WAVE ENERGY FEASIBILITY ASSESSMENT FOR FOUR CARIBBEAN COUNTRIES AND ONE FRENCH OVERSEAS TERRITORY (WORK PACKAGE 1: TECHNICAL & INVESTMENT)

RESPONSE TO SECOND SET OF QUERIES BY CONSULTANTS

1. **Project references — ToR Section F**

Wave-energy resource assessments are often carried out separately from technical and economic feasibility studies. Can we submit complementary references that together cover the required expertise, rather than each reference covering the full scope?

CCREEE Response: Complementary project references may be submitted, provided that, collectively, they demonstrate the firm's relevant experience across the principal technical and economic components of the assignment. The references should collectively demonstrate experience comparable in nature and scope to the present assignment and clearly identify the firm's role, activities undertaken and deliverables completed. The firm must also demonstrate the specific capabilities outlined under Section F of the ToR, including wave-energy feasibility experience and in-situ marine data collection capability.

2. **Consortium qualifications — Evaluation Criteria Section A**

Which requirements must each consortium member meet individually, and which can be met collectively? Please clarify this for experience, project references and annual turnover.

CCREEE Response: The Legal Status, Ineligibility Status and previous/general experience of consultants will be accessed individually, while rest of the criteria including Average Annual Turnover, project specific experience etc. will be evaluated collectively.

3. **Survey areas and water depths — ToR Sections 2.1, 2.5 and 2.6**

Are indicative survey areas, water depths and cable-route lengths available for pricing? If we must make assumptions, how would changes to these assumptions be handled under the contract?

CCREEE Response: The ToR establishes the general survey requirements and expected outputs but does not prescribe definitive site-specific survey areas, water depths or cable-route lengths for the preparation of proposals. Such details, including bathymetric data, seabed conditions and cable-route characteristics, are expected to be further established and refined through the assessment and survey activities outlined in the ToR.

As clarified under Section 3.2 of the issued Minutes of the Pre-Proposal Meeting, bidders are required to make reasonable and technically justified assumptions regarding survey areas, water depths, cable-route lengths, vessel requirements, and associated operational costs, consistent with the Terms of Reference (TOR). These assumptions

must be clearly stated, supported by appropriate unit rates and cost breakdowns, and adequately reflected in the financial proposal.

Bidders shall bear responsibility for the accuracy and adequacy of their assumptions and proposed costs. Any underestimation or subsequent deviation from these assumptions shall not entitle the consulting firm to additional compensation or an extension of time, provided the requirements remain within the originally agreed contractual scope.

Any material changes to the agreed scope of work specifically requested or authorized by CCREEE shall be addressed in accordance with the applicable contractual provisions and subject to prior written approval by CCREEE.

Firms are encouraged to review Sections 2.1–2.6 of the ToR, particularly the requirements relating to equipment mobilisation, deployment planning, monitoring station selection and data collection. Sections 3.3 and 3.5 provide further context on resource mapping and site-specific assessment, while Sections 5.1 and 5.2 outline the requirements for site selection and preliminary engineering design.

4. Technologies and sites — ToR Sections 3, 3.5, 4.4 and 5.2

Must all shortlisted technologies be assessed and designed at every priority site, or can we select the most suitable combinations? Please also confirm the number of Phase B sites, as Sections 3, 3.5 and 5.2 give different figures.

CCREEE Response: The technology assessment and selection should follow the methodology outlined in Sections 4.1–4.4 of the ToR.

1. **Site-specific suitability:** The validated wave resource data, together with water depth, bathymetry, grid connectivity, environmental conditions and local operational constraints, should inform the technical suitability of Wave Energy Converter (WEC) technologies at each priority site.
2. **Regional considerations:** Technology readiness, commercial deployment status, developer track records, supply-chain capacity, hurricane resilience, insurance availability and regional operation and maintenance (O&M) capabilities should also inform the assessment of each technology's practical and commercial viability within the Caribbean context.
3. **Technology selection:** Given variations in wave resource characteristics, environmental conditions and exposure to extreme weather, the most suitable technology categories may differ between priority sites. Accordingly, different technology combinations may be selected and recommended for individual sites based on the validated wave resource data and site-specific suitability assessments. The ToR does not require every shortlisted technology to undergo detailed assessment and preliminary engineering design at every priority site. Rather, the technologies selected for further assessment and design should reflect the characteristics and constraints of each site.
4. **Technology down-selection:** The recommendation of 2–4 technology categories under Section 4.4 should be informed by the technology landscape review, Caribbean suitability screening and hurricane

survivability analysis outlined in Sections 4.1–4.3. Recommendations should be supported by technical justification, relevant reference projects and performance benchmarks.

The subsequent preliminary engineering designs and energy yield modelling under Sections 5.2 and 5.3 should therefore reflect the technologies selected for each priority site and the respective site characteristics.

Clarification on the number of Phase B sites:

The intended assessment sequence is for 2–4 potential sites per participating jurisdiction to be considered during Phase A, with the findings and data collected documented in the initial assessment (D2). Following this assessment, 1–2 priority sites per participating jurisdiction will be taken forward for the more detailed Phase B assessment, resulting in a total of 5–10 priority sites.

The reference in Section 3.5 to 2–4 priority sites per participating jurisdiction (10–20 sites total) for Phase B is an error. The intended Phase B scope is 1–2 priority sites per participating jurisdiction, as outlined in Sections 3 and 5.2.

5. Cable routes — ToR Sections 2.5, 5.2 and 6.3

What survey corridor width is required between the wave-energy sites and the landfalls? We understand that field surveys for onshore cables are outside the scope.

CCREEE Response: Sections 2.5, 5.2 and 6.3 of the ToR establish the requirements for bathymetric surveys along prospective subsea cable routes, preliminary cable-route design and associated grid interconnection considerations. However, a definitive survey corridor width between the offshore wave-energy sites and proposed landfalls is not prescribed.

The survey corridor requirements should be informed by site-specific conditions, including the selected wave-energy technology, potential array configurations, seabed characteristics, proposed cable-route alignment and the location of existing or proposed grid connection infrastructure. These considerations should inform the proposed survey approach and preliminary engineering design undertaken as part of the assignment.

Any assumptions regarding potential cable-route alignments and survey corridor widths should be clearly documented and technically justified, demonstrating that the proposed approach is appropriate to achieving the intended outputs and supporting the assessments outlined in the ToR.

Firms are encouraged to review the bathymetric survey requirements under Section 2.5 of the ToR, which apply to prospective offshore subsea cable routes between the wave-energy sites and the proposed landfalls. Physical field surveys along onshore cable routes are not explicitly required under the scope of the ToR. However, firms should consider the provisions of Sections 5.2 and 6.3 relating to preliminary cable-route design and grid

interconnection infrastructure, as well as Section 7.1 concerning associated infrastructure costs, as part of their engineering and cost assessments.

6. Survey campaigns — ToR Section C, particularly Section 2

Can we carry out separate survey campaigns across the jurisdictions? How should mobilisation and transit days be shown in the price breakdown?

CCREEE Response: The ToR does not prescribe a specific methodology or sequencing arrangement for undertaking the survey activities across the five participating jurisdictions. Firms are therefore responsible for proposing a methodology and implementation schedule that clearly outlines their approach to delivering the required survey and monitoring activities.

The proposed methodology should clearly identify the sequencing and scheduling of activities, taking into consideration the mobilisation, deployment, operation, maintenance and retrieval requirements of the monitoring equipment, as well as inter-jurisdictional transportation and other logistical considerations. In particular, firms must demonstrate how their proposed approach will ensure that the continuous 12-month wave buoy and Acoustic Doppler Current Profiler (ADCP) monitoring programme specified in Sections 2.1–2.3 of the ToR is maintained throughout the assessment period, without compromising the overall project implementation schedule and established timelines.

Mobilisation and transit days should be clearly identified in the financial proposal and distinguished from days allocated to technical survey activities. Firms should provide a breakdown of anticipated personnel days, equipment and vessel mobilisation, inter-jurisdictional transportation, and other associated logistical and operational costs.

The financial proposal should provide an itemised cost breakdown for each survey site, identifying the costs associated with the respective survey activities, including bathymetric and geophysical surveys, geotechnical investigations, sampling and testing (where applicable), and the associated equipment, personnel and vessel requirements. Costs associated with mobilisation, transit, equipment deployment, operation, maintenance and retrieval should also be separately identified. Where these costs are shared across multiple sites or jurisdictions, firms should clearly indicate the basis on which they have been allocated or apportioned.

In accordance with the financial provisions of the ToR, equipment mobilisation, deployment and operational costs associated with in-situ data collection, including wave buoys, ADCPs, vessels and other survey equipment, should be costed separately from expert days.

The overall financial breakdown should provide sufficient detail to identify anticipated expenditure at both the individual survey site and jurisdictional levels, while distinguishing site-specific costs from shared regional mobilisation, transportation and logistical costs.

7.Bathymetric surveys — ToR Section 2.5

Please confirm the required seabed coverage and survey accuracy. Does the specified resolution of ≤2 m refer to the grid cell size of the final seabed model?

CCREEE Response: Section 2.5 of the ToR specifies that multibeam bathymetric surveys must produce high-resolution seabed topography maps at a resolution of ≤2 m within the prospective array footprints. This requirement is further supported by Deliverable D-Data, which specifies the submission of gridded Digital Terrain Models (DTMs) and georeferenced bathymetric charts in GIS-compatible formats.

Based on these provisions, the ≤2 m resolution is interpreted as referring to the horizontal spatial resolution of the final gridded DTM, corresponding to a grid cell size of no greater than 2 m × 2 m.

The grid cell dimension should be distinguished from survey accuracy, which relates to the horizontal and vertical uncertainty of the underlying bathymetric measurements. While the ToR specifies the required output resolution and identifies the areas to be surveyed, it does not prescribe specific horizontal or vertical survey accuracy tolerances. Firms should therefore propose and justify appropriate survey coverage, measurement accuracy and tolerances, guided by applicable internationally recognised hydrographic survey standards and the requirements of the subsequent seabed characterisation, mooring and foundation assessments, and subsea cable routing. The proposed approach should demonstrate that the bathymetric data collected will be sufficiently accurate and detailed to support the intended outputs and engineering assessments.

8.Seabed imagery and sub-bottom profiling — ToR Sections 2.5 and 2.6

Is backscatter, side-scan sonar or other seabed imagery required? For sub-bottom profiling, are there minimum requirements for line spacing, penetration depth and vertical resolution?

CCREEE Response: Sections 2.5 and 2.6 of the ToR outline the requirements for bathymetric and geotechnical surveys to support seabed characterisation and the subsequent assessment of mooring and foundation requirements and subsea cable routing. Section 2.6 specifically requires sub-bottom profiling using a parametric echosounder or boomer, together with seabed sampling and laboratory analysis. However, the ToR does not explicitly prescribe the use of backscatter, side-scan sonar or other additional seabed imaging techniques, nor does it establish minimum sub-bottom profiling parameters for line spacing, penetration depth or vertical resolution.

Firms should propose an appropriate combination of geophysical survey techniques and associated survey parameters to demonstrate how the required seabed characterisation outputs will be achieved. The proposed approach should consider the requirements of the subsequent seabed characterisation, mooring and foundation assessments, and subsea cable routing, taking into account the anticipated seabed conditions and the objectives of the survey. Where additional seabed imaging techniques, such as side-scan sonar, are proposed, firms should explain their intended application and how they complement the bathymetric and geophysical survey outputs.

Where acoustic backscatter data can be acquired through the proposed multibeam survey, firms should also indicate whether and how these data will be processed and used to support seabed classification.

For sub-bottom profiling, firms should clearly identify and technically justify their proposed survey parameters, including line spacing, penetration depth and vertical resolution. These should be appropriate to characterising the subsurface stratigraphy and assessing the suitability of the seabed for the potential mooring and foundation systems identified in Section 2.6. The proposed methodology should also demonstrate how the geophysical survey results will be interpreted alongside the seabed sampling and laboratory analysis to inform the geotechnical assessment.

Firms are encouraged to review Sections 2.5 and 2.6, as well as Section 5.2 of the ToR, for further context on the bathymetric, geotechnical and preliminary engineering design requirements. The proposed survey methodology should be guided by applicable internationally recognised standards and established industry practices.

9.Wave buoys — ToR Sections 2.1–2.4

Are GNSS-based directional wave buoys acceptable if they meet the applicable IEC TS 62600-101 requirements? What evidence is needed, and which data must be transmitted remotely rather than stored onboard for later delivery?

CCREEE Response: In accordance with Section 2.1 of the ToR, equivalent directional wave measurement systems that demonstrate compliance with the applicable IEC TS 62600-101 requirements may be considered. Firms proposing alternative measurement systems must provide supporting technical documentation, including manufacturer specifications, calibration records, validation results and details of the measurement and processing methodology. This documentation should demonstrate that the complete measurement system is capable of reliably producing the required wave parameters and directional spectra, with measurement performance and associated uncertainties adequately characterised.

Sections 2.1–2.3 of the ToR require real-time data transmission and remote monitoring to support the continuous 12-month monitoring programme. Section 2.3 further requires data to be transmitted and archived in real time, with data gaps and anomalies flagged and investigated within 48 hours. Accordingly, firms must propose monitoring arrangements that enable remote access to wave buoy and ADCP measurements, instrument operating status and relevant data quality information. These arrangements must support ongoing monitoring and validation of the emerging in-situ datasets against ERA5 and WAVEWATCH III.

Firms should clearly specify the measurement data and associated information to be transmitted remotely, the proposed transmission frequency, and the arrangements for data storage, synchronisation and recovery in the event of communication interruptions. The proposed arrangements must ensure that the real-time monitoring and data validation requirements of the ToR can be met.

The complete quality-controlled dataset, including computed directional wave spectra and associated metadata, must be processed, archived and submitted in accordance with Section 2.4 and Deliverable D-Data.

Firms are encouraged to review Sections 2.1–2.4 of the ToR for the technical requirements relating to equipment specifications, calibration, deployment, real-time data transmission, remote monitoring and data processing. Proposed equipment and monitoring arrangements must demonstrate their suitability for delivering the required wave resource assessment outputs.

10.Subcontracting limit and equipment rental — Clarifications 3.7 and 3.24

Does the 25% subcontracting limit apply to equipment purchases or rentals, such as wave buoys and ADCPs, or only to subcontracted services? Where a supplier provides both equipment rental and deployment, maintenance or retrieval services, how should these costs be classified for the purpose of this limit?

CCREEE Response: As clarified under Sections 3.7 and 3.24 of the Minutes of the Pre-Proposal Meeting, the maximum permissible subcontracting limit of 25% of the total assignment value applies to services or activities subcontracted to third parties for the execution of the assignment. The rental/leasing of equipment, including wave buoys, Acoustic Doppler Current Profilers (ADCPs), and associated instrumentation, shall be treated as equipment-related costs and shall not, in themselves, constitute subcontracting for the purpose of calculating the 25% limit. However, where an equipment supplier is also engaged to undertake specific services or activities, such as deployment, installation, operation, maintenance, monitoring, or retrieval of equipment, the costs attributable to such services shall be considered subcontracted services and counted towards the permissible subcontracting limit. Where a supplier provides both equipment and associated services under a single arrangement, bidders are required to clearly distinguish and separately itemize equipment purchase/rental costs and service-related costs in their financial proposals. This distinction must reflect the actual nature and scope of the arrangements and shall not be used to circumvent the prescribed subcontracting limit. Bidders shall also clearly identify all proposed subcontractors, their respective roles, responsibilities and scope of services in their technical proposals. In all cases, the lead consulting firm or Joint Venture (JV) shall remain fully responsible for the overall management, coordination, quality and satisfactory completion of the assignment, including all equipment-related arrangements and subcontracted activities, in accordance with the RFP and Terms of Reference.

11. Team Leader Qualifications — Section F. Consultancy Qualifications

While your ToR states that the Team Leader must hold an advanced degree in Ocean Engineering, Marine Engineering, Renewable Energy Engineering or Oceanography, would a PhD in Marine Biology be accepted when the individual has extensive demonstrable experience in wave and tidal energy as well as all other relevant areas?

CCREEE Response: The qualifications and relevant professional experience of all proposed key experts, including the Team Leader, shall be assessed by the Evaluation Committee in accordance with the qualification

requirements and evaluation criteria stipulated in the RFP and Terms of Reference (TOR). The relevance and suitability of any alternative academic qualification, together with the candidate's demonstrated professional experience, shall be considered strictly within the framework of the prescribed criteria. Accordingly, CCREEE is unable to provide a definitive determination regarding the acceptability of a specific qualification at this stage. Bidders are advised to provide comprehensive supporting information demonstrating the proposed candidate's qualifications, relevant expertise, and professional experience to facilitate an objective and consistent evaluation.

Issued by: Caribbean Centre for Renewable Energy and Energy Efficiency (CCREEE)
Issued on: 06-November-2026