Introduction to

SNPDRI Philippines Corporation

September 24, 2024

Intellectual Property Rights Statement

This document is the property of and contains proprietary information owned by SNPDRI and/or its related proprietor. You agree to treat this document in strict accordance with the terms and conditions of the agreement under which it was provided to you. No disclosure or copy of this document is permitted without the prior written permission of SNPDRI.

CONTENTS

I. Profile of SNPDRI

Company Profile

II. Profile of SNPDRI Philippines Corporation

PART 01

I. Profile of Smart Energy (SNPDRI) - Company Overview

SPIC wholly-owned subsidiary
SPIC Integrated Smart Energy Science & Technology Co., Ltd.
State Nuclear Electric Power Planning Design & Research Institute Co., Ltd.

- **Mission**

Dedicate smart energy to the society
Create core value for customers
Bring a better life to employees

- **Vision**

Vigorously develop smart energy and build a world-class innovative technology company

- **Core Value**

Sincerity, creation and excellence

Integrated operation

SPIC Integrated Smart Energy Science & Technology Co., Ltd.
State Nuclear Electric Power Planning, Design & Research Institute Co., Ltd.
SPIC Innovation Center for Integrated Smart Energy Industry

The most comprehensive and highest level qualification

The highest-level design qualification in China "**Grade A for Comprehensive Qualification of Engineering Design**"
The highest-level survey qualification in China "**Grade A for Comprehensive Qualification of Engineering Survey**"
The highest-level consulting qualification in China "**Grade A for Qualification of Engineering Consulting**"
One of the four major institutions for **power grid engineering consulting and evaluation** of the National Development and Reform Commission of China
First China Power Industry **Quality Gold Award**
The 17th **China Quality Award**

I. Profile of Smart Energy (SNPDRI) - Enterprise Strategy

Vision	**Vigorously develop smart energy** **Build international first-class innovative technology company**
Two "-type" and Two "-ization"	**Innovative-type Technical-type Internationalization Differentiation**
Four Businesses	**Energy think tank R&D innovation** **Engineering services Investment & operation**
Market layout	The Company has laid out both domestic and international markets, covering 31 provinces in China. In overseas, the Company has formed the market layout of cultivating the market in **Southeast Asia, South Asia, West Asia, East Europe and Southeast Africa**, developing the market in **West Africa and Central Asia**, extending the market in **Latin America**, and striving for the market in **West Europe and North America**; The projects are distributed in **33 countries** such as the Philippines, Malaysia, Indonesia, Pakistan, Turkey and Ethiopia.

I. Profile of Smart Energy (SNPDRI) - Business Layout

Four segments

Nuclear energy

It has reached the world-class level in the Gen III AP/CAP nuclear power units and Gen IV HTGR nuclear power conventional island.
It has undertaken research on National Science and Technology Major Projects of "large advanced PWR and HTGR nuclear power plants" in China.
It has completed the world's first nuclear power heating project.

Renewable energy

It masters all-round technologies in solar energy, wind energy, biomass energy, geothermal power generation, and garbage power generation, with abundant experience.

- ✓ Largest wind power heat supply project in China
- ✓ First Biomass Power Plant in China
- ✓ National Quality Project of China
- ✓ Full industry chain: Survey, design, consulting, scientific research and EPC

Power grid

It has reached an international leading level in the field of UHV and smart grids, covering from UHV to LV distribution networks.

- ✓ One of the first batch of UHV engineering design units in China
- ✓ Top two in the EHV engineering industry
- ✓ Achieved 5 "first" in the world
- ✓ Achieved 4 "leading position" in the world

Integrated smart energy

It has formed the technical service capability of the whole industry chain in integrated smart energy, hydrogen energy, core technology research and development of energy storage, policy research and judgment, and standards preparation.

- ✓ A number of technologies have reached the leading level in China
- ✓ Obtained the National Quality Project Award of China
- ✓ First Intelligent Ecological Power Station in China

I. Profile of SNPDRI

Company Profile

II. Profile of SNPDRI Philippines Corporation

PART 01

II. Profile of SNPDRI Philippines Corporation(SPC) - Company Overview

SNPDRI Philippines Corporation (SPC) is located in Unit 622 BSA Twin Towers Building, Bank Drive Cor. Julia Vargas Avenue, Ortigas Center, Mandaluyong City, 1555 which is a wholly owned subsidiary of SNPDRI.
Its business scope includes design, consulting and general contracting of transmission lines, substations and renewable energy. Since its establishment in Manila, Philippines in 2013.

II. Profile of SNPDRI Philippines Corporation(SPC) - Company Overview

2013——Established the Philippine Representitive Office

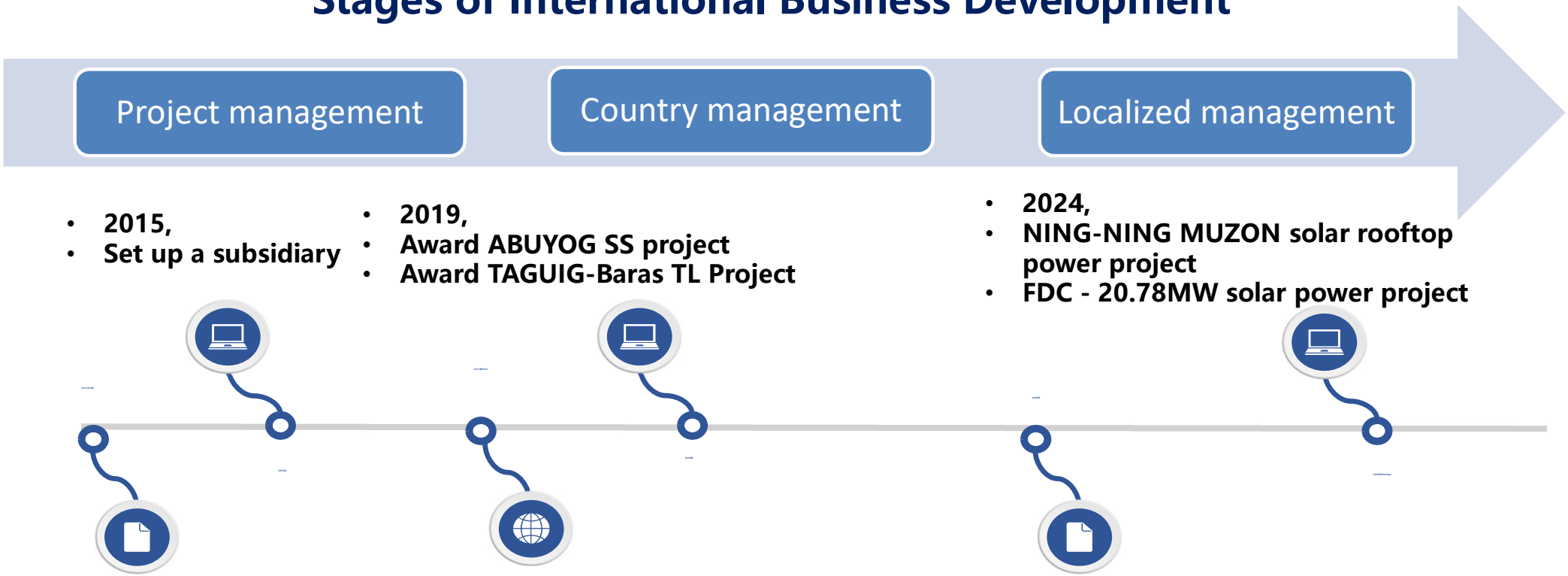
2017——Registration of the Philippine subsidiary

2022——The International Department and the SPC combination

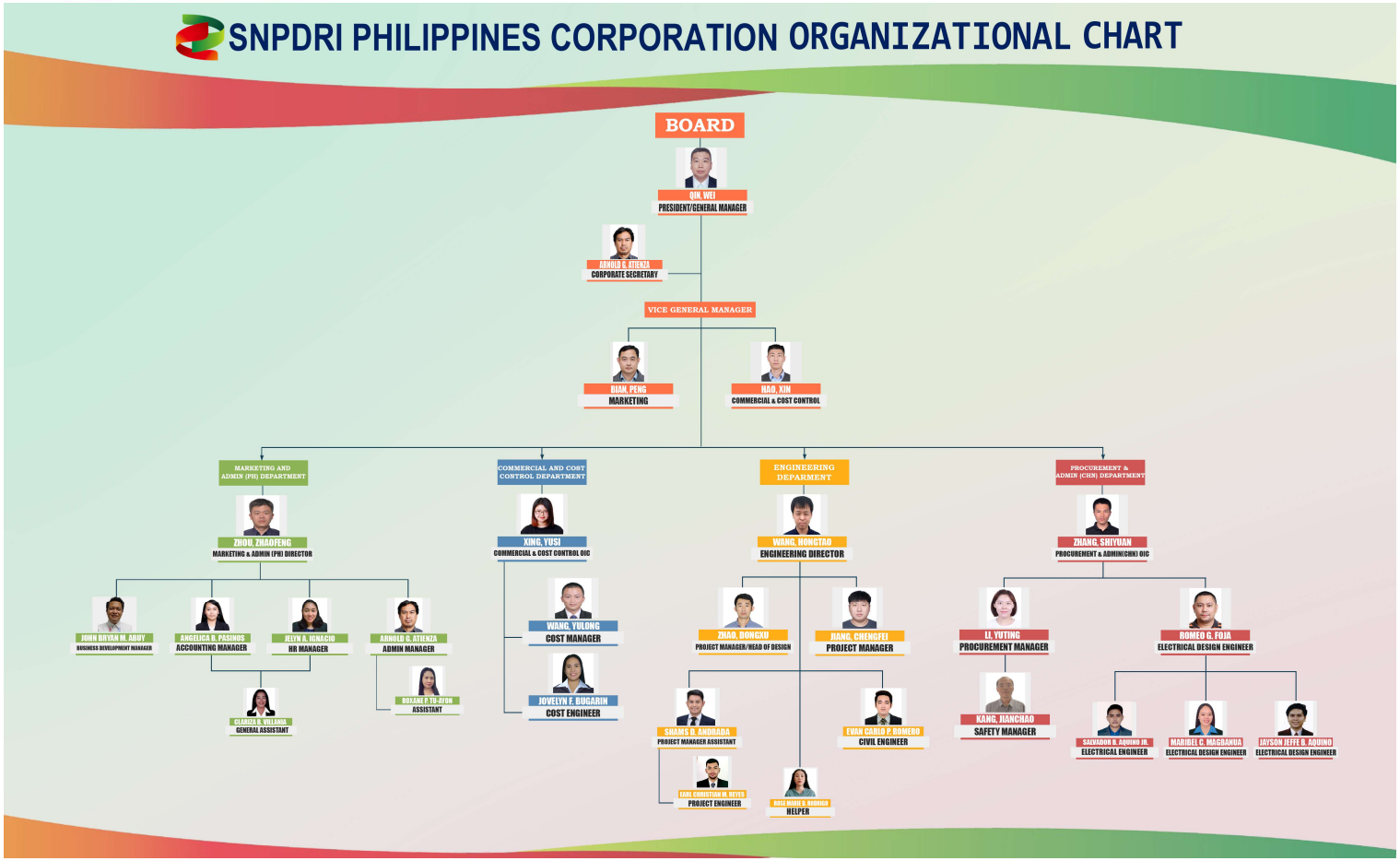
STRATEGIC POSITIONING

- **Globalization Platform**
- **International Market Development Platform**
- **Execution platform for international projects**

Stages of International Business Development



II. Profile of SNPDRI Philippines Corporation(SPC) - Organization Chart



II. Profile of SNPDRI Philippines Corporation (SPC)) - References Overview

SNPDRI Philippines Corporation(SPC) has contracted five general contracting projects with a total contract value of over 15 billion pesos. Among them, Navotas 230kV transformation project and Pagbilao 500kV transformation project have entered the project acceptance stage.

Abuyog 230kV power transformation project and Taguig-Baras 500kV TL project West Luzon Backbone 500kV TL II, 554 design project, Ning*ning Muzon Solar Rooftop Power Project and FDC design project.

II. Profile of SNPDRI Philippines Corporation (SPC) - Business Layout

With the strong support of the parent company SNPDRI and the SPIC Group, **SNPDRI Philippines Corporation(SPC)** aims to expand its business into new areas, including wind power, photovoltaic, energy storage and smart energy, as well as into the Southeast Asian market.

References

I. Navotas 230kV transformation project

II. Pagbilao 500kV transformation project

III. Abuyog 230kV power transformation project

IV. Taguig-Baras 500kV TL project

V. Western Luzon Backbone 500kV TL Project

VI. 554 design project

VII. Ning*ning Muzon Solar Rooftop Power Project

VIII. FDC - 20.78MWdc Ground Mounted Solar Project

PART 02

I. Navotas 230kV transformation project

Navotas 230kV transformation project is located in NAVOTAS fishing port, northwest of Manila. It was originally a 115kV step-up station of a gas power station. The project needs to demolish the original step-up station and build a 230 substation on the same site, including Two sets of new 230/115/13.8kV transformer, with capacity of 300MVA each、4-circuit of 230kV、10-circuit of 115kV .

II. Pagbilao 500kV transformation project

PAGBILAO 500kV Substation EPC project is located in PAGBILAO City, about 120 kilometers southeast of Manila, covers an area of about 25 hectares, installs 3 groups of 3×334MVA main transformer, new 3 500kV intervals, expansion of 2 500kV intervals, new 4 230 kV intervals. The project started on March 15, 2019.

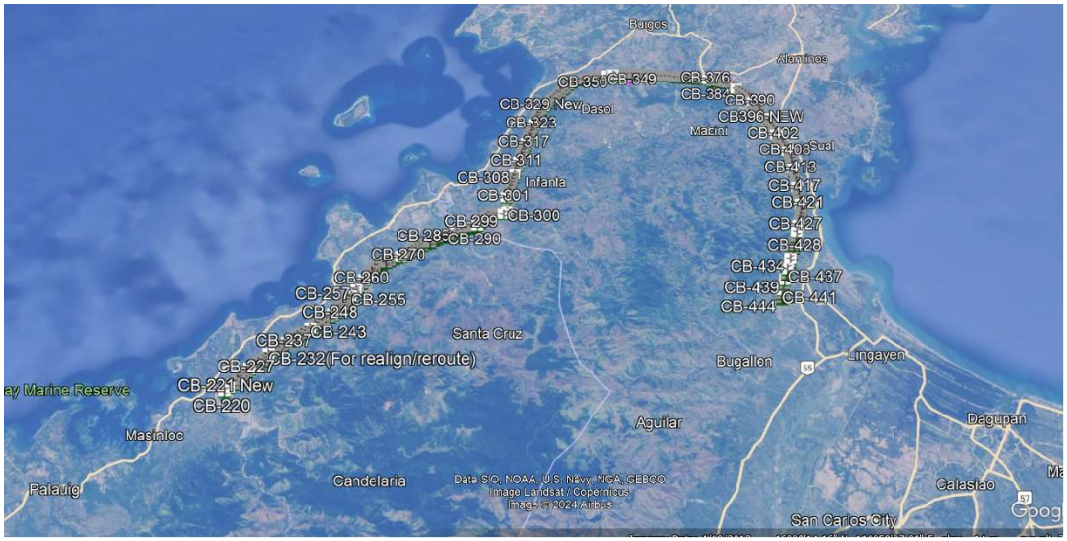
III. Abuyog 230kV power transformation project

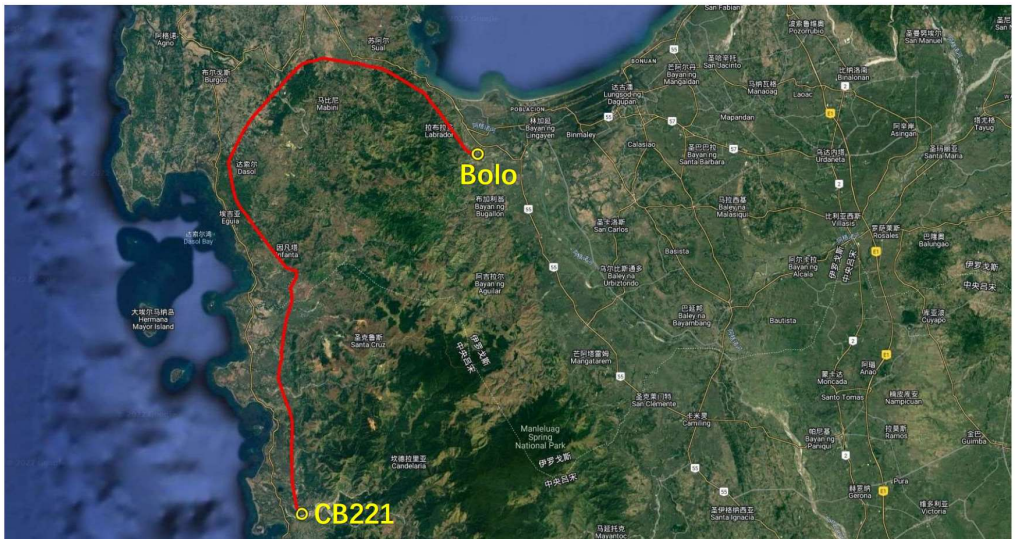
Abuyog 230kV power transformation project is located in South Luzon, Philippines. The project scale includes 2 sets of 100MVA 230/69/13.8kV main transformer, 230kV distribution device (12 circuit breakers), 230kV outlet line, 69kV distribution device (8 circuit breakers), and 69kV outlet line.

IV. Taguig-Baras 500kV TL project

The TAGUIG-BARAS 500kV Transmission Line project (Package B) is located in the southern suburbs of Metro Manila, on the northern shore of Laguna Lake. The length of project is 14km, the same tower is set up in double circles, the wire is 4×795MCM ACSR/AS with double ground wire, all of which are OPGW(36 cores). It needs to build 47 tower bases, including 17 linear tower, 30 tensile tower. The iron tower adopts steel pipe Angle steel composite tower.

V. Western Luzon Backbone 500kV TL Project





The **Western Luzon 500kV Backbone Project (Stage 2) – Schedule II (Tower No. CB-221 to Bolo S/S)** is located in Provinces of Zambales and Pangasinan in Luzon. The work includes design, supply, installation, erection, and civil works, as well as stringing, testing and commissioning of the Transmission Line. The project will consist of 228 lattice steel towers, approximately 87.0 kilometers long that will be installed starting in Candelaria, Zambales and ending in Labrador, Pangasinan.

VI. 554 design project

The 554 design project includes 5 sub-projects:

1.LAOAG substation is a conventional AIS substation. The 230kV and 115kV switch fields are connected by half circuit breaker, and the 69kV switch field is arranged in radial direction (single bus connection).

2.BAUANG substation is a conventional AIS substation with 230kV switch field and one-half circuit breaker connection, 115kV and 69kV switch field are radial arrangement (single bus connection).

3. SAN ESTEBAN substation is a conventional AIS substation with 115kV and 69kV switching fields in radial arrangement (single bus connection).

4. BACNOTAN Substation shall be fitted with new walls as shown and described in the civil scope of the works and in the site development plan.

5. CURRIMAO substation is a conventional AIS substation with 115kV and 69kV switching fields in radial configuration (single bus connection).

VII. Ning*ning Muzon Solar Rooftop Power Project

NING-NING MUZON-15.96MWdc Roof Solar Project located at Labac, Naic Cavite. The rooftop solar project is composed of two housing units preferably PAGSIKAT and PASINAYA.

PASINAYA has 7,938 635Wp monocrystalline silicon half-cell single-sided photovoltaic modules, 38 sets of 100kW string inverters and 2 sets **of 34.5kV-2000kVA box-type substations** were installed in the PAGSIKAT, with an installed capacity of **3,800kW**. Every 18 to 20 string inverters are connected to a 34.5kV-2000kVA box-type substation, which increases the voltage to 34.5kV, collects it through the collector line, and then connects it to the **34.5kV Transmission Lines** for grid connection.

PAGSIKAT has 18,504 590Wp monocrystalline silicon half-cell single-sided photovoltaic modules, 81 sets of 100kW string inverters, **3 sets of 34.5kV-2000kVA box-type substations and 2 sets of 34.5kV-1600kVA box-type substations.** The installed capacity of the project is **8,100kW.** Every 17 to 20 string inverters are connected to a 34.5kV-2000kVA box-type substation, and every 13 to 16 string inverters are connected to a 34.5kV-1600kVA box-type substation, which increases the voltage to 34.5kV, collects it through the collector line, and then connects it to the **34.5kV Transmission Lines** for grid connection

VIII. Misamis 20.78MW Solar Power Project

FDC - 20.78MWdc Ground Mounted Solar Project with an area of 189,341 m² (18.9341 ha) located at Villanueva, Misamis Oriental. The project scope of works includes **PV Solar Farm** (34,356 sets 605W, N-Top CON, Bificial, Dual-glass, salt-spray resistant, 5 assy (Central Inverter & MV Transformer Integrated IP65 Inverter Capacity: 3300kVA,13.8kV,60Hz MV Transformer Capacity:3300kVA,0.63/13.8kV, Substation (1 unit - 25 MVA Power Transformer 13.8/69kV, 1 set - PCB (DT), 2 sets - DS, 1 set- DS/ES, 3 pcs - PT, 3 pcs - CIT, 1 assy - MCSG(Main 1-1500A, 40kA, 3 Branches - 250A, 25kA))and the **69kV Transmission Lines** (4km away from the tapping point).

Thank you!