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**CONTRACTOR'S HEALTH, SAFETY, SECURITY,  
AND ENVIRONMENTAL OBLIGATIONS**

**(2023)**

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## I. OBLIGATIONS

### A. General Expectations and Standards of Performance

#### A1. Compliance

- A1.1. The Contractor shall strive to achieve the goal of zero high-risk incidents and take all measures and follow all procedures required to protect workers, members of the public, and the environment.
- A1.2. The Contractor shall comply with the obligations contained within this document, applicable local procedures, and/or project-specific technical specifications.
- A1.3. The Contractor shall comply with all regulatory requirements, agreements, contract work acts, local regulations, rules, and guidelines.
- A1.4. Unless otherwise agreed to by the Owner, any necessary licenses, authorizations, certificates or permits required to perform the work must be obtained by the Contractor and furnished to the Owner upon request. The Contractor shall report promptly to the Owner any situations that may include, or lead to, the reception of a notice or an order from an agency.
- A1.5. The Contractor shall monitor and promptly and suitably correct HSS&E-related deficiencies and hazards or threats, including those that may be identified by the Owner, regulatory agencies, or auditing parties. All deficiencies and high-risk hazards found shall be reported to the Owner.
- A1.6. If the Contractor is unsure of a proper working procedure, the Contractor shall immediately request guidance from the Owner before proceeding with the work.
- A1.7. In addition to the Contractors' disciplinary policy, the Owner is at liberty to object to, and to require, the Contractor to remove from the work site forthwith any person employed by the Contractor in or about the execution of the workers who, in the opinion of the Owner, presents a significant HSS&E risk due to his/her conduct, level of competence, or negligence. Such persons shall not be employed again at the work site without the prior written consent of the Owner.
- A1.8. The Contractor shall not deviate, or work contrary to, these Contractor's HSS&E Obligations without written consent formally provided to the Contractor by the Owner, specific to the scope of work for which such a deviation may apply.

#### A2. Qualification, Training, and HSS&E Meetings

- A2.1. The Contractor shall implement and document a thorough qualification process for all Subcontractors that will review both leading (e.g., training, work observations, risk assessments etc.) and lagging indicators (e.g., incident rates, unsafe acts, compliance

violations). The Contractor shall verify through this process that the Subcontractor is capable and qualified to complete its work safely and meet the provisions explained within this document. Each contract with a Subcontractor shall expressly state in the agreement that the Subcontractor is bound by the provisions of these Contractor's HSS&E Obligations insofar as they apply to the work being performed under any such a (sub-)contract. The Contractor shall ensure compliance by all Subcontractors with such provisions and the Contractor shall be fully responsible for the acts and omissions of Subcontractors and other Contractor personnel.

A2.2. The Contractor is required to provide its personnel and all Subcontractor employees the required HSS&E training and work site or project-specific orientation sessions.

A2.3. The Contractor shall conduct HSS&E orientation meetings before the commencement of project work. This orientation meeting is mandatory for both the Contractor's and Subcontractor's personnel. This orientation will be site and work-specific and will identify the limits of the safe working area and all related restrictions, high-risk HSS&E hazards, obligations outlined in this document, and the site emergency response plan.

Once the project has started, the Contractor shall conduct site HSS&E orientation meetings (as above) for new Contractor and Subcontractor personnel before they start work. The Contractor must maintain, and make available to the Owner upon request, written confirmation that these meetings have taken place.

A2.4. The Contractor shall employ in the execution of the work only such persons that are competent in their respective trades. Workers must understand the safety, technical, and environmental aspects of their jobs. The Contractor is responsible for providing primary, update, and refresher training as needed.

A2.5. The Contractor must verify, track, and document employee training and skills. A record of employee skills, training, and designations shall be maintained by the Contractor and available for inspection by the Owner or Owner's representative. Verification must be provided immediately upon the request of the Owner. (i.e.: qualified/competent persons, Licenses, Certifications, etc.)

A2.6. The Contractor shall not use any unqualified employees on any project in a labor capacity that may include high-risk work, including but not limited to:

- work in the operating/generating power stations.
- work on/near energized electrical equipment
- work in forestry (e.g.: right-of-way clearing)
- Driving a vehicle or heavy operating equipment
- Use of high-risk mechanical equipment (e.g.: chainsaws)
- Exposure to high-risk hazards or conditions such as falls greater than 3m (10ft), falling objects, rotating mechanical equipment, confined spaces, etc.

A2.7. For project lasting six weeks or more, the Contractor shall conduct mid-project and/or monthly site HSS&E meeting with its workers. The Owner reserves the right to require more frequent HSS&E meetings as necessary. The Contractor must ensure involvement in these meetings by their designated project management. Invitation to these meetings shall be extended to the Owner and applicable stakeholders within a reasonable timeframe before assembly. The content of these meetings should be relevant to the exposures anticipated on the project. The minutes of the meetings shall be forwarded to the Owner within three (3) working days of the meeting.

A2.8. The contractor shall participate in the performance evaluation meetings when requested by the Owner.

### **A3. Other Requirements**

A3.1. The Contractor is required to inspect the condition of tools and equipment to establish that they are in proper working condition, designed to applicable safety and environmental standards, approved by the applicable governing body(s) for the purpose for which they are to be used, and free of defects before use.

A3.2. The Contractor shall make available to the Owner, upon request, all work HSS&E-related documentation for review and audit.

A3.3. The Contractor shall provide a positive, inclusive work environment for all workers and exhibit zero tolerance for workplace violence, discrimination, harassment, and bullying whether on the work site or otherwise related to project work.

A3.4. The Contractor shall maintain positive and respectful relations with third parties including government agency representatives and all neighbors and other users of areas in and around the work site.

A3.5. The Contractor shall refer any inquiry from the public or the media related to the work to the Owner.

A3.6. The Contractor shall report problematic relations with third parties to the Owner without delay.

A3.7. The Contractor shall notify the Owner immediately of any visits or inspections from regulatory agencies or governing bodies at the project.

### **A4. Security**

A4.1. The Contractor shall comply with all Brookfield Renewable security policies/procedures as made available to it and as applicable to the site, project, and/or the Contractor's scope of work. The Contractor's personnel will be subject to any security arrangements put in place by the Owner. If Brookfield does not have an operating presence at the project site, the Contractor shall employ adequate security measures to ensure site

and personnel security.

- A4.2. The Contractor must comply with all qualification requirements about the hiring and employment of workers as outlined in the contract. Contractors must ensure that qualifications are also delegated to third parties as required. Such qualification requirements may include criminal background checks, drug screening, employment eligibility verification, references from previous employers, etc.
- A4.3. Drugs and alcohol are strictly prohibited from all Brookfield Renewable facilities and project sites. No persons will be permitted to enter a site/project if believed to be in possession of, or under the influence of, drugs or alcohol.
- A4.4. Firearms and other weapons are prohibited from all Brookfield Renewable facilities and project sites. No Contractor personnel (except security Contractors specifically authorized and approved in writing) will be permitted to enter a work site if believed to be in possession of a firearm or other weapon.
- A4.5. The Contractor shall maintain prudent office security for office areas used for Brookfield Renewable projects. The Contractor shall also take all reasonable precautions to prevent unauthorized access of persons to the Contractor's and Brookfield Renewable's equipment.
- A4.6. The Contractor shall, if physically possible and applicable to their scope of work, close off the work site/project completely with sturdy fencing (height 6 ft / 2m). The entrances to the site/project shall be locked outside working hours at a minimum, and necessary instruction and prohibition signs shall be erected in clearly visible locations along the perimeter of the site/project.
- A4.7. Access to the work site / project shall be provided to the Owner at all times and without undue delay.
- A4.8. To ensure the safety of Brookfield Renewable's information and project details, the Contractor must practice sound information security measures, such as implementing a clear desk policy, controlling access to sensitive documents, and maintaining confidentiality agreements.
- A4.9. The Contractor shall maintain prudent computer and communications security for any computer system and network being used for the handling of Brookfield Renewable information, including controlled computer access, virus protection, security updates, firewalls and backup routines.
- A4.10. When requested by the Owner, a Contractor's representative shall be present at the site/project to respond to security or emergency situations within one hour (or a reasonable alternative time frame as pre-agreed by the Owner) after notification.

## B. Project Planning and Management

### B1. Site Hazard Assessment

B1.1. At the discretion of the Owner and in preparation of the project plan prior to the commencement of project work, the Contractor, in conjunction with the Owner, will review the projects' HSS&E Inherent Hazard Assessment and identify in the project HSS&E Project Plan any additional high-risk HSS&E hazards/ threats that need to be addressed.

### B2. Project Planning Level

B2.1. Based on the determination by the Owner of the appropriate level of HSS&E Planning required for the work, the Contractor shall either:

- a) Collaborate with the Owner on the development and/or review of the Project HSS&E Planning, or
- b) Establish a thorough Project HSS&E Planning process in compliance with the requirements outlined below:
  - i. Level 1 Planning: If the project involves complex work, or work lasting more than 20 days, the Contractor shall prepare a Project Construction Schedule, a Project HSS&E Plan, and Daily Job HSS&E Plans.
  - ii. Level 2 Planning: If the project involves a short duration complex work (<20 days), the Contractor shall prepare a Project HSS&E Plan and Daily Job HSS&E Plans.
  - iii. Level 3 Planning: If the project does not involve any of the above, the Contractor shall prepare Daily Job HSS&E Plans for all tasks related to project work.

*Complex Work: Work that has any of the following items: multiple crews/stakeholders, multiple high-risk tasks with no control barriers, interrelated tasks that rely on the completion of others that, if not completed, are likely to create significant delays or major hazards, or work where the timing of resource allocation is vital to the completion of the work.*

### B3. Project Construction Schedule

B3.1. When applicable as specified in B2.1b, the Contractor shall provide to the Owner, prior to commencement of the work on-site, a Project Construction Schedule showing the sequence of tasks required to complete the work. The Project Construction Schedule will include the timing, resources, and special equipment required for each task in the plan. The Owner reserves the right to review and comment on the Project Construction Schedule. The Contractor is responsible to address to the satisfaction of the Owner all comments and will use the Project Construction Schedule to prepare the Project HSS&E Plan(s) required as per Section B4.

## **B4. Project HSS&E Plans**

- B4.1. When applicable as specified in B2.1b, the Contractor shall complete a Project HSS&E Plan based on the projects' inherent hazard assessment and construction schedule, as applicable. The Project HSS&E Plan shall include the sequence of activities to be completed on-site for the entire project term. If a project has multiple major phases or Contractors, then additional plans may be required by the Owner. For each major task, the plan will identify all high-risk HSS&E hazards and include a barrier analysis that identifies the intended means of controlling or mitigating the hazards to an acceptable level of risk. The Owner reserves the right to require specific formats for the Project HSS&E Plan. A sample *HSS&E Form: Project HSS&E Plan* template is attached in Appendix A.
- B4.2. The Contractor shall update the Project HSS&E Plan at the request of the Owner or to address any new tasks that may create additional HSS&E high-risk hazards during the project. All changes to the Project HSS&E Plan shall be reviewed by the Owner, and a copy of the Plan shall be maintained at the project site and available for review.
- B4.3. The Owner will review the Project HSS&E plan and may, at its sole discretion, require the Contractor to make modifications the Owner deems necessary to ensure compliance with these Contractor's HSS&E Obligations. The Contractor shall provide to the Owner the revised Project HSS&E Plan(s) at least 15 days prior to the start of work unless a shorter duration is mutually agreed to. The Contractor shall inform workers of the details of any such revised Project HSS&E Plan(s) prior to the commencement of project work.
- B4.4. The Contractor is responsible for the accuracy, completeness, suitability, implementation and communication of Project HSS&E Plans and site HSS&E hazards to all levels of employees and Subcontractors that they bring on-site throughout the course of their work.
- B4.5. The Contractor shall ensure that all HSS&E hazard controls and barriers identified in the Project HSS&E Plan(s) are in place and functional prior to the commencement of work and are always maintained and functional until completion of the work.

## **B5. Daily Job HSS&E Plans**

- B5.1. At the start of each work shift and prior to the commencement of any work on-site, each of the Contractor's and Subcontractors work crews shall prepare a Daily Job HSS&E Plan, where all individual workers assess critical HSS&E hazards and/or threats pertaining to the specific tasks to be performed. The Contractor shall provide the Owner with a copy of all Daily Job HSS&E Plans upon request. A sample *HSS&E Form: Daily Job HSS&E Plan* template is attached in Appendix B.
- B5.2. The Daily Job HSS&E Plan shall:



- a) Identify the sequence of tasks to be completed along with the potential for each to cause:
  - i. fatality or serious injury.
  - ii. damage to the natural environment, or;
  - iii. damage to a Brookfield Renewable or third-party property.
- b) an assessment to identify the most effective barriers (control barriers, protective and support barriers) for mitigating each identified risk and completing the work safely. If the work conditions change at any time giving rise to new high-risk safety and/or environmental hazards, the Contractor shall stop, reassess, and revise the Daily Job HSS&E Plan and communicate it to all affected workers before resuming work.

B5.3. The Owner reserves the right to require additional means of hazard mitigation (barriers) if, at the Owner's sole discretion, a hazard is not controlled to an acceptable level.

B5.4. All Daily Job HSS&E Plans shall be approved by a competent person. The Owner reserves the right to determine the process for Daily Job HSS&E Plan approval.

B5.5. Daily Job HSS&E Plans must be communicated to all workers associated with the task each day and every worker shall adhere to the requirements of each applicable Daily Job HSS&E Plan.

B5.6. Members of the Contractor's management team shall regularly participate in meetings where Daily Job HSS&E Plans are discussed.

B5.7. It is the Contractor's responsibility to ensure that all employees receive training on how to create and maintain high-quality Daily Job HSS&E Plans.

## **B6. Project-Specific HSS&E Programs**

### **B6.1. Personal Protective Equipment**

The Contractor shall develop and maintain a minimum Personal Protective Equipment (PPE) program that addresses standards for use, care, inspection, training, and standards for purchasing PPE. The PPE program must meet or exceed applicable Brookfield Renewable requirements and be evaluated as part of the risk assessment process.

### **B6.2. Product Transport and Delivery Systems and Waste Management**

- a) The Contractor shall have, and administer, a chemical hazard program that meets the provisions of the Globally Harmonized System (GHS) and applicable regulations. The program shall outline, at a minimum:
  - i. Chemical hazard communication plan
  - ii. Hazardous material shipping and handling process
  - iii. Provide employees with the right to understand chemical hazards via Safety Data Sheets

- b) Upon completion of the work or when a particular product is no longer required on site, whichever occurs first, the Contractor shall remove all remaining quantities of the product and all empty containers.
- c) Hazardous material, waste or dangerous goods shall not be left on site or with the Owner without the prior written consent of the Owner. The Contractor shall separate all waste material into hazardous and non-hazardous waste. An itemized list with name, classification, and quantities of all waste must be provided to the Owner.
- d) Hazardous waste or dangerous goods shall not be disposed of through the Owner's waste management system (unless requested in writing by the Owner) or on the Owner's or third party's property. The Contractor is responsible for waste disposal to an appropriate waste disposal facility in accordance with all applicable laws and regulations.
- e) Product delivery systems, including but not limited to, containers, valves, pumps, pipes, hoses, nozzles, and vents, shall be in good working order and without leaks. The Contractor shall provide overflow prevention or protection for chemical, fuel, and oil storage containers/tanks.

### B6.3. Industrial Hygiene

- a) The Contractor must evaluate the project site for possible health hazards that may be identified after mobilization. Considerations for testing and working with, or around these substances shall be discussed with the Owner. Hazards to consider include, but are not limited to, lead, asbestos, silica, mercury, PCBs, Radon, volatile organic compounds (VOC's), oxygen enrichment/deficiency, SO<sub>2</sub>, carbon monoxide, mold, hexavalent chromium, etc.
- b) The Contractor is responsible for following all applicable regulatory standards related to health hazards associated with their work.

### B6.4. Traffic Control

- a) For any projects involving the use of heavy vehicles, shared roadways with pedestrian traffic, or backing of vehicles, the Contractor shall prepare a Site Traffic Control Plan that includes all structures, meeting areas, access roads, drop-off locations, and vehicle parking areas. The plan must be updated as work site conditions change and made available for review by the Owner. The plan shall address:
  - i. Road marking
  - ii. Maximum slope degrees for heavy equipment traffic.
  - iii. Personal protective equipment

- iv. Signage
  - v. Physical barriers
  - vi. Speed control
  - vii. Flaggers and spotters
  - viii. Communication
- b) All vehicles on site must be in good working order with current vehicle inspections for safety and mechanical conditions. All vehicles must be operable per original equipment manufacturers' specifications.
  - c) All vehicles with a gross vehicle weight rating above 10,000lbs (4,500kg) must have backup alarms installed. Dedicated personnel ('spotters') must assist in all situations where a driver's line of sight is obstructed when backing up a vehicle.
  - d) Drivers must hold the applicable license for the equipment they intend to operate per regulation. The Contractor shall provide copies of driver's licenses to the Owner upon request.
  - e) All persons in vehicles must always wear seatbelts when the vehicle is in use.
  - f) The use of handheld cellular devices is prohibited for all persons operating a vehicle within the scope of the project or on Brookfield property.

## **B7. Contract Monitoring and Work Observations**

- B7.1. The Contractors' site/project management staff shall develop an HSS&E monitoring plan, conduct structured, documented safe work observations targeting high-risk work performed by its workers and Subcontractors, and report major findings to the Owner. The monitoring plan shall be made available to the Owner upon request. The Owner will review the monitoring plan and may, at its sole discretion, require the Contractor to make necessary modifications. A sample *HSS&E Form: Safe Work Observations* template is attached in Appendix C.
- B7.2. At the timing and frequency of its discretion, the Owner may also conduct structured safe work observations of project-related tasks being performed by the Contractor or Subcontractors. The Contractor shall ensure that workers and supervisors cooperate with the Owner during such work observations.

## **C. Incidents, Emergency Prevention, and Response**

### **C1. Incident Response and Reporting**

- C1.1. In the event of a high-risk HSS&E incident, the Contractor shall:
  - i. Stop work.
  - ii. Secure the work site to ensure the protection of workers, the environment, members of the public, and evidence necessary for incident investigation.

- iii. Provide notice to all required appropriate authorities.
- iv. Report the incident immediately to the Owner.

C1.2. The Contractor shall immediately take appropriate actions to contain and clean up any chemical spill or release and report all such events to the Owner.

C1.3. The Contractor shall provide to the Owner, as soon as possible and in all cases within 24 hours, all relevant facts necessary for the determination of the severity of the incident. A sample *HSS&E Form: Initial HSS&E Incident Investigation Report template* is attached in Appendix D.

C1.4. The Contractor shall complete an investigation of any incident occurring during the performance of work and provide the Owner with a detailed written report of its findings) as soon as possible.

C1.5. In addition to the requirements outlined in paragraph C1.4 above, the Owner reserves the right to conduct its own internal investigation of any HSS&E-related incident(s) occurring during the project. The Contractor is obligated to cooperate with the Owner during any such investigation and collaborate in the implementation of any action plan(s) resulting from the incident. This may include making available all evidence related to the incident and employees and/or Subcontractors available for interviews or training.

## **C2. Emergencies, Spills, and Emergency Preparedness**

C2.1. The Owner has the authority, and the Contractor and its workers the obligation, to stop work whenever such stoppage may be necessary to ensure the safety of workers or members of the public; the protection of any equipment, structure, or property; or the protection of the environment. This includes the authority to order the Contractor or a Subcontractor to stop working. The Contractor shall notify the Owner immediately upon stoppage of work due to an HSS&E concern.

C2.2. The Contractor shall establish emergency preparedness and response plans for potential HSS&E emergencies related to the Contractor's, and its Subcontractors, scope of work and/or caused by their own activities. Emergency preparedness and response plans must comply with all applicable regulatory requirements and shall, at a minimum, encompass:

- i. Fire Prevention and Protection Procedures
- ii. Evacuation Plan
- iii. Oil/petrol/chemical spill prevention and response procedures
- iv. Process for accounting for on-site personnel during an emergency

C2.3. All employees who have responsibilities within an Emergency Response Plan must be trained in their duties. Emergency drills / exercises to test response capabilities must be considered in the Emergency Response Plan and conducted at the direction of the

Owner for any work.

C2.4. The Contractor shall provide and make available:

- i. Adequate and suitable rescue and firefighting equipment
- ii. The minimum level of first-aid equipment required by regulation for the scope of work and size of the workforce and adequate personnel trained in first aid and cardiopulmonary resuscitation (CPR)
- iii. Chemical spill kits

## **D. Activities with Additional Requirements**

### **D1. Work in proximity to Exposed energized electrical equipment.**

D1.1. For any work involving – or in close proximity to – exposed energized electrical equipment, regardless of the voltage involved, the first alternative must always be to de-energize, test, and ground the equipment and evaluate adjacent equipment for arc flash potential.

D1.2. All Contractor and Subcontractors' workers must be qualified pursuant to industry practices and have been trained on the specific procedure prior to performing any work in proximity to exposed energized equipment (see Section I Definitions). The Contractor shall inform affected workers employed in the execution of the contract regarding the location of all electrically energized apparatus in the vicinity of the work and the correct and safe working procedures consistent with their hazard exposure, including but not limited to (as applicable to the work) isolation, de-energizing, grounding, and maintaining safe distances for work in proximity to energized equipment.

The Contractor shall verify that every on-site supervisor and worker is fully conversant with the correct and safe working procedures consistent with their hazard exposure, including but not limited to (as applicable to the work) isolation, de-energizing, grounding, and maintaining safe distances for work in proximity to energized equipment.

D1.3. Minimum Clearance Distance to exposed energized electrical equipment must be outlined for various voltage levels for qualified workers, unqualified workers, and relevant equipment, with the following additional conditions:

- a) The minimum distance to exposed energized electrical equipment for qualified workers per voltage range (phase-to-phase or phase-to-ground for AC or DC voltages) must be either the distance set by local regulatory requirements or by the table below, whichever is most stringent.
- b) The positioning of workers, conductive tools, equipment, or materials must take into consideration arc flash exposure, planned action, equipment failure, and unintentional movement that may result in encroachment on the minimum

clearance distance.

Voltage Range, Phase to Phase or Phase to Ground	Minimum Distance to Exposed Energized Electrical Equipment for <u>Qualified</u> Workers
750 V to 50 kV	1 meter (3 feet)
51 to 125 kV	1.5 meters (5 feet)
126 to 250 kV	2.5 meters (8 feet)
251 to 550 kV	4 meters (13 feet)
> 550 kV	6 meters (20 feet)

D1.4. If it is not possible to de-energize the electrical equipment, the workers, conductive tools, equipment or materials must be kept outside of the minimum clearance distance to exposed energized electrical equipment.

D1.5. For any work that may encroach on the minimum clearance distance to exposed energized electrical equipment, physical control barriers must be applied to prevent inadvertent electrical contact and a qualified dedicated observer must be present at all times.

D1.6. For any work that cannot be completed by applying the above criteria:

- a) A specific work procedure to prevent contact with exposed energized equipment that includes shock and arc flash hazard analysis, along with multiple Protective Barriers and all necessary Support Barriers must be documented and subsequently approved by the Owner.
- b) All work (except for troubleshooting, testing, or isolating on or in proximity to control voltages at a voltage less than 600 volts), must be monitored by a qualified, dedicated observer who was involved in the preparation of the Daily Job HSS&E Plan.

## **D2 Work On exposed energized electrical equipment.**

D2.1. No work on exposed energized electrical equipment is allowed unless specific written consent has been granted by the Owner following a formal request by the Contractor. Such requests must include proposed work-specific procedures and control barriers and must be evaluated during the project planning process as far in advance of the work as possible. The Owner's responsible authority reserves the right to not approve work to be conducted on exposed energized equipment above 600 volts.

## **D3. Use of mobile and heavy operating equipment**

- D3.1. The Contractor shall ensure that operators of heavy operating equipment have up-to-date licenses and are qualified to operate the heavy operating equipment as per all regulatory requirements.
- D3.2. The Contractor must ensure that operators have received on the safe operation of heavy equipment at the site, including site-specific hazards, operating restrictions, communications, etc.
- D3.3. Operators shall familiarize themselves with the operation of the specific piece(s) of heavy equipment that they will be required to operate, and shall conduct thorough pre-use checks on all heavy equipment. Pre-use equipment checklist completion must be recorded and documented.
- D3.4. Operators of heavy equipment must be involved in the preparation of Daily Job HSS&E Plan for the work. Daily Job HSS&E Plans must include details on the use of the heavy equipment such as vehicle setup, pre-use inspection, and testing, stabilization, work zone protection, rigging requirements, operating limitations, minimum clearance distances to energized electrical equipment, oil/fuel spill prevention and control measures, and end-of-day securing of equipment.
- D3.5. Heavy equipment must be inspected and maintained in compliance with manufacturer requirements. Appropriate maintenance and inspection records must be maintained.
- D3.6. Unless performed by qualified powerline workers on transmission and distribution circuits, all work requiring the use of mobile heavy operating equipment near electrical supporting structures, such as towers, poles, and guy wires, shall comply with the following conditions:
  - i. Mobile heavy equipment shall remain at a minimum safe working distance of 3 meters (10 feet) from any electrical supporting structure;
  - ii. A safe work zone must be established around the electrical supporting structure. The perimeter of the zone and the structure must be marked with cones, flags, or caution tape. These visual aids must be attached or positioned so that they are easily visible to the operators of heavy equipment working in the area.
  - iii. For any work required within 3 meters (10 feet) of an electrical supporting structure, the first alternative must be the use of hand tools. If the use of hand tools is not feasible, the work requires detailed job safety planning, physical barriers and/or a dedicated observer.
  - iv. If the above conditions cannot be met, a documented work procedure highlighting the risks and limitations, must be approved by the Owner.
- D3.7. Hand-held electronic devices shall not be used while operating heavy equipment. This

includes speaking on the phone, texting, attending e-mails, surfing the Internet, actively using GPS devices that are not fixed in the vehicle, etc.

D3.8. When Rigging & Lifting with Multiple Use Equipment (other than cranes or non-crane lifts) the Contractor must ensure that:

- i. The specific heavy equipment has been designed for lifting in the specific manner of the intended lift, including considerations for setup, ground conditions, and meteorological/ weather considerations.
- ii. All rigging equipment has been properly rated and will be used in accordance with the manufacturer's recommendations.
- iii. All rigging equipment has been stamped with a load rating and is in good working order as per manufacturers' specifications.
- iv. The weight of the intended load (including any soil loading) has been properly assessed.
- v. A rigging & lifting plan has been developed and approved by a competent and qualified person.
- vi. Operators have been trained in the proper use of any equipment intended to use in conducting the lift.

D3.9. Original Equipment Manufacturers (OEM) ladders installed on heavy equipment may be used as intended per the manufacturer's specification. These ladders must be free of debris/material, in good working order, and have no damage or modifications. Any non-OEM installed ladders intended to be used on or with the operation of heavy equipment must meet all requirements outlined below in Section D4.

## **D4. Climbing and working at Height**

D4.1. The Contractor must have a fall protection and prevention program established and applicable to the work on site. This program must meet the standards established by the Owner. Fall protection measures must be taken whenever there is a potential for a high-risk HSS&E event involving gravitational energy.

D4.2. For all temporary and permanent work structures, equipment, and installations, where there is a gravitational hazard, the first alternative is to change the design to eliminate the hazard. If it is not practical to eliminate the falling hazard through engineering or design change, a Fall Protection Hierarchy system must be implemented in the following order of priority:

- a) Fall Prevention System
  - i. Guardrail System
  - ii. Travel Restraint System
- b) Fall Limiting System
- c) other Fall Arrest System



D4.3. Whenever there is a possibility of objects falling from height, an adequate safe work zone must be established to ensure that workers and others are not exposed to falling objects from the work above. For example, the area where potentially dropped tools or equipment could land might be delineated with caution tape or monitored by a dedicated observer, and work platforms might have kick plates installed.

D4.4. Any time workers are required to perform work in a situation that requires Fall Protection and cannot reasonably be expected to self-rescue, the Contractor must develop and implement a fall rescue plan appropriate to the work and ensure that rescue team members have received all necessary training and are deemed competent to conduct the specific type of rescue called for in the plan. At a minimum, the rescue plan must:

- a) outline emergency procedures for the removal or extraction of workers from elevation should they need retrieval for any reason, and;
- b) address the availability and accessibility of rescue personnel and required equipment (internal and external).

## **D5. Cranes, Hoisting, and Rigging**

D5.1. The Contractor must have a formal craning and hoisting program that defines the requirements for all types of lifts using such equipment. The program requirements must include, but are not limited to, the following:

- a) Crane assembly and disassembly.
- b) Levelling, stabilizing, and securing of cranes.
- c) Loading and off-loading of craning/hoisting equipment.
- d) Crane walking (including transit from road to use area).
- e) Crane fueling and storage.
- f) Communication/signaling requirements during hoisting or moving materials and equipment.
- g) Clearly defined, documented, and communicated roles and responsibilities related to all workers involved in craning, hoisting, and rigging tasks, including hoisting/erection crew supervisor, crane operator, signal-person, riggers, and any other applicable qualified/competent persons assigned to such operations (including designated engineer or consultant).

D5.2. All crane operators and riggers must receive training within a structured program on the crane's safe operation; have a thorough understanding of the operating limitations of the specific equipment with which they are working; and have up-to-date training and operating licenses (as applicable).

D 5.3 A formal Lift Plan must be prepared:

- a) For all lifts using mobile cranes (including mobile tire mounted and track cranes, tower cranes, and boom truck cranes).

b) When using fixed overhead/tower or gantry cranes any time an activity using the equipment is determined to be Medium or High-Risk on the Daily HSS&E Job Plan.

D5.4 The Lift Plan must include a drawing or picture showing:

- i. the anticipated location of the hoisting equipment, structures, utilities, public and site traffic, and other operations/activities/equipment within 150% of the crane's boom length,
- ii. the proposed travel of the lift(s), and expected delivery entry/exit points,
- iii. the staging of support vehicles/equipment and materials
- iv. the hazards in the lift's vicinity (e.g., overhead or underground utilities, manholes, structures, traffic, excavations).

D5.5 For all lifts using any type of crane, hoist, or other lifting device, the Daily Job Safety Plan must include key activities related to craning and hoisting activities such as crane and hoist setup, pre-use inspection and/or testing, operating limitations, minimum clearance distances to energized electrical equipment, and oil and fuel spill prevention and control measures if applicable. Daily Job Safety Plans must be reviewed with all workers who could be affected by the operation of the Crane and/or Hoist prior to the start of Work.

D5.6 Pre-use checks must be done on all Cranes and Hoists prior to operating the equipment. Pre-use checklists must be used by the Operators and records must be maintained for a minimum of 5 years.

D5.7 There must be a pre-lift meeting/discussion with all workers involved in the lift.

D5.8 A safe work zone around the crane's operating range and possible drop areas must be established and delineated with boundaries and postings identifying the hazard.

D5.9 Any area in which workers could be trapped or crushed by the movement of the counterweight of a mobile crane must be fenced or barricaded.

D5.10 An evaluation of the expected meteorological/ weather conditions (e.g., wind speed, lightning) expected during the craning and hoisting activities must be performed.

#### D5.4 Requirements Specific to Critical and High-Risk Lifts

All Critical or High-Risk Lifts require the Lift Plan to be completed by a designated competent person. At a minimum, the plan must address the following elements:

- a) Description of the lift
- b) Crane(s) involved in the lift activity and relevant equipment specifications.
- c) Drawing for the lift that identifies:
  - i. Location of lifting equipment
  - ii. Lift height
  - iii. Load radius

- iv. Load chart (and boom length & angle when possible)
- v. Size & weight of the load
- vi. Flight path of load
- vii. Rigging specifications and attachment points
- viii. Percent of Crane's rated capacity
- d) Personnel involved
- e) Communication method
- f) Ground conditions
- g) Required meteorological/ weather conditions to safely perform the lift
- h) Pre-lift inspection procedures and, if necessary, load test and practice lifts
- i) Intermediate emergency load-down points in the load path
- j) Procedures for lifting Workers (when applicable)
- k) Procedures for keeping unwanted persons from crossing below-suspended loads

## D5.5 Lifts to Be Reviewed by a Qualified Engineer

At a minimum, the following lifts must be reviewed by a Qualified Engineer prior to the lift taking place:

- a) Any Critical Lift
- b) When rigging components are altered or used in a way that is different from manufacturer's specification
- c) When rigging components are site or shop fabricated
- d) When the vertical sling angle is greater than 45° while using eye bolts and greater than 60° for other lifts
- e) When structural members are used for hoisting and the strength of the anchor points cannot be ensured
- f) When specifically requested in the Project HSS&E Plan
- g) When specifically requested by the Owner

A Qualified Engineer shall be responsible to ensure that the lift will be done in conformance with applicable standards, codes, regulations, instructions, and procedures.

## **D6. Use of Off-Road Vehicles (ATV's) and Snowmobiles**

- D6.1. The use of straddle-type all-terrain vehicles and motorcycles is not permitted on work sites.
- D6.2. All off-road vehicles used by the Contractor or Sub-Contractor shall be designed for work travel and hauling, not recreation; shall be equipped with seat belts; and shall have rollover protection that meets the regulatory design standards.
- D6.3. Off-road vehicle operators and riders shall wear seatbelts at all times while the vehicle is in operation, and approved safety helmets if the off-road vehicle is not equipped with a cab and windshield.
- D6.4. Operators shall operate at prudent speeds for trail conditions and in no instance (unless

approved in writing by the Owner) shall exceed 50 kph (30 mph).

- D6.5. Operators shall have completed a combination of both instruction and hands-on training regarding the safe operation of off-road vehicles.
- D6.6. The Contractor shall have an emergency plan in place for the use of off-road vehicles, including snowmobiles, that includes emergency communication, survival gear appropriate for the weather and conditions, and an Emergency Response Plan.
- D6.7. In addition to the above, where snowmobiles are required for the execution of work by contractors or sub-contractors, operators must:
- a) always wear approved full-face shield helmets
  - b) must have completed training regarding the safe operation of the specific type of snowmobile to be used, and;
  - c) must respect trail conditions and speed limits on groomed snowmobile trails.

## **D7. Confined Spaces**

- D7.1. Before allowing any worker to enter a confined space, the Contractor must develop a written Confined Space Plan. The primary objective of the plan is to eliminate the hazard before entry. If this is not possible, then control measures and procedures must be put in place to ensure that workers are not placed in a dangerous situation. At a minimum, the Confined Space Plan must consider:
- a) A method for assessing the hazards to which the worker may be exposed.
  - b) A method for developing plans for eliminating or controlling the hazards.
  - c) An entry permit system setting out measures and procedures to be followed when working in a confined space.
  - d) The requirements of any applicable confined space regulations
- D7.2. The Contractor shall only permit qualified workers to enter confined spaces.
- D7.3. A copy of the confined space plan must be provided to the Owner upon request.
- D7.4. If workers from more than one Contractor will be entering a confined space, the prime Contractor must prepare a confined space coordination plan.
- D7.5. The Contractor is responsible for developing rescue protocols for every confined space that are outlined in the Confined Space Plan and readily available for prompt execution.

## II. DEFINITIONS

In the event of a conflict between the definitions set forth below and any defined terms contained in a definitive agreement with a Contractor, the definitions outlined in the definitive agreement shall govern and control.

1. **Brookfield Renewable:** Brookfield Renewable includes Brookfield Renewable Energy Partners L.P., Brookfield Renewable Power and Transition Inc., Brookfield Energy Marketing, and the subsidiaries, affiliates, and operating businesses managed by such entities.
2. **Barriers:** A component whose function is to control HSS&E hazardous energy to protect the worker, the environment, and the public. Barriers can be classified as:
  - a. **Control Barriers:** A barrier that eliminates, minimizes (to a safe level), or substitutes hazardous energy or is engineered to comprehensively and physically isolate the worker from the energy source. These are normally barriers that do not depend on human performance to be effective.
  - b. **Protective Barriers:** Barriers whose function is to protect the workers, the members of the public, the natural environment, third party's properties, and/or Brookfield Renewable facilities, Operations, and/or image in case of out-of-control energy. These barriers interact with the energy.
  - c. **Support Barriers:** Barriers whose function is to enhance the effectiveness of control barriers and Protective Barriers. These barriers rely entirely on human performance. Examples include HSS&E rules, written procedures, training, dedicated observers, etc.
3. **Competent Person:** A worker who can identify existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to workers, members of the public, or to the environment and who has the authorization to take prompt corrective measures to eliminate them.
4. **Confined Space:** A space that has limited or restricted means of entry, is not designed for continuous occupancy, and is large enough and configured so that a person can enter the space and maneuver well enough to perform tasks. (In cases where different jurisdictions have varying definitions, the definition with stricter requirements should be used.)
5. **Contractor:** A person or company contracted or engaged to perform Work for Brookfield Renewable.
6. **Critical Lift:** is a lift which requires exceptional care in handling due to any of the following:

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- a. the potential for the load to be greater than 75% of the rated capacity of the crane (other than an overhead/gantry crane) and/or any associated rigging.
  - b. the potential for the load to be greater than the rated capacity of a fixed overhead/gantry crane permanently installed at a work site, or.
  - c. the use of two or more cranes for the same lift.
7. **Complex Work:** Work that has any of the following items: multiple crews/ stakeholders, multiple high-risk tasks with no control barriers, interrelated tasks that rely on the completion of others that, if not completed, are likely to create significant delays or major hazards, or work where the timing of resource allocation is vital to the completion of the work.
8. **Environment:** Environment refers to the natural environment (plants, animals, earth, water, etc. whether on Brookfield Renewable property or not) and to members of the public that could be affected by the facilities' Operations or by any work.
9. **Environmental Protection:** Environmental Protection includes elements such as, but not limited to, protection of members of the public, dam protection, oil and chemical spill prevention, waste management practices, and protection of critical areas such as waterways, areas with certain protection or preservation status, or designated species habitat.
10. **Hazard:** A condition or situation with the potential for the release of unwanted energy that could result in (1) an injury or an illness to a worker or to a member of the public; and/or (2) an injury or (monetary) loss due to an intentional, security-related event; and/or (3) damage to the natural environment, Brookfield Renewable facilities or third party's properties.
11. **High-Risk Work:** Activities in which, if an event were to occur, the energy released would be powerful enough to cause a severe injury or fatality to a worker or to a member of the public; and/or (2) an injury or (monetary) loss due to an intentional, security-related event; and/or (3) a major damage to the natural environment, Brookfield Renewable facilities or third party's properties.
12. **HSS&E:** Health, Safety, Security, and Environment.
13. **HSS&E event:** HSS&E events include unsafe acts and incidents.
14. **Health, Safety, Security & Environment Incident:** An HSS&E event *with energy out of control* that resulted in or could have resulted in, had it not been for good fortune, (1) an injury or an illness to a worker or to a member of the public; and/or (2) an injury or (monetary) loss due to an intentional, security-related event; and/or (3) damage to the natural environment, Brookfield Renewable facilities or third party's properties.
15. **High-Risk Incident:** An HSS&E Incident involving *powerful energy out of control* that resulted in or could have resulted in, had it not been for good fortune, a Serious Injury or Fatality or significant environmental damage.
  - a. **Powerful Energy:** An element of work that involves energy capable of inflicting a serious injury or fatality.

- b. **Serious Injury or Fatality:** Life-threatening or life-altering incident resulting in serious injury, disability, or death.

16. **High-Risk Lift:** a lift that falls in any of the following categories:

- i. Lift where any part of the equipment within the mobile Crane's swing radius may become closer than 20 feet (6 meters) to electrical lines independently of the lines' voltage level.  
**Note:** *the first alternative is to de-energize, test, and ground exposed electrical equipment.*
- ii. Lift where the load weight or its center of gravity is difficult to determine.
- iii. Lift that may be subject to adverse weather conditions (i.e. high winds, lightning, etc.).
- iv. Lift in poor soil/ground conditions.
- v. Lift where chain falls or other dynamic rigging are used to alter the rigging configuration and/or center of gravity while a load is suspended.
- vi. Lifts where the loss of control may result in:
  - Significant injury or fatality of a Workers and/or of members of the public,
  - Catastrophic damage to a structure's integrity,
  - The loss of an irreplaceable or un-repairable item that would jeopardize future operations, the safety of a facility, or result in a delay to schedule or other serious program impacts,
  - Significant financial impact to the extent it would affect Facilities/project commitments and/or
  - Negative impact on the Environment including the release of hazardous substances.
- vii. Lifting of Workers with a Crane or Hoist.
- viii. Any lift specifically identified or designated as a High-Risk Lift by the Project Responsible Authority or Qualified Engineer.

17. **Mobile and heavy operating equipment ('heavy equipment'):** Heavy-duty vehicles and equipment specially designed for executing construction, maintenance, or transportation tasks, frequently involving earthwork or material handling operations.

18. **Owner:** refers to a Brookfield Renewable representative assigned to oversee the contracted work. This may include the Brookfield Renewable Project Managers, Operational Managers, Asset Managers, Contractor Monitors, or designated 3rd party oversight vendors and is assigned on a per-project basis by the local Brookfield Renewable business.

19. **Project:** Refers to any operations, maintenance, or construction work conducted under a definitive agreement or contract for a Brookfield Renewable business.

20. **Public Safety:** includes the protection of members of the public who could be impacted by Brookfield Renewable operations, facilities, or by any work related thereto.

21. **Qualified Person:** A person is deemed qualified if he/she has obtained through education and/or experience the knowledge, skills, and expertise required to perform the job/assigned work according to prudent and current industry practice; and his/her manager has determined/verified the person's skill level.

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22. **Security:** The protection of a person, physical assets, or organization against a Threat or (monetary) loss brought about by the intentional act.
23. **Sub-contractor:** A person or company contracted or engaged by a Contractor to perform any aspect of the Work or portions thereof.
24. **Threat:** Any action, circumstance or event which has the potential or possibility to cause harm, loss, or damage to workers, assets, and/or operations.
25. **Work:** Any tasks related to activities such as construction, projects, maintenance, operating, switching, service work, field studies, etc., performed by Brookfield Renewable employees, Contractors, and/or Sub-contractors at Brookfield Renewable work sites. This may include activities at any stage of the project lifecycle (i.e., mobilization, setup, execution, commissioning or demobilization).
26. **Work in Proximity to Exposed Energized Electrical Equipment:** is work where a person, or conducting tools, equipment, or other objects are within the minimum clearance distance to energized electrical equipment, or are physically capable of, through unintentional movement, encroaching on the minimum clearance distance to energized electrical equipment.
27. **Work on exposed energized electrical equipment:** work where contact is made with an energized conductor or equipment.
28. **Work Site:** refers to the location at which the work is conducted. The work site may include Brookfield Renewable facilities or associated sites (such as roads used for the work, etc.), whether on Brookfield Renewable property or not.
29. **Workers:** Includes Brookfield Renewable employees, Contractors, and Subcontractor employees.



## III. APPENDICES

**Appendix A: Project HSS&E Plan Form**

**Appendix B: Daily Job HSS&E Plan Form**

**Appendix C: Safe Work Observation Form**

**Appendix D: HSS&E Initial Incident Investigation Report**