

Electricity

## Launching Plan of Sumatera Transmission and Sumatera – Java Transmission

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MEDAN – Along with launching of Acceleration and Expansion of Indonesia Economic Development Master Plan Projects (a.k.a MP3EI) for Sumatera Economic Corridor at Friday, (10/10/2014), Coordinating Minister for Economic Affairs, Chairul Tanjung, also launched 500 kilovolt (kV) Sumatera Electrical Transmission and Sumatera – Java Electrical Interconnection Transmission Project Plan. The both projects have strategic values to strengthening power supplies to Sumatera and to connecting electrical transmission between Sumatera and Java.

“500 kV transmission of trans Sumatera project will be like interconnection Java and Bali, but it only for Sumatera. It means every power plant in Sumatera Island can supply the power to all places in Sumatera with no exception. And also this project very monumental, because electric and energy which can make our country becomes to be developed country, because without electric there is no Industry and without Industry our country cannot becomes to be developed country”. Cooperating Minister of Economic Affairs, Chairul Tanjung said.

“Electric is important to be power of attraction for economic development through economic sector. This project plan’s launching will makes Sumatera to be an Island which has high economic growth and in long term Sumatera should has big power capacity and able to encourage industry development in Sumatera Island”, He Said.

### 500 kV Sumatera Transmission Project

Sumatera Electric Transmission Project extending along the eastern side of Sumatera Island. This extra high voltage transmission lines will serves as an “Electric Highway” in Sumatera which supply the electricity from the power plant centers into electric load spot centers in Sumatera Island.

For the first step, will be build five of 500 kV transmission Areas in Sumatera, such as below:

- New AurDuri Area – Boundary (Jambi – Riau) (Lot-1)
- New AurDuri Area – Boundary (Jambi – Riau) (Lot-2)
- Boundary Area (Jambi – Riau) – Ruas Rengat Area – New Garuda Sakti (Lot-1)
- Rengat Area – New Garuda Sakti (Lot-2)

The transmission lines will be build on end of 2014 and operation target begin on 2017, the transmission lines will be extending 360 kilometer circuit (a.k.a kms) from Aur Duri, Jambi until Garuda Sakti, Riau. The transmission lines will supply the electric from some steam power plant centers (a.k.a PLTU) which is currently under construction, such as Jambi Steam Power Plant with 2 X 400 megawatt (MW) capacity, South Sumatera Steam Power plant 6 capacity of 2 x 300 MW and South Sumatera Steam Power Plant 7 capacity of 2 x 150 MW. Moreover, the transmission lines will supports 275 kV electric lines which currently use as mainstay for supply the power in Sumatera Electricity System.

Sumatera Electricity System consist of 3 Big Electricity Systems, such as South Side of Sumatera, include South Sumatera, Lampung, and Bengkulu, Middle side of Sumatera, include West Sumatera, Riau, and Jambi, and North Side of Sumatera, include North Sumatera and Aceh. Total of current electric load peak in Sumatera is about 4,483 MW and electric load increase about 10% per year. The Transmission Lines development will reinforce Sumatera Electricity System and also to reduce fuel usage as fuel power plant significantly.

The 500kV Sumatera transmission project is first transmission development project which use financing scheme and full development which will be performed by Developer and for the next long term will owned by National Electricity Company (a.k.a PLN).

For the second step, 500kV transmission lines which will connecting Aur Duri to Muaraenim, at South Sumatera will be begin to build on 2016. And for third step is build transmission lines which will connecting Garuda Sakti to Medan. If all steps of development have done as the target, on 2020 there is Sumatera “Electric Highway” which connecting Muara Enim at South Sumatera to Medan at North Sumatera. The rapidly economic growth in Sumatera will get good power supply at the future.

### **Sumatera – Java Interconnection HVDC Transmission Project**

Sumatera Java Interconnection (a.k.a ISJ) High Voltage Direct Current transmission (a.k.a HVDC) is Strategic Electricity Project which is found in 2013 – 2022 PT. PLN (Persero) Power Supply Business Plan. The purposes of First Transmission Development in Indonesia which use HVDC Technology are below:

1. To increase the ability and reliability of power supply in Sumatera and Java
2. To support government program in order to diversification of power plant energy
3. To increase electrification ratio in Sumatra and Java
4. To encourage national economic growth

ISJ HVDC Transmission will supply 3,000 MW electric power from 8, 9, & 10 of South Sumatera Independent Power Producer/ IPP steam power plant (private electric power plant) to Sumatera and Java system. Total length of ISJ HVDC Transmission is 742 km which consist of 464 km DC Transmission (a.k.a Direct Current) and 278 km AC Transmission (Alternating Current). ISJ HVDC Transmission development will through 4 provinces, such as South Sumatera, Lampung, Banten, and West Java. ISJ HVDC Transmission Development will take 300 hectares land area.

Herewith the development plans of ISJ HVDC Transmission Project:

- 500kV AC/DC Converter Station and Electrode Station on the side of Sumatera and Java including 500 kV, 275 kV, and 150 kV of AC substation
- ± 40 km HVDC Submarine Cable at Sunda Strait including Landing Point on side of Sumatera and Java
- ± 464 km HVDC Transmission on the side of Sumatera and Java
- ± 278 km 500kV AC Transmission on the side of Sumatera and Java (SF)

**(ADMINISTRATOR)**