



PT Trina Mas Agra Indonesia

Company Introduction and Solar Energy Potential in Indonesia

Indonesia Solar Summit 2024

Jakarta, 21 August 2024



Solar PV Manufacturing Investment

Shareholders:



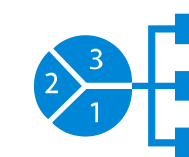
TMAI Groundbreaking Ceremony
28 August 2023



TMAI Shareholder's Agreement
11 October 2023



Location : Kendal Industrial Park



Capacity : **1GW** in 1st Phase (Solar Cell & Solar Module); extendable to 3GW



Technology : **Tier-1** N-type Topcon Cell & Module (**AAA** bankability by BNEF)



Investment: more than **100 Mn USD**



Land preparation: **Dec 2023**

EPC: **Mar 2023**

Financial Close: **31 Jul 2024**

COD Solar Module: **Q3 2024**

COD Solar Cell: **Q4 2024**



TKDN Local Content Compliant
>40% as Per Mol Reg 34/2024



Market: **Utilities Projects**

Product Type: NEG21C.20

Vertex N

High String Power | High Power Generation | High Reliability

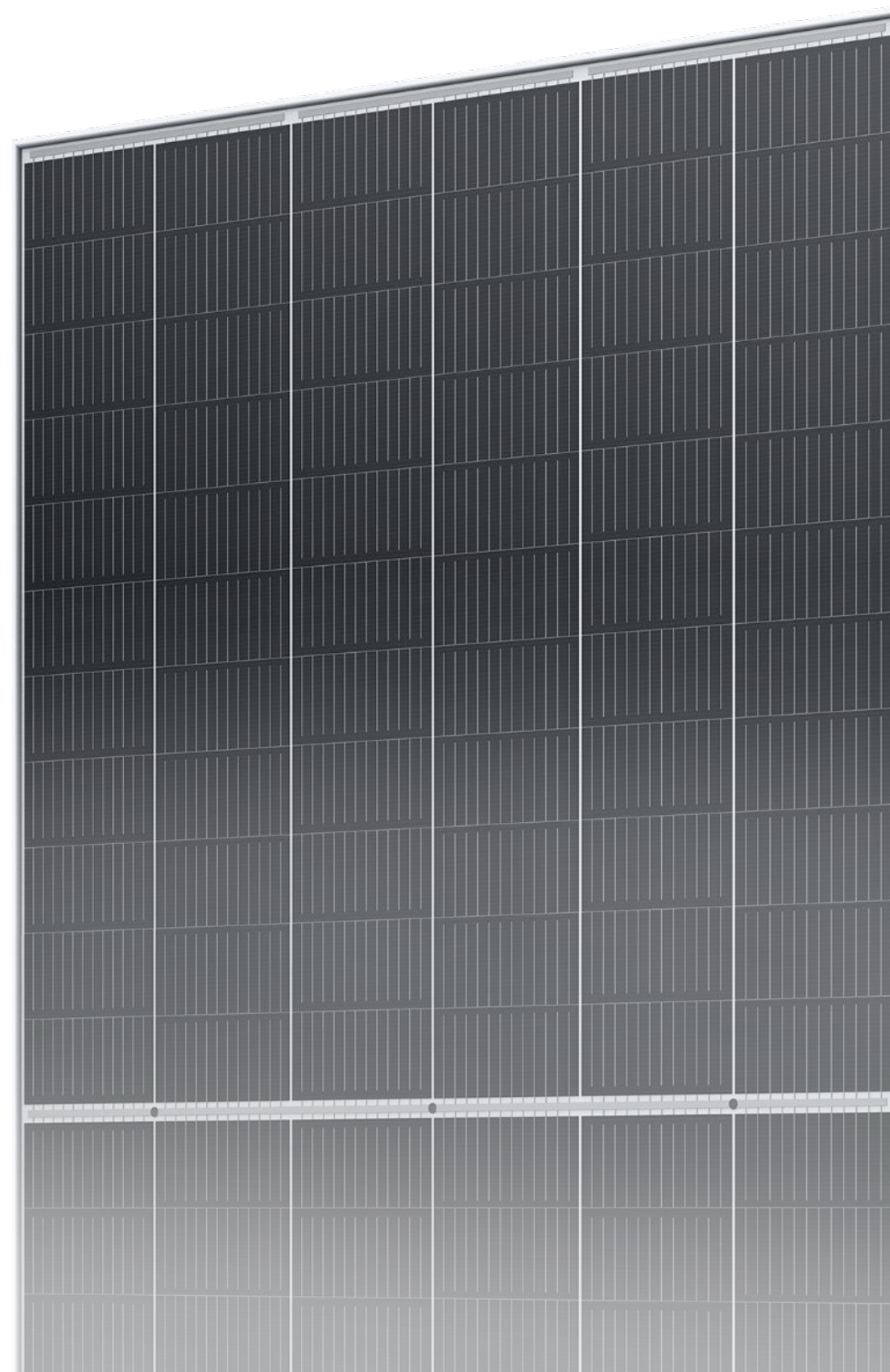
Maximum Power

Up to
720W

Physics Parameter

Size: 2384*1303mm

Weight: 38.7kg



Efficiency

Up to **23.2%**

Technical Parameter

Low voltage design concept

Voc: 49.4V

Imp : 17.44A

Challenges for Solar Energy in Indonesia

From TKDN-focused solar panel manufacturer's point of view:

1. Limited demand and delayed execution

- Demand for TKDN solar panels are limited to PLN projects only (RUPTL)
 - Execution of PLN projects usually takes more time than earlier estimate
- **Impact:** limited scalability for factory investment, including for upstream development and lack of certainty on purchase order

3. Immature local industry ecosystem

- Lack of local & qualified suppliers to achieve required TKDN (EVA film, tempered glass, solar silicon and PV Ribbon)
 - Locally purchase components for TKDN compliant are more expensive
- **Impact:** higher cost of production, TKDN achievement dependent on supporting industry

3. TKDN requirement does not align with support for TKDN

- No fiscal incentive given specific for solar cell and solar panel investment which technology is rapidly advancing
 - Current TKDN calculation approach does not provide sufficient incentive for upstream investment
 - No import duty on solar panel as barrier-to-entry
 - TKDN relaxation in the new regulations (uncertainty of TKDN policy for manufacturer)
 - Unclear price preference policy for using TKDN-compliant solar panel
- **Impact:** local factory is in a difficult position to compete against global market pricing

Support Required from Government

1. Expansion and Acceleration of demand execution

- Generate **new solar projects pipeline** to be ratified in the new RUPTL for sufficient market share and economics of scale
- **Accelerate project preparation and transaction** for quicker project execution
- **Wider implementation of TKDN-mandatory projects** (rooftop, electricity export, captive powers)

2. Acceleration of solar panel-grade industry supply chain

- **Fiscal incentive** specific to promote the growth of solar panel supporting industry
- **Involvement of SOE** as the industry player to catalyst the growth
- Clarity on the **specification and certification** of solar panel-grade components

3. Local industry protection from Government

- Heavy **import duty** on solar panel and solar cell import (US and India impose import duty to protect local manufacturers)
- Clarity on **Price Preference** (electricity tariff pricing) of using TKDN-compliant solar panels for PLN projects
- Incentive or **preference for real investment** project against *makloon* scheme

Manufaktur RI Anjlok, Jokowi Keluarkan Titah Ini



Foto: Muchlis Jr - Biro Pers Sekretariat Presiden

Untuk permasalahan itu, Jokowi menekankan kembali pentingnya penggunaan produk lokal. "Penting belanja produk lokal sekali lagi saya tekankan, kemudian penggunaan bahan baku lokal dan perlindungan terhadap industri dalam negeri kita," tegasnya.

<https://finance.detik.com/industri/d-7486369/manufaktur-ri-anjlok-jokowi-keluarkan-titah-ini>. (13 Aug 2024)

Therefore, Indonesia can **accelerate** its execution on **energy transition, renewable energy supply resilience** and increase the **depth of its local solar power industry**. In addition, **new technology** will be transferred to Indonesia and **new high-skilled workforce** will be created

Thank You

PT Trina Mas Agra Indonesia

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