



Corporate Renewable Energy Supply Scheme (CRESS)

In brief for Power System Study (PSS) Process

4th February 2025

Grid Planning, Grid Strategy, Grid Division, Tenaga Nasional Berhad

Context

1. On 26th July 2024, Ministry of Energy Transition & Water Transformation (PETRA) had announced a program called **Corporate Renewable Energy Supply Scheme (CRESS)** with the objective to enhance corporate access to green electricity, enabling third parties to supply or purchase renewable energy via the Grid System network.
2. The framework has comprised the roles of Tenaga Nasional Berhad (TNB) in enabling the execution of the CRESS.
3. The importance of the process that is established by Suruhanjaya Tenaga with the cooperation from several stakeholders; Single Buyer, Tenaga Nasional Berhad and Grid System Operator has been explained through the Guidelines For Corporate Renewable Energy Supply Scheme (CRESS).
4. In sense of the guide as the main reference, the interested applicants shall be obliged to comply to the technical and commercial requirement provided.

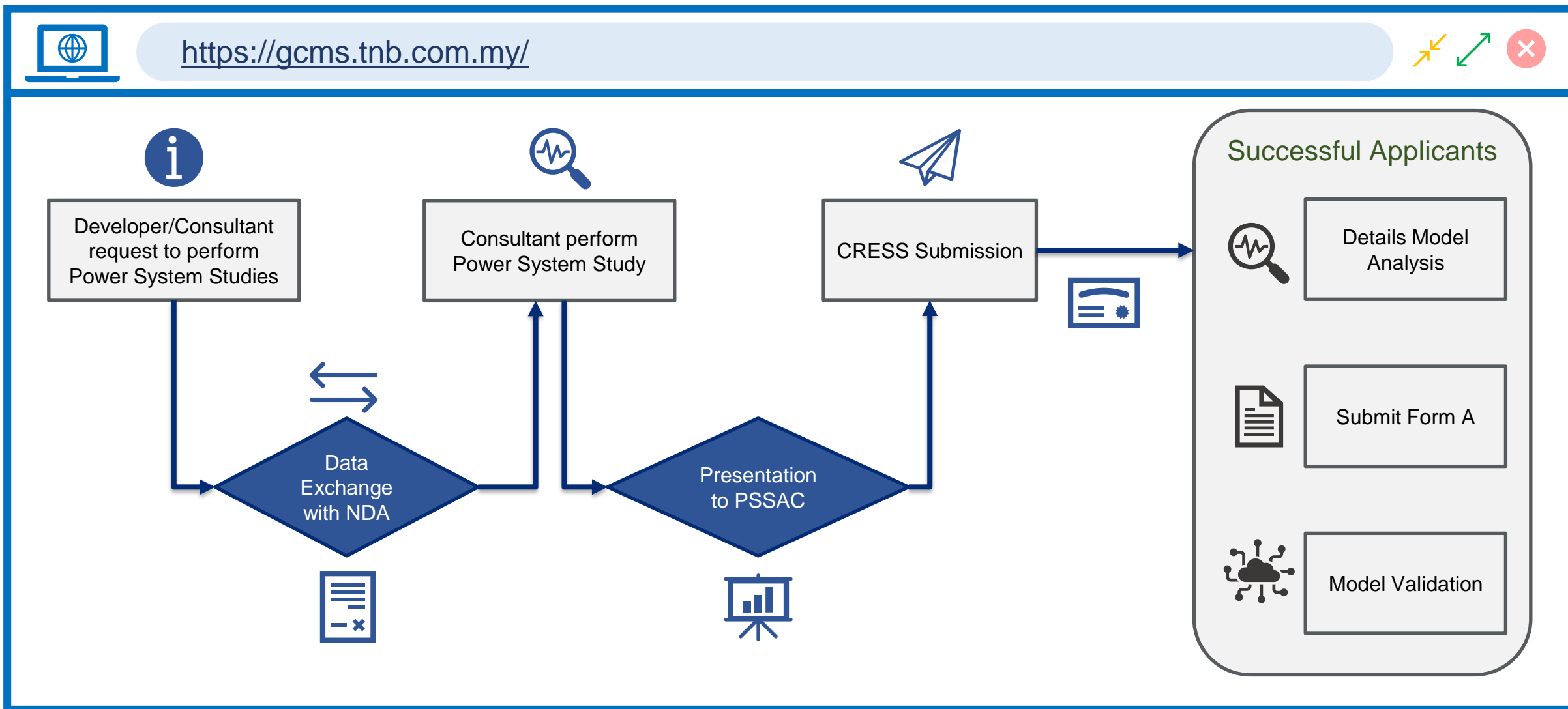
Objectives

Given this context, the objectives for the briefing is to enhance the understanding for the process established as follows:

1. To provide and syndicate with PSS consultants and applicant on the **overview of the envisioned CRESS Power System Study (PSS)** application process
2. To introduce the **Grid Connection Management System (GCMS)** for application of the PSS



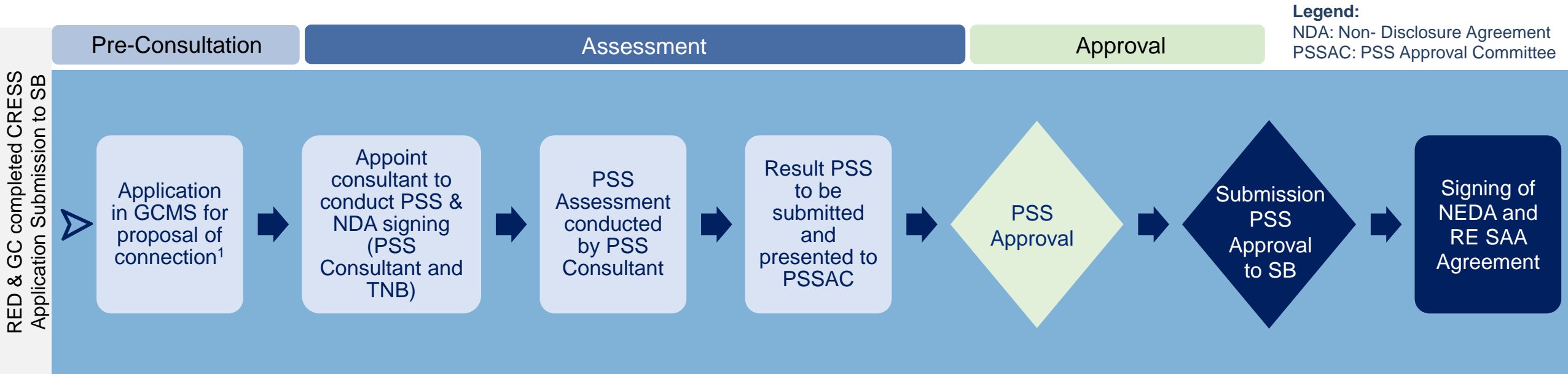
Application Process for PSS in analyzing the assessment to evaluate feasible generation capacity including post-award verification and installations finalization



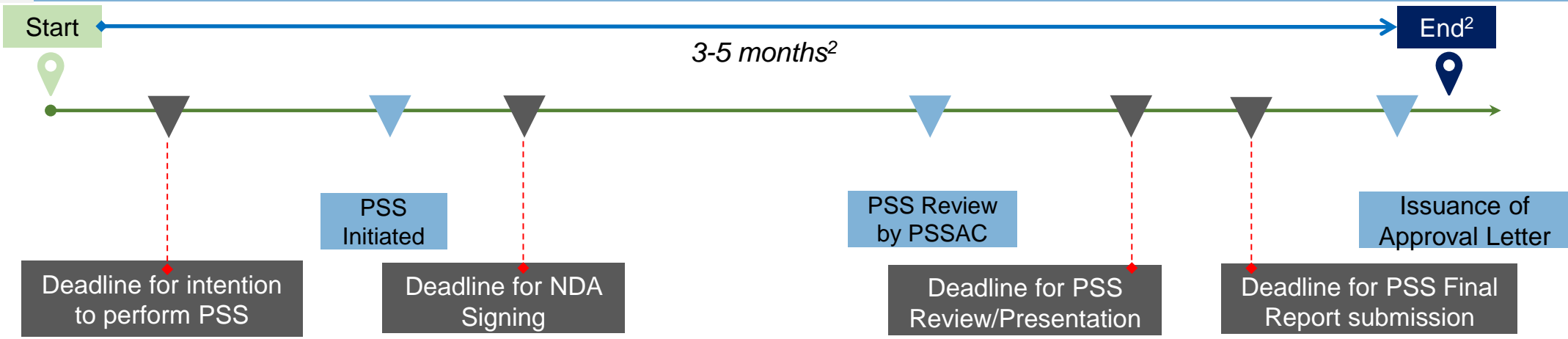
Process Ownership: Developer/Consultant TNB Energy Commission



Indicative Timeline for PSS Assessment with Pre-consultation Stage on The Proposed Connectivity by Renewable Energy Developer (RED) and Green Consumer (GC)



RED & GC completed CRESS Application Submission to SB



Note:

1. Complete the registration through Single Buyer (SB)
2. PSS completion process will be depending on the Final Approval subject to fulfilment of Final Report and Validation



Power System Study is to be carried out by the Renewable Energy Developer to identify the feasibility capacity proposal with associated Green Consumer

Objectives of the PSS are:

1. To identify connection scheme options (and configurations) for the Transmission connected RED, considering the existing transmission infrastructure within the vicinity of the proposed RED.
2. To investigate the impact of the new injection to the Grid System as well as the impact of the Grid System to the operations of the RED plants.
3. To assess the ability of the grid-connected RED in compliance with the technical requirements as stated in the Grid Code by assessing the steady state and dynamic analysis including reactive power assessment.



Documents for reference for compliance:

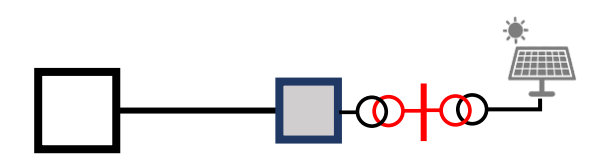
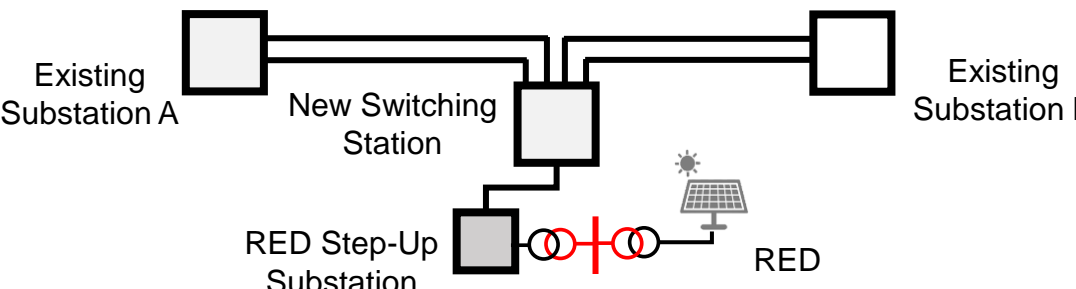
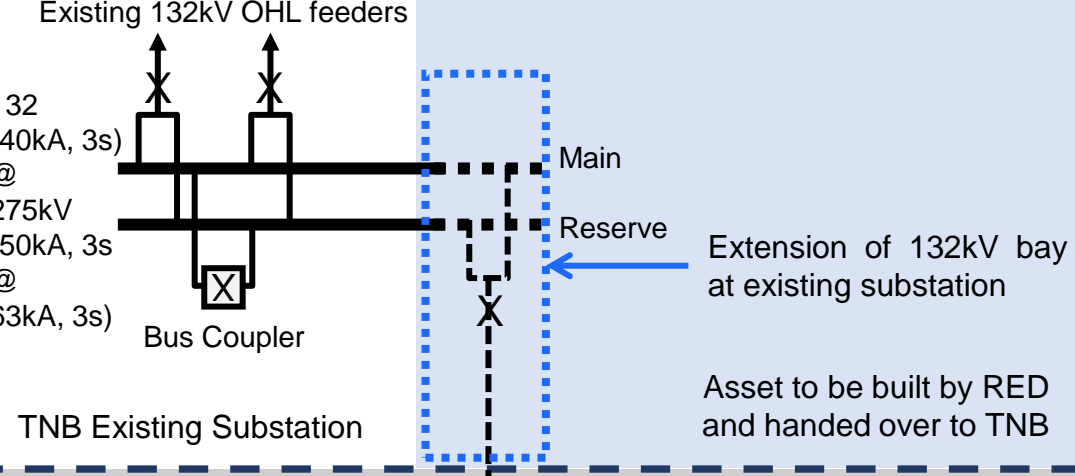
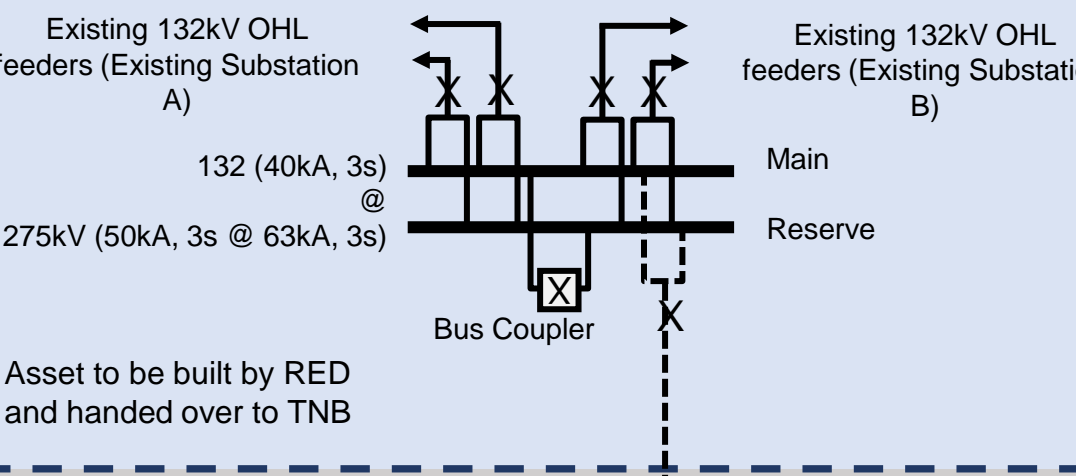
- Grid Code for Peninsular Malaysian (Version 2020)
- Transmission System Reliability Standards (Referred to as License Standards by MGC)



Connection Option for Grid-Connected CRESS and the Scope of Works for the related development of RED



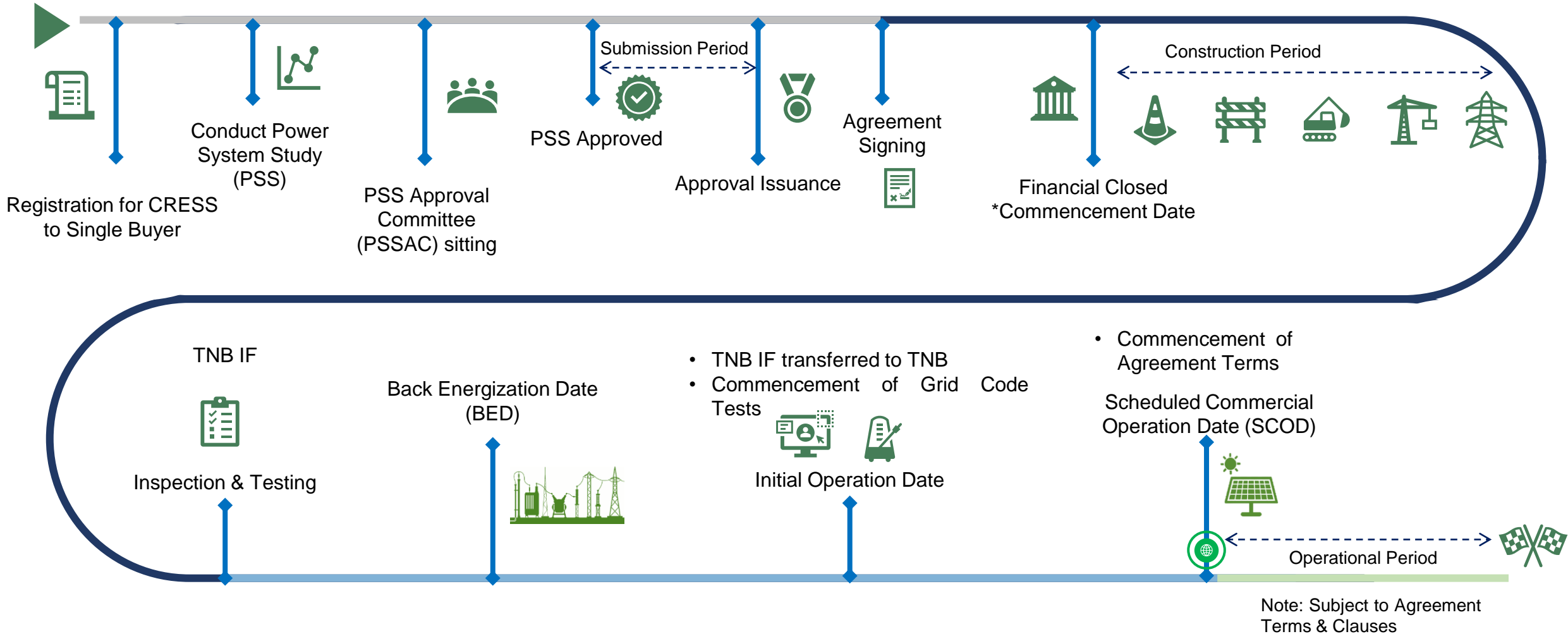
Civil, Primary, Secondary, Telecommunication etc.

Direct Connection into Existing TNB Substation	New Switching Station with Double Circuit LILO between Existing Substation
 <p>Existing Substation RED Step-Up Substation RED</p>	 <p>Existing Substation A New Switching Station Existing Substation B</p> <p>RED Step-Up Substation RED</p>
<p>Existing 132kV OHL feeders</p>  <p>132 (40kA, 3s) @ 275kV (50kA, 3s @ 63kA, 3s)</p> <p>Main Reserve</p> <p>Bus Coupler</p> <p>TNB Existing Substation</p> <p>Extension of 132kV bay at existing substation</p> <p>Asset to be built by RED and handed over to TNB</p> <p>To RED Step-Up Substation</p> <p>Asset build, own, operate & maintain by RED</p>	<p>Existing 132kV OHL feeders (Existing Substation A)</p>  <p>Existing 132kV OHL feeders (Existing Substation B)</p> <p>132 (40kA, 3s) @ 275kV (50kA, 3s @ 63kA, 3s)</p> <p>Main Reserve</p> <p>Bus Coupler</p> <p>Asset to be built by RED and handed over to TNB</p> <p>To RED Step-Up Substation</p> <p>Asset build, own, operate & maintain by RED</p>

Note:
1. LILO: Loop-in-Loop-Out



Overview for the CRESS execution process towards the project award inclusive of project execution and commissioning



Legend:
 — : Application Process Period — : Execution Period — : Commissioning Period — : Operational Period subject to Agreement term

Q & A

Grid Technical Solutions

Grid Planning, Grid Strategy

Grid Division, Tenaga Nasional Berhad.

Level 5, Tower C, TNB Platinum

No. 3, Jalan Bukit Pantai, Bangsar

59100 Kuala Lumpur, Malaysia.

Email: gcmsadmin@tnb.com.my

**Thank
you**

