

Schedule No. 4c. Environmental, Social, Health And Safety (ESHS) – Cost Schedule

Item	Description	Qty (1)	Unit Price		Total Price	
			Foreign Currency Portion <i>(specify currency)</i> (2)	Local Currency Portion <i>(specify currency)</i> (3)	Foreign Currency Portion <i>(specify currency)</i> (1x2)	Local Currency Portion <i>(specify currency)</i> (1x3)
ESHS 1001	Air quality & dust	1 Lot				
	a. The Contractor to protect stockpiles of friable material subject to wind-throw by wetting, or with a barrier, vegetation, or windscreen					
	b. Suppress dust during dry periods by use of water sprays					
	c. Use of personnel protective equipment (PPE)					
	d. Keep stockpiles and exposed soils compacted and re-vegetate as soon as possible.	1 Lot				
ESHS 1002	Solid waste generation	1 Lot				
	a. Materials to be disposed/recycled off-site by licensed vendors.					
ESHS 1003	Noise & vibration	1 Lot				
	a. Provide silencers or enclosures for noise generating machines such concrete mixtures, compressors, etc.					
	b. Provision of protective devices like earmuffs/earplugs to workers, who are continuously exposed to high levels of noise during construction activities.	1 Lot				
ESHS 1004	Construction Material Sourcing	1 Lot				
	a. Strip & store topsoil separate from subsoil for major tower site excavations					
	b. Rehabilitation of exposed sites as soon as practicable	1 Lot				
ESHS 1005	Occupational Health & Safety - Construction, and Decommissioning phase	1 Lot				
	a. Staff Training on Occupational Health & Safety					
	b. Use of signs, barriers and education/ public outreach to prevent public contact with potentially dangerous equipment;					
	c. Ensure provision and proper use of Personal Protective Equipment (e.g. Safety harness, helmet, dust masks, etc)	1 Lot				

	d. Maintain a fully stocked and accessible first aid kit under trained first aider	1 Lot				
ESHS 1006	Hazardous Materials (Fuel, Oil & chemical storage on site)					
	a. Compact impermeable sheeting to prevent oil spills/leaks from causing subsurface contamination for placing on-site tools and equipment, such as generators, compressors	1 Lot				
	b. Training of employees working onsite on good housekeeping practices	1 Lot				
ESHS 1007	Community Health and Safety					
	a. Use of barricading tape to prevent members of public from accessing excavated tower foundations and work sites during construction	1 Lot				
	b. Adequate hazard communication to the public by use of appropriate signages as prescribed by national law and international best practice	1 Lot				
	c. The contractor should conduct public awareness on safety requirements within construction sites	1 Lot				
	d. HIV & AIDS education and awareness	1 Lot				
	e. Provide adequate security where necessary for the public and staff	1 Lot				
	f. Public awareness of the public health issues identified.	1 Lot				
	g. Provision of condoms for staff	1 Lot				
	h. Distribution of HIV & AIDS awareness materials in collaboration NACC	1 Lot				
	i. Cordon working site and ensure controlled access	1 Lot				
ESHS 1008	Fall from Heights					
	a. Procure and enforce proper use of necessary protective equipment	1 Lot				
ESHS 1009	Soil destabilization, Soil erosion, Soil contamination/Pollution					
	a. Proper soil investigation and analysis	1 Lot				
	b. Rehabilitation of all disturbed areas	1 Lot				
	c. Areas susceptible to erosion shall be properly sloped & compacted to reduce the effect of runoff	1 Lot				
ESHS 1010	Hilly areas/Ridges undulating areas- Kyogong Hills- Soil erosion, Landslides, Collapse of pylons					
	a. Appropriate PPEs (Ear muffs/ plugs, dust mask, leather gloves etc) for use during excavations with compressors / drilling machines	1 Lot				
	b. Warning tape/ Barricading to prevent public from accessing the site	1 Lot				
	c. Sensitize community members especially sand	1 Lot				

	harvesters during project implementation					
ESHS 1011	Rivers (Sikinteirr, Ewaso, Enkare, Amalo and Nyongores rivers) -Soil erosion, Ground destabilization, floods, collapse of pylons	1 Lot				
	a. Where necessary construct temporary bridges to facilitate movement of workforce and construction materials					
ESHS 1012	Rivers-Water pollution	1 Lot				
	a. Contractor to provide sanitary conveniences along the line routing					
ESHS 1013	Ewaso River-Damage to timber bridge	1 Lot				
	a. Contractor to take caution of Timber Bridge across Ewaso river to ensure weight transported across such a bridge can be accommodated. The contractor should verify transport logistics and take note that any damage to existing infrastructure will be replaced at his own cost.					
ESHS 1014	Streams and springs (Tuiyobei, Olmotiiook, Lebekwet and Kotab-silibwet streams) Chepkutbei & Chepkirib springs - soil erosion, Water pollution, water obstruction	1 Lot				
	a. Since some areas are sloppy put in place soil erosion control measures					
ESHS 1015	Risk of fire	1 Lot				
	a. Apply precautions of mitigating against fire					
ESHS 1016	Traffic congestions, road accidents, Road tear and wear and construction of access roads	1 Lot				
	a. Where possible build elevated cross-overs across roads to ensure that cables are pulled and strung without disrupting roads					
	b. Install proper signages and warnings for work sites proximal or along roads	1 Lot				
	c. Reflective clothing for workers	1 Lot				
	d. Apply for necessary permits and advertise on newspapers with highest circulation the days and time when heavy line materials will be transported along the roads, Vehicles to be marked wide load as necessary	1 Lot				
	e. Employment of a road safety coordinator to oversee implementation of the traffic controls	1 Lot				
ESHS 1017	Power disruptions/ damage of existing local power distribution lines (33 and 11KV powerline)	1 Lot				
	a. Build elevated cross-overs across existing lines to ensure conductors are strung without disruption of existing infrastructure as the proposed 132 KV line will be routed above other existing power lines along route of traverse.					

	b. Where 132kv line is crossing 33 or 11kv provide safety net	1 Lot				
ESHS 1018	Wild animals- Disturbance, habitat loss, hunting a. Pylons erected across forested areas mainly in Ole Keiwa and Ole Kurieta forest farms should be installed with some razor wire or spikes to deter Baboons from climbing up the poles even though Baboons unlike chimpanzees are not arboreal.	1 Lot Per KM				
ESHS 1019	Birds-Electrocutions, collision a. Contractor to install visibility enhancement objects such as marker balls, bird deterrents, or diverters placed at intervals along conductor for greater visibility.	1 Lot Per KM				
ESHS 1020	Spread of sexually transmitted diseases, unwanted pregnancies, family breakdowns a. HIV/AIDs awareness should be done by the contractor to staff and the public through notices.	1 Lot				
	b. Contractor should contact safety talks and include HIV/AIDs and drug and alcohol abuse in the sessions and records maintained as proof.	1 Lot				
	c. The contractor should provide condoms to the workers.	1 Lot				
ESHS 1021	Sanitary conveniences a. The contractor should provide mobile toilets to the work force throughout the line routing	1 Lot				
ESHS 1022	Olmotiok Ridge – Excavation a. Ensure hazard communication/signs are put in place since farmers do graze animals on top of the ridge	1 Lot				
ESHS 1023	Olmotiok Ridge - Noise and dust a. Provide workers with ear muffs due to noise and Dust masks to prevent dust	1 Lot				
ESHS 1024	Community dam- Loss of Habitats Soil erosion, siltation and sedimentation a. Put place flaps or bird warning devices since the dam attracts birds	1 Lot Per KM				
	b. Create awareness amongst the public on safety issues during project implementation	1 Lot				
ESHS 1025	Environmental and social monitoring of noise a. Measure the Noise Level within the Project area and at distances of 30 from the transmission line	1 Lot				

TOTAL FOR BILL ESHS		
<p>NB: ESHS costs will form part of the evaluated bid cost as shown in Table 5</p> <p>ESHS costs are deemed to cover operations on all sites (as defined in clause 1.3 of ESHS specifications)</p> <p>Interim payment certificates shall include the portion of each ESHS cost amounting to the percentage of the actual progress achieved in executing the ESHS measures in compliance with the ESHS Specifications and approved by the Engineer.</p>		

Schedule No. 5. Grand Summary

Item	Description	Total Price	
		Foreign	Local
1	Total Schedule No. 1. Plant, and Mandatory Spare Parts Supplied from Abroad		
2	Total Schedule No. 2. Plant, and Mandatory Spare Parts Supplied from Within the Employer's Country		
3	Total Schedule No. 3. Design Services		
4a	Total Schedule No. 4a. Installation and Other Services		
4b	Total Schedule No. 4b. Factory Acceptance Test and Training		
4c	Total Schedule No. 4c. Environmental, Social, Health and Safety (ESHS)		
Total (to bid Form)			
Name of Bidder			
Signature of Bidder			