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PURPOSE

The purpose of the Environmental, Health and Safety (EHS) Supplemental Requirement document is to define business unit EHS requirements not included in the Duke Energy EHS Handbook. Contractors are to comply with all Federal, State and Local EHS regulations, the Duke Energy EHS Handbook, and these business unit EHS Supplemental Requirement and Contractor-owned programs or procedures.

Contractors shall have on-site the Duke Energy EHS Handbook, the EHS Supplemental Requirement document and/or any Contractor-owned programs or procedures which define work practices exceeding Duke Energy requirements.

Contractors shall periodically make available at Duke Energy’s request their management systems, programs, processes and procedures that are designed to achieve the Duke Energy Health and Safety Vision stated in the Duke Energy EHS Handbook.

KEYS TO LIFE

Duke Energy’s Health and Safety vision is to have an injury- and illness-free workplace.

Keys to Life support the vision by identifying hazards of high-risk activities known to cause fatalities and serious injuries. They outline standards and define expectations, behaviors and controls necessary to prevent serious events.

Keys to Life do not replace existing safety procedures, policies or manuals. It is one tool of Duke Energy’s fatality and serious injury prevention program.

Duke Energy expects Contractors to assess their work-scope safety risks to ensure they have effective controls in place and to follow behaviors and standards defined by Keys to Life.

- **Driving safely** - Wear seat belts, follow posted speed limits and comply with all other motor vehicle regulations. While driving, do not send or read texts or emails, minimize use of cellphones and use hands-free devices only, and avoid any distractions that would remove your focus from the road. Before moving a parked vehicle, circle the vehicle to ensure there are no obstacles around, above, or below it, and that the vehicle is safe to operate. Position vehicles to minimize the need for backing. Pull through or back into parking spaces when possible and use a backing guide when available.
- **Personal protective equipment** – Wear appropriate personal protective equipment (PPE) for the hazards involved in the work. Use PPE to provide protection from injuries to the head, eyes, body, hands and feet.
- **Pre-job briefings** – Prior to performing any work activities, identify hazards associated with the task during a thorough job briefing. Contractors shall also clearly identify strategies to eliminate or mitigate hazards and create clarity for the role of each crew member. Job briefings are required at the following times: the start of the work activity; when personnel, condition, equipment, or exposures change; or when new personnel arrive on scene.
- **Work zone safety** – Work zones shall be established at all work sites where vehicle traffic is a hazard. Traffic control warning devices shall be appropriately placed before work is begun.
- **Electrical safety** – Wear rubber gloves and sleeves as required when within minimum approach distances, except when performing live-line bare-hand work per approved work methods. All work on lines or equipment presumed de-energized shall be performed only after the lines or equipment have been isolated, tested for voltage, located and or tagged out, and grounded (as required). When working in proximity to energized lines or equipment, all conductors, lines and other equipment that may be contacted shall be completely covered with approved hoes, blankets, and/or hoods.
- **Pole/structure inspection** – All poles shall be visually inspected and tested, using the sound and probe/prod test, prior to climbing, placing a ladder against the pole, or changing loading. Visual inspections shall be performed on all non-wood structures prior to climbing, alteration of loading, and installing or removing equipment.
- **Fall from elevation** - Utilize fall protection equipment when required by the task. Inspect equipment before use and use it properly. Maintain three points of contact when changing elevation.

- **Falling objects/line of fire** – When overhead work is being performed, employees shall not enter the fell or drop zone without suspending overhead work activities, establishing three-way communications and receiving permission to enter. Consider “line of fire” when setting up work sites to ensure that objects that could fall or move suddenly due to stored energy do not cause injury to employees or the public.
- **Rigging** – Plan all lifting activities. Inspect all rigging equipment prior to each use. Employees involved in rigging activities shall be properly trained. The manufacturer’s equipment ratings/limits shall not be exceeded.
- **Confined space entry** – Do not enter a confined space until the proper evaluation has been performed and appropriate controls have been put in place. Confirm acceptable atmospheric air quality prior to entry with an approved monitor. When required, a qualified attendant shall be present, and an air quality monitor shall be in continuous use.
- **Trenching/excavations** - Prior to any excavation work, take all reasonable steps to identify underground gas and electric utility lines. Any excavation where work is to be performed shall be shored, sloped, or shielding when the depth exceeds 5 feet or if soil conditions are determined to be unstable to prevent cave-in or entrapment.

EVENT REPORTING AND INVESTIGATIONS

1. It is imperative that the Duke Point of Contact (POC) remain abreast of all aspects of contractor performance. Contractors shall verbally notify the POC immediately after any event or near miss. The POC can assist with ensuring the appropriate event response action is taken. When in doubt, notify the POC.
2. Contractors shall report the following events **within 24 hours of occurrence** by submitting the “*Preliminary Incident Report*” (PIR) accessible on the Contractor Portal.
 - a. Occupational Safety and Health Administration (OSHA) recordable injuries
 - b. Environmental Events - Reportable Environmental Event (REE)-1, REE-2 and Category 3 environmental event when a notification is made to an external agency.
 - Duke Energy management may request a PIR be submitted for other environmental events to allow EHS evaluation on classification and reporting requirements.
 - c. Cardinal Electrical Safety Rules (CESR) – Events
 - d. Cardinal Safety Digging Rules (CSDR) - Events
 - e. Outages
 - f. Utility Property Damage
 - g. Customer Property Damage
3. The PIR shall be submitted **within two hours** for a Fatality, Life-Altering injury (LAI) or Serious Injury.
4. REE-1's, REE-2's, Fatalities, Life Altering Injuries, Serious Injuries (SIF's) and Significant Customer Outage events caused by a contractor will require a causal analysis. The causal analysis investigation will be in accordance with the contractor’s procedures but must meet the defined elements of the Duke Energy Corrective Action Program (CAP) (See ADMP-ADM-OPX-00065, Corrective Action Program or the respective Business Unit CAP program).
5. Contractors may be requested to conduct causal analysis investigations on Significant Near Misses at the discretion of business unit leadership.

CONTRACTOR COMPANY PRE-QUALIFICATION PROCESS

1. Pre-qualification is required for Prime Contractor Companies who perform either
 - a. Medium EHS Risk Work with a PO/Contract 1-year or longer, OR
 - b. High EHS risk work.
2. Prime Contractor Companies must register an account with Avetta, which is a 3rd party web-based application pre-approves data and documents submitted by contractor companies. The pre-approval process consists of safety evaluations/ratings and manual audits. Avetta reviews, verifies, documents data submitted by contractors to Duke Energy's Avetta account. A green rated = Approved (passed) Safety Rating is required for DE to issue PO or Contracts.
3. Avetta conducts the safety & environmental evaluation/rating, compares data against Duke Energy and Business Unit specific safety targets, and issues either an Approved (Green/Pass) or Not Approved (Red/Fail) safety rating. (See Targets below)
 - a. Prime Contractor Companies shall review all sub-contractor's environmental, health and safety programs for compliance with environmental, health, and safety requirements, Local, State, Federal requirements, Duke Energy EHS Handbook requirements, and the requirements of this document i.e., EH&S Performance Targets below.
 - b. Manual Audit is the verification by Avetta that contract companies have OSHA compliant written H&S programs. Audits occur every 3 years.
 - c. QuickVett is a module that allows contractors who do not currently participate in Avetta to provide a limited amount of information/safety data to determine if the contractor will meet Duke Energy's safety performance targets should work be awarded. This process does not allow a safety rating to be issued.
4. All targets are 3-year averages except for fatalities, Contractor shall use the following minimum requirements to pre-qualify, provide documentation as requested, and qualify sub-contractor companies:

Contract companies with 1 - 10 employees – all business units:

- a. One or fewer workplace fatalities within the previous three (3) years. If one (1) fatality, no confirmed Serious OSHA citation relating to the fatality.
- b. Experience Modification Rate (EMR) <1.00
- c. Confirmed OSHA Citations <1 serious with 0 willful or repeat Citations
- d. Environmental Notice of Violation (NOV) (federal or state) with penalties > \$100

Companies with 11 but less than 99 employees - all business units

- a. One or fewer workplace fatalities within the previous three (3) years. If one (1) fatality, no confirmed Serious OSHA citation relating to the fatality.
- b. Experience Modification Rating (EMR) = 1.0 or less.
- c. Environmental Notice of Violation (NOV) (federal or state) with penalties greater than \$1000 = one (1) or less confirmed
- d. OSHA citations = one (1) or less serious with 0 willful.
- e. Total Recordable Injuries = three (3) or less.
Contractors must pass the fatality target (a) and three of the remaining four targets (b-e).

Companies with 100 or more employees - all business units

- a. One or fewer workplace fatalities within the previous three (3) years. If one (1) fatality, no confirmed Serious OSHA citation relating to the fatality.
- b. Experience Modification Rating (EMR) = 1.0 or less.
- c. Environmental Notice of Violation (NOV) (federal or state) with penalties greater than \$1000 = two (2) or less confirmed.
- d. OSHA citations = two (2) or less serious with 0 willful.
- e. Total Incident Case Rate (TICR) = Business unit specific Targets. Total Recordable Incident Rate (TRIR) is an equivalent term
- f. Days Away/Restricted Time (DART) = Business Unit Specific Targets
Contractors must pass the fatality target (a) and four of the remaining five targets (b-f).

AERIAL LIFTS

Contractor shall have a documented program for safe operation of aerial lifts that will be available for review by Duke Energy. Dielectric test results for aerial equipment shall be documented and available to Duke Energy upon request

ELECTRICAL PERSONAL PROTECTIVE EQUIPMENT (PPE) (CESR)

Contractor shall have a documented Electrical Personal Protective Equipment (PPE) program, subject to the review of Duke Energy, including but not limited to the following:

1. Flame-resistant (FR) Clothing: The program shall include requirements for the use, inspection and maintenance of FR clothing, face shields and arc flash suits. FR clothing shall meet OSHA requirements for the work being performed.
 - a. FR clothing shall have a minimum arc rating of 4.2 cal/cm² or as required by the published available fault current.
 - b. FR clothing is required when performing work on energized equipment or when within 10 feet of exposed energized equipment.
 - c. One hundred percent natural fiber clothing is required under FR clothing.
2. Rubber Gloves and Sleeves: The program shall include requirements for rating, testing, inspecting and using (requirements/exceptions) rubber gloves and sleeves.
 - a. Whenever rubber gloves are required, leather glove protectors are worn over the rubber gloves
 - b. Leather glove protectors shall not be worn without rubber gloves.
 - c. Leather glove protectors shall not be worn for any other purpose.

DEDICATED OBSERVER/QUALIFIED WORKER

Contractor shall have a documented qualified observer program, subject to the review of Duke Energy, including, but not limited to, the identification of critical tasks to be observed, procedural compliance, clearances, correct PPE use, pre-job briefs, compliance with protective cover-up/insulate and isolate standards and correct tool use.

Contractor shall have a documented qualified observer program, subject to the review and approval of Duke Energy, including, but not limited to the identification of critical tasks to be observed, procedural compliance, clearances, correct PPE use, pre-job briefs, compliance with protective cover-up/insulate and isolate standards and correct tool use.

1. The designated qualified observer shall be able to identify nominal voltages, energized components, minimum approach distances, and proper safe work practices while crew members are working on energized lines.
2. The designated qualified observer must be identified during the job briefing.
3. Contractor is responsible for ensuring subcontractors comply with the qualified observer program.
4. Duke Energy retains the ability to designate observers if necessary due to the hazard risk of work being performed by the Contractor.

GROUNDING (CESR)

1. Contractor shall have a documented grounding program, subject to the review of Duke Energy, for the grounding of vehicles and mobile equipment.
2. Contractor shall have a documented grounding program, subject to the review of Duke Energy, for the testing of potential and grounding of conductors.
3. For Missing Station Grounds, Contractors shall comply with the “*Duke Energy Transmission Missing Grounds Policy*.”
4. Contractors shall use Duke Energy’s grounding log sheet for all grounds placed on the Duke Transmission system. This log will be for equipment, personal and static discharge grounds.

GENERAL OVERHEAD SAFETY

1. When tree crews ask for a line to be grounded during outage situations (i.e., when a tree is lying on a line), the following is required:

- a. The installation of grounds on both sides of the work location and as close as possible to the tree crew.
- b. The grounding of a pole or structure if the tree crew work involves a pole or structure.

PROTECTIVE INSULATING EQUIPMENT/INSULATE & ISOLATE (I&I) (CESR)

- 1. Contractor shall have a documented program, subject to the review of Duke Energy, for the proper understanding and application of I&I for the work being performed.
- 2. Contractor shall ensure protective insulating equipment (i.e., cover-up) is used when working on or near energized or de-energized conductors, neutrals or equipment that workers might contact unless the conductors, neutrals or equipment have been cleared, tested and grounded. Workers are not required to cover-up the phase they are working on.

POWER FACTOR ELECTRICAL TESTING

- 1. Contractors shall have a documented Power Factor Electrical Testing program, subject to the review of Duke Energy, including, but not limited to, the establishment and enforcement of work practices for the protection of each worker from the hazards of high-voltage or high-power testing at all test areas, both temporary and permanent.

QUALIFIED PERSONS, CRANE OPERATIONS

- 1. Contract companies providing crane operation services in support of Duke Energy Transmission work shall be trained as Qualified Persons in accordance with OSHA 1910.269 (a) (2) (i) - (ii).

SAFETY SIGNS AND BARRICADES

- 1. In Transmission, a plastic chain may be used in lieu of barrier tape.

WORK AUTHORIZATION REQUIREMENTS

- 1. Contractor shall use the Duke Energy Switching & Tagging Log Book for the recording and documenting all clearances, hot-lines, and orders carried by, and issued to, the Contractor's field resources. Contractor's Switching & Tagging Log Book will be made available for review and inspection by Duke Energy's representative upon request.
- 2. Contractor shall ensure when working on distribution or transmission circuits and/or equipment over 600V that will remain energized, a hot line tag shall be issued in accordance with the Duke Energy Switching and Tagging Log Book for the applicable jurisdiction. This will be for any "hands on work" at primary facilities or work where Contractor may potentially encounter distribution or transmission circuits and/or equipment over 600V at primary facilities.
- 3. At Duke Energy's discretion, a hot line tag may be requested for other critical tasks not defined above

HELICOPTER OPERATIONS

- 1. When requested, the following shall be subject to the review and approval of Duke Energy and/or third- party subject matter expert (SME) representing Duke Energy:
 - a. Pilot qualifications, ratings, certifications and background
 - b. Aircraft maintenance logs, history
 - c. All aircraft, ground support equipment and rigging.
- 2. Helicopter service providers will be subject to Duke Energy oversight requirements and associated safety measures, as required.

CAPACITORS:

- 1. Based on industry experience, manufacturer's requirements must be followed when transporting and storing capacitor banks. One must familiarize themselves of the capacitor bank's set-up before installing leads.