## ECOP
### Replacement of Existing Substations with New Substations

<table>
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<tr>
<th>ISSUES/RISKS</th>
<th>MITIGATION MEASURE</th>
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<tr>
<td>Site of new substation may involve conversion of critical natural habitats or affects non-critical natural habitats&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Provide maps of proposed subproject area to Ministry of Environment, Green Development and Tourism(MEGDT), Director General for Environment and Natural Resource Management for approval</td>
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<td>Site of new substation may involve destruction or conversion of forests/forest ecosystems&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Provide maps of proposed subproject area to Ministry of Environment, Green Development and Tourism(MEGDT), Director General for Forests for approval</td>
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<tr>
<td>Site of new substation may adversely impact Mongolian cultural resources&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Provide maps of proposed subproject area to Ministry of Education, Culture and Science, (MECS) Director General for cultural property management for approval</td>
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| Dust generation/ Air pollution                                              | The Construction Contractor will 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:  
  - watering dusty roads and construction sites;  
  - covering of material stockpiles;  
  - Exposed soil and material stockpiles shall be protected against wind erosion. |
| Noise and vibration                                                         | • All construction vehicles must have mufflers in good condition to avoid excessive noise emissions  
  • Construction activities should be limited to legally permissible times, or to between 7:00 AM and 6:00PM, whichever is stricter. If work must be done outside these time limits: (a) permission must be obtained from the appropriate authorities and (b) local residents be given sufficient advanced notification.  
  • Any construction equipment deemed too noisy by the local environmental authority and/or if there are complaints from locally affected groups, the equipment shall be replaced. |
| Water pollution                                                             | • If sanitary facilities are not currently available at the subproject sites, 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 water body.  
  • Do not wash cars, trucks or machinery in or near natural water bodies or drinking water sources. |
| Drainage and sedimentation                                                  | • The Contractor shall ensure any drainage system is always maintained cleared of mud and other obstructions. |
| Solid waste (non-hazardous)                                                | • 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 BSEDN/EBEDN. |

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<sup>1</sup> This is extremely unlikely, but is suggested as a precautionary measure.
- 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 MEGTD or local environmental authorities.
- The Contractor shall collect and separate on site recyclable wastes such as steel, aluminum and copper tailings, recyclable construction materials, such as parts of building fabrication, boards, flooring and packaging materials for later recycling, for use as fill or selling off to licensed companies for recycling and rehabilitation on the consent of ESBDN/BSEDN.
- 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 recommended and approved by local waste management authorities or the Ministry of Environment, Green Development and Tourism (MEGDT).

| Chemical or hazardous materials and/or wastes (spent lubricants, paints, adhesives, solvents, equipment fluids containing PCBs etc.) | Used lubricating oil and grease shall be removed from site and sold to a properly licensed recycling company. 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 a licensed oil recycling company or disposed at a government approved site. Do not use toxic materials, including lead-based paints on any structures: coating materials for steel or concrete structures. Asbestos materials are not to be used as either construction (roofs, interior or exterior walls etc.) or insulating materials (piping, ductwork, etc.) in any buildings. If any existing building contains asbestos materials, the Construction Contractor is responsible for having these materials removed with guidance from MEGTD. **For components such as old transformers, circuit breakers, capacitors and other electric equipment, etc. which may contain PCBs** BSEDN/EBEDN is to make arrangements to have the oils sent to the PCB Test Laboratory in Ulaanbaatar. For those components free of any leaks: If the oil contains PCB at unacceptable levels (>50 ppm), arrangements are to be made by BSEDN/EBEDN to send the oil to the PCB Processing Center in Ulaanbaatar for PCB removal from the oil. The equipment may then be refilled with PCB free oil and used elsewhere in the distribution system. If oil is free of PCBs (<50 ppm), the equipment can still be used elsewhere in the power distribution system. |
For components which provide visual evidence of previous leaks or are leaking

If the oil contains PCB at unacceptable levels (>50 ppm), arrangements are to be made by BSEDN/EBEDN to send the oil to the PCB Processing Center in Ulaanbaatar for PCB removal from the oil. The equipment may then either be repaired and refilled with PCB free oil and used elsewhere in the distribution system, or the equipment could be sold as scrap to operators officially licensed to conduct recycling/recovery.

If oil is free of PCBs (<50ppm), the equipment can either be repaired and be used elsewhere in the power distribution system or sold as scrap to operators officially licensed to conduct recycling/recovery.

Any soil or surface materials that exhibit visual evidence of contamination from oil leaks should be excavated to at least six inches beyond the line of visible contamination, then collected into heavy duty plastic containers. The MEGDT should be informed and should provide guidance for the handling of this waste (both for PCB contaminated soils and non PCB contaminated soils).

*All new electrical equipment should be free of PCBs and this requirement should be specified in any bid documents.*

**Disruption of vegetative cover and ecological resources**

- Areas to be cleared should be minimized as much as possible.
- To the extent possible, existing roads should be used. If access roads must be established, they should cause minimal disruption to local habitats. The same access road used for construction/installation should be used for maintenance operations.
- The Construction Contractor shall remove topsoil from all areas where topsoil will be impacted on by rehabilitation activities, including temporary activities such as storage and stockpiling. Any stripped topsoil shall be stockpiled in temporary areas agreed with BSEDN/EBEDN and be adequately protected from loss by rain, wind etc.
- Application of pesticides (herbicides) for vegetation clearing and/or maintenance is not permitted. Land clearance/maintenance should be done either manually or mechanically or both.
- For the removal of virgin vegetation, BSEDN/EBEDN shall obtain an environmental clearance or permit issued by the MEGDT or local environmental authorities.
- When needed, the Construction Contractor shall erect temporary protective fencing to efficiently protect any trees before commencement of any works within the site.
- Cleared areas such as disposal areas, site facilities, workers’ camps,
### Traffic management

| Stockpiles areas, working platforms and any areas temporarily occupied during construction of the project works shall be restored by the Construction Contractor using land. 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 MEGTD. |

### Interruption of utility services

- **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)**

### Restoration of affected areas

- **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 Construction 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 MEGTD.**

### Worker and public Safety

| Mongolia’s requirements for worker health and safety will be followed. (Refer to Mongolian Labour Law, (Part VII- Labour conditions, Health and Safety, Section 83- To provide the labour health and safety condition, Section 84- To ensure the occupational safety and hygiene requirements, 85- To compensate the damages caused by employees due to industrial accidents, poisoning and occupational diseases). In addition, worker health and safety will be |
followed in accordance BSEDN/EBEDN protocols). The Construction 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. The employer shall provide instructions to workers for labour safety and health requirements every day before commencement of work. Use of personal protective equipment (PPE) by workers will be strictly enforced.

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<td>If the Construction Contractor discovers sites/artifacts of archeological, historical, significance, including graveyards and/or individual graves during excavation or construction, the Construction Contractor shall: Stop the construction activities in the area of the chance find immediately; Notify BSEDN/EBEDN officials 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 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, BSEDN/EBEDN will make necessary design changes to accommodate the request and preserve the site; 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.</td>
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