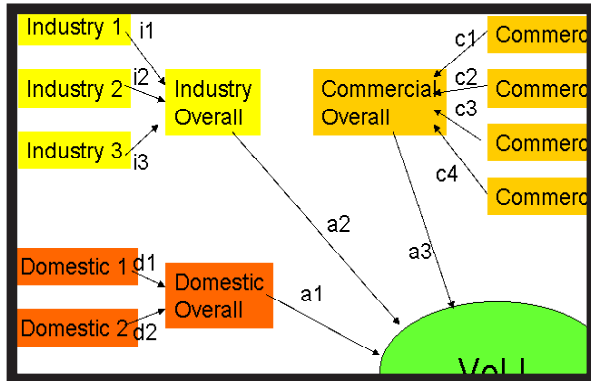




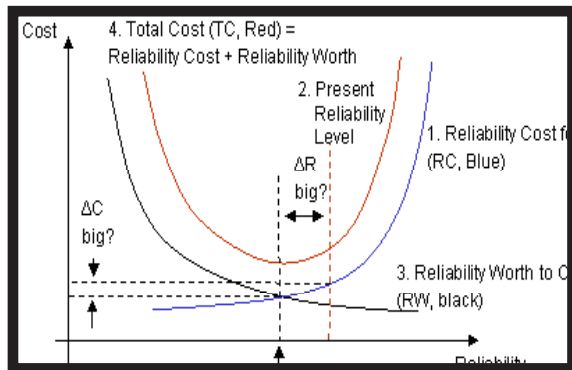
**TNB RESEARCH**

## R&D Fund Project

### A Study to Determine the Value of Lost Load for the Commercial and Industrial Customers for TNB Distribution



Method to Compute the Composite VoLL



Utility Asset Investment: Balancing Reliability Cost and Reliability Worth

### Project Overview

There is a growing need to determine the value of electricity worth for system security purposes. This can be seen in the proliferation of contracts for interruption or interruptible load schemes between electricity utilities and large consumers. In order for schemes

like this to take off, the Value of Lost Load (VoLL) must first be found. This project used customer survey in order to collect the data from the commercial and industrial customers of TNB Distribution. The VoLL and customer damage function (CDF) is calculated for each stratum in the commercial and industrial strata.

### Deliverables

- \* A complete methodology on determining the VoLL
- \* A questionnaire which allows TNB to quickly assess the outage cost to the consumer
- \* The composite VoLL determined from the project is RM10.47/kWh

### Benefits

- \* To assess the reliability level of the electricity supply to commercial and industrial areas and quantify the assessed reliability level in terms of indices and monetary value.
- \* To vary the reliability levels of the electricity network based on the potential variances that can occur whilst determining the outage costs of commerce and industry for specific commercial and industrial areas.
- \* To determine the reliability level function with a variation of capital investment costs.
- \* To establish the optimal reliability and capital investment level for specific commercial areas.
- \* To ascertain the margin of reliability,  $\Delta R$ , and the margin of cost,  $\Delta C$ , as a point of further discussion between the Regulator and the Utility.