RESPONSE TO

OFFICE OF UTILITY REGULATION'S

REVIEW OF

GUERNSEY ELECTRICITY LIMITED'S

PRICE CONTROL - DRAFT DECISION

(Document No: OUR 05/23 – September 2005)

Response to Office of Utility Regulation's Review of Guernsey Electricity Limited's Price Control - Draft Decision (Document no: OUR 05/23 – September 2005)

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Executive Summary

Guernsey Electricity Limited (GEL) has reviewed the Office of Utility Regulation's (OUR's) proposals for a future price control in detail and this document contains GEL's response in areas that are not highlighted in the OUR's document as being confidential. Confidential matters have been dealt with through two separate letters to the OUR.

GEL does not agree with the approach currently being taken by the OUR in a number of key areas of the price control. The impact upon the company's operations and finances of the OUR's proposals in several of these areas is very significant. GEL is therefore, in this response to the OUR, forced into being very candid and clear on the areas of dispute within the OUR's proposals.

GEL's views on the overall approach taken by the OUR are as follows:

- it fails to take account of the extent to which the company had already voluntarily forgone profitability and had proposed to protect customers by containing and smoothing customer price increases, before submitting suggested new price levels to the OUR;
- therefore, by proposing to reduce prices further downwards, it takes the company into an unacceptable financial position;
- this is demonstrated by the fact that, even using the OUR's model and the OUR's input assumptions, the company is now forecast to make losses for at least the next 12 years;
- using data assumptions that GEL can defend, those losses are very much larger in magnitude;
- since those levels of high and sustained losses represent the company's best estimate of the implications of the OUR's proposals, the company cannot accept the proposals as drafted;
- in its document, the OUR shows no evidence of having considered at all the projected losses of the company (as are forecast in the OUR's own model);
- instead, the OUR has chosen to focus solely upon forecasting the cash position of the company;
- this flows from a distorting emphasis on the relevance to the OUR's price control of the "Save to Spend" policy of the island and the company;
- this results in significant detrimental treatment of other key aspects of the approach to the price control;
- most notably, the company is allowed no return whatsoever on its existing asset base of £94m;
- this, together with the losses projection fundamentally undermines the commercialisation of the company which commenced in 2001;
- the conventional approach in electricity regulation, to take account of the depreciation of assets to fund their future replacement, is not adopted;
- even the OUR's forecast of cash balances, which it chooses as a sole focus, are highly optimistic and are very unlikely to materialise;
- this will undermine fundamentally the "Save to Spend" policy and will change radically the prudent approach to electricity finances adopted by the island to date;
- as a result customers will pay abnormally low prices in the short term;

- these will bear no resemblance to the large (55%) increase in imported electricity costs which the company will face from 1 December this year, under a contract to which the OUR has no objection in principle; and
- the RPI-0.9% price control is therefore unsuitable – both in its proposed level and its form, given the very significant proportion of costs which are related to imported electricity and volatile world oil market prices.

GEL has considered carefully how the OUR's proposals should be amended after consideration of the following items:

- Appendix 1 of this response, which consists of a paper by one of the world's leading experts on electricity price controls of the form being conducted by the OUR. This assesses the OUR's approach and identifies both the alternative approach that GEL would suggest and also identifies where the OUR's own approach requires amendment if it is to be implemented successfully;
- GEL's separate identification to the OUR of where the assumed operating cost levels are forecast too low and why this is the case;
- GEL's further justification of its capital expenditure programme in the small number of areas where the OUR has suggested that the projects should not be progressed and not funded by electricity customers (Automated Meter Reading and Marine Current Turbines); and
- the benefits to customers underlying GEL's plans and specifically the tariff changes originally proposed by GEL.

GEL looks forward to working with the OUR on all of this material as a matter of urgency so that:

- the OUR can examine in more detail GEL's views and the evidence supporting those views;
- the OUR's proposals can be reconsidered and revised so as to produce a fair and sustainable balance of objectives;
- the company can continue to meet its licence objectives, abide by States' policies and continue the progress made since commercialisation;
- a new price control can be agreed as soon as possible after the increase in costs that the company faces on 1 December of this year; and
- the new price control can be based upon regulatory principles which represent a firm foundation for the future finances of the electricity infrastructure on Guernsey.

Overview

Introduction

Guernsey Electricity Limited (GEL) is pleased to have received the OUR's Draft Decision on 26 September since it represents an important milestone in the setting of a price control for the company. The current price freeze upon the company's prices has been in place much longer than the OUR originally predicted and has been a matter of significant concern for the company – particularly in the light of the rapidly rising world energy costs of the last two years.

Since this is the first electricity price control to be derived and set by the OUR, it establishes some fundamental principles for the first time. This makes it an extremely important document for the island of Guernsey, particularly given the special circumstances of the company in delivering electricity services to a community which depends upon secure and cost-effective supplies as a priority service in promoting the well-being of the island.

In addition to the Draft Decision document, GEL has since been provided with a copy of the OUR's model that has been used to calculate the level of the price control proposed by the OUR. Within the time available, work has been done by GEL to assess the OUR's price control approach and financial model, the principles upon which these are based, and the short and long term impacts of the resultant proposals on the company and its customers. As a result, GEL has derived an assessment of each of these issues, which in several important instances differ substantially from those of the OUR. These are summarised below.

Form of price control

GEL seriously questions the adoption of an RPI-X formula for the whole of its business, given that the energy and fuel cost element is in no way related to Guernsey RPI. The RPI-X formula is inappropriate for application to wholesale energy costs, which are a very significant fraction of total costs and which are highly uncertain and volatile in world markets. The application of RPI-X across all costs, as proposed by the OUR, would result in very high risks for the company. These high risks are unacceptable and are inconsistent with the OUR's proposals on the rate of return and incentives to be allowed under the price control. GEL would propose a form of price control with automatic correction of prices if generation costs (oil and import) change from the level forecast by the OUR. A simple automatic correction mechanism is set out by GEL in this response document, which avoids unnecessary regulation.

Regulatory approach to the price control finances

The most important regulatory decision in any sector is often the basis upon which the regulated company's finances are to be considered and modelled. A number of options are available to regulators but the OUR has chosen not to apply the method used in the UK for Electricity regulation. As a result, the approach adopted by the OUR does not recognise the depreciation of existing assets in order to provide for their replacement. The OUR has chosen to use a method similar to that used in the UK for the regulation of Railtrack. This method would only be equivalent in the very long term. In the short term it examines the capital requirements as they are predicted to occur at the time of setting the price control. Furthermore, the OUR has not applied its own model properly and therefore the OUR proposes to set the price control incorrectly (see below). If the OUR chooses to pursue its

current approach, then the price calculation needs to be adjusted to include a return in respect of the existing assets and dividend payments to the shareholder, with a consequent impact on both the initial price control level and changes in prices over time - and so on the expected revenue path. More suitable to the circumstances of electricity regulation on this island would be to allow standard accounting depreciation and the associated regulatory model used elsewhere.

The starting position

The OUR values existing company assets at zero. The OUR's approach is therefore not allowing GEL to make any return whatsoever on the assets in place at the beginning of the price control. GEL refutes this approach because the existing assets have continuing useful lives and the OUR's chosen method, if correctly applied, requires these assets to be properly recognised and rewarded, with dividends to shareholders forming part of a suitable model. Regulatory accounting suggests that a return is allowable whilst there is still a net book value greater than £1, i.e. assets are still in their useful life period. GEL would ask that the revised proposals contain a reasonable estimate of the value of the company's assets, which are currently accounted for at a value of £94m. Failure to do this could have significant implications for the company's accounts, with large trading losses – as well as resulting in customer prices that are set at too low a level.

The OUR is essentially assuming that when the company was set up at Commercialisation by the States the company should have been valued at zero. GEL disputes this assumption and believes that the OUR's approach is fundamentally at odds with the Commercialisation process and its aims.

The OUR's amendments to GEL's opening cash reserve balance are hypothetical, since the funds are falsely assumed to be available to the company, but this is not actually the case. The balance includes capital expenditure incurred in prior years, which is considered by the OUR to be inefficient and is wrongly assumed to be available in future years. The OUR should base its model on the actual cash balances reported by the company, which are audited, which appear in the regulatory accounts and which have been approved by the OUR.

Depreciation

Under standard accounting approaches, depreciation charges to the profit and loss account are used to provide for a reasonable charge for the usage of those assets in the relevant financial years. GEL suggests that the OUR adopts the approach to Electricity regulation used in the UK and therefore that it includes a depreciation charge in its regulatory analysis.

The OUR argues in its document that the "Save to Spend" policy negates the need for a depreciation allowance by regulation, this is incorrect (see below).

"Save to Spend" policy

The argument put forward by the OUR in this area is false, that the entire asset base and the present cash reserve have been financed by payments by customers in the past, with no contribution from government or taxpayer as the owner of the company. The OUR is therefore incorrect to claim that to make any further charge in respect of these assets would be to charge twice. This is because the OUR is incorrect in its assumption that customers

have financed the existing assets in advance and should therefore be deemed to own them already. When a private sector company finances investment from its cash balances it is said to finance it from retained earnings. It is not said to be financed by customers. This is also the position of GEL.

The argument that customers have already paid for the assets is not supported by any evidence that investment has been financed from payments from customers that exceed the costs of their supply rather than from the retained earnings of GEL and its predecessor. The original company, and the States of Guernsey Electricity Board, were responsible for building up assets partly as a result of returns and dividends to its owner, the States of Guernsey, that were foregone. That is, investment has been financed from retained profits.

Rate of return

The OUR argues for a cost of capital of 4.8% - based on a rate for a risk free investment. The OUR's model fails to allow this reward for existing company assets since they are incorrectly valued at zero.

GEL is far from a risk free enterprise. This is particularly the case as a result of regulation, which presents considerable risk if it fails to allow prices to change with market price generation costs.

The kinds of return values that are truly commercial would be well in excess of 4.8%. For regulatory purposes, a value in excess of a 4.8% should therefore be applied to reflect the risk of the business. However, the OUR applies its own value of 4.8% to a zero asset base and so the effective rate being applied to existing assets is zero, which is wholly unacceptable. In its proposals, the OUR is failing to recognise the fact that GEL is now supposed to be allowed to operate as a commercial entity, with a corresponding allowed regulatory return on its assets.

Operating costs

The OUR's suggestions for future operating cost levels do not take account of all of the information available to the OUR. As a result they are too harsh and are unattainable. For example, within the heading of Finance and Administration and IT costs, GEL's costs have increased well below general wage inflation despite additional functionality being necessary as a result of commercialisation. As a further example, in the only other specifically identified area, the OUR has failed to take into account the very significant levels of manpower reduction already achieved since the year 2000.

Capital investment

GEL is pleased that the OUR has accepted its plans for future capital investment, but notes the exception applied to the company's Automated Meter Reading system (see below).

However, the OUR's application of its financial model to attempt to ensure adequate funding of that investment is of very significant concern to GEL, since it has an impact on the traditional approach to funding investment such that sufficient funds might not be available, as has been the case in the past.

The OUR's current price control assumptions threaten the delivery of investment consistent with the existing island approach to funding.

It has to be remembered that the estimates used by GEL and the OUR are estimates of planned expenditure only and an island electricity system is particularly susceptible if unplanned expenditure is not made promptly. There therefore remains a risk that unplanned expenditure requirements arise and these would need to be funded from debt – which is counter to the "Save to Spend" policy and will increase costs by adding interest payments.

Import and Generation Costs

GEL welcomes the OUR's agreement in principle that the full costs of increased import costs should be reflected in full in prices. However, assumptions elsewhere in the OUR's analysis largely negate the effect upon the company of such a decision.

The increase in costs to the company in this category which is due on 1 December 2005 is very large – both for the new wholesale electricity contract price and the related uncertainty in future market price levels each year. In this area the background to the price negotiations is significant. A market price has been delivered and GEL has obtained an independent third party review of this price. The present very high prices for fuel oil and its future price volatility are also highly relevant.

Given that the OUR has accepted this position in principle, the matter should now be settled and should not be subjected to further unnecessary regulation over the next three years.

States' Policy

The only short term decision required is a regulatory one for the purposes of the price control. Making political and policy decisions in this area, ahead of when necessary, involves unnecessary risk. Generation investment is not required for several years and so no immediate decision is necessary. There is certainly no need in GEL's view to revisit policy issues at each price control. The latest Policy assumptions can be used at each price control without unnecessary revisiting.

Timetable

The OUR's price control timetable assumes that there will be no delay between the States meeting on 30 November to discuss policy matters and the issuing on 1 December of the Final decision on the price control by the OUR (which is required for tariff changes to come into effect on the 1 January). GEL believes that it is highly unlikely that the OUR will achieve this. The OUR has already committed that GEL should not be financially disadvantaged by further delays to the price control. The mechanism by which this is achieved needs to be confirmed by OUR.

Detailed review of the OUR model

GEL has compiled a list of comments on the model. These comments include: errors of principle used in the design of the model; errors of application and analysis within the model; incorrect assumptions in the model; and assumptions in the model where GEL takes a different view to the OUR on the most appropriate value to be used. These are being

submitted to the OUR separately and could be the basis for a useful meeting on the proposals.

Impact on prices

The OUR's approach and model will, even if correctly implemented, result in higher customer prices in the long term. Today's customers are effectively being subsidised by tomorrow's customers, in relative terms.

If incorrectly implemented, as at present, the OUR's approach will result in higher customer prices in the future when the existing assets need to be replaced. Work conducted by GEL shows that implementation of the draft proposals will result in artificially low price projections, due to errors in the application of the model. This is caused by the reduction of the company's cash balance, no allowance for depreciation of the existing assets and no return on the un-depreciated assets.

If dividend payments were to be included in the OUR's model to correct for these effects, or if another standard method was used, then prices would need to be accordingly higher. However, the OUR's approach of calculating an X factor to move from present price levels to achieve a future target cash balance would (even in the more correct formulation in which the NPV of the revenues is set equal to that of the expenditure) still result in a rising price path, with lower prices up to the year 2015 and correspondingly higher prices to the year 2025. A step rise in prices is necessary within the year ahead, to achieve efficient prices and prevent present customers being favoured at the expense of future customers.

Financial implications

The effect of the OUR's proposals is to remove all of the company's accumulated profits generated over the last three years which stood at £3m at 31 March 2005. Indeed the proposals go further than this by creating negative reserves in the price control period and continuing losses over all the years to 2016/17 (the end of the OUR's model). The OUR's proposals, as shown in their model, would mean that the company would have accumulated losses of approximately £12.3m (an average of £1.0m per annum) over the 12 years to 31 March 2017. This assumes that the efficiency savings proposed by OUR are achievable. GEL has seen no evidence that the savings are well-founded and does not believe that they can be achieved. If the efficiencies cannot be achieved, GEL would suffer £23.6m losses over the 12 years to 2016/17, an average of a £2.0m loss per annum.

This position would mean that there will never be a dividend paid to GEL's shareholders.

The OUR claims that it has to make sure that GEL is sustainable in the long term, that future States requirements for generation policy can be met and that by 2017 GEL will have cash reserves to meet future generation requirements. The OUR's model shows a cash balance at 31 March 2017 of £10m, assuming that the efficiencies proposed by the OUR can be achieved. If those efficiencies are not achievable then GEL will have negative cash of approximately £4.3m.

It appears that the OUR has focussed almost entirely on cash balances with concern about the current £20m figure. The OUR's view is that this has all come from customers. This is not true. Part of our cash was, for example, created from the lease premium we received as part of the cable link asset purchase. This is treated as deferred income and we have a

liability as at 31 March 2005 of approximately £1m, which is a creditor for which we must retain funds. A further element of this cash generation has been through operational efficiencies that GEL has already achieved, such as the headcount reduction over the last 5 years. There is also the past service deficit on the pension scheme of £4.9m to consider, as cash could or should have been spent on a higher level of pension contributions in the last three years. GEL also requires working capital of approximately £3m for liquidity purposes.

If one considers further the return to the shareholder we should first reflect back to 1933 when the States of Guernsey purchased the electricity business of a private company. The consideration was £285,500. There has been no return to the "quasi shareholder" or investor in all the years from 1933 to 2001. It is only in the last three years that the business has provided a return in the form of the dividends paid by GEL. If one also considers what happened at Commercialisation on 1 February 2002, the value of the electricity business was confirmed at its net asset value, subject to some revaluation of property assets. This value was independently audited by professional auditors. Therefore the economic value of the business was again confirmed at that stage.

If one takes a return on the original investment from 1933 to 2001, it can be argued that the States of Guernsey should have had a return of £39m, if one assumes a return roughly equal to the present net asset value of £94 million, if one assumes a real return of just over 3% per year as the extent to which the overall cost of capital is above the interest rate[1]. The fact that the shareholder has not taken this return has also contributed to the positive cash position that GEL has, consistent with leaving cash in the business to be reinvested for the benefit of the island community.

In addition, it has to be fully recognised that there are errors in the fundamentals that the OUR is proposing:

- the OUR is not allowing GEL to pass on the full additional cost of imported electricity to its customers (as these are assumed to be off-set with unachievable efficiency proposals); and
- the OUR is not allowing GEL any return on the tangible fixed assets that the States of Guernsey valued at the Commercialisation date of 1 Feb 2002 at £101m.

<u>Other issues</u>

AMR - The OUR proposes to disallow a proportion of GEL's existing AMR programme. This would prevent GEL from improving service quality and coverage to customers and would result in extra costs being incurred to go back to the previous method of data collection. Full funding of the company's AMR programme is cost justified if the OUR adequately considers the future benefits and efficiencies of AMR. The OUR's attitude to AMR is in stark contrast to that of other regulatory bodies, who have been pressing electricity companies to adopt such technology, since its benefits to customers are widely recognised.

MCT – GEL's modest investment in this area is consistent with adherence to States' policy guidance in this area and should be permitted under regulation.

[1] UK prices rose by a factor of 44.2 between 1932 and 2001/02. 3.15% compound interest over 68 years gives a factor of 8.24. Multiplying £285,500 by these factors produces £99.5 million.

Energy efficiency - The DG proposes a new regulatory requirement upon the company to make funds available via GEL to reduce electricity consumption. This is an unnecessary new obligation with unnecessary costs to run and administer.

Bill insert - The annual insert to customers' bills on the "Save to Spend" fund proposed by the OUR will cause unnecessary cost and customer confusion. Such information is available to the OUR in much greater detail and the OUR has statutory powers and duties to act to protect customers on any issues of concern. Major investments made and contemplated are also fully reported in the company's annual report, which is freely available.

Compliance with a new price control

The OUR proposes to publish compliance guidelines prior to the price control becoming effective. However, since the proposals in the Draft Decision were available only at a high level, the nature of what is meant by compliance is unclear and yet it could have a significant impact on the nature and effect of the proposals. It is therefore necessary for detailed compliance arrangements to be brought forward by the OUR before the Final Decision and finally as an integral part of that Final Decision. The requirements should be set out and agreed as an integral part of the price control and well before 1 January 2006.

Conclusion

GEL believes that its response shows that there have been material errors as to the facts and material irregularities as to the application of approaches in order to determine the allowed regulatory prices. The highlighted errors in the OUR's approach, if corrected, would revise significantly upwards the prices in the OUR's Draft Decision. GEL can demonstrate that proper application of regulatory price control principles would result in the OUR setting a minimum price control significantly above the price levels requested by GEL. This results from GEL's shareholder's existing policy of minimising prices to customers and accepting a return well below a normal regulatory level.

In brief the island's electricity infrastructure is being placed in a higher risk regulatory environment so as not to allow prices to rise in line with world fuel and electricity market prices. By setting prices too low, the OUR's current proposals will force GEL into a loss-making position and will damage the finances of the company. They will also result in a negative impact on the efficiency of the Guernsey economy since customers will be paying an artificially low price which encourages increased use of electricity and inefficient use of resources. This would mean that the DG would be failing in his duty "to promote the economic and social development and well-being of Guernsey".

GEL has no intention of continuously making losses and has no significant historic reserves to fall back on. Any need to revalue the company's assets as a result of the regulatory decision to assume that they have no value (for the purposes of setting future revenues in a price control) significantly exacerbates this problem. GEL notes that moving away from a flat profile of price increases to the profile originally suggested by GEL would match the unavoidable increase in import costs and would have the effect of reducing early year losses.

In the OUR's proposals the balance has been incorrectly set with price levels that are lower than necessary. Short term lower prices are provided at the expense of losses for GEL and a zero return on existing assets, and a zero return for the shareholder.

A key principle to be applied in assessing the price control is that of economic efficiency. Under this, it is necessary that an investor should have the expectation of recovering the cost of capital on efficient investment. From a consumer point of view, the need is to set a charge that reflects the cost of provision. The OUR's proposals set prices too low and so do not achieve either objective.

Market volatility of import and oil costs means that regretfully the feature of the island having declining real prices for electricity cannot be sustained any longer. Whereas the company has achieved no tariff increases whatsoever for many years, it now has no option but to increase tariffs to reflect world market conditions affecting the costs of generation. At the same time, service levels are to be protected and the high level of efficiency of the organisation maintained - all in order to ensure that customers continue to receive very high value for money.

GEL believes that its proposals for relatively moderate increases in prices relative to the very substantial unavoidable increases in oil and wholesale electricity costs, will protect customers as regards price, quality, and continuity of service and will ensure that demands for electricity will be met into the long term on the traditional basis of pre-funding of investment traditionally adopted in Guernsey. Ensuring that electricity prices are not too low will promote the economic and social development and well-being of Guernsey by ensuring that the true costs of electricity are seen by customers. Compared to the protected price level that has been experienced to date as a result of the cable link, which has resulted in there being no increase in prices compared to 14 years ago, the higher prices for the future proposed by GEL are a proper recognition of current and expected future circumstances. The price levels suggested by GEL would continue the secure funding of the electricity system in Guernsey well into the future – in the manner accustomed to by the island and to the benefit of both existing and future generations of customers.

The issues raised in the OUR's document are so fundamental that GEL prioritises meeting with the OUR to explain this feedback on the proposals so that a sound basis for the future regulation of the electricity infrastructure in Guernsey can be derived.

The remainder of this Consultation Response is ordered in an identical manner to the OUR's original document, in order to aid comparison with the Draft Decision. This Consultation Response is supplemented by two further submission documents to the OUR, in the form of letters addressed to the OUR, that deal with the confidential topics dealt with by the OUR.

1. Introduction

Guernsey Electricity Limited (GEL) is pleased to justify the price it charges for electricity. The company is delighted to explain its position as an efficient operator, providing high quality services, making the correct investment decisions and proposing customer prices at the lowest appropriate level. The company is States owned and so has no interest in artificially inflated prices. At Commercialisation, the States put in place guidance to the States Department (currently the Department of Treasury and Resources) that is responsible for acting on behalf of the island as shareholder. This guidance already ensures that the monopoly position of the company is not exploited and that tariffs are set with due regard for a balance between seeking a commercial return on the resources employed and the effect on the community of any increase in charges which may result. The company has, as a priority, the demonstration that its operations are efficient and to the benefit of its customers in both the short and long term. As a result, investment is never proposed that does not benefit customers.

It has been agreed that it is not sensible to have competition in the provision of electricity, at least for the foreseeable future, on the island of Guernsey. However, customers certainly have choice as regards the heating market, for which the competing fuels of gas and fuel oil are available. Customers can also control their costs through the choice of economy tariffs, as well as controlling their efficient use of electricity. Although in general terms, competitive markets do provide efficiency incentives, the changes since Commercialisation at GEL indicate that the company has been run in a manner consistent with operating in a competitive market. Service standards have improved, costs have been controlled, manpower has reduced substantially and as a result, prices have not increased since they were last altered almost 14 years ago.

There has been no increase in tariffs for Guernsey Electricity customers for more than a decade. In the period 1992/3 to 2004/5 customers have seen a 40% decrease in prices relative to inflation.

All this has been achieved despite the considerable escalation of world fuel and electricity price increases, which in the UK, have already resulted in price increases in the range 25% to 36% to customers of the main energy suppliers. The UK is a region where full competition has existed for many years and yet the price rises proposed in Guernsey are lower, and are proposed by GEL to be implemented with delayed effect so as to smooth the effect on customers.

During 2004/5 the company exceeded all of the minimum targets set within the overall Standards of Service and of the 16,000 instances covered by the Guaranteed Standards, the company was required to make payments on only 18 occasions.

Reliability and security of supply has been improving from already high standards and in 2004/5 the average time customers were without power again fell – this time to just 15 minutes. The UK average for 2003/04 as reported by Ofgem was 81.1 minutes.

Costs have been well controlled, with the number of employees reducing substantially.

The sophisticated nature of Guernsey's economy, both today and in the future, demand an electricity supply system with reliability at least as good as is normal for the developed world.

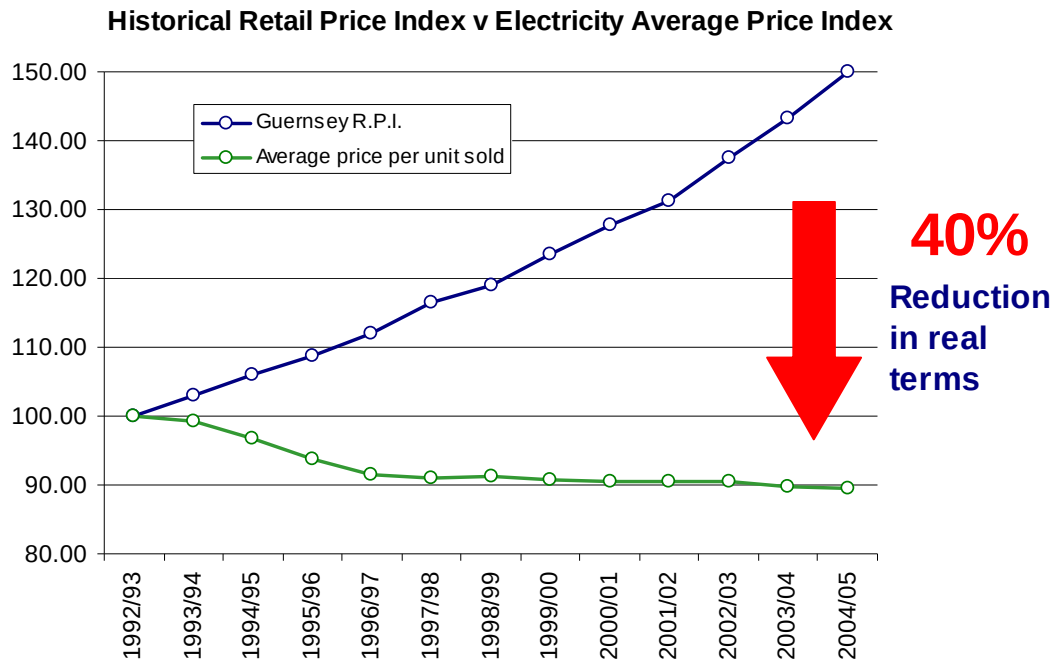
Achieving such standards on a small island is a challenge which cannot be met without adequate and continuing investment both in plant and in people.

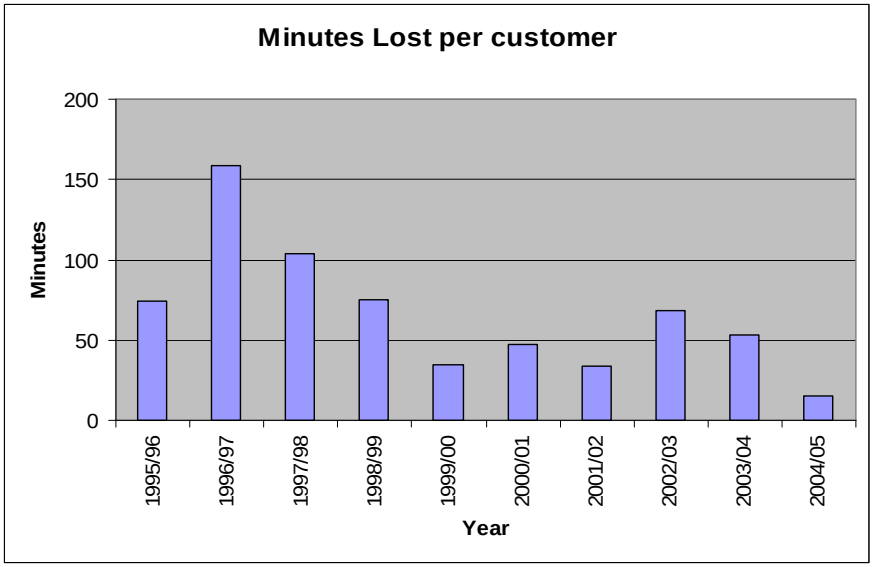
GEL's customers continue to value the service levels provided – whether this is in the financial sector, for which electricity is a critical "round the clock" service, or whether this is for a domestic customer. We feel that it is in the interest of the island to maintain that level of service.

Company policy is therefore to set out plans which continue to deliver service efficiently, which means seeking incremental opportunities to remain efficient, given the high efficiency level of the starting position at Commercialisation.

This level of service and continuous improvement is best summarised as:

a) initiatives on customer service over and above the regulatory standards;
b) traditional services continued to be offered to islanders as part of public service ethos; and
c) new systems/services that have/will enhance/maintain customer service.

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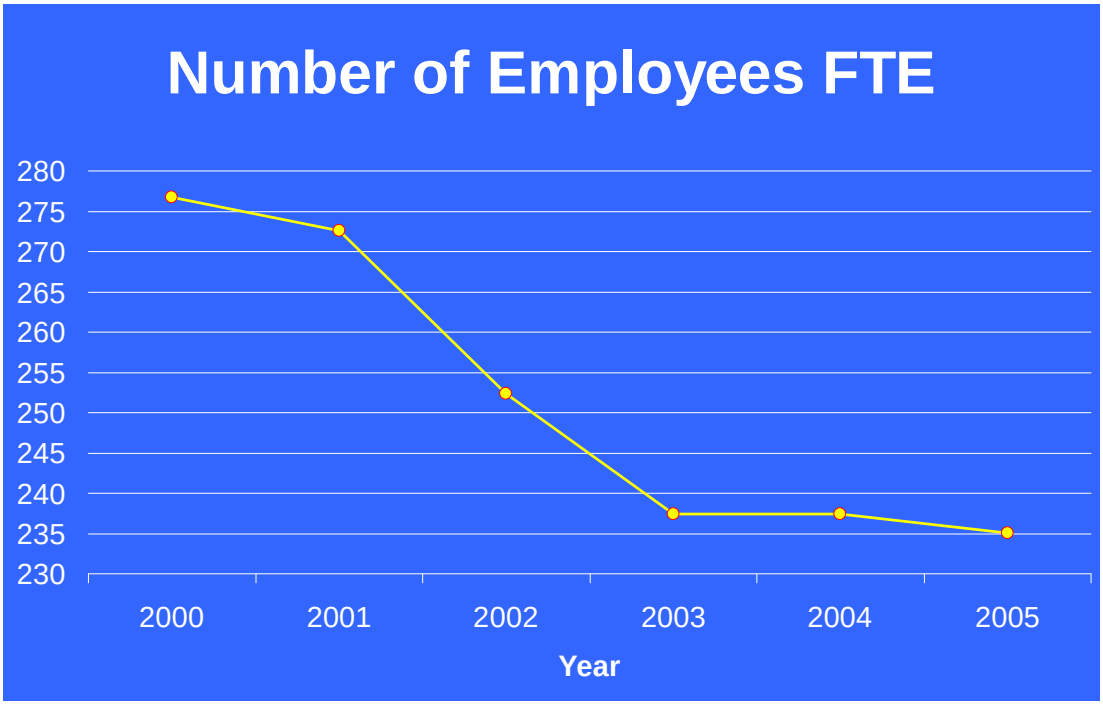
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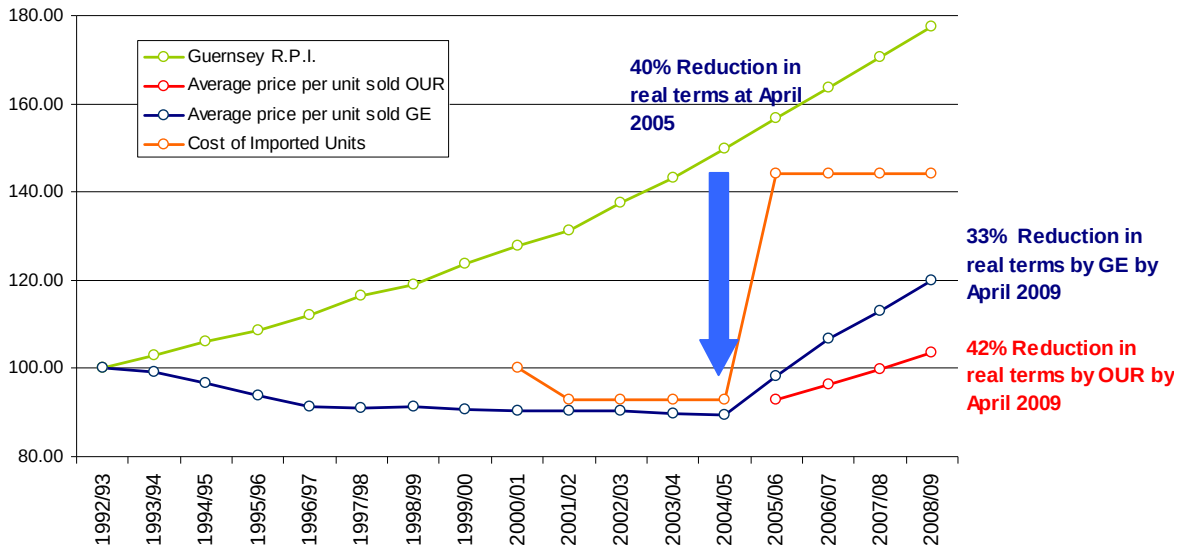
2005
Year

Given this background, GEL has a robust position from which to defend its price proposals to an additional level of scrutiny by the OUR and to demonstrate the rationale for customer benefits of all activities. However, there are risks in the approach by the OUR suggested in the Consultation Paper that the OUR should be involved in "controls on how GEL chooses to spend money". This responsibility and the decision making is a matter for the management, the Board and the shareholder of the company. Otherwise, the second guessing of proper company decisions can risk destruction of value through any unnecessary or inappropriate level of interference.

GEL has controlled costs during the recent years of the frozen prices, a trend which has been in place for 14 years. This has resulted in very low customer prices at the current time – particularly when the recent escalating costs of oil and European electricity are taken into account. Whilst historical prices were undoubtably higher in real terms (as evidenced by no changes to prices for 14 years), the matter for consideration in this price control is the level of future prices, which need to rise from an abnormally low starting point, given more recent and current energy market conditions of high prices. The historical tariff levels were set several years ago and led up to the major investment in the cable link, which was achieved without price rises to customers in order to pay for this critical investment. However the diagram below highlights that at 31 March 2009, GEL's tariff prices will show a 33% reduction in real terms. The OUR's proposal is a 42% reduction. GEL cannot continue above its current 40% reduction in real terms and still absorb a 55% increase in import costs.

Historical and Forecast Retail Price Index v Electricity Average Price Index



The "premium" concept referred to by the OUR when referring to GEL's policy of maintaining cash reserves is not valid. The benefits of the pre-funding policy are security of funds for investment and also actually lower costs due to interest receipts. The effect of adopting an alternative to this policy would involve borrowing, with the associated interest payments by the company and hence higher costs. The servicing of debt would put costs up and create pressure to raise tariffs higher. The use of the word premium is introduced and is used

several times in the OUR's document, but given the lower overall costs that it creates, this is extremely misleading. This phrase also suggests a separate billable value, which it is not.

The policy of "Save to Spend" is very much part of an overall philosophy to financial prudence adopted in Guernsey since World War II. The States of Deliberation as Government and as islanders' representatives should be instrumental in reviewing any change of the pre-funding policy. Although the OUR argues that it has accepted the "Save to Spend policy", the Consultation Document indicates in several places that the OUR is intellectually opposed to it. The OUR narrowly assumes that the cash reserves built up under the "Save to Spend" policy are solely to pay for capital investments, however the policy is a wider financial security approach which prudently provides for future uncertainties, as well as for known expenditures. This is the chosen approach on the island and is highly appropriate given the risks and uncertainties in providing secure electricity supplies. The company has to deal with a geography that inevitably involves aspects of isolation and independence and yet the service provision is of fundamental priority to businesses and the community. For example, in the event of a major failure on any of GEL's older generators, the island might well face the need to replace it in whole. A new 14MW slow speed diesel generator would cost well in excess of £10m. Such a replacement is not expected, but could become necessary immediately, given the island's security needs and the limited diversity of options open to the island.

The OUR estimates that GEL's cash reserves amount to £700 per customer. If this is not averaged across all small and large customers, but is illustrated in proper proportion to customer size, then the value per domestic customer is £464 and per islander is just £222.

The only reason why interest received upon the company's cash reserves is some 60% of profits is that operating profits have been extremely moderate for GEL to date. Given that the company's assets amount to circa £94m in the 2004/5 accounts, the profit of £1m is very modest. This is beneficial to customers in terms of low prices and does not provide a basis to alter the application of the "Save to Spend" policy.

GEL's proposed application of the policy is proportionate and it is subject to the scrutiny of the shareholder, The Department of Treasury and Resources on behalf of the States of Guernsey. Scrutiny by any lender of money would indeed exist but would not necessarily add value to the work of the States' Department. However, very significant payments would certainly need to be made to any third party lender, who would clearly require commercial interest rate levels. This would certainly result in associated large interest payments if the company were to adopt an indebted position. This makes the very large assumption that a third party would be prepared to provide debt finance to a company continually making losses. In the OUR's proposals, the balance has been incorrectly set with price levels that are lower than necessary. Short term lower prices are provided at the expense of the company being forecast to produce losses for two decades, no regulatory allowance for depreciation of the assets, a zero return on all existing assets and higher prices in the long term.

Since this is the first electricity price control to be derived and set by the OUR, it establishes some fundamental principles for the first time. This makes it an extremely important document for the island of Guernsey, particularly given the special circumstances of the company in delivering electricity services to a community which depends upon secure and cost-effective supplies as a priority service in promoting the well-being of the island.

The arguments set out in this Consultation Response identify that in a number of areas the OUR has made incorrect assumptions and has adopted a flawed approach, so as to mean that if the OUR's price proposals are implemented without modification, then GEL will not continue to be the strong, sustainable electricity company necessary to meet island needs, now and in the future.

2. Structure of the Paper

The OUR originally proposed that GEL's price control would be reviewed in time for implementation in January 2005 at the very latest. The OUR's new 1 January 2006 deadline for the price control to come into effect is still unlikely to be met. This is because GEL's licence conditions require it to give 1 month's notice of tariff changes. With the OUR requiring input to its process from the States meeting regarding generation planting on 30 November 2005, it is highly unlikely that the OUR will be able to communicate its Final Decision to GEL and GEL's customers in time on 1 December 2005. The OUR has committed to the fact that GEL should not be financially disadvantaged by further delays.

Furthermore, given the importance of the issues to be dealt with in the Final Decision, the crucial nature of the issues raised in this Consultation Response and the fact that GEL has only 14 days within which to decide whether or not to accept the OUR's final conclusions, a firm and achievable date should be given for when the Final Proposals will be released. Without this, efficient preparations for the company to analyse the OUR's further considerations, cannot be made. This date should be set out by the OUR well before 30 November, otherwise customers and GEL will have significant doubts as to when the new price control will come into effect and when the level of new prices will be announced. At present the 1 January date proposed by the OUR appears to be extremely optimistic.

3. Background

GEL believes that the postponement of the electricity price control in March 2003 by the OUR and the commencement, at the OUR's suggestion, of a process involving the consultants Mott MacDonald was not necessary. Although the study by Mott MacDonald is one input to a policy debate, it does not cover all of the aspects necessary to be considered as part of the wider Policy background to electricity investment decisions, and most importantly to an energy policy for Guernsey.

The key issue however, is that Policy should not be forced into a timetable to suit a price control. Rather, a price control should proceed on the basis of Policy arrangements as they stand at the time chosen by the regulator to conduct the price control. There is usually sufficient tolerance within the regulatory price control methodology so that investment requirements, which are never known with certainty, can be accommodated. Similarly, the fact that inevitably Policy might need to be updated over time can normally be accommodated within the price control approach.

The commissioning of the Mott MacDonald study has delayed the implementation of GEL's price control by in excess of two years and in GEL's view, any further delay to the price control is unnecessary. The OUR should be able to proceed on the basis of reasonable assumptions regarding Policy and should agree to revisit the price control should revision to

those assumptions prove to be needed as a result of new States' Policy emerging. A position that the OUR has previously taken.

Hence in GEL's view, the current critical dependency of the OUR's price control work stream on the 30 November meeting of the States is not required. Furthermore, to bring Policy issues to the States for consideration in order to meet regulatory tasks and work programmes risks Policy being updated at the wrong time. Many of the investment decisions are not required to be made for several years and can be made at a later time with much more information than is the case at present. The potential disadvantages to the island of making premature and sub-optimal Policy decisions in this process, whereby "the tail wags the dog", need to be guarded against.

In any case, in GEL's view, the OUR is wrong to focus so much on the States' Policy issue because the sensitivity of prices to plausible changes in the outcome of considering alternative future investment requirements is not significant – so long as the price control is modelled properly – and especially when compared to other, much larger, uncertainties.

For example, the Background section of the OUR's Consultation Document covers the States' Policy issue and the Mott MacDonald Consultants' Report, but does not cover at all the change in the price of GEL's import contract for wholesale electricity supplies from France. This is a background issue of far greater importance. The change in wholesale electricity costs is of altogether greater significance to the future level of prices over the next three years, than is the area of future States Policy and future capital expenditure requirements, which are faced much further into the future.

The real key background issues to the price control are the higher level of oil prices and escalating world energy market prices and the resultant step increase in the costs of electricity imported from France via the marine cable link to France via Jersey. These imports account for some 80% of Guernsey's electricity supplies (accounting for some 46% of generation costs) and will increase by some 55%. This cost increase is real, certain, is not dependent upon any Policy matters and takes place from 1 December this year. This large increase is inevitably the consequence of escalating world oil and energy costs and the ending of the period of protection to Guernsey afforded by the previous contract price. It is apparent that faced with a background of such a large percentage increase in such a large fraction of GEL's costs, the OUR's price control of RPI-0.9% is not reflective of the real cost changes in providing electricity supplies to customers.

The only short term decision required is a regulatory one for the purposes of the price control. Making political and policy decisions in this area, ahead of when necessary, involves unnecessary risk. Generation investment is not required for several years and so no immediate decision is necessary. There is certainly no need in GEL's view to revisit policy issues at each price control. The latest Policy assumptions can be used at each price control without unnecessary revisiting.

4. Licensing Regime and Legislative Framework

The review of the relevant legislative framework provided by the OUR is useful. It should however also include reference to the States' Direction to The Department of Treasury and Resources when acting as GEL's shareholder. This Direction, as well as dealing with other matters, requires the shareholder representative to draw a "*balance between seeking a*

commercial return on the resources employed and the effect on the community of any increase in charges which may result". This is quoted from part of the report entitled "The Future Provision of Electricity Services", pages 1603-1614 of Billet xxiv 15/12/01.

GEL's shareholder is therefore already abiding by States' Guidance to balance return and prices when approving GEL's tariff data that was submitted to the OUR as part of this price control review process. This ensured that prices were as low as was appropriate. Indeed, the low level of return associated with GEL's submission (circa just a 1% return on existing assets) proves that the chosen balance by GEL and its shareholder is highly protective of customers in terms of the prices proposed to be charged. The submission by GEL contained appropriate assumptions on efficient operating costs and required investment.

When setting the price control for GEL, the OUR will be seeking to achieve the objectives set out in section 2 of the Regulation of Utilities (Bailiwick of Guernsey) Law 2001. GEL believes that its proposed tariff levels and the accompanying planned costs levels, investments and activities, would allow GEL to meet its statutory obligations. At the same time, GEL's view is that such price levels would also be consistent with the OUR to fulfilling its own duties.

It is GEL's view that corrections are required to the OUR's method and data used to derive the Draft Decision, in order to regulate prices without material errors as to the facts or material irregularities. These corrections are in the areas highlighted in GEL's Consultation Response, so that the OUR can take account of these before considering the Final Decision on the electricity price control.

5. Developments in Guernsey

World energy price increases and the price renegotiation in the import contract are the most significant relevant developments. These should therefore be added to the two bullet points at the commencement of this section in the OUR's Draft Decision document. The effect of rising energy costs and the step change in import costs is very large compared to the protected price level that has been experienced to date. This is, in GEL's view, the main development and driver for a new price control (see previous comments under Section 3).

5.1 States review of the Strategic Generation options for the Island

Comments by GEL on the issue of States Policy have been dealt with under Section 3. In summary, GEL's position on policy matters is that:

- political decisions are only required for overall guidance on environmental policy and security policy;
- given forecasts of electricity demand and generation supply, investment decisions do not actually need to be made for at least 5 years;
- the only short term decision required is a regulatory one for the purposes of the price control;
- this decision should set an assumed minimum or maximum level of investment, not a specific generation option or a specific investment commitment;
- the OUR is it at liberty to decide whether the Mott MacDonald report can assist the OUR in that regulatory decision;

- GEL sees no reason in principle why allowed capex investment cannot be agreed with the OUR directly for this price control, without making the price control dependent upon specific policy decisions;
- making political decisions in this area ahead of when necessary involves risk that Policy is developed at the wrong time and therefore in the wrong way; and
- there is no need to revisit policy issues at each price control – the latest Policy assumptions can be used at each price control without unnecessary reassessment.

This section of the OUR's document states on this topic:

"Should following that debate, there still be a requirement to further consider the impact of the agreed States policy on the final price control decision this will be undertaken at the most appropriate time."

GEL has already expressed its concerns at the lack of a clear and reliable timetable in this area. GEL would ask the OUR to proceed with the price control on the basis of reasonable assumptions on States' Policy matters so that firm milestones can be applied to the plan for this work stream. The continued uncertainty over such a fundamental issue for GEL results in a significant on-going business risk. This risk can only be removed by an appropriate approach to the regulatory work on the electricity price control.

The Consultation Document refers to certain understandings as to what, in broad terms, the States Policy considerations will wish to achieve. GEL has not seen a final copy of any documentation that is due to go to the States for its November 30 meeting. However, if the OUR considers such matters to be critical for the price control, then we would suggest that the current documentation upon which the OUR has made its proposals should have been included as an Appendix. This could have been a confidential Appendix, if necessary, but the Consultation would thereby show a consistent set of source documentation for the price control.

Of the three assumptions highlighted by the OUR on Policy matters: the first relates to funding rather than energy or generation policy matters; the second relates to two generic options for existing and further generation capacity; and the third relates to regulatory price control matters. Therefore perhaps only one highlighted assumption (the second) relates directly to generation planting matters. GEL has no objection in principle to the content of the highlighted assumption that relates directly to generation planting. The first assumption takes a narrow view of reserves as being used solely for capital expenditure and only considers the period of the price control. GEL would suggest that a wider view of the benefits of reserves should be considered and that longer timescales are appropriate for generation planting policy matters. The third assumption is a surprisingly specific assumption for a policy consideration and again relates specifically to the price control. GEL awaits sight of the documentation to be provided to States Members and the outcome of their deliberations. However, it would seem likely that given the above comments that these narrowly defined assumptions will need to be altered in some form to reflect the documentation presented to States Members and the outcome of the relevant meeting.

GEL has already stated its concerns in Section 3 of this Consultation Response regarding over reliance upon the determination of Policy matters as a precursor to practical progress on a regulatory price control. Similarly GEL's concerns over the need to progress the price control against firm and credible milestones, has been dealt with in Section 2.

5.2 Submission of Information by GEL

GEL continues to stand by the proposal it made to the OUR on 30 June, although delay's to the OUR's timetable mean that price changes cannot now be phased in as GEL had hoped since the 1 December 2005 tariff change is now impossible to implement. GEL's concerns over further predicted delays have been dealt with under Section 2 of this Consultation Response. GEL's proposed price changes are the minimum possible increase to customers to reflect the increased cost of imported wholesale power. It is GEL's view that the application of sound regulatory principles will not suggest a lower level of prices for the outcome of the price control.

The OUR proposes that the OUR has to consider:

" whether it (GEL's submission) is the best possible strategy to fulfil the various policy imperatives that have been set out by the States of Guernsey".

GEL is confident in defending its full submission and its plans in terms of the efficiency of its costs and also the appropriateness of the company's investment strategies to meet policy objectives. However, GEL notes that the OUR has set itself a very high hurdle in this regard and there is a risk that the OUR will attempt only to second guess the company in the proper exercise of its role in operations and strategic planning. Given the limited resources and expertise of the OUR, such work is possibly counter to the public interest if high costs are incurred and the supporting analysis is not robust compared to the company's own analysis.

Based upon the OUR's Draft Decision document, GEL would seriously question the legitimacy of any assertion that the suggested amendments to the company's submission are demonstrable as being the "best possible strategy" to meet the policy objectives with which GEL is faced and which it has been dealing with as its core business activity for many years.

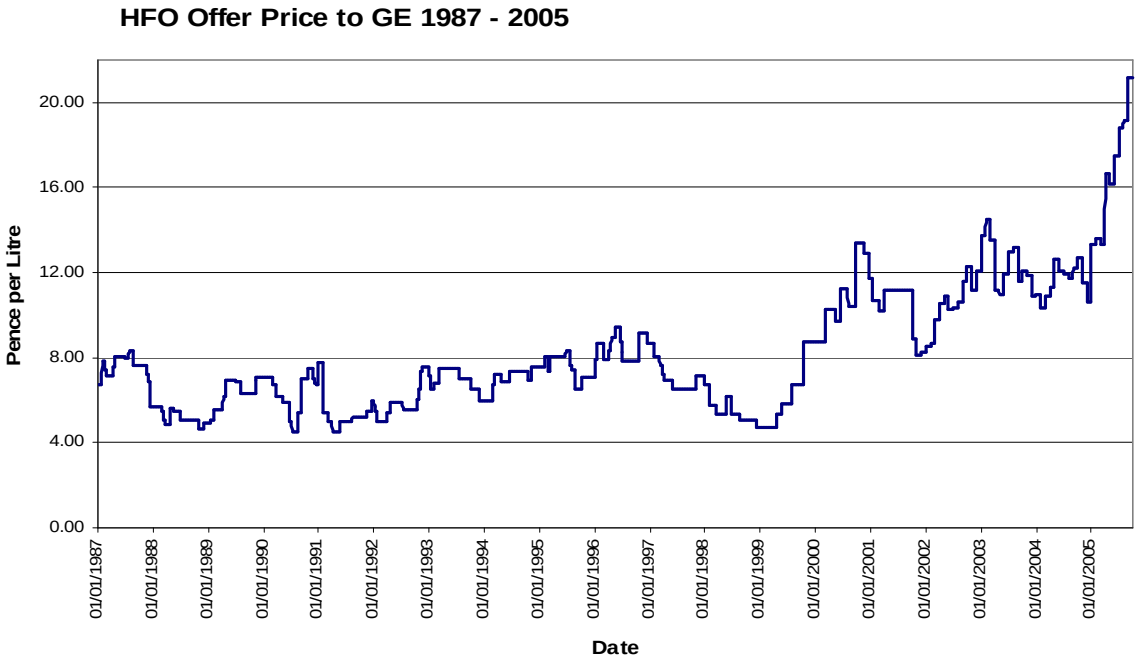
6. Principles of GEL's Price Control

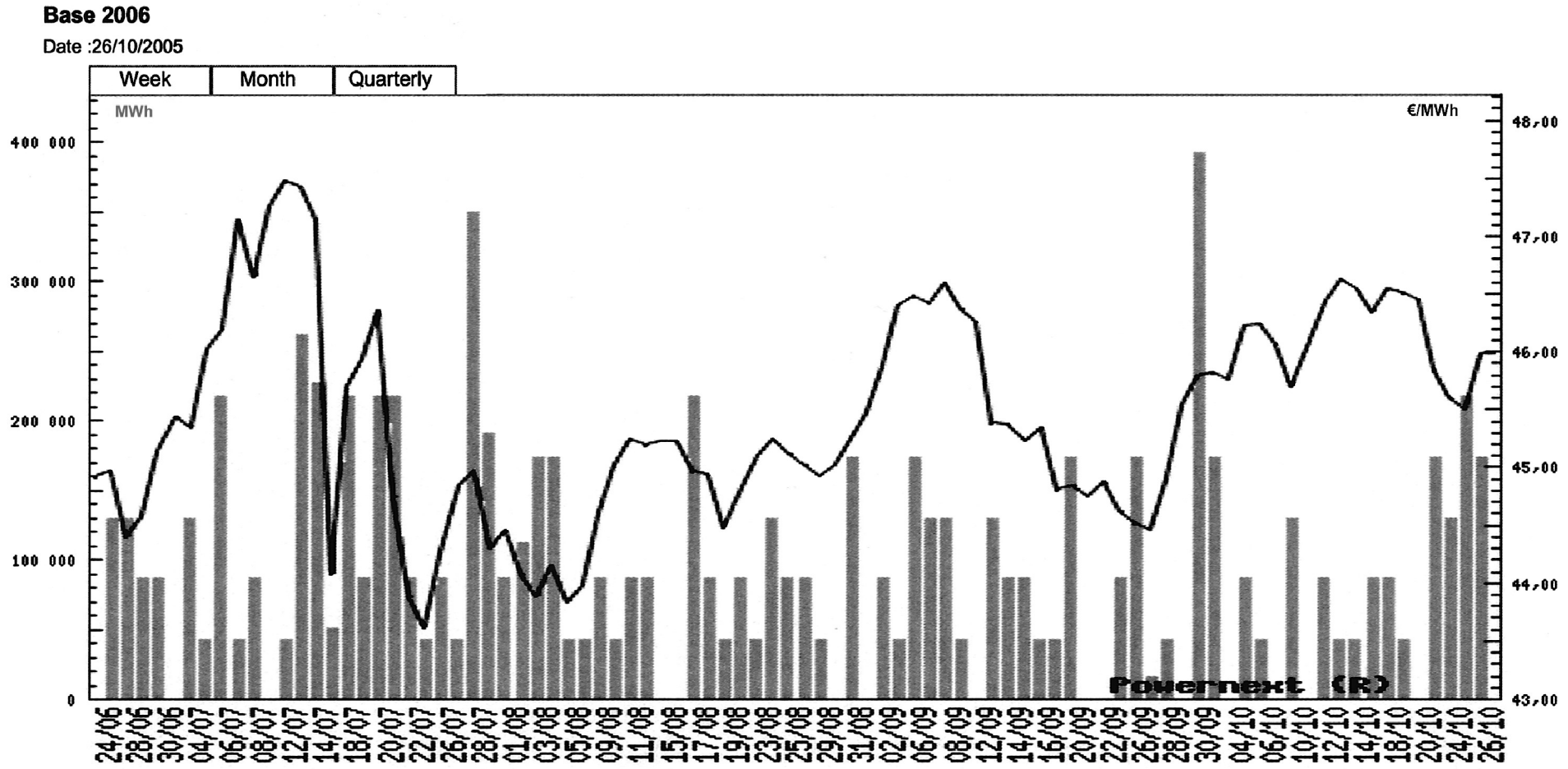
6.1 Form

The OUR proposes in its Draft Decision "an incentive regulation form of price control (i.e. RPI-X or RPI+Y) on GEL". The OUR document referred to in this area (OUR 02/29) is now more than three years old. That document does not explain in any detail what the differences are meant to be between these two forms of price control and why one would be chosen rather than the other. GEL assumes, from the OUR's proposal on prices elsewhere in the current Draft Decision document, that the OUR is proposing to apply a formula of "RPI-0.9%" to its prices. GEL understands this to be the RPI-X option referred to by the OUR.

By far the main element of GEL's costs relate to electricity purchase costs (oil and import) and these are not determined by RPI and cannot be expected to reduce by RPI-0.9% from current levels. Costs under the import arrangements with France are due to increase by 55% on 1 December – even before the price control is due to come into effect. If the OUR is to proceed with an RPI-X form of price control then it is essential to have a correction mechanism for changes in electricity generation costs and wholesale electricity purchase costs. Without this, GEL would not be able to accept this form of price control. The size of the

variability faced by GEL in purchase costs is very significant, as illustrated by the graphs below.




Base 2006
Date :26/10/2005
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A simple correction mechanism to account for the variability in purchase costs (fuel oil and wholesale imports) is set out here for consideration by the OUR. Before the end of each financial year (eg by December) GEL will submit to the OUR a comparison of the actual purchase costs in the year to date (plus its best estimate of the expected actual generation costs for the remainder of current year). This will be in a form that allows direct comparison with the forecast used for the purposes of setting the original estimate of the price control the price control. This will be accompanied by GEL's best estimate of future costs for the following year. The difference (positive or negative) between these figures and the values assumed when setting the control in 2005 will be added (or subtracted) to the purchase costs originally forecast for the following year of the price control. An adjustment to customer prices will then be agreed by the OUR which leaves GEL in the same position had the original OUR forecasts been correct. The formula for such amendments will be applied so as to leave GEL with an RPI-X incentive form of regulation over all other elements of costs. The definitions and algebra to be used in this correction mechanism can be agreed between GEL and the OUR in time for presentation as part of the Final Decision documentation.

Without such a correction mechanism, GEL will face extremely high costs of any attempt to purchase at prices that conform to the RPI-X form of price control. In fact GEL has no confidence that such purchasing arrangements might even be available. The consequent costs and risks to the company of being regulated on this inappropriate basis make the suggested form of price control regulation intolerable. GEL has submitted data supporting its proposed prices which shows that the prices are at the minimum level as a result of the adoption of a low return assumption. Such a low return can only be acceptable in a low risk environment. In any case, under the OUR's pricing proposals, GEL is forecast to make significant losses for the foreseeable future. Applying RPI-X regulation to a business with wholesale energy costs as a very significant fraction of its total costs is not appropriate.

GEL has also commented separately on the OUR's confidential section regarding import costs in a separate letter to the OUR.

6.2 Scope

GEL agrees with the OUR that there should be no tariff re-balancing at the time of this price control, although in future this might become appropriate and so needs to be considered for future tariff price controls.

GEL agrees with the scope of the control and the associated proposed list of tariffs. The list set out is not quite complete. It excludes the Boiler Tariff and there are elements of the Maximum Demand Tariff missing - installed capacity and power factor data appears not to have been included. These detailed matters can be clarified between GEL and the OUR before 30 November.

6.3 General structure and process for price control

The OUR has not set out in this section a clear or a full explanation of the model that is intended to be used to derive the revenue for the price control. GEL's knowledge is now improved as result of subsequently being permitted to have a copy of the OUR's model that

was used for price setting in the Draft Decision and for the modelling of the future finances of the company.

In May 2005 the OUR proposed to GEL a model which was more conventional to that typically used in the electricity sector outside Guernsey and to that used in other sectors on Guernsey. The new model now proposed represents a significant change.

In order to shed light on the OUR's approach, GEL has commissioned work by G Horton of Horton 4 Consulting. This is attached as Appendix 1 to this Consultation Response. This highlights some fundamental errors in the OUR's methodology and its application to set prices in this price control.

GEL strongly suggests that the OUR should adopt the standard building block approach described in Appendix 1. Without this, or very significant amendments to the OUR's existing approach the proposals will result in prices being set too low.

6.4 Relevant Price Control Period

The OUR has proposed a price control for a period of just over three years. GEL agrees that this is an appropriate period. GEL prefers a period such as this in order to reduce regulatory uncertainty in its business. GEL has been in the process of agreeing a first price control with the OUR for more than three years due to several delays to the originally envisaged timescales. To have a price control for less than this type of period would involve a perpetual programme of electricity price control work which is costly and is an unnecessary distraction of management time. GEL is strongly against having to deal with a price control more often than this and so wholeheartedly supports the OUR in a proposed period in excess of three years. This should allow a three year period of low regulatory costs to emerge.

However, if the price control is to be appropriate and of the correct form, it needs to correct for the level of purchase cost allowance each year to outturn values, since the OUR has accepted GEL's new import arrangements and fuel oil will also be purchased at the prevailing market price.

GEL has explained in Section 6.1 why RPI-X regulation cannot sensibly be applied to electricity purchase costs or fuel oil costs. Without proper proposals as to how these cost areas are to be regulated, the OUR's proposal in this section, to examine material changes on merit arguments, will involve continual regulation and more cost. In circumstances such as this, a regulatory price control is ordinarily agreed through a formula which sets out how such a large element of costs is to be treated. Repeated re-assessment after the price control is agreed can be avoided in this way. A correction mechanism is proposed by GEL in Section 6.1 of this Consultation Response.

In the footnote to this section it is stated that the contract with EdF expires in November 2008. This is incorrect, pricing clauses are subject to renegotiation at that date but under an existing long term contract that GEL joined part way through, and that expires in 2012.

6.5 Monitoring and Compliance

GEL welcomes the OUR's intentions to minimise the resources required for compliance and monitoring under the price control, as well as the OUR's intentions to ensure maximum transparency and certainty for GEL.

However, the accompanying section of the OUR's document contains no specific proposals. This area of compliance will become a new regulatory requirement and the OUR has not yet set out the requirements. Given the great uncertainty as to how electricity purchase costs will be dealt with, this is potentially a very significant omission. GEL needs to understand what this process of compliance is in order to understand what the price control proposals actually mean.

As a result, it is reasonable to expect that the OUR's compliance proposals and requirements should be set out as an integral part of the price control Final Decision. Otherwise GEL might be unclear as to how the OUR proposes to deal with the most significant element of the company's costs.

Given GEL's understanding of the OUR's proposals to date, the risk of a high regulatory burden of compliance can be avoided by adoption of GEL's suggestion set out in Section 6.1 for the operation of the price control. This would reduce costs for both GEL and for the OUR and would avoid the continual re-examination of price control issues, with its associated risk and uncertainty.

7. Allowable Revenue

GEL notes that the OUR sets out a high level view of the components of a revenue model. Each of those terms should be founded in proper and established accounting and regulatory treatment of a business. The OUR stresses that a key factor to be considered is the level of cash required by the company to meet its commitments over the period of the price control. This is true, but cash is just one factor. The need to recognise the value of the company and its assets, to provide a return on those assets, the company's profitability projection, and the need to finance the company on a sustainable basis with a view to the period after the end of the short term price control, are also important considerations. The OUR's approach to the price control does not give due consideration to each of these other factors and is therefore in need of significant amendment before finalisation.

7.1 The Regulatory opening asset value

The business has for many years run with a high asset base – due largely to the investment in generation capacity which has been required in order to meet high security of supply criteria on a small island. The assets taken on at the point of Commercialisation in February 2002 with additions and disposals to March 2004 have already been audited independently and reported to all parties. The Regulatory Accounts as at 31 March 2004 report core business assets with a net book value of £94m at that date on an historic cost basis.

GEL believes that this section of the OUR's document asserts, through flawed argument and misunderstanding, that the island's and the company's "Save to Spend" policy means that an asset value of zero is appropriate for the price control. The OUR appears falsely to assume

in the first paragraph that assets should be remunerated only when they have been financed by borrowing. This is not correct since equity considerations of the company are equally, if not more, important. Since GEL has not incurred debt, and the associated interest charges, the OUR appears to go on to assume that as a result a zero asset valuation is appropriate. This is incorrect.

The OUR goes on to argue that because the company has adopted a prudent policy of being in a position to purchase assets from reserves, rather than from borrowing, that allowing GEL a return on assets "would mean that customers would be effectively paying for the same assets twice". This is wholly wrong.

Based on a perceived need to avoid this incorrectly assumed situation, the OUR states that:

"the DG has concluded that no return on GEL's regulatory opening asset value should be included in its allowed revenue."

This essentially values the company, including its £94m of audited assets at zero.

Since regulatory price control purposes will determine totally the allowed revenues of the company, this issue is of the utmost concern to GEL. Regulation will effectively determine the value of the assets since there is no other way but via regulation for GEL to be remunerated in respect of those assets. Therefore the OUR's subsequent statement that:

"This should not be interpreted in any way as an assessment of the value of GEL's assets, as this is a materially different appraisal process."

is clearly untrue and demonstrates a fundamental error and misconception in the OUR's approach. Any company owning assets upon which it is unable to earn any return is duty bound to reconsider the value of those assets.

Regulatory accounting suggests that a return is allowable whilst there is still a net book value greater than £1, i.e. assets are still in their useful life period. The original company and the States of Guernsey Electricity Board were responsible for building up assets partly as a result of returns and dividends that were foregone. That is, investment has been financed from retained profits. The OUR's approach is not allowing GEL to make any return whatsoever on the assets in place at the beginning of the price control. Furthermore, those assets are not permitted to be depreciated. Instead, an allowance is made only for the short term cash required to fund short term capital expenditure.

The OUR is effectively asserting that when the company was set up at Commercialisation by the States, that the company should have been valued at zero. This is not the case and a more detailed explanation of GEL's views on the OUR's approach can be seen from the work by G Horton in Appendix 1.

The work by G Horton identifies that the principles to be applied in assessing the price control are primarily those of economic efficiency. In order to satisfy productive and dynamic efficiency it is necessary that an investor should have the expectation of recovering the cost of capital on efficient investment. From a consumer point of view, and to satisfy allocative efficiency, the need is to set a charge that reflects the marginal cost of provision. The argument put forward by the OUR to support its method is that the entire asset base and the present cash reserve have been financed by payments by customers in the past, with no

contribution from government or taxpayer as the owner of the company, and so to make any further charge in respect of these assets would be to charge twice. This argument from fairness, that customers should "not pay twice", is less powerful than it at first appears. The OUR is not correct in its assumption that customers have financed the existing assets in advance and should therefore be deemed to own them already. When a private sector company finances investment from its cash balances it is said to finance it from retained earnings. It is not said to be financed by customers. This is also the position of GEL.

There is a further problem that arises if no revenue is granted in respect of existing assets. These assets have a positive value (of £94m) in the company's balance sheet and a depreciation charge is levied in respect of them in the profit and loss account. This will result in the company recording a loss. There is a strong argument that, if the proposed price control is introduced, GEL should revalue the balance sheet and set the book value of these assets to zero. If this were to be done, GEL would sustain an immediate loss equivalent to its total tangible assets of £94m.

The OUR's price calculation needs to be adjusted to include a dividend payment in respect of the existing assets with a consequent impact on both the initial price and the path of price levels thereafter, and so on the expected revenue path. Allocative economic efficiency of use of resources is unlikely to be served by setting a price that does not take the cost of the existing assets into account. The OUR's proposals will therefore result in a negative impact on the efficiency of the Guernsey economy. The implication of this is that the DG could well be failing in his duty "to promote the economic and social development and well-being of Guernsey". The argument from fairness for failing to include them (that customers have already paid for the assets) does not appear to be supported by any evidence that investment has been financed from payments from customers that exceed the costs of their supply rather than from the retained earnings of GEL and its predecessor. Furthermore the argument is weakened by the fact that GEL is States owned and so the beneficiaries of the additional payment would be in large part electricity customers in their role as citizens. An additional argument against failing to include existing assets as a determinant of price is that GEL would make accounting losses and may have to write down its existing asset value to zero. In fact, since the OUR goes on to model the cash balance of the company to decrease, so the company valuation by the OUR is effectively negative, which is clearly a wholly unacceptable situation.

The OUR concludes the section by claiming that:

"The above analysis is only an assessment of whether electricity customers should be charged a return by GEL on assets for which they have already paid."

It is clear to GEL and is indisputable that such regulatory decisions as those being made within the price control will have very significant implications upon the real value of the company and its assets and their accounting treatment. The OUR's claim is therefore incorrect and in any case the concept that customers have "already paid" for the assets and that therefore GEL should not receive a return on those assets is wholly false (see above). GEL hopes to discuss this matter after the OUR has read the Consultation Response and has had time to review the Appendix 1 to this response.

7.2 The Regulatory Depreciation Schedule

Depreciation is charged in the accounts according to the useful asset lives. The useful lives have been reviewed in 2004 and reflect the professional opinions of the Directors of the company, as recorded in the statutory accounts to 31 March 2005. GEL's forward projections reflect these revised lives.

In the first part of this section the OUR recognises that the allowable revenue of a price controlled business will generally include an allowance to raise the revenue to meet the cost of depreciation. The OUR then goes on to state that because of the "Save to Spend" policy, the OUR believes that a depreciation schedule is already provided for and so this is not provided for separately in the OUR's calculation of GEL's allowable revenue.

It is not stated in this section of the Consultation, but examination of the OUR's model shows that the OUR chooses to allow the actual level of capital expenditure as a cash allowance on a short term basis, rather than a proper depreciation allowance. GEL refutes this approach and would suggest that the standard "building block" approach to electricity price control regulation is used. UK electricity regulation would normally allow for depreciation in any price control (see Appendix 1). The OUR appears to have used a method similar to that used for Railtrack in the UK.

Existing assets have useful lives and depreciation charges to the profit and loss account are providing for a reasonable charge for the usage of the asset in the financial years. With all other income and expense unchanged, the net cash arising over the full useful life of all existing assets would ultimately, under the historic cost convention, allow cash to be banked until a new asset of the same type is acquired to replace the old one. Depreciation that has not already been charged to the profit and loss account in respect of existing assets should be allowed for statutory and regulatory purposes.

Whilst GEL believes that the use of a depreciation allowance is the preferred method for dealing with the need to replace assets in a price control, it recognises that alternative models do exist. However, such models need to be formulated and applied correctly. As explained in Appendix 1, this is not the case with the OUR's current approach. This situation is further exacerbated by the OUR's error in assuming that the "Save to Spend" policy and the associated cash balances are in some way connected with the decision not to model and allow for depreciation charges under regulation.

Under standard accounting approaches, depreciation charges to the profit and loss account are used to provide for a reasonable charge for the usage of those assets in the relevant financial years. GEL suggests that the OUR adopts the approach to Electricity regulation used in the UK and therefore that it includes a depreciation charge in its regulatory analysis.

The OUR argues in its document that the "Save to Spend" policy negates the need for a depreciation allowance by regulation, this is incorrect.

The argument put forward by the OUR in this area is false, that the entire asset base and the present cash reserve have been financed by payments by customers in the past, with no contribution from government or taxpayer as the owner of the company. The OUR is therefore incorrect to claim that to make any further charge in respect of these assets would be to charge twice. This is because the OUR is incorrect in its assumption that customers have financed the existing assets in advance and should therefore be deemed to own them

already. When a private sector company finances investment from its cash balances it is said to finance it from retained earnings. It is not said to be financed by customers. This is also the position of GEL.

The argument that customers have already paid for the assets is not supported by any evidence that investment has been financed from payments from customers that exceed the costs of their supply rather than from the retained earnings of GEL and its predecessor. The original company was responsible for building up assets partly as a result of returns and dividends to its owner, the States of Guernsey, that were foregone. That is, investment has been financed from retained profits.

7.3 Capital Expenditure

The OUR proposes that its review of GEL's capital expenditure programme will be different from that conducted by the company or its Board. Whilst this might potentially be the case, the reasons why it might be different, as explained in this section of the OUR's document, do not support this assertion. The OUR describes its approach as "assessing benefits to the customer" and "an assessment from the customers' perspective". GEL believes that these are very much taken into account by the company and its Board and the OUR has no evidence to the contrary.

Nevertheless, GEL is prepared to explain and defend the capital investment proposals in its plan and to explain the customer benefits and full justification. GEL notes that regulators usually recognise that it is the company which is in a better position to judge most investment decisions, rather than the regulator. Regulators therefore tend to provide the correct incentive framework for investment decisions, rather than to examine specific projects from what is inevitably a more remote perspective than is available to the company, for which these investments relate to its core activity.

In essence, the OUR has approved the entire capital programme for the company for the price control period, with the exception of Automated Meter Reading. Some historical costs for Marine Current Turbines are also proposed to be disallowed. GEL welcomes the acceptance of the bulk of its investment schedule and responds in detail on these two exception items in Section 8 of the response.

7.4 Operating Costs

Total company staff numbers have been managed downwards from 277 to 235 over the period 2000 to 2005. During the year ended 31 March 2005, approximately 200 staff worked within GEL's core business. This represents a major achievement to ensure that cost levels are efficient. The headcount of company employees continues to reduce.

GEL has also taken the opportunity to seek services from outside the company, a process often referred to as "outsourcing". GEL's basic policy is to consider outsourcing where it is both practical and will create genuine economic and operational benefit. In many areas of the business practicability is limited by the need to retain direct staff to deal with fault and emergency works. It is further limited by the general absence of a wider utility base on the island to allow a contractor to create economies of scale.

The OUR's suggestions for future operating cost levels do not take account of all of the information available to the OUR. As a result they are too harsh and are unattainable. For example, within the heading of Finance and Administration and IT costs, GEL's costs have increased well below general wage inflation despite additional functionality being necessary as a result of commercialisation. As a further example, in the only other specifically identified area, the OUR has failed to take into account the very significant levels of manpower reduction already achieved since the year 2000.

GEL's cost forecasts assume efficiencies will continue to be used to off-set trends which are likely to increase company costs:

- the rising cost of road works owing to the Environment Department's insistence on short road closures which forces GEL to work more overtime through the weekend and bank holidays. This puts pressure on both capital and revenue work;
- the rising cost of Health and Safety in particular the project to bring safety systems up to modern best practice. It may be incidental, but last year our accident figures were substantially lower than previously was the case;
- the greatly increased costs for more Health and Safety training and certification. There are now many more operational actions where operators have to be trained and certificated;
- the rising cost of insurance;
- the cost of property Conveyancing;
- increased surveys of the cable link to check condition of cable in Guernsey, Jersey and French waters;
- new laws and regulations, the pace of which is accelerating;
- increases in indirect taxes in Guernsey, on such things as rates on property, duties etc; and
- the restructure of the island's tax situation from 2008.

The OUR expresses doubt as to whether the company's plans reflect the operating costs of an efficient operator. The three areas under consideration are largely covered in three confidential sections of the Draft Decision document. These amount to some 4&1/2 pages in total and have been reviewed by GEL.

GEL has responded to the OUR in these areas in the form of two confidential letters. In GEL's view, the OUR has not been able to justify any of the costs that it has suggested should be removed from the business plan and GEL cannot accept the implications of running the business without the proper inclusion of those costs.

GEL notes that the OUR identifies that where it can express concerns that GEL is not incurring the costs of an efficient operator, it should consider disallowing costs. In principle GEL agrees that this should be the case but the OUR's proposals are not, in GEL's view sound in this area.

This is a particularly serious matter since not only does such regulatory disallowance of efficient operating costs have an impact on the level of the price control, but it also undermines the "Save to Spend" policy. If regulatory operating cost targets are not achievable, then the company's finances will be adversely affected, the required cash reserves will be depleted, and these will not be at the level assumed by the OUR's model.

7.5 Cost of Capital

In submitting price control data to the OUR in July 2005, GEL had no information on the level of risk upon the company that the OUR would propose as a result of the form of price control to be adopted. GEL therefore had to make an assumption and chose to assume a low risk price control environment. GEL took the OUR's then risk free approximate figure of 5% and voluntarily proposed to reduce price levels still lower, in the interests of customers and the island community as a whole. This exceptional behaviour resulted in prices at a level consistent with just a 1% return. This is far lower than can be justified without the company's voluntary approach to price rise mitigation and it is only a tenable situation in a low risk regulatory environment.

The second paragraph of this section of the OUR's Consultation misrepresents GEL by saying that the company submitted to the OUR a preferred cost of capital value of 1%. GEL did not. GEL explained its rationale for choosing 1% return on assets in its tariff data submission to the OUR. This was not WACC-based, but was based upon customer protection.

GEL submitted its proposals of tariff levels based upon an assumption that prices should voluntarily be constrained to a 1% return on its assets. This was in order to protect Guernsey customers, as a short term arrangement to limit the increase in prices as a result of the substantial increase in world oil and electricity prices which is to be reflected in the new price for imported electricity from France and on-island generation using oil.

Far from “insufficient consideration” having been given to this matter as suggested by the OUR, GEL and its shareholder has already adopted an approach to pricing suggestions that places the customer foremost in the company’s considerations.

GEL has already, therefore, proposed to adopt lower prices than could easily be justified and which would be consistent with a fair regulatory return on assets. Quite apart from failing to understand the significance of this approach by GEL the DG is inconsistent in his reasoning that he must allow a higher value in order to ensure that GEL is sustainable. Although the DG suggests a higher figure of 4.8%, the OUR methodology applies that value to an assumed existing asset base value of zero (see Section 7.1) – giving an effective return on existing assets of zero. Since the existing assets represent the vast majority of GEL’s assets during the period of the price control, the OUR’s earlier proposed decisions in Section 7 of their paper has the effect of totally undermining the sustainability of the company, by placing it in a position of making losses over decades.

The OUR argues for a cost of capital of 4.8% - based on a rate for a risk free investment. GEL is far from a risk free enterprise, particularly as a result of regulatory uncertainty and the substantial uncertainty over the timing and level of allowed prices under regulation relative to the highly uncertain costs of electricity imports and world oil price levels and volatility. Given the objectives of Commercialisation on Guernsey, it needs to be appreciated that values for a return that is truly commercial would be well in excess of the 4.8% (risk free) rate suggested by the OUR.

8. Capital Expenditure over the Price Control Period

GEL notes that the OUR sets out its role in reviewing capital investments and expresses the view that the OUR's role "is not to judge the merits of any particular project or investment". GEL agrees with this and would prefer an incentive rather than an investigative form of regulation and so GEL is surprised that the OUR has chosen specifically to remove GEL's AMR project from the capital investment programme that was proposed.

GEL's submission is based upon one view of planned capital expenditure requirements. There remains a risk that unplanned expenditure requirements arise and these would need to be funded.

8.1 Cash Reserves

In its proposals, the OUR allocates all cash reserves to the core business and proposes that non-core activities are isolated from that cash. GEL can accept this in a forward looking manner but when applied retrospectively by the OUR this involves risk. The OUR's modelling amendments to GEL's opening cash reserve balance are to a large extent hypothetical, since any cash which is retrospectively assumed to have been dealt with as non-core does not really exist for the company going forward. There is risk involved in taking it into account when modelling the business for future price control purposes.

The OUR claims that it has to make sure that GEL is sustainable in the long term, that future States' requirements for generation policy can be met and that by 2017 GEL will have cash reserves of £10m to build for future generation requirements. GEL estimates that the OUR's proposals will result in GEL making losses for decades and that cash levels will be well below those estimated by the OUR, and will be overdrawn by approximately £5m at 31 March 2017.

8.2 Automated Meter Reading (AMR)

The OUR disallows the AMR programme but allows some costs to cover new meters. The treatment of historical costs is less clear than the treatment of future costs. The impact of the AMR programme being cancelled is not taken properly into account by the OUR since the increased costs of such a cancellation were not included in GEL's tariff data submission. Whilst the OUR proposes to allow the capital costs of new meters in its proposals, it does not allow the additional necessary capital investment that would be required if GEL were to return to a future programme which relied upon the old technology. The major example of this is the replacement of the cyclocontrol load switching system at over £1m.

If GEL has already spent £1.2million on AMR and only 50% is allowable in the regulatory price control calculations, then the OUR is effectively reducing a future capex figure as the funds have already been spent and again the cash balance proposed by the OUR is purely hypothetical.

The cost/benefit equation in GEL's Board Paper on AMR shows a saving of £300k for full AMR adoption and GEL is able to supply further explanation to the OUR as required. This saving is to be achieved even without taking account of many of the benefits to be provided by AMR. Many of the benefits are essentially "unquantifiable" since they cannot easily be

given a monetary value by GEL or any other party. Nevertheless, GEL's investment case was not dependent upon these benefits and such benefits are additional reasons why the programme should be allowed to proceed to completion. Such benefits include those both to the customer (eg convenience of accurate bills) and internally to GEL (eg load profile data). These would lost entirely if the programme were to be halted.

The ten year investment Cost/Benefit summary for AMR is as follows:

A: Quantifiable Benefits Assessment

A1: Reverting back to Traditional Metering / Billing Operations Costs

Manual Meter Reading Staff x 6	1,511,450
Meter Reading Data Entry Staff x 2	442,376
Credit Controller Staff x 2	712,716
Engineering Time for estimated Bill reconciliations	98,306
Vehicle Costs for Meter Readers and Engineers	147,813
Meter costs in recertification/ renewal programme	117,112
Replacement of Cyclocontrol Load Switching System	1,018,466
Total Cost	£4,048,239

A2: AMR Technology Metering/Billing Operations Costs

AMR Meters, Controllers (inc. modem devices)	2,151,953
Installation cost of new AMR equipment infrastructure	443,863
Engineering costs of system integration	137,810
System Telecommunications Costs	110,585
Meter Asset Inspector Cost	270,341
Vehicle Costs for Asset Inspector	14,781
Credit Controller Staff x 1	356,358
System Maintenance	276,295
Total Cost	£3,761,986
Cost Savings	**£286,253**

B: Unquantifiable Benefits Assessment

B1: Customer Benefits

- The end of estimated billing for all customers. Accurate billing of energy consumed for all customers.
- The future introduction of bi-monthly or monthly direct debit options on accurate energy consumption.
- Greater security of supply through global load shedding technology to shed heating load only, in planned load reduction scenarios.
- No entry required to customers private property to read meters accurately.
- Final reading and disconnect process for billing purposes is carried out remotely using the AMR system at a pre-arranged time. No physical appointments to keep or need to be kept waiting due to operational work load and traffic issues.

- Reconnection carried out by the customer by the “push of a button” by the customer.
- When a suspect voltage depression is evident at customer's premises, instead of an engineer being required to attend in the first instance, a system interrogation can be carried out through the AMR system to check if the customers supply voltage falls within limits.
- Customers will in future be able to see their load profile information on web based applications. This enables customers to be in charge of their load patterns, thereby raising customer awareness of consumption and contributing to energy efficiency.

B: Company Benefits

- The load control switching system is over 25 years old and is due to be replaced. This one way signalling technology will be replaced by a two way signalling control system through the implementation of AMR technology.
- Stock levels of large numbers of differing types of signal receiver and meter type will be replaced by the stock of one type of meter that is suitable for over 60 domestic tariff applications, simplifying stock control and helping to control the associated costs.
- Reconnections, disconnections and final readings will be carried out automatically saving operational costs and scope for error.
- All metering assets will be displayed on the GIS system showing status and communications assessment. Phase connection detail will be passed automatically to the central system.
- New innovative tariff structures can be automatically downloaded to customer’s meters and time band changes managed far more efficiently without changing customers metering equipment.
- Enhanced system security will be provided on the LV distribution system by identifying open circuit network faults when they occur. This will assist in preventing cascade LV open circuit faults in meshed areas reducing Customer Minutes Lost (CML).
- The AMR meter actually records power loss duration and reports details back to central monitoring of CML. This will provide accurate power loss statistics and report fraudulent disconnection of supply for cut-out fuse replacement, enhancing security.
- The AMR meter has reverse detection built in with non-reversible display if supply is re-connected by a fraudulent user.
- Network loading studies through load profile data will enable operation of network assets closer to maximum capabilities and will enable heavily loaded areas to be reinforced before emergency action is required.
- Energy profile data can be obtained for all customers helping GEL to understand what tariffs benefit which specific groups of customers. This can be used to help customers be more energy efficient. It also permits greater understanding of purchase requirements and load curve management.
- The AMR meter design is an OFGEM approved product.

In the light of these benefits we hope that the OUR will see fit to allow GEL to continue to fund the AMR programme rather than revert to the more costly and less effective traditional metering approach.
The OUR states that:

"The uptake of AMR technology by larger commercialised electricity providers is low, which is at odds with the full adoption of the technology by a provider operating at the scale of GEL"

In response GEL notes that:

- The UK metering market is extensively fragmented since privatisation with many different stakeholders responsible for a customer's meter.
- In Energy Monthly (September 2005): "Energywatch warned that the current structure of the UK energy supply market meant the installation of smart metering was "highly unlikely".
- ENEL (Italy) A large commercialised/privatised utility has deployed 30 Million AMR meters into customers homes in the last 5 years, a number of major Scandinavian utilities are also deploying AMR.

GEL is at an advantage as a result of its small scale when investing in AMR compared to the larger companies referred to by the OUR. In addition those larger companies are forced to operate in a highly fragmented market due to the nature of the competitive market in supply that has been adopted in the UK. The Guernsey situation allows GEL to integrate and deliver an AMR system effectively as a result of the single company situation with clear communication, accountability and management focus. GEL has recently been awarded the accolade of "Best AMR system in Europe" and roll out of the programme is going well and is properly managed.

To quote Energywatch in the UK:

"Evidence shows that smart meters have the potential to deliver significant benefits to priority customer groups, improve energy efficiency and promote the effectiveness of the energy market". "Energywatch calls upon the Government, Ofgem and the industry to deliver a pathway that might lead to the widespread adoption of smarter meters and smarter energy customers".

Energywatch goes on to list three barriers to the adoption of such technology in the UK none of which applies to the Guernsey situation. The only barrier within the Guernsey context so far is the OUR's position as described in the Draft Decision document.

8.3 Future Generation

GEL has already commented upon the Mott MacDonald study and the OUR's assumptions regarding future policy matters in Sections 3 & 5.1 of this response. These issues are dealt with again in this section of the OUR's document but GEL's comments are not repeated also.

The source of the OUR's £59.9 million figure is not known to GEL and clarification can hopefully be provided.

8.4 Reducing Greenhouse Gas Emissions

The OUR sets out in this section a lengthy view of background information on pollutant gas emission issues - upon which, GEL does not propose to comment in detail. There are two key points that are made.

The first key issue is that the DG proposes that the OUR has a role to make funds available via GEL to reduce greenhouse gas emissions. GEL does not necessarily agree with this view of the OUR's role and it appears to rest upon one of the policy assumptions dealt with in Section 5.1. These will be determined in due course but overall GEL would suggest that it is safer to assume that no such explicit guidance is confirmed by the date at which the OUR would need to finalise its proposals to achieve implementation by 1 January 2006.

The OUR proposes that GEL charges customers circa £3.60 per customer per year for energy efficiency costs. The £3.60 appears to come from a UK source, which is out of date now that the UK market has been based upon competition for several years. The suggested £3.60 per customer comes out of GEL's revenue and customer prices and hence is essentially an additional cost to customers upon which they are not able to make a choice.

GEL's view is that this scheme will have high administrative costs per customer due to the much smaller size of Guernsey compared to the UK, where it was first implemented. There will also be regulatory costs in reviewing what is essentially a new obligation under the electricity licence. There would be some definitional issues to clarify within the scheme. If the OUR is given the assumed remit to proceed and if it continues along this route then GEL will implement the scheme but is not convinced that the costs and administration issues make it truly worthwhile and an appropriate use of customers' money.

The second key issue in the section is the OUR's proposal not to allow GEL's existing and potential future investments in the field of Marine Current Turbines (MCT).

It is not comparable to relate the funds suggested by the OUR for emission reductions to the apparent GEL figures on MCT investment. The OUR is mistaken in criticising this area of examination by GEL, which the OUR assumes is GEL's approach to reduce greenhouse gas emissions. Rather, GEL is abiding by policy requirements on renewable energy sources (see below) rather than attempting to promote energy efficiency.

GEL's views on MCT expenditure is that some small level of investment is necessary for GEL to comply with States' policy in this area. So far the company has invested £250,000 in this field to receive the research benefits over a number of years. This has primarily been to comply with States' requirements by having first hand data and knowledge of a technology which is widely regarded as potentially particularly well-suited to Guernsey's circumstances. It is essentially equivalent to the cost of commissioning expert advice but allows that knowledge to be built up on the island by GEL employees through access to privileged information. The specific technology involved is highly credible and well supported by major European energy companies. GEL's decision to follow developments in this particular form of renewable energy follows on from its evaluation of other possible forms, all of which appear less suitable for various reasons. GEL's small investment is proportional to its small size but Guernsey gains very significant benefits given the very special conditions that exist in the island's waters.

The following is an extract from the States Strategic and Corporate plan contained in Billet D'Etat XV, 12th July 2000, under section 3.3 Energy Policies:

"The practicability of using renewable energy sources for producing electricity should continue to be monitored by the States Electricity Board and other States Departments. Individuals and businesses should be encouraged to use renewable energy resources

wherever practicable. Progress on the use of renewable energy should be reported upon annually in the Policy Planning, Economic and Financial Report"

In line with the OUR's view stated in Section 8 that it would not propose to judge the merits of any particular project or investment, the OUR should allow existing historical costs for MCT within the price control since they are related to complying with States' requirements. Future costs should not be ruled out since to do so might prevent the company from complying in future. No plans for future MCT expenditure were included in GEL's tariff data submission to the OUR.

GEL's modest investment in this area is consistent with adherence to policy guidance in this area and should be permitted under regulation.

9. Operating Expenditure over the Price Control Period

9.1 Imported Electricity [This section is confidential]

GEL has replied separately to the OUR on this section in the form of a Confidential letter.

GEL welcomes the OUR's agreement in principle that the full costs of increased import costs should be reflected in full in prices. However, assumptions elsewhere in the OUR's analysis largely negate the effect upon the company of such a decision.

The increase in costs to the company in this category which is due on 1 December 2005 is very large – both for the new wholesale electricity contract price and the related uncertainty in future market price levels each year. The present very high prices for fuel oil and its future price volatility are also highly relevant. In this area the background to the price negotiations is significant. A market price has been delivered and GEL has obtained an independent third party review of this price.

Given that the OUR has accepted this position in principle, the matter should now be settled and should not be subjected to further unnecessary regulation over the next three years.

9.2 Pensions

GEL recognises that the OUR has taken a supportive position towards the funding of pensions for GEL employees who are members of the States of Guernsey Pension Scheme. The retention of the membership of the States Pension Scheme was a condition of commercialisation. As has been well publicised, the stock market falls in recent years have highlighted this important issue. The concerns have been extended further by the accounting standard on pension accounting (known as FRS17) which recognises liabilities on a different basis to the traditional actuarial basis. BWCI are actuaries for the States of Guernsey and they have carried out their triennial valuation of the Scheme and its associated funding. GEL has its own actuarial account within the scheme and BWCI have assisted us in meeting the pension reporting requirements under FRS17.

The annual update for 31 March 2005 reporting recorded a deficit of £4.9 million. The GEL Board has resolved to manage this deficit out by paying lump sum contributions based on annual updates of the deficit and the estimated remaining service lives of employees. BWCI

confirmed that their actuarial work indicates an average remaining service lives of 12 years. GEL made a contribution to the deficit in the year ended 31 March 2005 and this will continue in the year ended 31 March 2006 at a rate that takes into consideration the past service deficit and the years over which it should be spread. GEL will adopt the 12 years rather than the 15 OUR proposed. This is therefore the value that should be used in modelling of price control cost allowance levels.

BWCI have also advised that the employer's contribution rate for future service cost should increase substantially. We are advised by the Treasury and Resources Department that this future service funding rate will be put to the States of Guernsey for approval at the November or December 2005 States meeting. This process is mandatory for future service contributions.

For the year ended 31 March 2006 the GEL pension contribution will be £100k higher than the OUR have allowed in their proposals.

9.3 Generation [This section is confidential]

GEL has replied separately to the OUR on this section in the form of a Confidential letter.

9.4 Overheads [This section is confidential]

GEL has replied separately to the OUR on this section in the form of a Confidential letter.

10. Cash Reserves for Capital Expenditure from 2009/10 to 2016/17

The OUR price control model looks forward to 2026/27 and has been populated for all of those years. The introduction to Section 10 of the Draft Decision indicates that the OUR has not considered the long term covering the years between 2017/18 and 2026/27, but have restricted their review to the proposed price control period and the years 2009/10 to 2016/17. GEL has noted that there was an understatement of £8 million in opex in year 2017/18 which has the effect of overstating cash at 31 March 2018 and every year thereafter in the model.

It should be noted that the price control has been totally driven by views on cash balances. There are alternative recognised regulatory methods for price control and these are covered elsewhere in this response document.

The cash approach adopted by the OUR requires the accounting for new capital expenditure whereas the profits approach requires the accounting for depreciation. The weakness of the new capex approach is that for GEL it is not at a smooth level in a period of years but has a recurring regular capex extended by major plant additions at irregular time periods. Depreciation has a smoothing effect and avoids the volatility of GEL's capex profile. This can help smooth prices for customers. The impact of these differences is highlighted below.

It has been good practice for at least 100 years, as confirmed by the professional institutes of chartered accountants and other business leaders, that to make an important business decision, the minimum financial information needed is a profit and loss account, a balance sheet and a cash flow statement. This draft decision paper focuses totally on cash. GEL

firmly believes that this is a fundamental weakness. Having highlighted the weakness in such an approach, we return to comment on the draft cash proposals set out in Section 10.1 of the OUR's document. GEL also goes on to highlight within Section 10.2 of this response the impact on profits.

There is actually no Section 10.2 in the OUR's document since it does not report on the profitability impacts of its proposals. This is a serious omission.

10.1 Save to Spend Allowance

Subsequent to the issue of the Draft Decision paper, the OUR provided a copy of its price control model which is designed using Microsoft Excel. GEL's examination of the price control elements of the OUR model raises a number of questions and observations that have been reported separately to the OUR. These include disputed data by GEL in the following areas:

- Generation opex efficiencies;
- Finance, Administration and IT opex efficiencies;
- Pension contributions (see our reply to section 9.2 of OUR's Draft Decision paper);
- Material differences on import costs;
- Material differences on fuel oil costs;
- Material differences on opex for cable link;
- Incorrect inclusion of meter expenditure that is not AMR ; and
- All generation capex for period 1 December 2005 to 31 March 2006 has been omitted, and therefore effectively disallowed.

Figure 4 and the text of the OUR's Section 10 highlights the cash balance of £10 million at 2016/17. Is this a performance target being set by the OUR (performance regulation)? Is this the main assumption above all else that is determining the calculation back to the proposed tariff increase or is this merely a result of the collection of price control data and assumptions that the OUR has made, including the decision of a 0.9 efficiency X factor? Why £10 million?

These questions are raised by GEL now that it has been allowed to see the OUR's model. GEL hopes that the OUR will be able to discuss the position shortly. In the Draft Decision paper there is no explanation as to how the exact figure of 0.9% for the efficiency X factor has been calculated or why the cash balance figure is acceptable. GEL believes that clarification and explanation of these issues is a crucial aspect of the consultation and transparency of the OUR's proposals.

The figure of £10m needs to withstand contingencies, but none has been allowed for in OUR's Draft Decision. For example, if GEL had an engine failure, then that one item alone would cost more than £10 million. If GEL had to go into debt to finance such a contingency then the OUR must consider the real implications. It is a fundamental error that debt will bring advantages to GEL customers. The claim by the OUR that the "Save to Spend" policy amounts to a "premium" on prices is wrong. The "Save to Spend" policy generates interest income that offsets costs and so allows tariffs not to change, or restricts increases. To remove cash and create debt means losing the income offset and also increasing the costs of GEL, i.e. a double impact. This extra cost is either passed onto the customer in higher tariffs or the company achieves lower profits or suffers losses.

To date the customer has been protected by the interest earned from the "Save to Spend " policy. This is highlighted by the OUR statement "cash reserves contributed the majority (60%) of the company's profit in 2004/05". Therefore the profit generated from tariffs and non-core income is the minority figure (40% of operating profit of £1.4 million on turnover of £28 million). This is only 2.0% of turnover, not a commercial return.

The OUR's comprehensive criticism of the "Save to Spend" policy is not justified and the £700 per customer over emphasises the issue. If this is not averaged across all small and large customers, but is illustrated in proper proportion to customer size, then the value per domestic customer is £464 and when expressed per islander is just £222.

The GEL policy of "Save to Spend" is very much in line with the overall island policy on not being indebted. Unfortunately at this current time, the Isle of Man is an example of a situation very different from Guernsey's, where debt has been required in order to fund electricity services, and tariffs have increased as a result.

GEL's views on these matters are that the existing policy results in a low risk for customers and protects them from sudden price shocks. It is a discount, not a premium, as a result of the lower net costs from interest savings.

GEL's cash invested with the States Treasury for the total company at 31 March 2004 was £15.5 million. As the company had invested in a non-core property temporarily to clear a major boundary issue, the non-core treasury balance at 31 March 2004 was calculated at an "overdraft" of £1.6 million. Therefore the core treasury balance was deemed to be £17.1 million. Effectively, GEL's core business had provided a loan to its non-core business. GEL does not intend to hold onto this property in the medium term and it will be sold. The OUR has followed through with this philosophy in that all non-core capex is deemed to be financed on a rolling 10 year loan basis. The opening balance for the core business as at 1 April 2005 is an estimate, not an actual figure. This should be updated to the actual figure and the impact considered before the final decision is announced.

The OUR also "corrects" the opening cash balance for items it deems not to be core business. This correction is retrospective and the assumed cash is on a notional rather than on a real basis. The adjustments relate to AMR and to MCT which are discussed in our response to Section 6 of the Draft Decision paper.

In addition, it has to be fully recognised that there are errors in the fundamentals that the OUR is proposing:

- the OUR is not allowing GEL to reflect the full additional cost of imported electricity to its customers as these are assumed to be off-set with the OUR's efficiency proposals, which GEL is disputing as it considers the proposals to be flawed; and
- the OUR is not allowing GEL any return on the company's tangible fixed assets that the States of Guernsey valued at the Commercialisation date of 1 Feb 2002 at £101m. The core business value of this as reported in the regulatory accounts as at 1 April 2002 was £99 million.

In the Draft Decision paper the OUR leaves GEL at risk to change of the price control if funding arrangements change – this adds further to regulatory risk and uncertainty for GEL.

The OUR has also allowed an energy efficiency cost which GEL did not request and which GEL understands is to be matched in expenditure by a new activity required by regulation. GEL's impairment value of £50,000 for MCT has been disallowed, even though it is a very efficient cost of meeting GEL's obligations to the States of Guernsey. This £50,000 is not a cash flow but has the equivalent treatment as depreciation by affecting profits.

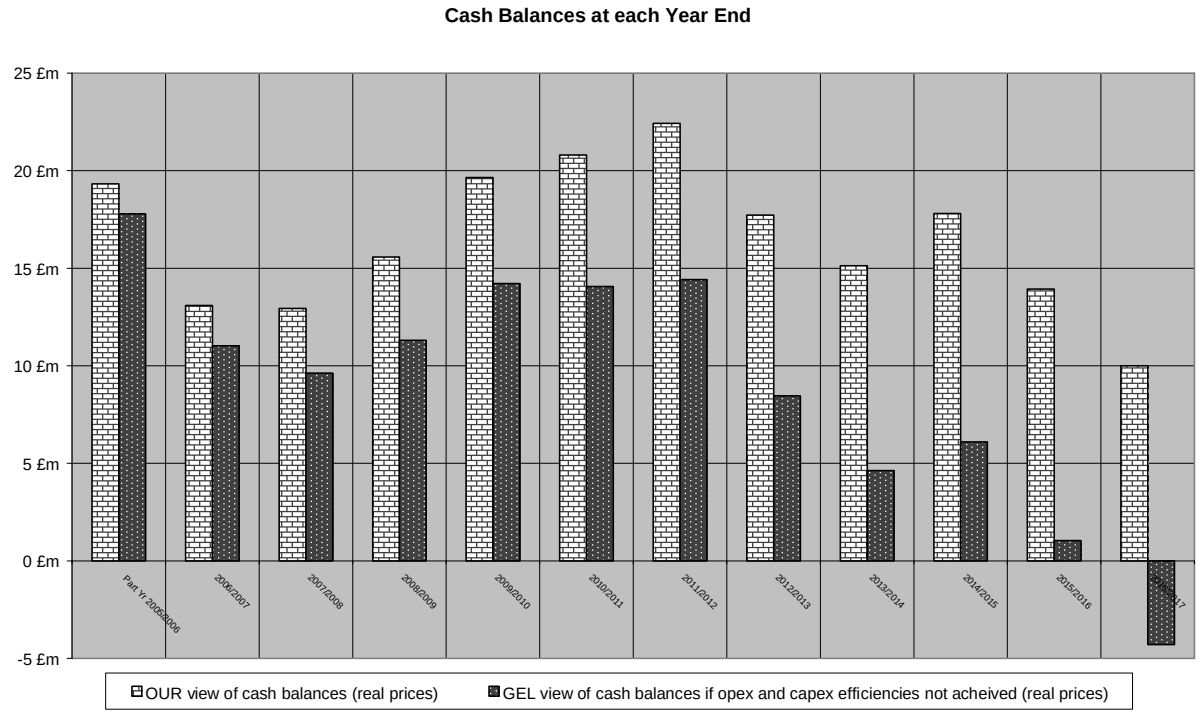
The RPI assumption that the OUR has used is already out of date and will result in GEL receiving a lower level of allowed revenue than the OUR's model predicts.

It is wrong to infer that GEL's non-core business has no benefit to electricity customers. There is a customer expectation that we provide retail sales and contracting as our growth in these areas confirms. This service provision is similar to Guernsey's sister islands and is highly appropriate in the circumstances.

GEL also participates in activities which could be labelled as community services, which its shareholder approves of - such as providing fuel to growers to support the horticulture business in the island and street lighting.

The OUR claims that it has to make sure that GEL is sustainable in the long term, that future States requirements for generation policy can be met and that by 2017 GEL will have cash reserves to meet future generation requirements. The OUR's model shows a cash balance at real prices at 31 March 2017 of £10m, assuming that the efficiencies proposed by the OUR can be achieved. If those efficiencies are not achievable then GEL will have negative cash (that is, a debt) of approximately £4.3m. The following graph set out as Figure 10A illustrates this.

Figure 10A - OUR view of cash balances and GEL view of cash balances if efficiencies not achieved

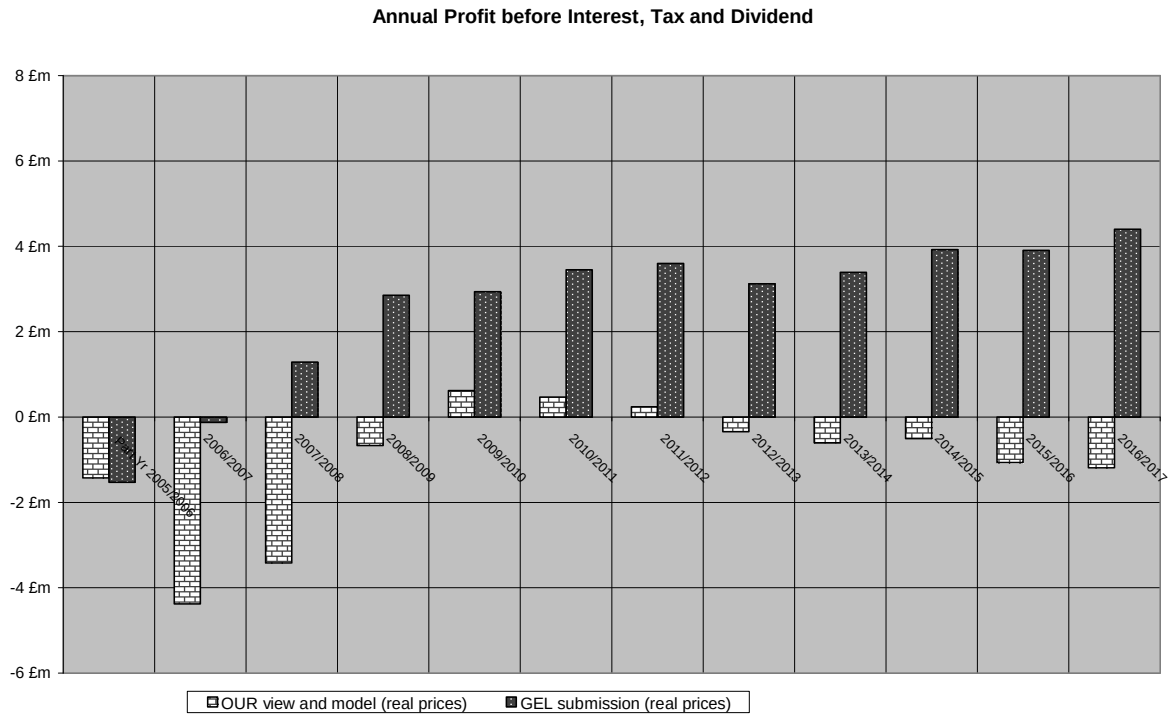


10.2 Profits

The effect of the OUR's proposals is to remove all of the company's accumulated profits generated over the last three years, which stood at £3m at 31 March 2005. Indeed the proposals go further than this by creating negative reserves in the price control period and continuing losses over many years ahead. At the end of 2016/17, the OUR's proposals, as shown in their model, would mean that the company would have accumulated **losses** of approximately **£12.3 million** over the 12 years to 31 March 2017 (an average of £1.0 million per annum) – see Figure 10B.

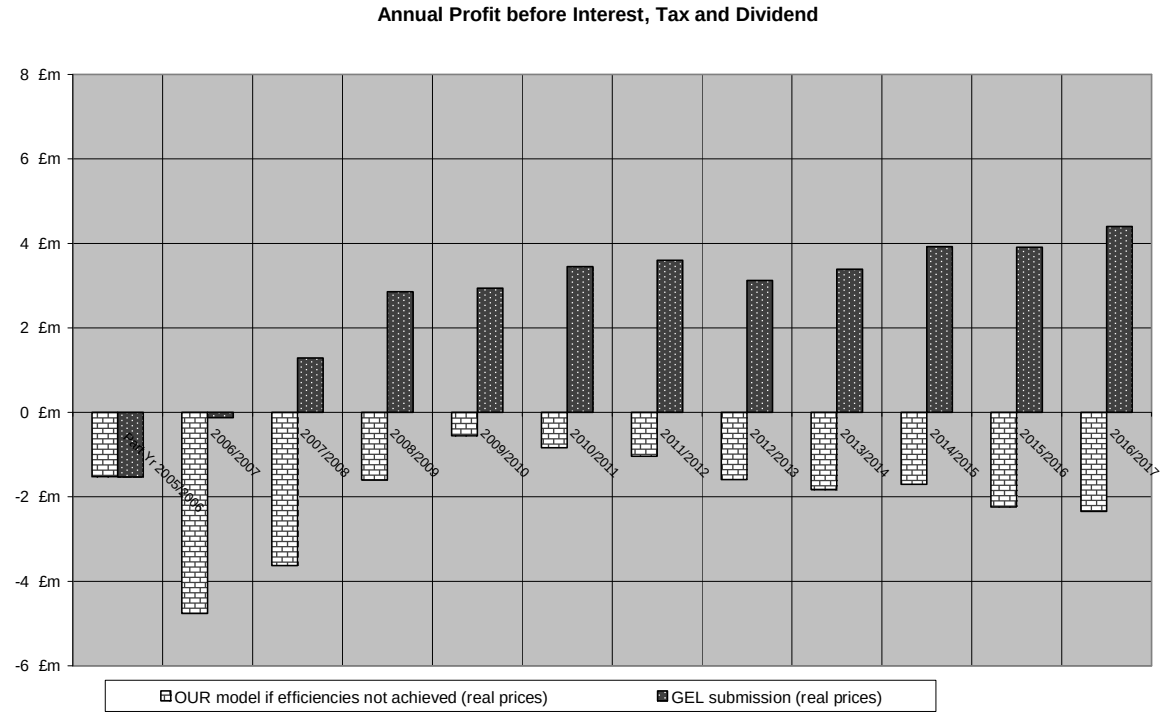
All of these amounts assume that the efficiency savings proposed by OUR are achievable. If they are not achievable – a view that GEL can support – then losses will be even higher - see figure 10C.

Figure 10B – Profit/ (Loss) comparison of GEL application and OUR's view and model



GEL has seen no evidence that the savings proposed by the OUR are well-founded and does not believe that they can be achieved. If the efficiencies cannot be achieved, GEL would suffer **£23.6 million losses** over the 12 years to 2016/17, an average of a £2.0 million loss per annum. See Figure 10C.

Figure 10C - Profit/ (Loss) comparison of GEL application and OUR's view and model if efficiencies not achievable

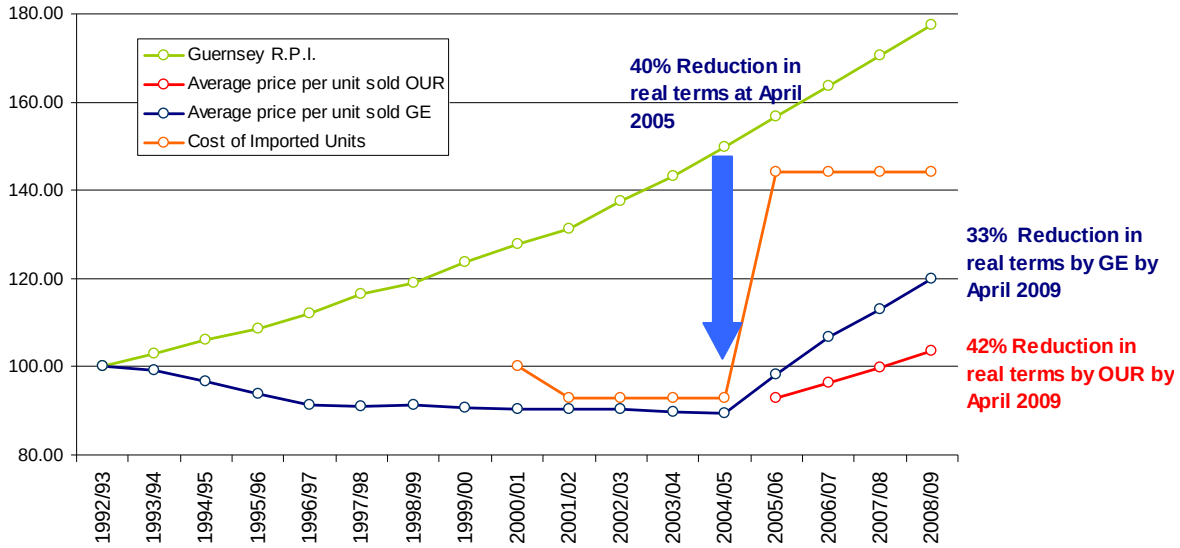


This position would mean that there will never be a dividend paid to GEL's shareholders.

Figure 10D set out below summarises the overall impact of price proposals and their impact going forward compared to the historical position. The average price will continue to be very substantially below the equivalent Guernsey RPI position. This is achieved in spite of the dramatic impact of the change in the import contract price.

It is clear from Figure 10D that the OUR's draft price proposals are far from reflecting the realities of the increasing cost of imported electricity. GEL has already, in its price proposals, protected customers to the maximum extent feasible.

Historical and Forecast Retail Price Index v Electricity Average Price Index



11. Conclusion

The most important regulatory decision in any sector is often the basis upon which the regulated company's finances are to be considered and modelled. A number of options are available to regulators but the OUR has chosen not to apply the method used in the UK for Electricity regulation. As a result, the approach adopted by the OUR does not recognise the depreciation of existing assets in order to provide for their replacement. The OUR has chosen to use a method similar to that used in the UK for the regulation of Railtrack. This method would only be equivalent in the very long term. In the short term it examines the capital requirements as they are predicted to occur at the time of setting the price control. Furthermore, the OUR has not applied its own model properly and therefore the OUR proposes to set the price control incorrectly. If the OUR chooses to pursue its current approach, then the price calculation needs to be adjusted to include a return in respect of the existing assets and dividend payments to the shareholder, with a consequent impact on both the initial price control level and changes in prices over time - and so on the expected revenue path. More suitable to the circumstances of electricity regulation on this island would be to allow standard accounting depreciation and the associated regulatory model used elsewhere.

In addition to the Draft Decision document, GEL has since been provided with a copy of the OUR's model that has been used to calculate the level of the price control proposed by the OUR. Within the time available, work has been done by GEL to assess the OUR's price control approach and financial model, the principles upon which these are based, and the short and long term impacts of the resultant proposals on the company and its customers. As a result, GEL has derived an assessment of each of these issues, which in several important instances differ substantially from those of the OUR.

From a detailed review of the OUR model, GEL has compiled a list of comments on the model. These comments include: errors of principle used in the design of the model; errors of application and analysis within the model; incorrect assumptions in the model; and

assumptions in the model where GEL takes a different view to the OUR on the most appropriate value to be used. These are being submitted to the OUR separately and could be the basis for a useful meeting on the proposals.

The OUR's approach and model will, even if correctly implemented, result in higher customer prices in the long term. Today's customers are effectively being subsidised by tomorrow's customers, in relative terms.

If incorrectly implemented, as at present, the OUR's approach will result in higher customer prices in the future when the existing assets need to be replaced. Work conducted for GEL shows that the implementation in the draft proposals will result in artificially low price projections, due to errors in the application of the model. This is caused by the reduction of the company's cash balance, no allowance for depreciation of the existing assets and no return on the un-depreciated assets.

If dividend payments were to be included in the OUR's model to correct for these effects, or if another standard method was used, then prices would need to be accordingly higher. However, the OUR's approach of calculating an X factor to move from present price levels to achieve a future target cash balance would (even in the more correct formulation in which the NPV of the revenues is set equal to that of the expenditure) still result in a rising price path, with lower prices up to the year 2015 and correspondingly higher prices to the year 2025. A step rise in prices is necessary to achieve efficient prices and to prevent present customers being favoured at the expense of future customers.

11.1 Capex

The OUR proposes that the sum effect of adjustments is to reduce capex by £0.45m.

GEL does not accept this, see Section 8.

11.2 Opex

The OUR proposes that the sum effect of adjustments is to increase opex by £1.34m.

GEL's does not accept this, see Section 9.

11.3 Cost of Capital

The OUR suggests a cost of capital for the company of 4.8%. The OUR goes on to apply that figure to a zero asset base in any case. This effectively either values the company at zero or allows a zero return on existing assets.

GEL's commercial range for business risk is in excess of 4.8%. If the OUR were to allow a reasonable return on assets under regulation, GEL would price below the regulatory cap for the three years of the price control.

11.4 Level of Price Control

11.4.1 Level of X Factor

The OUR proposes a price control of RPI - 0.9%.

GEL believes that this form of control is inappropriate to its business given the uncertainty of electricity purchase and generation costs over the three year period.

The level of the control proposed by the OUR as a regulatory allowance is too low because of errors in the OUR's regulatory methodology and errors in some of the data used as input to the OUR's model.

GEL's best estimate of the minimum necessary levels of price increases remains at the level submitted to the OUR as part of the company's tariff data submission. This involves a relatively higher price rise initially to match, but also to smooth, the profile of new costs in the revised contract for imports from France.

GEL would expect to use historical values of RPI for elements of the price control not related to electricity wholesale costs or fuel oil, in any future price control.

GEL has suggested a mechanism by which the OUR can ensure that the price control is automatically adjusted to take account of currently unknown variations in wholesale electricity costs and fuel oil.

Market volatility of import costs means that regretfully the feature of the island having declining real prices for electricity cannot be sustained any longer. Whereas the company has achieved no tariff increases whatsoever for many years, it now has no option but to increase tariffs to reflect world market conditions affecting the costs of generation. At the same time, service levels are to be protected and the high level of efficiency of the organisation maintained - all in order to ensure that customers continue to receive very high value for money.

12. Price Control Compliance and Next Steps

The third paragraph of this section refers to a new concept of an additional Save to Spend fund statement. This is effectively a cash flow statement which appears in the Statutory and Regulatory accounts already. The company already publishes such information in its report and accounts and additional information is available to the OUR. The OUR already has substantial regulatory powers to protect customers and the direct communication to customers is unnecessary unless the OUR believes that its proposals to the company are not correct or adequate in some way.

The OUR's proposal for an annual insert to customers' bills on the "Save to Spend" fund will cause unnecessary confusion and cost. Any attempt to debate the company's future investment policy with customers many years ahead of time, through information accompanying bills, will be both highly confusing to customers and will be subject to frequent change, reflecting the volatile nature of energy markets. Such frequent change will prove difficult to explain. In addition, Data Protection matters might mean that such an insert cannot be sent to all customers anyway. GEL suggests that customers need not be given

information on the "Save to Spend" policy since such information is available to the OUR and the OUR sets the price control on customers' behalf accordingly.

The fourth paragraph mentions the formal compliance report to DG. It is reasonable for GEL to be given an understanding of what this is and what it means in terms of its effect upon the price control Final Decision and the workload involved. GEL believes that the OUR should publish all compliance information at the same time as the Final decision on the price control.

The OUR proposes to publish compliance guidelines prior to the control becoming effective. However, since the proposals in the Draft Decision were available only at a high level, the nature of what is meant by compliance could have a significant impact on the nature and effect of the proposals. It is therefore necessary for detailed compliance arrangements to be brought forward by the OUR at the same time as the Final Decision and as an integral part of the Final Decision.

The OUR's price control timetable assumes that there will be no delay between the States meeting on 30 November to discuss policy matters and the issuing on 1 December of the Final decision on the price control by the OUR (which is required for tariff changes to come into effect on the 1 January). GEL believes that it is highly unlikely that the OUR will achieve this. The OUR has already committed that GEL should not be financially disadvantaged by further delays to the price control.

13. Annex A

The very small summary table in this appendix - containing only a very small part of the relevant data set - is an inadequate amount of information to explain the calculations underlying the proposals.

GEL has, after the Consultation commenced, received a copy of the OUR's model that has been used to derive the level of prices suggested in the proposals. This model has been the subject of a review by GEL. GEL has as a result compiled a list of comments on the model. These comments include: errors of principle used in the design of the model; errors of application and analysis within the model; incorrect data assumptions in the model; and data assumptions in the model where GEL takes a different view to the OUR on the most appropriate value to be used. GEL has replied separately to the OUR on this section in the form of a Confidential letter and this could be the basis for a useful initial meeting on the proposals.

Appendix 1

Statement of professional background and Paper by Mr Geoffrey Horton

Geoffrey Horton is highly experienced in price control issues and is an economist, consultant and former industry regulator who has been at the forefront of the development of UK price control methods, having been, inter alia:

- The Northern Ireland electricity regulator (1992-95);
- Director of Regulation at the British Office of Electricity Regulation (1990-95) where his responsibilities included running the price control reviews and enforcement (for over 40 individual controls) and where he helped develop the standard UK method;
- Senior Economic Adviser at the UK Department of Energy (1988-90) with responsibilities including the economic advice on electricity reform and privatisation;
- Director of Consumer Affairs running the consumer protection half of the Office of Fair Trading (1995-98);
- Consultant in regulatory economics to regulatory bodies and regulated companies (1998 onwards) including advice on price control in several industries and many different jurisdictions.

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Review of regulatory finance issues

A report to Guernsey Electricity Ltd

26 October 2005

Review of regulatory finance issues

Report to Guernsey Electricity Ltd by Geoff Horton

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1 Introduction and summary

The Guernsey Office of Utility Regulation (OUR) has published a draft decision in its review of the price control of Guernsey Electricity Limited (GEL). The decision is based on a method that targets GEL's cash reserves. GEL has asked Horton 4 Consulting to assess this method, compare it with standard regulatory practice, and recommend any appropriate changes to the method.

In this paper it is argued that the principles to be applied in assessing the price control are primarily those of economic efficiency. The overall objective is to produce the greatest net benefit - benefit to consumers less overall costs - and this is achieved through the promotion of economic efficiency.

To satisfy productive and dynamic efficiency it is necessary that an investor should have the expectation of recovering the cost of capital on efficient investment. This requires a method of valuation that ensures an expectation of "financial capital maintenance (FCM)". However, when industries have been privatised and a new regime initiated, the regulatory value adopted for the assets already in existence at that time has often differed from both the historic and current cost values of those assets.

From a consumer point of view, and to satisfy allocative efficiency, the need is to set a charge that reflects the marginal cost of provision. This is so that the customer will purchase whenever the benefit of consumption exceeds the cost (and so price) and will refrain from purchasing when the benefit is below the cost. Allocative efficiency is promoted by pricing at marginal cost, which may be below the average cost calculated using current cost asset values if there are economies of scale, but is unlikely to be approximated if existing assets are ignored.

This paper considers three standard methods of utility price control – the building block method used in UK energy and other regulation, infrastructure accounting as used in water and (previously) rail and a cash flow approach – and demonstrates that they all achieve the same result.

The method used by OUR in its draft decision is a cash flow approach but one that does not consider the cost of the use of existing assets. The effect is that no allowance is made for depreciation of the existing assets or for a return on the undepreciated part. This fails to produce FCM but, given GEL's position as a government-owned company, it is not certain that it does so in a way that promotes inefficiency. However, the resulting prices are likely to fail to cover the resource cost and so to result in allocative efficiency.

The argument put forward to support OUR's method is that the entire asset base and the present cash reserve have been financed by payments by customers in the past, with no contribution from government or taxpayer as the owner of the company, and so to make any further charge in respect of these assets would be to charge twice.

The argument from fairness, that customers should not pay twice, is less powerful than it at first appears since the payment is a transfer between customers and GEL's owners, the citizens of Guernsey, who are to a large extent the same people. GEL could distribute any cash surplus it acquires to its owners, thereby compensating them for the higher charges, while at the same time ensuring that electricity prices reflect costs and so that economically efficient choices are made by customers – a situation that is unlikely to occur if a negative value is put on existing assets.

Moreover, OUR does not appear to be correct in its assumption that customers have financed the existing assets in advance and should therefore be deemed to own them already. When a private sector company finances investment from its cash balances it is said to finance it from retained earnings. It is not said to be financed by customers. According to information provided to me by GEL, this is also the position of that company. GEL is the successor to the States Electricity Board, which was formed by the purchase of an existing power company. The purchase was financed by a loan from the States and a further loan was taken out in 1950 to finance capital expenditure. Customers were not charged for capital expenditure in advance. It was originally financed by borrowing with a state guarantee covering the equity risk. Although interest payments were made on the original loan there have been no dividend payments. Those earnings were retained by GEL and used to finance subsequent investment. As far as I know, there is no evidence that customers have paid a price that exceeds the cost of their supply in order to finance future investment.

There is a further problem that arises if no revenue is granted in respect of existing assets. They have a positive value (of about £100 million) in the company's balance sheet and a depreciation charge is levied in respect of them in the profit and loss account. In many circumstances this will result in the company recording a loss. There is a strong argument that, if the proposed price control is introduced, GEL should revalue the balance sheet and set the book value of these assets to zero. If this were to be done, GEL would sustain a large initial loss.

I therefore recommend that, if a cash flow approach is used, the price calculation is adjusted to include a dividend payment in respect of the existing assets, with a consequent impact on both P_0 and X and so on the expected revenue path. This would accord with standard UK practice and would be more likely to achieve allocative efficiency and to avoid a possibly unsustainable position for GEL's accounts and financial indicators.

2 Regulatory objectives

GEL is subject to a price control because it has considerable market power. In setting the price control OUR is seeking to achieve the objectives set out in section 2 of the Regulation of Utilities (Bailiwick of Guernsey) Law 2001. The six duties can be summarised as to:

- Protect customers as regards price, quality, continuity of service and choice;
- Ensure that reasonable demands for the service are met;
- Promote the economic and social development and well-being of Guernsey;
- Promote effective competition;
- Improve service quality and coverage; and
- Lessen the impact on the environment.

The duties are similar to those of other utility regulators in the United Kingdom, including those to which I was subject when electricity regulator in Northern Ireland, except that there is no duty to ensure that licence holders can finance the activities for which they are licensed.

However, most UK utility regulators have seen the objectives as complementary, rather than conflicting, and considered that their reordering and revision in the 2000 Utilities Act had little, if any, effect. The main objective is the promotion of customers' long term interests and this entails many of the other objectives, including that concerning licensees' ability to obtain finance. Customers' interests include that their reasonable and economical demands for the service are met and this cannot be done if efficient licence holders are unable to finance their activities. Competitive markets, if they are effective, are the best means of furthering customer' interests. Environmental costs have to be weighed against the benefits to consumers, as do other costs of providing the service.

The overall objective is to produce the greatest net benefit - benefit to consumers less overall costs - and this is achieved through the promotion of economic efficiency. Regulators' duties often include the promotion of efficiency and economy in the industry, rather as OUR's duties include the general promotion of economic well-being in Guernsey through the activities of the regulated utility. Indeed, I would maintain that the principles to be applied are primarily those of economic efficiency.

3 Economic efficiency

Economic efficiency is often considered in three categories:

- Efficiency in production - so that goods and services are produced at least cost;
- Efficiency in allocation - so that the goods and services that are produced are those whose consumption will maximise consumer welfare; and
- Dynamic efficiency.

The first requires, inter alia, that producers are faced with incentives that reflect the true costs of the resources they use so that they can minimise the overall cost, the second that consumers face prices that reflect the full cost of providing the good or service so that they can make efficient choices and the third that investors can recover the costs of efficient investment and innovation.

These considerations also underlie the Bonbright principles[2], which are widely cited in United States regulation. These involve three primary criteria:

- Capital attraction, which takes the form of a reasonable return for private utility companies;
- Consumer rationing, under which prices are designed to discourage wasteful use and promote all use that is economically justified; and
- Fairness.

3.1 Productive efficiency

To satisfy productive efficiency and capital attraction it is necessary that an investor should have the expectation of recovering the cost of capital on efficient investment. This requires a method of valuation that ensures an expectation of "financial capital maintenance".

Under financial capital maintenance (FCM) the regulated firm will, if it is operating efficiently, recover the financial capital invested in its assets; payments for return and depreciation (when discounted at the cost of capital) will equal the cost of the investment. This clearly will not apply if assets are excluded from an asset base but, provided they are included, it is a principle that is compatible with many systems of asset valuation and price setting. However, it will have implications for the method of application of each.

3.2 Allocative efficiency

From a consumer point of view, and to satisfy allocative efficiency, the need is to set a charge that reflects the marginal cost of provision. This is so that the customer will purchase whenever the benefit of consumption exceeds the cost (and so price) and will refrain from purchasing when the benefit is below the cost.

The cost valuation that is relevant for this perspective is that of an expansion or contraction of output, which would require purchase of inputs at the present cost and so, as regards capital

[2] These are described in *Principles of Public Utility Rates* (1988) James C Bonbright, Albert L Danielsen, and David R Kamerschen.

assets, the purchase of a modern equivalent asset (MEA) or, if less expensive, the use of other means of achieving the same objective without the asset, which is known as the optimal deprival value (ODV).

Marginal cost should be calculated valuing assets at replacement cost (or ODV) but it may differ from the calculated average cost if there are economies of scale or if the measurement of average cost values assets differently. There is a large literature about the reconciliation of the marginal cost principle with that of raising sufficient revenue to cover all costs (including a reasonable return) in circumstances when there are economies of scale and marginal cost is below average cost[3].

There are various studies that have investigated the existence of scale economies in electricity distribution. Some have concluded that they exist[4] but others have concluded that only very small scale is a disadvantage[5]. In New Zealand Meyrick and Associates[6] concluded that economies of scale are unimportant.

If there are no economies of scale allocative efficiency will require that prices should be based on an assessment of costs that is comprehensive, i.e. including the costs of existing assets. Even if there are economies of scale it is likely that the cost of existing assets would need to be taken into account. For example if the degree of economies of scale is such that costs increase 0.9% when output increases 1% and if capital costs are half of total costs, marginal cost pricing could be approximated by valuing assets at 80% of their real cost.

3.3 Dynamic efficiency

There is less consensus over the conditions for dynamic efficiency but it is generally recognised that two important factors are competition, to promote innovation, and FCM, to ensure that efficient investment will be rewarded and so that it takes place.

3.4 Conclusions

Financial capital maintenance is important for both productive and dynamic efficiency but, when industries have been privatised and a new regime initiated, the regulatory value adopted for the assets already in existence at that time has often differed from both the historic and current cost values of those assets.

Allocative efficiency is promoted by pricing at marginal cost, which may be below the average cost calculated using current cost asset values if there are economies of scale but is unlikely to be approximated if existing assets are ignored.

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[3] For example in Laffont J. -J. & Tirole J. (2000), *Competition in Telecommunications*, MIT

[4] *Productivity Improvements in Distribution Network Operators* Report to Ofgem by Cambridge Economic Policy Associates Ltd November 2003; *Scale and cost efficiency in the Swiss electricity distribution industry*: evidence from a frontier cost approach. Centre for Energy Policy and Economics Working Paper Number 8 Filippini, Massimo, Wild, Jörg, & Kuenzle, Michael (1999).

[5] *Evidence on Scale Economies in Electric Utility Distribution and What it Implies: "Is Bigger Better?"* by John Kelly, Director of Economics & Research, American Public Power Association March 2001; *Electric Power Distribution Costs: Analysis and Implications for Restructuring*, John E. Kwoka, Jr., a report to the American Public Power Association, December 2000.

[6] *Regulation of Electricity Lines Businesses, Analysis of Lines Business Performance – 1996–2003* Report prepared by Meyrick and Associates for Commerce Commission, Wellington, New Zealand December 2003

4 Regulatory calculations

Given an initial asset value, the standard regulatory objective in price control calculations has been to provide an expectation of FCM and to attempt to influence the structure of prices to approximate to marginal cost pricing.

4.1 Capitalisation and depreciation: the standard "building block" method

Probably the simplest method of securing FCM is when prices are set on a "building block" approach to recover costs using, in respect of the cost of capital assets, straight line depreciation of the historical cost of the asset plus the nominal cost of capital as a return on the undepreciated portion[7]. This recovers the cost of the assets through a process of capitalisation and depreciation. However, use of historic costs will tend to frontload charges relative to an assessment of prices based on marginal cost, particularly when inflation is high, and so will be likely to conflict with allocative efficiency.

An alternative is to index the asset value (and so also the depreciation charge) for inflation and to apply a return equal to the indexed asset value times a real cost of capital. The discounted sum of returns and depreciation charges will equal the cost of the asset and ensure FCM. This indexed value too may differ from a modern equivalent asset or deprival value and so from marginal cost but the difference may not be large.

The "building block method" with indexed values is the standard approach used in energy regulation in the UK to calculate required future revenue. The objective is to set a base price[8] and a value for X so as to produce prices during the price control period which generate revenues equal to the expected value of costs. The sum is done in present value terms discounting future costs and revenues by the company's cost of capital each year. Over a run of years this is equivalent to assuming that the company earns a rate of return equal to its cost of capital. The present value equation can be derived from the more simple form by transformation of the series.

The normal approach is to consider a regulatory period as a whole and set a price control so that the net present value of expected revenue is equal to that of expected costs using an equation similar to that below, where all values are expressed in constant prices, *ror* is the rate of return, RAB the regulatory asset base, C current spending, I investment spending and the suffixes relate to the year in question.

$$NPVCosts = RAB_0 - RAB_5 /(1+ror)^5 + \sum_{t=1}^{5}(1/(1+ror)^{(t-0.5)}).(C_t + I_t)$$

In other words, revenue during the period should be equal to:

- spending on operating costs and investment during the period
- plus the value of assets at the start of the period

[7] The simplest form of the building block approach sets expected revenue equal to the rate of return times the average regulatory asset base (RAB) + depreciation of the RAB + operating costs (C_t), where the RAB at the end of the year is equal to the previous RAB less depreciation plus new investment (I_t).

[8] Referred to as P_0, this is a notional price for the year preceding the first year of the price control period.

- less the value of assets left at the end of the period to be paid for under future price controls.

Assets at the end of the period are normally calculated by adding the capitalised new investment to the starting assets, applying a depreciation profile to the starting assets and new investment, and calculating the final asset stock by subtracting that depreciation from the starting assets and new investment.

The full equation (of the kind shown below) sets the net present value of expected revenue, given the revenue driver volume (*V*) expected in each year, equal to that of the expected costs of an efficient company by setting a base price (P_o) and X factor.

$$0 = RAB_0 - RAB_5/(1+ror)^5 + \sum_{t=1}^{5}((1/(1+ror)^{(t-0.5)}).(C_t + I_t - P_0.(1-X)^t.V_t))$$

4.2 Infrastructure accounting

In the water industry, and for a time in railways, there has been a slightly different approach. A value was set on the original network, in both cases well below any estimate of its current cost value, and a return granted on that value at the cost of capital. Other allowable costs were operating costs and, instead of depreciation, a renewals charge designed to cover the cost of replacement and maintenance.

The present value of the infinite stream of returns will equal the initial value and all other costs are expensed and rewarded as they are incurred, so there is FCM and this "infrastructure" method produces the same expectation for the net present value of revenue as the building block method used in energy.

The system is complicated by the fact that "enhancements" to the network's capacity (either in quantity or quality) are treated differently. These are capitalised and rewarded on the basis of a return and depreciation.

4.3 A cash approach

A further extrapolation of the infrastructure approach would be to grant a return on the original asset value and pay for all expenditure, whether on maintenance, renewal or enhancement as it occurs.

The costs to be considered would therefore be all future expenses plus a perpetual dividend stream whose net present value (at the cost of capital) would equal the initial network value. The net present value of revenue would be set equal to the expected net present value of these costs. This should achieve the same NPV as the other methods and has been advocated for use in the UK.

4.4 OUR's approach

OUR appears to have adopted a form of such a cash flow approach but with the difference that no value or dividend stream been assigned to the existing assets, on the grounds that under the "save to pay" policy customers have already paid for them[9]. Indeed, in practice, a

[9] The form used also differs from the standard method (and raises a further possibility of error) by targeting a final cash balance rather than setting the NPV of revenue equal to the NPV of cash costs.

negative value has been assigned since GEL's cash balance is to be reduced from around £20 million now to £10 million in real terms in 2016.

The effect is that no allowance is made for depreciation of the existing assets or for a return on the undepreciated part.

The argument put forward to support this is that the entire asset base and the present cash reserve have been financed by payments by customers in the past, with no contribution from government or taxpayer as the owner of the company, and so to make any further charge in respect of these assets would be to charge twice.

If this were the case, customers would have been paying prices that were probably well above marginal cost, particularly in GEL's early days. The argument is that they should now be compensated by paying lower prices. However, this is likely to result in prices that are below costs and so in allocative inefficiency.

The argument from fairness, that customers should not pay twice, is less powerful than it at first appears since the payment is a transfer between customers and GEL's owners, the citizens of Guernsey, who are by and large the same people. GEL could distribute any cash surplus it acquires to its owners, thereby compensating them for the higher charges, while at the same time ensuring that electricity prices reflect costs and so that economically efficient choices are made by customers – a situation that is unlikely to occur if a negative value is put on existing assets. However, there will be some mismatch between the customer base and taxpayers.

Moreover, OUR does not appear to be correct in its assumption that customers have financed the existing assets in advance and should therefore be deemed to own them already. When a private sector company finances investment from its cash balances it is said to finance it from retained earnings. It is not said to be financed by customers.

According to information provided to me by GEL, this is also the position of that company. GEL is the successor to the States Electricity Board, which was formed by the purchase of an existing power company. The purchase (plus an initial cash balance) was financed by a loan from the States. This was subsequently repaid but a further loan was taken out in 1950 to finance capital expenditure. Customers were not charged for capital expenditure in advance. It was originally financed by borrowing. It would be unusual for a private sector electricity company to be entirely debt financed but state-owned companies are, because the state guarantees the company and so takes what would otherwise be the equity risk. Although interest payments were made on the original loan there have been no dividend payments. Those earnings were retained by GEL and used to finance subsequent investment. As far as I know, there is no evidence that customers have paid a price that exceeds the cost of their supply in order to finance future investment.

OUR's proposals would seem therefore not to accord with FCM. However, it is possible that the owner of a state-owned company might agree to a breach of FCM without there being adverse impact on the incentive to invest and so on productive and dynamic efficiency, provided that it is made clear that the circumstances are exceptional and that the breach could not occur without the owner's consent. However, such a step – particularly one involving assigning a zero value to existing assets – would be without precedent. Apparently similar occasions, when regulators have used asset values below the book value at the time of a first industry price control, have been ones where the state has privatised the assets below book value and FCM has been with respect to what the shareholders paid for the assets and not what the state originally paid.

In summary, it would appear that:

- Customers have not financed the existing asset base in any other sense than that it has been financed from the retained earnings from serving them;
- Failing to levy charges in respect of the depreciation of existing assets and a return on the undepreciated balance causes a transfer of resources from the taxpayers that own GEL to its customers, many of whom are the same people;
- Failure to levy the charge is likely to result in prices that are less than the cost of supply and so result in allocative inefficiency.

5 Company accounts

There is a further problem that arises if negative revenue is granted in respect of existing assets. They have a positive value (of about £100 million) in the company's balance sheet[10] and a depreciation charge is levied in respect of them in the profit and loss account. In many circumstances this will result in the company recording a loss. This can be seen by considering that revenue is calculated as operating costs plus investment less interest earnings less a share in the decline in cash balance. Costs in the profit and loss account are operating costs plus depreciation. The latter often exceeds investment, let alone investment less interest earnings and cash reduction. Costs will often, perhaps even normally, exceed revenue.

There is a strong argument that, if the proposed price control is introduced, GEL should revalue the balance sheet. Assets should be priced according to the "value-to-the-owner" rules. These set the value at the lower of the replacement cost or the economic value, where the economic value is the higher of the net present value of the asset's expected future earnings and its possible sale value[11]. The future earnings of the existing assets are set to zero (on the grounds that they have already been paid for) and they have little resale value (not least because GEL are required to use them to produce electricity) so their "value-to-the-owner" is zero. This is therefore the appropriate balance sheet value. If this were to be done, GEL would sustain a large initial loss.

I have not investigated the likely financial consequences for GEL of OUR's proposals in any detail but it seems likely that such circumstances could result in outcomes for GEL's accounts and for financial indicators (such as interest cover), which are commonly taken into account in UK utility regulation, that could be potentially unsustainable.

[10] I understand that the value of the asset base was assessed by Deloitte & Touche when they were vested in GEL in 2002. Presumably they were of the opinion that they would generate future revenue of at least that value.

[11] See "The Economic Analysis of Accounting Profitability", J. Edwards, J. Kay & C. Mayer, 1987, ch.3.

6 Numerical examples

These points can be illustrated using the figures for operating costs, investment, units sold, the interest rate and the cost of capital adopted by OUR in their draft decision. The use of these values, and of the assumption that there are no other expenditures required, does not imply endorsement of them. Their assessment is not within the scope of this study.

A price path that is very close to that proposed by OUR can be obtained by calculating the constant real decrease in prices (the X in RPI-X) from 2006 that produces a revenue that, given the assumed expenditures on operating costs and investment (net of customer contributions) together with a starting cash balance of about £20 million, results in a balance of about £10 million at the end of 2016/2017. This calculation has been labelled "Cash flow I". X is 0.0026. Prices fall at just over a quarter of a per cent a year in real terms. The path of proposed prices does not appear to have a constant real change over the entire period. It is initially slightly higher, then lower and finally (after 2020) higher again; but the differences are small.

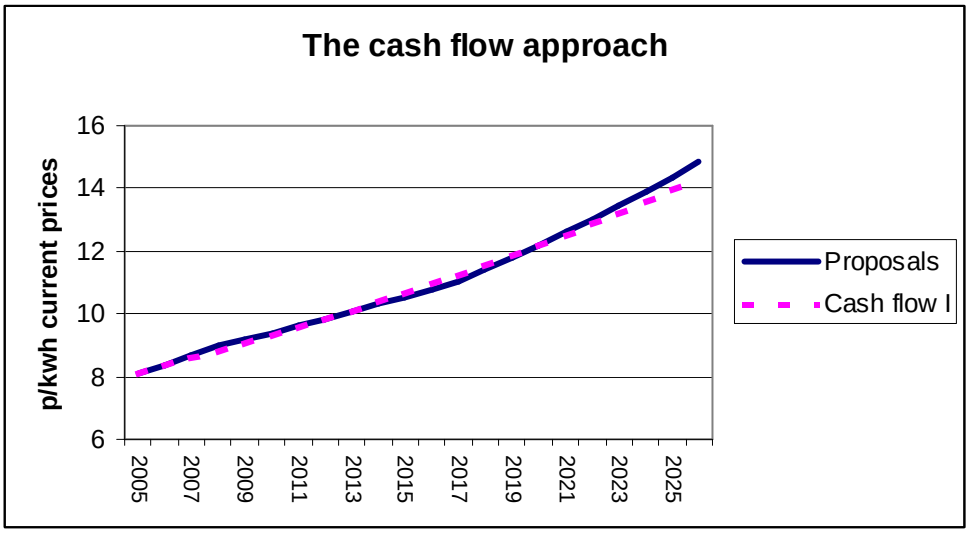

Figure 1. Comparison of OUR proposals with a simple cash flow

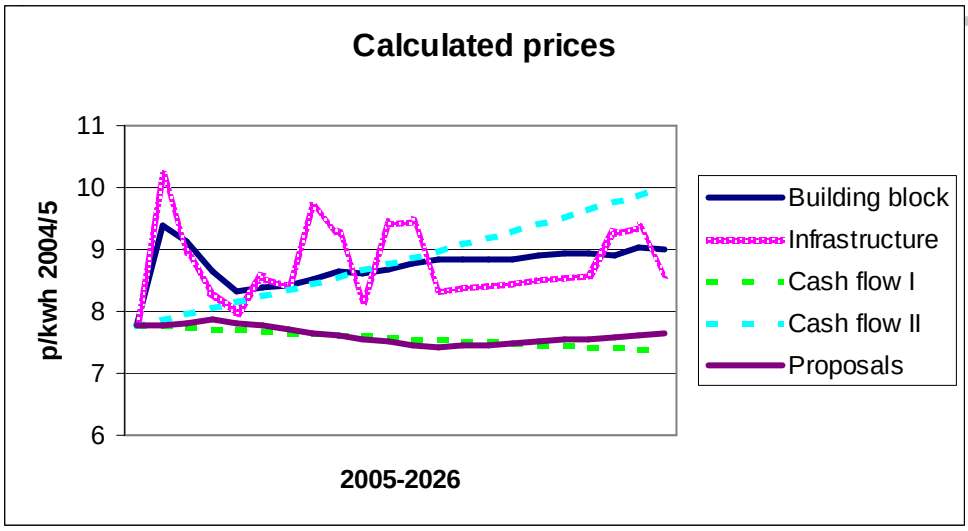

Figure 2. Comparison of proposals with standard methods rewarding the asset base

However, such an approach does not give any reward to the existing capital asset base. 0 therefore compares these two price series (this time with general inflation removed so as to express them in 2004/05 prices) with three forms of the standard method:

1. The same cash flow approach but adding a dividend payment each year equal to the cost of capital times the initial net asset stock: the dividend is constant in real terms, i.e. it increases with inflation. *Cash flow II*

2. The building block approach that sets revenue equal to operating costs plus depreciation plus a return of the cost of capital on the asset base. The calculation of revenue and of the regulatory asset base has assumed a 40 year asset life and straight line depreciation. A further assumption about the rate of retirement of gross assets was also required. The resulting depreciation charge was lower than the accounting figures given to me. *Building block*

3. An infrastructure approach that arbitrarily separated investment into replacement (70%) and enhancement (30%). *Infrastructure*

Unsurprisingly, the methods rewarding the asset base produce higher prices.

Calculating a price based on the costs each year produces a rather unstable price. This is particularly the case with the infrastructure method which adjusts revenue to fund 70% of a highly volatile investment path. 0 therefore calculates an RPI-X price path for the building block and infrastructure approaches that produces the same net present value of revenue as the volatile price paths in 0. As theory predicts, the three methods (cash flow II, building block, infrastructure) produce the same path, RPI+1.2%.

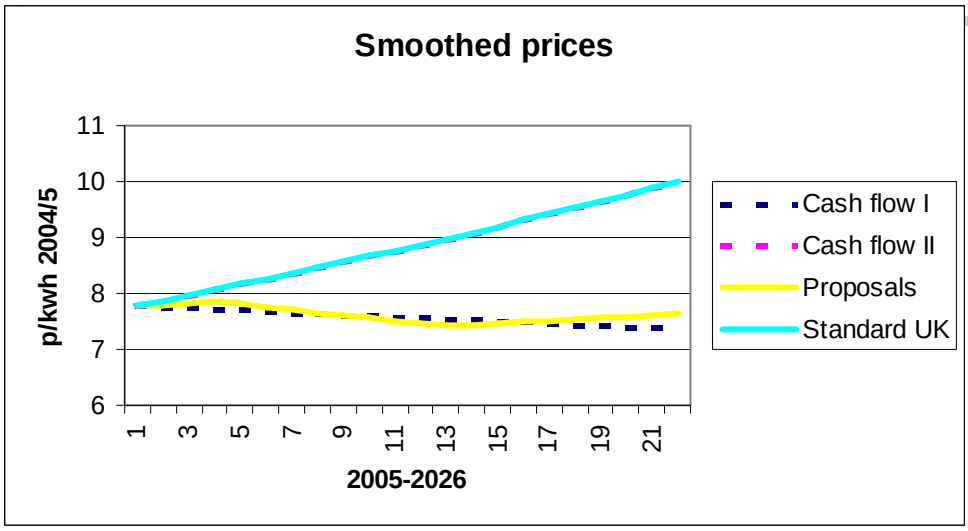

Figure 3. RPI-X price paths for the standard UK method and the proposals

The upward price path that results when the asset base is rewarded is a little misleading. It produces early HCA losses, particularly when the actual depreciation figures from GEL's accounts are used, followed by large profits in later years. A "P_0 adjustment" that raised prices by 13% and then kept them flat would produce the same net present value of revenue and flatter profits. This is shown as a "level" price in 0. There are many other possible combinations of P_0 adjustments and X factors.

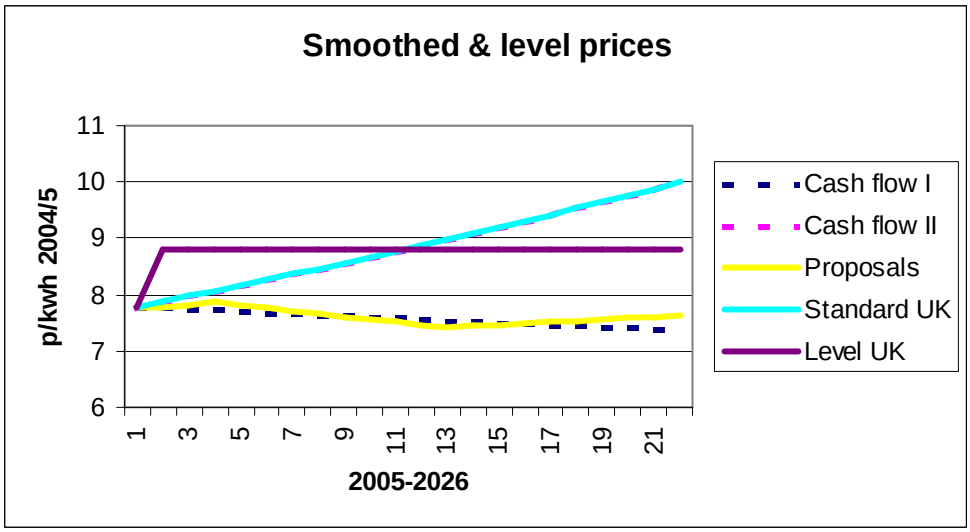

Figure 4. Different P_0 adjustments and X factors

7 Conclusions

Economic efficiency is the appropriate criterion by which to assess the price control proposal.

The standard methods of utility price control seek to ensure that an efficient company will achieve financial capital maintenance (FCM), which promotes productive and dynamic efficiency, and that customers face prices that reflect the true costs of their purchases, which promotes allocative efficiency. Possible standard methods include capitalisation and depreciation (as used in the UK in energy regulation), infrastructure accounting (as used in water) and cash flow. If used correctly these can all promote efficiency and be reconciled with each other.

The method used by OUR in its draft decision is a cash flow approach but one that does not consider the cost of the use of existing assets. The effect is that no allowance is made for depreciation of the existing assets or for a return on the undepreciated part. This fails to produce FCM but, given GEL's position as a government-owned company, it is not certain that it does so in a way that promotes inefficiency. However, the resulting prices are likely to fail to cover the resource cost and so to result in allocative efficiency

Allocative economic efficiency is unlikely to be served by setting a price that does not take the cost of the existing assets into account. The argument from fairness for failing to include them (that customers have already paid for the assets)

a. does not appear to be supported by any evidence that investment has been financed from payments from customers that exceed the costs of their supply rather than from the retained earnings of GEL and its predecessor and

b. would be weakened, even if true, by the fact that GEL is state owned and so the beneficiaries of the additional payment would be in large part electricity customers in their role as citizens.

An additional argument against failing to include existing assets as a determinant of price is that GEL would probably make accounting losses and may have to write down its existing asset value to zero. This could put it in a very difficult financial position.

I therefore recommend that, if a cash flow approach is used, the price calculation is adjusted to include a dividend payment in respect of the existing assets, with a consequent impact on both P_0 and X and so on the expected revenue path. This would accord with standard UK practice and would be more likely to achieve allocative efficiency and to avoid a possibly unsustainable position for GEL's accounts and financial indicators.

Prices and profits

Prices	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
OUR																						
Proposals	7.78	7.79	7.81	7.86	7.81	7.76	7.71	7.66	7.61	7.56	7.51	7.46	7.42	7.44	7.46	7.49	7.51	7.54	7.56	7.59	7.61	7.64
Cash flow method	7.78	7.76	7.74	7.72	7.70	7.68	7.66	7.64	7.62	7.60	7.58	7.56	7.54	7.52	7.50	7.48	7.46	7.44	7.42	7.41	7.39	7.37
Standard																						
Building block	7.78	9.38	9.13	8.64	8.33	8.37	8.43	8.52	8.66	8.62	8.69	8.76	8.83	8.83	8.85	8.84	8.89	8.92	8.93	8.90	9.05	9.01
Infrastructure	7.78	10.19	8.95	8.31	7.95	8.55	8.43	9.67	9.26	8.16	9.43	9.46	8.31	8.37	8.41	8.44	8.51	8.54	8.57	9.25	9.34	8.59
Cash flow with divs.	7.78	7.87	7.97	8.06	8.16	8.26	8.36	8.46	8.56	8.66	8.77	8.87	8.98	9.09	9.20	9.31	9.42	9.53	9.64	9.76	9.88	10.00
Smoothed	7.78	7.87	7.97	8.06	8.16	8.26	8.36	8.46	8.56	8.66	8.77	8.87	8.98	9.09	9.20	9.31	9.42	9.53	9.64	9.76	9.88	10.00
Level	7.78	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79	8.79

Profits £m	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
OUR																						
Proposals	2.00	-0.81	0.30	2.47	3.59	3.24	2.89	2.37	1.85	1.98	1.31	0.92	0.40	0.35	0.12	0.11	-0.36	-0.70	-0.89	-0.65	-1.71	-1.20
Cash flow method	2.00	-0.92	0.01	1.88	3.10	2.88	2.65	2.27	1.91	2.20	1.71	1.52	1.22	0.91	0.40	0.08	-0.74	-1.46	-2.07	-2.28	-3.84	-3.89
Standard																						
Cash flow with divs.	2.00	-0.50	0.91	3.30	5.11	5.52	6.00	6.39	6.87	8.10	8.62	9.54	10.45	11.47	12.40	13.65	14.54	15.68	17.08	19.06	19.87	22.39
Smoothed b.b. & infra	2.00	-0.50	0.91	3.30	5.11	5.52	6.00	6.39	6.87	8.10	8.62	9.54	10.45	11.47	12.40	13.65	14.54	15.68	17.08	19.06	19.87	22.39
Level	2.00	2.90	4.15	6.31	7.85	7.95	8.08	8.07	8.10	8.81	8.77	9.05	9.25	9.49	9.55	9.83	9.65	9.62	9.73	10.29	9.54	10.36

Calculated depreciation as used in the price control calculation

Profits £m	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
OUR																						
Proposals	-1.35	-4.29	-3.23	-1.01	0.22	-0.15	-0.44	-1.26	-1.68	-1.58	-2.54	-2.86	-3.00	-2.52	-2.73	-2.64	-2.65	-2.79	-2.77	-2.62	-2.66	-2.19
Cash flow method	-1.35	-4.40	-3.53	-1.60	-0.26	-0.51	-0.68	-1.36	-1.63	-1.36	-2.14	-2.26	-2.19	-1.96	-2.45	-2.68	-3.03	-3.55	-3.94	-4.26	-4.79	-4.88
Standard																						
Cash flow with divs.	-1.35	-3.98	-2.63	-0.18	1.74	2.13	2.67	2.76	3.34	4.53	4.76	5.76	7.05	8.60	9.55	10.89	12.25	13.59	15.21	17.08	18.92	21.40
Smoothed b.b. & infra	-1.35	-3.98	-2.63	-0.18	1.74	2.13	2.67	2.76	3.34	4.53	4.76	5.76	7.05	8.60	9.55	10.89	12.25	13.59	15.21	17.08	18.92	21.40
Level	-1.35	-0.58	0.62	2.83	4.48	4.56	4.75	4.44	4.57	5.25	4.91	5.28	5.85	6.62	6.70	7.07	7.37	7.53	7.86	8.31	8.59	9.37

Actual depreciation s shown in the accounts