

Enhancing the Spot Market to Attract Investments to Renewables

Terms of Reference | November 2023

This Project addresses market barriers to renewable energy investments by assessing and updating the methodologies for setting price-mitigating measures and will recommend new cap values at balanced levels that will attract investments and at the same time protect consumers from high tariffs. The government has acknowledged that the currently outdated and low price caps discourage investments in peaking generators leading to heavy reliance on aging fossil-based plants. The project will also analyze opportunities for more renewables in the spot market and risks to RE investments.

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I. Introduction

- 1 The Southeast Asia Energy Transition Partnership ([ETP](#)) brings together governments and philanthropies to work with partner countries in the region. ETP supports the transition towards modern energy systems that can simultaneously ensure economic growth, energy security, and environmental sustainability. To contribute to the achievement of the UN's Sustainable Development Goals (SDGs) and the Paris Climate Agreement objectives, ETP works in Southeast Asia, with a focus on three priority countries, namely Indonesia, the Philippines, and Vietnam. ETP's strategy is built around four interrelated pillars of strategic engagement that are squarely aligned to address the barriers to energy transition. These are (i) policy alignment with climate commitments, (ii) de-risking energy efficiency and renewable energy investments, (iii) extending smart grids, and (iv) expanding knowledge and awareness building.

II. Summary

- 2 The project will address the market barriers to renewable energy investments by assessing and updating the methodologies for setting price-mitigating measures and recommending new cap values at balanced levels that will attract investments and at the same time protect consumers from high tariffs. The government has acknowledged that the current, outdated, and low price caps discourage investments in peaking generators leading to heavy reliance on aging fossil-based plants. The project will also analyze the opportunities for more renewables in the spot market and the risks to RE investments.

III. Project Details

A. Rationale

- 3 The Wholesale Electricity Spot Market (WESM) is the central venue for trading power and reserves in the Philippines. The market is a gross pool where all generators submit price offers and volume nominations for dispatch. The resulting market prices are applied across all spot quantities or those delivered by merchant plants that do not have existing power supply agreements - this includes renewable energy (RE) resources prioritized in the WESM dispatch.
- 4 In 2006, the WESM Tripartite Committee, composed of the Department of Energy (DOE), the Energy Regulatory Commission (ERC), and the Philippine Electricity Market Corporation (PEMC) adopted a bid cap, otherwise known as the WESM Offer Price Cap, of PhP62,000/MWh (USD1,100/MWh¹) to manage prices. In 2013, the price cap was set at an interim level of PhP32,000/MWh (USD580/MWh)^{2,3}. A 2015 study

¹ USD1=PhP55

² WESM Tripartite Committee Joint Resolution No. 4. 24 October 2014. *Further extending the Interim Offer Price Cap in the Wholesale Electricity Spot Market (WESM) to harmonize the finalization of the permanent pre-emptive mitigating measure to be applied in the WESM.*

³ ERC Resolution No. 14 Series of 2014. 5 August 2014. *A Resolution Extending Further the Implementation of the Interim Mitigating Measure in the WESM.*

recommended the market price caps and floors to be set at PhP32,000/MWh (USD580/MWh) and PhP-10,000/MWh (USD-180/MWh) respectively. The WESM Tripartite Committee adopted these as permanent price caps and floors on 1 Jan 2016⁴.

- 5 ERC implemented another mitigating measure termed the Secondary Price Cap (SPC)⁵. It prevents repetition of sustained high market prices wherein, if the rolling average of the generator-weighted average price (GWAP) for 3-day-equivalent trading intervals breached the prevailing threshold (PhP9,000/MWh or USD160/MWh), the succeeding intervals shall be imposed a cap of PhP6,245/MWh (USD110/MWh).
- 6 The current price caps have not been adjusted since 2015. These considered operational costs, capital expenditures, and investment costs during that time. It was also benchmarked against the costs of natural gas and oil-based power plants. The economy has drastically changed since the setting of the price caps. The general opinion⁶ is that the current price caps are too low that it discourages investments in peaking generators, such as solar and wind, leading to heavy reliance on base-load facilities or ageing plants that are costly to maintain⁷. Consequently, they lead to higher market prices. The low caps limit potential revenues and discourage investments, particularly in renewables which tend to have low operating costs but higher capital costs. Investors will be hesitant to commit to capital projects that may not be able to generate sufficient revenues. The low ceiling prices in the second round of the green energy auctions is one of the reasons identified for the low subscription, which highlights the sensitivity of investors to price signals.
- 7 Renewable energy generation has priority in the merit-order table of the WESM and compensates based on the market clearing prices. They are price takers, where revenues are limited by the prevailing market price caps.
- 8 There is a need to review the methodology of setting the caps, to reflect the current economic landscape, and to broaden the parameters to include investments and operational costs of other technologies, especially RE generation. As price takers, RE generators will benefit from higher price caps. The table below shows how the ERC-approved Feed-in-Tariff (FIT) rates compare to the prevailing WESM price caps and their maximum possible revenue as merchant plants in the WESM, as price takers.

| RE Resource | FIT Rate (PhP/MWh) | WESM Price Cap (PhP/MWh) | Maximum Possible Generator Revenue Surplus for Merchant Plants (PhP/MWh) |
|-------------|--------------------|--------------------------|--|
| Wind | 8,530 | 32,000 | 23,470 |
| Solar | 9,680 | | 22,320 |

⁴ WESM Tripartite Committee Joint Resolution No.3 dated 17 December 2015.

⁵ ERC Resolution No.08 Series of 2014. 5 May 2014. *A Resolution Adopting and Establishing a Pre-emptive Mitigation Measure in the WESM.*

⁶ Jose A. E. O. (2023, Feb 1). [ERC reviewing secondary price cap after DoE cites potential to unlock investment](#). *Business World*.

⁷ Power Wrangler (2015). *The Development and Review of the Methodology and Determination of the Levels of Offer Price Cap and Floor, and market Price Cap and Floor for Energy and Reserves* [PowerPoint Presentation]. Development Academy of the Philippines

| | | | |
|---------|-------|--|--------|
| Biomass | 6,630 | | 25,370 |
| Hydro | 5,900 | | 26,100 |

- 9 Moreover, the cost of grid reliability is not included in the current price caps. It is important to consider the importance of preventing load loss in calculating the caps. As customers are unable to participate in the market and respond through demand-side bidding, price caps must be determined in a way that customers are protected. The proper price caps should encourage investment leading to new power generation and more market participants that in turn create healthier market competition.
- 10 The study will also look at the impact of increasing RE in the WESM. The increasing cost of coal and the declining cost of renewable energy technologies is tipping competitiveness in favor of renewables. The study will look at how increasing RE merchant plants will affect the market, and understand the barriers and investment risks to RE generators.

B. Impact

- 11 This project supports the attainment of the Philippines' clean energy scenario characterized by 50% share of renewables in the power generation mix by 2040. Enhancing power sector planning will contribute to increasing the share of renewables in the total primary energy supply and total final energy consumption. It can lead to the displacement of fossil-based power generation leading to significant reduction and avoidance of Greenhouse Gases.

C. Outcomes and Output

- 12 ETP has four strategic outcomes (SO):
 - o SO1. Policy alignment with climate commitments
 - o SO2. De-risking investments on energy efficiency and renewable energy
 - o SO3. Extending smart grids
 - o SO4. Knowledge and Awareness Building
- 13 This project contributes to SO2 and SO4 leading to facilitate increased participation of renewable energy generators in the WESM by reviewing price mitigating measures and methodologies and analysing barriers and investment risks and aims to contribute to broader outcomes that are aligned with the Philippines' RE and energy self-sufficiency targets. The expected long-term outcomes from this project are:
 - o Increase uptake of renewables into the grid.
 - o Enhanced understanding of opportunities for renewable energy generators in the WESM that will encourage greater investments in renewables.
 - o Improved price mitigation measures that will encourage investments into RE generation, increase market participants, and enhance market competition which will lead to lower tariffs.

- Strengthened capability for PEMC and Independent Electricity Market Operation of the Philippines (IEMOP) to monitor and analyse market and price trends, and update price mitigating measures in the future.

The specific project objectives are:

- To review WESM price mitigation measures and recommend methodologies for setting them
- To understand how increasing RE will affect spot market trends
- To understand the barriers and risks to RE merchant plants

14 To achieve the intended outcomes, the primary outputs of this project will include:

- Assessment of WESM Price Mitigating Measures
- Updating Price Mitigating Measures
- Analysis of RE Participation in the WESM
- Capacity Building

15 More specific details of this project's intended deliverables are discussed in Section IV.

D. Sustainability, Gender Equality and Social Inclusion Mainstreaming

16 ETP is committed to promoting and supporting gender equality and social inclusion (GESI) through its project implementation. Groups that will be impacted by the project activities shall be identified. The Project shall be inclusive of the invited stakeholders during the consultation and seek a balanced representation of women and other identified groups in project activities. The implementing partner should identify the implications, its outputs, and contributions to gender equality and social inclusion in the project activities. This task shall be accomplished through a clear methodology and approach

IV. Project Activities and Expected Deliverables

17 In line with the outputs and outcomes expected from this project, this section provides additional information on specific deliverables that will be required to accomplish the above project outputs.

18 This project will have four main components:

- Component A: Inception and Set-up
- Component B: Assessment and Updating WESM Price Mitigating Measures
- Component C: RE Participation in the WESM
- Component D: Capacity Building on Simulation Practices

19 Each component will have one or more deliverables. Bidders may propose other activities to strengthen the delivery of the intended outcomes.

- 20 To deliver the outputs, the selected Implementing Partner (IP) must consult with relevant PEMC units, PEMC's technical working group, the Independent Electricity Market Operator of the Philippines (IEMOP), the ERC, DOE, WESM participants, and other relevant stakeholders. The IP may need to gather data to perform the analyses and activities. They must coordinate with PEMC, ERC, IEMOP, and other agencies to collect the information. The IP must be prepared to sign a non-disclosure agreement with PEMC, ERC, and IEMOP to cover data-sharing concerns, if necessary.

Component A: Inception and Set-up

21 Deliverable 1: Inception Report

Project Inception. The consultant must develop and submit a detailed inception report detailing the plan, ensuring the expectations of ETP are aligned with the understanding of the project from the consultant. The inception report should contain, as a minimum:

- a. Introduction and project background
- b. Scope of Services
- c. Methodology and Workplan, including approach, methodology and project gantt chart
- d. A detailed approach as to how each deliverable will be met and what each submission will contain
- e. Audience mapping and analysis and communication/ outreach plans
- f. Identification of suitable media channels to be used for communicating the project and rationale for choosing them
- g. A donor/development partners coordination strategy
- h. Project management inclusive of organisational chart detailing key personnel, their roles and responsibilities, as well as their locations (strong in-country team and project management is expected)
- i. Risks, mitigations, and assumptions
- j. Monitoring and Evaluation Framework, presented in the form of the ETP Results Based Monitoring Framework (RBMF)
- k. Communications Plan as described in the below table.

22 The consultant is responsible for drafting a detailed communications plan⁸ which will be embedded in the Inception Report. The minimum requirements for the communications materials are as follows:

Table 1: The Minimum Requirements of the Communications Plan

| Item | Communications materials | Quantity |
|------|---|--|
| 1 | Social media posts (liaising with ETP) | 5 |
| 2 | Press releases | 1 per public workshop/ event published in at least 1 newspaper (to be cleared with PEMC and other beneficiaries) |
| 3 | Feature article/blog post on the project to be uploaded in ETP's website | 1 |
| 4 | Online presentations of project progress and highlights to the ETP Secretariat and/or ETP Funders | 2 (1 hour maximum/ each) |

Bidder should include in their financial proposal the costs for producing the above communication materials, as well as the cost for publishing the Press Release

23 Deliverable 2: TWG established and meeting reports with minutes of the meetings

Enhancing Spot Market Technical Working Group (TWG). The consultants will serve as the secretariat of this TWG. In consultation with the Energy Regulatory Commission (ERC), Philippine Electricity Market Corporation (PEMC), and Independent Electric Market Operators of the Philippines (IEMOP), identify the stakeholders that will be part of the TWG. The consultants will regularly convene the TWG to keep them updated on the project and to seek guidance on the projects' implementation. Consultants must keep and prepare the minutes of meetings, facilitate meetings, and act as the liaison among TWG members, ERC, PEMC, IEMOP, and ETP.

The bidder must consider holding **at least two in-person TWG meetings⁹ with around 15 participants per meeting**. The cost of holding the in-person TWG meetings will be reimbursable.

⁸ The consultant is requested to deliver the communications activities as per the requirement in Table 1. The bidders should propose the non-personnel budget for the execution of the communication work in their financial proposal.

⁹ Under deliverable 2, the organization of at least two in-person TWG meetings for 15 participants/meeting will be paid on a reimbursable basis. The bidder is expected to propose a lump sum amount for the delivery of TWG establishment and associated report and separately propose the budget for the organization of the TWG meetings in their financial proposal.

Component B. Assessment and Updating of WESM Price Mitigating Measures

24 This component will analyze the WESM price trends and their impact on renewable energy participants. It will review the historical WESM price patterns and analyze the impact of current price mitigating measures.

25 **Deliverable 3: Assessment of WESM Price Patterns and Price Mitigating Measures**

Assess WESM price patterns and price mitigating measures: Consultants will review and analyze price patterns in WESM and understand potential drivers for increased renewable energy participation. Consultants are expected to perform their own data collection to deliver this task. Interviews with relevant stakeholders may need to be conducted.

- Assess WESM price trends. Analyze how these affect the participation of renewable energy generators in the WESM (including FIT-stranded plants and RE merchant plants); analyse the economic viability of RE merchant plants based on historical prices and other renewable energy market mechanisms in effect (renewable portfolio standards, green auctions, and others). The consultants are expected to assess the impact of the changing mix of participants (conventional and renewable energy generators) on market prices.
- Review the current WESM market price mitigating measures, including the offer price cap and floor, and the secondary market price cap, and analyze how they affect the market. Understand their impact on attracting investments into new plants, power supply, market competition, and end-user tariffs, among others. Review the methodology for setting the caps and determine if it is still suitable in the current market conditions.
- Review the international experience and best practices in assigning price mitigating measures, and assess the different methodologies for calculating them.

26 **Deliverable 4: Report on Updated Price Mitigating Measures**

Update Price Mitigating Measures. Recommend appropriate price mitigating measures that will promote market efficiency and competition, and safeguard against excessively high or low prices, while encouraging investments in power generation. The activities may include:

- Propose price mitigating measures and methodologies. Conduct scenario analyses to understand the impact of different price cap levels, values, and/or different methodologies. The [selected] consultants must develop a robust modeling framework to stimulate the market dynamics under each scenario, considering factors such as market prices, merit order, and end-users tariffs, among others. Bidders are also encouraged to identify the parameters that can be included in the simulations. They are also required to analyze and compare the outcomes of the different scenarios. The bidders must propose the modeling technique or tool and data types that will be used. Setting up a regulatory sandbox can be an option. Any simulation model used in the project should be turned over to PEMC. The project will not cover the cost of the subscription. The methodology, assumptions, and findings of the analysis for each scenario must be documented in the policy brief.

- The consultant is expected to conduct two **(2) in-person focus group discussions¹⁰**, one with the government representatives and another with market participants each to gather input, suggestions and feedback. The costs associated with the venue and meals will be reimbursable.
- Recommendation on Appropriate Price Mitigating Measures. Based on the analyses and consultations, propose new values for the offer price cap and floor, and SPC. Consultants should propose new methodologies for setting these, if necessary.

Component C: Analysis of RE Participation in the WESM

27 This component will assess the impact of increasing participation of RE generators in the WESM. The output of this component must be delivered as a separate publishable study that can be disseminated to the wider public. It must be copyedited with a proper layout for easy reading.

28 Deliverable 5: Publishable Study on the Impact of Increasing Participation of RE Generators in the WESM

- Analyze the impact of prevailing market mechanisms, such as the renewable portfolio standards (RPS), green energy option, and the green energy auction program (GEAP), and others on the spot market and RE merchant plants.
- Analyze the opportunities, barriers and risks for RE merchant plants in the WESM. Many investors/financial institutions perceive the spot market as a high-risk off-taker. Analyze if, an adjustment of the price caps and other price mitigating measures will encourage investor confidence in the spot market as a viable market for renewables.
- The document will be accompanied by a policy brief summarizing the key findings and recommendations of the study.

Component D: Capacity Building and Dissemination

29 This component aims to enhance PEMC's and the Independent Electricity Market Operator of the Philippines' (IEMOP) capability to analyze market prices and assess market efficiency, price volatility, price drivers, and others.

30 Deliverable 6: Price Simulation Training Report

Price Simulation Training: Strengthen PEMC's and IEMOP's capability to analyze price trends using price simulation tools through in-person training. Bidders may propose to develop a simple tool or nominate open-source tools to enhance PEMC's and IEMOP's analyses of price trends and facilitate the revision of price mitigating measures in the future. This tool may be used to deliver the other

¹⁰ Under Deliverable 4, the organization of at two in-person focus group discussions will be paid on a reimbursable basis. The bidder is expected to propose in their financial proposal the budget to organize and execute the focus group discussions separately from the personnel lump sum cost required to deliver the overall deliverable.

activities of this project. All models developed and used must be turned over to PEMC after the training program. Bidders should consider conducting **three (3) workshops for 30 participants¹¹**.

31 Deliverable 7: Results Dissemination Report

Presentations of Findings and Recommendations. Consultants are expected to present the results/outputs of the project to relevant stakeholders. The consultants will organize one dissemination event for 45-50 participants. The consultants will be responsible for logistics and other necessary preparations for this event in coordination with PEMC. The cost of this event should be proposed in the financial bid. A report documenting the dissemination event will be submitted.

32 Monthly Progress Reports

Together with the milestone delivery, the consultant is required to submit a monthly progress report that includes a concise narrative of the activities completed and the next steps. The monthly progress Report serves as the monitoring report and is an internal report between the consultant and the ETP team. Failure to submit this report will result in the payments being withheld.

The report must also include the following standard items:

- Updated Gantt Chart
- On a quarterly basis, this report should include an update on results achieved as per the Results Based Monitoring Framework (RBMF) and provided template. Where applicable, must be gender disaggregated
- Slide deck that summarizes the findings, status, and project next steps.
- Risks and mitigations
- Lessons learned
- Minutes of meetings, if relevant
- Minutes of Interviews and Consultations if relevant

33 The final progress report

A summary of the project, activities conducted, highlights of outputs, the project's potential impact on energy transition, recommendations on follow-up activities, and lessons learned in conducting the project.

¹¹ Under deliverable 6, the organization of the three (3) workshops for 30 participants will be paid on a reimbursable basis. The bidder is expected to propose in their financial proposal the budget to organize and execute the workshops separately from the personnel lump sum cost required to deliver the overall deliverable.

V. Project Timeline

The Project is expected to be delivered in 10 months. Bidders may propose a timeline based on their methodology. The expected deliverables are

| Deliverable | Description | Estimated Delivery | Payment Milestone |
|----------------------------------|---|---|---|
| Milestone 1 | Deliverable 1: Inception Report | Month 1 | 10% of the Lump sum Component of the Contract |
| Milestone 2 | Deliverable 2: TWG established and meeting reports with minutes of <i>at least two TWG meetings</i>* Deliverable 3: Assessment of WESM Price Patterns and Price Mitigating Measures | Month 3 | 20% |
| Milestone 3 | Deliverable 4: Report on Updated Price Mitigating Measures* | Month 7 | 30% |
| Milestone 4 | Deliverable 5: Publishable Study on the Impact of Increasing Participation of RE Generators in the WESM. Deliverable 6: Price Simulation Training Report* | Month 9 | 20% |
| Milestone 5 | Final Report - A summary of the project, activities conducted, highlights of outputs, the project's potential impact on energy transition, recommendations on follow-up activities, and lessons learned in conducting the project. Deliverable 7: Results Dissemination Report | Month 10 | 20% |
| Non-personnel reimbursable costs | Some of the above deliverables (*) contain logistic organizations of workshops/discussion groups and meetings. This includes the execution of the communication work. The consultant is required to propose in their financial proposal a ceiling cost to organize and execute all aspects of the workshops, including organization and logistics ¹² . | As per the deliverables' milestone deadlines. | |

¹² See detailed minimum requirements on the logistic organizations in the section IV. Project Activities and Expected Deliverables.

| | | | |
|---|---|--|--|
| <p>Contract Monitoring Requirement</p> | <p>Monthly Progress Report (Internal-facing reports) and the final progress report</p> | <p>Monthly submission In a provided template</p> | |
|---|---|--|--|

- Deliverables 3 and 6 are public-facing documents. As such, after the content has been approved, the reports should undergo a process of copy editing and desktop publishing to produce professional, international standard, public-facing reports.
- A public-facing, **publishable Executive Summary** (approximately 2 pages) in professional English must be submitted with each deliverable.
- A public-facing, **catchy PowerPoint presentation** highlighting key information must be submitted with each deliverable.
- All project deliverables and presentations must be submitted in English.
- All deliverables are subject to review by ETP, and beneficiary entity(ies) where applicable, before approval. If there are comments and suggestions, the deliverables need to be revised accordingly before payment is released.
- The consultant is required to organize and execute all aspects of the workshops, including organization and logistics.
- The consultant must consider and highlight specific gender considerations in their proposal.
- The consultant must be available to attend 1 in-person workshop with the ETP secretariat in the region. The costs for this will be covered outside the financial scope of this proposal.
- The consultant, or an active organization within the applying consortium, must have in in-country presence.
- All outputs must reflect ETP's, its funders', and relevant partners' logos. Visibility guidelines will be provided.

VI. Key Beneficiaries

34 The key beneficiaries of this project are provided in Table 3.

Table 3. List of beneficiaries of this project

| Beneficiary | Benefit | Explanation |
|-------------|---------|-------------|
|-------------|---------|-------------|

| | | |
|--|--------|---|
| Philippine Electricity Market Corporation (PEMC) | Direct | PEMC served as the autonomous group market operator and governing body of the Philippine Wholesale Electricity Spot Market (WESM). |
| Independent Electricity Market Operator in the Philippines (IEMOP) | Direct | As the Independent Market Operator of the WESM, IEMOP serves as the main platform for wholesale electricity trading by, among other things, managing the registration for new entrants, receiving electricity bids and offers, demand forecasting, calculating real-time market prices and dispatch schedules of participants, monitoring the day-to-day market trading, and handling billing, settlement, and collections. |
| Energy Regulatory Commission (ERC) | Direct | The ERC is the primary regulatory body of electric industry of the country. It facilitates the approval of investments for upgrades in the transmission infrastructure and ensures fairness in the market. |

VII. Donor Project Mapping

35 A donor mapping was conducted to prevent duplication of efforts between ETP and other development partners in the same areas, as well as to identify areas where ETP could provide support for energy transition that had not yet been addressed.

Table 4: Donor Mapping: Enhancing the Spot Market to Attract Investments to Renewables

| Name of Organization | Topic and Detailed Activity |
|----------------------|---|
| ETP | Market Mechanisms for Battery Energy Storage Systems Integrating rules for the participation of battery energy storage systems and other energy storage systems in the WESM |

36 The consultant is expected to identify and engage with other relevant stakeholders as part of this project.

VIII. Results-Based Monitoring Framework

37 The results of the project are monitored through the following framework in Table 5. All milestone progress reports must update the achievements of the indicators.

38 The results are reported with additional supporting information and evidence where applicable and necessary.

Table 5. Project RBMF

Enhancing the Spot Market to Attract Investments to Renewables

IMPACT

- GHG emissions avoided or reduced - fossil fuel replaced by renewable energy
- Share of renewable in the total final energy supply (TPES) increased
- Increasing the share of the renewable energy mix to 35% by 2030 and at least 50% by 2040

OUTCOME

SO2. De-risking renewable energy investments

SO4. Knowledge and awareness building

OUTPUT

2.2. De-risked project finance is accessible via financial institutions generating a pipeline of large-scale renewable energy projects

4.1 Stakeholders (relevant Government entities, public sector companies, financial institutions, private entities, academia, and consumers) involved in the RE/EE value chain, are knowledgeable and better informed to advance the energy transition agenda.

| INDICATORS | TARGETS |
|---|---|
| IN 2.2-01 No. of new and existing, national and international, financing options / instruments de-risked and opened for private and blended financing | 2 instruments: <ul style="list-style-type: none"> • New methodology for setting price mitigating measures • Revised regulation with new price caps that encourage investments into renewables, enhance market competition and lead to lower tariffs |
| IN 4.1-01 No of studies, research, new evidence gathered and published, for raising awareness, improving knowledge base, driving decisions, and dissemination | 1 study on the opportunities, barriers, and risks of RE merchant plants in the WESM |
| IN 4.1-02 No. of trainings, knowledge sharing events, and/or awareness workshops organized at national and regional levels building institutional capacity and knowledge networks | 1 set of training sessions on electricity price simulations |

ACTIVITIES

- Assessment of historical spot market prices, analyzing trends and their impact on renewable energy participants.
- Analyze the impact of current price mitigating measures including offer price caps and floors, as well as secondary price caps to the market and on attracting investments in new renewable energy plants
- Review of international experience and best practices in setting price mitigation measures
- Update the methodology for setting price mitigating measures and determine new offer price caps and floors, and secondary price caps
- Prepare a standalone publishable report on the opportunities of renewable energy in the spot market, including risks and barriers
- Training for PEMC and IEMOP on price simulations and analyses
- Price simulations or modelling and analyses
- Consultations with relevant government agencies and market participants

IX. Qualification and experience of the service provider and evaluation criteria

A. Qualification and Experience of the Service Provider

1. The consultant’s project team should demonstrate the capacity to execute the work and should include all essential roles filled with personnel with relevant experience. CVs of the personnel proposed should be used to verify this information.
2. The following are the **minimum positions** that should be included on the team. Bidders should assess the additional positions needed (if any) to complete the assignment as per the Terms of Reference:
 - i. Electricity Market Expert/Team Lead
 - ii. Renewable energy regulatory Expert
 - iii. Data Scientist/Modeling Expert
3. Considering the importance of close coordination with stakeholders in the Philippines, it is expected that the team proposed consists of consultant(s) who understand the local context in the Philippines.
4. The bidder should also assign a Contract Manager who would liaise on the non-technical part of the contract implementation, including coordination, liaising with key counterparts, and liaising with UNOPS on the submission of invoice and payment-related documents.

B. Evaluation Criteria

Eligibility and Formal Criteria

5. The *criteria contained in the table below will be evaluated on a **Pass/Fail** basis and checked during the Preliminary Examination of the proposals.*

| Criteria | Documents to establish compliance with the criteria |
|--|--|
| 1. Offeror is eligible as defined in Instructions to Offerors, Article 4. In case of JV, all JV members should fulfill this requirement | <ul style="list-style-type: none"> ● Form A: Joint Venture Partner Information Form, all documents as required in the Form, in the event that the Proposal is submitted by a Joint Venture. ● Form B: Proposal Submission Form |

| Criteria | Documents to establish compliance with the criteria |
|---|--|
| 2. Completeness of the Proposal. All required Questionnaires (if any), Returnable Bidding Forms, and other documentation requested under the Document Checklist section have been provided and are complete | <ul style="list-style-type: none"> • All documentation as requested under Instructions to Offerors Article 10, Documents Comprising the Proposals |
| 3. Offeror accepts UNOPS General Conditions of Contract as specified in Section IV: Contract Forms | <ul style="list-style-type: none"> • Form B: Proposal Submission Form |

Qualification Criteria

6. The criteria contained in the table below will be evaluated on a Pass/Fail basis and checked during Qualification Evaluation of the proposals.

| Criteria | Documents to establish compliance with the criteria |
|--|---|
| <p>1. The company should have a minimum of 5 years of continuous experience in delivering similar projects in the past with a track-record of success.</p> <p>In case of JV, at least one of the JV members should fulfil this criteria</p> | <ul style="list-style-type: none"> • Certification of incorporation of the Offeror • Form F: Performance Statement Form |
| <p>2. Offeror must provide a minimum of two (2) customer references from which similar services have been successfully provided, within any of the last 5 years.</p> <p>In case of JV, the customer references of JV members can be combined</p> | <ul style="list-style-type: none"> • Form F: Performance Statement Form |

Technical Criteria

7. Technical evaluation will be carried out to bids that pass the eligibility, formal and qualification criteria, with requirements as follows:

- i. The maximum number of points that a bidder may obtain for the Technical proposal is 80. To be technically compliant, Bidders must obtain a minimum of 56 points
- ii. Minimum pass score: 70% of maximum 80 points = 56 points

8. Technical proposal points allocation

| <i>Section number/description</i> | | <i>Points Obtainable</i> |
|--|---|--------------------------|
| 1. | <i>Offeror's qualification, capacity and expertise</i> | 20 |
| 2. | <i>Proposed Methodology, Approach and Implementation Plan</i> | 35 |
| 3. | <i>Key Personnel proposed and Sustainability Criteria</i> | 25 |
| <i>Total Technical Proposal Points</i> | | 80 |

Section 1: Offeror's qualification, capacity and expertise

| Section 1: Offeror's qualification, capacity and expertise | | Points | Sub-points |
|---|--|---------------|-------------------|
| 1.1 | Brief description of the organization, including the year and country of incorporation, and types of activities undertaken, including relevance of specialized knowledge and experience on similar engagements done in the past. | 15 | |
| | Bidders partnering up with a local entity to provide for the strategic consultation, translations; as well as the communications expertise is considered a valuable asset. | | |
| | 1. Experience in projects of comparable size, type, complexity and technical specialty | | 5 |
| | 2. Experience in providing similar services in the region, especially in the Philippines | | 5 |

| Section 1: Offeror's qualification, capacity and expertise | | Points | Sub-points |
|--|---|-----------|------------|
| | 3. Understanding of local context, and partnering up with a Philippines-based entity to provide for the strategic consultation, as well as the communications expertise | | 5 |
| 1.2 | General organizational capability which is likely to affect implementation: management structure, and project management controls. (Max 4 pages written text) | 5 | |
| | 1. Management structure, management controls, and extent to which any part would be subcontracted | | 3 |
| | 2. Financial Capacity/financial stability: Bidder should have a minimum annual turnover of 300,000 USD in any of the past 2 years. In the case of a joint venture, annual turnover is calculated based on the total annual turnover of the JV members. | | 2 |
| Total points for section | | 20 | |

Section 2: Proposed Methodology, Approach and Implementation Plan

| Section 2: Proposed Methodology, Approach and Implementation Plan | | Points | Sub-points |
|---|---|-----------|------------|
| 2.1 | Description of the Offeror's approach including risk(s) and mitigation measure(s), and methodology for meeting or exceeding the requirements of the Terms of Reference | 27 | |
| | 1. Description of the offeror's approach assessing and updating the price mitigating measures of the Philippines Wholesale Electricity Spot Market.. | | 15 |

| Section 2: Proposed Methodology, Approach and Implementation Plan | | Points | Sub-points |
|---|---|-----------|------------|
| | 2. Description of the offeror’s approach to assess the participation of renewables in the electricity spot market and deliver a study that could encourage investments to renewable energy projects. | | 12 |
| 2.2 | Quality Assurance Plan | 5 | |
| | 1. A plan outlining how the bidder intends to ensure oversight and quality assurance throughout the assignment. Quality Assurance plan should include discussion on risk-assessment and its mitigation plan | | 5 |
| 2.3 | Implementation Timeline | 3 | |
| | 1. Bidder submits a detailed implementation timeline which includes detailed activities to be undertaken during this assignment, and is completed with gantt chart | | 3 |
| Total points for section | | 35 | |

Section 3: Key personnel proposed and Sustainability Criteria

| Section 3: Key personnel proposed and Sustainability Criteria | | Points | sub-points |
|---|---|--------|------------|
| | Qualifications of key personnel proposed aligned with the Terms of Reference | 20 | |
| 3.1 | <u>Team Lead/Electricity Market Expert</u> Education: A Master's Degree in Energy Economics, Economics, Engineering or related fields is required. Bachelor | | 10 |

| | | | |
|--|--|--|--|
| | <p>degree plus an additional 2 years of relevant experience is considered equivalent.</p> <p>Experience:</p> <ul style="list-style-type: none"> • A minimum of 10 years of relevant experience in a similar role, with a minimum of 2 years of leadership experience • Professional experience in the power industry, preferably roles related to market analyses, energy trading, regulatory affairs, or power development. • In-depth understanding of electricity markets, including market structures, and regulatory frameworks is required. • Understanding of energy trading, power generation technologies, and grid operations is desired. • Experience and knowledge of the Philippines electricity market is desired. • Strong quantitative and analytical skills for interpreting market data, assessing market trends, and conducting modeling will be valuable. • Proficiency in data analysis tools, statistical methods, and economic/market modeling software is an advantage. <p>Other Requirements</p> <ul style="list-style-type: none"> • Strong and demonstrated capacity for organisation, management with excellent reporting and coordination skills • Strong technical competence and professional skills for timely implementation, coordination and management of activities • Strong interpersonal and communications skills, resourcefulness, initiative, tact and ability to cope with any situation especially Asian culture • Openness to change and ability to receive/integrate feedback | | |
|--|--|--|--|

| | | | |
|--|---|--|---|
| | | | |
| | <p><u>Renewable Energy Regulatory Expert</u></p> <p>Education:</p> <p>Masters degree in Electrical engineer / Renewable Energy / Economics / relevant similar fields with an additional 5 years experience in the Philippines renewable energy sector. A bachelor degree plus an additional 2 years of relevant experience is considered equivalent.</p> <p>Experience:</p> <ul style="list-style-type: none"> • At least 5 years of working experience in the Philippines renewable energy sector is required. Experience working with the Energy Regulatory Commission (ERC) is an advantage. • Understanding of the Philippines renewable energy policies, market mechanisms, regulatory framework is a must. • Understanding of the different renewable energy technologies is an advantage. • Experience and understanding of the Philippines electricity market is desired. • Strong quantitative and analytical skills for interpreting market data, assessing market trends, and conducting modeling will be valuable. • Proficiency in data analysis tools, statistical methods, and economic/market modeling software is an advantage. | | 5 |
| | <p><u>Data Scientist/ Modeling Expert</u></p> <p>Education:</p> <p>Masters degree in Electrical engineer / Renewable Energy / Economics / relevant similar fields with an additional 5 years power system modeling/simulationsof relevant experience. A bachelor degree plus an additional 2 years of relevant experience is considered equivalent.</p> | | 5 |

| | | | |
|---------------------------------|---|-----------|--|
| | <p>Experience:</p> <ul style="list-style-type: none"> • At least 5 years of working experience in power sector, energy market research, analyses, modeling and simulations is required • Strong quantitative and analytical skills for interpreting market data, assessing market trends, and conducting modeling is required. • Proficiency in data analysis tools, statistical methods, and economic/market modeling software is required. • Understanding of the Philippine electricity market is an advantage. | | |
| 3.2 | The bidder shall provide a clear statement, approach and methodology that demonstrates its commitment to support and mainstream gender equality and social inclusion through its operations and project implementation activities. | 5 | |
| Total points for section | | 25 | |

a. Financial Criteria (20 maximum points)

The financial part of those proposals that are found to be technically compliant will be evaluated as follows.

The maximum number of points that a bidder may obtain for the Financial Proposal is 20. The maximum number of points will be allocated to the lowest evaluated price bid. All other prices will receive points in reverse proportion according to the following formula:

Points for the Financial Proposal of a bid being evaluated =

$$\frac{[\text{Maximum number of points for the Financial Proposal}] \times \{\text{Lowest price}\}}{[\text{Price of proposal being evaluated}]}$$

Financial proposals will be evaluated following completion of the technical evaluation. The bidder with the lowest evaluated cost will be awarded (20) points. Financial proposals from other bidders will

receive prorated points based on the relationship of the bidder’s prices to that of the lowest evaluated cost.

Formula for computing points: Example

| |
|---|
| Points = (A/B) Financial Points |
| Bidder A’s price is the lowest at \$20.00. Bidder A receives 20 points |
| Bidder B’s price is \$40.00. Bidder B receives $(\$20.00/\$40.00) \times 20$ points = 10 points |

The total score obtained in both Technical and Financial proposals will be the final score for the proposal, with 80% allocated to the Technical proposal and 20% to the Financial proposal. The proposal obtaining the overall highest score will be considered as the winning proposal. This proposal will be considered to be the most responsive to the needs of UNOPS in terms of value for money.

The selection of the preferred bidder will be based on a cumulative analysis, analyzing all relevant costs, risks and benefits of each proposal throughout the whole life cycle of the services and in the context of the project as a whole. The lowest priced proposal will not necessarily be accepted.