

## R&D Fund Project

### Pilot Study On The Use Of Gapless Transmission Line Arresters (TLA) As An Alternative To Gapped TLA In TNB Transmision



ABB TLA (PEXLIM) installed on Balakong to Serdang 132kV line



SEDIVER TLA (SLA) installed on Balakong to Serdang 132kV line

#### Project Overview

This project is to evaluate an alternative Transmission Line Arrester - Gapless-Type TLA in TNB. A total 148 units of OHIO BRASS, ABB and SEDIVER gapless TLA were installed on Balakong to Serdang 132kV line in May 2005. Each TLA was installed with an ABB EXCOUNT II TLA sensor for the on-site measurements of TLA surge and resistive leakage currents. Monitoring was carried out on site for a period of 15 months between May 2005 and July 2006. The conditions of the TLA were monitored for signs of premature ageing during service. Three TLA samples of each make were taken from the site after 12 months and were sent for laboratory examinations and electrical retests to verify the conditions of the service-aged TLA.

#### Deliverables

- (i) OHIO BRASS, ABB and SEDIVER gapless TLA equipped with ABB EXCOUNT II TLA sensors installed on Balakong to Serdang 132kV line
- (ii) Findings on the effectiveness of installed gapless TLA reliability in preventing line tripping due to lightning (Final Report)
- (iii) Findings on the in-service gapless TLA conditions (Final Report)

#### Benefits

- (i) Improved Balakong to Serdang 132kV line lightning performance
- (ii) Improved technical knowledge and experience on the use of gapless TLA in TNB
- (iii) Improved knowledge helps in specifying and selecting gapless TLA for TNB