

# **GUIDELINES**

## **FOR CORPORATE RENEWABLE ENERGY SUPPLY SCHEME (CRESS)**



# **GUIDELINES FOR CORPORATE RENEWABLE ENERGY SUPPLY SCHEME (CRESS)**

First Edition (September 2024)

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# **ELECTRICITY SUPPLY ACT 1990**

**[Act 447]**

## **GUIDELINES FOR CORPORATE RENEWABLE ENERGY SUPPLY SCHEME**

**GP/ST/No.40/2024**

IN exercise of the power conferred by Section 50C of the Electricity Supply Act [Act 447], the Commission issues the following guidelines.

### **Citation and Commencement**

1. These Guidelines may be cited as the Guidelines for Corporate Renewable Energy Supply Scheme.
2. These Guidelines shall come into operation on the date of registration of these Guidelines.

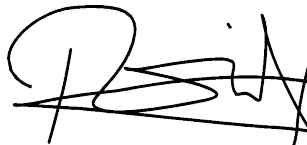
### **Purpose of these Guidelines**

3. The purpose of these Guidelines is to regulate the direct procurement of electricity generated from Green Energy Plant ("GEP") owned by Renewable Energy Developer ("RED") to electricity Green Consumer registered with Electricity Utility Company ("EUC") via Electricity Supply Network in Peninsular Malaysia.

### **Amendment and Variation**

4. The Commission may at any time revise, amend, modify, or revoke these Guidelines, and promulgate any requirement on the use, production and installation of GEP installation to ensure true cost of supply, fairness to all consumer and the security and reliability of the Electricity Supply Network.

Date: 20 September 2024



**DATO' IR. TS. ABDUL RAZIB BIN DAWOOD**

Chief Executive Officer  
Energy Commission

## TABLE OF CONTENTS

1. OBJECTIVES	4
2. APPLICATION OF THESE GUIDELINES	4
3. DEFINITIONS AND INTERPRETATION	5
4. INTRODUCTION	10
5. LEGAL AND REGULATORY REQUIREMENTS	11
6. CORPORATE RENEWABLE ENERGY SUPPLY SCHEME (CRESS)	12
7. CONTRACTUAL FRAMEWORK	15
8. CONDITIONS FOR PARTICIPATION AND OTHER RELEVANT MECHANISM	18
9. LICENSING REQUIREMENT	21
10. RENEWABLE ENERGY CERTIFICATE	22
11. SYSTEM ACCESS CHARGE	22
12. DECOMMISSIONING OF GREEN ENERGY PLANT	22
13. SUBMISSION OF APPLICATION FOR PARTICIPATION	24
14. RIGHTS OF ENERGY COMMISSION	25

## LIST OF APPENDICES

1. Appendix 1: Sample of CRESS Billing Calculation
2. Appendix 2: Indicative Application Process

## LIST OF FIGURES

1. Figure 1: Physical and Financial Framework for the CRESS
2. Figure 2: Contractual Framework for CRESS

## **1. OBJECTIVES**

1.1. These Guidelines are developed by the Commission for the following objectives:

- (a) to introduce the Corporate Renewable Energy Supply Scheme (CRESS) in Peninsular Malaysia as a platform to facilitate the Green Consumers sourcing renewable energy directly from the developer through an Open Access to Peninsular Malaysia Electricity Supply Network;
- (b) to describe the principles of the CRESS;
- (c) to set out the requirements and prerequisites for participation in the CRESS;
- (d) to outline the application and approval process for participation in the CRESS;
- (e) to set out the roles, functions and responsibilities of the relevant parties under the CRESS; and
- (f) to provide for any other matters which may be or incidental to the implementation of the CRESS.

## **2. APPLICATION OF THESE GUIDELINES**

2.1. These Guidelines shall apply to:

- (a) the Renewable Energy Developers (“RED”) who are seeking approval to participate in CRESS;
- (b) the Electricity Utility Companies (“EUC”) who holds a licence to supply and distribute electricity in Peninsular Malaysia and whose system is to be connected with the Green Energy Plant (“GEP”) and Green Consumer;

- (c) the Green Consumers;
- (d) any parties who are involved in the implementation and operation of the CRESS; and
- (e) any parties who intend to participate in the CRESS.

- 2.2. These Guidelines are not intended in any way to circumvent the application of and obligations or requirements under any other written law and any regulatory frameworks, guidelines, and industrial standards.
- 2.3. Any person who wishes to participate in the CRESS shall have the full responsibility to conduct an independent analysis of its proposal, including gathering and presenting all necessary information.
- 2.4. Any person who wishes to participate in the CRESS shall be fully responsible for any decisions taken in relation to the preparation and submission of the application for participation in the CRESS, whether or not in reliance on any information supplied by the Commission, the Single Buyer or any other parties or any of their personnel or representatives.
- 2.5. Any person who wishes to participate in the CRESS shall refer to the relevant laws, procedures and documents issued by the relevant authorities for further information (if required).

### **3. DEFINITIONS AND INTERPRETATION**

- 3.1. In these Guidelines, unless the contrary intention appears:
  - (a) The terms used shall have the same meaning as in the Act, the Regulations, the Guidelines, and Codes made under the Act.
  - (b) The singular includes the plural, and the plural includes the singular.
- 3.2. In these Guide, unless the context requires, the definitions of the terms are as follow:

<b>“Act”</b>	means the Electricity Supply Act 1990 [Act 447], as amended or modified from time to time;
<b>“Backfeed Agreement”</b>	means an agreement entered between the RED and EUC to allow transfer of electricity generated from System to GEP;
<b>“Bilateral Energy Supply Contract”</b>	means a special agreement pursuant to Section 29 of the Act, entered between Green Consumer and Renewable Energy Developer for supply of electricity generated from Green Energy Plant;
<b>“Billing Period”</b>	shall have the meaning given to it as defined in the NEDA Guidelines;
<b>“Codes”</b>	means all codes issued by the Commission, pursuant to Section 50A of the Act, including the Grid Code for Peninsular Malaysia as amended or modified from time to time;
<b>“Commission”</b>	means Energy Commission established under the Energy Commission Act 2001 [Act 610];
<b>“Corporate Renewable Energy Supply Agreement (or CRESA)”</b>	means an agreement between Green Consumer and EUC to allow transfer of electricity from GEP to Green Consumer;
<b>“Commencement Date”</b>	means the commencement date of the Corporate Renewable Energy Supply Agreement between EUC and Green Consumer as indicated in the notification by EUC to the Green Consumer;
<b>“Direct Connection”</b>	means a direct physical link between GEP and Grid System;
<b>“Electricity Supply Network”</b>	means both the Grid System and distribution network;
<b>“Electricity Utility Company (or EUC)”</b>	means the holder of a license granted by the Energy Commission under Section 9 of the Act to distribute and supply electricity in the Peninsular Malaysia with the electricity supplied from the Single Buyer Market;
<b>“Emergency Condition”</b>	means the condition or situation that either meets the criteria as set out in the Grid Code or, according to the Grid System Operator's



	judgment based on the Grid Code or standard utility practices, poses a direct threat to life or property, jeopardises the safety, integrity, stability, or security of the Grid System, could significantly disrupt the Grid System, or could negatively impact the delivery of safe, reliable electricity to consumers, including interconnected utilities. GSO may change or suspend the delivery of renewable energy and/or BESS generation during system emergency;
<b>“Energy Laws”</b>	means the Act and all subsidiary legislations made thereunder, as amended, or modified from time to time;
<b>“Excess Energy Date”</b>	means the date on which the excess energy shall be supplied by the RED;
<b>“Firm Output”</b>	means dispatchable energy output;
<b>“Fund”</b>	means the fund set up by the Government to facilitate energy transition for electricity sector in Peninsular Malaysia;
<b>“Government”</b>	means the Government of Malaysia;
<b>“Green Consumer”</b>	means an owner or occupier of a premise who is required to be supplied with electricity by EUC and RED. Green Consumer must be an existing customer of EUC with new additional demand or new customers which shall enter into CRESA with EUC;
<b>“Green Energy Plant (or GEP)”</b>	means the renewable energy power generation system owned by RED that is connected to the System under CRESS;
<b>“Grid Code for Peninsular Malaysia”</b>	means such document as published by the Commission and as amended or modified from time to time;
<b>“Grid Owner”</b>	means the party that owns the high voltage backbone Grid System and is responsible for maintaining adequate grid capacity in accordance with the provisions of the Grid Code for Peninsular Malaysia and licence standards;

<b>“Grid System”</b>	means the system consisting (wholly or mainly) of high voltage electric lines (132kV and above) owned and operated by EUC and used for the transmission of electricity from one power station to a sub-station or to another power station or between substations or to or from any external interconnection, and includes any plant and apparatus and meters owned or operated by EUC in connection with the transmission of electricity;
<b>“Grid System Operator (or GSO)”</b>	means the entity recognize under the Act as System Operator;
<b>“Guidelines”</b>	means these Guidelines for Corporate Renewable Energy Supply Scheme;
<b>“Guidelines for Single Buyer”</b>	means the Guidelines for Single Buyer Market (Peninsular Malaysia) 2018 as amended or modified from time to time;
<b>“Guidelines on Licensing”</b>	means the guidelines issued by the Commission pursuant to Section 9 of the Act, cited as Guidelines on Licensing Under Section 9 of The Act [Electricity Supply Act 1990 (Act 447)] 2016, as amended or modified from time to time, which is available on the Commission’s website ( <a href="http://www.st.gov.my">www.st.gov.my</a> );
<b>“M<sub>RED</sub>”</b>	means the Meter RED, being the energy meter installed and owned by EUC at the site of the RED to measure and record the energy delivered to the Grid System and energy received from Grid System;
<b>“M<sub>GC</sub>”</b>	means the Meter Green Consumer, being the energy and maximum demand meter installed and owned by EUC at the Green Consumer premise to measure and record the energy delivered and associated maximum demand;
<b>“New Enhanced Dispatch Arrangement (or NEDA)”</b>	has the same meaning as in the Guidelines for New Enhanced Dispatch Arrangement;
<b>“NEDA Agreement”</b>	has the same meaning as in the Guidelines for New Enhanced Dispatch Arrangement;

<b>“NEDA Guidelines”</b>	has the same meaning as in the Guidelines for New Enhanced Dispatch Arrangement, as amended from time to time;
<b>“Open Access”</b>	means non-discriminatory access to the electricity transmission and distribution system provided to eligible consumers and generators;
<b>“Public Generation Licence”</b>	means the generation licence issued by the Commission under Section 9 of the Act for the purpose of generating electricity and supply to or for the use of any other person;
<b>“Regulatory Period”</b>	means the period under Incentive Based Regulation mechanism;
<b>“Renewable Energy Developer (or RED)”</b>	means the RE plant owner whose plant is connected to the System under Corporate Renewable Energy Supply Scheme;
<b>“Renewable Energy System Access Agreement (or RE SAA)”</b>	means an agreement entered between the RED and Grid Owner to allow transfer of electricity generated from GEP to the System;
<b>“Single Buyer”</b>	means the entity recognised under the Act as Single Buyer;
<b>“System”</b>	means an electrical system in which all the conductors and equipment are electrically or magnetically connected;
<b>“System Access Charge (or SAC)”</b>	means charges levied to RED to recover the cost of network infrastructure and other necessary charges in delivering green electricity from RED to the Green Consumer;
<b>“Tenaga Nasional Berhad (or TNB)”</b>	means Tenaga Nasional Berhad, a limited liability company with the address at Pejabat Setiausaha Syarikat, Tenaga Nasional Berhad, Tingkat 16, Tower A, TNB Platinum, No. 3, Jalan Bukit Pantai, Bangsar, 59100 Kuala Lumpur.

- 3.3. Subject to paragraph 3.1 and unless expressly indicated to the contrary or unless the context otherwise requires, terms adopted and used in these Guidelines shall bear the same meaning as they are defined in the Act.

- 3.4. If there are any conflicts between the provisions of these Guidelines and those contained in the Energy Laws, the provisions in the Energy Laws shall prevail.

#### **4. INTRODUCTION**

- 4.1. The Government is committed to battle climate change and facilitate energy transition. Malaysia aims to achieve seventy percent (70%) renewable energy in the capacity mix by 2050 as an effort to fulfil the country's Net Zero aspiration. The Government's aspiration to address the climate change challenges is complemented by the Environmental, Social and Governance (ESG) commitment pledges made by businesses and corporate organisations which promote, amongst others, environmental sustainability.
- 4.2. In line with the aspiration, the Government has implemented several initiatives in the last ten years to facilitate and accelerate the use of renewable energy through programmes such as feed-in tariff, self-consumption, net energy metering, green electricity tariff and large-scale solar power plants.
- 4.3. In 2022, the Government has introduced the Corporate Green Power Programme (CGPP) which enables the businesses or corporate organisations to meet their respective ESG commitment by having a virtual power purchase agreement with RE developer for the use of green electricity in their operation.
- 4.4. In 2024, the CGPP programme is further enhanced with the introduction of Corporate Renewable Energy Supply Scheme, which will enable the businesses and corporate organisations to source their own green electricity through a physical power purchase agreement and Open Access to the Grid System.
- 4.5. The introduction of the CRESS is part of the Ministry of Energy Transition and Water Transformation (PETRA) initiatives under the Government Renewable Energy Enhancement for Niche Sector (GREENS) MADANI aimed at supporting the goal of energy transition for high-priority sectors.

## **5. LEGAL AND REGULATORY REQUIREMENTS**

5.1 The CRESS is in accordance with the provisions and requirements of the current legal and regulatory frameworks, the market mechanism and system operation and dispatch principles, the tariff structures, the electricity tariff setting principles and the metering and billing system as well as with reference to the various technical guidelines of EUC. This is to ensure that it can be implemented under the current frameworks and industry structure with no changes to the current practices, without affecting the current tariffs and without unfair financial impacts on other consumers.

5.2 The main legal and regulatory frameworks which the CRESS will be subject to are as follows:

- (a) The Electricity Supply Act 1990;
- (b) The Electricity Supply Regulations 1994;
- (c) The Licensee Supply Regulations 1990;
- (d) The Guidelines for Single Buyer Market (Peninsular Malaysia);
- (e) The Guidelines for New Enhanced Dispatch Arrangement;
- (f) The Guidelines on Electricity Tariff Determination Under Incentive Based Regulation (IBR) For Peninsular Malaysia;
- (g) The Grid Code for Peninsular Malaysia; and
- (h) The Distribution Code for Peninsular Malaysia, Sabah and F.T. Labuan (Amendment) 2017.

as amended, modified or supplemented from time to time.

5.3 The participants are strongly advised to study and understand the principles provided in the NEDA Guidelines, the Single Buyer market operation and the tariff structure before participating in the CRESS.

## 6. CORPORATE RENEWABLE ENERGY SUPPLY SCHEME (CRESS)

- 6.1 The CRESS provides an avenue for Green Consumers to procure green electricity directly from the RED through Open Access to the Grid System.
- 6.2 In line with the Government's intention, this CRESS will be implemented using the NEDA framework and involve several parties such as RED, Green Consumer, Single Buyer, GSO, Grid Owner and the EUC.
- 6.3 The CRESS framework is as illustrated in **Figure 1** (Physical and Financial Framework).

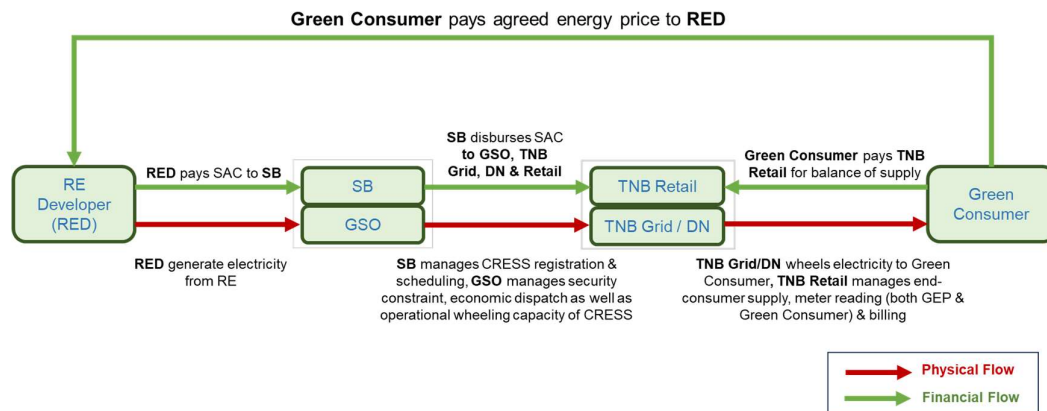


Figure 1: Physical and Financial Framework for the CRESS

- 6.4 The RED shall develop, own and operate a new GEP for its Green Consumer. The GEP shall have Direct Connection in accordance with the Grid Code for Peninsular Malaysia. The energy produced by the GEP is exported through the Electricity Supply Network in accordance with NEDA Guidelines and relevant Codes and Agreement.
- 6.5 The RED is allowed to contract with more than one (1) Green Consumer up to the maximum registered export energy for the CRESS.
- 6.6 The Single Buyer shall administer the registration of RED as a NEDA participant, manage the operation of energy generated by the RED, which

includes but are not limited to the scheduling and settlement with RED under the CRESS.

- 6.7 The GSO shall manage the dispatch of the energy produced from the GEP and any storage system associated with the RED and at the same time ensure the security of the Electricity Supply Network. GSO also manages the testing and commissioning of these assets as required under the Grid Code and other relevant guidelines related to the operation of these generating or storage modules.
- 6.8 The energy produced by RED shall be wheeled through to the Green Consumer using the Electricity Supply Network and subject to the SAC. The wheeling availability shall be declared by the GSO.
- 6.9 A Green Consumer is allowed to source green electricity from more than one (1) RED up to its maximum energy as declared in the CRESA with the EUC.
- 6.10 The EUC shall manage the last mile connection and relevant services to the Green Consumer. The EUC shall also be responsible as the supplier of last resort as per declared demand contracted with the EUC in the event where RED is not able to generate and supply electricity to the Green Consumer.
- 6.11 The EUC shall carry out the billing process and issue the relevant bill to the Green Consumer based on meter readings at both RED ( $M_{RED}$ ) and Green Consumer ( $M_{GC}$ ) premises. The meter reading at RED and Green Consumer premises shall be coordinated in such a way that the readings reflect the supply and consumption of electricity that occur within the same time during the Billing Period. The meter reading and billing activities shall be carried out on a monthly basis. RED and Green Consumer shall also grant EUC and Single Buyer the access for  $M_{RED}$  and  $M_{GC}$ .
- 6.12 The EUC shall provide the meter readings of  $M_{RED}$  and  $M_{GC}$  to the Single Buyer for the purpose of billing process and issuance of the relevant bill to RED by Single Buyer on the first (1<sup>st</sup>) day of the month.

6.13 The bill issued by the EUC to the Green Consumer shall contain, but not limited to, the following information:

- (a) Period covered by meter reading and billing;
- (b) Quantity consumed by the Green Consumer ( $M_{GC}$ );
- (c) Quantity exported and supplied by RED ( $M_{RED}$ );
- (d) Quantity supplied by the EUC as a supplier of last resort ( $M_{GC}-M_{RED}$ );
- (e) Amount to be paid to the EUC for the supplied energy, relevant fixed charges and other services; and
- (f) Actual metered maximum demand.

6.14 EUC will issue an electricity bill to the Green Consumer for every billing cycle period, being:

- (a) the period beginning on the Commencement Date and ending on the date on which the first bill is issued by EUC to the Green Consumer, following the occurrence of such Commencement Date;
- (b) each one (1) month period thereafter during the term of the CRESA between EUC and Green Consumer; and
- (c) the period beginning from the date following the last date of the immediate preceding bill and ending on the date the CRESA between EUC and Green Consumer expires in accordance with its terms.

6.15 The EUC may also offer billing services to RED and Green Consumer for energy supplied by RED to Green Consumer.

6.16 The Green Consumer shall make payment due to the EUC for electricity supplied by EUC in accordance with the CRESA between the Green Consumer and the EUC. The Green Consumer shall also make payment to RED for green electricity supplied from RED in accordance with the Bilateral Energy Supply Contract and RED.



- 6.17 For the same Billing Period as described in item 6.11, 6.12 and 6.13, the Single Buyer shall carry out the billing process and issue the relevant bill to the RED based on meter reading at RED ( $M_{RED}$ ) premise. Billing period for CRESS programme shall start from 1<sup>st</sup> of the month.
- 6.18 The bill issued by the Single Buyer to the RED shall contain, but not limited to, the following information:
- (a) Billing Period covered by meter reading;
  - (b) Quantity exported and supplied by RED ( $M_{RED}$ );
  - (c) SAC (based on  $M_{RED}$ ), relevant NEDA charges, and other services (if any);
  - (d) Quantity of excess energy (if any); and
  - (e) Net amount to be paid to the Single Buyer after netting off amount related to excess energy.
- 6.19 The RED shall make payment due to the Single Buyer in accordance with the settlement provisions stipulated in the NEDA Guidelines.
- 6.20 In the event where  $M_{RED}$  is greater than the total of  $M_{GC}$  due to Green Consumer's lower energy usage, the amount of energy greater than  $M_{GC}$  shall be deemed as free energy to the system.
- 6.21 Upon receiving the payment from the RED, the Single Buyer shall then disburse the components of SAC to the relevant parties.

## **7. CONTRACTUAL FRAMEWORK**

- 7.1 The overview of the contractual framework for this CRESS is as illustrated in **Figure 2**.

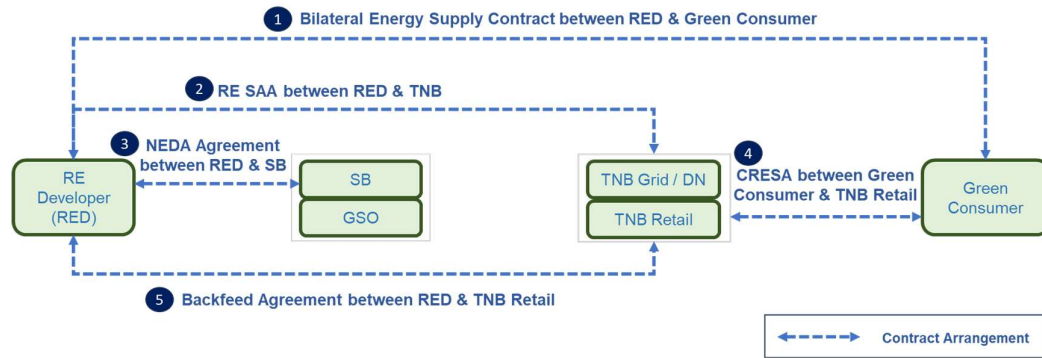


Figure 2: Contractual Framework for CRESS

7.2 There are at least five (5) separate contracts involved in this CRESS. The agreements are as follows:

- (a) Bilateral Energy Supply Contract between RED and Green Consumer for the sales and purchase of green electricity;
- (b) Renewable Energy Supply Access Agreement between the Grid Owner and the RED;
- (c) NEDA Agreement between RED and the Single Buyer for the invoicing and collecting of the relevant SAC and compliance to the NEDA Guidelines and these Guidelines;
- (d) Corporate Renewable Energy Supply Agreement between the Green Consumer and the EUC for the sales and purchase of electricity from the EUC; and
- (e) Backfeed Agreement between RED and the EUC for the sales and purchase of electricity from the EUC.

7.3 The Bilateral Energy Supply Contract between the RED and the Green Consumer shall include, but not limited to, the following items:

- (a) the governing law, Act and Regulations;
- (b) the roles and responsibility of RED in supplying the energy to Green Consumer by applying the prudent utility practices;

- (c) the concern or right of the Green Consumer with regards to the quality of supply;
- (d) the information regarding RED which includes but not limited to the installed capacity, location, commencement date, commercial operation date, interconnection and metering;
- (e) the information on the energy sales which includes but not limited to the term of agreement, rate and energy payment;
- (f) the information on billing which includes but not limited to the billing period, calculation, statement, meter reading, bill payment, disputes on non-accuracy and records;
- (g) the information for during supply interruption, emergency operation, scheduling and maintenance;
- (h) the information on the green attribute arrangement (if any); and
- (i) the force majeure event and suspension of sales and purchase of energy by both parties.

7.4 The RED shall also register as a NEDA participant and execute the NEDA Agreement. This NEDA Agreement shall bind the RED to the NEDA Guidelines which will be part of the mechanism for the CRESS implementation.

7.5 In addition, the RED shall enter into RE SAA with the Grid Owner which binds the RED to the technical requirements for the network access. This RE SAA ensures that the RED complies with the relevant technical Codes and Guidelines.

7.6 The RED shall also enter into Backfeed Agreement with the EUC to obtain electricity supply for plant own consumption, backfeed requirement during construction and other usages.

- 7.7 In managing item 7.3(f), the RED may also enter into an agreement with the EUC to manage the billing and payment collection from the Green Consumer on behalf of the RED.
- 7.8 In managing CRESS, RED and Green Consumer shall allow generation and consumption data to be shared by all relevant parties.
- 7.9 In addition to the Bilateral Energy Supply Contract signed between the Green Consumer and the RED, the Green Consumer shall also enter into the CRESA with the EUC as the supplier of last resort. The agreement shall reflect and cover the necessary arrangement as highlighted in item 6.10 to 6.14.

## **8. REQUIREMENTS AND PREREQUISITES FOR PARTICIPATION IN CRESS AND OTHER RELEVANT MECHANISM**

- 8.1 Green Consumer shall be the registered high voltage and medium voltage consumer of the EUC in Peninsular Malaysia.
- 8.2 The RED can be the owner of the GEP and Green Consumer.
- 8.3 The Green Consumer can be the owner of the RED and GEP.
- 8.4 The electricity generated by the GEP shall be in the form of renewable energy.
- 8.5 The RED shall be operating in Peninsular Malaysia with at least fifty one percent (51%) local ownership which shall be part of the licence condition.
- 8.6 The GEP shall be at least 30MW and have Direct Connection.
- 8.7 Any dedicated connection between the GEP and the Green Consumer is not permissible under these Guidelines.

- 8.8 The maximum export capacity from GEP to the Grid System shall be determined based on the outcome of power system study.
- 8.9 The RED shall declare its maximum monthly energy output during registration as CRESS participant.
- 8.10 Exported energy by RED that is greater than the maximum monthly energy demand due to withdrawal of Green Consumer from the programme (excess energy), can be sold to the system through NEDA mechanism at 8 sen/kWh, subject to the system condition and GSO's approval. SAC is not applicable if RED is selling the excess energy to Grid System.
- 8.11 RED shall provide a written notification on the discontinuation of the Bilateral Energy Supply Contract to Single Buyer prior to thirty (30) days of the Excess Energy Date.
- 8.12 Exported energy by RED that is greater than the maximum monthly energy demand by Green Consumer due to imbalance between generation and demand, will not be compensated through NEDA mechanism.
- 8.13 GEP shall declare a Firm Output for the day-ahead scheduling in the Market Participant Interface (MPI).
- 8.14 For the avoidance of doubt, in the event where the GEP is unable to fulfil the requirement of Clause 8.9;
- (a) the RED shall develop an energy storage system with Direct Connection. The energy storage capacity (MW) shall not be less than fifty percent (50%) of the GEP registered capacity or the tested capacity prior to commercial operations whichever ever lower, for four (4) consecutive hours and dispatchable by GSO as per system requirement; or
  - (b) RED shall be subject to a higher System Access Charge.

- 8.15 In the event where energy storage is unavailable due to planned or unplanned outage, RED shall be subject to non-firm SAC.
- 8.16 In carrying out its role in maintaining system security, GSO shall have the right to instruct GEP to reduce, maintain or increase the output subject to system condition. The facility for this control and monitoring will be tested prior to commercial operation, in line with the Codes and relevant guidelines.
- 8.17 The GSO shall only perform its duties under these Guidelines if the system permits and shall not be obligated to dispatch power in the event of an Emergency Condition within the grid system.
- 8.18 RED may supply to more than one (1) Green Consumer and shall comply with the following conditions:
- (a) RED shall declare the amount of energy allocated for each of its Green Consumer in percentage of maximum monthly energy output declared during registration;
  - (b) In the event where the total monthly energy output of RED is lower than the declared maximum monthly energy output, the EUC shall use the allocated percentage and actual total monthly energy output in the billing calculation for the Green Consumer;
  - (c) In the event where the total monthly energy output of RED is greater than the declared maximum monthly energy output, the EUC shall use the allocated percentage and declared maximum monthly energy output in the billing calculation for the Green Consumer;
  - (d) Any changes on the percentage of energy allocated for the Green Consumer can be made in writing by RED to the Commission and copied to the Single Buyer and EUC no later than one hundred twenty (120) days prior to the effectiveness of the intended changes. Effectiveness of the changes will only occur on the first (1<sup>st</sup>) day of any calendar month; and

- (e) Any changes or replacement of Green Consumer shall be made in writing by RED to the Energy Commission and copied to the Single Buyer and the EUC no later than ninety (90) days before the effectiveness of the changes. Effectiveness of the changes will only occur on the first day of any calendar month.

8.19 Green Consumer shall be a new customer to the EUC operated in Peninsular Malaysia who has received or will receive electricity supply starting on 30<sup>th</sup> September 2024. Existing customers shall only participate if it declares new additional demand to the EUC.

8.20 For existing customer who participates with new additional demand, 100% of maximum demand declared multiply by load factor of 0.52 x 730 (hours) will be used to set the minimum threshold under CRESS programme. The minimum threshold will be used for billing calculation.

8.21 The approval of CRESS application is subject to:

- (a) Successful registration under NEDA;
- (b) Completeness of all related agreement or contract as stipulated in Clause 7.2;
- (c) Compliance to the prerequisites and requirements as stated in these Guidelines; and
- (d) Full compliance to GSO technical documents.

8.22 The sample of CRESS billing calculation is provided in **Appendix 1**.

## **9. LICENSING REQUIREMENT**

9.1 The RED shall apply for a licence for the operation of the GEP as stipulated under the “Guidelines on Licensing Under Section 9 of the Act”.

## **10. RENEWABLE ENERGY CERTIFICATE**

- 10.1 Under the CRESS framework, the green attributes belong to the RED. The green attributes shall be transferred to the Green Consumers in accordance to the Bilateral Energy Supply Contract between the RED and the Green Consumer.
- 10.2 Redemption of the green attributes in the form of the Renewable Energy Certificates (RECs) by Green Consumer shall be done in Malaysia according to international standards.
- 10.3 In the event that RED sells excess energy to the Grid System the corresponding green attributes shall belong to the Single Buyer.

## **11. SYSTEM ACCESS CHARGE**

- 11.1 The RED shall be charged with SAC for the use of Peninsular Malaysia Electricity Supply Network and associated services.
- 11.2 The Single Buyer shall be invoicing and collecting the relevant SAC from the RED based on the amount of energy exported by RED into the Grid System. The amount shall exclude the excess energy that is sold to the Single Buyer through NEDA.
- 11.3 The SAC shall be reviewed in every Regulatory Period.
- 11.4 The SAC as published in the Energy Commission's website at [www.st.gov.my](http://www.st.gov.my)

## **12. DECOMMISSIONING OF GREEN ENERGY PLANT**

- 12.1 The application to establish a GEP must include a decommissioning plan which contain the following details:



- (a) The name, address, telephone number, and e-mail address of the person(s) or entity(ies) responsible for implementing the decommissioning plan;
- (b) A statement of conditions that require the decommissioning plan to be implemented;
- (c) Identification of all components of the GEP;
- (d) A plan with timeline and estimated cost for removing all components of the GEP from the property in the event of decommissioning; and
- (e) A plan for recycling or otherwise reusing all components to the greatest extent practicable.

12.2 A GEP shall be subject to decommissioning if it has not been in operation for a period of twelve (12) consecutive months or ceased operation. If decommissioned, the GEP shall be removed by the RED within a period of twelve (12) consecutive months or within the period specified in the decommissioning plan. The plan shall comply with:

- (a) the Act;
- (b) the Regulations;
- (c) the Licensee's Supply Regulations 1990;
- (d) the laws of the relevant local authorities;
- (e) any codes, guidelines, standards, directives and notices issued by the Commission and any other authorities having jurisdiction over the facility works and operation of the GEP; and
- (f) the technical and any other documents published by the EUC on the relevant technical and commercial requirements, specifications, standards, etc. for the decommissioning of the GEP.

In the absence of such guidelines, standards, directives and notices, the requirements shall be in accordance with the acceptable prudent industry practices as may be determined by the Commission.

### **13. SUBMISSION OF APPLICATION FOR PARTICIPATION**

13.1 The application for participation in the CRESS shall start from 30<sup>th</sup> September 2024.

13.2 The submission of application shall be made through the Single Buyer's website at [www.singlebuyer.com.my](http://www.singlebuyer.com.my)

13.3 The RED is responsible to submit the application for participation on behalf of its Green Consumer.

13.4 The submission of application by the RED shall include, but not limited to, the following information:

- (a) Company profile of the RED and relevant supporting documents including authorisation and bank statement;
- (b) Company profile for Green Consumer and relevant supporting documents;
- (c) Selection of power plant supply category (firm or non-firm output);
- (d) Power plant project details including project costs, preliminary technical specifications, relevant drawings and project schedule;
- (e) Monthly export energy and allocation to every Green Consumer;
- (f) Letter of undertaking for the CRESS;
- (g) Report of power system study and letter of approval;
- (h) Copy of land lease agreement or land sales and purchase agreement;
- (i) Copy of the executed Bilateral Energy Supply Contract between the RED and the Green Consumer;
- (j) Default declaration document of the RED and Green Consumer;
- (k) Decommissioning plan; and
- (l) Any other documents, as may be prescribed by Single Buyer.

13.5 The indicative application process is as illustrated in **Appendix 2**.

13.6 The information on the application process shall be made available in the Single Buyer website at: [www.singlebuyer.com.my](http://www.singlebuyer.com.my)

#### **14. RIGHTS OF ENERGY COMMISSION**

14.1 The Commission reserves the right to revoke the participant registration, under the following circumstances:

- (a) the construction of the GEP is not implemented according to the project schedule in the application for participation submitted or not completed by the scheduled commercial operation date, or as may be extended and agreed by the Single Buyer; and/or
- (b) non-compliance of the CRESS participant on any rules, codes and licence conditions issued under Section 9 of the Act and these Guidelines.

The interested CRESS participants agree to waive its right to commence any legal actions against the Commission, Single Buyer, GSO and EUC at all time and for any reason whatsoever for matters arising from or in connection to these Guidelines.

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## APPENDIX 1

### Principle Billing Calculation:

- 1) If Actual Energy Output is higher than Declared Maximum Monthly Energy Output, the Declared Maximum Monthly Energy Output will be used as Billable Energy Output
- 2) If Actual Energy Output is equal to or lower than Declared Maximum Monthly Energy Output, the Actual Energy Output will be used as Billable Energy Output
- 3) When the Billable Energy Output is equal to or lower than Total Consumption Green Consumers:

- i. First, determine billable consumption from RED

$$\frac{\text{Billable Energy Output}}{\text{Total Billable Energy Output}} \times \text{Total Billable Energy Output} \times \text{Allocated Percentage Green Consumer}$$

- ii. Second, determine Maximum Consumption of Green Consumer

$$\frac{\text{Allocated Percentage Green Consumer}}{\text{Total Allocated Percentage Green Consumer by REDs}} \times \text{Consumption Green Consumer}$$

- iii. Third, compare Billable Consumption from RED against Maximum Consumption of Green Consumer. Billable Consumption from RED shall not be higher than the Maximum Consumption of Green Consumers

- iv. No payment for excess Energy Output from RED

- 4) When the Billable Energy Output is greater than Total Consumption Green Consumers:

- i. First, determine billable consumption from RED

$$\frac{\text{Billable Energy Output}}{\text{Total Billable Energy Output}} \times \text{Total Consumption Green Consumers} \times \text{Allocated Percentage Green Consumer}$$

- ii. Second, determine Maximum Consumption of Green Consumer

$$\frac{\text{Allocated Percentage Green Consumer}}{\text{Total Allocated Percentage Green Consumer by REDs}} \times \text{Consumption Green Consumer}$$

- iii. Third, compare Billable Consumption from RED against Maximum Consumption of Green Consumer. Billable Consumption from RED shall not be higher than the Maximum Consumption of Green Consumers

- iv. No payment for excess Energy Output from RED

Scenario 1 : 1 RED to 1 Green Consumer (GC)

Declaration	RED 1
Declared Maximum Monthly Energy Output	1000
Allocated Percentage Green Consumer 1	100%

Sub - Scenario 1	RED 1		Total Billable Energy Output
	Actual Energy Output	Billable Energy Output	
Actual Energy Output = Declared	1000	1000	1000
Actual Energy Output < Declared	800	800	800
Actual Energy Output > Declared	1200	1000	1000
Actual Energy Output = Declared	1000	1000	1000
Actual Energy Output = Declared	1000	1000	1000

Sub - Scenario 2	Total Actual Energy Output	Total Billable Energy Output	Total Actual Consumption GC	Total Billable Consumption from all RED for all GCs (cap at maximum consumption GC)	Total Excess Energy from Actual Energy Ouput
Billable Energy Output = Actual Total Consumption GC	1000	1000	1000	1000	0
Billable Energy Output < Actual Total Consumption GC	800	800	1000	800	0
Billable Energy Output = Actual Total Consumption GC	1200	1000	1000	1000	200
Billable Energy Output > Actual Total Consumption GC	1000	1000	800	800	200
Billable Energy Output < Actual Total Consumption GC	1000	1000	1200	1000	0

Actual Consumption - $M_{GC1}$	Total Billable Consumption from RED (cap at maximum consumption GC)	Balance Consumption from TNB	Green Consumer 1		
			Consumption from RED 1		
			Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)
1000	1000	0	1000	1000	1000
1000	800	200	800	1000	800
1000	1000	0	1000	1000	1000
800	800	0	800	800	800
1200	1000	200	1000	1200	1000

Scenario 2 : 1 RED to Multiple Green Consumer (GC)

Declaration	RED 1
Declared Maximum Monthly Energy Output	1000
Allocated Percentage Green Consumer 1	90%
Allocated Percentage Green Consumer 2	10%

Sub - Scenario 1	RED 1		Total Billable Energy Output
	Actual Energy Output	Billable Energy Output	
Actual Energy Output = Declared	1000	1000	1000
Actual Energy Output < Declared	800	800	800
Actual Energy Output > Declared	1200	1000	1000
Actual Energy Output = Declared	1000	1000	1000
Actual Energy Output = Declared	1000	1000	1000

Sub - Scenario 2	Total Actual Energy Output	Total Billable Energy Output	Total Actual Consumption for all GC	Total Billable Consumption from all RED for all GCs (cap at maximum consumption GC)	Total Excess Energy from Actual Energy Ouput
Billable Energy Output = Actual Total Consumption GC	1000	1000	1000	700	300
Billable Energy Output < Actual Total Consumption GC	800	800	1000	680	120
Billable Energy Output = Actual Total Consumption GC	1200	1000	1000	700	500
Billable Energy Output > Actual Total Consumption GC	1000	1000	600	460	540
Billable Energy Output < Actual Total Consumption GC	1000	1000	1400	900	100

Actual Consumption - $M_{GC1}$	Total Billable Consumption from RED (cap at maximum consumption GC)	Balance Consumption from TNB	Green Consumer 1		
			Consumption from RED 1		
			Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)
600	600	0	900	600	600
600	600	0	720	600	600
600	600	0	900	600	600
400	400	0	540	400	400
800	800	0	900	800	800

Actual Consumption - $M_{GC2}$	Total Billable Consumption from RED (cap at maximum consumption GC)	Balance Consumption from TNB	Green Consumer 2		
			Consumption from RED 1		
			Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)
400	100	300	100	400	100
400	80	320	80	400	80
400	100	300	100	400	100
200	60	140	60	200	60
600	100	500	100	600	100

Scenario 3 : Multiple RED to 1 Green Consumer (GC)

Declaration	RED 1	RED 2
Declared Maximum Monthly Energy Output	600	400
Allocated Percentage Green Consumer 1	100%	100%

Sub - Scenario 1	RED 1		RED 2		Total Billable Energy Output
	Actual Energy Output	Billable Energy Output	Actual Energy Output	Billable Energy Output	
Actual Energy Output = Declared	600	600	400	400	1000
Actual Energy Output < Declared	480	480	320	320	800
Actual Energy Output > Declared	720	600	480	400	1000
Actual Energy Output = Declared	600	600	400	400	1000
Actual Energy Output = Declared	600	600	400	400	1000

Sub - Scenario 2	Total Actual Energy Output	Total Billable Energy Output	Total Actual Consumption for all GC	Total Billable Consumption from all RED for all GCs (cap at maximum consumption GC)	Total Excess Energy from Actual Energy Ouput
Billable Energy Output = Actual Total Consumption GC	1000	1000	1000	900	100
Billable Energy Output < Actual Total Consumption GC	800	800	1000	800	0
Billable Energy Output = Actual Total Consumption GC	1200	1000	1000	900	300
Billable Energy Output > Actual Total Consumption GC	1000	1000	800	720	280
Billable Energy Output < Actual Total Consumption GC	1000	1000	1200	1000	0

Actual Consumption - $M_{GC1}$	Total Billable Consumption from RED (cap at maximum consumption GC)	Balance Consumption from TNB	Green Consumer 1					
			Consumption from RED 1			Consumption from RED 2		
			Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)	Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)
1000	900	100	600	500	500	400	500	400
1000	800	200	480	500	480	320	500	320
1000	900	100	600	500	500	400	500	400
800	720	80	480	400	400	320	400	320
1200	1000	200	600	600	600	400	600	400

Scenario 4 : Multiple RED to Multiple Green Consumer (GC)

Declaration	RED 1	RED 2
Declared Maximum Monthly Energy Output	600	400
Allocated Percentage Green Consumer 1	60%	60%
Allocated Percentage Green Consumer 2	40%	40%

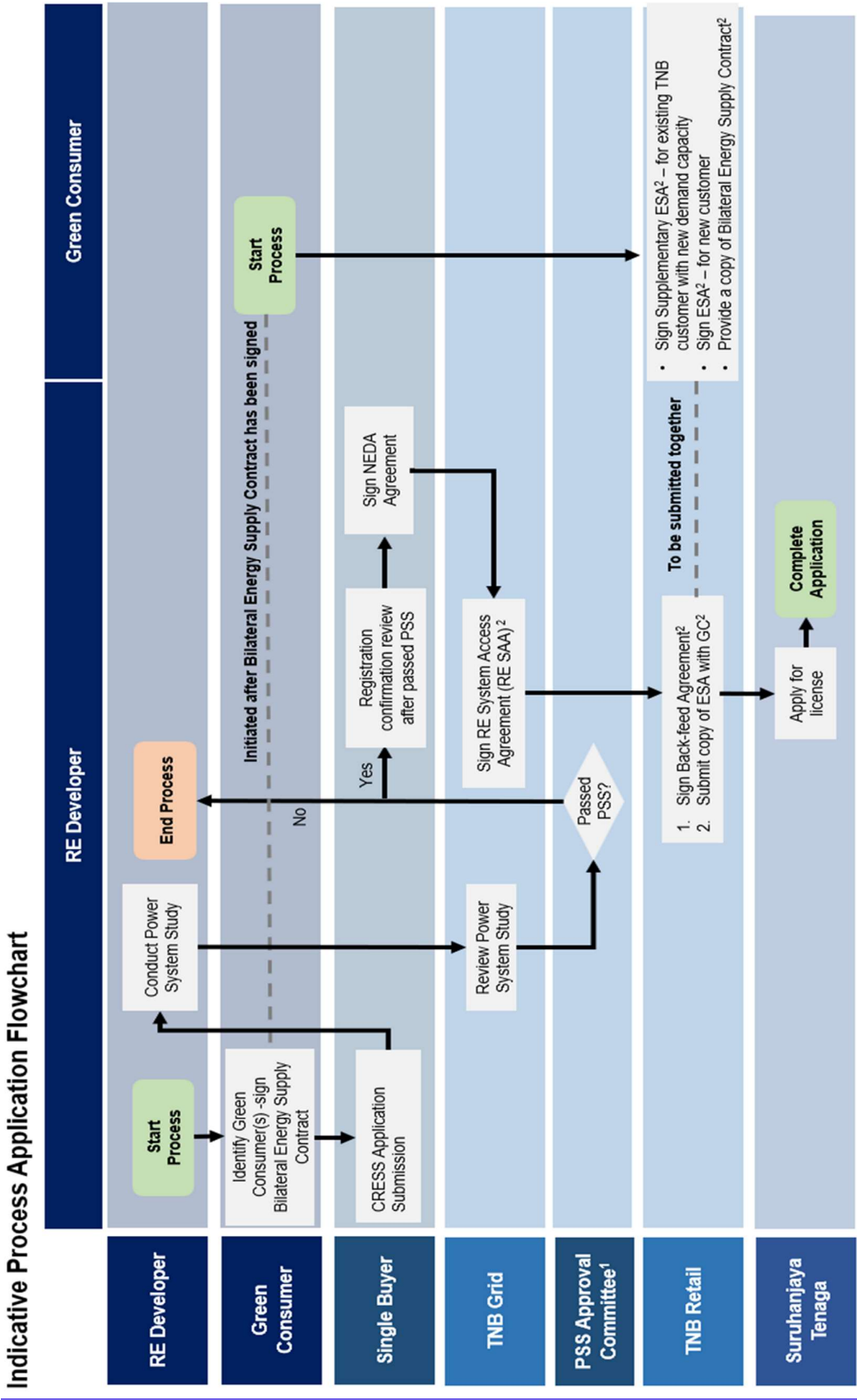
Sub - Scenario 1	RED 1		RED 2		Total Billable Energy Output
	Actual Energy Output	Billable Energy Output	Actual Energy Output	Billable Energy Output	
Actual Energy Output = Declared	600	600	400	400	1000
Actual Energy Output < Declared	480	480	320	320	800
Actual Energy Output > Declared	720	600	480	400	1000
Actual Energy Output = Declared	600	600	400	400	1000
Actual Energy Output = Declared	600	600	400	400	1000

Sub - Scenario 2	Total Actual Energy Output	Total Billable Energy Output	Total Consumption GC	Total Billable Consumption from all RED for all GCs (cap at maximum consumption GC)	Total Excess Energy from Actual Energy Ouput
Billable Energy Output = Actual Total Consumption GC	1000	1000	1000	900	100
Billable Energy Output < Actual Total Consumption GC	800	800	1000	800	0
Billable Energy Output = Actual Total Consumption GC	1200	1000	1000	900	300
Billable Energy Output > Actual Total Consumption GC	1000	1000	600	540	460
Billable Energy Output < Actual Total Consumption GC	1000	1000	1400	1000	0

Actual Consumption - M <sub>GC1</sub>	Total Billable Consumption from RED (cap at maximum consumption GC)	Balance Consumption from TNB	Green Consumer 1					
			Consumption from RED 1			Consumption from RED 2		
			Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)	Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)
600	540	60	360	300	300	240	300	240
600	480	120	288	300	288	192	300	192
600	540	60	360	300	300	240	300	240
400	344	56	216	200	200	144	200	144
800	600	200	360	400	360	240	400	240

Actual Consumption - M <sub>GC2</sub>	Total Billable Consumption from RED (cap at maximum consumption GC)	Balance Consumption from TNB	Green Consumer 2					
			Consumption from RED 1			Consumption from RED 2		
			Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)	Billable Consumption	Maximum Consumption	Billable Consumption (cap at maximum consumption GC)
400	360	40	240	200	200	160	200	160
400	320	80	192	200	192	128	200	128
400	360	40	240	200	200	160	200	160
200	196	4	144	100	100	96	100	96
600	400	200	240	300	240	160	300	160







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