

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง)  
ในการจัดซื้อจัดจ้างที่มีชิ้นงานก่อสร้าง

1. ชื่อโครงการ Enquiry No. TS12-GIS-04  
งานจัดซื้อ 115 kV Gas Insulated Switchgear  
โครงการขยายระบบส่งไฟฟ้าระยะที่ 12  
/หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย
  2. วงเงินงบประมาณที่ได้รับจัดสรร  
โครงการขยายระบบส่งไฟฟ้าระยะที่ 12 งบประมาณ 60,000 ล้านบาท
  3. วันที่กำหนดราคากลาง 16 ธันวาคม 2565 (วันที่ อวส. อนุมัติ )  
ราคารวมภาษีมูลค่าเพิ่มและค่าใช้จ่ายอื่นๆ เป็นเงิน 20,800,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ
  4. แหล่งที่มาของราคากลาง  
หลักเกณฑ์การกำหนดราคากลางการจัดซื้อและจัดจ้างงานก่อสร้างระบบส่งไฟฟ้าของสายงานระบบส่ง
  5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง
    - 5.1 นายจิตติวัฒน์ เบญจวงศ์รัตน์ หสภ-ส., กวอ-ส.
    - 5.2 นายภูภัทร พานทอง วศ.7, หสภ-ส., กวอ-ส.
- หมายเหตุ ค่าใช้จ่ายอื่นๆ ได้แก่ ค่าใช้จ่ายที่ กฟผ. ต้องจ่ายตามวิธีการพิจารณาเปรียบเทียบราคาที่กำหนดไว้ในเอกสารประกวดราคา เช่น อากรขาเข้า เป็นต้น

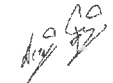
นายภูภัทร พานทอง  
นายภูภัทร พานทอง  
(นศทส-ท.)  
27 มิ.ย. 2566

**MEDIUM COST TO ENQUIRY NO. TS12-GIS-04**  
**SUMMARY OF BID PRICE**  
**SUPPLY OF 115 KV GAS INSULATED SWITCHGEAR**  
**TRANSMISSION SYSTEM EXPANSION PROJECT NO.12**

| No.                               | Description                               | Currency | Supply of Equipment | Supply of Equipment                       | Foreign Currency | Local Currency<br>(excluding VAT)<br>Baht |
|-----------------------------------|---|----------|---------------------|---|------------------|---|
|                                   |   |          | Foreign Supply      | Local Supply                              |                  |   |
|                                   |   |          | CFR Thai Port       | Ex-works Price<br>(excluding VAT)<br>Baht |                  |   |
|                                   |   |          | Amount              | Amount                                    | Amount           | Amount                                    |
| 1                                 | Schedule 1 : SF6 GAS INSULATED SWITCHGEAR | THB      | 19,089,877.26       |   |                  |   |
| <b>BID PRICE</b>                  |   | THB      | 19,089,877.26       | Baht                                      |                  | Baht                                      |
| <b>OTHER EXPENSES</b>             |   | THB      | 381,797.55          | Baht                                      |                  | Baht                                      |
| <b>VAT</b>                        |   | THB      | 1,363,017.24        | Baht                                      |                  | Baht                                      |
| <b>SUMMARY OF BID PRICE</b>       |   | THB      | 20,834,692.05       | Baht                                      |                  | Baht                                      |
| <b>TOTAL MEDIUM COST</b>          |   | THB      | 20,834,692.05       |   |                  |   |
| <b>TOTAL MEDIUM COST(ROUNDED)</b> |   | THB      | 20,800,000.00       |   |                  |   |

**MEDIUM COST TO ENQUIRY NO. TS12-GIS-04**  
**Schedule 1 : SF6 GAS INSULATED SWITCHGEAR**  
**SUPPLY OF 115 KV GAS INSULATED SWITCHGEAR**  
**TRANSMISSION SYSTEM EXPANSION PROJECT NO.12**

| Item No. | Description   | Qty. | Unit | Currency | Supply of Equipment |               | Supply of Equipment                       |          | Foreign Currency |        | Local Currency |        |
|----------|---|------|------|----------|---------------------|---------------|---|----------|------------------|--------|----------------|--------|
|          |   |      |      |          | Foreign Supply      |               | Local Supply                              |          | Unit Price       | Amount | Unit Price     | Amount |
|          |   |      |      |          | CFR Thai Port       |               | Ex-works Price<br>(excluding VAT)<br>Baht |          |                  |        |                |        |
|          |   |      |      |          | Unit Price          | Amount        | Unit Price                                | Amount   | Unit Price       | Amount | Unit Price     | Amount |
| 1-1      | 123 kV 3150 A 40 kA Gas Insulated Switchgear as per Ratings and Features RF IS7542(IEC) and Drawing No. NBR-S-1-03/04, NBR-S-1-04/04, NBR-S-2-01/01, NBR-S-3-01/01 and NBR-S-4-01/01 (115kV Line No.1 to PEA) | 1    | bay  | THB      | 19,089,877.26       | 19,089,877.26 | XXXXX                                     | XXXXX    | XXXXX            | XXXXX  | XXXXX          | XXXXX  |
| 1-2      | 123 kV 3150 A 40 kA Gas Insulated Switchgear as per Ratings and Features RF IS7542(IEC) and Drawing No. NBR-S-1-03/04, NBR-S-1-04/04, NBR-S-2-01/01, NBR-S-3-01/01 and NBR-S-4-01/01 (Metal Enclosed Bus)     | lot  |      | THB      | Included            | Included      | XXXXX                                     | XXXXX    | XXXXX            | XXXXX  | XXXXX          | XXXXX  |
| 1-3      | 123 kV 3150 A 40 kA Gas Insulated Switchgear as per Ratings and Features RF IS7542(IEC) outdoor type (GIB) as per Drawing No. NBR-S-1-03/04, NBR-S-1-04/04, NBR-S-2-01/01, NBR-S-3-01/01 and NBR-S-4-01/01    | lot  |      | THB      | Included            | Included      | XXXXX                                     | XXXXX    | XXXXX            | XXXXX  | XXXXX          | XXXXX  |
| 1-4      | Local control cubicle for IS7542 for item 1-1 thru 1-3 (including interlocks requirement with existing bays and existing LCC Modification (if any))*  | 1    | set  | THB      | Included            | Included      | Included                                  | Included | XXXXX            | XXXXX  | XXXXX          | XXXXX  |
| 1-5      | Steel Supporting Structure for IS7542*  | lot  |      | THB      | Included            | Included      | Included                                  | Included | XXXXX            | XXXXX  | XXXXX          | XXXXX  |
| 1-6      | Removable service platform and removable ladder for GIS inspection (include existing GIS)   | lot  |      | THB      | Included            | Included      | Included                                  | Included | XXXXX            | XXXXX  | XXXXX          | XXXXX  |

  
 นายประวิทย์ เลิศโกวิท  
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง  
 16 Dec 2022

- Project 1-C2 -

หนังสือ ๒๕๖๑  
 ทักษิณทร์ พูนผลกุล  
 (๕๕๓๕-๕.๑)  
 17 มิ.ย. 2566

filename : TS12-GIS-04

**MEDIUM COST TO ENQUIRY NO. TS12-GIS-04**  
**Schedule 1 : SF6 GAS INSULATED SWITCHGEAR**  
**SUPPLY OF 115 KV GAS INSULATED SWITCHGEAR**  
**TRANSMISSION SYSTEM EXPANSION PROJECT NO.12**

| Item No.                          | Description   | Qty.  | Unit    | Currency   | Supply of Equipment  |          | Supply of Equipment                       |          | Foreign Currency |          | Local Currency |             |
|-----------------------------------|---|-------|---------|------------|----------------------|----------|---|----------|------------------|----------|----------------|-------------|
|                                   |   |       |         |            | Foreign Supply       |          | Local Supply                              |          | Unit Price       | Amount   | Unit Price     | Amount      |
|                                   |   |       |         |            | CFR Thai Port        |          | Ex-works Price<br>(excluding VAT)<br>Baht |          |                  |          |                |             |
|                                   |   |       |         |            | Unit Price           | Amount   | Unit Price                                | Amount   | Unit Price       | Amount   | Unit Price     | Amount      |
| 1-7                               | Accessories and special tools necessary (if any give details)   | lot   |         | THB        | Included             | Included | Included                                  | Included | XXXXX            | XXXXX    | XXXXX          | XXXXX       |
| 1-8                               | Cost of Installation Supervisor for Item no. 1-1 to 1-7   | 20.00 | man day | THB        | XXXXXX               | XXXXXX   | XXXXXX                                    | XXXXXX   | Included         | Included | Included       | Included    |
| 1-9                               | Cost of Field test supervisor as per IEC 62271-203  | 5.00  | man day | THB        | XXXXXX               | XXXXXX   | XXXXXX                                    | XXXXXX   | Included         | Included | Included       | Included    |
| 1-10                              | Cost of Field test  | lot   |         | THB        | XXXXXX               | XXXXXX   | XXXXXX                                    | XXXXXX   | Included         | Included | Included       | Included    |
|                                   | Note : The SF6 gas in a quantity equivalent to 115% of the total equipment actual requirement shall be provided as follows:<br>- 100% of SF6 gas quantity shall be shipped in returnable steel bottles which shall be returned back to Contractor.<br>- 15% of SF6 gas quantity shall be shipped in non-returnable steel bottles which shall become the property of EGAT. |       |         |            |                      |          |   |          |                  |          |                |             |
| <b>Total Price for Schedule 1</b> |   |       |         | <b>THB</b> | <b>19,089,877.26</b> |          | <b>Baht</b>                               |          |                  |          |                | <b>Baht</b> |

\* The design of supporting structures and LCCs for Gas Insulated Switchgear shall be verified by Gas Insulated Switchgear manufacturer.

**MEDIUM COST TO ENQUIRY NO. TS12-GIS-04**  
**Service of Installation Supervisor (Schedule 1)**  
**SUPPLY OF 115 KV GAS INSULATED SWITCHGEAR**  
**TRANSMISSION SYSTEM EXPANSION PROJECT NO.12**

| Item No. | Description   | Qty.  | Unit    | Currency | Foreign Currency |          | Local Currency<br>( excluding VAT )<br>Baht |          |
|----------|---|-------|---------|----------|------------------|----------|---|----------|
|          |   |       |         |          | Unit Price       | Amount   | Unit Price                                  | Amount   |
| 1-8      | Cost of Installation Supervisor for Item no. 1-1 to 1-7 | 20.00 | man day | THB      | Included         | Included | Included                                    | Included |
| 1-9      | Cost of Field test supervisor as per IEC 62271-203      | 5.00  | man day | THB      | Included         | Included | Included                                    | Included |
|          |   |       |         |          |                  |          |   |          |

Note:

1. The quoted total man-days for installation supervisor shall be the required number of days for complete installation, erection, field test and commissioning of all equipment as specified.
2. In addition to the quoted total man-days above, EGAT will also pay the following :
  - a. Travelling time from and to Supervisor's home office as well as travelling time from and to the installation site including ten (10) working days of operation, if any, which will be at the same rate as the cost quoted per man-day.
  - b. Airfares round trip economy class between the Supervisor 's home office and Bangkok by the most expeditious and direct route.
3. Local transportation from and to installation site will be provided by EGAT.
4. If the working man-days are less than the quoted total man-days, the payment shall be on the basis of actual man-days.
5. For man-days exceeding the quoted total amount, no payment shall be made by EGAT. Any such additional man-days approved by EGAT shall be paid on the quoted man-days rate.



นายประวิทย์ เลิศโกวิทย์  
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง  
 16 Dec 2022

นายไพโรจน์ พงษ์กุล  
 ทัษภัทร พูนผลกุล  
 27 มิ.ย. 2566 (นชพส-ท.)

Cost of Field Test (Schedule No. 1)

| Description   | Cost of Field Test Supervisor<br>Currency : _____ | Cost of Field Test<br>Currency : _____ |
|---|---|--|
| Field test cost as per IEC 62271-203  |   |  |
| a) General construction check   | Included  | N/A                                    |
| b) Inspection of all pressure switch operation  | Included  | N/A                                    |
| c) Mechanical operation of the CB, DS and GS  | Included  | N/A                                    |
| d) Operation of all valves  | Included  | N/A                                    |
| e) Check of correct gas pressure in all sections  | Included  | N/A                                    |
| f) Air or hydraulic pressure check before and after specified co-operation of circuit breakers  | Included  | N/A                                    |
| g) Check for gas leakage in all sections and fluid leakages in all mechanisms   | Included  | N/A                                    |
| h) Insulating gas characteristics test  | Included  | N/A                                    |
| i) Measurement of Characteristic time quantities (timing) and Record of Mechanical travel characteristics (Motion) of Circuit Breakers : Test result and record shall confirm satisfactory performance by comparison with the reference obtained during the routine test at manufacturer factory as well as Manufacturer criteria | Included  | N/A                                    |
| j) Insulation resistance tests  | Included  | N/A                                    |
| k) Dielectric test on main circuit  |   |  |
| - Power-frequency voltage test  | Included  | -----                                  |
| - Partial Discharge tests   | Included  | -----                                  |
| l) Voltage tests of auxiliary and control circuits  | Included  | N/A                                    |
| m) Main circuit resistance measurement  | Included  | N/A                                    |
| n) Test all instrument transformers   | Included  | N/A                                    |
| o) Check all porcelain  | Included  | N/A                                    |
| p) Operational tests of all components, control, alarm and protection circuits  | Included  | N/A                                    |
| q) Moisture content of SF6 gas in all sections  | Included  | N/A                                    |

- Note: 1. The on site testing and check, unless otherwise agreed upon, shall be performed in accordance with the IEC standards.  
 2. The quoted cost of field test shall include field test expenditure, transportation of test equipment (import and export by contractor) and other expenses relating to such field test.  
 3. The test reports shall be submitted within two weeks after the completion of test.

Rev.12

- Project 1-C5 -

นายประวิทย์ เลิศโกวิท  
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง  
 16 Dec 2022

filename : TS12-GIS-04

หทัยภัทร พูนผลกุล  
 27 มี.ย. 2566 (นพทส-น.)