

# **GREEN MARK INCENTIVE SCHEME**

## **(Version 2)**

### **APPLICATION FORM**

### **FOR 2<sup>nd</sup> DISBURSEMENT**

### **(Private Development)**

1. Applicants should read the guidelines before filling in this form.
2. You may require about 15 minutes to fill this form. All fields in this application are compulsory. Where information is not applicable, a “N.A.” is necessary.
3. All necessary supporting documents must be submitted together with your application.
4. Where terms or phrases are not defined herein, applicants should refer to the website of the Building and Construction Authority (“BCA”) or write to BCA for interpretive guidance. Such interpretive guidance shall be conclusive.

This application form is to be submitted, together with the Project information sheets duly completed and all required documents listed in the checklist to:

Deputy Director  
Green Policy Department  
Green Mark Incentive Scheme – New Building  
Building and Construction Authority  
5 Maxwell Road  
#17-00 Tower Block MND Complex  
Singapore 069110

For Official Use Only:

|                       |
|-----------------------|
| Registration No.      |
|                       |
| Incentive Entitlement |
|                       |

## GREEN MARK INCENTIVE SCHEME APPLICATION FORM

### PARTICULARS & DECLARATION BY APPLICANTS

We declare that the facts stated in this application and the accompanying information are true and correct to the best of our knowledge and that we have not withheld any material fact. We understand that if we obtain any incentive by way of false or misleading statements or information, or by withholding of any material fact, BCA may, at its discretion, withdraw the incentive and recover immediately from us any amount of the incentive that may have been disbursed.

|                                    |  |                 |  |
|------------------------------------|--|-----------------|--|
| Name of Developer / Building Owner |  |                 |  |
| Address                            |  | Tel No/Fax No   |  |
| Contact Person / Email Address     |  | Company's Stamp |  |
| Name & Designation of Applicant*   |  |                 |  |
| Signature                          |  | Date            |  |

|  |  |                 |  |
|--|--|-----------------|--|
| Name of Architect Firm (Enhanced GMIS) |  |                 |  |
| Address                                |  | Tel No/Fax No   |  |
| Contact Person / Email Address         |  | Company's Stamp |  |
| Name & Designation of Applicant*       |  |                 |  |
| Signature                              |  | Date            |  |

|  |  |                 |  |
|--|--|-----------------|--|
| Name of M&E Engineers Firm (Enhanced GMIS) |  |                 |  |
| Address                                    |  | Tel No/Fax No   |  |
| Contact Person / Email Address             |  | Company's Stamp |  |
| Name & Designation of Applicant*           |  |                 |  |
| Signature                                  |  | Date            |  |

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\* Only the sole proprietor, partner or company director of the applicant company, as registered with Accounting & Corporate Regulatory Authority (ACRA) or professional bodies, may sign this declaration.

**PROJECT INFORMATION (Sheet 1)**

**PROJECT DETAILS**

|   |                                     |   |   |
|---|-------------------------------------|---|---|
| Description of Project:                                     |                                     |   |   |
| Project Name: (Short)                                       |                                     | Building Category   | <input type="checkbox"/> Commercial<br><input type="checkbox"/> Residential<br><input type="checkbox"/> Industrial<br><input type="checkbox"/> Institution<br><input type="checkbox"/> Other<br>_____ |
| Project Address:  |                                     |   |   |
| Developer /Building Owner:                                  |                                     |   |   |
| A Subsidiary of A Major Developer, if applicable            |                                     |   |   |
| Architect:  |                                     |   |   |
| M&E Engineer:   |                                     |   |   |
| Contractor:   |                                     |   |   |
| Managing agent/<br>Maintenance Contractor:                  |                                     |   |   |
| Facility Manager:   |                                     |   |   |
| Other Specialist Consultant :                               |                                     |   |   |
| Total energy consumption for past 12 months (kWh)           |                                     |   |   |
| Total Gross Floor Area <sup>1</sup> (GFA) in m <sup>2</sup> | Green Mark Rating                   | <input type="checkbox"/> Gold<br><input type="checkbox"/> Gold <sup>PLUS</sup><br><input type="checkbox"/> Platinum                       |   |
|   | EDB's Solar Capability Scheme (SCS) | <input type="checkbox"/> No<br><input type="checkbox"/> Pending approval<br><input type="checkbox"/> Yes (state relevant amount \$ _____) |   |

<sup>1</sup> Gross Floor Area (GFA) means the Gross Floor Area which has been permitted under Section 14 of the Planning Act (Cap 232) to be developed.

**GREEN MARK INCENTIVE SCHEME  
APPLICATION FORM  
PROJECT INFORMATION (Sheet 2)**

**CHECKLIST OF DOCUMENTS TO BE ENCLOSED WITH APPLICATION**

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a) Energy Modelling (Only applicable for Air-conditioned building with Green Mark Gold<sup>PLUS</sup> or Platinum)

|   |  |
|---|--|
| Reference model's annual energy consumption |  |
| Actual building's annual energy consumption |  |
| Energy saving (%)                           |  |

The Energy Modelling is done by: \_\_\_\_\_

b) i) All necessary evidence documenting the past 12 months electrical bills after TOP.  
ii) Green Mark Verification Certificate.

c) Information to be submitted for GMIS(NB) declaration

|                          | Items   | No. of Pages | Remarks |
|--------------------------|---|--------------|---------|
| <input type="checkbox"/> | <b>Appendix A:</b><br>Residential Buildings: Summary On Electricity Consumption And Savings     | 2            |         |
| <input type="checkbox"/> | <b>Appendix B:</b><br>Non-Residential Buildings: Summary On Electricity Consumption And Savings | 2            | .       |

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**APPENDIX A: RESIDENTIAL BUILDINGS: SUMMARY ON ELECTRICITY CONSUMPTION AND SAVINGS**

| Items   | Actual Load (kW) | Daily Usage (hr)* | Load per day (kWh) |
|---|------------------|-------------------|--------------------|
|   | A                | B                 | A X B              |
| <b>1) Mechanical Load</b>                         |                  |                   |                    |
| MV Fans (Plantroom)                               |                  |                   |                    |
| Carpark fans                                      |                  |                   |                    |
| A/C for club house                                |                  |                   |                    |
| Lobby A/C (1st sty & Basement)                    |                  |                   |                    |
| Guard House A/C                                   |                  |                   |                    |
| Domestic pumps                                    |                  |                   |                    |
| Ejector pumps                                     |                  |                   |                    |
| Booster pumps                                     |                  |                   |                    |
| Sump Pumps  |                  |                   |                    |
| <b>2) Lift Load</b>                               |                  |                   |                    |
| Passager Lifts                                    |                  |                   |                    |
| Service Lifts                                     |                  |                   |                    |
| Club House Lifts                                  |                  |                   |                    |
| <b>3) General Lightings</b>                       |                  |                   |                    |
| Carpark Lighting - 24 hours operation             |                  |                   |                    |
| Carpark Lighting - 5 hours operation              |                  |                   |                    |
| Guard House                                       |                  |                   |                    |
| Facade lighting                                   |                  |                   |                    |
| Landscape Lighting - 12 hours operation           |                  |                   |                    |
| Landscape Lighting - 5 hours operation            |                  |                   |                    |
| Corridor& staircase Lighting - 12 hours operation |                  |                   |                    |
| Corridor& staircase Lighting - 5 hours operation  |                  |                   |                    |
| <b>4) Club House</b>                              |                  |                   |                    |
| Club Interior Lighting                            |                  |                   |                    |
| Power to Gym equipment, SPA, etc                  |                  |                   |                    |
| Swimming Pool Filtration                          |                  |                   |                    |
| Underwater Lighting                               |                  |                   |                    |
| Water Feature                                     |                  |                   |                    |
| <b>5) Others</b>                                  |                  |                   |                    |
|   |                  |                   |                    |
|   |                  |                   |                    |
|   |                  |                   |                    |

\* Hours used is based on a typical residential building

| Items   | Formula                                   | Value |
|---|---|-------|
| Total kWh per day   | $\sum(A \times B)$                        |       |
| Total Energy Consumption per year (kWh/year) for common areas                                 | $\sum(A \times B) \times 365$             |       |
| Gross Floor Area (m <sup>2</sup> )  | C   |       |
| EEl for Common Facilities (kWh/m <sup>2</sup> /yr) EEl-Common (item to update for appendix B) | $\frac{[\sum(A \times B) \times 365]}{C}$ |       |

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**ELECTRICITY CONSUMPTION FOR DWELLING UNITS A/C**

|                                  | <b>Estimated Load(kW)</b> | <b>Daily Usage (hr)</b> | <b>Load per day (kWh)</b> |
|----------------------------------|---------------------------|-------------------------|---------------------------|
| A/C load for all apartment units |                           |                         |                           |
| <b>Total kWh per day (D)</b>     |                           |                         |                           |

| <b>Items</b>   | <b>Formula</b>           | <b>Value</b> |
|--|--------------------------|--------------|
| Total Energy Consumption per year (kWh/year) for all units A/C | $D \times 365$           |              |
| Gross Floor Area (m <sup>2</sup> )                             | C                        |              |
| EEI for all units A/C (kWh/m <sup>2</sup> /yr)<br>EEI-A/C      | $\frac{D \times 365}{C}$ |              |

**ESTIMATED ENERGY SAVING PER YEAR FOR GREEN FEATURES**

| <b>Green Features</b>              | <b>Estimated Energy Saving Per Year# (kWh)</b> | <b>Distribution of Energy Saving* (%)</b> |
|------------------------------------|--|---|
| Dwelling Units A/C (Estimated)     |  |   |
| Lighting for common areas (Actual) |  |   |
| Car Park MV System (Actual)        |  |   |
| Others (Actual)                    |  |   |
| <b>Total Energy Saving</b>         |  |   |

\* Distribution of energy saving is percentage of estimated energy saving per year for each green features over total energy consumption per year for both common areas and all units A/C

# Details calculation of energy saving for each green features shall be enclosed

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**APPENDIX B: NON-RESIDENTIAL BUILDINGS: SUMMARY ON ELECTRICITY CONSUMPTION AND SAVINGS**

| <b>System/ Equipment</b>                    | <b>Reference Model<br/>Energy Consumption (kWh/yr)</b> | <b>Actual Building<br/>Energy Consumption (kWh/yr)</b> | <b>Energy Consumption Savings<br/>(%)</b> |
|---|--|--|---|
| <b>Lighting (Air-Conditioned Space)</b>     |  |  |   |
| <b>Lighting (Non Air-Conditioned Space)</b> |  |  |   |
| <b><sup>1</sup>Air-Conditioned Plant</b>    |  |  |   |
| <b><sup>2</sup>Air System Fans</b>          |  |  |   |
| <b>Mechanical Ventilation Fans</b>          |  |  |   |
| <b>Lifts</b>                                |  |  |   |
| <b>Escalators</b>                           |  |  |   |
| <b>Receptacle Equipment</b>                 |  |  |   |
| <b>Domestic Water Systems</b>               |  |  |   |
| <b>Others (Pls specify)</b>                 |  |  |   |
| <b>Total Building Energy Consumption</b>    |  |  |   |

Items listed are based on typical building. Items could be added for better description.

<sup>1</sup> Chilled Water System (chillers, water pumps and cooling towers)

<sup>2</sup> Chilled Water Air Handling and Fan Coil Units

# Details calculation of energy saving for each SYSTEM shall be enclosed

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**Renewable Energy Sources (if applicable)**

| System/ Equipment       | Energy Produced (kWh/yr) | Reference Model<br>Energy Consumption<br>(kWh/yr) | Actual Building<br>Energy Consumption<br>(kWh/yr) | Energy Consumption<br>Savings (%) |
|-------------------------|--------------------------|---|---|-----------------------------------|
| Photovoltaic            |                          |   |   |                                   |
| Others (Please specify) |                          |   |   |                                   |
| Total Building Energy   |                          |   |   |                                   |

**Calculation of EEI :**

$$EEI = (TBEC - DCEC) / (GFA_{\text{excluding carpark}} - DCA - GLA * VCR) * (55 / OH)$$

where:

- a) TBEC : Total building energy consumption (kWh/year)
- b) CPEC : Carpark energy consumption (kWh/year)
- c) DCEC : Data centre energy consumption (kWh/year)
- d) GFA<sub>excluding carpark</sub> : Gross floor area exclusive of car park area (m<sup>2</sup>)
- e) DCA : Data centre area (m<sup>2</sup>)
- f) GLA : Gross lettable area (m<sup>2</sup>),
- g) VCR : Weighted floor vacancy rate of gross lettable area (%)
- h) 55 : Typical weekly operating hours of office buildings in Singapore (hrs/week)
- i) OH : Weighted weekly operating hours of gross lettable area exclusive of data centre area (hrs/week)

**For tenant receptacle load, the table below is for reference**

| Receptacle Loads           | Nominal Values       |
|----------------------------|----------------------|
| Computer intensive offices | 22 W/m <sup>2</sup>  |
| General office areas       | 16W/m <sup>2</sup>   |
| Large conference areas     | 11 W/m <sup>2</sup>  |
| Server/Computer rooms      | 540 W/m <sup>2</sup> |

Source: ASHRAE STD 90.1:1999

|            |  |
|------------|--|
| <b>EEI</b> |  |
|------------|--|