

GUYANA POWER & LIGHT INC.

SCHEDULE 2:

**OPERATING STANDARDS AND
PERFORMANCE TARGETS
2004 - 2005**

DECEMBER 2004

Schedule 2 Operating Standards & Performance Targets

Definitions:

- "Standards and Targets" Are the operating standards and performance targets as set out in this Schedule, and as modified from time to time in accordance with this Schedule.
- "Revised Interim Standards" are the Standards and Targets approved from time to time by the Minister pending the development of Final Standards. The Standards and Targets set out in this schedule are to be in effect from January 01, 2004 to December 31, 2005 and replace the Preliminary Standards. Until Final Standards are developed and put into effect, Revised Interim Standards are to be submitted to the Minister for approval no later than November 1 each year.
- "Final Standards" are the Standards and Targets to be developed and put into effect for the remaining period of the licence at a date to be agreed by the Minister.
- "Grandfathered Plant" is Plant which will not need to comply with the Standards and Targets.

1. Introduction

The Operating Standards and Performance Targets attached to the Licence specified standards and targets that were to be achieved by GPL, subject to "best efforts" and the need to preserve GPL's financial integrity.

Despite the company's best efforts it was unable to complete its major capital expansion programme. This resulted in the company being unable to meet all the standards and targets included in the Licence. Further, the investor withdrew from the company in March 2003 and the Management Contract was terminated at the end of April 2003. This resulted in material deterioration of the financial and other resources necessary to achieve the standards and targets as set out in the original Schedule 2. ?

Accordingly the "Revised Interim Standards" have been developed to reflect the position of the Company at that time, restrictions currently faced in obtaining financing on commercial terms as a wholly owned Government entity and limitations to self generated funds as a result of the need to address tariffs in a manner to avoid losing customers to self-generation, despite current licence provisions. 3



The achievement of these standards and targets is based on the "best efforts" of the company and the need to preserve the company's financial integrity. The non-achievement of these standards shall not be grounds for any legal challenge by any customer or class of customers with respect to the service provided by the company.

Until the Final Standards are approved by the Minister, the Revised Interim Standards then in effect shall continue to apply in subsequent years.

2 Technical and Operating Standards

2.1 GPL Plant

All existing Plant as at the Effective Date, October 01, 1999 is considered Grandfathered Plant. All of the generating property owned by GEC and operated by GPL is also considered as Grandfathered Plant for the purposes of this Schedule.

3 Performance Targets and Customer Services

Benchmark targets against which progress can be monitored are outlined below.

Quality of Supply Standards

Category	Analysis and Projections					
Customer Interruptions	Targets for System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) proposed for 2004-05 are:					
	SAIFI = $\frac{\text{Total Number of Customer Interruptions}}{\text{Total Customers Served}}$					
	SAIDI = $\frac{\text{Total Customer Hours of Interruptions}}{\text{Total Customers Served}}$					
			2004	2005		
	SAIFI	130	120			
	SAIDI	225	200			
Losses	The level of losses at May 01, 2003 was 43% of gross generation net of auxiliary use. The total projected losses as a percent of gross generation, net of auxiliary use are included below: The Company expects to achieve these targets in last quarter of the respective years.					
			2004	2005		
		%	39	37		
Average Availability	Average Availability = $\frac{\text{Total Available Hours for all Units}}{\text{Number of Units X Hours in Period}}$					
			2004	2005		
		Availability, %	80%	80%		

Category	Analysis and Projections
Voltage & Frequency Regulation	<p>While the original expectation was that new transmission and distribution networks would be introduced to reduce voltage and frequency swings and remediate existing deficiencies due to the need to focus on reducing losses and minimise tariff increases T&D projects have been deferred.</p> <p>As such GPL will seek to maintain, in stable conditions voltages of $\pm 6\%$ and following a system disturbance $\pm 10\%$ of the prescribed voltage and frequency regulation of ± 0.1 Hz. during normal operating conditions.</p>

Financial Standards

Category	Analysis and Projections														
Accounts Receivable	The status of GPL accounts receivable is estimated from a joint GPL / GEC Debtors' Ledger. Work is in progress to permit a formal split of the Ledger. Pending finalisation of this split, the quoted figures are provisional and net of bad debt expenses.														
	<table border="1"> <tr> <td>Net</td> <td></td> <td>2004</td> <td>2005</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Days</td> <td></td> <td>75</td> <td>69</td> <td></td> <td></td> <td></td> </tr> </table>	Net		2004	2005				Days		75	69			
	Net		2004	2005											
Days		75	69												
Accounts Payable	The following targets for accounts payable are in relation to total purchases.														
	<table border="1"> <tr> <td></td> <td></td> <td>2004</td> <td>2005</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Days</td> <td></td> <td>50</td> <td>48</td> <td></td> <td></td> <td></td> </tr> </table>			2004	2005				Days		50	48			
			2004	2005											
Days		50	48												
Bad Debt Expense	The targets for bad debt expenses are in relation to annual sales.														
	<table border="1"> <tr> <td></td> <td></td> <td>2004</td> <td>2005</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Days</td> <td></td> <td>6.0%</td> <td>6.0%</td> <td></td> <td></td> <td></td> </tr> </table>			2004	2005				Days		6.0%	6.0%			
			2004	2005											
Days		6.0%	6.0%												
Meter reading and Customer Billings	<p>Meter Readings The target is to issue 85% of all bills based on actual meter readings. The current performance is around 80%.</p> <p>Large Consumers – Maximum Demand Consumers The target is to issue bills within 7 days of meter reading</p> <p>Domestic and Small Business Consumers The target is to issue bills within 30 days of meter reading. Weighted by value and based on a sample, the current performance is estimated at 32 days.</p>														
	<table border="1"> <tr> <td></td> <td></td> <td>2004</td> <td>2005</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Days</td> <td></td> <td>32</td> <td>30</td> <td></td> <td></td> <td></td> </tr> </table>			2004	2005				Days		32	30			
			2004	2005											
Days		32	30												

Customer Service Standards

These standards are difficult to monitor in the absence of a modern billing system since delays occur in customer payment and fulfillment of other conditions. Comprehensive information is not therefore available regarding current performance.

As a general proposition, the following targets should be treated as met if 85% or more of the cases are completed by or within the target. This is to cater for exceptional cases where more complexity arises. Days quoted are working days unless otherwise stated.



All targets assume that the customer has met all the requirements of the Standard Terms and Conditions prior to work starting.

Category	Analysis and Projections																																										
New Connections	<p>These standards deal with new supplies. Where primary or secondary networks are required, the current targets are 10 weeks for provision of commercial service and 12 weeks for a new residential sub-division (mains network only). It is not proposed that these be changed.</p> <p>Where only a service and meter is involved, 10 – 15 working days is the target in the commercial case and 15 – 20 working days the target in the residential case. All these times assume that the requirements of the Standard Terms and Conditions are met by the customer prior to work and that the customer is ready for supply. Due to cash constraints and timing, GPL, from time to time, may not have all materials available when required to provide supply. As such, the ability to achieve these targets may be affected. (This has affected service delivery during 2002.) GPL will inform customers in such cases and advise when supply is likely to be provided.</p> <p>UAEP is a separate major programme and the above standards are not applicable. UAEP targets will be defined within that Project's work schedules.</p> <table border="1"> <thead> <tr> <th></th> <th>2004</th> <th>2005</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td colspan="6">Primary or secondary network required (period in weeks after ST&C conditions fulfilled)</td> </tr> <tr> <td>Comm. service</td> <td>10</td> <td>10</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Residential subdivision</td> <td>12</td> <td>12</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="6">Primary or secondary network NOT required (period in days after ST&C conditions fulfilled)</td> </tr> <tr> <td>Comm. service</td> <td>10-15</td> <td>10-15</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Residential services</td> <td>15-20</td> <td>15-20</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		2004	2005				Primary or secondary network required (period in weeks after ST&C conditions fulfilled)						Comm. service	10	10				Residential subdivision	12	12				Primary or secondary network NOT required (period in days after ST&C conditions fulfilled)						Comm. service	10-15	10-15				Residential services	15-20	15-20			
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Reconnections	<p>The target for re-connection is within 2 days.</p> <p>Where a service and / or meter is required for re-connection, the target would be 10 working days in the commercial case and 15 working days for residential – in both cases on the assumption that there is no requirement for additional load in which case it would be treated as a new supply.</p> <p>Due to cash constraints and timing, GPL, from time to time, may not have all materials available when required to provide supply. As such, the ability to achieve these targets may be affected. (This has affected service delivery during 2002.) GPL will inform customers in such cases and advise when supply is likely to be provided.</p> <p>To fully achieve and monitor these standards, a new billing system will be required.</p> <table border="1"> <thead> <tr> <th></th> <th>2004</th> <th>2005</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td colspan="6">Reconnection, service and meter in place (days after ST&C requirements met)</td> </tr> <tr> <td>In G'town</td> <td>2</td> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Elsewhere</td> <td>2</td> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="6">Reconnection, service and meter not in place (days after ST&C requirements met)</td> </tr> <tr> <td>Commercial</td> <td>10</td> <td>10</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Residential</td> <td>15</td> <td>15</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		2004	2005				Reconnection, service and meter in place (days after ST&C requirements met)						In G'town	2	2				Elsewhere	2	2				Reconnection, service and meter not in place (days after ST&C requirements met)						Commercial	10	10				Residential	15	15			
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Commercial	10	10																																									
Residential	15	15																																									

Category	Analysis and Projections					
Billing Complaints and Queries	<p>The current target is to respond within 5 working days. Many queries are addressed at GPL counters immediately. Queries in writing are generally acknowledged on receipt and followed up as quickly as possible.</p> <p>It is proposed that an acknowledgement be issued for written complaints within 3 working days. If the complaint relates to a billing anomaly does not require a site visit to resolve, it is proposed that an explanation be provided within 7 working days of receipt of the original complaint. If the complaint relates to a legal dispute and/or involving the Public Utilities Commission it is proposed that an explanation be provided <u>within 40 working days</u> of receipt of the original complaint.</p> <p>Full achievement of this standard and the ability to monitor performance is contingent on implementing the new billing system to enable the causes of certain queries to be eliminated (e.g. to facilitate explanations of billing adjustments in the bill, to reduce time from meter reading to billing, etc.).</p>					
	Days		2004	2005		
	Acknowledge		3	3		
	Billing queries- No Site Visit		7	7		
	Legal queries- No Site Visit		40	35		
All queries -Site Visit		40	35			

Other Standards

Category	Analysis and Projections					
Meter Replacement	<p>Mass meter replacements will generally be associated with the loss reduction campaign.</p> <p>Meters will also be replaced, as necessary, following investigation of individual customer complains. The target for replacing an individual customer's meter, once this is determined by GPL as necessary following a complaint, is 10 working days on average for a commercial meter and 8 working days on average for a residential for 90% of cases.</p> <p>Due to cash constraints and timing, GPL, from time to time, may not have all materials available when required to provide supply. As such, the ability to achieve these targets may be affected. (This has affected service delivery during 2002.) GPL will inform customers in such cases and advise when supply is likely to be provided.</p>					
	Av. Work Days		2004	2005		
	Commercial		10	10		
	Residential		8	8		
Local Supplier Program	<p>GPL has worked with a number of local suppliers to provide new services. These include design and manufacture of fibreglass meter enclosures; galvanised steel CT enclosures; design and manufacture of modular office furniture; training in network construction and maintenance skills; syllabus development for employee training; major meter installation refurbishment; etc.</p> <p>GPL purchases poles and other wood products from local suppliers, as well as local services (e.g. vehicle hire, scrap removal, site maintenance, building construction, etc.). Given the nature of GPL's business, most purchases are for fuel and equipment that cannot be sourced in Guyana. Issues of technology and, more importantly scale, make substitution difficult or impossible.</p>					



Category	Analysis and Projections
	GPL will continue to work with local suppliers to develop opportunities for local business to work with GPL provided that products and services can be locally provided to quality, price and timeliness standards.



Schedule 2 Operating Standards & Performance Targets

Definitions:

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- “Revised Interim Standards” are the Standards and Targets approved from time to time by the Minister pending the development of Final Standards. The Standards and Targets set out in this schedule are to be in effect from January 01, 2007 to December 31, 2009 and replace the Revised Interim Standards for 2004 – 2005. Until Final Standards are developed and put into effect, Revised Interim Standards are to be submitted to the Minister for approval no later than November 1 2009.
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- “Grandfathered Plant” is Plant which will not need to comply with the Standards and Targets.

1. Introduction

The Operating Standards and Performance Targets attached to the Licence, specified standards and targets that were to be achieved by GPL, subject to “best efforts” and the need to preserve GPL’s financial integrity.

Despite the company’s best efforts it was unable to complete its major capital expansion programme. This resulted in it being unable to meet all the standards and targets included in the Licence. The Company continues to pursue various initiatives to realize the financing necessary to implement its capital programme. The return in April 2003 to full Government ownership imposed HIPIC conditionality on borrowing which severely limited the list of potential lenders. Sustained sharp increases in fuel prices, over the past three years, which have been largely absorbed by the Company has depleted its cash flows to the extent that funding for major capital works from internal cash flows was impossible.



Accordingly the "Revised Interim Standards" have been developed to reflect the position of the Company at this time, restrictions currently faced in obtaining financing on commercial terms as a wholly Government entity and limitations to self generated funds as a result of the need to address tariffs in a manner to avoid losing customers to self-generation, despite current licence provisions.

The achievement of these standards and targets is based on the "best efforts" of the company and the need to preserve its financial integrity. The non-achievement of these standards shall not be grounds for any legal challenge by any customer or class of customers with respect to the service provided by the company.

Until the Final Standards are approved by the Minister, the Revised Interim Standards then in effect shall continue to apply in subsequent years.

2 Technical and Operating Standards

2.1 GPL Plant

All existing Plant as at the Effective Date, October 01, 1999 is considered Grandfathered Plant. All of the generating property owned by GEC and operated by GPL is also considered as Grandfathered Plant for the purposes of this Schedule.

3 Performance Targets and Customer Services

Benchmark targets against which progress can be monitored are outlined below.

Quality of Supply Standards

Category	Analysis and Projections					
Customer Interruptions	Targets for System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) proposed for 2007 - 2009 are:					
	SAFI = $\frac{\text{Total Number of Customer Interruptions}}{\text{Total Customers Served}}$					
	SAIDI = $\frac{\text{Total Customer Hours of Interruptions}}{\text{Total Customers Served}}$					
			2007	2008	2009	
	SAIFI	130	140	125		
	SAIDI	225	250	200		
Losses	The level of losses at Dec. 2003 was 40.5%, Dec. 2004 was 38.6%, Dec. 2005 was 38.4% and Dec. 2006 was 35.1% of gross generation net of auxiliary use. The total projected losses as a percent of gross generation, net of auxiliary use are included below: The Company expects to achieve these targets in the end of the last quarter of the respective years.					



Category	Analysis and Projections					
			2007	2008	2009	
	%		32.8	28.7	22.1	
Average Availability	<p>All generating plant as at October 1st, 1999 (Effective Date) is considered as Grandfathered Plant and is not included in the computation of this standard. Six new 1.6MW and four used 1.4MW mobile high speed generating units have been acquired since the Effective Date and while these are primarily designed for peak shave duty they are essentially operated base-load and therefore experience more forced outages. This standard applies to the seven remaining units in this mobile fleet.</p> <p>Average Availability = $\frac{\text{Total Available Hours for all Units}}{\text{Number of Units X Hours in Period}}$</p>					
			2007	2008	2009	
	Availability, %		75%	75%	85%	
Voltage & Frequency Regulation	<p>The original expectation was that new transmission and substation facilities would have been constructed to reduce voltage and frequency swings and remediate existing deficiencies but due to the ever increasing price of fuel T&D projects have been deferred. The nominal voltage and frequency levels are indicated in paragraph 3.6 of the Standard Terms & Conditions.</p> <p>GPL will seek to maintain, in stable conditions voltages, of $\pm 6\%$ of the nominal voltage and $\pm 10\%$ following a system disturbance and frequency of ± 0.2 Hz of the nominal frequency.</p>					

Financial Standards

Category	Analysis and Projections					
Accounts Receivable	<p>The status of GPL accounts receivable is stated in its audited annual financial statements. The quoted figures are net of provision for doubtful debts. Unlike the figures in the financial statements the receivables as per the billing system include GEC's receivables.</p>					
	Net		2007	2008	2009	
	Days		63	60	60	
Accounts Payable	<p>While most of GPL's Creditors offer 30 days credit some of the largest ones actually offer up to sixty days. The determination of this target is from the invoice date.</p>					
			2007	2008	2009	
	Days		43	40	40	
Bad Debt Expense	<p>GPL's collection has improved significantly since 2005 and has been consistently maintained above 98% since. Bad Debt Expense is the estimated amount of bad debt applicable to the accounting period (year) and has been reduced from 5% in 2004 to 3% in 2005.</p> <p>Bad Debt Expense = 3% of sales for the year.</p>					
			2007	2008	2009	
	Days		3.0%	3.0%	3.0%	



Meter reading and Customer Billings	Meter Readings The target is to issue 85% of non-MD bills based on actual meter readings and 95% of MD bills based on actual meter readings.					
	Large Consumers – Maximum Demand Consumers The target is to issue bills within 7 days of meter reading					
	Domestic and Small Business Consumers The target is to issue bills within 30 days of meter reading ultimately.					
			2007	2008	2009	
	Days Non-MD	32	30	30		
	Days MD	7	7	7		

Customer Service Standards

These standards are difficult to monitor in the absence of a modern billing system since delays occur in customer payment and fulfillment of other conditions. Comprehensive information is not therefore available regarding current performance.

As a general proposition, the following targets should be treated as met if 85% or more of the cases are completed by or within the target. This is to cater for exceptional cases where more complexity arises. Days quoted are working days unless otherwise stated. All targets assume that the customer has met all the requirements of the Standard Terms and Conditions prior to work starting.

Category	Analysis and Projections					
New Connections	These standards deal with new supplies. Where primary or secondary networks are required, the current targets are 10 weeks for provision of commercial service and 12 weeks for a new residential sub-division (mains network only). It is not proposed that these be changed.					
	Where only a service and meter is involved, 10 – 15 working days is the target in the commercial case and 15 – 20 working days the target in the residential case. All these times assume that the requirements of the Standard Terms and Conditions are met by the customer prior to work and that the customer is ready for supply. Due to cash constraints and timing, GPL, from time to time, may not have all materials available when required to provide supply. As such, the ability to achieve these targets may be affected. GPL will inform customers within the prescribed target period in such cases and advise when supply is likely to be provided.					
			2007	2008	2009	
	Primary or secondary network required (period in weeks after ST&C conditions fulfilled)					
	Comm. service	-	10	10	10	
	Residential subdivision	-	12	12	12	
	Primary or secondary network NOT required (period in days after ST&C conditions fulfilled)					
Comm. service	-	10-15	10-15	10-15		





Category	Analysis and Projections					
Residential services	-	15-20	15-20	15-20		
Reconnections	<p>The current target calls for re-connection within 2 days. It is proposed that the standards be modified to take account of local topology, tools and equipment available to GPL and available management and supervisory resources. In Georgetown city, it is targeted that a reconnection take place no later than 2 full working days following the day on which the customer meets the requirements of the Standard Terms and Conditions (ST&C) - where the service and meter is in place and only a simple connection is necessary. Where a service and / or meter is required for re-connection, the target would be 10 working days in the commercial case and 15 working days for residential – in both cases on the assumption that there is no requirement for additional load in which case it would be treated as a new supply.</p> <p>To fully achieve and monitor these standards, a new billing system will be required.</p>					
		2007	2008	2009		
	Reconnection, service and meter in place (days after ST&C requirements met)					
	In G'town	2	2	1		
	Elsewhere	2	2	1		
	Reconnection, service and meter not in place (days after ST&C requirements met)					
	Commercial	10	10	10		
	Residential	15	15	15		
Customer Notification	<p>This standard relates to information necessary for a customer, category of customers or all customers to understand adjustments to their accounts occasioned by the application of The First Schedule of the License, The Third Schedule of ESRA or the Standard Terms and Conditions.</p> <p>GPL will endeavor to notify all or a category of customers by publishing notices in a daily newspaper of wide circulation, identifying the reason for the adjustment and the methodology for determining the impact on individual accounts, at least seven working days before the bill issue date.</p> <p>For individual customers, GPL will endeavor to dispatch a detailed explanation regarding the justification and computation of any adjustment to their account within five working days following the bill issue date.</p>					
		2007	2008	2009		
	All customers or any Category (Working Days before bill issue date)	7	7	7		
	Individual customer (Working Days following bill issue date)	5	5	5		



Category	Analysis and Projections					
Billing Complaints and Queries	<p>The current target is to respond within 5 working days. Many queries are addressed at GPL counters immediately. Queries in writing are generally acknowledged on receipt and followed up as quickly as possible.</p> <p>It is proposed that an acknowledgement be issued for written complaints within 3 working days. If the complaint relates to a billing anomaly and does not require a site visit to resolve, it is proposed that an explanation be provided within 7 working days of receipt of the original complaint.</p> <p>If the complaint relates to a legal or technical dispute and/or involves the Public Utilities Commission and/or requires a site visit, it is proposed that an explanation be provided within 28 working days of receipt of the original complaint. GPL will endeavor to provide a response within 14 working days and as necessary, request the PUC's approval of an additional 14 working days. GPL will consider its request approved if no response is received from the PUC within 5 working days.</p> <p>Full achievement of this standard and the ability to monitor performance is contingent on implementing the new billing system to enable the causes of certain queries to be eliminated (e.g. to facilitate explanations of billing adjustments in the bill, to reduce time from meter reading to billing, etc.).</p>					
			2007	2008	2009	
	Days to Acknowledge		3	3	3	
	Billing queries- No Site Visit		7	7	7	
Legal queries, and/or, PUC, and/or Site visit		28	28	28		

Other Standards

Category	Analysis and Projections					
Meter Replacement	<p>Mass meter replacements are generally be associated with the loss reduction campaign. Meters will also be replaced, as necessary, following investigation of individual customer complains. The target for replacing an individual Customer's meter, once GPL has determined this to be necessary following a complaint and providing the Customer has rewired the meter interface to the current standard and has obtained an inspection certificate, is 7 working days on average for a commercial meter and 8 working days on average for a residential for 90% of cases. Due to cash constraints and timing, GPL, from time to time, may not have all materials available when required to provide supply. As such, the ability to achieve these targets may be affected. GPL will inform customers in such cases and advise when supply is likely to be provided.</p>					
	Av. Work Days		2007	2008	2009	
	Commercial		8	7	7	
	Residential		8	8	8	