources: Form EIA-826, "Monthly Electric Utility Sales and Revenues with State Distributions Report," and Form EIA-923, "Power Plant Operations Report.	http://www.eia.doe.gov/cneaf/electricity/epm/flash/flash.html
EIA – Coal Fuel Data	U.S Energy Information Administration	Information on Global Coal Production Shares	http://www.eia.doe.gov/fuelcoal.html
EIA – Generation Capacity & Plant Availability (Power Plant Inventory in the United States)	U.S Energy Information Administration	The Form EIA-860 is a generator-level survey that collects specific information about existing and planned generators and associated environmental equipment at electric power plants with 1 megawatt or greater of combined nameplate capacity.	http://www.eia.doe.gov/cneaf/electricity/page/eia860.html
High-Impact, Very Low Probability Risks	North American Electrical Reliability Corporation	High-Impact, Low-Frequency (HILF) events are those risks whose likelihood of occurrence are uncertain relative to other threats, but could significantly impact the system were they to occur. They include, but are not limited to, electromagnetic pulse events, geomagnetic storms, pandemic influenza, and coordinated cyber attacks.	http://www.nerc.com/page.php?cid=6|69|327
EIA - Petroleum Navigator - Home page	U.S Energy Information Administration	Winter Heating Oil Price Projections	http://www.eia.doe.gov/dnav/pet/pet_sum_top.asp
EIA - Weekly Petroleum Status Report	U.S Energy Information Administration	Weekly projections regarding petroleum prices and other market statistics.	http://www.eia.doe.gov/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/wpsr.html
EIA - US Weekly Gasoline Prices by Region	U.S Energy Information Administration	Weekly prices for the United States by region, state, and city.	http://www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_home_page.html
EIA - Weekly Retail On-Highway Diesel Prices	U.S Energy Information Administration	Weekly prices for the United States by region, state, and city.	http://www.eia.doe.gov/oog/info/wohdp/diesel.asp
EIA - Gasoline & Diesel Fuel Update	U.S Energy Information Administration	Gas and Diesel real time market information	http://www.eia.doe.gov/oog/info/gdu/gasdiesel.asp

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
EIA - Market Assessment of Planned Refinery Outages	U.S Energy Information Administration	Market Assessment of Refinery Outages Planned for March 2010 through June 2010 reviews the supply implications of refinery outages planned for March through June 2010, which covers the seasonal increase in gasoline demand.	http://www.eia.doe.gov/pub/oil_gas/petroleum/feature_articles/2010/outage2010a/outage2010a.html
EIA - Company Level Imports	U.S Energy Information Administration	Company import data regarding crude oil.	http://www.eia.doe.gov/oil_gas/petroleum/data_publications/company_level_imports/cli.html
EIA - Petroleum Marketing Monthly	U.S Energy Information Administration	Monthly price and volume statistics on crude oil and petroleum products at a national, regional and state level.	http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_marketing_monthly/pmm.html
EIA - Petroleum Supply Monthly	U.S Energy Information Administration	Supply and disposition of crude oil and petroleum products on a national and regional level. The data series describe production, imports and exports, movements and inventories.	http://www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_supply_monthly/psm.html
EIA - Prime Supplier Report	U.S Energy Information Administration	The Prime Supplier Report presents data collected on Form EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption." These data measure primary petroleum product deliveries into the States where they are locally marketed and consumed.	http://www.eia.doe.gov/oil_gas/petroleum/data_publications/prime_supplier_report/psr.html
EIA - Heating Oil & Propane Update	U.S Energy Information Administration	Weekly heating oil and propane prices are only collected during the heating season which extends from October through March.	http://www.eia.doe.gov/oog/info/hopu/hopu.asp
EIA - Refinery Capacity Report	U.S Energy Information Administration	Data series include fuel, electricity, and steam purchased for consumption at the refinery; refinery receipts of crude oil by method of transportation; current and projected capacities for atmospheric crude oil distillation, downstream charge, production, and storage capacities.	http://www.eia.doe.gov/oil_gas/petroleum/data_publications/refinery_capacity_data/refcapacity.html
GAO Natural gas pipeline safety report to Congress	U.S. Government Accountability Office	Recommendations regarding risk based standards for pipeline safety.	http://www.gao.gov/new.items/d06945.pdf
DOE Electric Disturbance Events Report	U.S. Department of Energy	The Electric Emergency Incident and Disturbance Report (Form OE-417) collects information on electric incidents and emergencies.	http://www.oe.netl.doe.gov/oe417.aspx
Federal Electric Event Emergency Alert and Incident Report	U.S Energy Information Administration	Monthly and annual summaries of electric disturbances.	http://www.eia.doe.gov/cneaf/electricity/page/disturb_events.html

Peoria Energy Assurance References List			
Guidance	**Organization**	**Description**	**Web Address**
DOE emergency situations report for electricity	U.S. Department of Energy	Energy Emergency Situation Reports	http://www.oe.netl.doe.gov/emergency_sit_rpt.aspx
Yields and Crop Predictions for Corn and Soybeans	U.S. Department of Agriculture	Current U.S. Agriculture commodity prices.	http://www.nass.usda.gov/

City of Peoria Energy Profile

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I. Population and Economic Summary

Illinois is the fifth most populous state in the US. The population of Peoria has decreased in the past several decades dropping off from a 126,000 residents high in 1970 to 112,000 in 2000. Since 2000 the population has increased slightly to 115,000.

The City of Peoria experienced a sharp economic downturn in 2008. A slow recovery began in late 2009 and has continued, with a 1% growth rate between May of 2010 and May of 2011. Unemployment rates are on par with the national average at 9.5%. Employment is lead by healthcare (29,321), followed by manufacturing (28,231), retail trade (25,036), and professional services (23,454). The median household income is $48,913, slightly below the national average.

II. Energy Use

Energy use data is not readily available down to the city level. The following is an excerpt from the 2011 *Illinois Energy Assurance Plan* describing the use of energy within Illinois.

The State used just over 4 trillion Btu of total energy in 2008 (Energy Information Administration) which is 4.1% of the US total, while producing just over 2 trillion Btu of energy making it a net importer of energy. Illinois is also ranked 5th in the country in industrial manufacturing but ranked 29th for per capita energy use indicating its industrial base may not be energy intensive. The state has limited reserves of petroleum and natural gas and must import these from other States or countries. Illinois also has a large coal reserve (produced 33.7 million short tons in 2009), but much of the coal is currently not mined and is high in sulfur. The State imports a lot of coal from western states for electrical generation, 94% in 2008 (37.2 million tons). The State, however, is a net exporter of electricity with an active nuclear generation industry. Illinois has 11 operating reactors at 6 facilities and ranks 1st in the nation in nuclear electrical generation.

The following table indicates the energy sources and total British thermal units (Btu) for Illinois in 2008. Twenty four percent of the total energy used in Illinois was from nuclear generated electricity versus the national average of 8.5%. This could be a critical difference in Illinois' energy portfolio which needs to be taken into account when considering energy assurance and potential disruptions. Nuclear energy is considered by many to be clean and renewable, but the nature and removal requirements of the waste have made its use controversial, and Illinois' plants are aging. Illinois does, however, have a very active monitoring program, and the plants are operating at capacity which is also increasing with improved efficiencies. The plants are also expected to continue operations beyond their current proposed lifespan of 30 years as safety records and rigorous monitoring indicate they can continue to function well within guidelines. Below is summary of information for these major energy sources for Illinois.

2008 Illinois Energy Use in Trillions of Btu

State	Total Energy	Coal	Natural Gas	Petroleum	Nuclear	Renewable	Interstate Elec. Flow
Illinois	4,089	1,103	1,003	1,324	995	176	-512
%	100%	27%	25%	32%	24%	4%	-12%

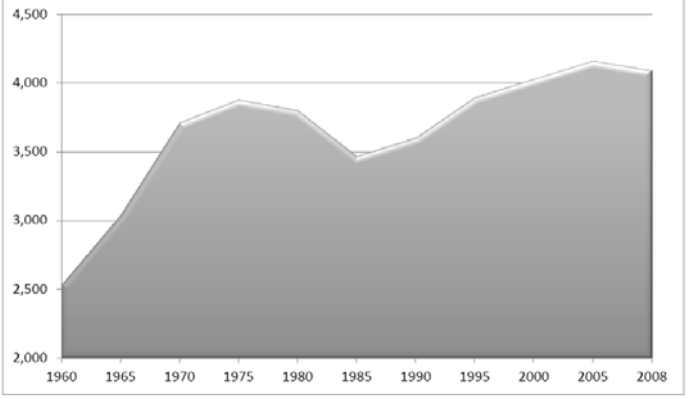
In 2008, only 4% of Illinois' energy came from renewable sources. In August of 2007, the state adopted a renewable energy standard requiring state utilities to produce at least 25% of their energy from renewables, (75% of this is to come from wind) and improve efficiency by 2%. Special considerations for the electrical grid to support wind will need to be built into the system. Electricity from wind is intermittent. The electrical grid is designed to anticipate needs and provide total energy requirements for that period. One option is natural gas generators to accompany wind operations. These generators can quickly fire up and change output to compensate for the intermittent output from wind, but they can be expensive.

An overview of Illinois' energy strengths and weaknesses would indicate the state is a major transportation, distribution and oil refining location and produces a good deal of electricity but also imports much of the raw materials for energy production.

Strengths and Weaknesses of Illinois Energy Supplies

Strengths	Weaknesses
Petroleum	
* Leads the Midwest in refining capacity numerous pipelines run through and terminate in state	* Most of state's petroleum is imported making state vulnerable to supply disruptions
* 4 in-state refineries	* Any disruption in down-stream pipelines
* Oil coming from Canada and Gulf Coast	impacts Illinois production
Electricity	
* Top nuclear electricity producing state in US	* Top energy consuming state due to industry
* 3rd largest coal reserves in US	* Most of state's coal inaccessible and high in sulfur
* Leading producer and net exporter of electricity	* Strong reliance on coal and nuclear (Over 95%)
Natural Gas	
* Major transportation hub for natural gas	* Most natural gas used by state is imported
* Numerous pipelines run and end in state impacts Illinois production	* Any disruption in down-stream pipelines
Renewable	
* Top producer of corn-based ethanol	* Little potential for hydro-electric development
* Potential for wind and solar contributions	* Estimated renewable capacity will not meet state demand

A summary of Illinois' energy sources, infrastructure, supply and demand shows an increasing use of all energy sources since 1960. This trend is expected to continue, according to the EIA. Total energy consumption in the US is expected to increase by 15% by 2022.



Total Energy Consumption in Illinois 1960-2008 (In Trillions of Btu)

III. Energy Infrastructure

The 2009 National Infrastructure Protection Plan (NIPP) builds upon past efforts and outlines recommendations on how to protect and enhance the reliability of critical infrastructure during natural or man-made disasters. Energy is one of 18 sectors for critical infrastructures and key assets identified in the NIPP. The full list of critical infrastructures includes:

Agriculture and food	Drinking water and wastewater	Nuclear reactors, materials, and waste
Defense industrial base	Chemical	Information technology
Energy	Commercial facilities	Communications
Healthcare and public health	Critical manufacturing	Postal and shipping
National monuments and icons	Dams	Transportation systems
Banking and finance	Emergency services	Government facilities

The Energy Sector includes infrastructure assets from electric power, natural gas and petroleum. Energy assets and critical infrastructure components are owned by private, Federal, State, and local entities, as well as by some types of energy consumers, such as large industries and financial institutions (often for backup power purposes). The following table describes supporting activities and assets for each type of energy[1].

Electricity	Natural Gas	Petroleum
• Generation - Fossil Fuel Power Plants - Nuclear Power Plants - Hydroelectric Dams - Renewable Energy • Transmission - Substations - Lines - Control Centers • Distribution - Substations - Lines - Control Centers • Control Systems • Electricity Markets	• Production - Gas Fields • Processing • Pipelines - Transport - Distribution • Storage • LNG Facilities • Control Systems • Gas Markets	• Crude Oil - Oil Fields - Terminals - Pipelines - Storage • Processing Facilities - Refineries - Terminals - Pipelines - Storage - Control Systems - Petroleum Markets

A. Infrastructure Interdependencies

The infrastructure of a local community consists of many elements, including electricity transmission lines and distribution systems, gas pipelines and storage facilities, water

[1] *Energy Sector-Specific Plan 2010, An Annex to the National Infrastructure Protection Plan*

and sewer systems, communication lines, transportation systems, medical and emergency facilities, telephone switching stations, and cell towers. Each element of a community's infrastructure also has its own internal infrastructure. The concept of infrastructure interdependency is based on connectivity between the various elements of an infrastructure. It means that a disruption in one element can affect the functioning of numerous systems that depend on that element, possibly causing a cycle of infrastructure disruption.

Interdependencies vary in complexity and scale. Some interdependencies have only local linkages. For instance, a loss of electricity in one part of the electric grid may affect the city's drinking water treatment plant. More complex and interdependent systems can have regional, national, and international linkages. For example, a disruption in telecommunications services could affect banking and financial systems locally, and then spiral into a global problem.

There are three types of infrastructure interdependency failures:

Failure Type Description

Cascading failure - A disruption in one infrastructure causes a disruption in a second infrastructure; for example, a loss of energy causes a wastewater treatment plan to shut down.

Escalating failure – A disruption in one infrastructure exacerbates an independent disruption of a second infrastructure; for example, the time it takes to restore banking services is prolonged because telecommunications lines and signals are not available.

Common-cause failure - A disruption of two or more infrastructures at the same time is the result of a common cause; for example, a tornado adversely impacts the availability of electric power, petroleum, clean water, and telecommunications simultaneously.

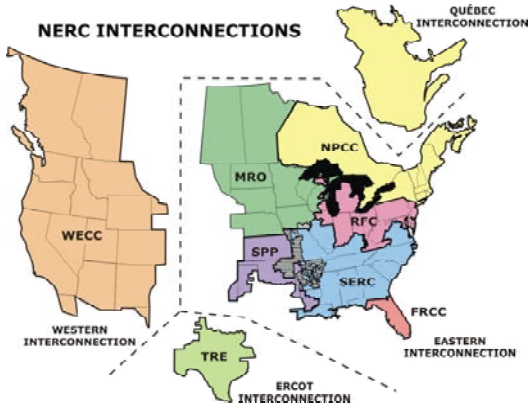
In the course of the development of the PEAP, several interdependencies of significant concern were identified and will require continued coordination to increase resiliency.

- Communications dependencies on electricity. Currently battery backup systems maintain functionality at key communications nodes. Internet service back-up capabilities will function up to 12 hours independently, but will require replacement after that time period. Cellular communications dependencies require further coordination to define.
- Continuity of Government dependencies on electricity. Generators are in place at key emergency and governmental facilities; however a full assessment of the capability for essential functions to be maintained has not been performed to capture all interdependencies and impacts of an electricity disruption for an extended period.
- Water distribution and sewage treatment infrastructure. Public health services as well as the health and welfare of the general population are dependent on the capability to maintain water and sewage, both of which have electrical dependent components. Water distribution is provided by Illinois-American Water Company.

- Private sector dependencies on electricity and fuel. The public could become increasingly dependent on city government in long tern electrical or fuel disruptions. Service normally provided by the private sector may not be available due to delivery disruptions, inability to store perishables, and financial sector disruptions making credit cards and cash machines non-functional.

IV. Energy Providers

A. Electricity



Illinois is divided by two North American Electric Reliability Corporation (NERC) zones which consist of different electricity distribution grids, the Reliability First Corporation (RFC) zone, and the South East Reliability Corporation (SERC) zone. Except for locations with municipal utilities, Ameren is responsible for distributing and delivering the electricity within the SERC zone including the city of Peoria. Many of the electrical generating facilities are owned by sister companies of Ameren and ComEd (all of the nuclear facilities are owned by Exelon a sister company to ComEd). The Illinois Electric Supplier Act (220 ILCS 30/1) allows for more than one electrical supplier to service any area in Illinois.

The Illinois Commerce Commission (ICC) is the state regulating agency over electricity providers and as such has established guidance addressing standards of service. This includes policy associated with service disruptions and reporting requirements.

1. 83 Illinois Administrative Code Section 411.120 Requirements

Section 411.120 of 83 Illinois Administrative Code Part 411 sets forth notification and reliability standards for Illinois electricity providers such as Ameren. Following are several key reporting requirements that facilitate energy emergency coordination, information distribution and emergency planning.

Section 411.120 Notice and Reporting Requirements

a) *Telephone or facsimile notice. A jurisdictional entity must provide notice by telephone or by facsimile transmission to the Consumer Services Division of the Commission when any single event (e.g., storm, tornado, equipment malfunction, etc.) causes interruptions for 10,000 or more of the jurisdictional entity's customers for three hours or more. After such interruptions have continued for three hours, a jurisdictional entity must provide notice within one hour when the notice would be provided during normal business hours, or within the first hour of the next business day. A jurisdictional entity shall provide updates every two hours during the normal business day until service is restored to all customers involved. To the extent that data and information are known, such notice shall include the data and information listed below.*

1) *An estimate of the number of customers the interruptions affect.*

2) *Starting date of the interruptions.*

3) *Starting time of the interruptions.*

4) *Duration of the interruptions.*

5) *Locations of the interruptions, described as precisely as possible in generally recognized and geographically oriented terms such as street address, subdivision, or community.*

6) *Description of the cause of the interruptions.*

7) *The date and time when the jurisdictional entity expects to restore electric service.*

8) *The name and telephone number of a jurisdictional entity representative the Commission Staff can contact for more information about the interruptions.*

9) *Customer call volume to the jurisdictional entity during the interruption as compared to normal call volume and the steps the jurisdictional entity is taking to address call volume.*

b) *Annual report. On or before June 1 of each year, each jurisdictional entity, except for jurisdictional entities exempt under Section 411.110(b), shall file with the Chief Clerk of the Commission an annual report for the previous calendar year submitted under oath and verified by an individual responsible for the jurisdictional entity's transmission and distribution reliability.*

1) *The data requirements incorporated in the annual report are not meant to replace timely reports on outages when they occur or are remedied as required by other provisions of this Part.*

2) *Supporting data used for more than one purpose or calculation need be submitted only once in each annual report, if submitted with clear cross-references. Data should be consistent and differences reconciled to the extent possible.*

3) *The annual report shall include the information listed below.*

A) *A plan for future investment and, where necessary, reliability improvements for the jurisdictional entity's transmission and distribution facilities that will ensure continued reliable delivery of energy to customers and provide the delivery reliability needed for fair and open competition, along with the estimated cost of implementing the plan and any changes to the plan from the previous annual report.*

i) *The plan must cover all operating areas, including a description of the relevant characteristics of each operating area and the age and condition of the jurisdictional entity's equipment and facilities in each operating area.*

ii) *The plan shall cover a period of no less than three years following the year in which the report was filed.*

iii) *The plan shall identify all foreseeable reliability challenges and describe specific projects for addressing each.*

iv) *The plan shall report and address all unresolved reliability complaints about the jurisdictional entity's system received from other utilities, independent system operators, and alternative retail electric suppliers.*

v) *The plan shall report the specific actions, if any, the jurisdictional entity is taking to address the concerns raised in such complaints received from other utilities, independent system operators, and alternative retail electric suppliers.*

vi) *The plan must consider all interruption causes listed in Section 411.120(b)(3)(D).*

vii) *The plan must consider the effects on customers and the cost of reducing the number of interruptions reported as required by Section 411.120(b)(3)(C).*

Additional sections of the annual report document reporting requirements on planned and unplanned service interruptions, duration and steps to minimize service interruptions. The annual report is a key resource for the city of Peoria to track area disruption issues and progress towards rectifying issues, overall service reliability status, and long-term plans for infrastructure maintenance, improvements and capacity. Portions of the Ameren Annual 411 Report are included in the Peoria Energy Profile, the full report is included as an attachment to the Peoria LEAP.

Ameren

The ICC requires electricity providers to provide extensive service reliability data. The following sections are drawn from the 2010 Ameren annual report to the ICC on capacity and reliability.

The Ameren electric system consists of nearly 29,000 miles of distribution lines with voltages ranging between 600 V and 69 kV. Approximately 86% of these lines are overhead, with the remaining 14% underground. This system serves more than 1.2 million customers throughout the lower three-quarters of the State of Illinois (Figure 3). Along with rural communities, Ameren also delivers electricity to larger areas such as Peoria, Galesburg, Quincy, Bloomington-Normal, Champaign-Urbana, Decatur, Mattoon, Belleville, Marion, and Carbondale.

2. Capacity Planning

Ongoing system planning studies are performed to help ensure the integrity of the transmission and distribution system. These efforts include preparing electric load forecasts, monitoring facility loadings, evaluating the system impacts of proposed generating units, and identifying required system reinforcements and expansions. Although not readily quantifiable, the reliability improvements associated with capacity-related system reinforcements and expansions include the following:

- Reduced risk of equipment failure and outage due to overload
- Improved reserve capability and correspondingly, reduced outage duration
- Facility upgrades, which can also address condition issues

3. Reliability Indices and Measures

In 2010 Ameren's System Average Interruption Frequency Index (SAIFI Index) for controllable outages dropped to 1.14. Controllable outages include all outages except those that are due to customer equipment, are intentional or are due to loss of supply. The 2010 result continues a positive trend and is the Company's best overall SAIFI performance for controllable outages since 2006, the first year that statistics included all three predecessor companies. The table below presents the SAIFI Index for over the last five years.

Year	SAIFI--Controllable Outages
2010	1.14
2009	1.21
2008	1.62
2007	1.37
2006	2.21

Another measure of reliability performance that saw improvement in 2010 involved the Company's worst performing circuits (WPC's). As seen in the table below when comparing averages of the SAIFI, Customer Average Interruption Frequency Index (CAIFI) and Customer Average Interruption Duration Index (CAIDI) indices for the worst performing circuits to the previous year, significant progress has been made as a result of the considerable investment made in the maintaining and upgrading of the WPC's.

Worst Performing Circuit Index Averages			
Year	SAIFI	CAIFI	CAIDI
2010	3.45	3.78	927
2009	4.19	4.34	2969

Ameren also improved its count of customers exceeding reliability targets (CERT's) with respect to frequency and duration in 2010. At the distribution voltage level, to be listed with respect to frequency a customer must incur at least six interruptions during each of the previous three years, and to be listed with respect to duration a customer must incur at least 18 hours of total interruption during each of the previous three years. As shown in the table below, the count with respect to frequency in 2010 was reduced to only 4 customers, while the 2010 count with respect to duration represents a 38% improvement in performance over the 2009 result.

Year	CERT's—Frequency	CERT's—Duration
2010	4	980
2009	92	1,590

Another measure of system reliability is customer interruption level. Increased numbers of customers who experience either no outages or only one outage during the year help to drive down the SAIFI Index. As seen in the table below, 65% of customers were at those outage levels in 2010, a 4% improvement over the Company's 2009 performance and an 11% improvement since 2008.

Interruption Level	2010	2009	2008
0	449,251	406,921	342,324
1	358,636	353,509	325,832
2	201,816	225,655	231,034
3	109,767	126,884	142,183
4	58,629	64,095	79,738
5	31,859	28,934	48,876
6	11,591	11,682	27,286
7	5,748	6,035	14,821
8	3,460	3,599	9,325
9	1,128	2,122	4,989
10	574	87	2,984
11 to 15	275	1,396	2,619
16 to 20	1	9	90
Over 20	0	0	0
Total	**1,232,735**	**1,230,928**	**1,232,101**

As Ameren has added automation and intelligence to its electrical distribution system, it has been a challenge to manage the additional data and continue to efficiently operate the system. A large scale initiative that is the planned solution to this challenge and represents a significant investment for AIC is the Advanced Distribution Management System (ADMS) project. The ADMS will replace existing systems and applications utilized in the operation of Ameren's electric distribution system. The new supervisory control and data acquisition (SCADA) system is planned to be in operation in 2012 with the additional functional areas to be placed in service in 2013. This system will allow Ameren to operate and manage the distribution system more efficiently, accurately, and safely.

4. Preventative Measures

a) Device Inspection Program

The Device Inspection Program utilizes the Circuit and Device Inspection System (CDIS) to track both the devices requiring inspection and the results of those inspections. Capacitor banks are inspected annually, while reclosers, regulators, and sectionalizers are inspected twice a year. Many repairs can be completed at the time of the inspection. However, deficiencies requiring follow up repair by a two-man or larger crew are also tracked to completion. The following table reflects the results of devices inspected and repairs completed during 2010.

AIC Device Inspection Summary 2010

Division	Devices to be Inspected	Devices Inspected	Repairs Generated	Repairs Completed
1	2,567	2,543	20	20
2	990	987	147	136
3	1,395	1,389	5	5
4	2,260	2,260	82	82
5	1,579	1,579	83	83
6	2,653	2,650	92	92
TOTAL	11,444	11,408	429	418

For 2010, 99.7% of the device inspections were carried out, while by the end of the year, 97.4% of the repairs generated had been completed. In 2011, Ameren plans to continue the Device Inspection Program. The number of devices inspected will be similar to the 2010 totals, with the number of repairs generated being dependent on the issues found as a result of the inspections.

b) Vegetation Management

In 2010, Ameren trimmed 100% of the circuit miles (8,889 miles) that were scheduled for maintenance trimming. In addition, approximately 157 miles of 2011 cycle work was trimmed in the fourth quarter of 2010.

Mid-cycle circuit inspection/trimming was performed on 100% of circuits schedule in 2010. This program identifies and addresses vegetation issues that have evolved since the last scheduled cycle trim. During mid-cycle, Ameren focuses efforts on “cycle-buster” trees which are affecting the three-phase backbone and facilities that are untapped.

Ameren conducted a vegetation management sourcing event during calendar year 2010. As a result, Wright Tree Service was awarded vegetation related work in Divisions 1, 2, 3 & 4-North. Nelson Tree service was awarded vegetation related work in Divisions 4-South, 5 & 6. Both contracts are in effect from 1/1/11 – 12/31/15.

In 2010, Ameren was once again named a "**Tree Line USA"** utility company. The National Arbor Day Foundation recognizes utilities that participate in quality tree care practices, annual worker training, tree planting within communities, and public education. Ameren continued tree replacement and Arbor Day programs within several cities throughout its territory. Ameren promotes planting the right tree in the right place. It is important for Ameren to work with communities to identify and remove existing problem trees in order to increase reliability. In 2010, Ameren removed 119,806 trees as a proactive approach to reducing tree related outages. This figure includes trees removed through community programs and trees that jeopardized the system.

In 2011, Ameren has scheduled 550 circuits (8472 miles) for maintenance trimming. The number of circuits to be trimmed in 2011 maintains AIC's commitment to adhere to a four year cycle. Ameren will also perform a mid-cycle patrol on 544 circuits.

c) Damage Prevention

Ameren takes proactive steps to minimize damage to underground facilities. This damage prevention program provides internal and external education on underground facility damage prevention. Ameren personnel support this effort in the following ways:

- Participate as members of the Illinois One-Call Center, Joint Utility Locating Information for Excavators (J.U.L.I.E.). Ameren employees currently hold positions on the J.U.L.I.E. Board, including President and Treasurer/Secretary.
- Participate in the Northern Illinois Pipeline Association (NIPA)/Southern Illinois Pipeline Association (SIPA) organizations to meet DOT/ICC emergency responder training commitments.
- Provide face-to-face presentations for individual fire departments, schools, safety fairs, excavators, and apprentice groups.
- Provide ongoing internal training with Division personnel regarding changes in legislation and refresher training on safety and the damage prevention process.
- Provide face-to-face meetings to excavators who have repeatedly damaged Ameren facilities.
- Perform field audits to ensure quality locating is being conducted by the contract locators.

- Participate in the American Gas Association's Damage Prevention Team to aid in the development of "Best Practices" in a national effort to reduce third-party damages to underground facilities.

- Send J.U.L.I.E. excavator handbooks to excavators who have damaged Ameren facilities

- Contact equipment rental agencies and garden centers/nurseries about the possibility of having J.U.L.I.E. brochures (excavators handbook, homeowners guide) available at their stores.

- Conduct meetings/training with the alliance contractors Ameren uses to construct gas and electric facilities. These sessions will include safety, J.U.L.I.E. law, and the damage prevention process.

The focus on the J.U.L.I.E. process and support of the programs above helps to maintain or improve reliability by reducing damages.

In 2011, the following damage prevention initiatives are planned:

- Expand the current Watch & Protect program to include all high pressure gas mains and all steel mains 8" in diameter and greater.

- Enhance the damage tracking system by using a GIS system to plot damages throughout the year.

d) Animal Protection - Circuits

In 2010, Ameren reviewed 26 circuits for additional animal guarding. Of those, 25 were deemed as viable projects. In 2010, 1,481 animal guards were installed on those circuits with another 973 planned for 2011. Almost all animal guarding completed in 2010 was done so prior to the rate case outcome in April.

In 2011, Ameren has identified 12 circuits where additional animal guarding is a cost efficient means to improve reliability. Ameren plans to install 664 animal guards in 2011 with an additional 253 in 2012 to further protect the identified circuits.

As previously stated, all new overhead distribution transformers continue to be purchased and installed with animal protection. New transformers are equipped with a clam shell type of guarding and insulated wire. AIU has achieved a 34.5% reduction in animal caused customer interruptions since 2006.

e) Avian Protection

In 2010, Ameren retrofitted 558 poles on 14 circuits to adhere to avian friendly standards. These poles were identified in areas of known raptor population. In 2011, AIC will retrofit an additional 404 poles on 33 circuits.

In addition to retrofitting the identified poles, Ameren has adopted avian friendly standards for new construction to provide ongoing protection for avian wildlife. These new protection standards will also protect other wildlife, as the path from the primary transformer bushing up to the primary tap connection will be concealed with covered products on all new construction.

f) Animal Protection - Substations

Because large numbers of customers are affected when substation outages occur, animal protection projects inside the substation provide Ameren with opportunities to significantly enhance system reliability. Protection can include installing an electric animal fence around substation equipment, installing spinners on overhead conductors to mitigate animal intrusion, and equipping energized facilities within the substation with insulated cover-ups. Smaller scale mitigation projects that require a maintenance outage are coordinated with other substation maintenance activities in order to minimize customer interruptions.

In 2010, Ameren installed electric animal fences at 25 substations serving a total of 58,140 customers, in addition to completing various smaller protection projects of the types listed above. In 2011, the Company plans to continue its substation animal protection initiative, installing animal fences and other equipment as dictated by operational needs in accordance with sound engineering practice.

g) Multiple Device Interruptions

The objective of the Multiple Device Interruption Program is to positively influence Ameren's SAIFI index by identifying and correcting problems on circuits and portions of circuits that are subject to frequent outages. The program initiates the review and remedial actions for facilities that have experienced three or more interruptions during the previous 12 month period. Central to the program is the Weekly Reliability Review Process. A weekly report is generated that identifies all devices, including breakers, reclosers and fuses, on the AIC system that meet the program criteria.

The outages are then reviewed by the Divisions and the appropriate facilities inspected. In many cases, the reviews determine that the underlying outage causes have already been addressed or will be addressed through existing planned work. However, in some cases corrective action is initiated. Many of these projects focused on some of the same initiatives that are set up on a program basis, including lightning arrester installation, animal guarding, and underground cable replacement work, to name a few. The Vegetation Management group also completes a similar Weekly Reliability Review

Process when 50% or more of the outages that have occurred are tree-related. The remediation work that results from these inspections typically involve hot spot trimming projects.

Division and Vegetation Management reviews generated by the Multiple Device Interruption Program for 2010 are totaled and listed in the following table.

AIC Multiple Device Interruption Summary 2010

Division	Reviews Generated	Reviews Completed	Remediation Projects Planned	Remediation Projects Completed
1	360	281	16	16
2	33	33	14	11
3	13	13	11	10
4	85	85	8	8
5	78	76	16	16
6	79	79	66	66
TOTAL	648	567	131	127

The Multiple Device Interruption Program is ongoing in 2011. The number of reviews performed will be dependent on specific outages experienced.

h) Lightning Protection

Lightning protection has been identified by Ameren as a key component of enhancing system reliability. The objective of lightning protection initiatives and projects is to reduce the likelihood of customer outages due to lightning strokes, thereby reducing the Company's SAIFI index. Lightning protection initiatives and projects are documented in the Reliability Action Plans.

Projects that have been deemed as effective measures toward reducing lightning-caused outages include the upgrading of existing sub-transmission circuits and distribution feeders to current lightning protection design standards. The ability to identify the need for these projects has been enhanced by the ongoing Circuit Inspection Program which among other items indicates the presence and condition of lightning arresters and provides a check for broken and missing pole grounds. In 2010, the Company completed three sub-transmission lightning protection upgrade projects, two of which included the installation of lightning arresters, with the other raising the static wire on a 69 kV line to improve the shield angle. On its distribution system, the Company in 2010 upgraded six feeders to current design standards with the addition of lightning arresters. Additionally, inspections resulting from the Multiple Device Interruption Program that indicated inadequate lightning protection resulted in numerous completed projects in which lightning arresters were added on portions of feeders.

In 2010, in addition to the ongoing identification and completion of lightning protection projects described above, the Company has continued an initiative begun in 2009, the Lightning-caused Outage Reduction Program. All 11 projects that were to be engineered in 2009 have been completed in 2010 as scheduled. For 2010, the program analyzed AIC's worst performing circuits and next-worst performing circuits utilizing lightning cause code data from the Company's Outage Analysis System (OAS). Engineering work on the feeders can take advantage of the Vaisala Fault Analysis and Lightning Location System (FALLS), along with previously mentioned circuit inspection data concerning present arrester and pole ground placement. The resulting eight projects that were recommended for engineering in 2010 and targeted for completion in 2011 are also finished.

In 2011, the Company will continue to identify opportunities to enhance lightning protection on its sub-transmission and distribution facilities utilizing the results of circuit inspection and multiple device interruption data. Additionally, AIC has identified an additional ten feeders that are being targeted for engineering analysis in its Lightning-caused Outage Reduction Program.

B. Natural Gas

Although Illinois has very little indigenous natural gas production, the State is a major transportation hub for natural gas supply moving through North America. Major natural gas pipeline systems from the U.S. Gulf Coast, U.S. midcontinent regions, and western Canada converge at the Chicago Hub and the ANR Joliet Hub. From there, natural gas is transported to consumption markets in the Midwest and Northeast. In June 2009, a section of the eastern leg of the Rockies Express Pipeline system from Colorado and Wyoming began delivering additional natural gas supply to Illinois. To meet peak demand during the winter, Illinois stores natural gas in natural aquifers and depleted oil or natural gas reservoirs. Underground natural gas storage capacity in Illinois is second only to that of Michigan. The residential sector leads natural gas demand in Illinois, with more than four-fifths of Illinois households relying on the fuel as their primary energy source for home heating.

The EIA publishes a monthly report on natural gas inventories and deliveries to industrial, commercial and residential customers, withdrawals from underground storage and pricing. This information is compared to previous years and 4-month averages and can be used to identify trends in price and use. Also, according to the National Association of State Energy Officials (NASEO) Energy Assurance Guidelines, two other indicators of changes in natural gas supply are spot and contract prices and curtailment notices. Weather will also need to be watched. Long-term cold spells may impact supplies. To meet peak demand in the winter, the state stores natural gas in natural aquifers and depleted oil and natural gas reservoirs, but a disruption in a pipeline or accidental release of this gas could cause a shortage.

Along with electricity, Ameren is also responsible for natural gas distribution and delivery for a large area of Illinois. Illinois is at an advantage due to the ability to "take" from multiple pipelines as needed because of the large number of pipelines which pass through from other areas of the country. "Takes" operate year round and fill storage for emergencies. Single supplier disruption is not an issue in Illinois due to this ability.

Several companies own pipelines in Illinois, and the pipelines have to follow the same guidelines with the National Transportation Safety Bureau and ICC as petroleum pipelines. The Illinois Commerce Commission's Natural Gas Pipeline Safety section inspects natural gas pipeline facilities to assure compliance with all Federal and State safety rules and regulations pertaining to the design, construction, operation and maintenance of those facilities. All companies offering natural gas in Illinois have EOPs. Ameren is active in emergency training exercises.

C. Renewable Energy

The two primary components of Illinois' renewable energy portfolio are electricity from wind and solar and bio-fuels for transportation from ethanol (primarily from corn) and bio-diesel (primarily from soybeans). EIA reports minimal use of hydro-electricity in Illinois. In 2008, just over 4% of the state's total energy was provided by renewable sources for electricity, and that 1,438 megawatts were generated from renewables in 2007. Illinois' renewable energy standard requires the state's utilities to be producing 25% of their electricity from renewable sources by 2025. Much of this is expected to come from wind.

Illinois being a large corn and soybean production state (often first or second in production nationally) makes it a good location for the production of corn ethanol and soy bio-diesel. Current ethanol production in Illinois is greater than 860 million gallons per year. Plants often keep ethanol in storage at the facility. Illinois River Energy, for example, reports keeping 300,000 gallons of ethanol in reserve at all times. The Governor of Illinois has the authority to suspend the blend wall in times of emergency (allowing for more ethanol to be used in replacement of gasoline for fuel). This could make ethanol a viable alternative to gasoline in times of emergency if supply is cut off.

D. Petroleum

Illinois is a major delivery and transportation State for raw crude oil with four refineries in the State, and another just across the border in Indiana. Several pipeline companies deliver crude oil to these refineries. The ICC lists 26 pipeline companies certified in Illinois. These include each of the companies which own a refinery plus Enbridge, which provides an ever-increasing amount of Canadian crude. Oil which originates as raw crude is refined into petroleum products at the refineries, and additional pipelines transport the products to wholesaler, retailers and value-adders. Gasoline is transported to the 25 terminals in Illinois where it is mixed with additives for each gasoline station and transported via semi-trailer to the stations which are primarily independently owned. Each refinery has extensive plans for emergencies and disruptions.

Company	Nearest City	Barrels per Day
Citgo	Lemont	181,000
ExxonMobil	Joliet	248,000
Marathon	Robinson	204,000
ConocoPhillips	Wood River	306,000
BP	Whiting, IN	405,000

List of Illinois Refineries and Their Capacity

Gasoline is one of the major fuels consumed in the United States and the main product refined from crude oil. Consumption in 2010 was about 138 billion gallons, an average of about 378 million gallons per day. Gasoline accounts for about 66% of all the energy used for transportation, 47% of all petroleum consumption, and 17% of total U.S. energy consumption. About 49 barrels of gasoline are produced in U.S. refineries from every 100 barrels of oil refined to make numerous petroleum products. Transportation accounts for 27% of all energy consumption in Illinois, which makes it the second largest energy-consuming sector of the state economy after industry. Illinois is a major producer and consumer of ethanol. The state ranks second for consumption of ethanol and for the number of alternative fuel stations of all types.

The single biggest factor in the price of gasoline is the cost of the crude oil from which it is made. In recent years, the world's appetite for gasoline and diesel fuel grew so quickly that suppliers of these fuels had a difficult time keeping up with demand. This demand growth is a key reason why prices of both crude oil and gasoline reached record levels in mid-2008. By the fall of 2008, crude oil prices began to fall due to the weakening economy and collapse of global petroleum demand. These factors helped gasoline prices to drop below $2 per gallon of Regular gasoline in late 2008 and early 2009. The gradual improvement in the U.S. and world economies in 2010 and the political events in the Middle East and North Africa in early 2011, the source of about one third of world oil production, contributed to the increases in crude oil and gasoline prices in 2010 and 2011.

Any event that slows or stops production of gasoline for even a short time, such as planned or unplanned refinery maintenance or the refinery shutdowns that occurred when the Hurricanes Katrina and Rita hit the Gulf Coast in 2005, can prompt bidding for available supplies. If the transportation system cannot support the flow of surplus supplies from one region to another, prices will remain relatively high.

There are 3 bulk fuel suppliers in the Peoria area, Cady Oil, Yoder Oil and Ag-Land FS. Cady Oil is the primary supplier for the City. Contact information for each supplier is included in the resources attachment to the LEAP. Based on DHS - Homeland Security Infrastructure Program (HSIP) data there are 52 gas stations in the City. The State ranks second behind Minnesota in the number of E85 (an alternative fuel composed of 85 percent ethanol and 15 percent gasoline) fueling stations, with approximately 200. The Peoria area has 8 gas stations offering alternative fuels, 2 gas stations provide liquefied petroleum gas and 6 gas stations that provide ethanol in the area, detailed in the following figure.

Alternative Fuels and Advanced Vehicles Data Center: Alternative Fueling Station Locator

Alternative fueling stations within 15 miles of 61605

All Biodiesel (B20 and above)

Compressed Natural Gas

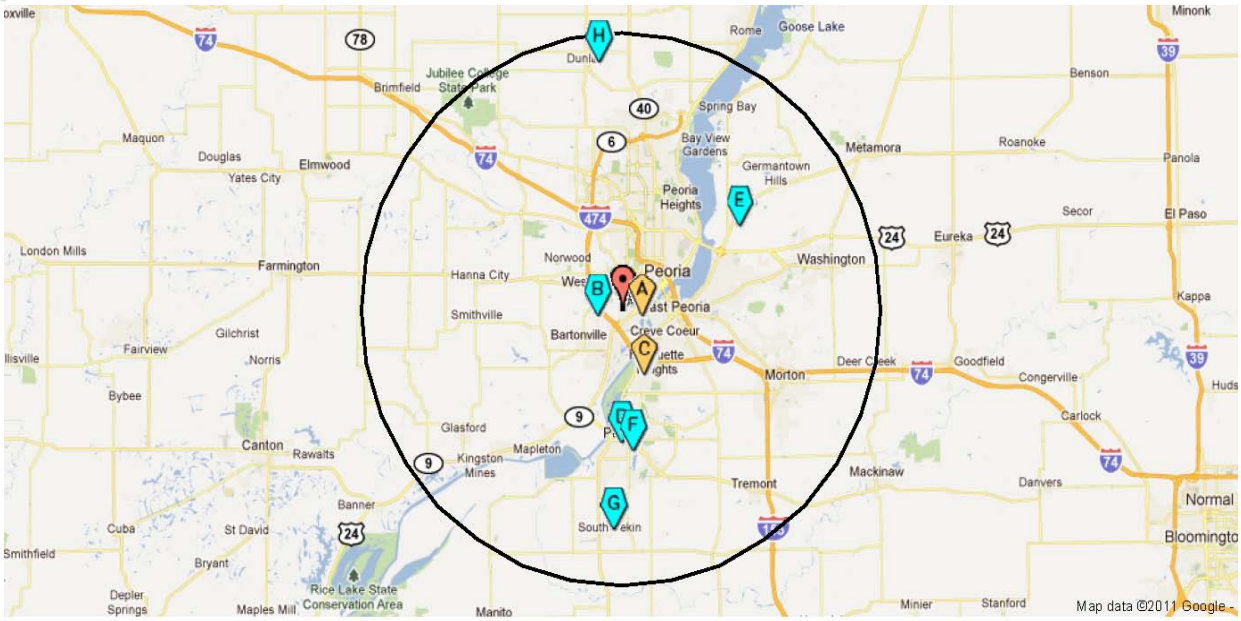
Ethanol (E85)

Electric

Hydrogen

Liquefied Natural Gas (LNG)

Liquefied Petroleum Gas (Propane)



A AmeriGas Liquefied Petroleum Gas (Propane) 3916 Adams St SW Peoria, IL 61605 **Phone:** 309-637-3518 **Distance**: 0.6 Miles **Intersection Directions:** Towards Bartonville **Access:** Public - call ahead	**B Phillips - Apollo Mart** Ethanol (E85) 2136 S Airport Rd Bartonville, IL 61607 **Phone:** 309-697-6610 **Distance**: 2.2 Miles **Intersection Directions:** Junction of Airport Road and W Harp Hollow Road **Access:** Public - see hours	**C Hicksgas** Liquefied Petroleum Gas (Propane) 460 Radio City Dr Pekin, IL 61554 **Phone:** 309-382-3431 **Distance**: 3.8 Miles **Access:** Public - call ahead
D USCO #6 Ethanol (E85) 801 S Second St Pekin, IL 61554 **Phone:** 309-346-4016 **Distance**: 7.4 Miles **Access:** Public - credit card after hours	**E Thorntons Store #351** Ethanol (E85) 107 W Spring Creek Rd East Peoria, IL 61611 **Phone:** 309-694-1777 **Distance**: 7.6 Miles **Access:** Public - see hours	**F USCO #1** Ethanol (E85) 815 Derby St Pekin, IL 61554 **Phone:** 309-346-4111 **Distance**: 7.8 Miles **Access:** Public - credit card after hours
G USCO Ethanol (E85) 12073 State Route 29 Pekin, IL 61554 **Phone:** 309-348-3938 **Distance**: 12.1 Miles **Access:** Public - see hours	**H USCO #8** Ethanol (E85) 114 N 4th St Dunlap, IL 61525 **Phone:** 309-243-7369 **Distance**: 13.4 Miles **Intersection Directions:** Route 91 **Access:** Public - see hours	

ELECTRIC ENERGY EMERGENCY

I. Purpose

This electric energy specific attachment to the Peoria Energy Assurance Plan (PEAP) provides information, guidance and procedures specific to an electrical energy emergency where electricity has been disrupted or demand threatens to exceed supply of electricity. This attachment provides general guidance and procedures and cannot account for every scenario or situation. The identified primary and supporting departments play an active role in responding to an energy emergency and will be referenced throughout the plan as the **PEAP Team**. It is expected that the PEAP Team will continually build upon and refine this plan through an active after-action review and corrective action program.

II. Situation

Short duration electrical disruptions are not uncommon for communities to experience periodically. The City of Peoria has in the past and will in the future experience longer term and wide spread electricity disruptions as a result of natural hazards such as ice or snow storms and thunderstorms or tornados.

The Illinois Electric Service Customer Choice and Rate Relief Law of 1997 restructured the state's electric service industry to allow a choice of electric suppliers. With electric choice, the electric supply may be provided by different companies known as Retail Electric Suppliers (RESs). Ameren is the primary RES for Peoria and is responsible for the transmission and distribution systems for electricity in Peoria. Ameren will coordinate notification, response and recovery efforts with the PEAP Team in regards to service disruptions and shortages. In the case where the City EOC has been activated, Ameren will provide a liaison to the EOC as requested and adhere to the best of their ability to the guidance set forth in the PEAP.

III. Concept of Operations

Electrical energy emergencies will be managed in accordance with the Peoria EOP and PEAP, additional electrical energy emergency specific roles and responsibilities are listed in section IV of this document. This section provides information about types and causes of electricity interruptions and shortages, general response actions and strategies to reduce demand.

A. Classification of Interruptions

Several types of disruptions to electric power service can affect customers. The most common disruptions are:

Interruption – a complete loss of electrical service or power outage. A power outage might affect only one customer, a neighborhood or several neighborhoods the entire city or the entire region.

Voltage fluctuation – a change in the voltage of the electricity provided to customers, either up or down, without a total loss of power. This type of disruption, commonly known as a "brownout," is most frequently observed during periods of peak demands for electricity

At times, an advance warning can enable customers to prepare for an interruption in service. Other times, interruptions occur without warning and, therefore, cannot be announced in advance. On this basis, interruptions can be grouped into five categories:

1. Intentional interruption – scheduled.

Some interruptions are intentional and can be scheduled in advance. For example, an interruption might be necessary when components of the power system are taken out of service for maintenance or upgrading. Scheduled intentional interruptions can last from several minutes to several hours. Often utilities are able to maintain service by completing necessary work with live lines or altering transmission routes to bypass areas undergoing maintenance.

2. Intentional interruption – unscheduled.

Some intentional interruptions must be done "on the spot." As a result, the level of advance notice dictated by a scheduled interruption cannot be provided. For example, a fire department or a police department might request an interruption in service during a fire or an accident.

3. Intentional interruption – demand-side management.

Some customers (on the demand side) have entered into an agreement (interruptible service rider) with Ameren to curtail their demand for electricity during periods of peak system loads. In return for agreeing to these interruptions, the customer receives a lower electricity rate and/or a rebate. These agreements are an important tool in Ameren's ability to maintain overall service when the grid is strained.

4. Intentional interruption – load shedding.

When the power system is under extreme stress because of heavy demand and/or failure of critical components, it is sometimes necessary to intentionally interrupt the service to selected customers to prevent the entire system from collapsing. In such cases, customer service (or load) is cut, sometimes with little or no warning. One form of load shedding — called a "rolling blackout" — involves cutting service to selected customers for a predetermined period (usually not more than two hours). As power is restored to one block of customers, power to another block of customers is interrupted to keep the overall load on the system down.

5. Unplanned interruption.

Unplanned interruptions are outages that come with essentially no advance notice. This type of interruption is the most problematic and can vary dramatically in extent and duration. Causes of unplanned interruptions include:

- Wires cut due to accidental dig-in;
- Malfunction, or equipment failure due to age, improper operation, excessive operation, or manufacturing defect;
- Overload on equipment;
- Reduced capability or equipment that cannot operate within its design criteria;

- Tree contact other than from storms;
- Vandalism, or intentional damage;
- Weather, including ice/snow, lightning, wind, and broken tree limbs; and
- Wildlife caused interruptions.

Many unplanned interruptions will affect a small number of customers and be of short duration while necessary repairs are completed. In situations where widespread disruptions occur or where disruptions will exceed more than four hours, Ameren will make efforts to notify customers and will assess disrupted areas for critical customers. If severe weather is forecasted, City of Peoria OEM may activate the EOC prior to the arrival of severe weather. If the EOC is activated the PEAP Team and Ameren will send staff to man the EOC and proceed with operations as per the City of Peoria EOP.

B. Critical Customers

While interruptions of a few minutes or less are usually merely a nuisance to customers, on occasion they can be serious. Interruptions to individuals who rely on electrically powered life support equipment could result in a medical emergency. The ICC requires utilities to maintain a list of critical customers and verify the list at least once every two years.

Facilities and services that provide for the health, safety and security of the public are also critical. A list of these locations is also maintained. It is important for the city to coordinate with Ameren to identify critical facilities and services and to work with them during an emergency to accurately plan restoration priorities. The PEAP Team and Ameren will coordinate as needed, at a minimum annually, to share and jointly develop critical customer and critical facility lists for the City of Peoria.

C. Demand Reduction

In situations where electricity production is or is likely to be insufficient to meet demand, measures to reduce demand can be very effective. The public can play a key role in reducing the demand for electricity if give adequate information and clear instructions. The Energy Assurance Public Information Strategies attachment is meant to complement and supplement, not replace the Peoria EOP Public Information Annex; it provides information on public outreach to promote conservation measures. Ameren public information officers should work closely with the city of Peoria public information officer and coordinate through the joint information center.

Ameren will notify OEM of expected shortages and the possible need for conservation. Conservation measures should be implemented at the city level when called for, to encourage public participation. The city can consider exemptions to conservation measures for health care facilities and families with young children or other populations sensitive to the measures.

D. Conservation Measures

1. Adjust Indoor Regulated Space Temperature

Encourage commercial and residential customers who use electricity for heating and/or cooling to adjust their building temperatures to a maximum of 65°F during winter and minimum of 78°F during summer (or other temperatures as recommended by Ameren).

2. Reduce Hot Water Temperature

Encourage commercial and residential users to lower the temperature of the hot water in their buildings to 105°F. Exemptions would be granted for hospitals and other public/private health care facilities, restaurants, laundries, and other buildings that require high temperature hot water for health or industrial purposes. The public should also be encouraged to install low-flow shower heads and other energy-saving measures.

3. Additional Consumer Conservation Measures

Consumers can voluntarily implement a number of other conservation measures to save electricity:

- Turn off lights, electronic equipment (such as computers and televisions), and appliances when not in use;
- Reduce wattage of light bulbs and replace traditional light bulbs with fluorescent bulbs;
- Clean the lint screen on washers and dryers after each load of laundry;
- Use electricity-intensive appliances during off-peak times only; and
- Reduce outdoor illumination to essential lighting only (such as for security purposes).

E. Escalating Shortage

Economic, political, natural disaster or other events can result in long term energy shortages that may require more formal implementation of voluntary conservation measures or even mandatory conservation measures. The OEM will closely coordinate with Ameren, County and State Emergency Management to assess the need for the Mayor to issue an Emergency Declaration and implement mandatory electricity conservation measures. Mandatory measures will include the previously described voluntary measures and could be expanded to include:

1. Reduced Operations Hours for Public Services and Schools

City offices and public school hours can be reduced or modified to reduce demand during peak periods.

2. Monitor Public and Commercial Usage

In close coordination with Ameren, high electricity usage customers can be identified and measures to reduce demand identified and implemented.

3. Heating Alternatives

If the electricity shortage occurs in winter, request residents and businesses using electrical heating systems to switch to other fuels for heating such as wood stoves or kerosene heaters.

In escalating shortages rolling blackouts have likely been implemented. The city will need to consider the need for heating or cooling shelters for residents experiencing electricity disruptions.

IV. Organization and Responsibilities

A. Organization

The Primary Department for energy emergencies is the OEM. The PEAP Team will be organized as described in the Energy Assurance Annex and support emergency operations in the EOC as directed in the EOP.

PEAP Coordinator
Peoria Emergency Manager

Primary Department
Peoria Office of Emergency Management

Supporting Departments
Peoria Department of Public Works
Peoria Public Information Officer
Peoria Police Department
Peoria Fire Department
Ameren

Governmental Supporting Agencies
Peoria County Emergency Management Agency
Illinois Commerce Commission
Illinois Energy Office
Illinois Emergency Management Agency
US Department of Energy

B. Responsibilities

The following energy and situation specific responsibilities are in addition to general responsibilities listed in the base Energy Emergency Annex Section III.

Scheduled Interruptions: Action	Responsible Party(s)
Efforts will be made to schedule intentional interruptions at a time that will limit the inconvenience to customers.	Ameren

Critical customers and public services facilities will be notified at least 24 hours in advance of the date, time and estimated duration of each planned interruption.	Ameren
Attempts to inform all other customers affected will also be made if the planned interruption will be greater than 4 hours in duration.	Ameren

Unscheduled Interruptions: Actions	Responsible Party(s)
Ameren will ascertain if any critical customers will be impacted by the unscheduled interruption and provide notification as soon as possible.	Ameren
Ameren will coordinate with OEM to provide information about the number of customers impacted.	Ameren
The OEM will assess the cause of the disruption and obtain an estimate of the duration of the interruption. If the interruption is expected to be for an extended period of time the procedures for unplanned interruptions > 4 hours will be implemented.	All

Demand Side Reduction: Actions	Responsible Party(s)
As much advance notice as practicable will be given to interruptible service customers, with a minimum being two hours. Advance notice will include the estimated duration of the curtailment.	Ameren
When electricity demand reaches a level that service interruption is considered or implemented, Ameren will initiate notification of the OEM to ensure situational awareness and assess the need for expanded electricity conservation measures and full activation of Energy Emergency Annex.	Ameren
The PEAP Team will prepare for implementation of public outreach measures to encourage conservation as well as city conservation measures.	OEM PIO
If the situation continues to escalate, the PEAP Team will be fully activated. The OEM will assess the need for activation of the EOC to monitor the situation and facilitate public outreach and communications.	All OEM
City and public electricity conservation measures will be implemented if demand-side management measures are found to be inadequate.	All

Public outreach plans to encourage conservation will be implemented.	All
City resources will be assessed and prepared for deployment in preparation for the possibility of load shedding measures.	OEM Public Works

Load Shedding: Actions	Responsible Party(s)
The Energy Emergency Annex is fully activated prior to implementation of load shedding measures. Public outreach to encourage conservation has already been implemented and conservation outreach will continue with additional information provided regarding load shedding measures.	All
The PEAP Team will initiate event log.	OEM All
If the City EOC is activated, the PEAP Team will provide staff to support operations and information requests as directed.	All Ameren
The need for public health and safety measures, such as cooling centers, will be assessed and implemented if warranted by the OEM. Cooling center locations will be prioritized higher on critical facility lists and coordinated with Ameren.	OEM Ameren
City resources are deployed as needed and maintenance, fueling and transportation of resources such as portable generators are managed by Energy Emergency supporting department Public Works. Supply of fuel for generators will be closely monitored. Resources will be purchased as necessary to the ability of the city.	Public Works Finance
The OEM and PEAP Team will assess the need for additional resources exceeding city capabilities and coordinate additional needs with Peoria County EMA or the County EOC if activated.	All
The Energy Emergency function will communicate with the Law Enforcement function on the status and locations of load shedding for consideration of additional security measures.	All

Unplanned Disruptions >4 hrs: Actions	Responsible Party(s)
Ameren will notify the OEM of the nature of the disruption, number of customers affected, and expected duration of the disruption.	Ameren
Coordinate with OEM to assess the need for EOC activation to monitor	OEM

the situation and implement public health and safety measures.	
Impacted critical needs populations, facilities and services will be identified and resources distributed as appropriate. o If EOC is activated or resources distributed, the PEAP team will initiate an event log and begin documentation of time and expenditures as directed in the City of Peoria EOP. o The PEAP team will monitor resource availability and maintain deployed resources as necessary. If additional resources are required, OEM will request needed resources through the Peoria County EMA or EOC as directed in the City of Peoria EOP.	All

Severe Weather EOC Activation: Actions	Responsible Party(s)
Provide staff to the EOC as requested.	OEM All
Ameren will provide a representative to the EOC as requested.	Ameren
Take preparatory measures for possible disruption including resource assessment and preparation for deployment.	All
PEAP team will initiate an event log and begin documentation of time, expenditures, and resource usage as directed in the City of Peoria EOP.	All
Ameren and PEAP damage assessment teams will report to the EOC the extent of damages, customers impacted, and expected duration of disruption.	Public Works Ameren
Impacted critical needs populations, facilities and services will be identified and resources distributed as appropriate.	All
City resources are deployed as needed and maintenance, fueling and transportation of resources such as portable generators are managed by Energy Assurance supporting department Public Works. Supply of fuel for generators will be closely monitored.	Public Works All
The PEAP team and OEM will assess the need for additional resources exceeding city capabilities and coordinate additional needs with County Emergency Management or the EOC if activated.	All
The need for public health and safety measures, such as cooling centers, will be assessed and implemented by the OEM if warranted. Cooling center locations will be prioritized higher on critical facility lists.	OEM
The PEAP team will communicate with the Law Enforcement function on the status and locations of load shedding for consideration of additional security measures.	All

Ameren will implement company response per standard procedures and access additional resources to speed response and recovery. o Situation updates will be provided to Energy Emergency function regularly. o Assistance requests, such as traffic control, debris removal, escorts or staging area locations or security will be requested through Energy Emergency function and the EOC.	Ameren
Ameren and PEAP team will coordinate to distribute consistent information to the public.	Ameren PIO
If city resources are exceeded, request assistance from Peoria County in accordance with the City of Peoria EOP.	OEM

Natural Gas Energy Emergency

I. Purpose

This natural gas energy specific attachment to the Peoria Energy Assurance Plan (PEAP) provides information, guidance and procedures specific to a natural gas energy emergency where natural gas distribution has been disrupted or demand threatens to exceed supply capability. This attachment provides general guidance and procedures and cannot account for every scenario or situation. The identified primary and supporting departments play an active role in responding to an energy emergency and will be referenced throughout the plan as the **PEAP Team**. It is expected that the PEAP Team will continually build upon and refine this plan through an active after action review and corrective action program.

II. Situation

Widespread natural gas disruptions are fortunately an infrequent occurrence. Most disruptions are short lived and restricted to a small area. Given Peoria's residential dependency on natural gas for heating homes, even a relatively minor disruption in winter could require the city to open heating shelters and cause significant damage from frozen pipes. The most significant and likely hazard to the natural gas supply is high demand during winter; other hazards include human error or intentional acts to disrupt distribution. Once disrupted, reestablishing natural gas distribution is complicated by the need to visit every structure experiencing disruption to check systems and reignite pilot lights. This is a labor intensive and time consuming process.

The Illinois Commerce Commission (ICC) is the state regulating agency over natural gas providers and as such has established guidance addressing standards of service. This includes policy associated with pipeline safety.

III. Concept of Operations

Natural gas energy emergencies will be managed in accordance with the Peoria EOP and PEAP; additional natural gas energy emergency specific roles and responsibilities are listed in section IV of this document. Ameren, as the sole provider of natural gas in the City of Peoria, will coordinate notification, response and recovery efforts with the PEAP Team in regards to service disruptions and shortages. In the case where the City EOC has been activated, Ameren will provide a liaison to the EOC when requested and adhere to the best of their ability to the guidance set forth in the PEAP.

This section provides information about types and causes of natural gas disruptions and shortages, general response actions and strategies to reduce demand.

Natural gas disruptions are generally divided into two main categories: service interruptions and leaks. The service disruptions are further divided into intentional and unplanned interruptions.

A. Intentional Service Interruptions

In an intentional service interruption, the gas distribution company shuts off gas service to a customer or area for any number of reasons, including the following:

- Planned interruptions – necessary maintenance or upgrade of gas system equipment;
- Customer request – request by a customer to cut off gas supply (e.g., to perform internal maintenance, to facilitate new construction);
- Curtailment request – requests by the company asking customers with interruptible gas supply contracts to curtail gas load during periods of tight supply; and
- Gas supply shortage – curtailment of gas supply to an entire area, usually of small scope, to preserve the pressure and stability of the entire gas system.

B. Curtailment Measures

Curtailment measures are implemented when it is necessary to protect the supply and/or integrity of the system. This can occur when natural gas demand threatens to exceed supply or when natural gas supply is constricted. In severe situations, curtailment measures must be expanded to all customers.

C. Unplanned Service Interruptions

Unplanned interruptions to gas service can result from a wide variety of incidents, including the following:

- Malfunction of equipment;
- Damage to gas facilities due to natural disasters;
- Explosions or fires resulting from failure of gas equipment;
- Acts of vandalism, sabotage, or civil disturbance;
- Gas supply due to transmission pipeline problems;
- Pressure fluctuations caused by human error or equipment failure;
- Safety conditions that require shutdown of gas to a customer or area; and
- Emergency conditions (e.g., police or fire personnel request interruption of gas service due to some other emergency).

The above list of unplanned outages is illustrative and not all encompassing. Unplanned loss of service for gas customers occurs infrequently.

1. Leaks

Gas leaks can occur without interrupting gas service to the customer. In some cases, the leak can be repaired without interrupting customer service. Some of the causes of gas leaks are:

- Gas pipeline hits or dig-ins by customers or contractors;
- Corrosion in pipes or pipe joints; and

- Material component failure.

2. Number of Customers Affected

The loss of gas service to a large number of customers is a relatively rare occurrence. The number of customers affected, however, has a special implication for natural gas disruptions. Unlike dealing with an electric power outage, which generally requires no visits to customer premises, the restoration of gas service involves an initial visit to each individual customer to shut off gas valves; work to repair any equipment damage, purge the gas lines, and test for integrity; and a second visit to each individual customer to relight each appliance or manufacturing process and piece of machinery.

3. Duration of Disruptions

The duration of a natural gas disruption is very dependent upon the type of incident. Disruptions that require the excavation of a pipeline to find and repair a leak can take considerable time. Complicating the issue of duration of disruptions is the aforementioned need for the gas company to visit each customer individually to shut off valves, repair damage, purge lines, and relight equipment. A general rule of thumb used in the gas industry is that one trained service technician can relight about four residential customers per hour.

The time of year can have a huge influence on the impacts of a disruption. Interruptions of a few hours during the summer in a residential area may generally be of low consequence. During the winter, however, the same interruption scenario can affect the health and safety of the residents in a relatively short time, as well as cause significant economic damage (e.g., frozen water pipes). In some situation emergency warming centers may need to be opened.

During a disruption event, municipal personnel, including police, fire, and public works staff, must work closely with gas company personnel. Municipal personnel should not operate valves and meters unless they receive instructions from gas company personnel. Closing off or turning on the wrong valves could have serious consequences to public safety and the integrity of the gas system. It is imperative that government emergency personnel and gas company personnel coordinate their efforts in this matter.

4. Evacuation and Sheltering

Some natural gas leaks and ruptures can be extremely dangerous and require evacuation and sheltering of affected areas. In such circumstances the EOC Evacuation and Mass Care Functions should be activated and full emergency resources dedicated to life saving and life preserving activities. Ameren will play a key role in identifying the level of risk and extent of necessary evacuations. The PEAP team will staff the City of Peoria EOC for response and recovery efforts.

D. Demand Reduction

In situations where natural gas production is or is likely to be insufficient to meet demand, measures to reduce demand can be very effective. The public can play a key role in reducing the demand for natural gas if give adequate information and clear instructions. The Energy Assurance Annex Public Information Strategy attachment provides information on public outreach to promote conservation

measures, it is meant to compliment and supplement the City of Peoria EOP Public Information Annex, not replace it.

Ameren will notify OEM immediately when conservation measures may be called for. Conservation measures should be implemented at the city level when to encourage public participation. Exemptions to conservation measures can be considered for health care facilities and families with young children or other sensitive populations.

Natural Gas Conservation Measures

1. Reduce Indoor Heated Space Temperature

Encourage commercial and residential customers who use natural gas for heating to reduce their building temperatures to a maximum of 65°F, or other temperature as recommended by Ameren.

2. Reduce Hot Water Temperature

Encourage commercial and residential users to lower the temperature of the hot water in their buildings to 105°F. Exemptions would be granted for hospitals and other public/private health care facilities, restaurants, laundries, and other buildings that require high temperature hot water for health or industrial purposes. The public should also be encouraged to install low-flow shower heads and other energy-saving measures.

3. Reduced Operating Hours

Large employers (100 or more employees at one location) with offices that use natural gas as the heat source will be encouraged to reduce operating hours and allow employees to work from home by telecommuting.

4. Additional Consumer Conservation Measures

Natural gas consumers can take additional measures to conserve natural gas usage, including:

- Cleaning/replacing air filters monthly;
- Closing off unused rooms and closing vents in these rooms;
- Reducing heat level when not using space;
- Using alternative heating sources such as wood stoves or electric space heaters; and
- Cover holes, gaps and broken windows.

IV. Organization and Responsibilities

A. Organization

The PEAP team will be organized as described in the base Energy Assurance Plan and support EOC operations as described in the City of Peoria EOP.

PEAP Coordinator

Peoria Emergency Manager

Primary Department
Peoria Office of Emergency Management

Supporting Departments
Peoria Department of Public Works
Peoria Public Information Officer
Peoria Police Department
Peoria Fire Department
Ameren

Governmental Supporting Agencies
Peoria County Emergency Management Agency
Illinois Commerce Commission
Illinois Energy Office
Illinois Emergency Management Agency
US Department of Energy

B. Responsibilities

The following energy and situation specific responsibilities are in addition to general responsibilities listed in the base Energy Emergency Annex.

Intentional Service Disruptions: Actions	Responsible Party(s)
Customers with interruptible gas supply contracts will be given as much notice as practicable. These customers often have alternate power sources to maintain operations or plans in place to deal with interruptions.	Ameren
When natural gas supply reaches a level that service curtailment is considered or implemented, Ameren will initiate notification of the OEM to ensure situational awareness and assess the need for expanded natural gas conservation measures and full activation of Energy Assurance Annex. The PEAP team will prepare for implementation of public outreach measures to encourage conservation as well as implementation of city conservation measures.	Ameren OEM All
If the situation continues to escalate, the PEAP will be fully activated. The OEM will coordinate with the EA Team to assess the need for activation of the EOC to monitor the situation and facilitate public outreach and communications.	ESDA All
City and public natural gas conservation measures will be implemented if demand-side curtailment management measures are found to be inadequate.	All

Public outreach plans to encourage conservation will be implemented.	PIO
City resources will be assessed and prepared for deployment in preparation for the possibility of public curtailment measures. OEM will assess the need for opening heating shelters.	OEM All

Curtailment: Actions	Responsible Party(s)
PEAP is fully activated prior to implementation of curtailment measures. Public communications plan to encourage conservation has already been implemented and conservation outreach will continue with additional information provided regarding curtailment measures.	All PIO
PEAP Team will initiate event log.	OEM All
If the City EOC is activated, the PEAP team will provide staff to support operations and information requests as directed.	All
The need for public health and safety measures, such as warming centers, will be assessed by the OEM and implemented if warranted. Warming center locations will be prioritized higher on critical facility lists.	OEM All
City resources are deployed as needed and managed by PEAP team consistent with EOP guidance. The PEAP team will assess the need for additional resources exceeding city capabilities and coordinate additional needs with the Peoria County EMA or the County EOC if activated.	All Public Works

Unplanned Disruption: Actions	Responsible Party(s)
Ameren will notify the OEM of the nature of the disruption, number of customers affected, and expected duration of the disruption.	Ameren
OEM will coordinate with the PEAP Team to assess the need for EOC activation to monitor the situation and implement public health and safety measures.	OEM
Impacted critical needs populations, facilities and services will be identified and resources distributed as appropriate.	OEM All

If EOC is activated or resources distributed, the PEAP Team will initiate an event log and begin documentation of time and expenditures as directed in the City of Peoria EOP.	All Finance
The PEAP Team will monitor resource availability and maintain a list of deployed resources. If additional resources are required, the PEAP Team will request needed resources through the Peoria County EMA or EOC as directed in the City of Peoria EOP.	All Public Works
If city resources are exceeded, request assistance from Peoria County in accordance with the City of Peoria EOP.	OEM

Evacuation & Sheltering: Actions	Responsible Party(s)
Ameren will notify the OEM of the nature of the leak or rupture and the need for and extent of evacuations.	Ameren
City of Peoria will activate the EOC and Evacuation, Mass Care, and Energy Emergency functions at a minimum to coordinate evacuations and sheltering.	OEM All
Impacted critical needs populations, facilities and services will be identified and resources distributed as appropriate.	OEM All
The PEAP team will initiate an event log and begin documentation of time and expenditures as directed in the City of Peoria EOP.	All Finance
The PEAP team will monitor resource availability and maintain a list of deployed resources. If additional resources are required, the PEAP team will request needed resources through the County of Peoria EMA or EOC as directed in the City of Peoria EOP.	All Public Works
If city resources are exceeded, request assistance from Peoria County in accordance with the City of Peoria EOP.	OEM

Motor Fuel Energy Emergency

I. Purpose

This motor fuel energy specific attachment to the Peoria Energy Assurance Plan (PEAP) provides information, guidance, and procedures specific to a motor fuel energy emergency where supply has been disrupted fuel shortages threaten or are occurring. This attachment provides general guidance and procedures and cannot account for every scenario or situation. The identified primary and supporting departments play an active role in responding to an energy emergency and will be referenced throughout the plan as the **PEAP Team**. It is expected that the PEAP team will continually build upon and refine this plan through an active after action review and corrective action program.

II. Situation

A motor fuel energy emergency would result from a fuel supply shortage or a cascading energy emergency that disrupts fuel distribution. Shortages could be caused by production shortages resulting from local, regional or national refinery disruptions, transportation system disruptions, political or economic disruptions or other reasons. Distribution could be disrupted by a widespread electricity outage that results in fuel pumps at gas stations not functioning.

In a motor fuel emergency the PEAP would be activated to monitor the situation and advise city leadership on conservation measure alternatives and implementation; monitor city and emergency fuel supply; lead public education and awareness campaign on fuel conservation measures; city initiatives to reduce consumption; status of efforts; and to coordinate with Peoria County and State emergency management.

III. Concept of Operations

Fuel energy emergencies will be managed in accordance with the Peoria EOP and PEAP, additional fuel energy emergency specific roles and responsibilities are listed in this document. This section provides information about monitoring fuel supplies, coordination and communications in a fuel emergency and conservation measures.

A. Monitoring

The Peoria Office of Emergency Management (OEM) will be responsible for ensuring the monitoring a variety of areas prior to and during a motor fuel emergency including:

- National fuel production forecast and status of issues causing the fuel shortage. This activity will provide advanced notice of possible fuel shortages and the expected duration and severity of the shortage. Information will be utilized to prepare for a shortage and determine the extent of conservation measures necessary in the city.

- Regional/local commercial supply. Coordinate with city contracted fuel suppliers to stay informed as to the status and availability of fuel supplies for city operations. Reaffirm contracted supply agreements. Coordinate with regional suppliers to examine the extent that the public and business may be impacted and facilitate discussions of prioritization of deliveries. Coordinate with the Illinois Petroleum Marketers Association (IPMA) to gain information about and coordinate regional supplies. Coordinate with the ICC to provide regional and statewide status of fuel supply.

- Coordinate with the State Energy Office and ICC to stay informed of statewide management and conservation efforts. Public Information Officer should ensure a consistent message through coordination with State Public Information efforts.

- Public fuel provider supply. Monitor fuel inventory at publicly available fuel stations as well as expected deliveries. This information will be important to keep the public informed and understanding the status of the situation.

- City fuel supply and usage. Monitor city fuel supplies as well as city usage. It may be necessary to prioritize or consolidate work to reduce fuel usage.

- Monitor non-governmental critical service providers fuel supplies to ensure continuation of critical public services.

- Monitor success of conservation measures and implement into public outreach programs.

A comprehensive list of monitoring and information resources in located in attachment ##.

B. Communications and Coordination

The OEM will be responsible for ensuring coordination with Peoria County Emergency Management Agency, suppliers, and the public regarding the severity of fuel shortages, expected duration, measures to conserve fuel, and prioritization of fuel distribution. As the situation worsens, county and state assistance may be necessary and law enforcement may be required to increase enforcement of conservation measures. Keeping the public informed is important to the success of any conservation program; not only the measures being implemented, but the severity of the situation in realistic terms, and successes of conservation measures. Public outreach should be widespread and leverage all communications resources, television, radio, internet, email, text messaging and social media such as Facebook and Twitter. The Energy Assurance Public Information Strategies attachment is meant to complement and supplement, not replace the Peoria EOP Public Information Annex; it provides information on public outreach to promote conservation measures.

While it is possible that a fuel disruption could impact only the immediate area it would likely be for a short time period. A more likely scenario would be a regional or even national shortage that would result in communities throughout the area competing for limited resources. In such circumstances the state and federal government would play a key role in management and distribution of fuel resources. The Environmental Protection Agency may ease restrictions on

vehicle emissions and fuel components, state and federal departments of transportation may lift weight limits on roadways, state legislative measures to reduce speed limits and other policy measures may be implemented to ease the shortage. The PEAP team will need to maintain awareness of policy developments and can request consideration of these types of measures, however, as a community, the city of Peoria lacks the authority to institute these changes independently. Coordinating with the ICC, the State Energy Support Function lead, will ensure awareness of policy changes and provide an avenue to request changes in policy at the state and/or federal level.

The Illinois Department of Commerce and Economic Opportunity's Energy Office can also offer a variety of assistance and will be important team members in a fuel energy emergency. The State Energy Office and ICC maintain information regarding state and federal incentives for purchasing alternative energy vehicles and can assist with public education and outreach materials.

During a fuel emergency, regular coordination with area fuel suppliers will be important on a number of fronts. Suppliers will be able to provide some information about fuel supply availability, distribution volumes and schedules. They may be forced to restrict distribution as a shortage escalates. The PEAP team will need to maintain an awareness of available supplies as well as when and where deliveries will be made. Keeping the public informed will be key to preventing panic. Suppliers will not be able to provide long term answers; they may only have information about supplies and deliveries for the next few days or the week ahead. The PEAP team should coordinate with suppliers to set fuel distribution priorities. Public health and safety must be maintained. As a shortage extends or escalates, coordination with the county and state emergency management to request and coordinate prioritization of resources will be essential.

C. Interdependencies

Fuel shortages in particular expose unforeseen interdependencies in every aspect of the community. Virtually all deliveries of supplies necessary for health and well being are delivered by truck in Peoria. From groceries, to medical supplies, restaurant supplies and clothing, all must be transported by commercial trucking. The private sector will need to be considered and participate in prioritization of resources in a severe, extended fuel shortage. Public panic can quickly set in when grocery shelves begin to empty and medicine is not readily available. Regular coordination with community businesses and services will be important to identify early potential shortages and to encourage less frequent but larger deliveries. Stockpiles of resources critical for health services will be necessary as most hospitals do to not normally maintain more than a week's worth of supplies. The PEAP team will play an important role in educating both the public and private sector of these types of secondary impacts and strategies to prepare for them. It is therefore all the more important for the PEAP team to maintain an awareness of issues occurring in other communities and newly developed strategies for dealing with a fuel shortage by coordinating extensively with state emergency management and seeking out and participating in working groups and other outreach and education programs that will undoubtedly be implemented at the state and federal level.

D. Conservation Measures

The PEAP team will be responsible for identifying the most appropriate conservation measures given the level of fuel shortage and making recommendations to city leadership. Extended or severe fuel shortages may result in an emergency declaration being made by the Mayor that shifts many voluntary measures to mandatory conservation measures.

The most implementable and effective measure to conserve fuel is to reduce usage. There are many alternatives that can be implemented on a voluntary basis that will reduce fuel consumption. Additional measures may not be as popular or as easily implemented but may become necessary in extreme situations.

1. Reduction of Non-essential Vehicle Operations

The public and private sectors can reduce vehicle use in a variety of ways:

Encourage Vanpooling

Vanpooling is one of the most energy efficient means of commuting. The city can encourage use and implementation of vanpooling through public outreach efforts and using incentives. Fuel can be assured to vanpools by exempting officially recognized vanpools from sales restrictions.

Encourage Use of Public Transportation or Mass Transit

The city of Peoria has a robust public transportation system that can provide alternate means of transportation to residents. Coupling public transportation with alternate work schedules would also even out demands on public transportation to serve more people.

Work Schedule Alteration

The purposes of altering work hours are to encourage the formation of carpools, even out peak transit use, and allow the working public to better cope with irregular and possibly inconvenient service station hours. Implemented as a voluntary measure, large employers (over 100 employees) would be requested to install some form of flexible work hours program (if this is not part of their usual workplace policy) for the duration of the emergency.

Ridesharing

Several ridesharing programs could be implemented decrease overall use of gasoline by decreasing the number of trips made each day. Ridesharing alternatives include:

- Computerized Ridesharing Program – Implement a computerized ride matching service that offers the general public a mechanism coordinate carpooling/ridesharing to work during periods of gasoline shortfall. A ridesharing program would include outreach campaigns to the private and public sectors, public relations campaigns, and development of the capability for the public to coordinate ridesharing in an automated online environment.
- Lead Employer Ridesharing Recruiting – The purpose of this voluntary measure is to share expertise and experience in employer-sponsored ridesharing programs. By

bringing together firms with known successful experience in ridesharing and firms desiring technical assistance, additional ridesharing sponsoring firms can be recruited.

- Trip Consolidation – This measure seeks to reduce discretionary, non-work related automobile use by encouraging citizens to rideshare for shopping, church-going, and other trips. In addition, students would be encouraged not to drive when other means of transportation are available, unless physical disability necessitates driving. This measure would be implemented through a public information campaign that includes putting information inserts in utility bills, press releases, and radio and television interviews with a representative of the city.

Bicycle Use

Peoria residents could be encouraged to use bicycles as an alternate means of transportation during a fuel shortfall by providing information about, and improving, the bicycle commuting environment. Examples of activities that could be undertaken include:

- Establishing bicycle clinics to provide instruction in commuting techniques, safety, route selection, and parking;
- Making available information on area bicycle rentals and sales;
- Setting up a bicycle hotline;
- Distributing information through public media outlets;
- Establishing neighborhood commuting coordinators;
- Creating additional bicycle parking facilities;
- Establishing bicycle parking in office buildings;
- Organizing pedal pools and caravans;
- Promotion of commuting through the public media; and
- Obtaining endorsements by public individuals.

Telecommuting/Teleconferencing/Videoconferencing

People who are able to do so would be encouraged to perform their work duties from home and transmit their work to their office via email or other electronic means. Individuals are encouraged to participate in local area meetings via teleconference or videoconference rather than by driving to the meeting site.

Voluntary Operations Reductions

Request local trucking and construction companies to reduce operations and implement efficiency measures such as reducing the number of required trips by using higher capacity trucks.

City Fuel Reductions

City services would be assessed for consolidation of vehicle use and reduction of services. First reduction efforts in Public Works – Waste Management would be to suspend recycling collection, then yard waste.

2. Fueling Strategies

Staggered Retail Service Station Operating Hours
This measure seeks to reduce public inconvenience during periods of gasoline shortfall by encouraging service station operators to establish afternoon and evening hours on a staggered basis. This can be accomplished by making staggered hours a condition of receiving redirected gasoline by retailers.

Minimum Fuel Purchase
To prevent the public from stockpiling fuel or continuously topping off their tanks, minimum fuel purchase can be implemented of 10 or more gallons. This measure will also help reduce lines for fuel.

Vehicle Assistance
The cost of fuel during a shortage is likely to skyrocket. The city will need to be aware of and prepared to deal with secondary issues associated with the shortage. Vulnerable populations may become more dependent on the limited county public transportation, trips to doctors may become much more complicated and the limited public transportation capabilities of the county may become overwhelmed. The incidence of vehicles running out of fuel is likely to increase as low income populations may not be able to fill their tanks, this population may also have difficulty reaching places of employment and making ends meet due to increased fuel costs. The city may consider instituting programs and policy changes that ease the burden on low income and vulnerable populations.

3. Increase Fuel Efficiency

Vehicle Maintenance
Vehicles operate more efficiently and use less gasoline when they are properly maintained. Encourage vehicle owners to keep their vehicles properly maintained and consider free vehicle inspection programs to help owners to identify repairs or measures to help them increase fuel efficiency.

Strict Law Enforcement
Strict enforcement of speed limits to increase fuel efficiency and mandatory conservation measures may not be publicly popular, but they may become necessary in severe shortages. Coordination with law enforcement to implement targeted enforcement, implementation procedures and penalties will be required. Public education on the necessity of the measures, implementation timeline, and penalties will be important to limit public dissatisfaction. This measure may require state legislative action to implement on a widespread level.

Alternative Fuels and Green Vehicles

Vehicles utilizing alternative fuels, electricity, or fuel cells will reduced the overall demand on motor fuel. Increase public education on green vehicle purchase incentive programs such as tax credits, types of green vehicles and where alternatives fuels are available. This information is available on the Illinois Bureau of Energy and Recycling website (http://www.commerce.state.il.us/dceo/Bureaus/Energy_Recycling/). Coordination with suppliers may be necessary to increase availability of alternative fuels to the public or make charging stations available in the city if demand warrants. Programs allowing fuel efficient vehicles priority fueling or reduced limitation may also be implemented.

Ease Weight Restrictions

Coordinate with the ICC (State Energy Support Function Lead) to request the suspension of truck weight and size limitations on roadways to increase conservation of fuel by reducing the number of loads required.

E. Mandatory Conservation Measures

In a severe, prolonged fuel shortage, impacts will not be localized but impact the entire state and likely the nation. In this situation the governor may declare a state of emergency and implement mandatory conservation measures and possibly fuel rationing. The PEAP team will be responsible for coordinating implementation of mandatory measures with County Emergency Management and maintaining community outreach and education. Reporting status of implementation, fuel supplies and success of conservation may be required by state emergency management.

Public messages should be coordinated through both the county and the state. An additional challenge in this situation will be to maintain a sense of calmness in the public. Law enforcement efforts may focus more on enforcement of mandatory conservation measures, fuel rationing, higher incidence of fuel theft, and public unrest due to restrictions and long lines for fuel.

IV. Organization and Responsibilities

A. Organization

The EA Team will be organized as described in the base Energy Emergency Annex until the City of Peoria EOC is activated, at which time the EA Team will be incorporated into EOC operations as described in the City of Peoria EOP and Energy Emergency Annex.

PEAP Coordinator

Peoria Emergency Manager

Primary Department

Peoria Office of Emergency Management

Supporting Departments

Peoria Department of Public Works

Peoria Public Information Officer
Peoria Police Department
Peoria Fire Department
Ameren Energy

Governmental Supporting Agencies
Peoria County Emergency Management Agency
Illinois Commerce Commission
Illinois Energy Office
Illinois Emergency Management Agency
US Department of Energy

B. Responsibilities

The following energy and situation specific responsibilities are in addition to general responsibilities listed in the base PEAP.

A fuel shortage will require extensive public and private sector outreach, education and information sharing. It will also require constant coordination with county and state emergency management to maintain situational awareness and manage resources. City fuel supplies will need to be closely monitored and possible severely restricted. Actions that will need to be taken by the Energy Emergency Annex are listed below.

Fuel Shortage Threat: Actions	Responsible Party(s)
The OEM will maintain awareness of the status of fuel supplies and the potential threat of a fuel shortage. Coordination with County and State Emergency Management and ICC should be implemented to coordinate triggers for implementation of conservation measures and maintain awareness of County and State plans for implementation of conservation measures.	OEM
When a fuel shortage threatens the OEM will alert PEAP team and initiate preparedness actions for the city.	OEM
City resources will be assessed and additional fuel resources obtained if warranted.	Public Works All
Public information plans will be reviewed and updated and voluntary conservation strategies identified.	PIO All
When a fuel shortage appears imminent and conservation measures are to be implemented the PEAP will be fully activated and prepare for implementation of voluntary conservation measures and a public outreach, education and information program.	OEM All
OEM will coordinate with the PEAP team to consider activation of the	OEM

EOC.	All
Maintain awareness of County and State implementation of conservations measures and keep the City Council informed of status. City will comply with County or State directives to implement conservation measures.	OEM
Upon implementation of conservation measures, PIO will lead efforts to provide information to the public and ensure clear consistent messages. PIO will work with Peoria County PIO or Joint Information Center to coordinate message.	PIO
Monitor city resources and make recommendations for city government conservation measures.	Public Works All
As additional conservation measures are implemented or if conservation measures become mandatory, PIO will expand outreach efforts to ensure the private sector is involved and increase opportunities for public meetings to address concerns.	PIO OEM
In an escalating fuel shortage State and Federal legislative and policy measures may be implemented. Extensive coordination will be necessary to maintain situational awareness. PEAM team will seek out opportunities to participate in State coordination efforts such as emergency management conference calls and meetings and seek out Department of Energy resources. The City Council will be regularly briefed on the status of the situation.	OEM All
Coordinate with regional fuel suppliers to obtain information on status and schedule of deliveries, restrictions on delivery and coordinate priority distribution.	OEM Public Works PIO
If city resources are exceeded, request assistance from Peoria County in accordance with the City of Peoria EOP.	OEM

Public Information Strategy

I. Purpose

This Public Information Strategy attachment to the Peoria Energy Assurance Plan (PEAP) provides information and considerations regarding public outreach in energy emergencies. This attachment provides information specific to energy emergency and is meant to serve as a resource to supplement not replace the City of Peoria EOP Public Information Annex. The City of Peoria EOP Public Information Annex provides comprehensive guidance on procedures associated with public communications.

II. Public Message

In energy emergencies, whether electric, natural gas, or fuel, the public can play a critical role in preventing a complete system failure by participating in voluntary usage reduction measures. Requests for public usage reduction have been implemented successfully across the country to reduce demand and avoid or limit energy disruption. A clear and consistent message is critical to successfully implementing public usage reduction measures. Key components include:

- Clear and consistent message;
- Why conservation measures are necessary;
- The severity and geographical area of the situation;
- Consequences if usage is not curtailed;
- Specific measure the public can take to reduce usage;
- Successes in conservation efforts;
- Getting the message out; and
- Providing timely updates.

The public information strategy can also maintain public calm when it is all too easy for panic to set in by regularly providing information about the status of the situation, how long the situation is expected to last and next steps in managing the shortage. The city must make an effort to maintain the public trust by providing accurate, timely and credible information. Civil unrest or panic most often sets in from frustration and fear of the unknown.

The public information, education and outreach strategy will require effective coordination among city public information officer, city emergency management, stage agencies, in particular Illinois Commerce Commission, the energy supply industry (Ameren and motor fuel suppliers) and private sector entities such as the chamber of commerce. Messages will need to be accurate and coordinated for consistency utilizing the Joint Information Center (JIC). Where possible, pre-scripted messages can be developed

and coordinated in advance to ensure quick distribution. A city hotline can be established to answer public questions.

III. Joint Information Center

The JIC will serve as the public information office for the City of Peoria and the Public Information Officer will lead communications coordination as described in the Public Information Annex to the Peoria EOP and in the Roles and Responsibilities section of this plan. They will be responsible for maintaining public communications contacts with television and radio, as well as internet (city website and email) and social media communications. Coordinated press releases will be distributed to city and county officials to deliver updates. Imagery, video and maps will be incorporated as necessary to facilitate information delivery such as public service and assistance locations, areas of energy emergency impacts, and other information.

Energy conservation strategies discussed in energy specific emergency plans will be the focus of public information campaigns. As energy shortages or disruptions escalate, regularly scheduled press releases and/or public meetings should be scheduled.

For regional, statewide or national energy emergencies the PIO will be responsible for coordinating with County and State Emergency Management Offices to facilitate distribution of accurate information and aid in the implementation of widespread conservation measures. The ICC is the lead agency for state emergency operations regarding Energy Emergencies and will be responsible for coordination with other state agencies, utilities and fuel suppliers, and federal agencies as well as with counties and local communities.

IV. Organization and Responsibilities

During an incident of critical significance, public communications activities are implemented in accordance to the Peoria EOP Public Information Annex. The City of Peoria will utilize the Joint Information Center (JIC) concept. The City's PIO is responsible for setting up the JIC if more than one city department/agency or jurisdiction is involved in the incident. The jurisdiction where the incident is located will be the lead jurisdiction and provide for the JIC.

V. Public Communications Resources

Media contacts are listed in the Peoria EOP Public Information Annex.

Other Communications Measures that can be utilized include:

- Internet – City Website, Facebook, emails, twitter and other social media.
- Public meetings
- Mailers and handouts
- Public Events