

SECTION 2
RESEARCH METHODOLOGY

2. Research Methodology

2.1 Sampling Design

The unit of analysis is registered TNB consumers in the Cheras/Balakong area. Records of sampling frame are readily available in TNB Kajang's office, comprising of around 30,000 consumers at all major tariffs. Area and quota sampling is used for this study.

Area and quota sampling is chosen because of the availability of expert knowledge regarding TNB's consumers in the area. Data is available at TNB Kajang's office which can be used to produce a small but representative sample of the population.

Table 1 represents the statistics of the TNB consumers 15 km radius from Balakong Town. The town is chosen as the reference point because of its fairly central location in the area of study.

Table 1

**Distribution of TNB Consumers by Category and Tariff in
Cheras/Balakong area**

Category of Consumers	Tariff		
	Nos of Domestic	Nos of Commercial	Nos of Industrial
Ordinary Consumers	30,556	3,249	66
Large Power Consumers**		82	600
Total	30,556	3,331	666

Note: ** Large Power Consumers (LPC) are consumers of high electricity consumption and are normally metered through current-operated transformers

The study sample consists of 200 consumers and their distribution by area and quota are given in Table 2. The selected towns in the table are the focal points of growth within the area. Figure 1 presents the map of Cheras/Balakong area, illustrating the 6 locations.

The samples in Table 2 approximately proportionate the tariff paid by the population as shown in the Table 1. The consumers are fairly distributed according to the major areas and the sampling design attempts to cover the consumer spread geographically.

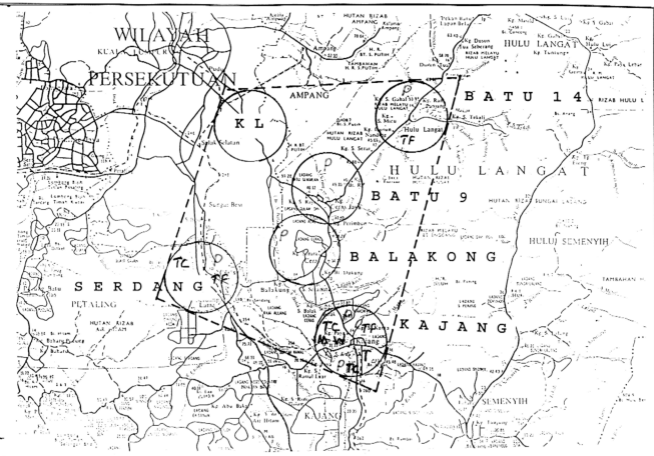
Table 2
Distribution of Study Sample by Tariff Type and Geographical
Locations

	Total Number	Kajang	Balakong	Serdang	Batu 9	KL	Batu 14
Domestic (Ordinary)	150	15	30	30	30	15	30
Commercial (Ordinary)	20	2	4	4	4	2	4
Industrial (Ordinary)	10	1	2	2	2	1	2
Commercial (LPC)	10		10				
Industrial (LPC)	10		10				
Total	200	18	56	36	36	18	36

Note: ** Large Power Consumers (LPC) are consumers of high electricity consumption normally metered through current-operated transformers

Figure 1

Map of Cheras/ Balakong Area



Keys:

Existing Centers

P	Post Office	M	Majlis Daerah
TC	TNB Collection	W	JBA/ Water Authority
T	Telekom Collection	TF	TNB Fault Restoration

2.2 Method of Data Collection

2.2.1 Survey Technique

The study utilized the survey method. The research instrument was an 8 page questionnaire consisting of 34 questions. It consisted of 6 sections. There are 10 questions on Billing, 3 questions on Disconnections, 4 questions on Enquiries, 8 questions on Supply Interruptions, 1 question on Perception of collection center features and 8 questions on Respondent data. Most are single-answer type of questions while some are multiple-answer type questions. There is one question which asks respondents to rank from eight features of a new Consumers Service Center. Appendix A presents a copy of the questionnaire.

The questionnaire was an improvement of a questionnaire used in an earlier study entitled "Customer Satisfaction Index" survey conducted by TNB headquarters in late 1994. The current questionnaire was developed after a series of brainstorming sessions

and discussions with a cross-functional team of TNB officers from TNB Kajang.

Initially, it was proposed that the survey be conducted by the drop-off method by TNB meter readers to save cost and time. However, after renewed discussions with TNB team, the self-administered approach was dropped in favor of personal interview for better response rate and accuracy. Enumerators would comprise of TNB Kajang clerks who know the area well and have good understanding of the survey process. Since the results of the study would have direct relevance to TNB Kajang, it was envisaged that the staff would be more committed to carry out the survey successfully.

The questionnaire was pre-tested using 10 respondents. Based on the feedbacks, two questions were added and one multiple answer question was reduced to a single-answer question. Some respondents were not clear on how to answer a question on ranking some attributes of the collection center. The final version reflected

all the feedbacks received and rectified the above problems.

2.2.2 Collection Procedure

Eleven clerk - enumerators spent 5 working days from 10.00 AM to 8.00 PM in the various areas interviewing consumers. Every attempt was made to ensure that actual respondents interviewed were the ones who actually pay the bills. The respondents came from the list of consumers provided by TNB Kajang; however, the enumerators were given freedom to interview any respondent as long as they conform closely to sampling distribution as given in Table 2.