

Energy Resilience for Climate Adaptation Project (ERCAP)
Environmental Code of Practice (ECOP)
for
COMPONENT 2: Demonstration Measures to Enhance Resilience of Energy Sector
(Pilot for Strengthening Transmission Network Structures to Better Withstand Weather Events and Climactic Impacts)

Background: BEL shared with the World Bank Team TORs it prepared for this important work that will be carried out at the beginning of the project. It will form the basis for damaged or weak poles replacement along the transmission line utilizing more suitable technologies. The study will evaluate damaged pole structures and recommend measures including alternative line supports and new design standards for each type of terrain encountered along the transmission line routes. A number of alternative pole materials (fiber glass, fiber reinforced polymer, pre-stressed concrete etc.) as well as support designs will be reviewed and their suitability to the local terrain and climate conditions assessed. Measures to rehabilitate/strengthen poles that are capable of being salvaged will also be studied. On the basis of the recommendations from the study, BEL will upgrade the pole structures and apply practices to compromised line sections and rebuild such sections along the existing line route; and rehabilitate salvageable poles.

ISSUES/RISKS	MITIGATION MEASURE
Dust generation/ Air pollution	<ul style="list-style-type: none"> • The Contractor implement dust control measures to ensure that the generation of dust is minimized and is not perceived as a nuisance by local residents, maintain a safe working environment, such as: <ul style="list-style-type: none"> - watering dusty roads and construction sites; - exposed soil and material stockpiles shall be covered to protect against wind erosion.
Noise and vibration	<ul style="list-style-type: none"> • All construction vehicles must have mufflers in good condition to avoid excessive noise emissions • Conduct activities during normal working hours • If activities must be conducted in the evening and/or weekend, provide local affected groups with at least one week notice of start and completion times • Any construction equipment deemed too noisy by the Department of Environment (DOE) and/or complaints from locally affected groups, the equipment shall be replaced.
Water pollution	<ul style="list-style-type: none"> • Portable or constructed toilets must be provided for construction workers either on site and/or at any work camps (if such camps will be established). There should be no direct discharges of human sewage to any waterbody. • Do not wash cars, trucks or machinery in or near natural water sources. • Construction wastewaters are anticipated to be negligible. However, any small amounts generated must be collected and disposed of by the Contractor with the permission of the Department of the Environment.
Drainage and sedimentation	<ul style="list-style-type: none"> • The Contractor shall ensure any drainage system is always maintained cleared of mud and other obstructions.

<p>Solid waste</p>	<ul style="list-style-type: none"> • At all places of work, the Contractor shall provide litter bins, containers and refuse collection facilities. • Solid waste may be temporarily stored on site in a designated area approved by the Construction Supervision Consultant and the Department of Environment (DOE)/Solid Waste Management Authority prior to collection and disposal. • Waste storage containers shall be covered, tip-proof, weatherproof and scavenger proof. • No burning, on-site burying or dumping of solid waste shall occur. If burning is the only alternative, prior approvals should be obtained by the DOE. • Since existing poles to be replaced are impregnated with wood preservatives (e.g. creosote, pentachlorophenol etc.), under <i>no circumstance are these poles to be burned</i>. If the discarded poles are provided to the public for construction purposes, <i>recipients of the poles must be explicitly warned of the dangers associated with burning these poles</i>. • Other recyclable materials such as scrap steel, scaffolding material, packaging material, etc. shall be collected and separated by the Contractor on-site from other waste sources for reuse, for use as fill, or for sale only to operators officially licensed to conduct recycling/recovery. • Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas, such as in areas of natural habitat or in watercourses. • When removed off site, solid waste or construction debris shall be disposed of only at sites identified and officially designated by the DOE and/or the Solid Waste Management Authority. • Components that have remaining useful life are to be stored and/or used at other sites as needed.
<p>Chemical or hazardous materials and/or wastes (spent lubricants, paints, adhesives, solvents)</p>	<ul style="list-style-type: none"> • Used oil and grease shall be removed from site and sold to a recycling company approved by the Department of Environment. • Used oil and lubricants, from the maintenance of any vehicles and machinery shall be stored in sealed drums or collected in holding tanks and removed from site and sold to an oil recycling company approved by the Department of Environment or disposal through the Solid Waste Management Authority. • Do not use toxic materials, including lead-based paints on any structures: coating materials for steel or concrete structures should be approved by the DOE, and bid documents for poles to be purchased must specify that wood preservatives used meet with the approval of the Pesticide Control Board and/or the DOE. Refer to the Pesticide Control Board of Prohibited Pesticides listing. • Hazardous wastes are to be stored with appropriate labeling at temporary facilities on-site or brought to a central facility that is well ventilated with impervious floors and locked when not in use. • In the event materials are to be used containing chemicals not previously regulated in Belize, the Contractor should obtain approval be approved by the Pesticides Control Board and/or the DOE.
<p>Disruption of vegetative cover and ecological resources</p>	<ul style="list-style-type: none"> • Areas to be cleared should be minimized as much as possible. • To the extent possible, existing roads/access routes to pole sites should be used. If access roads must be established, they should be routed to cause minimal disruption to local habitats or any economic activity (e.g. agriculture). The same access road used for construction/installation should be used for maintenance operations. • In the event virgin vegetation is removed, The Contractor shall remove topsoil from all areas where topsoil will be impacted on by rehabilitation activities, including temporary activities such as storage and stockpiling, of transmission line

	<p>poles/structures etc. Any stripped topsoil shall be stockpiled in areas agreed with the Construction Supervision Consultant for later use in re-vegetation and shall be adequately protected from loss by rain, wind etc.).</p> <ul style="list-style-type: none"> • Application of pesticides (herbicides) for vegetation clearing and/or maintenance is not permitted, unless approved by the Pesticide Control Board and the DOE. Preference for land clearance/maintenance should be for either manual or mechanical or both. Disposal of vegetative cover should be to a government approved site. • For the removal of virgin vegetation, the Contractor shall obtain an environmental clearance or permit issued by the DOE/Forestry department. • When needed, the Contractor shall erect temporary protective fencing to efficiently protect the preserved trees before commencement of any works within the site. • The Contractor shall ensure that no hunting, trapping shooting, poisoning of fauna takes place by Contractor personnel.
<p>Traffic management</p>	<ul style="list-style-type: none"> • Traffic Management shall be in accordance with BEL's Motor Vehicle Policy section 1.14. In addition to BEL's traffic control measures, during the construction phase of the project, BEL shall seek guidance from the Belize Traffic department in the event: <ul style="list-style-type: none"> a) there is significant increases in vehicle trips b) there is a need to re-route traffic taking into account sensitive areas such as schools and hospitals. c) there is a need to install lighting at night for traffic circulation. • The Contractor shall place signs around the construction areas to facilitate traffic movement providing direction to various components of the works, and provide safety advice and warning. • If materials are to be transported during rush hour, the Belize Traffic department must be notified by the Contractor and if necessary, provide assistance. Before pole replacement or rehabilitation activities start, BEL shall carry out consultations with local government and community and with the traffic department.
<p>Interruption of utility services</p>	<ul style="list-style-type: none"> • Provide information to affected households on working schedules as well as planned disruptions of water/power at least 2 days in advance. Any damages to existing utility systems of cable, telecommunications, water supply etc. shall be reported to authorities and repaired as soon as possible. Associated costs shall be the responsibility of the Contractor (TO BE INCLUDED IN THE PROCUREMENT DOCUMENTS)
<p>Restoration of affected areas</p>	<ul style="list-style-type: none"> • Cleared areas such as disposal areas, site facilities, workers' camps, stockpiles areas, working platforms and any areas temporarily occupied during construction of the project works shall be restored by the Contractor using landscaping, adequate drainage and vegetation. • Soil contaminated with chemicals or hazardous substances shall be removed, transported and treated as hazardous waste. Disposal shall be based on documented guidance from the Solid Waste Management Authority by licensed companies and treated as HAZARDOUS WASTES -see above.
<p>Worker and public Safety</p>	<ul style="list-style-type: none"> • Belize's requirements for worker health and safety will be followed. (Refer to Belize Labour Law, Part XIII: Safety, Health and Housing where applicable. In addition, worker health and safety will be followed in accordance with BEL's Corporate Safety Policy and Standards. Training workers on occupational safety regulations and provide sufficient personal protective equipment (PPE) for workers in accordance with applicable Belize laws. (Refer to BEL's Personal Protective Equipment Procedure)

	<ul style="list-style-type: none"> • The Contractor shall install fences, barriers, dangerous warning/prohibition site around construction areas showing potential danger to the public. • The contractor shall provide safety measures such as installation of fences, barriers warning signs, lighting systems to prevent traffic accidents as well as other risk to people and sensitive areas. • Alcohol use by workers during work hours is strictly prohibited. • Use of personal protective equipment (PPE) by workers will be strictly enforced.
<p>Communication with local communities</p>	<ul style="list-style-type: none"> • The contractor shall coordinate with local authorities (leaders of local communes, leader of villages) for agreed schedules of construction activities at areas near sensitive places (such as hospitals, schools, libraries, etc.) or at sensitive times (e.g. holidays, weekends, religious festival days etc.). • Copies of these ECOPs and of other relevant environmental safeguard documents shall be made available to local communities and to workers at the site upon commencement of the project. • Disseminate project information to affected parties (for example local authority, enterprises and affected households, etc.) through community meetings before construction commencement. • Provide a community relations contact from whom interested parties can receive information on site activities, project status and project implementation results. • Inform local residents about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, blasting and demolition, as appropriate. • Notification boards shall be erected at all construction sites providing information about the project, as well as contact information about the site managers, environmental staff, health and safety staff, telephone numbers and other contact information so that any affected people can have the channel to voice their concerns and suggestions. • Do not create nuisances and disturbances in or near communities. • In the event there is a nuisance or disturbance, it should be submitted to BEL's Safety, Health and Environment (SH&E) Unit in writing. The notification board should have the email address of the SH&E Unit, where all concerns are documented. • Each case will be dealt with in a timely manner no longer than two months after the concern has been received.
<p>Chance find procedures</p>	<p>If the Contractor discovers sites/artifacts of archeological, historical, significance, including graveyards and/or individual graves during excavation or construction, the Contractor shall:</p> <ul style="list-style-type: none"> • Stop the construction activities in the area of the chance find immediately; • Notify the Construction Supervision Consultant who in turn will notify responsible authorities in charge of the Cultural Property • Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, constant guarding of the site shall be arranged until the responsible authorities take over; • Delineate the discovered site or area; (to be done by Dept of Archeology /NICH.) • Relevant authorities would be in charge of protecting and preserving the site before deciding on subsequent procedures. • Decisions on how to proceed shall be taken by the responsible authorities. • If the cultural sites and/or relics are of high value and site preservation is recommended by professionals and required by the cultural relics authority, the Project's Owner will make necessary design changes to accommodate the request and preserve the site;

	<ul style="list-style-type: none">• Decisions concerning the management of the finding shall be communicated in writing by relevant authorities;• Construction works could resume only after written permission is granted from the responsible authorities concerning safeguard of the heritage.• Any worker removing such artifacts for personal use or gain, shall be dismissed and subjected to legal action.
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