

## **SMART ENERGY CHALLENGE (SEC) Terms and Conditions**

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## GENERAL INSTRUCTIONS

1 The Energy Market Authority (“EMA”) has set up a \$25 million Energy Research Development Fund (“ERDF”) to provide financial support for the implementation of new and innovative energy solutions.

2 The Smart Energy Challenge (“SEC”) is a competitive Request for Proposal (“RFP”) drawing from funds set aside in the ERDF. The SEC will provide seed money of up to \$5 million per project for the development of ideas that address Singapore's energy needs. In particular, the Smart Energy Challenge will seek innovative solutions in three key areas: Power Generation, Energy for Transport and Energy Efficiency for Industry. Through this process, we hope to exploit new technologies and develop solutions that will meet our objectives of economic competitiveness, energy security, and environmental sustainability.

3 The EMA has set up an ERDF Secretariat to administer the SEC. If there are any enquiries or clarifications on the SEC, the applicant may contact the ERDF Secretariat via email to [ema\\_erdf@ema.gov.sg](mailto:ema_erdf@ema.gov.sg).

4 The 1<sup>st</sup> RFP for the SEC is launched on **20 November 2009** and shall close on **20 February 2010 at 4.00 pm**. The applications for the SEC shall be submitted as follows:

- i. Softcopy via email to [EMA\\_ERDF@EMA.GOV.SG](mailto:EMA_ERDF@EMA.GOV.SG) by **20 February 2010, 4.00 pm, Singapore time**; and
- ii. One hardcopy duly signed and endorsed. It shall be printed on both sides in a booklet and submitted in a sealed envelope by **20 February 2010, 4.00 pm, Singapore time** to:

ERDF Secretariat  
Energy Market Authority  
991G Alexandra Road #01-29  
Singapore 119975

5 The ERDF Secretariat will acknowledge the receipt of the applications via email. The ERDF Secretariat reserves the right to reject any applications not submitted in accordance with the mode of submission.

6 Any applications received after the closing date and time or any extension thereof shall not be considered.

7 If there are any inconsistencies, conflicts or differences between the softcopy and the hardcopy submitted then the hardcopy of the proposal submitted shall be considered as the final version.

8 Proposals for the SEC will be evaluated by the ERDF Advisory Committee. All information required for evaluation by the ERDF Advisory Committee shall be attached together with the application form to facilitate a good understanding of the proposal. Privileged or confidential information shall be clearly marked as confidential.

9 The applicant agrees that:

- (i) The EMA shall not be held liable nor be bound to give any reasons for the rejection of any proposal.
- (ii) The applicant shall abide by the decisions of the EMA which shall be final;
- (iii) No proposal shall be deemed to have been accepted unless a Letter of Acceptance has been issued to the applicant by the EMA;
- (iv) The issue of a Letter of Acceptance by the EMA accepting the proposal shall create a binding contract between the EMA and the applicant. The Letter of Acceptance will be posted to the successful applicant's address as given in its RFP submission and such posting shall be deemed good service of such notice;
- (v) The applicant shall not take any legal action against the EMA, the ERDF Advisory Committee or any member of the EMA, the ERDF Advisory Committee in relation to their role in evaluating and deliberating on the proposal; and
- (vi) The EMA reserves its rights to terminate any funding or disbursement of funds.
- (vii) The EMA shall co-own the Intellectual Property (IP) developed for the project and shall have all rights to file for IP protection, use the IP and carry out commercialisation activities.

10 All proposals shall be submitted to the EMA using the designated application form which are available on the EMA's website at <http://www.ema.gov.sg>. All sections in the application form shall be duly filled and any requested documents shall be attached together with the application form.

## APPLICATION FORMAT

### a Submission Outline

The outline of the SEC submission is as follows:

<u>Title</u>	(Title to describe the project)
<u>Theme</u>	(Define the focus area of the project)
<u>Executive Summary</u>	(Max 1 page)
Main Project Paper	(Max 9 pages)
Technical Attachments	(Max 5 pages)
Declaration Form	
<u>Table of Annexes</u>	
SEC Annex 1	Company Data
SEC Annex 2	Curriculum Vitae (1 page per researcher)
SEC Annex 3	Format of Declaration Form
SEC Annex 4	References and Synopsis of Papers (2 pages)
SEC Annex 5	Funding Details

Please use Font Size Arial 12.

### b Executive Summary

The Executive Summary shall include but not limited to the following details:

**(i) Project Title**

Title to describe the project.

**(ii) Theme of the project**

Define the focus area of the project.

**(iii) Technical description of the project proposal**

A technical description of the project proposal including the specific objectives, hypotheses, methodology and approach.

**(iv) A simple and non-technical abstract of the project**

A written abstract simplified and to be used for public communication purpose.

**(v) Tangible and intangible outcomes and deliverables of the project**

To provide a list of outcomes and deliverables for the project.

**c Main Project Paper**

The main project paper shall contain but not limited to the following details:

**(i) Objectives of the Project**

This section shall articulate clearly the objectives of the project.

**(ii) Description of the Project**

This section shall include the details on the technical challenges and the proposed methodology and approach to solving the challenges.

The applicant shall highlight the importance of addressing the problems and describe how their work would create new knowledge or advance existing solutions. The novelty of their proposed approach and the potential of producing breakthrough work shall also be highlighted.

The specific competitive advantages of individuals in the proposed research project team in terms of unique capabilities and/or experience relevant to the project's technical focus shall be highlighted. This section shall also be used to highlight the international competitiveness of the work being carried out in terms of technical merit.

**(iii) Other Contributions of the Project**

This section shall be used to describe the contributions of the project in terms of technology, capability development, economic, security, environment and other benefits to Singapore. Any industry collaborations and/or co-funding arrangements shall be included in this section and details are to be provided on the extent of industry participation and plans for commercialisation.

The applicant shall highlight both quantitatively and qualitatively how the project would potentially generate economic payoffs for Singapore.

The applicant shall also indicate other contributions of the project. (e.g. towards building up research infrastructure, manpower, capabilities in Singapore etc.)

**(iv) Project Team Composition**

Relevant track records and capabilities of individual researchers in the team, their international standing and any unique competitive advantages that they bring to the team in achieving the project's objectives shall be highlighted. Detailed CVs of all the project team members shall be attached in Annex 2 of the application.

Each member of the project team must be suitably qualified and experienced in carrying out the project as specified in the RFP and proficient in English.

Any plans to leverage on collaborations (local and international) shall be highlighted. The value of such collaborations to the project must also be articulated.

The EMA reserves the right to request for replacement of any members of the project team.

**(v) Project Management**

An overview of the proposed project management structure and its plans to increase the chances of a higher success rate of achieving the objectives of the project must be provided. International competitiveness of the project being proposed should also be highlighted.

Request for change in project leader must be made in formal writing to the EMA detailing specific reasons by the employing organisation. Suitable replacement must be identified and must be an employee of the administering organisation. If no suitable candidate can be identified, the fund disbursement will be withheld until such a replacement can be found.

Request for change in project scope and direction must be made in formal writing to the EMA detailing specific reasons and how it will affect the project in terms of its outcome, deliverables, duration and funding. Note that there will be no additional funds. Such request for change in project scope and direction shall be subject to the approval of the ERDF Advisory Committee.

**(vi) Deliverables of Project**

A summary of the Key Performance Indicators (KPIs) for the project shall be provided.

The KPIs proposed shall be linked to the objectives of the project and appropriate means of tracking / measuring the success of the project shall be provided.

This section shall also highlight important outcomes that can be expected from the successful execution of the project.

**(vii) Detailed Project Schedule**

Estimated project duration in terms of calendar months shall be provided. A detailed project schedule (e.g. project time-line) of major project activities and milestone checkpoints shall be included. A brief description of each milestone and deliverables of the project shall also be given.

**(viii) Declaration of other Funding Support**

The applicant shall provide the details for all grants currently held or being applied using the format given below. Grants include those supported by or currently under consideration by Agency for Science, Technology and Research (A\*STAR), Building and Construction Authority (BCA), Economic Development Board (EDB), Land Transport Authority (LTA), Ministry of Education (MOE), National Environment Agency (NEA), National Research Foundation (NRF), other public funding schemes etc (e.g. Environment & Water Research Programme (EWRP), The Enterprise Challenge (TEC)) and the universities.

Grant Title & ID	Funding Agency	Status	Amount (S\$'000)	Years of Support	Expiry Date	Role Played

**d Technical Attachment**

The project proposal shall contain up to 5 pages of technical attachment and may include the following:

- (i) Schematic diagram of the process;
- (ii) Photographs;
- (iii) Technical brochures; and
- (iv) Laboratory test results; etc.

**e Declaration Form**

The applicant shall include a duly signed and endorsed Declaration Form together with their SEC RFP submission to the EMA. The format of the Declaration Form is shown below and submitted together with the application as Annex 3.

**Declaration Form**

I hereby declare the following on behalf of my company / organisation:

(Please delete accordingly)

(i) Is there any legal proceedings initiated against the company / organisation?

YES	NO
-----	----

(ii) Is the company / organisation insolvent prior to this application?

YES	NO
-----	----

If “YES”, please provide more details in a separate attachment under EMA SEC Annex 3.

Project Title			
Organisation			
Address			
Project Leader (Applicant)		Contact Number	
Designation		Email Address	
Signature & Date			

	Project Supported* by	Project Endorsed* by
Name		
Designation		
Signature and date		

\*Footnote:

Project is to be supported by either the Head of Department, Organisation Research Director or equivalent.

Project is to be endorsed by either the Dean of Institution, Chair of Faculty, Organisation CEO, MD or equivalent.

**f Company Data**

The applicant shall attach a copy of the latest ACRA Full Business Profile and the latest audited annual / financial report together with their submission of proposals under EMA SEC Annex 1.

**g Table of Annexes**

**(i) EMA SEC Annex 1 – Company Data**

The applicant shall attach a copy of the latest ACRA Full Business Profile and the latest audited annual / financial report together with their submission of proposals.

**(ii) EMA SEC Annex 2 – Curriculum Vitae (CV)**

The applicant shall include his/her CV and project members' CV in the proposal. Each CV shall be limited to one page.

**(iii) EMA SEC Annex 3 – Format of Declaration Form**

The applicant shall include a duly signed and endorsed Declaration Form together with their SEC RFP submission to the EMA. The format of the Declaration Form is shown in Section e above and submitted together with the application as Annex 3.

**(iv) EMA SEC Annex 4 – References and synopsis of papers**

The applicant shall include the references that are relevant to the project proposal. The applicant may also include synopsis of papers as part of Annex 4. The applicant shall submit the full paper upon request by the ERDF secretariat.

**(v) EMA SEC Annex 5 – Funding Details**

The applicant shall use the format for funding details to estimate the project budget required to carry out their proposed research project and submit as Annex 5.

## DETAILED BUDGET ESTIMATES

1 The applicant shall use this guideline to estimate the project budget required to carry out their research proposal. Applicant shall include all GST amount, where applicable, in estimating their project budget.

2 The following categories of organisation will qualify for up to 100% funding support of approved qualifying direct costs:

- (i) Institutes of Higher Learning;
- (ii) Public Sector Agencies: and
- (iii) Not-for-profit Organisations and Research Laboratories.

3 Private sector companies, as well as company-affiliated research laboratories/institutions shall qualify for up to 70% of the approved qualifying direct costs of the project.

4 The applicant shall provide the detailed budget estimates for each of the following cost items:

- (i) Expenditure on Manpower (EOM)
- (ii) Equipment
- (iii) Other Operating Expenses (OOE)
  - a. Materials and Consumables
  - b. Subcontracting of Non-research work
  - c. Other Costs
- (iv) Indirect Cost
  - a. Intellectual Property Protection

5 The format on how to fill up the Funding Details is shown below. The applicant shall use the format to tabulate a list of each requested funding support items. The Funding Details shall be submitted together with the application as Annex 5. The applicant shall use one row for each item and may insert additional rows according to their needs.

6 Applicants are also requested to read Annex A: "Notes on Funding Details" as it provides guidance and additional information of the funding details.

## Funding Details

### 1 Expenditure on Manpower (EOM)

Please provide details for the manpower in a separate attachment. In the details for each manpower, please explain individual involvement and declare what portion of his/her salary is dependent on the outcome of the R&D grants.

No.	Name	Monthly Salary (\$\$)	Man-months	Total Cost (\$\$)
1				
2				
3				
Sub-Total (EOM)				

### 2 Equipment

Please provide justification in a separate attachment. In the justification for each equipment, please explain and declare why existing similar equipment (if any) could not be used for the project.

No.	Description	Proposed Quantity	Unit Cost (\$\$)	Useful Life of Equipment (Months)	Total Cost (\$\$)
1					
2					
3					
Sub-Total (Equipment)					

### 3 Other Operating Expenses (OOE)

(i) Material & Consumables\*

No.	Description	Local or Import	Total Cost (\$\$)
1			
2			
3			
Sub-Total (OOE: Material & Consumables)			

(ii) Subcontracting of Non-Research Work\*

<b>No.</b>	<b>Description</b>	<b>Local / Foreign</b>	<b>Related Company (Y/N)</b>	<b>Total Cost (\$)</b>
1				
2				
3				
Sub-Total (OOE: Subcontracting)				

(iii) Other Costs\*

<b>No.</b>	<b>Description</b>	<b>Total Cost (\$)</b>
1		
2		
3		
Sub-Total (OOE: Other Costs)		

\* Footnote: Please provide justification in separate attachments.

#### 4 Summary of Direct Funding Costs

Items	Costs (S\$)
<b>1. Expenditure on Manpower (EOM)</b>	
<b>Sub-total of EOM</b>	
<b>2. Equipment</b>	
Purchase Price < \$100K	
Purchase Price > \$100K	
Software	
<b>Sub-total of Equipment</b>	
<b>3. Other Operation Expenses (OOE)</b>	
Materials and Consumables	
Subcontracting of non-research work	
Other Costs	
<b>Sub-total of OOE</b>	
<b>Total Direct Funding Costs Requested</b>	

#### 5 Intellectual Property (IP) Protection / Commercialisation\*\*

No.	Description	Indicate if item is for IP Protection or commercialisation activities	Total Cost (S\$)
1			
2			
3			

\*\* Applicable to institutes of higher learning; public sector agencies; and not-for-profit organisations and research institutes.

## 6 In-Kind Contribution

Applicant may include in-kind costs contributed by the organisation to conduct the research project. Relevant details (e.g. man-month and monthly salary, net book value of existing equipment, remaining equipment life etc.) shall be provided according to the format shown below.

<b>No.</b>	<b>Description</b>	<b>Total Cost (S\$)</b>
1		
2		
3		
Total In-Kind Contribution		

## Notes on Funding Details

### 1 General Instructions

The applicant shall use EMA SEC Annex 5: "Funding Details" to fill in the requested funding grant amount and to submit it together with their project proposal. Applicant shall check that the numerical inputs and all calculations in the submission are correct. Please indicate "Not Applicable" (N.A.) for items that do not require funding.

### 2 Expenditure on Manpower (EOM)

- (i) The SEC under the ERDF will reimburse the expenditure on manpower for:
  - a. EOM for research staff who are employed specifically to support R&D content of the project.
  - b. Only existing staff whose salary depends solely on the R&D projects secured will be considered for funding and eligible for reimbursement. Please provide justification in separate attachment.
- (ii) Monthly salary shall include basic salary, employer CPF contribution; other costs such as bonuses, staff insurance (which are in line with formal policy of host institution and is consistently applied regardless of funding sources). In addition, medical and dental benefits are also allowed. Allowances such as overtime, housing allowance, settling-in fees and transport shall be excluded.
- (iii) The applicant shall provide the following justifications for each manpower personnel requested including but not limited to:
  - a. A detailed job scope;
  - b. Justification for time required; and
  - c. Qualification / expertise required.

### 3 Equipment

- (i) The applicant shall provide the basis and justification for the purchase of any equipment (e.g. the purpose of the equipment and how it would be applied to the project). In addition to the justification for the purchase of the equipment, the applicant shall also submit three (3) price quotations for equipment costing more than \$100,000.
- (ii) The applicant shall declare whether a similar piece of equipment currently exists within the organisation. For equipment which

already exists within the organization, the applicant shall first try to make internal arrangements to use the equipment instead of buying a new piece of equipment.

- (iii) For applicants who wish to purchase new equipments (which already exist within the organisation), the applicant shall show evidence that they would not be able to rent or utilise the existing equipment. For example, the applicant could provide a photocopy of the log-book to show that the existing equipment is being overused, or a statement from equipment owner on why the equipment could not be shared.
- (iv) A pro-rated capital cost approach shall be adopted for non-specialised plant and non-dedicated equipment. The formula is as follows:

$$\text{Qualifying Cost} = \frac{\text{Equipment Cost X No. of mth equipment is used for the project}}{\text{Useful life of equipment}^*}$$

Where \* is based on Income Tax Act Sixth Schedule (No. of years of working life of assets.)

- (v) Software for office used shall not be supported. Only specialised and dedicated software used for the project shall be supported.

#### **4 Other Operating Expenses (OOE)**

##### **(i) Materials and Consumables**

Examples of supported items are specialised laboratory supplies, materials and consumables. Examples of not supported items are stationery, printer consumables, basic laboratory consumables, books, journals, manuscript and reports.

##### **(ii) Sub-Contracting of Non-Research Work**

This refers to non-research work such as analytical testing, use of specialised laboratory and development of tools for the research.

##### **(iii) Others**

The two main cost items to be classified under OOE Others are: "Rental of Equipment and Maintenance Cost" and "Cost of Living Allowances".

### **a. Rental of Equipment and Maintenance Cost**

The applicant shall provide the cost breakdown for the rental of each piece of equipment and show how the cost is computed by stating the utilisation time and the charge rate for each piece of equipment. The maintenance cost for equipment bought under the project can be claimed under OOE. Maintenance cost for existing equipment will not be supported.

### **b. Cost of Living Allowances**

The SEC under the ERDF will support the costs of Accommodation, Cost of Living Allowances (COLA) and airfare of overseas experts involved directly in the project. The job scope and deliverables for the overseas experts shall be clearly stated. The applicant shall also provide a breakdown on the honorarium (accommodation, salary/allowance, period of attachment). For calculating COLA, the “number of days” shall not include travelling time.

A list of the main allowable funding items under COLA is as follows:

- A round-trip airfare based on economy-class rates;
- COLA includes meals, tourist-class accommodation and road transport and shall follow existing rates from the organisation or government. In calculating COLA, the “number of days” should not include traveling time.
- One-time relocation and settling-in allowances for overseas experts are allowed.

## **5 Overhead Costs**

The following overhead costs should not be included in your budget estimates. For IHLs, public sector agencies and not-for-profit research organisations, these costs would be funded at up to 20% of the total Qualifying Direct Cost excluding exceptional items which are equipment costing more than \$100,000 and subcontracting of non-research work.

- Audit, legal, marketing or consultancy fees
- Utilities and telecommunications costs
- Maintenance and repairs of existing equipment and facilities
- Lease / Rent of land
- Insurances
- General office consumables
- Purchase of books, manuscripts or reports
- Basic laboratory consumables

## **6 Intellectual Property Protection**

- (i) The EMA shall co-own the Intellectual Property (IP) developed for the project and shall have all rights to file for IP protection, use the IP and carry out commercialisation activities.
- (ii) Funding for IP protection and commercialisation activities applies only to IHLs, public sector agencies and not-for-profit organisations. The maximum funding shall be capped at 10% of the total Qualifying Direct Cost excluding exceptional items (5% for IP protection and another 5% for commercialisation activities). IP protection will be computed by the EMA and classified as part of indirect cost.
- (iii) Commercialisation activities shall include proof of concept and costs for prototyping, demonstration project, etc. To qualify for funding for this category, the funded organisation shall provide documentary proof to show that all commercial rights are based in Singapore and to present an account on the use of the funds on an annual basis to the EMA.

## **7 Disbursement of Funds**

Disbursement of funds will be made on a reimbursement basis i.e. the applicant will only be reimbursed for expenses that have been incurred. Direct payment to the applicant's creditors is prohibited. Claims and reimbursements will be made on a quarterly basis up to a cumulative total of 70% of approved direct qualifying costs of a project. The remaining 30% will be held back until the satisfactory completion of the project. The first disbursement may be effected after acceptance of offer subject to a maximum of 70% of the grant approved. The final claim should be submitted within 6 months of completion of the project.