NextEra Energy Duane Arnold Energy Center

NextEra Energy Duane Arnold Energy Center (DAEC) is Iowa’s only nuclear generating station and is located nine miles northwest of Cedar Rapids near Palo. Although the NextEra Energy DAEC has safely operated since 1974, extraordinary precautions have been taken to ensure the safety of the public and plant workers in the unlikely event of an emergency at the plant.

What is a nuclear plant emergency?
In the unlikely event that protective barriers or systems fail to work properly, radioactive material in the form of gases or small particles could escape from the plant into the air. This could result in people being exposed to radioactivity and receiving unwanted radiation exposure.

The Nuclear Emergency Plan

Federal regulations require that state and county governments implement emergency plans to protect the public if there is an emergency at the NextEra Energy DAEC. The purpose of these plans is to ensure the public will know what to do in case of a nuclear emergency. Information provided in the following pages describes actions you may need to take if there is an emergency at NextEra Energy DAEC. Please keep this information and share it with your family.

Emergency Alert System (EAS)

The Emergency Alert System (EAS) is a group of radio and television stations that broadcast official information during an emergency. If the outdoor warning sirens sound, tune to radio 600 AM or 96.5 FM, the official designated EAS Radio Stations in this area, for up-to-the-minute emergency information.

How You Would Be Notified of an Emergency

The public is informed of an emergency by a system of outdoor warning sirens, radio broadcasts over the EAS station and additional warnings communicated by NOAA tone alert Weather Radio. A monthly test of the Outdoor Warning Siren System is conducted the first Wednesday of each month. It starts at approximately 8:45 am and tests the PA system plus the steady and wail tone sirens. If there is an emergency the sirens will sound with a three-to-five-minute steady tone. This alerts you to go indoors and tune to local radio stations for emergency information. You will be given specific instructions if you need to stay indoors, evacuate, or take other protective actions.

If you hear the sirens, check with neighbors and make sure they’ve heard the sirens and understand that they should tune to radio 600 AM or 96.5 FM. DO NOT use the phone unless you have a special emergency and require help. Leave the lines open for official emergency business. Radio and TV stations will inform the public when protective actions are no longer necessary.

To supplement the warnings provided by the outdoor sirens and EAS, the public is encouraged to purchase a NOAA tone alert Weather Radio. These radios can provide valuable warning and information in any emergency situation, and are particularly helpful in situations such as severe weather when the public needs to take immediate action. The National Weather Service conducts a weekly test of the NOAA Weather/Tone-alert Radio system each Wednesday between 11 a.m. and Noon.
I live in subarea: ____________________________________________

Emergency Planning Zone and Subareas

An emergency plan has been developed for an area called the Emergency Planning Zone (EPZ). The EPZ is an approximate ten-mile radius around NextEra Energy DAEC. This includes part of Benton and Linn Counties. Emergency plans for the NextEra Energy DAEC are regularly demonstrated for evaluation by the Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC) to demonstrate that they are adequate to protect the health and safety of the public. The emergency plan identifies subareas within two, five, and ten miles from the NextEra Energy DAEC. Some subareas in Cedar Rapids and Marion are beyond ten miles from the NextEra Energy DAEC. If an emergency should develop at NextEra Energy DAEC, it is not likely to affect all residents in the EPZ. For example, protective actions recommended for subarea #1, an area within two miles of the plant, may not be recommended for other subareas. The EPZ map included within this information shows subareas. Find the number of the subarea where you live and note the number of the subarea in the green box above.

Emergency Classifications

Emergency classifications are divided into four categories. Each calls for a certain level of response from plant and government personnel.

- **Unusual Event:** The least serious of the four levels. The event poses no threat to you or to plant employees, but emergency officials are notified. Public action is not needed.

- **Alert:** Declared when an event has occurred that could reduce the plant’s level of safety or security, but backup plant systems still work. Emergency agencies are notified and kept informed, but generally, no action by the public is necessary.

- **Site Area Emergency:** Declared when an event involving major plant operational problems or a security event has occurred. At this classification there is the potential for a minor radiation release, but the release would not exceed EPA safety standards for the general public. However, some public action may be needed. If public action is needed, the outdoor sirens are sounded and EAS (Emergency Alert System) instructions announced.

- **General Emergency:** The most serious of the four classifications is declared when an event involving major plant operational problems or a serious security event has occurred. At this classification there is the potential for a radiation release that would exceed EPA safety standards for the general public. Public action may be needed. If public action is needed, the outdoor sirens are sounded and EAS (Emergency Alert System) instructions are announced.

For Your Protection - Monitor and Prepare

When you become aware of an emergency at the nuclear plant, the best course of action is to monitor local radio or television for specific instruction directed by local authorities. While monitoring the situation you should be preparing to either evacuate or shelter in place.

Protective Actions

Concern for public safety in a nuclear emergency is due to the possibility of a radioactive release. Protective actions may be needed to avoid or limit radiation exposure to the public. Protective actions are directed by the state and county officials and are based on guidelines from the Environmental Protection Agency. Actions recommended will depend upon plant conditions at NextEra Energy DAEC and weather conditions. The actions recommended may be to shelter in place or evacuate. Respond promptly to all instructions. You do not need to rush. More information on Protective Actions can be found later in this Emergency Action Plan.

...continued on next page
If You Are Told to Shelter in Place

To shelter in place means that instructions are given to remain indoors if you are in an affected subarea. Shelter in place instructions may also be given to keep roadways clear so others can evacuate rapidly. The intent of sheltering in place is for the public to remain where they currently are or to seek shelter close by.

Take the Following Steps

• DO NOT pick up children at schools, preschools, or registered day care centers; our plans include special precautions for children in these facilities.
• Tune to the official EAS Radio Station 600 AM or 96.5 FM, monitor the situation and prepare to take additional directions from local officials.
• Limit non-emergency phone calls. If you must use a mobile device, texting is preferred.

If Indoors:
• Remain there until further notice.
• Shut all windows and doors.
• Turn off all ventilation (furnaces, fireplaces and air conditioning).
• Cover open food containers.

If Outdoors:
• Go indoors immediately and follow the “if indoors” instructions.
• Wash hands and face before eating and handling food.
• Take a lukewarm shower if possible.

If You Are In Your Car, At Work, or Away from Home:
• Close car windows, vents, and shut off heating and cooling systems.
• Turn your radio on and monitor the situation and follow directions.
• If your home is in an area being told to Shelter in Place, DO NOT try to go home. Leave the Emergency Planning Zone or enter a nearby building.
• Stay where you are, monitor the situation and await further instructions.

If You Are Told To Evacuate

• Evacuation is a precautionary move recommended for your safety. Please evacuate promptly once the recommendation is made.
• If you do not live in the area being evacuated you should keep off roads so the people who most need to evacuate can.
• Evacuation can last for a few hours or days. Plan for up to a three-day absence. Turn off small appliances, faucets, and ventilation systems. Lock doors and windows.
• Pack necessities. See the check list on a following page. Add items you might need.
• If directed by medical authorities, pick up relatives in nursing homes or hospitals.
• Residents with children in Benton and Linn County schools in an affected subarea will be able to pick up children at the designated Temporary Relocation Center (TRC) unless otherwise directed. See Temporary Relocation Center chart.
• Leave pets indoors with stored food and water for several days, or take them to a private kennel. Public Reception Centers do not have places for pets. All seeing eye and service animals will be received.
• Take this portion of the phone book with you and follow instructions given in EAS messages.
• Tie a white cloth to your front door. This indicates to emergency workers you have left your home. Drive safely. Use suggested evacuation routes. See map.
• Stay tuned to radio 600 AM or 96.5 FM for current information.
• Keep windows and vents closed if you are driving in a subarea that is being evacuated.
• Law enforcement agencies will provide traffic control and will maintain security in evacuated areas.
• Follow directions which are provided by local authorities to your designated Reception Center. Reception Centers are established to monitor evacuees for radiological contamination. Short-term housing and food is provided. Please go to the Reception Center for monitoring and registration even if you and your family do not need housing.
• You and your family can return to an evacuated area when informed by an EAS message or relocation center manager. State and local officials will make this decision.
If school relocation is recommended, parents should not go to the schools to pick up children as this causes traffic congestion, security risks, and impedes transporting children out of the area safely. Children from schools in subareas that may be affected will be moved to designated Temporary Relocation Centers (TRCs). Parents of children attending school in the EPZ can pick up children at the designated TRC as indicated in the chart below.

This chart includes all public and private schools, preschools, and registered day care centers inside the EPZ. If the general public is evacuated, any students remaining at a TRC will be taken to a designated Reception Center. EAS stations will broadcast the location to which students are taken.

### Temporary Relocation Centers (TRC) for Schools, Preschools, and Daycare Centers

#### Subarea If Your Child Attends

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<th>Subarea</th>
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| 16      | Cedar Rapids Community Schools and affiliated preschools and daycares (Northwest)  
          Cedar, Harrison, Hoover, Jackson, Madison, and Truman  
          Relocate to Middle Amana (Amana Elementary School) |
| 16      | Cedar Rapids Community Schools Roosevelt, Taft Alt., Taft Middle, Jefferson HS  
          Relocate to Tiffin (Clear Creek-Amana Middle School) |
| 16      | Alburnett Community Schools  
          Relocate to Troy Mills (North-Linn Schools) |
| 12      | All Metro Area Catholic Schools  
          and affiliated preschools and daycares  
          Relocate to Iowa City (West High School) |
| 15      | Good Shepherd Lutheran Day School  
          Isaac Newton Christian Academy and Preschool  
          Summit School  
          Other preschools and daycares not otherwise listed in subareas 5, 14, 15, 16, and 17  
          Relocate to Iowa City (Southeast Junior High) |

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| 15      | Cedar Rapids Community Schools and affiliated preschools and daycares (Northeast)  
          Arthur, Franklin, Garfield, Harding, Kennedy, Kenwood, Pierce, Polk  
          Alternative, Wright  
          Hiawatha Elementary School  
          Nixon Elementary School  
          J.N. Andrews Christian Academy  
          Viola Gibson Elementary  
          Relocate to Iowa City (West High School) |
| 24      | College Community Schools  
          (Prairie)  
          College Community Early Childhood Center  
          Four Oaks Day Treatment Center  
          Day Care & Headstart  
          Relocate to Iowa City (City High School) |
| 14      | Linn-Mar Community Schools and affiliated preschools and daycares  
          Relocate to Mount Vernon (Cornell College) |

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| 23      | Marion Independent Schools and affiliated preschools and daycares  
          Relocate to Mount Vernon (Mount Vernon Middle School) |
| 23      | Cedar Valley Christian School and Preschool  
          Grace Baptist School  
          Relocate to Mount Vernon (Washington Elementary) |

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<tr>
<th>Subarea</th>
<th>If Your Child Attends</th>
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| 23      | Other preschools and daycares not otherwise listed in subareas 23 and 24  
          Relocate to Mount Vernon (Cornell College) |
| 18      | Atkins Elementary School and affiliated  
          and non-affiliated preschools and daycares  
          Relocate to Van Horne (Benton Community High School) |
| 7       | Shellsburg Elementary School and affiliated and non-affiliated preschools and daycares  
          Relocate to Vinton (Tilford Elementary School) |

### See large map on following page for subareas.
Evacuation Routes to Assigned Reception Centers

1. Subarea includes immediate vicinity around NextEra Energy (DAEC) in Rural Linn County - Relocate to Independence
   Evacuate via (East of Cedar River) I-380 north to Iowa 150, north to Independence OR (West of Cedar River) West on 66th Street to 32nd Avenue, north on 32nd Avenue to Iowa 150, north to Independence.

2. Subarea includes Rural Linn County - Relocate to Independence
   Evacuate via North Center Point Road north to Spencers Grove Road, west to Iowa 150, north to Independence.

3. Subareas include Toddville and Rural Linn County - Relocate to Independence
   Evacuate via I-380 north to Iowa 150, north to Independence OR North Center Point Road north to Spencers Grove Road, west to Iowa 150, north to Independence.

4. Subareas include area northwest of Cedar Rapids and Rural Linn County - Relocate to Iowa City
   Evacuate via I-380 south to US 218 to Iowa City.

5. Subareas include NW/NE Cedar Rapids, Palo, Covington and Rural Linn County - Relocate to Iowa City
   Evacuate via Covington Road (F Avenue) east and south to Edgewood Road, south to US 30/218, east to I-380, south to US 218 to Iowa City OR Blairs Ferry Road south and east to I-380, south to US 218 to Iowa City.

6. Subarea includes Rural Linn County - Relocate to Independence
   Evacuate via Shellsburg Road/66th Street west to 32nd Avenue, north to Iowa 150, north to Independence.

7. Subareas include Shellsburg and Rural Benton County - Relocate to Independence
   Evacuate via 32nd Avenue north to Iowa 150, north to Independence.

8. Subareas include Center Point and Rural Linn County - Relocate to Independence
   Evacuate via I-380 north to Iowa 150, north to Independence OR North Center Point Road north to Spencers Grove Road, west to Iowa 150, north to Independence.

9. Subarea includes Rural Linn County - Relocate to Independence
   Evacuate via north Center Point Road north to Spencers Grove Road, west to Iowa 150, north to Independence.

10. Subarea includes Rural Linn County - Relocate to Independence
    Evacuate via Central City Road east to Iowa 13, north to US 20, west to Independence OR Troy Mills Road north to Walker Road, west to Quasqueton Road, north to Racine Avenue, north to US 20, west to Independence.

11. Subarea includes Alburnett and Rural Linn County - Relocate to Independence
    Evacuate via Central City Road to Iowa 13, north to US 20, west to Independence OR Roosevelt Street/Burnett Station Road east to Iowa 13, north to US 20, west to Independence.

12. Subarea includes Rural Linn County - Relocate to Independence
    Evacuate via County Home Road east to Iowa 13, north to US 20, west to Independence OR Roosevelt Street/Burnett Station Road east to Iowa 13, north to US 20, west to Independence.

13. Subareas include Hiawatha, Robins, NE Cedar Rapids, Marion and Rural Linn County - Relocate to Iowa City
    Evacuate via I-380 south to US 218 to Iowa City OR US 151B (1st Avenue) west to I-380, south to US 218 to Iowa City OR US 151/iowa 13 south to US 30/151, west to I-380, south to US 218 to Iowa City.

14. Subarea includes NE Cedar Rapids - Relocate to Iowa City
    Evacuate via I-380 south to US 218 to Iowa City.

15. Subarea includes SW/NW Cedar Rapids - Relocate to Marshalltown
    Evacuate via US 30/218 west to Marshalltown OR US 151 south to I-80, west to Iowa 14, north to Marshalltown.

16. Subareas include SW/NW Cedar Rapids and Rural Linn County - Relocate to Marshalltown
    Evacuate via US 30/218 west to Marshalltown.

17. Subareas include Atkins and Rural Benton County - Relocate to Marshalltown
    Evacuate via US 30/218 west to Marshalltown OR south on 33rd Avenue to US 30/218, west to Marshalltown.

18. Subareas include Rural Benton County - Relocate to Independence
    Evacuate via 32nd Avenue north to Iowa 150, north to Independence.

19. Subareas include Urbana and Rural Benton County - Relocate to Independence
    Evacuate via Iowa 150 north to Independence.

20. Subareas include SE/SW Cedar Rapids, Marion, and Rural Linn County - Relocate to Eldridge (Davenport area)
    Evacuate via US 151/iowa 13 south to US 30/151, west to I-380, south to I-80, west to US 61, north to Eldridge OR US 30/151 west to I-380, south to I-80, east to US 61, north to Eldridge OR I-380 south to I-80, east to US 61, north to Eldridge.

21. Subareas include SW Cedar Rapids - Relocate to Eldridge (Davenport area)
    Evacuate via I-380 south to I-80, east to US 61, north to Eldridge OR Kirkwood Blvd., south to Wright Brothers Blvd., west to I-380 or 6th Street SW, south to I-80, east to US 61, north to Eldridge OR Edgewood Road south to Wright Brothers Blvd., east to I-380 or 6th Street SW, south to I-80, east to US 61, north to Eldridge.

Reception Centers
are located in Independence, Marshalltown, Iowa City and Eldridge.*

* Local authorities will direct you to the Reception Center in the city listed.
Farm Information

“What do I have to do?”
Farmers, food processors, and distributors in Linn and Benton counties are provided a separate brochure. This brochure gives information about actions needed to protect the food chain if there is an emergency at the NextEra Energy DAEC. Farmers may need to put livestock in buildings and, if possible, provide them with feed stored in sheds or silos and protected water from covered stock tanks. In an emergency, information is provided to those who are affected. Copies of the brochure, “State of Iowa Radiological Emergency Information for Farmers, Food Processors, and Food Distributors,” are available from your Linn County Extension Service. In Linn County call 319-377-9839. In Benton County call 319-472-4739.

Health Conditions

Because of physical, medical or other functional or access needs, you or members of your household may need assistance in an evacuation. To plan for your transportation and shelter needs, local emergency management officials ask that you register with them. All information is kept confidential.

What options do I have for registering?

• Complete and return a Registration Form, which is located in the Yellow Book Telephone Directory.
• Call United Way 2-1-1 by dialing 2-1-1 or 1-866-469-2211 or from a cell phone 1-319-739-4211 and trained staff will register you over the telephone.
• Contact your local emergency management agency office and request a registration form or register online at linncounty-ema.org.
• Many local health and human service providers may have registration forms on hand - just ask for one.

What if I am elderly, disabled, or have other functional or access needs?
If you have not registered and need special transportation or shelter assistance in case of an evacuation contact:

Benton County residents - Benton County Emergency Management Agency at 319-472-4519.

Linn County residents - Linn County Emergency Management Agency at 319-892-6500.

What if I am hearing impaired?
If you are hearing impaired you can receive emergency information on your Telephone Device for the Deaf (TDD) by calling these phone numbers:

Benton County residents - Benton County Sheriff’s Office at 319-472-2337.

Linn County residents - Linn County Emergency Management Agency at 319-892-6586 OR Linn County Sheriff at 319-398-4016.

What if I am in the hospital or a nursing home?
If there is an emergency at the DAEC, hospitals and nursing homes may be asked to provide shelter or evacuate patients. Depending on medical conditions, patients may be released to friends or relatives, or relocated to facilities outside the EPZ. Intensive care and other patients unable to be evacuated will be sheltered at their care facility. Information about hospital and nursing home patients will be issued in the EAS messages.

Transportation

If possible, use your own transportation. If you can’t, follow these guidelines:

If you live in Cedar Rapids: Go to the nearest bus stop and wait for free pickup. You will be taken to a Reception Center.

If you live in a rural area: In Linn County call the Linn County Emergency Management Agency at 319-892-6500 for assistance. In Benton County call the Benton County Emergency Management Agency at 319-472-4519 for assistance.

Things to take if told to evacuate:

Medical Items
• Medicine(s)
• Glasses
• Special diet foods

Personal Items
• Special soaps
• Shaving items
• Toothbrush/toothpaste
• Sanitary items

Bedding
• 2 blankets per person
• or sleeping bag
• Pillow(s)

Extra Clothing
• Clothes for two days for each person
• Shoes

Identification and Important Papers
• Driver’s License
• Social Security Card
• List of medicines being taken

Baby Supplies
• Baby food/formula
• Diapers
• Baby bottles

Miscellaneous
• Cash/checkbook/credit cards
• Flashlight
• Portable radio with batteries
• Extra car keys
• mobile phone and charger

The EPZ Primary Emergency Alert Radio Station (EAS) is 600 AM or 96.5 FM
How Nuclear Power Plants Work
Power plants create electricity by running steam turbines, which are powered either by fossil fuels — coal, oil, natural gas — or by nuclear power. Nuclear technology produces energy by splitting uranium atoms in a process called fission. Fission generates heat that boils water for the steam that runs the turbines, which produce the electricity that we all use.

In a nuclear power plant, pea-sized uranium pellets are stacked inside long, thin fuel rods which are grouped in “assemblies” inside a reactor “core”. The core is encased in a very thick steel capsule, and the entire reactor is further protected by an airtight steel and concrete containment structure. This complex structure is designed to help ensure the safe utilization of nuclear power.

Radiation...A Fact of Life
Essentially, radiation is a form of energy that can travel through the air, just like light, heat or radio waves. Small amounts of radiation are naturally generated by different elements in the environment. Food, water, air and sunlight all expose us daily to tiny amounts of radiation.

Radiation is measured in rems or in millirem (thousandths of a rem). On average, a person living in the Midwest receives about 300 millirem of radiation annually from natural sources and another 300 millirem or so from x-rays and other medical procedures. It takes more than 35 times this much — over 20,000 millirem in a single day — to produce identifiable effects in the body. Federal regulations allow workers to receive up to 5,000 millirem of radiation in the course of a year’s work.

Contacts for Emergency Information
This information has been prepared by the NextEra Energy Duane Arnold Energy Center in cooperation with the Iowa Department of Homeland Security and Emergency Management, Benton County Emergency Management Agency, and Linn County Emergency Management Agency. You may obtain further information from any of the following organizations:

Iowa Department of Homeland Security and Emergency Management
Mark Schouten
Director
7900 Hickman Road, Suite 500
Windsor Heights, IA 50324
515-725-3231
homelandsecurity.iowa.gov

Linn County Emergency Management Agency
Michael E. Goldberg
Director
6301 Kirkwood Blvd. SW
Cedar Rapids, IA 52404
319-892-6500
linncounty-ema.org

Benton County Emergency Management Agency
Scott E. Hansen
Coordinator
213 2nd Ave.
Vinton, IA 52349
319-472-4519
bentoncountyema.com

NextEra Energy Duane Arnold Energy Center (DAEC)
Physical Address
3277 DAEC Rd.
Palo, IA 52324

For Emergency Plan Inquiries Contact
Mark Fritz
Emergency Preparedness Manager
319-851-7961 or 319-851-7010

For Media Inquiries Contact
Communications Manager
319-851-7140

* PLEASE READ AND KEEP THIS EMERGENCY INFORMATION *