



BCA Incentive and Financing Schemes for Existing Buildings



Incentive and Financing Schemes



Health Check



GMIS-EBP

Enhanced!



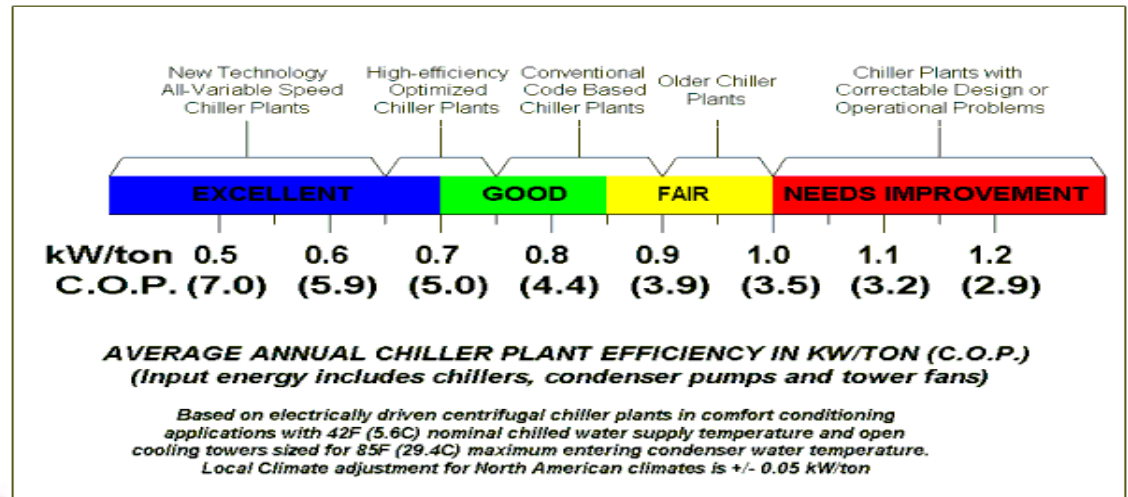
BREEF

Extended!



Health Check Scheme

- Energy audit on the central chiller plant only.
- Eligibility
 - existing buildings with GFA $\geq 2000 \text{ m}^2$,
 - has a central air-conditioning plant &
 - have not conducted any energy audit in the last 12 months prior to Green Mark application.
- Building owners applying for the Health Check scheme must also apply for Green Mark certification



Health Check Scheme

- Building owner can choose to either appoint BCA's Term Contractor or to engage their own ESCO (Energy Auditor) or PE (Mech) to perform the audit. The co-funding amount for either options will be based on BCA subsidized rate.

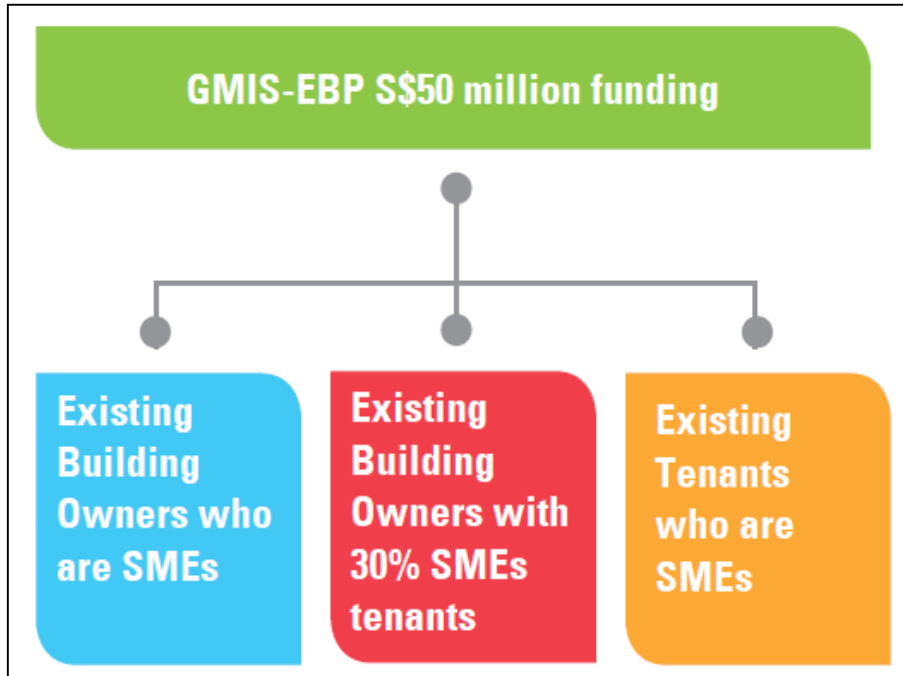


Subsidized Amount

- Depends on the no. of measuring instruments (flow meters, temperature sensors & power meters) required to perform the audit.
- Subsidized amount ranges from \$4,000 to \$6,500 per chiller plant. For e.g. 1 CHW pipe header + 1 CW pipe header + 3 sets of chillers, CHW pumps, CW pumps & cooling towers – \$4,000



Recap on GMIS-EBP



- Applicable for :**
- Existing private commercial non-residential buildings such as shopping malls, hotels and office buildings.
 - Tenanted premises such as offices, retail, restaurant and supermarkets.

The EE retrofitting works shall include the replacement to water-cooled chiller plant or VRF system.



Supporting documents for SME status

	Eligibility requirement for SME	Documents Required
1	Minimum 30% local shareholding	Accounting & Corporate Regulatory Authority (ACRA)
2	Company's Group annual sales turnover not more than S\$100 million	Declaration on :- a) Group annual sales turnover, and b) Employment size
3	Company's Group employment size not more than 200 workers	



Co-funding for Building Owners

For buildings using **water-cooled chilled water system**

Co-funding Rate	Cap Amount	Green Mark Requirement		Air-con System Efficiency (kW/RT)		Airside Efficiency (kW/RT)*
35%	\$1,500,000	Gold or better	+	0.7 or better	+	0.28
40%	\$2,250,000	Gold ^{plus} or better		0.65 or better		0.25
50%	\$3,000,000	Platinum		0.6 or better		0.22

*Requirement for Airside Efficiency is applicable only when EE works include replacement of AHU/FCU

For buildings using **Variable Refrigerant Flow (VRF) System**

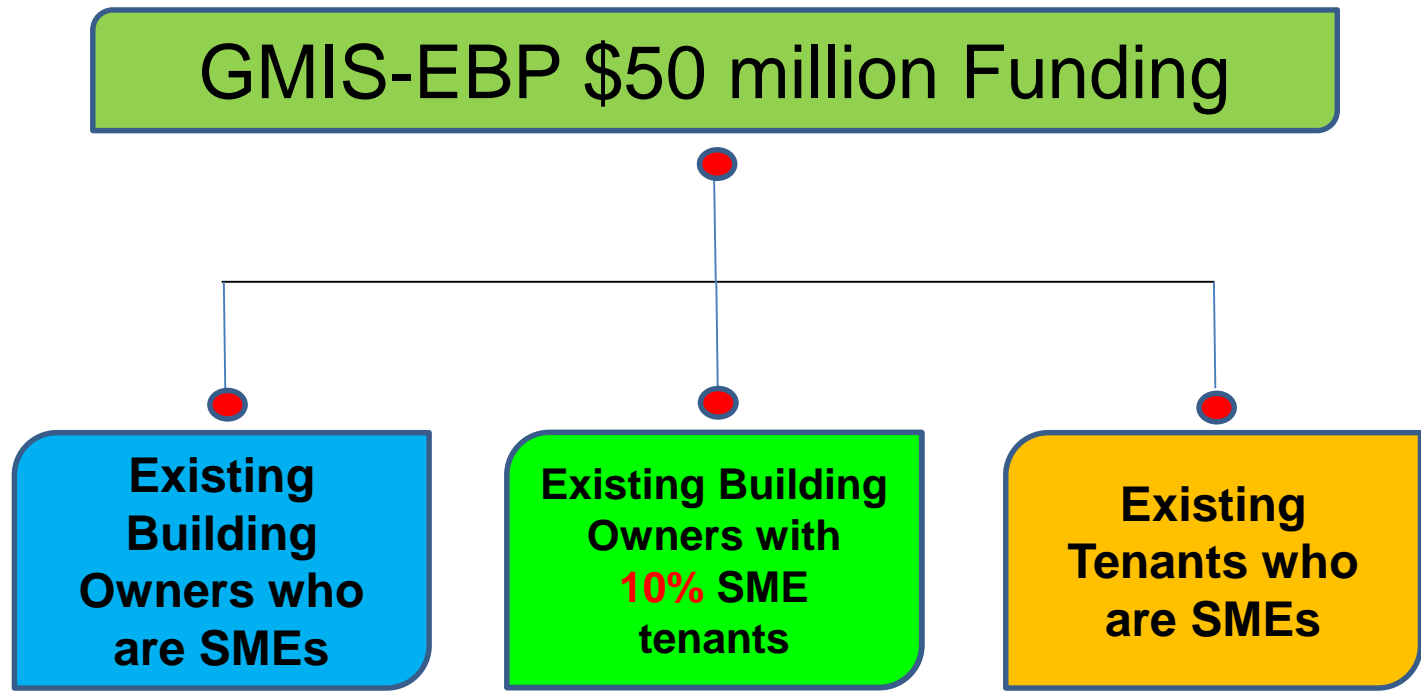
Co-funding Rate	Cap Amount	Green Mark Requirement		System Efficiency for VRF (kW/RT)*
35%	\$500,000	Gold or better	+	0.9 or better
40%	\$600,000	Gold ^{plus} or better		0.85 or better
50%	\$700,000	Platinum		0.75

Additional eligibility criteria for VRF System :

- (1) GFA ≤ 8,000 m²
- (2) Achieve minimum 10% energy savings for Total Building Energy Consumption



Enhancement 1: Eligibility Criteria



Energy improvement works for the identified 10% SME tenants

Applicant or Building Owner is required to replace the lightings or to achieve Green Mark certification for these 10% SME tenants' premises



Enhancement 2: Optimisation

Energy improvement works need not necessarily include chiller replacement, **building optimisation works** will be funded under GMIS-EBP.

In order to ensure energy savings through this optimisation, building owner will be required to adopt Energy Performance Contracting (EPC), where EPC firms guarantee the committed energy savings.

Examples of Optimisation works

- 1) *Installation of Variable Speed Drives (VSD) for cooling tower fans' motors, pumps' motors, AHU motors and ventilation fans' motors.*
- 2) *Removal of existing throttling valves or fittings to reduce the high pressure losses/resistance in the system.*
- 3) *Trimming or replacing impeller for oversized pumps.*
- 4) *Replacement to high efficient motors and in-fills for cooling towers.*
- 5) *Installation of Chiller Plant Optimization System to optimize the chiller plant operations and controls and achieve better plant system efficiency; and shall have the capability to compute heat balance.*
- 6) *Installation of automatic condenser tube cleaning system for the existing chillers.*
- 7) *Replacement of cooling coils, blower and motors for Air Handling Units and Fan Coil Units.*



Enhancement 2: Optimisation

For buildings undergoing Optimisation:

Co-funding Rate	Cap Amount	Green Mark Rating
35%	\$500,000	Gold or better
40%	\$600,000	Gold ^{plus} or better
50%	\$700,000	Platinum



Enhancement 3: Buildings in Business Parks

GMIS-EBP is now extended to buildings located in **Business Parks**.

Requirements:

- Buildings must have **office or retail components**
- For buildings with GFA more than 5,000 m² and are replacing the central chiller plant, they shall be subjected to the Phase 2 Environmental Sustainability Measures for Existing Buildings
- Building owners must be SMEs or with at least 10% of the tenants who are SMEs.

International Business Park

Science Park

Technopark @ Chai Chee

Changi Business Park

CleanTech Park



Enhancement 3: Buildings by VWOs and NGOs

GMIS-EBP is now extended to include buildings owned by:

- **Voluntary Welfare Organisations (VWOs),**
- **Non-Governmental Organisation (NGOs) and**
- **Religious Organisations buildings**

Requirements

- Building is owned by VWOs, NGOs or religious organisations
- Must not received funding from Government for building energy retrofits works



Summary of Enhancements

ENHANCED

GMIS-EBP

Existing Building Owners (Commercial & **Business Parks**) who are SMEs

Existing Building Owners with **10%** SME tenants

Existing building owners of **VWOs, NGOs & religious buildings**

Existing Tenants who are SMEs

Energy improvement works include chiller or VRF replacement and **building optimisation works**

For more details about the scheme, please visit <https://www.bca.gov.sg/greenmark/gmisebp.html>



Pilot Building Retrofit Energy Efficiency Financing (BREEF)

- BCA partnered a few Participating Financial Institutions to offer financing for energy efficiency retrofits.
- Performance guarantee through an Energy Performance Contract (EPC) required.
- Projects are required to meet min. Green Mark certified rating.



Eligibility for BREEF Scheme

Building Owners of a non-residential building

MCST for commercial and residential buildings

Energy Performance Contracting (**EPC**) firms accredited by SGBC

Energy Services Companies (**ESCO**) accredited by ESCO Accreditation Committee

Special Purpose Vehicles (**SPV**)



Participating Financial Institutions



DBS



Hitachi Capital Asia Pacific

*NEW



IFS Capital



Orix Leasing



Standard Chartered



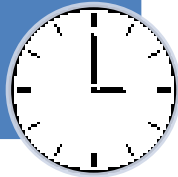
UOB



BREEF Scheme Details

- 8 years

Max Loan
Tenure



- S\$ 5 million

Max Loan
Quantum



- Determined
by PFIs

Interest
Rate



safe

high quality

sustainable

friendly

Incentive Schemes for Existing Buildings

Key features:

- Not mutually exclusive.
- May apply for both schemes if criteria are met.

Incentive (GMIS-EBP)

Target applicant: Building owners & Tenants who are SMEs and building owners who have 10% of it's tenants who are SMEs.

Purpose: Encourage EE retrofits to achieve improved energy performance & GM certification

Capital disbursement: 3 tranches for building owner's scheme and upon completion of EE works for tenant's scheme

Loan (BREEF)

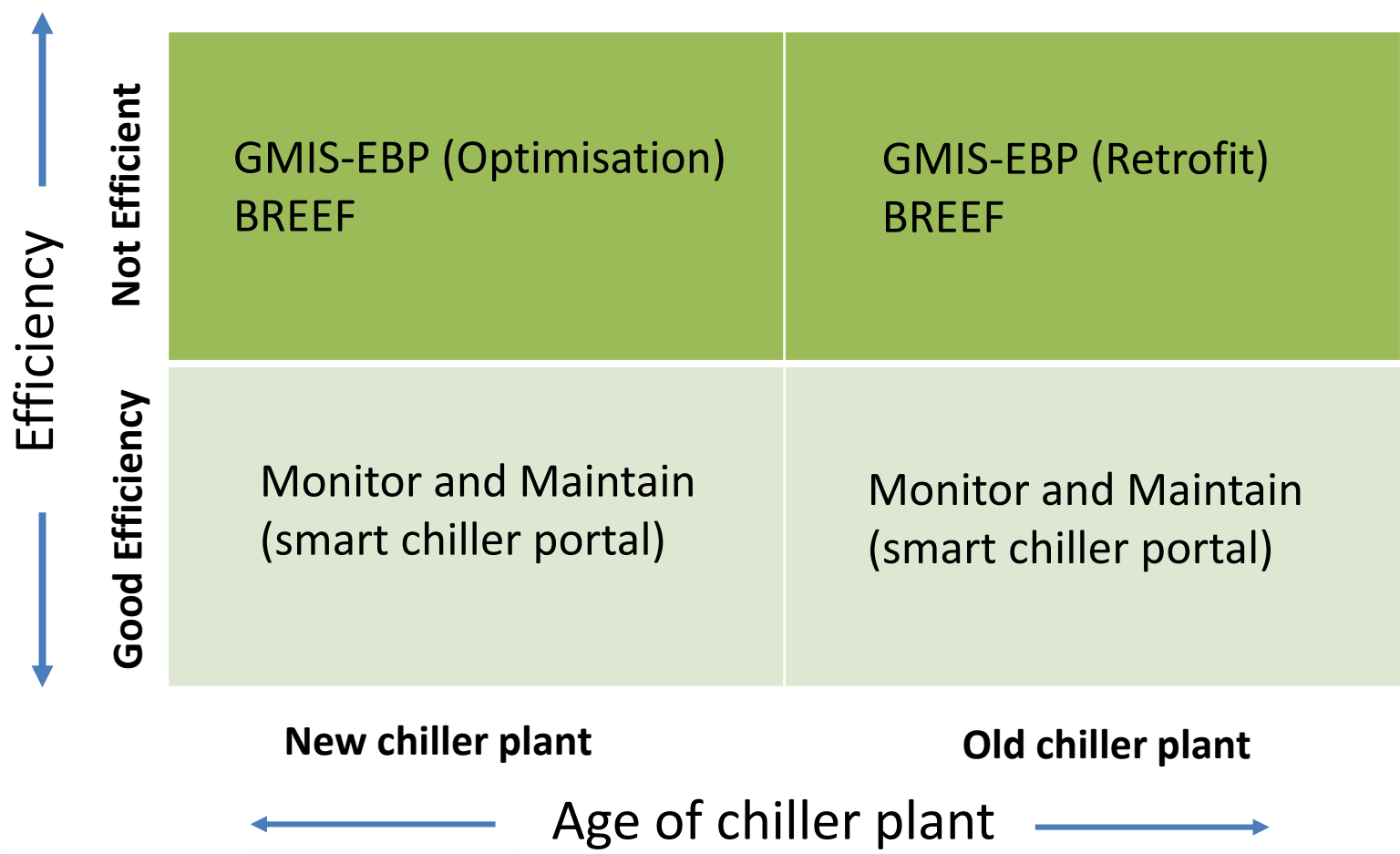
Target applicant: Building owners/ MCSTs/ ESCOs/ EPC firms/ SPV

Purpose: Help with upfront capital for EE retrofit to achieve minimum GM certified level

Capital disbursement: After GM certification is obtained.



Overview of Incentives Schemes



Thank You

For more information, please contact the following officers:

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