



**Empresa de Transmisión Eléctrica, S.A.**  
**REPUBLIC OF PANAMA**

**INFORMATION PACKAGE OF PROJECT**



January 2016

## ESTIMATED TENDERS PROGRAM

The projects listed below refer to projects with an estimated investment amount greater than US \$50 million and an estimated starting execution for 2016 and 2017 fiscal years.

All these projects are emblematic for the current administration led by President Juan Carlos Varela, due to its high social impact for the country, helping to improve the quality of life of thousands of Panamanians and economic development in various areas of the country.

Future Tenders	2016	2017
Panamá II – Chepo – Metetí line and associated substations.	June	
Sabanitas – Panamá III line and associated substations.		February
Panamá III 230 / 115 KV substations.		April
Chiriquí Grande – Panamá III 500 KV line design and associated substations.		March



## PANAMÁ II – CHEPO – METETÍ LINE AND ASSOCIATED SUBSTATIONS

### TYPE OF PROJECT

230KV Transmission Line and Chepo, Metetí Substations.

### PROJECT COST

B/. 103,633.000



### PROJECT STRUCTURE

There will be a design and construction bid that will include environmental, sociological, operating and coordination studies.

## Project Summary

In the document published by The Secretaría National de Energía (SNE), "Definition of Policies and Criteria for the Review of the National Interconnected System 2015 Expansion Plan" it is established that there must be an electrical integration of the far East Panama Sector. That requires that the electrical interconnection of Darién province must be completed in a short period with the construction of a transmission line of 230 KV starting from Panama II substation. This project requires the construction of the following infrastructure:

- Increase the capacity of the existing Transmission Line Panama II - Chepo.
- From the new Chepo substation to Bayano substation, the existing line will remain as is.
- New 170 km, 230KV, 300MVA transmission line from Chepo substation – Meteti substation, this will be a single power circuit in towers of double circuit capacity.
- New 230 KV Chepo four bays substation, in scheme of one and medium hybrid switch.
- New 230 KV Meteti two bays substation, in scheme of one and medium hybrid switch with two bays.

## Program Date:

June, 2016.



## SABANITAS – PANAMÁ III LINE AND ASSOCIATED SUBSTATIONS

### TYPE OF PROJECT

230 KV Transmission Line and Substations

### PROJECT COST

B/. 105,771,000



### PROJECT STRUCTURE

There will be a design and construction bid that will include environmental, sociological, operating and coordination studies.

## Project Summary

Because the near future integration of new natural gas generation plants at Colon province in the Atlantic, it is required that the existing transmission system between the Panama and Colon provinces to be reinforced to transmit this additional generation. Then it is necessary to construct a new transmission line from the Colon area, this new 230 KV transmission line will be built from the town of Sabanitas to the city of Panama (Sabanitas-Panama III 230 KV); which requires the following works:

- a. Line Sabanitas - Panama III 230 KV: line of 230 KV, double circuit, it will have an approximate length of 50 km.
- b. Expansion of the 230 KV Sabanitas substation: Two (2) new bays and switches for connecting the 230 KV Panama III substation double-circuit transmission line will be required.
- c. Expansion 230 KV Panama III substation bays.

## Program Date:

February, 2017.



## PANAMÁ III 230 / 115 KV SUBSTATION

### TYPE OF PROJECT

230/115KV. Panama III  
Substation

### PROJECT COST

B/. 63,443,633



### PROJECT STRUCTURE

There will be a design and construction bid that will include environmental, sociological, operating and coordination studies.

## Project Summary

This project consists on the construction of a new 230/115 KV Panama III substation, breaker and a half circuit breaker layout in a hybrid distribution scheme, that is switches, breakers, blades and CTs shall be SF6 encapsulated, the substation yard will be located in the Mocambo sector near Panama city.

This substation will serve as an interconnection point for new transmission lines for the distribution companies that feed the demand of through new smaller substations, and also connecting transmission lines coming from the West (LT-2 and LT-3) and the line from Sabanitas substation coming from Colon, where the future thermal power plants will be installed.

## Program Date:

April, 2017.



## CHIRIQUÍ GRANDE – PANAMÁ III 500 KV LINE AND ASSOCIATED SUBSTATIONS

### TYPE OF PROJECT

500 KV Transmission Line and 500/230KV. Substation

### PROJECT COST

B/. 474,982,000



### PROJECT STRUCTURE

There will be a design and construction bid that will include environmental, sociological, operating and coordination studies.

## Project Summary

Due to the construction of new hydroelectric, solar, wind and thermal power stations in the western side of the country, it's necessary to increase the transmission capacity of the electric power lines originating at Chiriquí and Bocas del Toro towards the metropolitan area of Panama and Colon cities. Given the increase in load in the metropolitan areas, we require the studies for design and construction of a Fourth transmission line from Bocas del Toro province, beginning at a new 500KV Chiriquí Grande substation, to the new 500KV Panama III substation. The following works are required for the operation of this project:

- a. 1280MVA, 500 KV Transmission line with an approximate length of 330 km.
- b. Construction of a new 500/230 KV Chiriquí Grande substation, build an extension of the 500/230 KV Panama III substation and the installation of Static-Var Compensator of +150 / - 30 MVAR at Panama III substation.

## Programing Date:

March, 2017.