

**Scanpower Limited**

**Pricing Methodology Disclosure**

**For Pricing Effective 1 April 2005 to 31 March 2006**

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## Introduction and Overview

1. The purpose of this document is to describe the methodology used by Scanpower Limited in setting its distribution and transmission charges, as required by the Electricity Information Disclosure Requirements 2004 (section 23).
2. The objectives of the pricing methodology are:
  - To allocate costs fairly between user groups
  - To establish a fair range of charges
  - To provide appropriate demand based pricing signals where possible
  - To achieve a rate of return acceptable to owners
  - To appropriately recover pass through costs such as transmission charges
  - To meet regulatory requirements relating to low-user pricing options
3. The components of this disclosure, which in total describe the Scanpower pricing methodology, include:
  - Disclosure of revenue requirements
  - Determination of customer charging groups
  - Identification of costs and associated drivers
  - Allocation of costs to customer groups
  - Derivation of charges
  - Rationale for structure of fixed and variable charges

## Calculation of Annual Revenue Requirement

4. The following table summarises the components included in the annual revenue requirement calculation:

*Table One – Calculation of Annual Revenue Requirement*

<b>Description</b>	<b>Amount</b>
Operations & Maintenance Costs	\$1,027,360
Administration & Corporate Costs	\$621,228
Depreciation Charges	\$761,940
Cost of Capital / Return to Owners	\$1,900,000
Transpower Charges	\$1,324,472
Electricity Commission Costs	\$15,000
<b>Total</b>	<b>\$5,650,000</b>

5. Individual balances are derived from budgeted costs for the 2005 to 2006 financial year. In the case of cost of capital / return to owners, the amount is equal to that agreed with the Scanpower Customer Trust and published in the annual statement of corporate intent.

#### **Identification / Explanation of Costs**

6. Operations & Maintenance is a direct cost and relates to maintenance, management, design and planning of the network assets.
7. Administration & Corporate is an indirect cost and relates to overheads such as Board and Executive costs, audit fees and similar items.
8. Depreciation charges reflect the annual charge to the accounts for depreciation on network distribution assets. The network is revalued on a depreciated replacement cost basis on a three yearly basis.
9. Cost of capital / return to customer owners represents that anticipated annual distribution of returns to customers by way of the annual network discount. The amount is agreed in consultation with the Scanpower Customer Trust and is recorded in the Annual Statement of Corporate Intent.
10. Transpower charges are transmission costs levied by the national grid operator. Due to significant upgrades in capacity and installation of new circuit breakers at the grid exit point this year, and timing issues, estimation of transmission charges has been more problematic than in previous years.
11. Electricity Commission charges are invoiced to Scanpower on a monthly basis. In line with pricing regulation, Scanpower is permitted to pass these costs onto consumers.

#### **Consumer Grouping for Pricing Purposes**

12. For pricing purposes, consumer groups have been split into domestic and commercial categories. This enables identification of residential supplies for the purposes of complying with low user tariff requirements.

13. In regard to residential low user tariffs, the decision was made to apply a low fixed daily charge component to all domestic supplies; i.e. not greater than 15 cents per day. Ease of understanding and reduced billing complexity were the underlying drivers behind this.
14. For commercial customers, consumer categories have been established on the basis of installed capacity and annual consumption. Both these measures correlate with the amount of asset used for each consumer group.
15. The table below summarises the consumer groupings for pricing purposes.

*Table Two – Consumer Grouping for Network Pricing Purposes*

<b>Pricing Group</b>	<b>Quantity</b>	<b>Description</b>
D1	4,529	Standard Domestic (0-15kVA)
C1	1,250	Standard Commercial (>8kVA)
C1.2	439	<2kVA Commercial (pumps, railway bells etc)
C1.5	394	2-8kVA Commercial (small sheds etc)
C3	13	Large Commercial (100,000 – 500,000 kwh pa)
C4	8	Large Commercial (500,000 – 2,000,000 kwh pa)
C5	2	Large Commercial (2,000,000 – 3,500,000 kwh pa)
C6	2	Large Commercial (3,500,000 + kwh pa)

16. The quantity of installations in each category is stated as at 1 April 2005 and is derived from the National Registry and cross referenced to Scanpower's billing system.
17. Therefore, the load / consumption characteristics shown in the table above prescribe the method / criteria for determining which pricing category a consumer is in. In regard to the Domestic / Commercial split, domestic consumers are deemed to be permanent places of residence as opposed to business premises.

### **Allocation of Costs to Customer Groups**

18. Costs are allocated to customer groups on the basis of installed capacity. Given the relative simplicity of the Scanpower network design (no zone substations), this is used as a correspondingly straightforward, yet appropriate, allocation basis.

19. The table below summarises the allocation of costs, by type, to the consumer groupings identified in the pricing structure. Included are the installed capacity ratings for each group based on actual installed transformer size.

Table Three – Allocation of Costs / Revenue Requirements to Consumer Pricing Groups

Group	Capacity	OM Costs	Admin	Deprec.	Cost of Cap.	Transpower	EC Costs	Rev. Req.
D1	27,174	\$474,214	\$286,750	\$351,700	\$877,012	\$611,357	\$6,924	\$2,607,958
C1	15,421	\$269,112	\$162,728	\$199,587	\$497,697	\$346,940	\$3,929	\$1,479,993
C1.2	1,317	\$22,983	\$13,897	\$17,045	\$42,505	\$29,630	\$336	\$126,396
C1.5	2,364	\$41,254	\$24,946	\$30,596	\$76,296	\$53,185	\$602	\$226,879
C3	1,500	\$26,177	\$15,829	\$19,414	\$48,411	\$33,747	\$382	\$143,959
C4	2,970	\$51,830	\$31,341	\$38,439	\$95,854	\$66,819	\$757	\$285,038
C5	1,350	\$23,559	\$14,246	\$17,472	\$43,570	\$30,372	\$344	\$129,563
C6	6,775	\$118,231	\$71,492	\$87,686	\$218,656	\$152,423	\$1,726	\$650,214
	<b>58,871</b>	<b>\$1,027,360</b>	<b>\$621,228</b>	<b>\$761,940</b>	<b>\$1,900,000</b>	<b>\$1,324,472</b>	<b>\$15,000</b>	<b>\$5,650,000</b>

### Fixed / Variable Cost Structure

20. In terms of the structure of fixed and variable pricing, as previously noted domestic (D1) pricing has been set such that all customers have a fixed daily charge of 15 cents, so as to comply with regulatory low user tariff requirements. With general increases in consumption since this policy was adopted, as shown in the table below the fixed / variable split for domestic consumers is 9.5% / 90.5%.
21. In the case of commercial customers, the fixed / variable split has been to some extent based on historical precedent, which has been a 30 / 70 cost ratio. Over time, with movements between consumer groups and changes to consumption patterns, this ratio has changed. Nonetheless, the over all commercial split of 28.7% / 71.3% is close to this objective.

Table Four – Split of Fixed and Variable Costs by Consumer Pricing Group

Class	Fixed Revenue	Fixed Percentage	Variable Revenue	Variable Percentage	Total
D1	\$247,963	9.5%	\$2,367,473	90.5%	\$2,615,436
C1	\$341,594	27.6%	\$897,987	72.4%	\$1,239,581
C1.2	\$67,699	50.8%	\$65,566	49.2%	\$133,265
C1.5	\$80,433	35.3%	\$147,113	64.7%	\$227,546
C3	\$38,113	22.7%	\$129,687	77.3%	\$167,800
C4	\$92,189	27.4%	\$244,298	72.6%	\$336,487
C5	\$41,759	14.7%	\$243,061	85.3%	\$284,820
C6	\$208,858	32.4%	\$435,007	67.6%	\$643,865
<b>TOTAL</b>	<b>\$1,118,609</b>	<b>19.8%</b>	<b>\$4,530,191</b>	<b>80.2%</b>	<b>\$5,648,800</b>

The rationale for a fixed charging component to is to reduce the impact of seasonal fluctuations in electricity consumption, which can either favourably or adversely impact actual revenues. Given a relatively static annual revenue requirement this is considered to be a prudent pricing policy.

### **Other Information**

22. Scanpower calculates variable kWh on grid exit point volumes. Therefore, end use consumption data should be adjusted by the appropriate loss factor (disclosed in the schedule of prices) to arrive at billable volumes.
  
23. The rationale for this is to reduce complexity in monthly billing as individual ICP level data and consumption calculations are not necessary. Furthermore, GXP volumes are reconciled independently and therefore appropriate for billing purposes.

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**Compliance Matrix**

<b>EIDR 2004 Section</b>	<b>Description</b>	<b>Document Reference</b>
23(a)	Describe the methodology used to calculate prices charged.	Entire document, paragraphs 1 to 23.
23(b)	Disclose the calculation of annual revenue requirement including numerical values.	Paragraphs 4-5 and Table 1 (pages 2 – 3)
23(c)	State consumer groups used for pricing purposes.	Paragraph 15, Table 2 (page 4)
23(c)(i)	Rationale for customer grouping.	Paragraphs 12 – 16 (page 4)
23(c)(ii)	Method for determining customer price group	Paragraph 17 (page 4)
23(c)(iii)	Statistics relating to each group in methodology.	Table 2 (kva / kwh criteria / ICPs per group) Table 3 (installed capacity by group)
23(d)	Allocation and basis for allocation of costs / revenue requirement to groups including numerical values.	Paragraphs 18 – 19, Table 3 (pages 4 – 5)
23(e)	Proportion of fixed to variable charges and associated rationale.	Paragraphs 20 – 21, Table 4 (pages 5 – 6)

## Published Pricing Schedules

### Scanpower Limited Schedule of Network Charges Effective 1 April 2005 to 31 March 2006

(All Prices are Stated *Exclusive of GST*)

#### D1 Standard Domestic Option

4,529 Customers

Code	Description	New Rate	Old Rate
10	Fixed daily supply charge (per day)	\$0.1500	\$0.1500
23	Variable network charge (day units per kwh)	\$0.0642	\$0.0642
24	Variable network charge (night units per kwh)	\$0.0428	\$0.0428

#### C1 Standard Commercial Option

1,250 Customers

Code	Description	New Rate	Old Rate
40	Fixed daily supply charge (per day)	\$0.7487	\$0.7487
28	Variable network charge (day units per kwh)	\$0.0642	\$0.0642
29	Variable network charge (night units per kwh)	\$0.0428	\$0.0428

The Standard Commercial option is applicable to commercial installations rated >8kVA with an annual consumption <100,000 kWh.

#### C1.2 2kVA Commercial Option

439 Customers

Code	Description	New Rate	Old Rate
11	Fixed daily supply charge (per day)	\$0.4225	\$0.4225
46	Variable network charge (day units per kwh)	\$0.0642	\$0.0642
47	Variable network charge (night units per kwh)	\$0.0428	\$0.0428

The 2kVA option is applicable to commercial installations rated <2kVA such as small pumps, electric fences and railway bells.

#### C1.5 5kVA Commercial Option

394 Customers

Code	Description	New Rate	Old Rate
13	Fixed daily supply charge (per day)	\$0.5593	\$0.5593
51	Variable network charge (day units per kwh)	\$0.0642	\$0.0642
52	Variable network charge (night units per kwh)	\$0.0428	\$0.0428

The 5kVA option is applicable to commercial installations rated <5kVA such as small sheds and workshops.

**C3 Commercial Option C3****13 Customers**

Code	Description	New Rate	Old Rate
50	Fixed daily supply charge (\$ / kva / month)	\$2.5668	\$2.5668
57	Variable network charge (day units per kwh)	\$0.0449	\$0.0449
58	Variable network charge (night units per kwh)	\$0.0299	\$0.0299
133	Corporate Services Charge (per month)	\$7.3796	\$7.3796

The C3 Commercial option is applicable to commercial installations using between 100,000 and 500,000 kWh per annum.

**C4 Commercial Option C4****8 Customers**

Code	Description	New Rate	Old Rate
60	Fixed daily supply charge (\$ / kva / month)	\$2.5668	\$2.5668
73	Variable network charge (day units per kwh)	\$0.0411	\$0.0411
74	Variable network charge (night units per kwh)	\$0.0143	\$0.0143
65	Maximum demand charge (June, July, August – peak kva)	\$4.2780	\$4.2780
134	Corporate Services Charge (per month)	\$7.3796	\$7.3796

The C4 Commercial option is applicable to commercial installations using between 500,000 and 2,000,000 kWh per annum.

**C5 Commercial Option C5****2 Customers**

Code	Description	New Rate	Old Rate
70	Fixed daily supply charge (\$ / kva / month)	\$2.5668	\$2.5668
78	Variable network charge (day units per kwh)	\$0.0411	\$0.0411
79	Variable network charge (night units per kwh)	\$0.0143	\$0.0143
75	Maximum demand charge (June, July, August – peak kva)	\$4.2780	\$4.2780
135	Corporate Services Charge (per month)	\$7.3796	\$7.3796

The C5 Commercial option is applicable to commercial installations using between 2,000,000 and 3,500,000 kWh per annum.

**C6 Commercial Option C6****2 Customers**

Code	Description	New Rate	Old Rate
71	Fixed daily supply charge (\$ / kva / month)	\$4.0641	\$4.0641
82	Variable network charge (day units per kwh)	\$0.0244	\$0.0244
83	Variable network charge (night units per kwh)	\$0.0078	\$0.0078
85	Maximum demand charge (June, July, August - peak kva)	\$3.9293	\$3.9293
136	Corporate Services Charge (per month)	\$7.3796	\$7.3796

The C6 Commercial option is applicable to commercial installations using over 3,500,000 kWh per annum.

### Miscellaneous Charges

Code	Description	New Rate	Old Rate
12	Public Lighting Network Supply Charge (per fitting per month)	\$1.0695	\$1.0695
18	Telecom Boxes (per month per box)	\$22.1387	\$22.1387
19	Electric Fences (monthly charge - no 400V distribution line)	\$6.4170	\$6.4170
98	Electric Fences (monthly charge - feed from distribution line)	\$8.5560	\$8.5560
	Building Services Temporary Supplies (3 months)	\$56.1488	\$56.1488
	Building Services Temporary Supplies (per month after 3 months)	\$24.0638	\$24.0638

### Transpower Charges (National Grid Operator Charges)

Transpower charges (exclusive of Loss Constraint Rental Payments) are incorporated into Scanpower network charges and, based on historical calculations, are recovered at a budgeted, average rate of 1.718 cents per kWh (ex GST).

In the event that savings in transmission charges arise during the year, which could cause Scanpower to breach Commerce Commission Price Threshold regulations, these will be refunded by way of a one-off distribution to customers or an adjustment to subsequent pricing depending upon the magnitude of these savings.

### Definition of Day / Night Charges

The day consumption charges apply to energy used between 7am and 11pm. Night consumption charges apply to energy used between 11pm and 7am.

Typically day consumption accounts for 76% of total electricity consumed on the Scanpower network. The remaining 24% is typically consumed at night.

### Line Loss Factors

Code	Loss Factor	Description
LFCA 1	1.025	Applicable to single ICP on dedicated feeder
LFCA 2	1.0728	Applicable to single ICP with 11kV metering
LFCA 3	1.081	Applicable to all other installations

LFCA 1 ICP = 0008500100CABDE

LFCA 2 ICP = 0008500400CA15G

## **Explanatory Pricing Notes for Electricity Retailers**

All variable kWh charges are based on GXP volumes. Non-half hourly metered loads should be grossed up using the appropriate loss factor to arrive at the chargeable GXP volume.

Volumes charged at the GXP are washed up monthly in line with reconciled data issued by the NRM.

Customer numbers are based on a Registry listing of energised ICPs generated at the time of issuing this schedule.