



## KUSILE POWER STATION

### PROJECT SITE FACILITIES AND SERVICES

**Part 3**  
**Annexure X.5**  
Rev 4\_0121

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#### 1. General

The *Employer*, at his expense, arrange for, develop and maintain the various facilities and services indicated in the attached Project Site Facilities and Services Matrix at or near the Project Site, as applicable. These services and facilities are provided on the basis detailed below. The *Contractor* should note that *Employer* provided accommodation and the Project Site canteen, induction and medical facilities are dealt with under Part 3 ANNEXURE X.6 [*Personnel, Accommodation and Industrial Relations*] of these *Employer* Policies and Procedures.

All *Employers* provided services and facilities are used concurrently by Other Project *Contractors* and the *Contractor* does make unreasonable demands thereon. The *Employer* does not assume any risk and hereby disclaims all liability for all loss or damage to property (whether in connection with the Works or otherwise) and injury to person (including in respect of the *Contractor's* Personnel) suffered or incurred in connection with any *Employer* provided services and/or facilities (including any security or access arrangements, accommodation facilities or medical facilities). Except for Compensation Events for additional Cost (and profit where so provided) or extension to the Time for Completion as expressly provided for under the Contract all such services and/or facilities are used by the *Contractor* and the *Contractor's* Personnel, as applicable, at the risk of the *Contractor* and the *Contractor* assumes full responsibility and liability for the use thereof by the *Contractor's* Personnel.

All facilities or services not specifically indicated as provided by the *Employer* in the attached Project Site Facilities and Services Matrix, but required for the Works (including roads, assigned lay-down yard improvements, and access needed by the *Contractor* in the performance of the Works), are provided, maintained and removed when no longer required, by the *Contractor*. Except as otherwise stated in the Contract, all *Contractor* provided facilities and services are to the satisfaction of the *Project Manager*. The provision or cessation of such *Contractor* provided facilities or services, and the erection, installation and removal thereof and/or of related equipment, requires the *Project Manager's* approval.

#### 2. Areas for *Contractor's* Yards and Offices

The *Project Manager* has indicated on the drawings the areas assigned to the *Contractor* for offices and laydown yard. The *Contractor* may erect temporary offices, stores and other similar structures necessary to carry out the Works on the area at the

Project Site allocated to him for this purpose by the *Project Manager*.

Note to tenderers: Tenderers must indicate use plan for yards and offices by completing and submitting the attached Ground Area Requirement Form [A-2/2 A] with the Tender.

Any such temporary offices, stores and other similar structures are erected to the satisfaction of the *Project Manager*. The *Contractor* is not permitted to occupy any other areas on the Project Site.

The *Contractor's* fences the yard area allocated to him with a 1.8m security fence to the satisfaction of the *Project Manager*.

The *Employer* clears and rolls the ground initially allocated to the *Contractor* to ensure normal load bearing capacity under reasonably anticipated construction conditions. The *Employer* provides roads from the terrace to the boundary of the *Contractor's* yard. The *Contractor* provides all roads within his area and, at his own cost, maintain the whole of this area including buildings, offices and other structures.

Should the *Contractor* require additional areas he requests same, in the form prescribed by the *Project Manager*, indicating the additional area/s required. The *Employer* reserves the right to not provide any additional areas. The *Employer* is not, however, obliged to clear or roll any additional areas allocated to the *Contractor*.

The *Contractor* submits to the *Project Manager* an initial drawing and/or description indicating proposed layout and utilisation of the *Contractor's* allotted storage areas. The drawing and/or written description is kept current, indicates the location and description of all stored items under the responsibility of the *Contractor*, and is submitted to the *Project Manager* as updates are made.

### 3. Project Site Roads and Parking

The *Employer* provides and maintains construction parking and general use roads on the Project Site. A construction parking lot is located outside the main security fence for *Contractor's* Personnel and visitors. Parking facilities are limited. *Contractor's* Personnel and visitors failing to park as directed while using this lot may have their vehicle removed and/or be banned from future use of the lot.

A limited number of *Contractor* and Subcontractor non-construction vehicles are allowed onto the Project Site. The *Project Manager's* approval and an appropriate permit is required as authorisation for such vehicles to be brought on to the Project Site.

### 4. Communication Services

The *Contractor* is responsible for his own internet connectivity.

The *Employer* provides for an analogue / digital telephone line and connection point in the area assigned for *Contractor's* Site office. The *Contractor* provides all wiring, hardware, and equipment from this point to points of use and pays all service charges for his use of the telephone system. The number of lines is determined by the *Project Manager*, subject to availability.

The *Contractor's* application for telephone services is made in the form required by the *Project Manager*.

There is cellular network coverage in the Project Site area. The *Contractor* makes his own arrangement for cellular connectivity and pays all service charges for his use of the cellular communication network.

The *Contractor* makes his own arrangements for radio communication at the Project Site, if required. The installation of radio communication equipment at the Project Site is subject to the approval of the *Project Manager*.

5. Post Box

A post box for the receipt of external mail is allocated for the *Contractor's* use at the *Employer's* Project Site Office. The *Project Manager* and the *Employer* is entitled to use this post box for general Project Works correspondence to the *Contractor*.

6. Fire Fighting and Fire Protection

The *Contractor* complies with all applicable Laws and the Project fire protection requirements, as amended from time to time, in respect of fire protection requirements during construction. The *Contractor* alone is responsible for providing adequate fire protection.

Without limitation, the *Contractor* provides adequate fire protection equipment in each warehouse, office, and other temporary structures, and in each work area being occupied to the satisfaction of the *Project Manager*. Access to sources of fire water are identified and kept open at all times. Suitable fire extinguishers are provided in enclosed areas, in areas which are not accessible to fire water, or in areas which may be exposed to fire that cannot be safely extinguished with water. Each fire extinguisher is of a type suitable for extinguishing fires that might occur in the area in which it is located. In areas where more than one type of fire might occur, the type of fire extinguisher required in each case is provided. Each extinguisher is securely placed and maintained in a convenient, clearly identified location for accessibility in the event of fire. The *Contractor* checks and services fire extinguishers as required by the applicable Law and standards.

Additionally, where the Works include elevations, the *Contractor* provides a dry firewater standpipe at a convenient location at the Site to which a pump truck (supplied by others) could be connected to provide water at the various upper elevations of the building. Hose connections and hoses are also provided at these elevations.

Any operation with potential for starting a fire includes a designated fire watch person.

Only work procedures which minimise fire hazards to the extent practicable are used. Combustible debris and waste materials are collected and removed from the Project Site each day. Fuels, solvents, and other volatile or flammable materials are stored away from the construction and storage areas in correctly marked, safe containers.

Unless specified in the Contract for a particular application, untreated canvas, paper, plastic, and other flammable flexible materials are not used on the Project Site for any purpose. Corrugated paper and other flammable packing materials are not permitted for the storage or handling of materials in any areas where they present a fire hazard. If such

flammable materials are on Plant or Materials that arrive at the Project Site, they are removed and replaced with an acceptable covering before the Plant or Materials are moved from the *Contractor's* yard into working areas.

Acceptable flexible materials for covering in the working areas are waterproof and flame resistant.

Formwork, scaffolding, planking, and similar materials which are combustible but which are essential to execution of the Work are treated for fire resistance or otherwise protected against combustion resulting from welding sparks, cutting flames, and similar fire sources. Temporary heating facilities are not left unattended.

## 7. Water

Potable and raw water for construction purposes are made available to the *Contractor* on the Project Site, free of charge, until the issue of the Taking-Over Certificate for the Works or for the last Section (as may be applicable). The *Contractor* indicates his request in the Tender. Neither the *Employer* nor the *Project Manager* is, however, bound to approve any revised requirements.

Note to tenderers: Tenderers must indicate water request by completing and submitting the attached Water Request Form [IA-2/1 B] with the Tender.

The *Contractor* exercises economy in use of the water obtained from this source. Potable water use is limited to servicing Project Works related activities requiring potable quality water.

The *Contractor* provides, installs, maintains, and removes when no longer required all pipes, fixtures, equipment, and metering (if necessary) from the *Employer* supplied source to the point of *Contractor's* use. Pipes are placed at least 900 mm underground or as otherwise approved by the *Project Manager* and on routes approved by the *Project Manager*. Installation meets all applicable codes and standards and are to the satisfaction of the *Project Manager* at all times.

## 8. Electricity

The *Employer* supplies electrical power for construction purposes at mini substations established on the Project Site until the issue of the Taking-Over Certificate for the Works or for the last Section (as may be applicable).

Electrical power to the Project Site is provided via a 22kV ring supply as well as a 22kV sub-station. The 22kV ring supply furnishes power to mini substations throughout the Project Site. Prior to furnishing power to the *Contractor*, a standard "Application for Power" form is completed and submitted to the *Project Manager*. The request is made at least 2 (two) weeks prior to power supply being required. Power supply is only provided in the following 400V, 3-phase, 4-wire ratings: 20, 40, 63, 80, 100, 225, 250 and 400 amps.

The *Contractor* indicates his requirements in the Tender. Neither the *Employer* nor the *Project Manager* is, however, bound to approve any revised requirements.

Note to tenderers: Tenderers must indicate construction power requested by completing and submitting the attached Electric Power Requirement Form [A-2/1 C] with the Tender, separately showing the request for at the Site, at the storage area and at the *Contractor's* yard area.

The *Contractor* uses electricity efficiently in the course of the execution of his Works on the Project Site. There is no charge for electricity used for construction purposes, unless the *Contractor's* use thereof is unreasonable.

The *Contractor* takes all necessary precautions not to damage the construction power supply during performance of the Work.

The *Contractor* provides, installs, maintains, and removes when no longer required, all racking, cable, and equipment to connect power from the mini substation to the point of *Contractor's* use. Installation of power cables are subject to the following requirements:

- 8.1 the size and type of cable required by the *Contractor* to connect to the mini substation power supply is subject to the approval of the *Project Manager*;
- 8.2 cables is placed at least 900mm underground and on routes approved by the *Project Manager*;
- 8.3 installation meets all applicable codes and standards and is to the satisfaction of the *Project Manager*.

Failure to comply with any of these requirements may result in immediate disconnection at the discretion of the *Project Manager*.

No connection is made to the permanent installation of the Kusile Power Station electrical reticulation system without the prior approval of the *Project Manager*.

The *Employer* endeavors to provide a safe and reliable power supply with interruptions kept to a minimum. No guarantees of power supply quality are, however, given and power supply interruptions of extended duration may occur without warning.

The *Employer*, where practicable, gives reasonable notice of interruption of supply. Planned outages are normally arranged and advised for low activity periods such as a Sunday and limited to 8 hours. The *Employer*, however, reserves the right, in case of uncontrollable interruptions, emergency, or when it is not reasonably practicable to give notice, to cut off the supply without warning.

To this end the *Contractor* makes arrangements, at his own expense, to guarantee continuity and quality of power for all activities where same is required and is furthermore considered to have allowed for all Costs and time for 12 hours of power related interruptions to the Works at the Project Site per rolling 28 day period.

## 9. Sanitation and Sewage

The *Employer* provides and operates a sewage treatment plant and general use toilet facilities at the Project Site. Until this plant and toilet facilities are in operation and to supplement *Contractor's* remote work areas, the *Employer* provides the necessary

sanitary facilities for all contractors. This includes chemical toilets and toilets with holding tanks as needed. Routine maintenance and emptying of these facilities is based on the level of usage to assure sanitary and health requirements are met. The *Contractor* provides, maintains, and removes when no longer needed, all pipe, pumps, and hardware to connect the sewage treatment plant to his office facilities from a connection point designated by the *Project Manager*. Installations are to be to the satisfaction of the *Project Manager*.

10. Lighting

The *Employer* provides and maintains general use Project Site lighting in the form of pole or mast mounted lighting fixtures. This general use lighting comprises area lighting at the construction parking area and the Project Site entrance, at the site office areas, immediately outside the Boiler and Turbine houses and near power centers.

No local or Project Works lighting are provided by the *Employer*. Accordingly, all temporary local lighting required by the *Contractor*, including lighting required to comply with the applicable Law, is provided by the *Contractor* at his own expense.

## PROJECT SITE FACILITIES AND SERVICES ATTACHMENT

## SITE FACILITIES AND SERVICES MATRIX

Site Facilities, Utilities and Services		Provided by		Details
Item		Contractor	Employer	
<b>Field Office</b>				
Field office structure		X		
Field office furniture		X		
Field office equipment		X		
Field office supplies		X		
Artisan change facilities		X		
Fabrication shops		X		
<b>Tools</b>				
Erection tools		X		
Special erection tools		X		
<b>Equipment</b>				
Construction equipment		X		
Contractor construction elevator		X		
Contractor equipment operator testing		X		
<b>Communication</b>				
Internet connection		X		
Radio & cell phone communication		X		
<b>Telephone</b>				
Construction telephone main service line			X	
Construction telephone line connection to Contractor field office		X		
Contractor's telephone equipment and system wiring		X		
<b>Compressed Air</b>				
Construction compressed air source		X		
Construction compressed air distribution		X		
<b>Electrical Power</b>				
Construction main power source and maintenance			X	
Construction power primary distribution system and maintenance			X	

Site Facilities, Utilities and Services		Provided by		Details
Item		Contractor	Employer	
Construction power <i>Contractor's</i> distribution system		X		
Construction power <i>Contractor's</i> distribution system maintenance		X		
Construction power energy usage payment			X	
<b>Construction Lighting</b>				
Structures interior temporary lighting and maintenance		X		
<i>Contractor</i> specific work area temporary lighting and maintenance		X		
General areas site lighting and maintenance			X	
<i>Contractor</i> areas site temporary lighting and maintenance		X		
<b>Water - potable and nonpotable</b>				
Construction water source			X	
Construction water <i>Contractor's</i> distribution and maintenance system		X		
Construction water usage payment			X	
Drinking water distribution		X		
<b>Heat</b>				
Temporary heating facilities/system		X		
<b>Sanitary Facilities</b>				
Construction primary sanitary facilities and maintenance			X	
<i>Contractor's</i> structures construction sanitary facilities and maintenance		X		
<b>Access Roads</b>				
Primary access roads and maintenance			X	
<i>Contractor</i> specific access roads and maintenance		X		
Primary access road dust control			X	
General Work related dust control		X		
Provide construction parking area and maintenance			X	
<b>Storage Facilities</b>				
Onsite lay-down space			X	
<i>Contractor</i> storage area maintenance		X		
Construction warehousing		X		
Tool storage facilities		X		
Climate controlled storage facilities		X		
Construction equipment fueling facilities		X		
<b>Security</b>				
Overall site security			X	
Contractor specific areas security		X		
Overall site security access card and finger print			X	



Site Facilities, Utilities and Services		Provided by		Details
Item	Contractor	Employer		
system and materials				
Medical Facilities				
Onsite first aid/medical services		X		
Project emergency ambulance		X		
Heliport Area		X		
Fire Protection				
Construction fire protection – fire extinguishers	X			
Construction fire protection - stand pipe	X			
Overall site fire brigade participation	X			
Construction fire equipment & vehicles		X		
Cleanup				
General refuse offsite disposal		X		
Contractor general refuse collection and onsite disposal	X			
Contractor field office cleaning service	X			
Hazardous waste disposal and clean up / rehabilitation	X			
Concrete source				
Concrete source	X			
Concrete usage payment	X			
Concrete test facilities and testing	X			
Scaffolding				
Scaffolding supply/erection	X			
Welding				
Welder testing	X			
Welder test facilities	X			
Welding/cutting consumables	X			
Railroad			None	
Railroad siding install & maintenance				
Food Services				
Allowed onsite - Yes/No	No	Yes		
Canteen		X		
Canteen fee payment	X			

## SITE FACILITIES AND SERVICES ATTACHMENT

## AREA USAGE

Form Reference: A-2/2 A

Year	Quarter	Office area dimensions & area	Workshop area dimensions & area	Covered storage dimensions & area	Open storage dimensions & area
20[•]	1				
	2				
	3				
	4				
20[•]	1				
	2				
	3				
	4				
20[•]	1				
	2				
	3				
	4				
20[•]	1				
	2				
	3				
	4				
20[•]	1				
	2				
	3				
	4				

## SITE FACILITIES AND SERVICE ATTACHMENT:

## WATER REQUEST

Form Reference IA-2/1 B

Year	Quarter	<i>Contractors Yard and Construction Water</i>	
		Potable water consumption over 3 months [kilo litres]	Raw water consumption over 3 months [kilo litres]
20[•]	1		
	2		
	3		
	4		
20[•]	1		
	2		
	3		
	4		
20[•]	1		
	2		
	3		
	4		
20[•]	1		
	2		
	3		
	4		
20[•]	1		
	2		
	3		
	4		

## SITE FACILITIES AND SERVICES ATTACHMENT

## ELECTRICAL POWER REQUEST

Form Reference IA-2/1 C

Year	Quarter	Site Power (Works)	Storage Power (Yard)	Office Power (Yard)
		Maximum demand over 3 months (kVA)	Maximum demand over 3 months (kVA)	Maximum demand over 3 months (kVA)
<b>20[•]</b>	<b>1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
<b>20[•]</b>	<b>1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
<b>20[•]</b>	<b>1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
<b>20[•]</b>	<b>1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			
<b>20[•]</b>	<b>1</b>			
	<b>2</b>			
	<b>3</b>			
	<b>4</b>			