KEMENTERIAN PERALIHAN TENAGA DAN TRANSFORMASI AIR

Nikmat Untuk Rakyat

PROGRAM NUR@PETRA: REBATE COOLING SYSTEM FOR INDUSTRY AND COMMERCIAL

IMPLEMENTATION GUIDE

(May 2025 : VERSION 2)

FOR INDUSTRY, COMMERCIAL & CHILLER VERIFIER

KEMENTERIAN PERALIHAN TENAGA DAN TRANSFORMASI AIR

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1.0 DEFINITIONS

"ACEM" - Association of Consulting Engineers Malaysia
"kW/RT" - Kilowatts per Refrigeration Tons.
"IEM" - The Institution of Engineers Malaysia
"MASHRAE" – ASHRAE Malaysia Chapter
"NUR Program" – Nikmat Untuk Rakyat Program.
PETRA - Ministry of Energy Transition and Water Transformation
"SEDA Malaysia" – Sustainable Energy Development Authority Malaysia
"SIRIM QAS" – SIRIM QAS International Sdn Bhd
"RT" - Refrigeration Tons.

2.0 INTRODUCTION

2.1 PROGRAM NIKMAT UNTUK RAKYAT (NUR): REBATE COOLING SYSTEM FOR INDUSTRY AND COMMERCIAL.

Program NUR or Nikmat Untuk Rakyat is a program spearheaded by the Ministry of Energy Transition and Water Transformation (PETRA), to educate and improve energy efficiency in Malaysia, focusing to domestic consumer, industry and commercial. Government has outline 3 main Program, for each program focusing on its target key area, which are;

I. Program NUR@PETRA Category 1: Rebate for Purchasing Energy Efficient Electrical Appliances for domestic consumers;
II. Program NUR@PETRA Category 2: Rebate for Purchasing Energy Efficient Electrical Appliances for Micro, Small and Medium Enterprise (MSME);
III. Program NUR@PETRA Category 3: Rebate Cooling System for industry and commercial

For Rebate Energy Efficient Cooling System, this program will be implemented by SEDA Malaysia through collaboration between government agencies such as Suruhanjaya Tenaga, JKR and industrial association partners (MASHRAE, ACEM, SIRIM QAS and IEM) with participating chiller manufacturers.

This initiative is to stimulate use of energy-efficient chiller by providing rebates to motivate the industry and commercial to replace existing chillers with new energy efficient chillers,to save energy.

2.2 OBJECTIVES

The objectives of the NUR Program are:

i) To support national policy on sustainable energy and it is one of the designated initiatives under National Energy Efficiency Action Plan (NEEAP) for year 2016-2025 and National Energy Transition Roadmap (NETR);
ii) To stimulate energy management practice amongst industries and commercials which is significantly reducing operational cost for daily operation;
iii) To accelerate the transformation of consumer electrical appliances market and increase the share of Energy Efficient (EE) models in the market. Finally, to phase out inefficient models from the local market; and
iv) As one of the initiatives to mitigate GHG emissions reduction.

2.3 PURPOSE

The purpose of this Guide is to explain the Program NUR structure, eligibility including the procedures and process to participate in the Program NUR: Rebate Energy Efficient Cooling System.

3.0 REBATES

Government has allocated the budget for the NUR Program. Funding will be awarded on a first come, first served basis to eligible industry or commercial who replace existing chillers with new energy efficient chillers for their buildings during the rebate offer period through SEDA Malaysia. The rebate amount will be **RM250 per RT (Refrigeration Ton)** which has been allocated based on total budget allocation and capacity to be applied throughout year 2025 and 2026.

4.0 DISTRIBUTION OF QUOTA OF REBATES

The distributions of chillers under NUR Program for year 2025 -2026 are based on first come first serve basis. The final rebate amounts approved subject to the final assessment by the *Jawatankuasa Penilaian dan Pemantauan Program NUR* based on the eligibility criteria outlined. The rebate is open to eligible applicants nationwide.
The amount of rebate approved shall not exceed 300RT per applicant.

5.0 ELIGIBILITY

5.1 APPLICANT

Applicants for Program NUR Rebate Energy Efficient Cooling System must meet ALL of the following eligibility criteria:

A. Applicant must be an **eligible** building chiller owner as explained in the table below.

Eligible criteria	• Chiller/s for comfort/thermal cooling for industry and commercial buildings at **operational condition**; or

	For example: offices, retails or shopping malls, hotels, private hospitals or clinics, factory (office building), private universities or colleges, etc. • Existing chiller/s installed **before or in 2015; and** • **The existing chiller coefficient's performance (COP) lower than the performance outlined in MS1525:2019** • **Replacement of existing chiller to water cooled OR air-cooled chiller/s.**
Non-eligible criteria	• Chiller/s for cooling or chilling for processes activities. *For example: production, manufacturing industry, etc.* • Chiller/s serving both process and office buildings; *For example: factory + office.* • Already replaced new chiller/s; or • Existing chiller/s installed **after year 2015.**

Must submit application form before replacing the existing chiller/s and install new eligible energy efficient chiller/s after get approval letter from SEDA Malaysia.

B. Must make the purchase and completely install new chiller/s within six (6) months from the date of approval.

Rebate Restrictions:

- Rebates will be awarded on a first-come, first-serve basis based on the post-marked date of a complete rebate application received. Rebate applications submitted outside the specified time frames may not be considered.
- Rebate is applicable to the chiller/s only and cost associated with the repair and/or replacements of associated subsystems are not eligible.

5.2 NEW REPLACEMENT ENERGY EFFICIENT CHILLER

All new replacement energy efficient chiller/s installations must meet the following eligibility criteria:

A. **Installation date:** Existing air-cooled or water-cooled electric chiller/s that is/are still in operational.

B. **Efficiency:** Efficiency of the existing chiller/s in kW /RT to be verified at site by an verifier appointed by SEDA Malaysia.

C. **Condition:** The existing chiller/s to be replaced shall be part of a ACMV system and its associated subsystems of a chilled water system that is currently operational and in use.

D. **Standard:** Efficiency of replacement chiller/s must comply with the minimum kW/TR rating as stipulated in **MS 1525:2019 (Code of Practice on Energy Efficiency and use of Renewable Energy for Non-Residential Buildings).**

Equipment	Size of tonnage	COP (kW/RT) @ 100% Load Conditions
Air cooled, with condenser	All	1.20
Reciprocating and Scroll	All	0.77
Rotary Screw	Below 150RT	0.77
	150RT – 300RT	0.68
	Above & equal 300RT	0.62
Centrifugal	Below 300RT	0.63
	Above & equal 300RT	0.57

Source: MS1525:2019 (Table 25. Water chilling packages, electrically driven: Chiller energy performance rating)

E. **Full-load Test:** Every new chiller must be tested at 100% load by chiller manufacturer's recognized testing facilities and submit the factory performance test report to SEDA Malaysia.

F. **On-site Performance Test**: Every new chiller must be tested on site at min 70% load by contractor/supplier together with verifier appointed by SEDA Malaysia.

G. **Chiller Info Plate:** Chiller performance data (as selected for manufacture) to be inscribed on metal plate secured to chiller body for future maintenance reference.

H. **Refrigeration Tons:** Replacement chiller/s may not necessarily be of the same RT (Refrigeration Tons). For example, an existing chilled water system comprising 3 nos. of 200 RT 500 RT chillers but with a peak cooling load of only 700 RT can be replaced with 3 nos. of 350 RT chillers, for total cooling load more than 300RT.

I. **Equipment:** It is expected that associated equipment within the chilled water system such as pumps, cooling towers, valves, power meter, BTU meter etc may also need to be replaced for the system to achieve optimum operating efficiency. However, rebate is only applicable to the chiller/s.

5.3 CRITERIA TO BECOME VERIFIER

The 3rd Party Verifiers shall meet the requirements as below;

	I. Consist of a ACMV technical expert appointed by SEDA Malaysia. II. Application for Verifiers will be assessed and recommended by ASHRAE Malaysia Chapter, ACEM and IEM for SEDA's approval. III. Consist of a member appointed by SEDA Malaysia nominated from SIRIM QAS.

Pre-Requisites for Verifiers (I and ii);

i)	**Member or Associate Member of ASHRAE** with a degree in Engineering (Mechanical or Electrical) with at least **seven (7) years** relevant experience in the HVAC industry.
OR	
ii)	**P.Eng (Mechanical or Electrical)** registered with the Board of Engineers, Malaysia with at least **seven (7) years** relevant experience in the HVAC industry.

6.0 REBATE CALCULATION

Rebate Amount (RM) = A x RM250

where:

A = Capacity of chiller/s based on the capacity value of either existing or replacement chiller/s with max 300RT. (unit: Refrigeration Tons, RT)

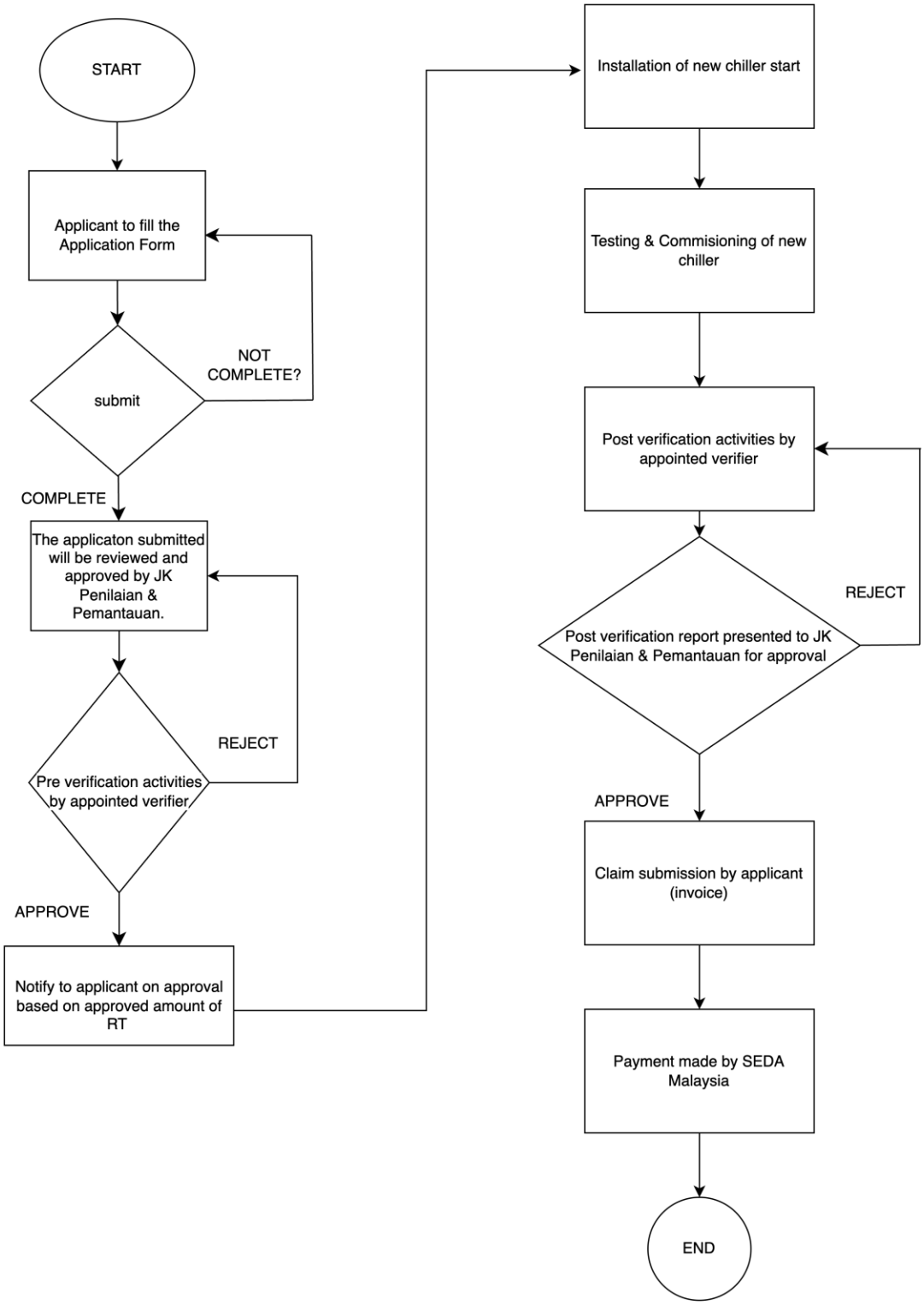
The rebate conditions are explained as shown in Table 1:

7.0 IMPLEMENTATION PARTIES

Function	Party
Implementing agency	SEDA Malaysia
Supporting agency	Suruhanjaya Tenaga
Responsible Ministry	Ministry of Energy Transition and Water Transformation (PETRA)
Distribution of rebate	SEDA Malaysia
Provider of energy efficient chillers	Participating manufacturers
Verifying of energy efficient chillers	Coordinated by SEDA Malaysia and assisted by SIRIM QAS, MASHRAE, ACEM and IEM.
Awareness and promotion	Coordinated and implemented by SEDA Malaysia and assisted by MASHRAE and manufacturers

8.0 PROGRAM STRUCTURE

8.1 PROCESS FLOWCHART



8.2 DETAILS PROCESS

i) Submit application form

a) Application form and guide for application can be downloaded through http://www.seda.gov.my/nur-chiller website.

b) Building owner must submit completed application form and supporting documents to SEDA Malaysia with:

i) information of existing chiller/s; and

ii) information for the proposed replacement chiller/s and installation as prescribed in the application form.

ii) Process application

a) SEDA Malaysia will verify the application form and documents for Program NUR qualification.

b) Incomplete application will be informed and returned to business owner for resubmission.

c) *Jawatankuasa Penilaian dan Pemantauan Program* NUR chaired by SEDA Malaysia will evaluate the application form and appoint authorised verifiers.

d) SEDA Malaysia will issue pre-site installation stage site verification official letter to applicant within 3 days from the date of the meeting.

iii) Site verification of existing chiller/s

a) Verifiers will verify the submitted information of the existing chiller/s including collating missing information where applicable at site.

iv) Submit verification report

a) Verifiers submit site verification report to SEDA Malaysia within 2 weeks.

v) Approval of Installation New Chiller

a) *Jawatankuasa Penilaian dan Pemantauan Program* NUR chaired by SEDA Malaysia will verify, decide and approve the application based on the site verification report submitted.

b) SEDA Malaysia will issue approval to install new chiller letter to applicant within 3 days from the date of the TC meeting.

vi) Purchase and install new chillers

a) Approved applicant must purchase and install the new chiller/s within 6 months from the date of approval.

b) Approved applicant shall notify implementation schedule to SEDA Malaysia.

vii) Site verification of new chiller/s

a) Verifiers verify submitted data on performance of new chiller/s at site including collating missing information where applicable.

b) Verify that permanent sub-metering (power-meter) is installed to measure and monitor the kW/RT of the new chiller/s.

c) Verify that proper testing and commissioning of the new chiller/s have been carried out such as (but not limited) to verifying pressure drop versus flows.

viii) Submit verification report

a) Verifiers submit site verification report to SEDA Malaysia within 2 weeks.

ix) Verify and approve verification report

a) *Jawatankuasa Penilaian dan Pemantauan Program* NUR chaired by SEDA Malaysia will verify, decide and approve the cash rebate based on the verification report submitted.

x) Payment to approved applicant

a) SEDA Malaysia issue payment to approved applicant within 3 weeks from the date of approval.

xi) Monitoring

a) Randomly site monitoring by SEDA Malaysia or authorised verifiers.

b) The applicant will be required to submit randomly progress reports to SEDA Malaysia as specified in the official approval letter.

9.0 EFFECTIVE DATE OF NUR PROGRAM

The NUR Program launched on 1st March 2025. NUR Program will continue from this date until all allocations are exhausted or when a public notice closing the rebate offer is issued whichever is earlier.

SEDA Malaysia

May 2025