GRANT CALL:
Energy Management Information Systems (EMIS) Demonstration

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EMIS GRANT CALL

Information on Grant Call

1 Energy Management Information Systems (EMIS) can help facility owners to identify energy and energy-related cost saving opportunities, as well as sustain energy reductions through real-time energy monitoring and reporting. Some EMIS may have additional functionalities such as optimisation of operating parameters to reduce energy use.

2 NEA is requesting proposals from facility owners to demonstrate the capabilities and effectiveness of EMIS in supporting energy management and in realising and sustaining energy savings. For this purpose, NEA will co-fund up to 50% of the cost of professional services for the design and implementation of EMIS demonstration projects at manufacturing facilities operating in Singapore. Up to two demonstration projects may be co-funded. Co-funding is capped at S$25,000 per project.

3 All proposals must reach NEA by 12 noon, 6 October 2015 (extended deadline). Successful applicants will be notified in writing by end December 2015.

Energy Management Information Systems (EMIS)

4 An EMIS is a real-time information system that makes energy performance visible to different levels of an organisation, enabling individuals and departments to plan, make decisions and take effective action to manage energy use. It consists of hardware for data capture (e.g. meters, measuring instruments), IT hardware (e.g. computers) and software for visualisation of data, data analysis, reporting and alerts.

5 The basic components and key features of an EMIS are listed below:

   Basic components of EMIS

   a) Sensors and accurate instruments to capture and transmit real-time operating data
b) IT hardware and software for data communications, storage or cloud capabilities, calculations and energy analysis

Key features of EMIS

a) **Real-time energy monitoring**: Dashboard displays of real-time energy data and system level energy metrics using graphs, charts and tables
b) **Integration**: Integration of EMIS with existing SCADA/DCS, BMS, Plant Information Systems, Plant Historian for better data access
c) **Alerts**: Alerts and signalling to prompt operational staff to take corrective action when energy metrics deviate from targets or in instances of poor performance
d) **Optimisation**: Optimisation and control of operating parameters to improve energy efficiency when EMIS is linked to control systems
e) **Diagnostics**: Online heat and mass balance for operational health checks
f) **Reports**: Customised management reports to support decision making, budgeting, target setting, tracking and benchmarking

Scope of the Grant

6 A general outline of an EMIS implementation project is shown below. The cost of professional services for the design and implementation of EMIS projects in existing industrial facilities will be co-funded under this grant call. However, funding support will not cover professional services rendered for the preliminary study phase of the EMIS project. Applicants are expected to already have an understanding of the key energy-using systems in their facility and a breakdown of energy consumption by end use.
Eligibility criteria

7 This grant call is intended for EMIS projects in existing industrial facilities in Singapore owned by Singapore-registered companies. Applicants must be owners and operators of such facilities.

8 The proposed project scope, i.e. the professional services for the design and implementation of EMIS to be supported under this grant call, must not
   a) be currently supported under other NEA grant schemes or grant schemes of other government agencies, or
   b) be the subject of an application or request for funding under other NEA grant schemes or grant schemes of other government agencies.

9 Successful applicants shall undertake to implement the EMIS outlined in their proposals within 10 months of the date of the letter of offer from NEA.
10 Projects that have moved beyond the design phase will not be considered.

11 The EMIS should be implemented on a full facility level. For very large facilities, partial facility level implementation covering a few key energy-consuming processes or systems may be considered. Areas to be excluded must be identified in the proposal with reasons for exclusion.

12 The engaged EMIS consultant should have managed and successfully completed at least one project of comparable scale and scope locally or overseas.

13 The applicant should target a minimum of 2% energy use reduction attributable to the EMIS.

14 Successful applicants shall share the details of the EMIS implementation project such as how it was conceptualised, the steps taken to implement it, challenges encountered, how they were resolved and the benefits to the company via a case study.

15 NEA officers will work closely with the successful applicant and the EMIS consultant on this project. NEA officers must be allowed access, by appointment, to inspect the EMIS in operation when implementation is complete.

Qualifying Costs

16 The qualifying costs for the grant include fees for professional services for the design, implementation and review stages of the EMIS implementation project, but excludes¹:

¹ Costs not supported under the grant may be eligible for other incentives such as tax incentives or other existing energy efficiency incentive schemes.

Under the Productivity and Innovation Credit (PIC) Scheme, businesses can enjoy 400% tax deductions/allowances and/or 60% cash payout for investment in innovation and productivity improvements. Qualifying activities include acquisition and leasing of PIC IT and Automation Equipment. More information can be found at: [https://www.iras.gov.sg/irashome/Plicredit.aspx%23About_Productivity_and_Innovation_Credit](https://www.iras.gov.sg/irashome/Plicredit.aspx%23About_Productivity_and_Innovation_Credit)

The cost of preliminary study work prior to EMIS design and implementation may be supported under NEA’s Energy Efficiency Improvement Assistance Scheme (EASE), if it is part of a complete work scope of an energy audit. More information on EASE can be obtained at: [http://www.e2singapore.gov.sg/Incentives/Energy_Efficiency_Improvement_Assistance_Scheme.aspx](http://www.e2singapore.gov.sg/Incentives/Energy_Efficiency_Improvement_Assistance_Scheme.aspx)
a) equipment costs (e.g. sensors, measuring instruments, computers, routers)

b) equipment installation cost

c) IT software acquisition or licensing costs

d) consumables

e) other costs not directly contributing to the consultancy services provided.

Grant Quantum

17 The grant quantum per project shall be 50% of the qualifying costs (incl. GST), or 1% of the total facility's energy cost in the previous year (i.e. 2014), or $25,000, whichever is lower.

Grant Disbursement

18 The full grant will be disbursed on a reimbursement basis upon submission of a post-implementation report. Only costs incurred during the qualifying period (within 16 months of grant offer) will qualify for reimbursement.

Evaluation Criteria

19 Up to 2 EMIS projects may be selected to receive the grant. The selection of the projects will be based on the following:-

a) Strength and quality of the proposal (e.g. coverage and features of EMIS, opportunities for saving energy, estimated energy savings potential of the project)

b) Prior experience of the EMIS consultant

Project duration and schedule

20 Projects must be contracted and a certified true copy of the contract shall be submitted to NEA within 4 months of the date of NEA’s grant offer.

21 The EMIS shall be commissioned and the projects completed within 10 months of the date of NEA's grant offer.
22 A post-implementation review must be conducted within 6 months from the commissioning of the EMIS.

**Deliverables**

23 The project deliverables are:-

- a) a summarised implementation plan
- b) an EMIS operation manual
- c) a post-implementation report

24 The summarised implementation plan shall be submitted to NEA within 6 months of the date of NA’s letter of offer. An EMIS operation manual shall be submitted to NEA within 10 months of the date of the letter of offer. The post-implementation report shall be submitted within 16 months from the date of the letter of offer.

25 The post-implementation report must include:-

- a) the energy parameters and metrics tracked
- b) where the data sets were obtained from
- c) how the data was measured
- d) how the information is presented on the dashboard and used by facility staff
- e) a description of all the energy-saving measures undertaken (e.g. operational improvements, new investment opportunities identified, improved work processes, improved energy management). The costs and benefits associated with these measures should be clearly evaluated and quantified, where possible
- f) the corresponding absolute energy reductions which are attributable to the EMIS
- g) feedback from facility staff on the use of the EMIS.
Submission requirements

26 Interested applicants must send the following to NEA by **6 October 2015, 12 noon (extended deadline):**

   a) Signed application form
   b) Accounting and Corporate Regulatory Authority (ACRA) business profile

27 All applications shall be submitted in hardcopy in sealed envelope in person, to:

   EMIS Grant Call Coordinator
   c/o Director (Energy Efficiency & Conservation Department)
   National Environment Agency
   40 Scotts Road #19-00
   Singapore 228231

NEA will issue an acknowledgement form to the applicant for every proposal received. All applications shall be duly completed. Incomplete submissions may be rejected.

28 Successful applicants will be notified in writing by end December 2015.

29 For enquiries and submission of proposals, please contact:

   a) Mr Brent Liu,
      Email: brent_liu@nea.gov.sg
      Telephone: 6731 9425

   b) Mr Leow Beng Kwang,
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      Telephone: 6731 9126