



PT SKS LISTRIK KALIMANTAN

IPP 3: PLTU Kalteng 1 (2X100 MW)

General and Technical Requirements & Scope of Work

Package Name:

Fabrication and Erection of 2 Units of Vertical Tank Receiver

PT SKS Listrik Kalimantan

Desa Tumbang Kajuei, Kecamatan Rungan, Kabupaten Gunung Mas
Kalimantan Tengah 74561, Indonesia

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**2 x 100 MW KALTENG – 1
COAL-FIRED STEAM POWER PLANT (CFSP)**



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1. Definition

The following words and expressions shall have the meanings hereby:

- **“Acceptance”** means acceptance of Facilities by the Owner after the Facilities installed, tested, and accepted.
- **“Bid”** means the proposal submitted by the Contractor along with all documents/credentials/attachments, etc.
- **“Contract”** means the Contract Agreement entered into between the Owner and the Contractor, together with the Contract Documents referred to therein; they shall constitute the Contract, and the term “the Contract”.
- **“Contractor”** means the company whose Bid to perform the Contract has been accepted by the Owner and is named as such in the Contract Agreement, and includes the legal successors or permitted assigns of the Contractor.
- **“Facilities”** shall mean all equipment and material, including software and accessories attached thereto, designed, supplied, constructed, and inspected by Contractor in accordance with specification specified here under and/or Contract.
- **“Good Utility Practice”** means at a particular time, those practices, methods and acts conforming to legal requirements and which are in accordance with standards of prudence applicable to industry which would have been expected to accomplish result at lowest reasonable cost consistent with reliability, safety and expedition.
- **“Installation”** means the project stages starting from fabrication, arrangement on site and testing.
- **“O&M”** means Operation and Maintenance of the Facilities.
- **“OHSE”** means Occupational Health, Safety and Environmental.
- **“Owner”** or the **“Company”** shall means PT SKS Listrik Kalimantan
- **“Plant”** means Kalteng-1 coal fired steam power plant namely PLTU Kalteng-1 (2x100 MW) which consist of Unit 1, Unit 2, and common facilities.
- **“Project Document”** means any drawing, specification, datasheet, calculation sheet, design description, P&ID, process flow diagram, and any other documents issued by Owner as a reference for Contractor in relation with the works to be performed under this document.
- **“Shop Drawing”** means detailed drawings created by Contractors, fabricators, or manufacturers to illustrate specific aspects of a construction project. These drawings provide detailed information about the materials, dimensions, and Installation procedures for various components of the project.

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2. Introduction

PT SKS Listrik Kalimantan owns and operates a coal fired steam power plant with gross capacity 2x115 MW and sells electricity to PT PLN (Persero) under Power Purchase Agreement (PPA). The Plant is located in Tumbang Kajuei, Kecamatan Rungan, Gunung Mas Regency, and Central Kalimantan Province at coordinated 1 22' 27,6" S and 113 33' 59,1" S. The location is approximately 3.5-hours transportation by car from Palangkaraya.

The Company intend to add 2 units of Coal Contained Tank Device at Water Treatment Plant with treatment capacity 10 m3/h each unit. The tank and erection shall be designed and constructed in such a way that the testing and operation shall not in anyway cause the disruption or impair the operational of the Plant or any parts thereof.

3. Bidder Requirements

The bidder must posses proven experience in supply, design, Installation, operation, maintenance, services, commissioning, testing and inspection with the following qualifications:

- 3.1. The bidder must hold valid business licenses to operate and perform its business activities in Indonesia and must comply with all applicable rules and regulations.
- 3.2. The bidder must have valid license to carry out project in accordance with applicable law.
- 3.3. The bidder must posses no less than 5 years of experiences for supply, design, Installation, service, maintenance and inspection, specifically must have had completed design and built tank with similar or larger capacity.
- 3.4. The bidder must have safety management system and preferably to hold relevance national and/or international certification related to occupational health, safety and environmental.
- 3.5. The bidder must perform site visit to familiarize itself with location, condition of size, space available, and other site conditions to enable a bidder to form a comprehensive proposal under this package. In case a bidder opts for not doing site visit, then the bidder is deemed to have satisfied itself with site condition as mentioned above and all and any risks associated with discrepancy or inadequacy of data for forming a complete proposal shall be borne by themselves.
- 3.6. Bidder shall, by submitting a tender, acknowledge that they have adequate knowledge of the site constraints and proposed Installation details, consulted with all relevant authorities having jurisdiction over the project, and have assessed their full liabilities for all such works and costs required in carrying out the works specified and shown. No recognition will be granted of any claims for additional costs resulting from the Contractor's failure to comply with the above.

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- 3.7. The bidder shall comply with requirements below
 - 3.7.1. Instructions to Bidder Form (attached in bid document).
 - 3.7.2. Offering letter.
 - 3.7.3. Copy of deed of company establishment.
 - 3.7.4. Supplier list and manufacture list.

4. Contractor Requirements

The Contractor shall perform project following with requirements below:

- 4.1. All equipment shall be provided by Contractor according with approved design by Owner.
- 4.2. The Contractor shall submit all works procedures for Owner review and comments. If the Owner makes comments to any procedure of works, the Contractor must arrange revisions of such procedure to address the Owner's comment and must resubmit it to the Owner within 2 days of the Owner's comment.
- 4.3. The works procedures shall indicate detailed steps of works, tools and equipment, and method of works. It shall also indicate all tools & equipment and the specifications of such tools & equipment used during the execution of works.
- 4.4. The Installation shall to be completed when it has passed all necessary tests and has been approved to the satisfaction of the distribution company. All necessary facilities, including all necessary instruments and test equipment and labour for carrying out tests, shall be provided by the Contractor at no extra cost to the Owner. The Contractor shall provide training to the Owner on the operation and use of all equipment and systems installed under the contract. The Contractor shall carry out final acceptance tests as required by the Owner and as specified.
- 4.5. In addition to the day to day coordination during the project duration, the Contractor is required for weekly project progress meetings. These meetings will discuss progress, OHSE, etc. The Contractor shall minutes of the meetings should be provided within 2 days of the meeting date. These meetings would be attended by the Owner and the Contractor, required consultants and sub-Contractors. The Contractor shall provide:
 - 4.5.1. All OHSE incidents.
 - 4.5.2. All quality non-conformances.
 - 4.5.3. Project program compared to contract program.

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- 4.5.4. Register of extension of time claims.
- 4.5.5. Register of variations showing items to be approved and date approval is required.
- 4.5.6. *Register of design changes.*
- 4.5.7. Register of request for information showing items to be responded to and date response required.
- 4.5.8. Hold points and witness points.
- 4.5.9. Works progress photographs.

5. Scope of Work

The Contractor shall design, supply equipment & materials, perform construction and Installation, testing of 2 Units of Vertical Tank Receiver project.

5.1. Scope of Engineering and Documents Submission

- 5.1.1. The Contractor shall design tank and erection in accordance with specification herein according with Owner approval in accordance with international standards and Good Utility Practice.
- 5.1.2. The Contractor shall submit design documents for Owner review and/or approval, including but without limitation to the following documents:
 - 5.1.2.1. Design data sheet and equipment datasheet.
 - 5.1.2.2. Shop Drawing.
 - 5.1.2.3. As built drawing
 - 5.1.2.4. Related document.
- 5.1.3. The Contractor shall provide OHSE manuals.
- 5.1.4. The Contractor shall provide project handover certificate.
- 5.1.5. The Contractor shall provide Quality Plan, including Inspection and Test Plan (ITP) and Test Procedure.
- 5.1.6. The Contractor shall provide project schedule, including key milestone schedule.
- 5.1.7. The Contractor shall provide Project Execution Plan (PEP) and submit to Owner for approval.

5.2. Scope of Procurement and Logistic

- 5.2.1. The Contractor shall supply of complete materials based on approved design.
- 5.2.2. The Contractor shall deliver the complete material including custom clearance import tax.

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- 5.2.3. The Contractor shall provide packing list of material prior to be dispatch and submit to Owner.
- 5.2.4. The Contractor shall provide storage management plan for receiving and storage of material. Storage area is provided by Owner.
- 5.2.5. All material purchasing is must confirmed and approved to Owner.
- 5.3. Scope of Construction, Installation and Testing
 - 5.3.1. The Contractor shall provide manpower for Installation, supervision, and quality control of project.
 - 5.3.2. The Contractor shall provide Installation procedure including method of work.
 - 5.3.3. The Contractor shall provide equipment, tools and consumables for Installation.
 - 5.3.4. The Contractor shall provide project quality plan for Installation.
 - 5.3.5. The Contractor shall provide construction report of Installation in daily, weekly and monthly basis.
 - 5.3.6. The Contractor shall conduct inspection based on Inspection and Test Plan (ITP) and provide test report.
 - 5.3.7. The Contractor shall conduct housekeeping, remove and dispose of all associated wrapping, rubbish or debris related to the Installation and deliver to designated area of waste after work completed.
 - 5.3.8. The Contractor shall provide Test Report.
 - 5.3.9. The Contractor shall ensure that all equipment of installed tank and erection in accordance with the design parameters and work properly.
 - 5.3.10. The Contractor shall provide Ultrasonic Test (UT) for Tank Cap, Penetrant Test (PT) of Whole Tank, Hydro Test refer to international standard and approved by owner.
- 5.4. Miscelenaeous
 - 5.4.1. All employee of Contractor shall be complied and follow Indonesia Regulation Law, especially work permit (working VISA).
 - 5.4.2. The Owner must at all time have full access to the Contractor work. The Owner's personnel must have full access to witness any and all of the Contractor's work.

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6. Technical Specification




Figure 6.1. Coal Contained Tank Device

Criteria	Units	Quantity
Tank and Accessory Quantity Need	set	2
Specification of Each Tank		
Material		Q235B or Equivalent with A36 and SS 400
Equipment Size	mm	Ø2020 x 10
Working Temperature	°C	5 – 50
Capacity	m ³ /h	10
Design Pressure	atm	1
Inlet Size DN50, PN 1.0	set	1
Outlet Size DN 65, PN 1.0	set	1
Backwash Inlet Size DN 100, PN 1.0	set	1
Surface Backwash Inlet Size DN 100, PN 1.0	set	1
Water Drain Size DN 125, PN 1.0	set	1
Sludge Drain Size DN 100, PN 1.0	set	1
Overflow Size DN 50, PN 1.0	set	1
Commissioning Outlet Size DN 65, PN 1.0	set	1
Lifting Lug Thickness 20 mm	pcs	2
Sight Glass	pcs	1
Needle Valve	pcs	4
Side Manhole DN 600, PN 1.0	pcs	2
Roof Manhole DN 600, PN 1.0	pcs	1
Support Thickness 15 mm	set	1
Partition Plate CS 10 MM	set	1
Stiffener Plate CS 150 x 10 mm	set	1

Note: See detail in Exhibit 1.

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7. General Warranty

The Contractor warrants and guarantees that the Facilities and/or the work as below

- 7.1. Free from any defects, including design defects, equipment and material defects, and workmanship;
- 7.2. New and of the kind and quality specified in the Contract/Purchase Order or Technical Specification and fit for their intended purpose,
- 7.3. Performed in accordance with international standard engineering and construction practice and Good Utility Practice
- 7.4. Conform to the requirements of the Contract in all respects.
- 7.5. Installation and construction works, until one (1) year from the date of Acceptance.

If any parts of the Facilities or the work is found to be defect after Acceptance by the Owner, the Owner will notify the Contractor about such defects and the Contractor shall take corrective measure to repair or replace such defect no later than 10 days from the date of notification. If the Contractor repairs or replaces any part of the Facilities or the work pursuant to the General Warranties, then the part of the work repaired or replaced in connection therewith and any part of the equipment and materials repaired or replaced in connection therewith shall continue to be covered by the General Warranty or General Warranties for a period that the General Warranty for such defective items shall be re-calculated from the date of such repair or replacement is completed until the duration as mentioned in the above paragraph for respective components.

8. Project Requirement

The Contractor shall provide project requirement as below:

- 8.1. Documentation Package (Hardcopy Covered, Softcopy Document and Editable Drawing)
 - 8.1.1. Factory Acceptance Test with Owner's approval
 - 8.1.2. Site Acceptance Test
 - 8.1.3. Part List and Detail Part Specification
 - 8.1.4. Shipping Document
 - 8.1.5. Technical and Installation Drawing
 - 8.1.6. Safety Agreement and Contractor Safety Management System (CSMS)
 - 8.1.7. Final Document
 - 8.1.7.1. List of Content
 - 8.1.7.2. Company profile
 - 8.1.7.3. Company contact

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- 8.1.7.4. Certificate of company and personnel
- 8.1.7.5. S-curve or progress report
- 8.1.7.6. Daily, weekly, monthly report (photo attached)
- 8.1.7.7. Inspection and Test report
 - 8.1.7.7.1. Dimensional Report,
 - 8.1.7.7.2. Welding Report,
 - 8.1.7.7.3. Orientation Nozzle Report,
 - 8.1.7.7.4. Plumbness Report,
 - 8.1.7.7.5. Installation Report,
 - 8.1.7.7.6. Center Line Report
 - 8.1.7.7.7. Erection Report
 - 8.1.7.7.8. Hydro Test Report
 - 8.1.7.7.9. Etc.
- 8.1.7.8. As-Built Drawing (Hardcopy Covered, Softcopy Document and Editable Drawing) - In Separate Document

8.2. Documentation Requirement

8.2.1. Pre-Installation and Shop Drawing

Prior to the commencement of the Installation of the system, the Contractor shall provide detailed documentation and Shop Drawings for approval by Owner. The Contractor shall provide Shop Drawings a **maximum of 2 weeks** prior to the proposed commencement date for approval. The Pre-Installation and Shop Drawings shall be provided by Contractor must include as minimum requirements below:

- 8.2.1.1. Fully detailed Scope of works document including details of all equipment supplied and description of works
- 8.2.1.2. OHSE Safety Plan which, includes site specific information on project details, first aid representation, evacuation procedures and locations, site isolation and signage requirements, proposed work areas and access, project roles and responsibilities and OHSE site specific issues. The Contractor shall comply with OHSE Regulation.
- 8.2.1.3. Site specific safe work method statement and/or Job Safety Analysis (JSA)

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8.2.2. Document

The document shall be supplied with three (3) copies (Hard-copy) & Soft-copy.

The Contractor shall provide document include the following as a minimum:

- 8.2.2.1. The manuals shall be supplied in a ring binder with the project name clearly displayed on the cover.
- 8.2.2.2. All equipment information sheets shall be supplied.
- 8.2.2.3. All soft-copy should be given to user with editable and unlocked file format.
- 8.2.2.4. The Contractor shall insert their own company name and details into each drawing (as-built drawings become the responsibility of the Contractor).
- 8.2.2.5. All as-built drawings shall be clear and legible to the Owner's satisfaction.

8.2.3. Technical information and drawings

The Contractor shall provide document include the following technical information and drawings:

- 8.2.3.1. Proof of the selected material.
- 8.2.3.2. Step-by-step Installation procedure.
- 8.2.3.3. Installation checklist.
- 8.2.3.4. Warranty information on all supplied equipment.
- 8.2.3.5. Shop drawings.

8.3. Health, Safety, and Environmental

The Contractor shall perform the works in accordance with applicable government rules and regulations including rules and regulation related with health, safety, and environmental. The Contractor must ensure that the works be performed safely and without any harm to environmental. The Contractor must ensure that the execution of the work by the Contractor shall not caused harm to any other personnel, including but not limited to Owner's personnel, other Contractor's personnel, or any third party.

The Contractor must at all time comply to the Owner's rules and regulation of Health, Safety, and Environmental regulations, including specific direction by the Owner to enhance the safety and environmental protection which may be issued by the Owner from time to time during execution of the works by the Contractor. The Contractor shall at all time comply with Heath, Safety, and Environmental regulation as attached to this document. The Owner may impose penalty to any Owner personnel who failed to



comply with the Owner's HSE regulations. The Owner may also expel from the Plant any of the Contractor's personnel whom in the opinion of the Owner does not comply with the Owner HSE requirements.

8.4. Quality of Work

The Contractor shall perform the works with the highest quality standard and in accordance with Project Document, Good Utility Practice, international engineering standard. The Contractor must provide adequate and competence quality control personnel to ensure that the quality of the works meets with the requirements under this document. In no less than 7 days prior to starting of the project works, the Contractor must submit an Inspection and Test Plan (ITP) for Owner approval.

The Owner may reject any works if in the opinion of the Owner that such works does not meet the quality requirement under this document, Project Document or Good Utility Practice, international standard engineering practice. If any works rejected by the Owner, the Contractor shall promptly take necessary action to rectify the works so that such works meet with quality requirements.

Upon completion of rectification works, the Contractor must submit notification to the Owner for further inspection. Any and all cost incurred for reworks shall be borne by the Contractor. Upon completion of the works and Unit commissioning, the Owner will evaluate the result and quality of the work.

The acceptance criteria of the works shall be based on the following documents:

- 8.4.1. International standards or power industry standards.
- 8.4.2. If there is no relevant quality standard for the above two items, both parties shall negotiate to solve the problem and be approved by the Owner.
- 8.4.3. In the project process, the Contractor shall fill in the concession release application form in case of any deviation.
- 8.4.4. The Contractor must submit progress report, inspection report, and completion report in accordance with format acceptable to the Owner. The Owner has right to review and make comment to the report submitted by the Contractor. If the Owner make comment to any report, the Contractor must revise such report and resubmit it to the Owner with 2 days of the Owner's comment.
- 8.4.5. The Contractor must submit inspection request in the form of Request for Inspection (RFI) in accordance with Inspection and Testing Plan approved by the Owner. Any Request for Inspection (RFI) must be submitted by the Contractor to the Owner in no less than 24 hours prior to inspection schedule.



8.4.6. Upon completion of the works, the Contractor may propose completion certificate to certify that the works has been completed by the Contractor in accordance with *General and Technical Requirement and Project Documents*. The Owner may review or comments the completion certificate or sign off such completion certificate if in the opinion of the Owner that all works has been completed by the Contractor in accordance with General and Technical Requirement and Project Documents.

9. Schedule of Works

Agenda	Apr				May			
	W1	W2	W3	W4	W5	W6	W7	W8
PO Released								
Construction Stage								
Kick Off Meeting								
Fabrication Process								
Delivery Process								
Site Installation								
Final Stage								
Final Inspection								
Project Handover (Include Document Package)								

10. Project Quality Objectives

The Contractor shall perform the works in accordance with requirement and Project Document.

The Contractor shall achieve quality objective as follows:

- 10.1. The completion rate of projects reaches 100%;
- 10.2. The completion rate of project test plan reaches 100%;
- 10.3. The completion rate of unit defect or punchlist elimination plan reaches 100%;

11. Owner's Responsibilities

Unless explicitly specified in this document or contract, the Owner shall have any other responsibility with regard to execution of the work. The Owner shall be responsible for:

- 11.1. Providing technical drawings of existing building, existing electrical panel and existing equipment specifications that relevant.
- 11.2. Providing dormitory for Contractor's personnel but exclude food and drink water.
- 11.3. Providing electricity for project activities (just power resources).

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Exhibit 1. TANK DRAWING

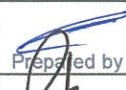
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