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In collaboration with DFDL

LEGAL UPDATE

Transforming Malaysia's Energy Landscape: Open Grid Access through CRESS

February 2025

INTRODUCTION

The Corporate Renewable Energy Supply Scheme ("**CRESS**") announced by the Ministry of Energy Transition & Water Transformation ("**PETRA**") on 26 July 2024, aims to enhance corporate companies' access to renewable energy through Peninsular Malaysia's grid system network. The Energy Commission of Malaysia ("**EC**") later issued a guideline for CRESS ("**CRESS Guidelines**") on 20 September 2024 to formally kick-start the highly anticipated third-party or open access regime.

Under CRESS, the corporate companies have the opportunities to source renewable energy directly from renewable energy developers participating in the New Enhanced Dispatch Arrangement (NEDA) market. The programme is expected to reduce carbon emissions by 701,000 tCO_2 annually and attract RM 10 billion in direct investments, fostering the creation of approximately 14,000 new job opportunities within the sustainable energy sector.[1]

Earlier this month, PETRA and EC co-organised a town hall known as the "CRESS Townhall – Technical Connections and Energy Storage Explained" ("**CRESS Townhall**") where industry experts were brought together to share invaluable insights on CRESS.

This publication highlights the key points of discussion from the CRESS Townhall.

[1] For further information, please refer to the press release with the title of "CRESS Tingkatkan Akses Bekalan Elektrik Hijau Bagi Syarikat Korporat di Malaysia" by PETRA on 26 July 2024 here

CRESS PLAYERS

The successful implementation of any energy and infrastructure projects, hinges on the active engagement and collaborative efforts of a diverse range of stakeholders and industry players from an integrated ecosystem, and CRESS is no exception. These interested parties, including the renewable energy developers ("**RED**"), the corporate company, which is known as the green consumer under the CRESS Guidelines ("**GC**"), Single Buyer ("**SB**"), Tenaga Nasional Berhad ("**TNB**") and Grid System Operator ("**GSO**") and their roles and responsibilities have been summarised in *Figure 1* below:

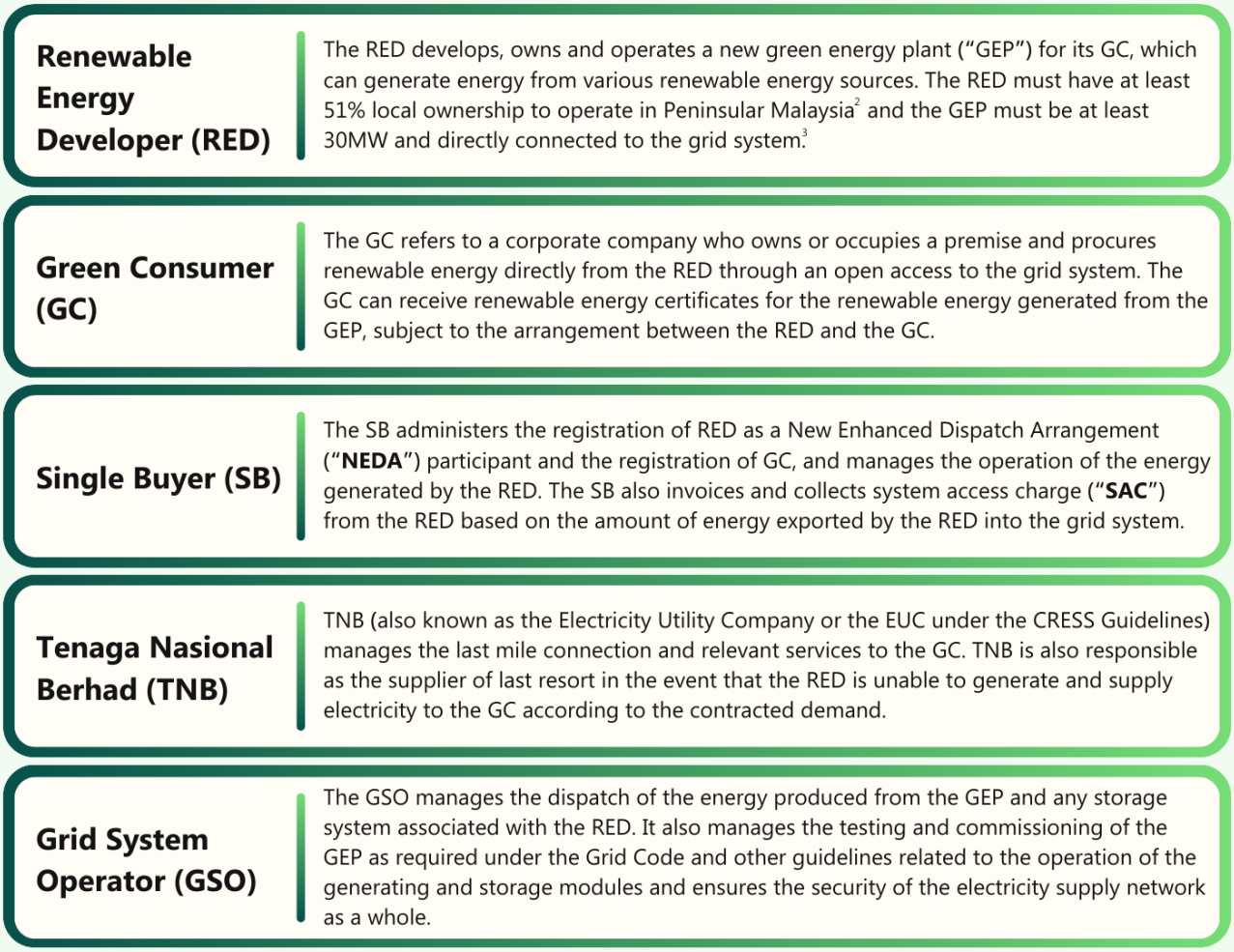

Figure 1: Overview of the CRESS Players and Their Roles

It is pertinent to note that CRESS does not allow a dedicated connection to transfer electricity directly from the GEP to the premise owned by the GC.[4] CRESS predominantly utilises the existing NEDA mechanism whereby the electricity generated from the GEP will first be exported to the grid system operated by GSO, before such electricity is exported to the premise owned by the GC.[5]

[2] Clause 8.5 of the CRESS Guidelines
[3] Clause 8.6 of the CRESS Guidelines
[4] Clause 8.7 of the CRESS Guidelines
[5] Clause 6.4 of the CRESS Guidelines

OVERVIEW OF THE CRESS IMPLEMENTATION AND APPLICATION PROCESS

Given the inherent complexity of energy and infrastructure projects, which typically involve various regulatory requirements and coordination among stakeholders and regulatory authorities, managing and navigating these processes efficiently is critical. While established players in the industry may already be familiar with the intricacies of the typical implementation process based on previous solar programmes, an overview of the CRESS implementation and application process serves as a great guidance for emerging players and stakeholders in helping them navigate the often-complex landscape of energy and infrastructure development and CRESS-specific processes.

CRESS Implementation Process

The outline of the CRESS implementation process, from the initial stage of project award to the final stage of plant operation is presented in *Figure 2* below:

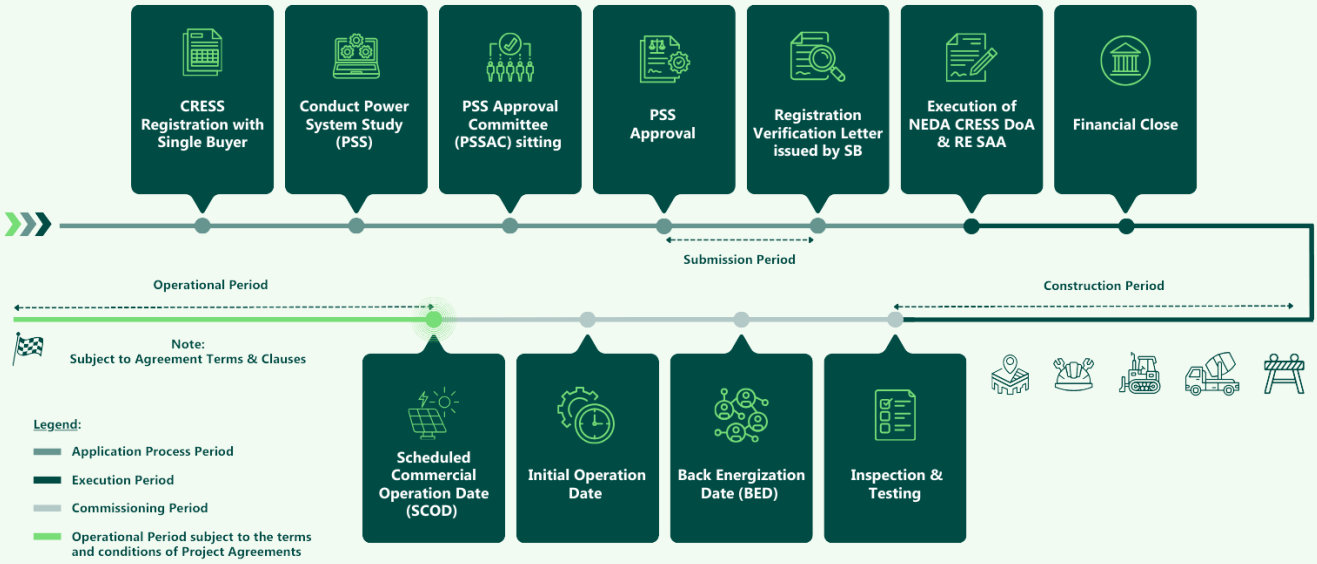

Figure 2: Overview of the CRESS Implementation Process[6]

[6] This diagram has been extracted from the slides on "Brief for Power System Study (PSS) Process in CRESS" prepared by the Grid Division of Tenaga Nasional Berhad here

CRESS Application Process

Interested participants may begin submitting applications for CRESS starting from 30 September 2024[7]. An overview of the CRESS application process is outlined in *Figure 3* below, followed by a detailed elaboration of the process:

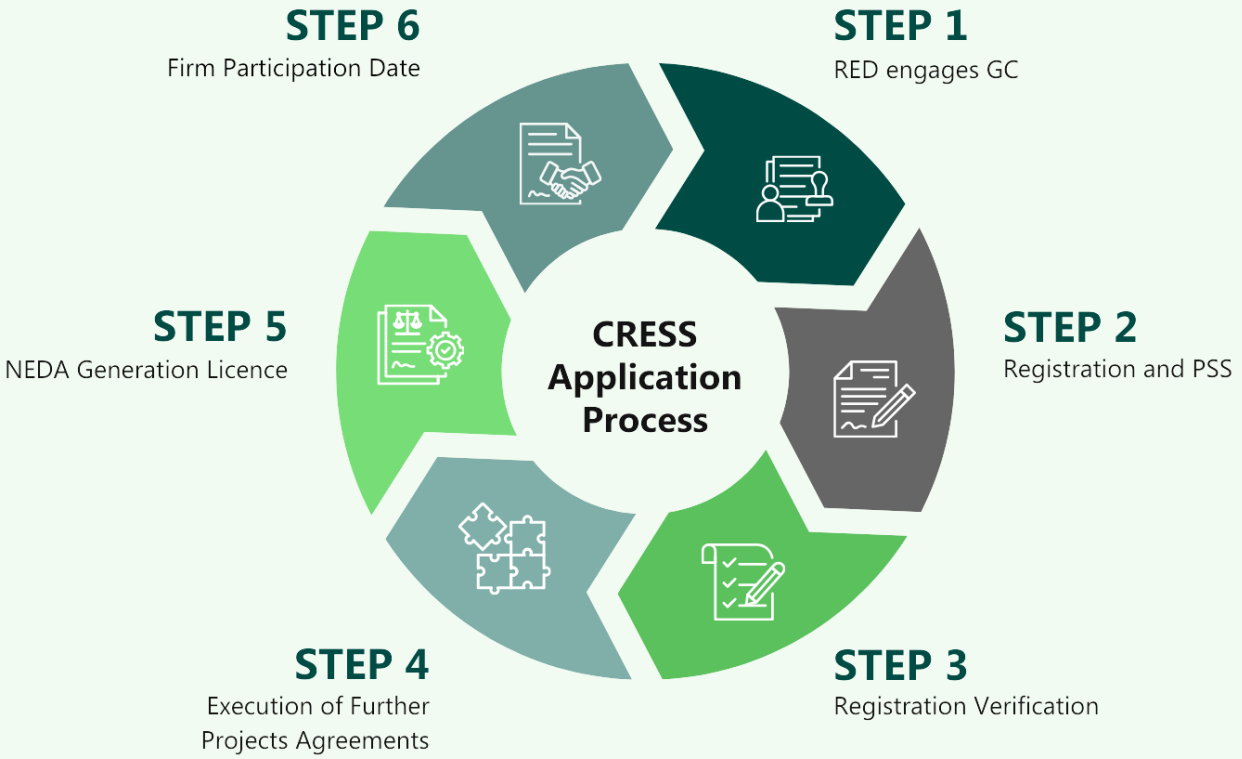

Figure 3: Overview of the Application Process for CRESS

Detailed Procedure for CRESS Application

A successful application for CRESS participation consists of the following six (6) steps[8]:

1 **Renewable Energy Developer Engages the Green Consumer**
The RED identifies the GC and executes a Bilateral Energy Supply Contract with the GC.

2 **Registration and Power System Study**
The RED registers at the SB's website and conduct a power system study ("**PSS**"). The RED will also be required to register on behalf of the GC. The PSS is required to determine the feasibility of the infrastructure connecting to the grid system and the appropriate connection scheme options. The registration must be complete with the following supporting documents:

[7] Please refer to the Frequently Asked Questions #1 on CRESS issued by the Energy Commission here
[8] For further information, please refer to the slides on CRESS Application Process prepared by Single Buyer here

RED

- ***Corporate Documents***: *Company Profile, Certified copy of SSM registration, Corporate Authorisation for NEDA participation, Bank Statement*
- ***NEDA Registration Form***: *Declaration of RED*
- ***Project Agreements***: *Executed and Stamped Bilateral Energy Supply Contract, Land Lease Agreement or Sale and Purchase Agreement (whichever applicable)*
- ***Technical Documents***: *Project Details (including costs, technical specifications, relevant drawings and project schedule), Decommissioning Plan*

GC

- ***Corporate Documents:*** *Company Profile, Certified copy of SSM registration*
- ***NEDA Registration Form:*** *Company status, Declaration of GC*

3

Registration Verification

SB informs and consults the GSO on the feasibility of the RED's future connection into the grid system. If the GSO approves the RED's future connection, SB will issue a registration verification letter to the RED and notify the EC.

4

Execution of Further Project Agreements

The participants enter into the following contracts: -

1. ***NEDA CRESS Deed of Accession*** *- between SB and RED: governs the invoicing and collection of the relevant system access charge and compliance with the NEDA guidelines and CRESS guidelines.*
2. ***Renewable Energy Supply Access Agreement (RESAA)*** *- between TNB Grid and RED: to allow the transfer of electricity from the GEP to the grid system and deals with the technical requirements for the network access between GEP and the grid system.*
3. ***Corporate Renewable Energy Supply Agreement (CRESA)*** *- between GC and TNB Retail: to allow the transfer of electricity from the GEP to the GC through the grid system, and governs*

the sale and purchase of electricity from TNB in the event that RED is unable to fulfil electricity demands or there is supply of excess energy.

4. ***Back-feed Agreement*** *- between TNB Retail and RED: governs the sale and purchase of electricity from TNB for the GEP's own use during construction phase e.g. commissioning of the plant.*
5. ***Billing and Collection Agreement (if applicable)*** *– between TNB Retail, GC and RED.*

5

NEDA Generation Licence

The RED submits an application to the EC for the NEDA Generation Licence (Public Installation) within three (3) months prior to the expected commercial operation date of the GEP.

6

Firm Participation Date

Upon the occurrence of the Initial Operation Date, the completion of the testing for Commercial Operation Date and the issuance of the Commissioning Test Certificate by EC, SB issues an official letter to the RED on the firm participation date, after which the RED may begin exporting energy under CRESS.

Did you know?
Battery Energy Storage System (BESS)

CRESS Townhall

BESS is a crucial component in CRESS in balancing the fluctuations in renewable energy output which has a direct impact over the system access charge payable by the RED.

GSO shared data collected from active generating facilities between April 2024 to July 2024 which demonstrates that: (i) the average energy generated by a 100MW large scale solar power plant is 609MWh (daily generation may exceed 800MWh); and (ii) the average energy exported by generating facilities above 50MW is 177MWh (daily generation may exceed 300MWh). The generation of electricity from renewable energy sources, especially solar, is largely dependent on weather conditions and solar irradiance, which may lead to intermittent generation. To overcome this problem, the CRESS Guidelines allows RED to install BESS with a direct connection to the GEP. The size of the BESS must be at least fifty percent (50%) of the GEP's registered capacity or tested capacity during commissioning, whichever is lower.[9]

GSO is responsible for coordinating and operating all grid-connected generating assets, including giving instructions to commence charging and discharging of the BESS to achieve the firming objective while ensuring safety of the grid system.[10] The installed BESS will typically undergo one (1) cycle of charging and discharging per day. The charging of BESS will be initiated when the generation level of the GEP is high and there is an excess of energy generated (9:00AM-5:00PM), whereas discharging of BESS will occur when there is a low generation level below the average (5:00PM-Midnight).

BESS Request for Qualification Exercise (BESS RFQ)

BESS installation projects were opened up to third parties to accelerate the BESS infrastructure roll-out ahead of the implementation of solar projects through the various programmes. Interested participants were invited to submit their qualifications earlier this month and the shortlisted participants will be notified to proceed with the request for proposal stage. The total capacity to be procured through the BESS RFQ is set to a minimum of 400MW/1,600MWh, and the projects are intended to achieve commercial operation in 2026.

The BESS RFQ also identified 25 interconnection points for the BESS installations based on their strategic suitability for connecting with Peninsular Malaysia's electrical grid infrastructure.[11]

[9] Clause 8.14(a) of the CRESS Guidelines

[10] Please refer to the Frequently Asked Questions #3 on CRESS issued by the Energy Commission here

[11] The 25 Interconnection Points are: Kedah - PMU Bukit Kayu Hitam; Pulau Pinang - PMU Gelugor; Perak - PMU Kelebang, PMU Teluk Intan East, PMU Temoh; Selangor - PMU Serdang; Negeri Sembilan - PMU Bahau, PMU Pajam; Melaka - PMU A Famosa, PMU Metacorp, PMU Sg. Rambai; Terengganu - PMU Batu Rakit; Kelantan - PMU Kandis, PMU Tunjung; Pahang - PMU Jambu Rias, PMU UIAM, PMU Tanjung Batu; Johor - PMU Jalan Nyior, PMU Peserai, PMU Parit Yusof, PMU Sri Sulong, PMU Jementah, PMU Mengkibol.

LOOKING FORWARD

The implementation of CRESS not only strengthens Peninsular Malaysia's electricity supply chain by offering corporate companies a more flexible option for procuring renewable energy in line with their sustainable goals, but also signifies Malaysia's remarkable transition to an open electricity market and supports the nation's journey towards a more sustainable energy future.

With numerous initiatives actively underway and poised for launch, the solar energy sector is expanding remarkably, positioning itself as a cornerstone of the nation's energy transformation and sustainable development strategy.

There is currently no prescribed quota limit to CRESS, but the pace at which industry players are adopting CRESS remains to be seen, given the relatively close runway with other large-scale solar (LSS) programmes, including the LSS Petra 5+ and the BESS RFQ that were just concluded earlier this month. Other CRESS-specific challenges include securing upfront and long-term offtake commitments from new corporate companies, which often initiate operations in phases, and more complex considerations surrounding project financing without TNB as the offtaker.

Looking ahead, the authors anticipate an increasing emphasis on integrated energy transition strategies within the region's renewable energy initiatives. The opportunities that the various renewable energy initiatives present will accelerate Malaysia's renewable energy ambitions, and inspire the region as a whole in shaping the next chapter of the region's renewable energy story.

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