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| **THEMATIC CHALLENGE CALL**  |

**Instructions**

Proposals must be submitted through a consortium led by an environmental sustainability design (ESD) consultant, consisting of technology suppliers, system integrators and research performers.

Please complete **ALL** the sections and follow the instructions given.  Incomplete submissions will not be accepted.  A **“NA”** or **“NIL”** response is required for questions that are not applicable or where there is no information available.

Please e-mail the completed proposal to BCA\_Challenge\_Call@bca.gov.sg by 29 May 2023 (Monday), 2359hrs. All information/data (eg. Product brochures, laboratory/factory test-results, certifications), energy model, cost benefit analysis (including payback) should be submitted to help convey a more complete understanding of the proposal.

**PART A: BUILDING PROJECT:**

Please indicate if this proposal for:

□ South Beach Tower □ Republic Plaza □ M Hotel Singapore

□ Parkroyal Kitchener Hotel □ JW Marriott Hotel Singapore South Beach

□ Hotel Michael

(Note: You are required to submit a separate proposal if you are submitting proposals for more than one building project).

**PART B: ORGANISATION INFORMATION:**

Please attach the following for each of consortium team members:

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| --- | --- |
| □ Consultant  | □ Technology/solution provider |
| □ Research Performer | □ System integrator |
| □ Others (Please specify): |

1. ACRA Bizfile printout
2. Management Financial Accounts,
3. Management CVs on the entity and parent-group level
4. Number of full-time employees on the entity and parent-group level,
5. Percentage of ordinary shares held by Singapore citizens or permanent residents, on the entity and parent-group level, and
6. Latest revenue (FY2021) on the entity and parent-group level.
7. Business Plans in scaling up technology for adoption.

**PART C: DETAILS OF TECHNLOGY (please provide the following details for each of the technologies proposed)**

1. Technology Name, Brand & Model
2. Key features of technology
3. Origins
4. Research papers/journal publications (please attach)
5. Images/brochures including set up and integration to BMS (please attach)
6. Category:

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| --- | --- | --- |
| □ ACMV | □ Envelop and façade system | □ Controls and Operations |
| □ Lighting | □ Indoor Air Quality | □ Energy Generation and Storage |
| □ Others (Please specify): |

1. Description of technologies and solutions:
2. Describe the technology proposed and which aspect of the focus area, as highlighted in the building projects is addressed.
3. Explain the innovation/uniqueness of the technology, and how it is suited for Singapore’s tropical climate.
4. Will this be the first of its kind solution to be demonstrated in Singapore Please share project references (local and/or overseas).
5. Describe the expected outcome(s) of the demonstration in terms of energy savings compared to GM2021 Platinum or best-in-class technology, and its contribution to the building’s Energy Utilisation Index (EUI) compared to GM2021 Platinum Buildings as a baseline
6. Describe how the technology or solution can be demonstrated:
7. Describe the procedures to carry out the demonstration:
	* How will the demonstration be set-up/ installed (drawings, if any);
	* Any regulatory issues or challenges;
	* Space requirements, if any (preferred location/type of space)
	* Any other important information (access requirements, etc.)
8. Describe the measurement and verification proposal to validate the performance of the technology (with a minimum 12 months of validated performance data).

**PART D: SCALABILITY OF TECHNOLOGY**

 □ New development □ Existing building

**Building Types**

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| --- | --- | --- |
| Office □Low-rise (<5 stories)□Mid-rise (>5-12 stories)□High-rise (>12 stories) | □ Hotel  | □ Retail Mall  |
| □ Mixed Development | □ Private Residential  | □ Institutional/ Educational |
| □ F&B | □ Light Industrial | □ Data Centre |
| □ Healthcare | □ Others (please specify): |

1. Describe how you plan to scale up the technology for wider adoption?

**PART E: ECONOMIC CONSIDERATIONS**

1. Estimated CAPEX of the technology and the premium over current GM2021 Platinum or best-in-class technology. Please provide information on $/unit and $/sqm where applicable.
2. Estimated installation cost.
3. Estimated maintenance & operational cost. Please describe the maintenance regime and need for replacement of parts.
4. Describe if there are any productivity improvements and manpower savings in terms of man-hours and cost savings.
5. Estimated lifespan of the technology.
6. Cost benefit analysis including expected payback
7. Estimated lead time (for procurement)

**PART F: COMMERCIAL VIABILITY**

1. Describe the size and profile of the addressable market for your solution in Southeast Asia now and in the next 3 years.
2. Describe how you plans to commercialise your IP (if applicable).
3. Describe your plans to venture into overseas markets.

**PART G: POINT OF CONTACT**

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| Organisation name: |
| UEN: |
| Address: |
| Name & Designation of Contact Person: |
| Contact Number: (Office) (Mobile) |
| Email Address: |

**PART H: INFORMATION OF CONSORTIUM LEAD - ESD CONSULTANT**

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| Company name: |
| UEN: |
| Address: |
| Name & Designation of Contact Person: |
| Contact Number: (Office) (Mobile) |
| Email Address: |

1. Project references:
2. Green Mark (GM) Super Low Energy and Zero Energy certification, local and overseas.
3. GBIC projects – ongoing and completed projects.
4. Composition of consortium – please list team members
5. Proposed Energy Efficiency (should minimally achieve 75% EE over 2005 baseline) and Energy Utilisation Index (EUI). Please include a simple energy modelling to show how the EUI is derived based on the technologies proposed.
6. Proposed CAPEX (provide breakdown of procurement of proposed technologies, installation works, testing and commissioning), measurement and verification of technology performance (adopting IPMVP standards), GBIC related costs including administration and reports.
7. Proposed payback period for the proposed technologies inclusive of a cost benefit analysis.
8. Have you accepted any forms of public funding previously? If yes, please, specify:

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Name and Designation of Consortium Lead Signature