

ข้อมูลประชาสัมพันธ์และช่องทางรับข้อคิดเห็นหรือข้อร้องเรียน  
ด้านการส่งเสริมคุณธรรมและความโปร่งใสในการดำเนินการ



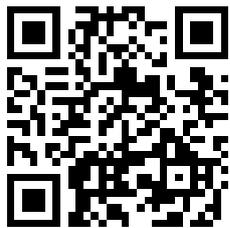
นโยบายต่อต้านการให้หรือรับสินบนเพื่อป้องกันการทุจริต  
และประพฤติมิชอบ



จรรยาบรรณของผู้ปฏิบัติงานจัดซื้อจัดจ้างและบริหารพัสดุ



ช่องทางรับข้อคิดเห็นหรือข้อร้องเรียน \*



การแจ้งข้อคิดเห็นหรือข้อร้องเรียนทางเว็บไซต์ กฟผ. \*



จรรยาบรรณคู่ค้า กฟผ. \*\*

\* ไม่ใช่ช่องทางแสดงความคิดเห็นร่างขอบเขตของงานหรือรายละเอียดคุณลักษณะเฉพาะของพัสดุที่จะซื้อหรือจ้าง/ ร่างประกาศ/ ร่างเอกสารประกวดราคาฯ

\*\* กฟผ. จัดทำและเผยแพร่จรรยาบรรณคู่ค้า เพื่อให้คู่ค้าของ กฟผ. ทุกรายมีแนวปฏิบัติในการดำเนินธุรกิจอย่างมีจริยธรรมและธรรมาภิบาล โดยคำนึงถึงสิ่งแวดล้อม สังคม การกำกับดูแลกิจการที่ดี ปฏิบัติตามกฎหมาย และเคารพหลักสิทธิมนุษยชน ดังมีรายละเอียดระบุใน QR Code จรรยาบรรณคู่ค้า กฟผ."

## **EGAT's Privacy Notice on Procurement, Inventory Management and Contract Administration**

Electricity Generating Authority of Thailand (EGAT) has performed the protection of the Personal Data regarding procurement, inventory management and contract administration to be in accordance with the **Personal Data Protection Act B.E. 2562** (the "2019 PDPA"), which comes into effect on June 1, 2022.

Details about EGAT's Privacy Notice on Procurement, Inventory Management and Contract Administration are available for you at [https://www.egat.co.th/privacy-notice-procurement\\_en.html](https://www.egat.co.th/privacy-notice-procurement_en.html) or the below QR Code.



## **The Redaction of Sensitive Personal Data**

EGAT has announced the Privacy Notice on Procurement, Inventory Management and Contract Administration for the collection, use or disclosure of Personal Data, excluding the Sensitive Personal Data.

Should the documents you wish to submit to EGAT contain the Sensitive Personal Data as defined in Section 26 of the 2019 PDPA, pertaining to racial, ethnic origin, political opinions, cult, religious or philosophical beliefs, sexual behavior, criminal records, health data, disability, trade union information, genetic data, biometric data, or of any data which may affect you in the same manner, you shall redact or conceal such data before submitting to EGAT.

## ประกาศความเป็นส่วนตัว (Privacy Notice) สำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญาของ กฟผ.

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) ได้ดำเนินการคุ้มครองข้อมูลส่วนบุคคลสำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญา เพื่อให้เป็นไปตามพระราชบัญญัติคุ้มครองข้อมูลส่วนบุคคลของประเทศไทย พ.ศ. 2562 (PDPA) ซึ่งมีผลบังคับใช้อย่างครบถ้วน ตั้งแต่วันที่ 1 มิถุนายน 2565 ทั้งนี้ ท่านสามารถศึกษารายละเอียดประกาศความเป็นส่วนตัว (Privacy Notice) สำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญา ได้ที่ <https://www.egat.co.th/privacy-notice-procurement.html> หรือที่ QR Code ด้านล่าง



### การขิดฆ่าข้อมูลส่วนบุคคลอ่อนไหว

กฟผ. มีประกาศความเป็นส่วนตัว (Privacy Notice) สำหรับการจัดซื้อจัดจ้าง การบริหารพัสดุ และการบริหารสัญญา เพื่อใช้ในการเก็บรวบรวม ใช้ หรือเปิดเผย ข้อมูลส่วนบุคคล แต่ไม่เก็บข้อมูลส่วนบุคคลอ่อนไหว หากเอกสารของท่านที่ต้องส่งมอบให้ กฟผ. มีข้อมูลส่วนบุคคลอ่อนไหวตามที่ถูกบัญญัติไว้ในมาตรา 26 ของ PDPA ดังนี้ เชื้อชาติ เผ่าพันธุ์ ความคิดเห็นทางการเมือง ความเชื่อในลัทธิ ศาสนาหรือปรัชญา พฤติกรรมทางเพศ ประวัติอาชญากรรม ข้อมูลสุขภาพ ความพิการ ข้อมูลสหภาพแรงงาน ข้อมูลพันธุกรรม ข้อมูลชีวภาพ หรือข้อมูลอื่นใด ซึ่งกระทบต่อเจ้าของข้อมูลส่วนบุคคลในทำนองเดียวกันรวมอยู่ด้วย ขอให้ท่านขิดฆ่า หรือปกปิดข้อมูลดังกล่าว ก่อนส่งมอบให้แก่ กฟผ.

## Notice to Bidder

### Subject : Online Payment for Purchase of Bidding Documents

Please be informed of the online payment for purchase of bidding documents as follows:

- 1) Fill-out the Registration Form and upload the proof of payment via the link provided in <https://www4.egat.co.th/fprocurement/biddingeng>

Payment shall be made by bank transfer or telegraphic transfer to EGAT's account no. 109-6-01958-2 (swift code : KRTHTHBK), Krung Thai Bank Public Company Limited, Bangkruai Branch, Nonthaburi.

All bank charges and fees incurred by the payment of bidding documents shall be under the buyer's responsibility.

- 2) The registration will be deemed complete only upon successful processing of the payment and confirmation of funds received.
- 3) After the payment has been verified for approximately 3 working days, the in-charge officer will send the link for downloading the bidding documents together with the receipt to the purchaser's email address in the Registration Form.

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## Invitation to Bid No. BBS1-DSS-01

### Supply of Digital Substation Protection and Automation System

### Transmission System for Hydro-Floating Solar Hybrid Project Bhumibol Dam Unit 1

The Electricity Generating Authority of Thailand (EGAT) is calling for the subject Invitation to Bid to be financed by EGAT's fund. The project is on the process of the Government's Approval. The Bid may be cancelled in case the project is not approved.

**Place of Delivery** : EGAT's Head Office

**Medium Cost (including Value Added Tax)** :

| Description  | Medium Cost (THB) |
|--|-------------------|
| Schedule 1 : 230 kV Digital Substation Protection and Automation Equipment | 54,300,000.-      |
| Schedule 2 : 230 kV Fault Recording System                                 | 3,200,000.-       |

#### **Eligibility of Bidders**

1. The Bidder shall be a local manufacturer or provide such locally manufactured materials and/or equipment and shall not be named in the List of Work Abandoners published by the Permanent Secretary, Ministry of Finance, and/or in the Debarment List and/or in the List of Work Abandoners declared by EGAT.
2. The Bidder shall not be a Jointly Interested Bidder with other Bidders as from the date of EGAT's issuance of the Invitation, or shall not be a person who undertakes any action as an "Obstruction of Fair Price Competition" for this Invitation.
3. The Bidder shall not either be EGAT's consultant or involve in EGAT's consultancy company under this Invitation to Bid, or shall not have EGAT's personnel involved in his business as shareholder having voting right that can control his business, director, manager, officer, employee, agent, or consultant except those who are officially ordered by EGAT to act or participate therein.
4. The Bidder shall not be the person who is privileged or protected not to be taken any legal proceedings under Thai Court; Provided that such Bidder's government declares that such special privilege is waived.
5. The Bidder who is a joint venture or consortium shall carry out all the work under such formation from the time of bidding until the fulfillment of the Contract.

#### **Availability of Bidding Documents**

Bidding Documents are available for online purchase during 8:00 hrs. to 15:00 hrs., Bangkok Standard Time, as from February 27, 2026 to April 10, 2026 at THB 300.- per copy, non-refundable.

Please find more details for online purchasing process at <https://www4.egat.co.th/fprocurement/biddingeng> or contact for further information at telephone no. 0 2436 0346 or [procurement.tse@egat.co.th](mailto:procurement.tse@egat.co.th).

#### **Delivery of Bids**

Bids shall be submitted at Bidding Room, 1<sup>st</sup> Floor, Tor 137 Building at EGAT's Head Office, Nonthaburi during 9:00 hrs. to 10:00 hrs., Bangkok Standard Time, April 30, 2026 and will be opened publicly at 10:00 hrs.

ELECTRICITY GENERATING AUTHORITY OF THAILAND

February 27, 2026

(Miss Wallapa Chewadhnakorkul)

Chief, Procurement Department – Transmission System Segment



ประกาศการไฟฟ้าฝ่ายผลิตแห่งประเทศไทย  
เรื่อง ประกวดราคาซื้อ เลขที่ BBS1-DSS-01

การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย (กฟผ.) มีความประสงค์จะซื้อ Digital Substation Protection and Automation System สำหรับระบบส่งไฟฟ้าสำหรับโครงการโรงไฟฟ้าพลังงานแสงอาทิตย์ทุ่นลอยน้ำร่วมกับโรงไฟฟ้าพลังงานเขื่อนภูมิพล ชุดที่ 1 โดยใช้งบประมาณ กฟผ. ทั้งนี้ โครงการอยู่ระหว่างการขออนุมัติจากคณะรัฐมนตรี การจัดหาครั้งนี้จะไม่ผูกพัน กฟผ. หากโครงการไม่ได้รับอนุมัติ

สถานที่ส่งมอบ : กฟผ. สำนักงานใหญ่

ราคากลาง (รวมภาษีมูลค่าเพิ่ม) :

| รายการ   | ราคากลาง (บาท) |
|--|----------------|
| Schedule 1 : 230 kV Digital Substation Protection and Automation Equipment | 54,300,000.-   |
| Schedule 2 : 230 kV Fault Recording System                                 | 3,200,000.-    |

**คุณสมบัติของผู้เสนอราคา**

- ต้องเป็นนิติบุคคลผู้ผลิตพัสดุ หรือผู้มีอาชีพขายพัสดุที่ผลิตในประเทศไทยตามประกาศ และต้องไม่เป็นผู้ที่จ้างงานซึ่งปลัดกระทรวงการคลังได้แจ้งเวียนชื่อไว้ หรือต้องไม่เป็นผู้ที่ กฟผ. ห้ามติดต่อหรือห้ามเข้าเสนอราคา หรือต้องไม่เป็นผู้ที่ได้รับผลของการสั่งให้นิติบุคคลหรือบุคคลอื่นเป็นผู้ที่จ้างงานตามคำสั่ง กฟผ.
- ต้องไม่เป็นผู้มีผลประโยชน์ร่วมกันกับผู้เสนอราคารายอื่น ณ วันประกาศประกวดราคาครั้งนี้เป็นต้นไป หรือต้องไม่เป็นผู้กระทำการอันเป็นการขัดขวางการแข่งขันราคาอย่างเป็นธรรมในการดำเนินการประกวดราคาครั้งนี้
- ต้องไม่เป็นที่ปรึกษาของ กฟผ. หรือมีส่วนร่วมในบริษัทที่ปรึกษาของ กฟผ. ในงานนี้ หรือต้องไม่มีผู้ปฏิบัติงาน กฟผ. เข้าไปมีส่วนร่วมในกิจการของผู้เสนอราคา ไม่ว่าจะในฐานะผู้ถือหุ้นที่มีสิทธิควบคุมการจัดการ กรรมการ ผู้อำนวยการ พนักงาน ลูกจ้าง ตัวแทน หรือที่ปรึกษา ยกเว้น ในกรณีที่ผู้ปฏิบัติงานได้รับคำสั่งอย่างเป็นทางการจาก กฟผ. ให้ไปปฏิบัติงานหรือเข้าร่วมในกิจการของผู้เสนอราคา
- ต้องไม่เป็นผู้ได้รับเอกสิทธิ์หรือความคุ้มกัน ซึ่งอาจปฏิเสธไม่ยอมขึ้นศาลไทย เว้นแต่รัฐบาลของผู้เสนอราคาได้มีคำสั่งให้สละสิทธิ์และความคุ้มกันเช่นนั้น
- ผู้ประสงค์เข้าประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม (Joint Venture or Consortium) จะต้องดำเนินการทุกขั้นตอนของการประกวดราคาในนามของกิจการร่วมค้าหรือกิจการค้าร่วม ตั้งแต่การเสนอราคาจนถึงสุดท้ายผูกพันกับ กฟผ.

**การขายเอกสารประกวดราคา**

ผู้สนใจติดต่อซื้อเอกสารประกวดราคา ในราคาชุดละ 300.- บาท ในวันทำการระหว่างเวลา 08:00 น. ถึง 15:00 น. ตั้งแต่วันที่ 27 กุมภาพันธ์ 2569 ถึงวันที่ 10 เมษายน 2569 ทั้งนี้ สามารถดูรายละเอียดการซื้อเอกสารประกวดราคาได้ที่เว็บไซต์ <https://www4.egat.co.th/fprocurement/biddingeng> หรือสอบถามข้อมูลเพิ่มเติมได้ทางโทรศัพท์ หมายเลข 0 2436 0346 หรืออีเมล [procurement.tse@egat.co.th](mailto:procurement.tse@egat.co.th)

**การยื่นซองประกวดราคา**

กำหนดยื่นซองประกวดราคา ในวันที่ 30 เมษายน 2569 เวลา 09:00 น. ถึง 10:00 น. และเปิดซองประกวดราคา เวลา 10:00 น. ณ ห้องประกวดราคา ชั้น 1 อาคาร ท.137 การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย เชียงสะพานพระราม 7 จังหวัดนนทบุรี

ประกาศ ณ วันที่ 27 กุมภาพันธ์ 2569

(นางสาววัลลภา ชีวธนากรณีกุล)

หัวหน้ากองจัดซื้อจัดจ้างสายงานระบบส่ง

ตารางแสดงวงเงินงบประมาณที่ได้รับจัดสรรและราคากลาง(ราคาอ้างอิง)  
ในการจัดซื้อจัดจ้างที่มีใช้งานก่อสร้าง

1. ชื่อโครงการ Bid No. BBS1-DSS-01

การจัดซื้อ Digital Substation Protection and Automation System

ระบบส่งไฟฟ้าสำหรับโครงการโรงไฟฟ้าพลังงานแสงอาทิตย์ทุ่นลอยน้ำ

ร่วมกับโรงไฟฟ้าพลังน้ำเขื่อนภูมิพล ชุดที่ 1

/หน่วยงานเจ้าของโครงการ ฝ่ายแผนงานและโครงการระบบส่ง การไฟฟ้าฝ่ายผลิตแห่งประเทศไทย

2. วงเงินงบประมาณที่ได้รับจัดสรร

ระบบส่งไฟฟ้าสำหรับโครงการโรงไฟฟ้าพลังงานแสงอาทิตย์ทุ่นลอยน้ำ

ร่วมกับโรงไฟฟ้าพลังน้ำเขื่อนภูมิพล ชุดที่ 1 งบประมาณ 1,195.40 ล้านบาท

3. วันที่กำหนดราคากลาง 22 มกราคม 2569 (วันที่ อวส. อนุมัติ )

ราคารวมภาษีมูลค่าเพิ่มเป็นเงิน 57,500,000.00 บาท ราคา/หน่วย ตามเอกสารแนบ

4. แหล่งที่มาของราคากลาง

หลักเกณฑ์การกำหนดราคากลางการจัดซื้อและจัดจ้างงานก่อสร้างระบบส่งไฟฟ้าของสายงานพัฒนาระบบส่ง

5. รายชื่อเจ้าหน้าที่ผู้กำหนดราคากลาง

5.1 นางวาสนา สุวรรณชีวะศิริ นวร-วช. กวป-ร.

5.2 น.ส. สิริภัทร ลักขณากุล หชคป-ร. กวป-ร.

MEDIUM COST FOR BID NO. BBS1-DSS-01

| Schedule | Medium Cost (Round) (THB) |
|----------|---------------------------|
| 1        | 54,300,000                |
| 2        | 3,200,000                 |
| รวม      | 57,500,000                |

\* Include VAT

  
นายสมชัย เจริญศรีเกษม  
ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง  
22 Jan 2026

**MEDIUM COST FOR BID NO. BBS1-DSS-01**  
**SUMMARY OF BID PRICE**  
**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND AUTOMATION SYSTEM**  
**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR HYBRID PROJECT BHUMIBOL DAM UNIT 1**

| No.                                   | Description  | Currency | Supply of Equipment                            | Foreign Currency | Local Currency<br>( excluding VAT )<br>Baht |
|---------------------------------------|--|----------|--|------------------|---|
|                                       |  |          | DDP EGAT 's Store<br>( excluding VAT )<br>Baht |                  |   |
|                                       |  |          | Amount   |                  |   |
| 1                                     | Schedule 1 : 230 kV Digital Substation Protection and Automation Equipment |          | 40,202,101.00                                  |                  | 10,509,075.00                               |
| <b>BID PRICE</b>                      |  |          | <b>Baht</b><br>40,202,101.00                   |                  | <b>Baht</b><br>10,509,075.00                |
| <b>VAT</b>                            |  |          | <b>Baht</b><br>2,814,147.07                    |                  | <b>Baht</b><br>735,635.25                   |
| <b>SUMMARY OF MEDIUM COST</b>         |  |          | <b>Baht</b><br>43,016,248.07                   |                  | <b>Baht</b><br>11,244,710.25                |
| <b>SUMMARY OF MEDIUM COST</b>         |  |          | <b>Baht</b><br>54,260,958.32                   |                  |   |
| <b>SUMMARY OF MEDIUM COST (ROUND)</b> |  |          | <b>Baht</b><br>54,300,000.00                   |                  |   |

  
 นายสมชัย เจริญศรีเกษม  
 ผู้อำนวยการฝ่ายวิศวกรรมระบบส่ง  
 22 Jan 2026

**MEDIUM COST FOR BID NO. BBS1-DSS-01**

**SUMMARY OF BID PRICE**

**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND AUTOMATION SYSTEM**

**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR HYBRID PROJECT BHUMIBOL DAM UNIT 1**

| No.                                   | Description                                | Currency | Supply of Equipment                            | Foreign Currency | Local Currency<br>( excluding VAT )<br>Baht |
|---------------------------------------|--|----------|--|------------------|---|
|                                       |  |          | DDP EGAT 's Store<br>( excluding VAT )<br>Baht |                  |   |
|                                       |  |          | Amount   |                  |   |
| 1                                     | Schedule 2 : 230 kV Fault Recording System |          | 2,603,812.00                                   |                  | 387,500.00                                  |
| <b>BID PRICE</b>                      |  |          | <b>Baht</b><br>2,603,812.00                    |                  | <b>Baht</b><br>387,500.00                   |
| <b>VAT</b>                            |  |          | <b>Baht</b><br>182,266.84                      |                  | <b>Baht</b><br>27,125.00                    |
| <b>SUMMARY OF MEDIUM COST</b>         |  |          | <b>Baht</b><br>2,786,078.84                    |                  | <b>Baht</b><br>414,625.00                   |
| <b>SUMMARY OF MEDIUM COST</b>         |  |          | <b>Baht</b><br>3,200,703.84                    |                  |   |
| <b>SUMMARY OF MEDIUM COST (ROUND)</b> |  |          | <b>Baht</b><br>3,200,000.00                    |                  |   |

  
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22 Jan 2026

**MEDIUM COST FOR BID NO. BBS1-DSS-01**  
**Schedule 1 : 230 kV Digital Substation Protection and Automation Equipment**  
**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND AUTOMATION SYSTEM**  
**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR HYBRID PROJECT BHUMIBOL DAM UNIT 1**

| Item No.                          | Description   | Drawing No. / Reference No.  | Qty. | Unit   | Currency | Supply of Equipment                            |               | Foreign Currency |        | Local Currency                |              |
|-----------------------------------|---|--|------|--------|----------|--|---------------|------------------|--------|-------------------------------|--------------|
|                                   |   |  |      |        |          | DDP EGAT 's Store<br>( excluding VAT )<br>Baht |               | Unit Price       | Amount | Unit Price                    | Amount       |
|                                   |   |  |      |        |          | Unit Price                                     | Amount        |                  |        |                               |              |
| 1-1                               | DSS : Digital Substation System   | - See Bill of Materials Item 1-1<br>- Specification No. 1008<br>- Drawing Nos. BB2-E-1 S<br>H.1/4-4/4, and TP-E-20.3<br>- This item shall be considered<br>as a major equipment. | 1    | SET    |          | 35,926,649.00                                  | 35,926,649.00 | XXXXXX           | XXXXXX | XXXXXX                        | XXXXXX       |
| 1-2                               | DSS : Spare Parts   | - See Bill of Materials Item 1-2<br>- Specification No. 1008<br>- This item shall be considered<br>as a major equipment.   | 1    | SET    |          | 4,275,452.00                                   | 4,275,452.00  | XXXXXX           | XXXXXX | XXXXXX                        | XXXXXX       |
| 1-3                               | Cost of product and software Technical instruction and Hands-on guidance Supervisor for item 1-1 (as per Section F-4.1 a) |  | 5    | Manday |          | XXXXXX   | XXXXXX        |                  |        | 222,000.00                    | 1,110,000.00 |
| 1-4                               | Cost of Technical Advisory online support Supervisor for item 1-1 (as per Section F-4.1 b)                                |  | 1    | Lot    |          | XXXXXX   | XXXXXX        |                  |        | 2,526,000.00                  | 2,526,000.00 |
| 1-5                               | Cost of EGAT-Factory Acceptance Test Supervisor for item 1-1 (as per Section F-4.1 e)                                     |  | 45   | Manday |          | XXXXXX   | XXXXXX        |                  |        | 75,200.00                     | 3,384,000.00 |
| 1-6                               | Cost of Installation Supervisor for item 1-1 (as per Section F-4.2)   |  | 45   | Manday |          | XXXXXX   | XXXXXX        |                  |        | 77,535.00                     | 3,489,075.00 |
| <b>Total Price for Schedule 1</b> |   |  |      |        |          | <b>Baht<br/>40,202,101.00</b>                  |               |                  |        | <b>Baht<br/>10,509,075.00</b> |              |

  
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 22 Jan 2026

**MEDIUM COST FOR BID NO. BBS1-DSS-01**  
**Service of Installation Supervisor (Schedule 1)**  
**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND AUTOMATION SYSTEM**  
**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR HYBRID PROJECT BHUMIBOL DAM UNIT 1**

| Item No. | Description   | Qty.  | Unit   | Currency | Foreign Currency |        | Local Currency<br>( excluding VAT )<br>Baht |              |
|----------|---|-------|--------|----------|------------------|--------|---|--------------|
|          |   |       |        |          | Unit Price       | Amount | Unit Price                                  | Amount       |
| 1-3      | Cost of product and software Technical instruction and Hands-on guidance Supervisor for item 1-1 (as per Section F-4.1 a) | 5.00  | Manday |          |                  |        | 222,000.00                                  | 1,110,000.00 |
| 1-4      | Cost of Technical Advisory online support Supervisor for item 1-1 (as per Section F-4.1 b)                                | 1.00  | Lot    |          |                  |        | 2,526,000.00                                | 2,526,000.00 |
| 1-5      | Cost of EGAT-Factory Acceptance Test Supervisor for item 1-1 (as per Section F-4.1 e)                                     | 45.00 | Manday |          |                  |        | 75,200.00                                   | 3,384,000.00 |
| 1-6      | Cost of Installation Supervisor for item 1-1 (as per Section F-4.2)   | 45.00 | Manday |          |                  |        | 77,535.00                                   | 3,489,075.00 |

Note:

1. The total man-days for supervisor shall be the number of days for all complete the activities specified in item 1-3 thru 1-6.
2. In addition to the 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 total man-days, the payment shall be on the basis of actual man-days.
5. For man-days exceeding the total amount, no payment shall be made by EGAT. Any such additional man-days approved by EGAT shall be paid on the man-days rate.

  
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 22 Jan 2026

**MEDIUM COST FOR BID NO. BBS1-DSS-01**  
**Schedule 2 : 230 kV Fault Recording System**  
**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND AUTOMATION SYSTEM**  
**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR HYBRID PROJECT BHUMIBOL DAM UNIT 1**

| Item No.                          | Description   | Drawing No. / Reference No.  | Qty. | Unit   | Currency | Supply of Equipment                            |                     | Foreign Currency |        | Local Currency |                   |
|-----------------------------------|---|--|------|--------|----------|--|---------------------|------------------|--------|----------------|-------------------|
|                                   |   |  |      |        |          | DDP EGAT 's Store<br>( excluding VAT )<br>Baht |                     | Unit Price       | Amount | Unit Price     | Amount            |
|                                   |   |  |      |        |          | Unit Price                                     | Amount              |                  |        |                |                   |
| 2-1                               | DSS : Fault Recording System  | - See Bill of Materials Item 2-1<br>- Specification No. 1008<br>- Drawing Nos. BB2-E-1<br>SH.1/4-4/4<br>- This item shall be considered as a major equipment.              | 1    | SET    |          | 2,045,137.00                                   | 2,045,137.00        | XXXXXX           | XXXXXX | XXXXXX         | XXXXXX            |
| 2-2                               | DSS : Spare Parts for Fault Recording System  | -Spare DFR equipment is same ordering number as supplied in Bill of Materials Item 2-1<br>-Specification No. 1008<br>- This item shall be considered as a major equipment. | 1    | EA     |          | 558,675.00                                     | 558,675.00          | XXXXXX           | XXXXXX | XXXXXX         | XXXXXX            |
| 2-3                               | Cost of product and software Technical instruction and Hands-on guidance Supervisor for item 2-1 (as per Section F-4.1 a) |  | 5.00 | Manday |          | XXXXXX   | XXXXXX              |                  |        | 25,000.00      | 125,000.00        |
| 2-4                               | Cost of EGAT-Factory Acceptance Test Supervisor for item 2-1 (as per Section F-4.1 e)                                     |  | 5.00 | Manday |          | XXXXXX   | XXXXXX              |                  |        | 25,000.00      | 125,000.00        |
| 2-5                               | Cost of Installation Supervisor for item 2-1 (as per Section F-4.2)   |  | 5.00 | Manday |          | XXXXXX   | XXXXXX              |                  |        | 27,500.00      | 137,500.00        |
| <b>Total Price for Schedule 2</b> |   |  |      |        |          | <b>Baht</b>                                    | <b>2,603,812.00</b> |                  |        | <b>Baht</b>    | <b>387,500.00</b> |



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 22 Jan 2026

**MEDIUM COST FOR BID NO. BBS1-DSS-01**  
**Service of Installation Supervisor (Schedule 2)**  
**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND AUTOMATION SYSTEM**  
**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR HYBRID PROJECT BHUMIBOL DAM UNIT 1**

| Item No. | Description   | Qty. | Unit   | Currency | Foreign Currency |        | Local Currency<br>( excluding VAT )<br>Baht |            |
|----------|---|------|--------|----------|------------------|--------|---|------------|
|          |   |      |        |          | Unit Price       | Amount | Unit Price                                  | Amount     |
| 2-3      | Cost of product and software Technical instruction and Hands-on guidance Supervisor for item 2-1 (as per Section F-4.1 a) | 5.00 | Manday |          |                  |        | 25,000.00                                   | 125,000.00 |
| 2-4      | Cost of EGAT-Factory Acceptance Test Supervisor for item 2-1 (as per Section F-4.1 e)                                     | 5.00 | Manday |          |                  |        | 25,000.00                                   | 125,000.00 |
| 2-5      | Cost of Installation Supervisor for item 2-1 (as per Section F-4.2)   | 5.00 | Manday |          |                  |        | 27,500.00                                   | 137,500.00 |

Note:

1. The total man-days for supervisor shall be the number of days for all complete the activities specified in item 2-3 thru 2-5.
2. In addition to the 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 total man-days, the payment shall be on the basis of actual man-days.
5. For man-days exceeding the total amount, no payment shall be made by EGAT. Any such additional man-days approved by EGAT shall be paid on the man-days rate.



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22 Jan 2026

**Important Information**  
**for**  
**Invitation to Bid No. BBS1-DSS-01**

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The purpose of this section is to inform the Bidders to **carefully study** the details of the revised terms and conditions in the bidding documents. The following provisions have been **recently revised** as stated hereunder:

**Article A-5. Preparation and Delivery of Bids and Article B-1. Preparation of Bids**

Details on how to prepare the proposal have been revised. Bids shall be prepared in accordance with the Instructions to Bidders contained in the Bidding Documents in one (1) original hard copy and one (1) electronic copy contained in USB flash drive.

**Article A-5. Preparation and Delivery of Bids**

Details of bid opening time and place shall be specified in the Tentative Schedule.

**Article A-6. Availability of Bidding Documents**

Availability of Bidding Documents has been changed from CD-ROM to electronic files for download via link provided by EGAT.

**Channel of Documents Submission**

For channel of document submission in the hereunder Articles, facsimile and telex has been replaced with letters submitted electronically or electronic mails (E-mails).

- Article B-1. Preparation of Bids
- Article B-4. Validity of Bids
- Article D-9. Notices
- Article F-8. Payment

**Article E-14. Preparation for Delivery**

The Instructions for Packaging attached at the end of Section E. General Conditions has been revised in item 8. Shunt Capacitor Bank.

**Article E-15. Shipment**

The Maritime Promotion Bureau has been updated to the Maritime Promotion Division and its contact information has also been updated.

**Article F-8. Payment**

After each payment is made, the Contractor or beneficiary shall issue and submit the receipt to EGAT as detailed in the paragraph added at the end of this article.

# DATA SHEET

for

## Invitation to Bid No. BBS1-DSS-01

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This section consists of provisions that are specific to each procurement and supplement the information or requirements included in bidding documents.

### **Article A-1. Invitation**

Insert the following as the second and third paragraphs of this article respectively:

“ The Letter of Award of Contract to be issued to the successful Bidder will be made after EGAT obtains the Project approval from the Government of Thailand, and the approval for Project implementation from the Government’s authority and/or other related entities as required (if any) by Thai laws.

Unless EGAT gets approval as such, the Project and the work under this invitation has to be cancelled. In the event such cancellation is required, all costs incurred by the Bidder in purchasing documents and preparing his bid shall be at his own account and will not be reimbursed by EGAT.”

### **Article B-3. Bid Security**

#### Schedule 1

The amount of bid security shall be THB 3,315,000.-.

#### Schedule 2

The amount of bid security shall be THB 177,500.-.

### **Article B-4. Validity of Bids**

The validity of the bid shall be for one hundred and fifty (150) Days from the date specified for opening of bid.

### **Article B-12. Evaluation and Comparison of Bids:**

The evaluation of bid prices shall be on schedule basis.

**Article E-27. Failure to Meet Requirements and F-10. Maintenance Guarantee**

The contract conditions shall be revised as follows:

EGAT shall have the right to require the Contractor to make any changes in the Equipment or Work covered by this Contract, which may be necessary in the opinion of EGAT, to make the Equipment or Work conform to the requirements of the Contract Documents, without additional cost to EGAT. Any defects in the Equipment or workmanship or other failure, to meet the requirements of the Contract, including errors and omissions on the part of the Contractor, which are disclosed prior to final payment or prior to acceptance by EGAT, or after completion of all tests, whichever occurs at the later date, shall, if so directed by EGAT, be corrected or replaced promptly by the Contractor at the expense of the Contractor.

Any latent defects not disclosed prior to the date of final payment or prior to acceptance or after completion of all tests, whichever occurs at the later date, but disclosed within the guarantee period as specified in Article F-10.a., shall be corrected or replaced promptly by the Contractor at the expense of the Contractor, except that the cost of installation for the replacement parts of the Equipment will be borne by EGAT.

The Contractor shall extend the provisions of his liability to cover all repair and replacement parts furnished under this Article as follows:

(1) All Equipment except Control and Protection Equipment and Fault Recording System

- Any malfunctioning and/or defect found within the guarantee period : For a new period of one (1) Year from the day immediately following the date of completion of such repair or replacement

(2) Control and Protection Equipment and Fault Recording System, *as well as Digital Substation Protection and Automation System*

- Any malfunctioning and/or defect found within the first Year of guarantee period : For a new period of two (2) Years from the day immediately following the date of completion of such repair or replacement
- Any malfunctioning and/or defect found within the second Year of guarantee period : For a new period of one (1) Year from the day immediately following the date of completion of such repair or replacement

The Contractor shall, if required by EGAT in writing, search under the directions of EGAT for the cause of any defect, imperfection or fault appearing prior to the acceptance of Equipment or in the period of maintenance guarantee. Unless such defect, imperfection or fault shall be one for which the Contractor is liable under the Contract, the cost of the work carried out by the Contractor in searching as aforesaid shall be borne by EGAT. If such defect, imperfection or fault shall be one for which the Contractor is liable under the Contract, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case repair, rectify and make good such defect, imperfection or fault at his own expense.

#### **Article \*F-4. Supervision of Installation**

The article shall be revised as follows:

##### ***F-4. Supervision***

*The Supervisor assigned to each item as specified in the Price Schedule: Service of Supervisor (Schedule 1) may be the same or different personnel. However, for each specific item, only one (1) Supervisor shall be assigned and shall remain the same personnel, in order to ensure work continuity and prevent disruption. In the event of an accident or force majeure, the Contractor shall notify EGAT within the same day and shall assign a replacement Supervisor within three (3) Days upon EGAT approval. The profile of the replacement Supervisor shall be submitted to EGAT in advance for review and acceptance.*

##### ***F-4.1 Supervision of Configuration and EGAT-Factory Acceptance Test (E-FAT)***

Subject to the desire and decision of EGAT, the Contractor may be required to furnish the services of qualified and experienced supervisor(s) who has at least three years experience on the particular Work required under the Contract and shall be the permanent employee of the manufacturer of the Equipment. *For works related to 230kV (or lower) Digital Substation Configuration, IEC 61850-based Protection and Control Systems, and Substation Automation Systems, the permanent employee of the representative of the manufacturer is acceptable refer to Manufacturers and Representatives for Protective Relay list Jan 2023*, provided that such employee is certified by the manufacturer. Unless otherwise specified, the Contractor shall provide a sufficient number of personnel with the necessary skills to perform the work under this Contract, in accordance with the requirements specified in the Price Schedule and Delivery Schedule

The scope of responsibility of the supervisor on behalf of the Contractor is as follows:

- a. *The Contractor shall be responsible for providing an on-site complete product and software Technical instruction and Hands-on guidance (if necessary) of the configuration process and the functionality of the proposed product(s) to be used under this Contract. The description shall include, but not be limited to, the following:*
  1. *Digital substation network configuration, monitoring systems, and product technical related knowledge.*
  2. *Hardware maintenance, troubleshooting, and system recovery procedures*
  3. *Initial software installation, software configuration, system programming, and maintenance practices.*
  4. *Provide training and necessary knowledge related to test tools, test software, and testing procedures to support EGAT in performing system verification and testing activities.*
- b. *Provide Technical Advisory online support for enquiry and technical clarification after completion of the F-4.1 a. activity until thirty (30) Days after the completion of the EGAT-Factory Acceptance Test (hereinafter called "E-FAT") but not later than the tenth (10<sup>th</sup>) Months after Technical instruction, to ensure that EGAT personnel receive adequate real-time technical guidance. The support shall be available during normal Working Days, (Monday to Friday) from 08.00 to 17.00 UTC+7 (for Foreign supervisor, the time can be adjusted base on both party time zone), with reasonable advance notice in case of Online meeting needed.*
- c. *Supervisor shall Prepare and submit to EGAT a detailed product and software description, which shall include the following:*
  1. *Instruction schedule indicating duration of each session*
  2. *List of topics and time allocations*
  3. *Names, qualifications profile, and experience of the assigned instructors*
  4. *Requirements for classroom space, equipment, and other necessary facilities*

- d. Upon completion of the network configuration, the Supervisor shall provide a test procedure of their product and/or software, along with a verification method or solution to demonstrate that the configuration has been correctly implemented.*
- e. During E-FAT stage, supervisor shall supervise and provide technical advice during the E-FAT.*
- f. All costs related to the on-site and Technical Advisory online support, including instructor fees, materials, and supporting services, shall be deemed included in the Bid Price.*

#### ***F-4.2 Supervision of installation and Site Acceptance test***

Subject to the desire and decision of EGAT, the Contractor may be required to furnish the services of qualified and experienced supervisor(s) who has at least three years experience on the particular Work required under the Contract and shall be the permanent employee of the manufacturer of the Equipment. ***For 230 kV (or lower) Control and Protection related***, the permanent employee of the representative of the manufacturer is acceptable, provided that such employee is certified by the manufacturer. Unless otherwise specified, the Contractor shall provide a sufficient number of personnel with the necessary skills to perform the work under this Contract, in accordance with the requirements specified in the Price Schedule and Delivery Schedule.

The scope of responsibility of the supervisor on behalf of the Contractor is as follows :

- a. Supervise and be responsible for the start-up, field test and commissioning of the Equipment.
- b. Prepare formulation sheets for a check list, test sheet, release form and field report to be discussed with EGAT before performing the installation work.
- c. Submit one copy of report summarizing the work performance, from the beginning to the completion of the supervisory period, to EGAT within fifteen (15) days after finish the installation work or final inspection. The report shall include the following:
  - 1. Note on pending matter i.e. faulty and omitted equipment, performance deficiency etc.

2. Problem concerning installation performance.
3. Photographs showing progress of the installation work periodically until the work is completed.

*d. During SAT stage, supervisor shall supervise and provide technical advice during the SAT. The actual testing shall be performed by EGAT.*

The Contractor shall, in each and every instance, cooperate fully with the construction personnel installing and/or operating the Equipment and the Work, the operations of the supervisor shall be coordinated with the program of construction at the site as directed by EGAT.

The supervisor shall report at EGAT in Nonthaburi, Thailand, on the date designated by EGAT after a reasonable advance notice from EGAT, and shall remain until the Equipment have been in satisfactory operation for at least ten (10) working days as determined by EGAT, unless released earlier by EGAT.

The installation supervisor must be able to understand, speak, read and write the English language fluently. Should an interpreter be necessary, the cost of such interpretation service shall be at the Contractor's expense.

\*If installation supervisor is required as specified in Price Schedule, this provision shall apply to this Contract.

## **Article F-8. Payment**

Payment for Equipment shall be revised as follows :

### **Payment for Equipment**

Payment in local currency will be made directly by EGAT in the following manner:

1. Eighty (80) per cent of the Contract price will be paid on the basis of pro rata value of each delivery against presentation of the Contractor's statement or delivery order confirming the delivery of Equipment at EGAT's store duly certified by EGAT's representative\*, EGAT's letters of approval for delivery, EGAT's letter of approval for test report\*\* of the relevant Equipment including EGAT's letter(s) of approval for final drawings only for Control and Protection Equipment and Fault Recording System, *as well as Digital Substation Protection and Automation System.*

\*EGAT's representative means the authorized EGAT's Store personnel to verify the quantity of Equipment according to the packing list to be delivered to the Site.

\*\*Test report means the report of tests specified in Article E-13. Inspection and Tests.

2. Ten (10) per cent of the Contract Price of each Schedule will be paid against presentation of Drawing and Document Acceptance Certificate to be issued by EGAT to certify the receipt of all drawings and documents required from the Contractor under Article F-11. Drawings and Documents to be Furnished by Contractor for such schedule, provided that payment shall not be made until EGAT has received from the Contractor the statement or delivery order and appertaining documents giving evidence of delivery of the main Equipment of that Schedule.
3. Ten (10) per cent of the Contract Price of each Schedule will be paid after the Equipment have been installed, tested and operated or used for a period of 30 Days and the acceptance of the said Equipment has been made by EGAT against presentation of Acceptance Certificate to be issued by EGAT and submission of maintenance security by the Contractor. EGAT will list the minor pending claim(s), if any, and payment will be made by deducting such claimed amount.

However, if, through no fault of the Contractor or of the Equipment, such installation, test and operation or use of the Equipment are delayed beyond a period of six (6) Months after complete delivery at EGAT's store; payment of this ten (10) per cent will be made as soon as possible but not later than the ninth (9<sup>th</sup>) Month after complete delivery and it shall be deemed as if acceptance of Equipment is made by EGAT at the end of the said sixth (6<sup>th</sup>) Month and the guarantee period shall start therefrom against submission of maintenance security by the Contractor.

In case there is some minor claim(s) or minor fault of the Contractor, the payment of this ten (10) per cent shall be made by deducting such claimed amount and the guarantee period of this part will start after such minor claim(s) has been settled by the Contractor and acceptance of which has been made by EGAT.

#### Payment for Service

Payment in foreign currency will be made in the currency or currencies in which the price has been stated in the price schedules. The Contractor has to inform EGAT the mode of payment he requires for payment for foreign currency portion together with detail of bank account No., beneficiary's name and address etc.

In case the local Contractor requires foreign currency or currencies to be paid directly to him, payment of such foreign currency or currencies will be made to the local Contractor in Thai baht by using the selling exchange rate published by the Bank of Thailand on the payment date.

In case the Contractor requires the payment of foreign currency portion to be made through letter of credit, EGAT will, if there is no fault or any delay caused by the Contractor, establish the letter of credit in the name of the Contractor or Suppliers not later than thirty (30) Days after signing the Contract. The Contractor shall be responsible for all bank charges inside and outside Thailand and including opening, amendment, reimbursing charges, payment commission, cable charges, discrepancy fee, acceptance commission and others (if any) arising from Letter of Credit.

Payment in local currency will be made directly by EGAT.

The Contractor or beneficiary has to inform EGAT by mailed letter or *letter submitted electronically or by electronic mail (E-mail)* immediately the date upon which he has received the original letter of credit *to be* opened in his favour.

Payment for the services of supervisor will be made within thirty (30) Days after his release by EGAT. Payment will be made on the basis of actual working man-days at the quoted cost per man-day up to a maximum equal to the total man-days quoted. For man-days exceeding the quoted total man-days, no payment shall be made by EGAT unless the Contractor can claim for any delays in the progress of the work caused by EGAT. Any such additional man-days approved by EGAT shall be paid on the basis of the quoted man-day rate.

***Payment for Technical advisory online as specified in the Price Schedule: Service of Supervisor in item 1-4 will be made within thirty (30) Days after the completion of work and satisfied by EGAT. The Payment will be made on the basis of Lump sum price.***

The number of quoted man-days shall include Sundays and shall cover a seven (7) day workweek, if required by the construction program. The working hours shall be forty-eight (48) hours per week, eight (8) hours per day, the working hours over 8 hours per day if requested by EGAT will be counted as overtime at 1½ times the regular hourly rate.

The amount to be paid for each Day for the services of the supervisor shall include for all salary, subsistence expense, insurance, compensations and personal expense of the supervisor, and all liabilities and responsibilities thereto.

EGAT will pay for round-trip economy class air transportation for the installation supervisor between the Contractor's home office and Bangkok by the most expeditious and direct route on trip basis by draft after receipt of the Contractor's invoice supported with the used air ticket of such supervisor. The remission of immigration fees and taxes collectible by the Kingdom of Thailand shall not be paid by EGAT, as described in Article E-11. Fees and Duties.”

*After each payment is made, the Contractor or beneficiary shall issue and submit the receipt to EGAT at e-mail : FFMS@egat.co.th within three (3) calendar days upon receipt of such payment. The details of receipt shall include but not be limited to the following:*

- *Company name and address*
- *The receipt date of payment*
- *Lists of Goods/Services the payment is made for*
- *Payment amount in numbers and in words*
- *Recipient signature*

#### **Article F-9. Liquidated Damages for Late Delivery of Equipment**

The Liquidated Damages shall be at the rate of one-tenth of one (0.10) per cent of the price of each complete Schedule of Equipment not timely delivered for each Day of delay. This sum is payable regardless of the actual loss and/or damages incurred.

**INVITATION TO BID NO. BBS1-DSS-01**

**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND  
AUTOMATION SYSTEM**

**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR  
HYBRID PROJECT BHUMIBOL DAM UNIT 1**

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**A-1. Invitation**

The Electricity Generating Authority of Thailand (EGAT) hereby invites sealed bids for furnishing and delivering of Digital Substation Protection and Automation System under Transmission System for Hydro-Floating Solar Hybrid Project Bhumibol Dam Unit 1 hereinafter called Equipment in accordance with the terms, conditions and Specifications described in these Bidding Documents.

**A-2. Eligibility of Bidders: General Requirements**

All Bidders shall meet the following requirements; failure to so comply shall constitute sufficient ground for rejection.

- a. The Bidder shall be a partnership, firm or company, either alone or in joint venture or in consortium.
- b. The Bidder must have purchased the bidding documents from EGAT. For a joint venture or a consortium, only one (1) member of the joint venture or consortium is required to purchase the bidding documents.

In case the Bidder's name is not exactly the same as the purchaser's name, the purchaser shall notify EGAT of the name of the Bidder in writing prior to the bid opening time.

- c. The Bidder shall be well-established and maintain a permanent place of business. For a joint venture or consortium, all members of the joint venture or consortium are required to meet this qualification.
- d. The Bidder shall not be named in the List of Work Abandoners published by the Permanent Secretary, Ministry of Finance, and/or in the Debarment List and/or in the List of Work Abandoners declared by EGAT.

- e. For the Bidder who changes name before submitting the bid, his experience records in previous name shall be considered as the experience records of the Bidder.
- f. The Bidder shall not be a Jointly Interested Bidder with other Bidders as from the date of EGAT's issuance of this invitation to bid, or shall not be a person who undertakes any action as an "Obstruction of Fair Price Competition" as defined in Additional Regulation for this invitation.
- g. The Bidder shall not either be EGAT's consultant or involve in EGAT's consultancy company under this invitation, or have EGAT's personnel involved in his business as shareholder having voting right that can control his business, director, manager, officer, employee, agent or consultant except the ones who are officially ordered by EGAT to act or participate therein.
- h. The Bidder shall not be the person who is privileged or protected not to be taken any legal proceeding under Thai court; provided that such Bidder's government declares that such special privilege is waived.
- i. In case of a joint venture or consortium, the Bidder shall carry out all the provision of the Equipment and all Work under such formation from the time of bidding until the fulfillment of the Contract and the parties to the joint venture or the consortium shall accept joint and several liability for performing all obligations under the bid and the Contract.
- j. The Bidder shall not propose to supply the Equipment from the country under the state of war whether declared or not.
- k. The Bidder shall have adequate fund to meet financial obligations incidental to this Contract.
- l. The Bidder shall submit documentary evidence established in accordance with Article B-8. Information to be Submitted with Bid to demonstrate the Bidder's sufficient eligibility to bid and qualification to perform the Contract.

**A-3. Eligibility of Bidders: Technical Requirements**

- I. All Bidders shall meet the following requirements; failure to so comply shall constitute sufficient ground for rejection.**
  - a. The Bidder shall manufacture or supply the Equipment or Work as required under this invitation to bid.

- b. If the Bidder is a new company formed by acquisition of or merger with other companies or business units before submitting the Bid, the experience records of any of such previous companies or business units that meet the requirements set forth herein are acceptable as the experience records of the Bidder.

Reference records of either the parent or affiliated companies shall not be considered as the record of such Bidder.

- c. The Bidder shall have no just or proper claims pending against him with respect to breach in the performance of Contract on other similar works awarded by EGAT.

If the Bidder is a new company formed by acquisition of or merger with other companies or business units, the pending claim of any of such previous companies or business units shall be considered as pending claim of the Bidder.

- d. The Bidder shall have sufficient capacity to carry out the Work.
- e. The Bidder shall propose the Equipment/Works which are manufactured/performed by the qualified manufacturers who shall fulfill the following requirements:

1. Being well-established and maintaining a permanent place of business.
2. Regular manufacturing of the Equipment of the type and similar rating proposed.
3. The manufacturer shall have the experience records that meet the requirements set forth herein.

If the manufacturer is a new company formed by acquisition of or merger with other companies or business units, and any of such previous companies or other business units has the experience records that meet the requirements set forth herein, such experience records are acceptable as the experience records of the new company. However, each Equipment/service to be supplied/performed under this Bid shall be manufactured/provided from the same source of supply and be the same company respectively as indicated in each of such relevant experience records as described in Item I.e.5 thru I.e.11 below. Otherwise, it shall not be acceptable and shall be sufficient grounds for rejection.

For the avoidance of doubt, it is not allowed to combine the experience records of the previous companies or business units in order to meet the experience requirements.

Reference records of either parent or affiliated companies shall not be considered as the records of such manufacturer.

4. The manufacturer shall have no just or proper claims pending against Equipment on other similar works.

In case the manufacturer is a new company formed by acquisition of or merger with other companies or business units, the pending claim of any of such previous companies or business units shall be considered as pending claim of the manufacturer.

5. For 230 kV Control and Protection Panel and below, having the following qualifications:

- 5.1 Being local manufacturer.

- 5.2 Having one of the following qualifications:

- 5.2.1 Having a letter of acceptance for manufacturing of Control and Protection Boards and/or fabrication of the specific Equipment issued by EGAT within the scope specified therein.

OR

- 5.2.2 Being listed in EGAT ACCEPTED MANUFACTURER LIST FOR CONTROL AND PROTECTION PANEL (LOCAL MANUFACTURER) attached at the end of Section A. Invitation to Bid.

The design of Equipment layout shall be performed by the manufacturer of control and protection panel under the Substation Control and Protection System Integrator's supervision. However, the design and engineering of the complete substation protection and automation system shall be performed by the Substation Control and Protection System Integrator.

6. For Substation Control and Protection System Integrator, having one of the following qualifications:

- 6.1 Having successful experience in EGAT's digital substation.

OR

- 6.2 Having at least two (2) records of practical experience on design and implementation of an IEC 61850 based control and protection system of a complete conventional or GIS with 110 kV or above digital substation (both station bus and process bus) with at least two (2) consecutive years of successful operation in overseas utilities (not his own country).

7. The proposed protective relays shall be the products from the manufacturers as listed in EGAT ACCEPTED MANUFACTURER LIST FOR PROTECTIVE RELAY attached at the end of Section A. Invitation to Bid and shall be in compliance with the details specified in EGAT's Specifications. Type/Model of the proposed protective relays shall be as specified in EGAT ACCEPTED MULTIFUNCTION RELAY LIST attached at the end of Section A. Invitation to Bid.

8. For Fault Recording System (FRS).
- 8.1 Having one of the following qualifications:
- 8.1.1 The cabinet and all Equipment are completely wired by the FRS manufacturer before shipping to Thailand.
- OR
- 8.1.2 The cabinet and the Equipment are wired in Thailand by the local cabinet manufacturer who has one of the following qualifications:
- 8.1.2.1 Having a letter of acceptance for manufacturing of Control and Protection Boards and/or fabrication of the specific Equipment issued by EGAT within the scope specified therein.
- OR
- 8.1.2.2 Being listed in EGAT ACCEPTED MANUFACTURER LIST FOR CONTROL AND PROTECTION PANEL (LOCAL MANUFACTURER) attached at the end of Section A. Invitation to Bid.

The design and engineering shall be performed by the FRS manufacturer. The assembly, factory test and commissioning shall be in accordance with the FRS manufacturer's standard and shall be performed under the FRS manufacturer's supervisor.

- 8.2 The proposed FRS shall be the product from the manufacturers as listed in EGAT ACCEPTED MANUFACTURER LIST FOR FAULT RECORDING SYSTEM attached at the end of Section A. Invitation to Bid and shall be in compliance with the details specified in EGAT's Specifications. Type/model of the proposed FRS shall be as specified in EGAT ACCEPTED FAULT RECORDING SYSTEM LIST attached at the end of section A. Invitation to Bid.
9. For supervisory software of IEC 61850 based substation control and protection system:
- Having at least one (1) supply record of implementing supervisory software in IEC 61850 based substation control and protection system which comprises at least two (2) manufacturers of protective Intelligent Electronic Device (IED) with successful operation and use of at least one (1) year.
10. For Merging Unit (MU), having one of the following qualifications:

10.1 Proposing the MU of the type and rating which has already been successfully operated in EGAT's digital substation.

OR

10.2 Proposing the MU from the manufacturers as listed in EGAT ACCEPTED MANUFACTURER LIST FOR PROTECTIVE RELAY (regardless of country) attached at the end of Section A. Invitation to Bid and shall be in compliance with the details specified in EGAT's Specifications.

AND

Having supply records of at least three (3) digital substations (both station bus and process bus) of the type proposed with at least three (3) consecutive years of successful operation at nominal system voltage of 110 kV or above in overseas utilities and/or overseas power generations with total installed capacity of at least 1000 MW (not his own country).

In case of the newly developed or modified type of MU, the detailed information of the development or modification shall be submitted with supply records of at least three (3) digital substations (both station bus and process bus) of the type proposed with at least one (1) consecutive year of successful operation at nominal system voltage of 110 kV or above in overseas utilities and/or overseas power generations with total installed capacity of at least 1000 MW (not his own country). EGAT, however, reserves the right and will make its own judgment whether or not to consider or accept the proposed developed or modified type.

11. For Bay Control Unit (BCU), having one of the following qualifications:

11.1 Proposing the BCU of the type and rating which has already been successfully operated in EGAT's digital substation.

OR

11.2 Proposing the BCU from the manufacturers as listed in EGAT ACCEPTED MANUFACTURER LIST FOR PROTECTIVE RELAY (regardless of country) attached at the end of Section A. Invitation to Bid and shall be in compliance with the details specified in EGAT's Specifications.

AND

Having supply records of at least three (3) digital substations (both station bus and process bus) of the type proposed with at least three (3) consecutive years of successful operation at nominal system voltage of 110 kV or above in overseas utilities and/or overseas power generations with total installed capacity of at least 1000 MW (not his own country).

In case of the newly developed or modified type of BCU, the detailed information of the development or modification shall be submitted with supply records of at least three (3) digital substations (both station bus and process bus) of the type proposed with at least one (1) consecutive year of successful operation at nominal system voltage of 110 kV or above in overseas utilities and/or overseas power generations with total installed capacity of at least 1000 MW (not his own country). EGAT, however, reserves the right and will make its own judgment whether or not to consider or accept the proposed developed or modified type.

**A-4. Joint Venture or Consortium**

In the event that the successful Bidder is a joint venture or a consortium formed of two or more companies, EGAT requires that the parties to the joint venture or the consortium accept joint and several liability for all obligations under the Contract.

**A-5. Preparation and Delivery of Bids**

Bids shall be prepared in accordance with the Instructions to Bidders contained in the Bidding Documents in one (1) original *hard copy and one (1) electronic copy contained in USB flash drive*, in English, on the bid forms included for this purpose and shall be accompanied with a bid security as required under Article B-3. Bid Security in a separate sealed envelope.

*For preparation of original hard copy, each page of the original hard copy shall be marked with the volume number and the page number in the lower right-hand corner, for example, Volume 1 of 10 and Page 1 of 100.*

*For preparation of electronic copy, each volume of the signed original hard copy shall be scanned into one (1) PDF file and each PDF file shall be named according to the volume number.*

*The USB flash drive shall contain electronic files of the proposal in the following formats :-*

- PDF files of all pages of each volume of the proposal, and*
- Excel files of filled-in Proposal Data, and*
- Excel files of filled-in Price Schedule*

***In the event of any discrepancy between the original hard copy and the electronic file(s), the original hard copy shall govern.***

The envelope of the bids will be marked in capital letters in the lower left-hand corner as follows :

**INVITATION TO BID NO. BBS1-DSS-01**

**SUPPLY OF DIGITAL SUBSTATION PROTECTION AND  
AUTOMATION SYSTEM**

**TRANSMISSION SYSTEM FOR HYDRO-FLOATING SOLAR  
HYBRID PROJECT BHUMIBOL DAM UNIT 1**

and shall be addressed and delivered to *EGAT* on or before 10:00 a.m., Bangkok Standard Time, *...see Tentative Schedule.....*

If the envelope(s) is not sealed, marked and addressed as required above, EGAT will assume no responsibility for the bid misplacement or premature opening.

Bids will be opened publicly at the *place and* time specified *in Tentative Schedule.*

Bids received after the time stipulated herein shall be rejected and returned unopened.

**A-6. Availability of Bidding Documents**

The Bidding Documents are available for examination *and online purchase at <http://www4.egat.co.th/fprocurement/biddingeng/>* and can be obtained *by downloading via link provided by EGAT* upon payment to EGAT, non-refundable, in the amount of USD *.....* or Baht *..300.-.* These prices include the value added tax.

EGAT ACCEPTED FAULT RECORDING SYSTEM LIST

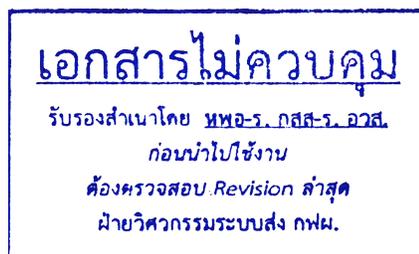
| Accepted Type  | Manufacturer    |
|----------------|-----------------|
| IDM+           | Qualitrol       |
| M871           | GE              |
| 7KE85 (*)      | Siemens         |
| TESLA 4000 (*) | ERL Phase       |
| TR 2100        | Rochester (RIS) |
| TR 3000 (**)   |                 |

Remarks

- (\*) Applicable to IEC 61850 for both station bus and process bus with the certification issued by the third party laboratory and specifying that the said FRS conforms to "IEC 61850 edition 2 parts 6, 7-1, 7-2, 7-3, 7-4, and 8-1".
- (\*\*) Applicable to IEC 61850 only for station bus with the certification issued by the third party laboratory and specifying that the said FRS conforms to "IEC 61850 edition 2 parts 6, 7-1, 7-2, 7-3, 7-4, and 8-1".

Notes

- The procedures for being listed in EGAT ACCEPTED FAULT RECORDING SYSTEM LIST are specified in the EGAT's Pre-Qualification (PQ) process, of which the details can be provided by Transmission System Engineering Division on request.
- If any types of FRS in the list are planned to discontinue the manufacturing, the manufacturer or the representative is responsible for informing EGAT at least 1 year before the unavailable date.

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EGAT ACCEPTED MANUFACTURER LIST FOR  
CONTROL AND PROTECTION PANEL (LOCAL MANUFACTURER)

| Description                                   | Manufacturer                         | Designed by                          |
|---|--------------------------------------|--------------------------------------|
| 500 kV Control and Protection Panel           | Hitachi Energy (Thailand) Limited    | Hitachi Energy (Thailand) Limited    |
|   | Precise System and Project Co., Ltd. | Precise System and Project Co., Ltd. |
|   | U-tah Industry Limited Partnership   | U-tah Industry Limited Partnership   |
|   | SCI Electric Public Company Limited  | Siemens Limited                      |
| 230 kV and below Control and Protection Panel | Hitachi Energy (Thailand) Limited    | Hitachi Energy (Thailand) Limited    |
|   | C&T Metal Products Co., Ltd.         | Easun Reyrolle Limited, India        |
|   | Precise System and Project Co., Ltd. | Precise System and Project Co., Ltd. |
|   | U-tah Industry Limited Partnership   | U-tah Industry Limited Partnership   |
|   | SCI Electric Public Company Limited  | SCI Electric Public Company Limited  |
|   | Timpano Electrical Co., Ltd.         | Timpano Electrical Co., Ltd.         |
|   | Mantra Switchgear Co., Ltd.          | Siemens Limited                      |

Notes

- The procedures for being listed in EGAT ACCEPTED MANUFACTURER LIST FOR CONTROL AND PROTECTION PANEL (LOCAL MANUFACTURER) can be provided by Transmission System Planning and Project Division on request.
- The control and protection panel shall be manufactured and designed by the manufacturer/company written in the same row.



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EGAT ACCEPTED MANUFACTURER LIST FOR FAULT RECORDING SYSTEM

| Description            | Manufacturer / Country |
|------------------------|------------------------|
| Fault Recording System | Qualitrol / UK         |
|                        | Siemens / Germany      |
|                        | Rochester / USA        |
|                        | GE / USA               |
|                        | ERL Phase / Canada     |

Bid No. BBS1-DSS-01

**เอกสารไม่ควบคุม**  
รับรองสำเนาโดย ทพอ.ร. กสส.ร. อวส.  
ก่อนนำไปใช้งาน  
ต้องตรวจสอบ Revision ล่าสุด  
ฝ่ายวิศวกรรมระบบส่ง กฟผ.

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EGAT ACCEPTED MANUFACTURER LIST FOR PROTECTIVE RELAY

| Description      | Manufacturer / Country          |
|------------------|---------------------------------|
| Protective Relay | ABB / Sweden, Switzerland, USA  |
|                  | GE / USA, Canada, Spain, UK     |
|                  | SEL / USA                       |
|                  | Siemens / Germany, UK           |
|                  | Toshiba / Japan, Vietnam        |
|                  | Schneider Electric / France, UK |
|                  | ZIV / Spain                     |
|                  | INGETEAM / Spain                |
|                  | NR Electric / China             |
|                  | Mitsubishi / Japan              |
|                  | Protecta / Hungary              |
|                  | Arcteq / Finland                |
|                  | Sifang / China                  |



**เอกสารไม่ควบคุม**  
 รับรองสำเนาโดย **หนอ-ร.กสส-ร.อวส.**  
 ก่อนนำไปใช้งาน  
 ต้องตรวจสอบ **Revision** ล่าสุด  
 ฝ่ายวิศวกรรมระบบส่ง กฟผ.







