中国中铁

Wang Kun

Jan. 16, 2024

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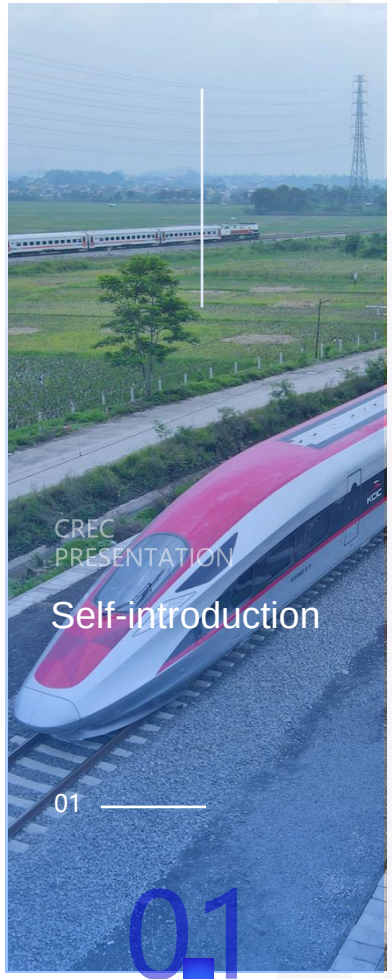

Steven Wong

(WANG Kun)

Executive President
CREC International Engineering Corporation

President of Council
China Chamber of Commerce in Indonesia

Project Director
CREC Jakarta - Bandung High Speed Railway Project

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China Chamber of Commerce in Indonesia

Purpose

- Smooth Chinese enterprises registered in Indonesia:
- Safeguard the interests of Chinese enterprises in Indonesia;
- Enhance the traditional mutual friendship
- Promote CHN & INDO companies' friendly cooperation and exchanges
- Serve as a Bridge and Link.

More info

Y2005	400	43	11
Established in May 2005	Effective members	Companies	Covering more than 10 Industries

China Chamber of Commerce in Indonesia

Industry Sections

1 Electricity Division, New Energy Industry Division, Electrical & Mechanical Division, Consumer Goods & Agriculture Division, Finance & Property Division, Railway Transportation & Hydraulic Engineering Division, Construction & Building Materials Division, Mining & Metallurgy Division, Aviation & Logistics Division, Petroleum & Chemical Industry Division, and Information & Communication Division. Security & Fellowship Department.

Local chapters

2 Bali Chapter, and Riau Chapter. Industry chapters and regional chapters designate chapter Presidents and Vice Presidents, respectively, who are responsible for providing support and services to members in their respective industries and regions.

Clubs and departments

3 The clubs are Badminton Club, Photography Club and China-Indonesia Economic and Trade Co-operation Zone Club. The three departments are: External Liaison Department, Policy Research Department, and Security and Joint Defense and Friendship Activities Department.

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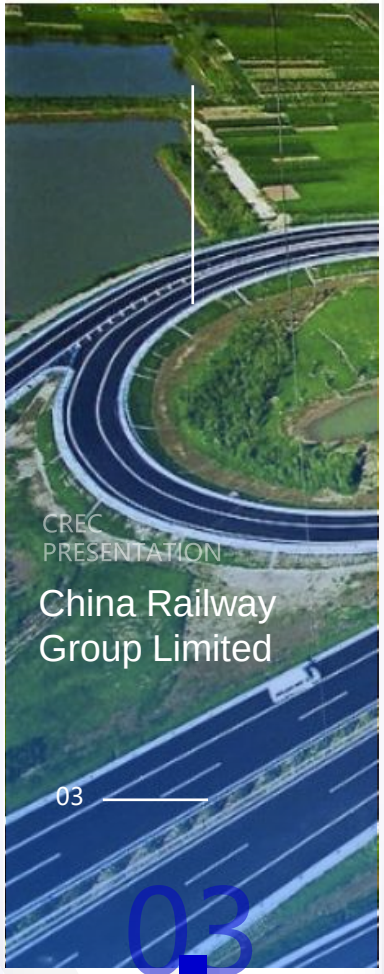

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About CREC

One of the largest engineering and construction companies in the world

FORTUNE GLOBAL 500 39

ENR TOP 250 13

What we can do?

A quick review of CREC projects

Solar Power

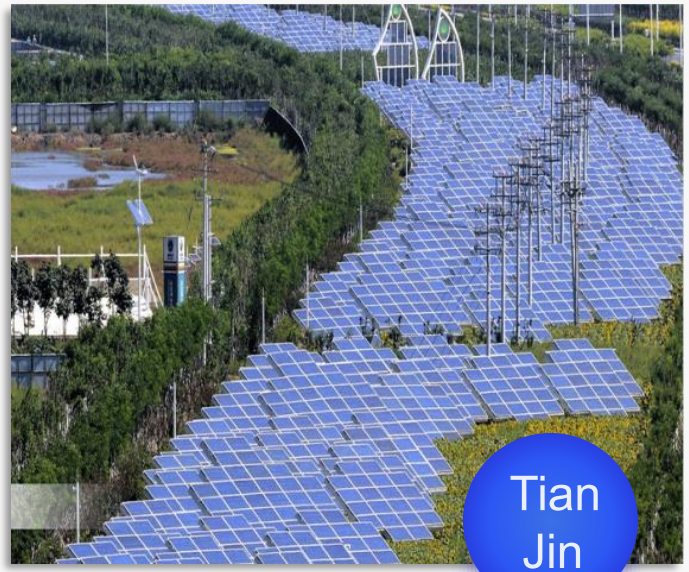
Dalian Lyushunkou District

12MW Distributed Project

Undertook the installation of the roof of photovoltaic building and related supporting works in the plant area.

Suzhou Project

The photovoltaic power generation project is located in Suzhou High Tech Zone, with **a total capacity of 5844.96 kW**. The company is mainly responsible for the procurement, installation and commissioning of 21648 groups of photovoltaic modules and supporting projects.



New Tianjin Eco-City-Tianjin Avenue

The overall length is about 2.87 km, with a total engineering design capacity of 3.3 MW.

The project includes the construction of civil pile foundation, foundation bearing platform, cable trench, maintenance channel, etc.

Offshore Wind Energy

1	2	3	4	5
(H3) Maritime Wind Power Project	**No. 2 Offshore Wind Power Plant**	**2# Offshore Wind Power Project**	**Offshore Wind Power**	**Offshore Wind Power**
The total installed capacity of the wind farm planning machine is 300mW, and it is planned to install 60 single–machine capacity of 5.0MW paddle gear transmission wind power crew, the contract amount is 101 million USD.	The installed capacity is temporarily designed by 300MW, with a total area of about 47.5km2, and the contract value of 74 million USD.	With a total installed capacity of 400MW, it is planned to install 31 6.45MW offshore wind turbines of Ming Yang and 32 6.25MW offshore wind turbines of Shanghai Electric, together with a 220 kV offshore booster station. Contract value is 107 million USD.	The total installed capacity is 300MW. It is planned to deploy 40 wind turbines with a capacity of 6MW or above and build a 220kV offshore booster station and an onshore centralized control center, contract value is 193 million USD.	This project mainly includes the foundation fabrication and construction of 42 fans, fan installation, block PC in offshore booster station, fan foundation and tower safety monitoring project, sea area early warning system project, lightning early warning service, construction of infrastructure base,
				

Photovoltaics

NOOR TAFLILALT Solar Photovoltaic Power Plant Project in Morocco

The total installed capacity of the project is **120 MW**. The project covers design, supply and construction, and provides professional technical support for operation and maintenance for the project.

Hydropower Division

To meet China's goals of achieving carbon peaking and carbon neutrality by 2030, CREC invests in cutting-edge infrastructure for its urban envelopment projects. By promoting green energy as well as smart, cloud plants for prefab construction, CREC aims to promote industry upgrade goals and set the template for energy-efficient construction.

Busanga hydropower station (DR Congo)

Capacity

240 MW

1.32Billion kWh

Generates clean energy every year

1.1Million tons

Reduction of carbon dioxide emissions

Mineral Resources

In the market of minerals and other natural resources, CREC has been carrying out projects through various forms including risk exploration, cooperative exploration, mergers and acquisitions, its mining assets mainly include copper, cobalt, molybdenum, lead, zinc and silver.

Flotation Production Line of SICOMINES

Eco-friendly process for ore beneficiation

Uyuni Potassium Salt Plant (Bolivia)

**One of the world's few facilities that operate at high altitudes,
the plant has an annual throughput of 350,000 tons**

CREC's International Strategy

Strength in Indonesia

What we did & What we are doing?

BUSINESS SEGMENT
Since 2005

UNDER CONSTRUCTION PROJECTS

22
Total Quantity of projects

2.5 billion+
Total Amount

1.366 billion+
Jakarta-Bandung High Speed Rail Project Amount

1.226 billion+
Other Projects Amount

Completed Project

- Anggoci HydroPower Division
- The Harum Nickel Strip Mining Project in North Maluku
- The fats, oils, and chemicals project of Xingzhong Industrial Co.
- The laterite nickel mining project of BSM

Under Construction Projects in Indonesia

Jakarta-Bandung high-speed railway project

Xingzhong industrial park

PT. TAM coal mine earthwork stripping project

Obi Island new apartment building project

PT HSM nickel mine facilities project

Obi Island earthwork project

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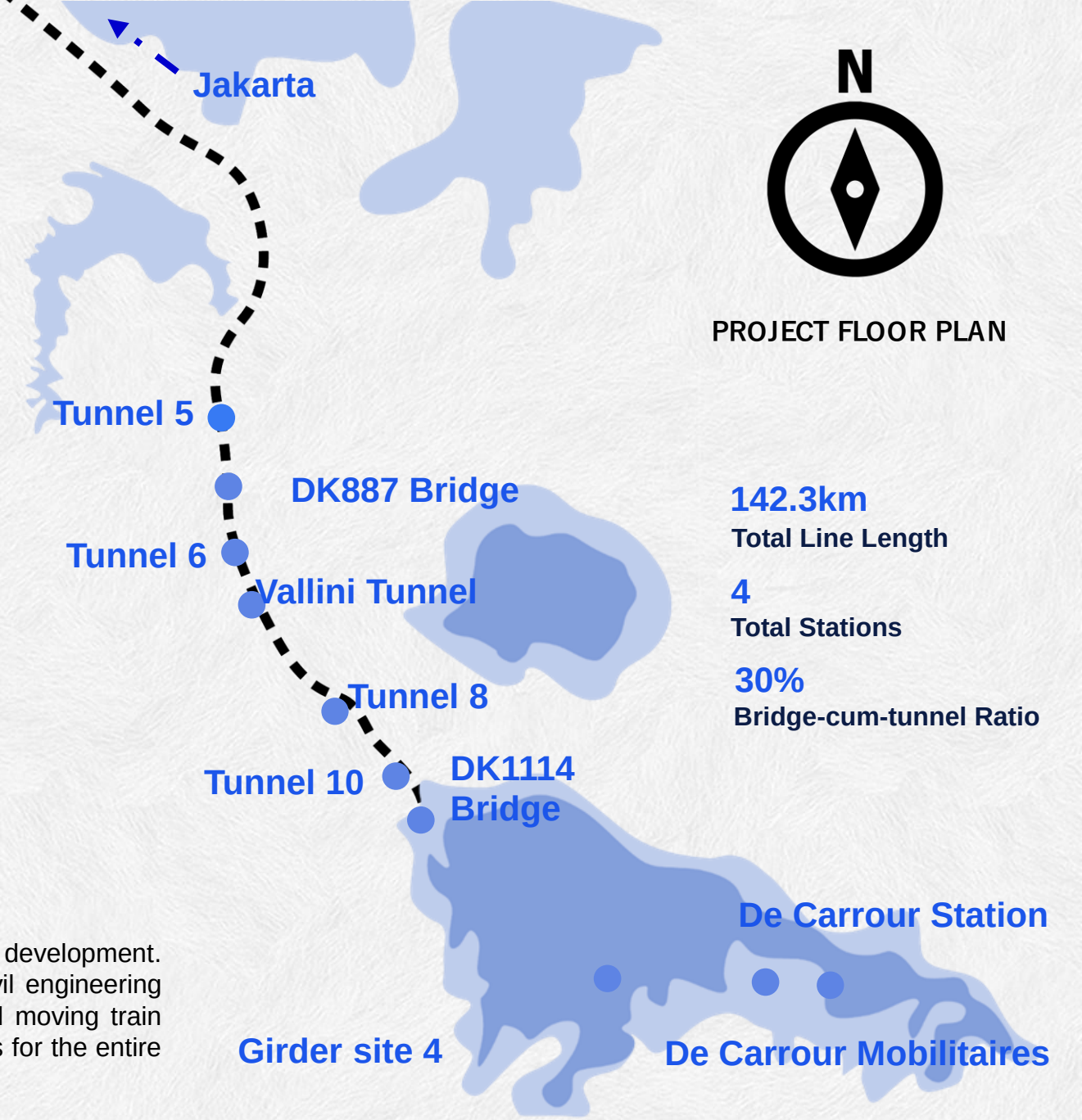
Jakarta-Bandung High-Speed Railway Project

5years
Construction Period

80years
Operation Period

$ 7.2billion
Total Investment



142.3km
Total Line Length

4
Total Stations

30%
Bridge-cum-tunnel Ratio

The project includes investment and financing, construction, operation and TOD development. China Railway and WIKA will jointly undertake the construction of 57.054km civil engineering works of DK85+046-DK142+100 section and Bandung moving train section and moving train alignment works. China Railway will undertake the power and electrification works for the entire 142km section.

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Related Regulations

Decree No. 30 of 2007 on Electricity

- established a series of principles that energy planning should follow, including convenience, rationality, efficiency, fairness, value-added, sustainability, public welfare, environmental protection, national defense, and consistency with national capabilities. According to the decree, new energy comes from new resources and can be produced through new technologies from renewable or non-renewable energy sources, including nuclear energy, hydrogen, coalbed methane, liquefied coal, and gasified coal. In addition, renewable energy comes from renewable resources, including geothermal energy, biomass energy, solar energy, hydropower, ocean energy, and temperature difference energy.

Related Regulations

Decree No. 30 of 2009 on Electricity

- in order to ensure the sustainability of power supply, it is necessary to optimize the use of major energy sources in Indonesia and abroad according to national energy policies. The policy decides to prioritize the development of new and renewable energy.

Ministerial Decree No. 17 of 2013

- preferential conditions for the purchase price of photovoltaic solar power stations by the National Electricity Company, which will promote more private developers to enter the field of photovoltaic solar power plants (Pembangkit Listrik Tenaga Surya, PLTS)

Related Regulations

Regulation No. 79 of 2014 on National Energy Policy

- the content related to the use of new energy for power generation includes renewable energy such as hydropower, geothermal energy, ocean current and temperature difference power generation, wind energy, solar energy, biomass energy, and waste power generation. The planning goal for renewable energy is to account for 23% of the total basic energy in 2025 (about 92.2 million tons of oil equivalent), of which the electricity accounts for 69.2 million tons of oil equivalent (45.2 GW), and the non-electricity accounts for 23 million tons of oil equivalent. The goal is to reach 31% by 2050.

Related Regulations

National Electricity General Plan 2015-2034

- the ultimate goal of optimizing the energy structure is to ensure that renewable energy accounts for at least 23% of primary energy consumption in 2025. In order to achieve the goal of renewable energy proportion, laws and regulations need to be formulated and better reward and punishment mechanisms need to be provided

Ministerial Decree No. 17 of 2014

- the maximum standard electricity price for the purchase of electricity and the required geothermal steam for geothermal power plants by the National Electricity Company (PLN) shall apply. – issued by MEMR

Related Regulations

Ministerial Decree No. 27 of 2014

- preferential policies for the National Electricity Company to purchase electricity from biomass power plants, promoting the development of biomass and biogas power plants. In this development plan, power plants need to cooperate with local governments to formulate long-term plans for biomass fuel prices.

Ministerial Decree No. 19 of 2015

- the price standards and tariff mechanism for the National Electricity Company to purchase electricity from hydropower stations below 10 MW, which has attracted more private developers to develop small and micro hydropower stations

Related Regulations

Ministerial Decree No. 44 of 2015

- preferential policies for the National Electricity Company to purchase electricity from waste-to-energy power plants using urban garbage as raw materials to support the development of such power plants.

Presidential Decree No. 47

- provide solar energy-saving lamps (LTSHE) for households without electricity.
- → rural residences with dispersed population, remote geographical locations, and unable to use the national power grid. The plan aims to electrify 256,114 households without electricity within two years.

Related Regulations

2017 Renewable Energy Procurement Policy

- the specific terms for the National Electricity Company to purchase renewable energy such as solar and wind energy

2020 REC

- a Renewable Energy Certificate (REC) trading market to promote the development of renewable energy in Indonesia

Related Regulations

2024 Ministerial Regulation No. 4

- Empower the National Electricity Company to directly sign power purchase contracts with independent power producers (IPPs) without implementing bidding.
- The business model of renewable energy projects changes from build-own-operate-transfer (BOOT) to build-own-operate (BOO).
- The National Electricity Company must fully purchase electricity from independent renewable energy power producers (prior to this, priority access had capacity limitations)

Post-pandemic Era

- High Speed Development Stage
- Utilization of new energy - reach 23% by 2025
  Utilization of renewable energy – reach 31% by 2050
- Indonesia will fully tap existing resources, build hydropower, geothermal, and solar power projects, accelerate the elimination of old coal-fired power plants, encourage investment in the construction of more renewable energy power plants; clean coal technology will reduce greenhouse gas emissions

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Opportunities

So long time Solar

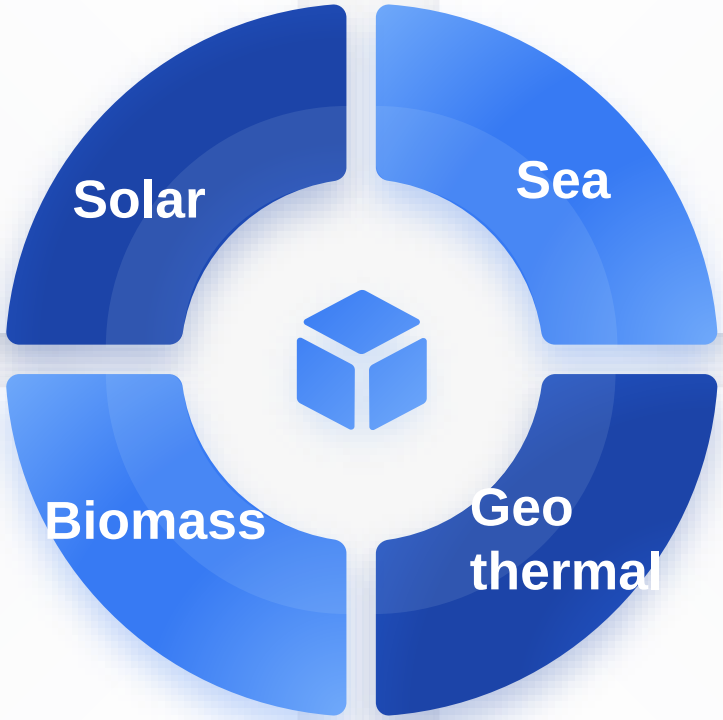
Photovoltaic potentiality:

4.6 kwh/m2/day; 43% land areas

See the seas

54,700km Coastline; 10-35MW

ONLY ONE in Lombok Strait
Low utilization



Win with the wind

Floating offshore – 79GW;
Fixed offshore – 198GW

----- World Bank

Get the Geothermal

1st in the world
Less than 7% developed

Issues constraining new energy investments

The main issues related to constraints on significant progress in new energy investment are the following:

Investment

Introduced in 2016 with **51%** PLN for all energy investments.

Localization

The localization rate, PKBN 40%, has to be calculated optimally in the context of the market. e.g., based on the overall investment, whichever is the highest.

Process

The **bidding process** need to be more predictable and binding.

Bidding

Bidding tariff caps , whether they can be optimized in relation to regions and sectors.

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THANKS