Our ref: PMG/LW

3 December 2010

Mr John Curran
Office of Utility Regulation
Suites B1 & B2
Hirzel Court
St Peter Port
Guernsey
GY1 2NH

Dear Mr Curran

Response to OUR Consultation on Guernsey Electricity Price Control

1. Introduction

Our response to this consultation document should not be taken as acceptance by Guernsey Gas Ltd (GG), that OUR's approach to GEL's Price Control is either robust, or sustainable or in the long term interests of energy consumers in Guernsey. A review of the financial performance of GEL since the last price control (EPC3) commenced in 2007 would show that GEL was not allowed sufficient revenue to either recover the costs of its licensed activities or to make prudent provision for future investments by increasing its 'Save to Spend' reserve. In the three years since the start of the current price control, GEL's 'Save to Spend' reserve has fallen from £19.7m to £11.4m, or by circa £2.8m/annum. Over the same three year period GEL has made a cumulative operating loss of £3.2m, making an operating loss in every year. In the three years prior to commercialisation (1997/98 to 1999/00) GEL's surplus totalled £12.2M. Therefore we continue to regard OUR's methodology as fundamentally flawed.

GG has two main areas of concern are:-

- The RAB old/RAB new methodology does not generate sufficient cash flow to fund essential capital investments or to make prudent provisions for future investment arising from the increase in peak demand.
- It is clear from GEL accounts that fuel/electricity purchase costs have been subsidised using the 'Save to Spend' reserve, which the OUR seem to have ignored in OUR10/13.

Having reviewed the methodology set out in this paper, and despite the lack of essential detail which has been omitted, GG has no confidence that OUR's methodology will provide GEL with sufficient funds over the next price control period (EPC4). Therefore we would strongly advise against implementing these proposals without substantial modification.

Setting aside arcane arguments about each of the elements in the price control, GEL needs, through its regulated tariffs, to have sufficient funds to finance its licensed activities and to make prudent provisions for essential future investments in the 'Save to Spend' reserve. The OUR should demonstrate clearly that it has done so.

We make general comments with regard to the consultation paper and processes in section 2. In section 3 we make specific comments in response to the questions posed by the OUR in the consultation document 10/13.

2. General Comments

2.1 Period allowed for third parties to respond

We again bring it to OUR's attention that they should allow sufficient time for third parties to respond to consultations. The four weeks allowed in this case was too short. GG do not have significant resources available at short notice for this type of activity. Such short consultation periods do not enable us time to discuss any issues that we have with the OUR before having to commit to a written response.

2.2 The Provision of Information

GG again ask the OUR to note that we are not satisfied with the amount of information that has been deemed to be confidential. The lack of information available with regard to regulatory investigations, reports and publications act as a barrier for delivering satisfactory outcomes, informed analysis and proper consultations.

2.3 OUR's Consultation Document

GG would question who the OUR wish to engage in their consultation processes. GG believe that the terminology and language that the OUR uses do not make their documents accessible to the majority of people.

2.4 States of Guernsey Review of Regulation

GG do feel that there is likely to be confusion as a result of the OUR's consultation process running simultaneously alongside the States of Guernsey's review of Utility Regulation Review. We would like the OUR to explain if and how the two processes will continue.

3. Specific Comments

3.1 OUR Document Item 4.1 Form of Price control.

Regardless of what price control method the OUR chooses to use GG are of the opinion that sensible targets should be set for GEL. The OUR should have regard to the small scale of GEL's operations the fact that it is an isolated island network with limited scope for downsizing, restructuring or out-sourcing when compared to the large utilities in Great Britain. The OUR should take account of the need for GEL to retain and develop its skilled workforce and ensure that GEL has a resilient level of resources, so as not to risk in any way the reliability of an essential service.

3.2 OUR's Document Item 4.2 Scope of the Price Control.

GG are not aware of any details with regard to the public lighting tariff and request the OUR to provide information.

GG would like to include the GEL buy back tariff within the scope of the price control, see our comments in item 3.7. Also GG would like to take this early opportunity to raise concerns it has in relation to specific tariffs in order that a comprehensive debate can take place.

We believe that the OUR should require GEL to provide stable predictable buy back tariffs and instruct GEL to withdraw their standby charge/tariff. If these items were addressed they could act as a catalyst to create competition in the generation sector, which could in turn provide the potential to reduce GEL's requirements for additional generation capacity in the future.
GG are of the opinion that the OUR should require GEL to provide stable, predictable buy back tariffs which at least reflect the full (capital and revenue) costs of electricity as supplied by GEL. We believe that there are sufficient incentives that should be taken into account to justify the implementation of a buy back tariff system in which a significant premium is paid above and beyond the full costs. Also GG are of the opinion that the OUR need to require GEL to withdraw their standing charge/tariff for customers who choose to generate

some of their own electricity. GG also believe that there are sufficient incentives that should be taken into account in order to force GEL to provide positive incentives to customers who choose to generate some of their own electricity. If GEL were required to provide stable predicable buy back tariffs and withdraw their standing charge for customers who generate some of their own electricity it would act:-

- To stimulate competition in the electricity market
- To reward more efficient means of generating power
- To encourage diversification of generation
- To reward lower carbon and sustainable generation
- To act as a means to reduce GEL's peak load and thus requirements for capital expenditure for future generation

During this price control decision we urge the OUR to give full and proper consideration to these suggestions that we have raised many times before. GG are not satisfied with how these issues have been avoided in the past; the OUR have refused to look into our complaint unless they are instructed to do so by the States Energy Policy. In turn the Energy Policy Group and C & E are of the opinion that it is not appropriate to interfere as it is a matter for the OUR. We are sure that the OUR can appreciate that this is not a satisfactory situation, it does not promote good relations nor is it consistent with the OUR being open and transparent. Whilst these issues may overlap with the energy policy we would like OUR's commitment to this time attempt to address these issues perhaps by initiating a specific working party. With this regard could we remind the OUR of the objectives declared in 'the regulation of utilities (Bailiwick of Guernsey) Law 2001' specifically:-

- To ensure that utility activities are carried out in such a way as best to serve and contribute to the economic and social development and well-being of the Bailiwick

- To introduce, maintain and promote effective and sustainable competition in the provision of utility services in the Bailiwick, subject to any special or exclusive rights awarded to a licensee by the Director General pursuant to States' Directions
- To lessen, where practicable, any adverse impact of utility activities on the environment

Also in relation to GEL's tariffs we welcome OUR's approach in recognising the potential for undue cross subsidies between different customers and seeking to implement cost reflective tariffs. GG note that this was a recommendation of the

independent expert panel that reported to the OUR in 2006. GG would like to raise further areas where there may be cross subsidisation between different sections of the customer base and services provided by GEL. This is discussed later in our response Item 3.6. In this section and appendix 1 we offer further information to indicate that GEL's provision of electricity to serve the heating market is not economically justified and thus must be cross subsidised from other services in which it has a 100% monopoly position.

3.3 OUR Document 4.3.2 Financeability.

We agree that GEL is currently funded through its 'Save to Spend' reserve. However it is worth noting that because GEL has made an operating loss over recent years, it would find it almost impossible to borrow money without a guarantee from the States of Guernsey. Moreover, as the OUR has failed to set a price control which has enabled GEL to recover the cost of providing its licensed activities, lenders would regard the OUR as a 'high risk' regulator, which would increase the cost of borrowing. Thus the OUR has little choice but to assume that GEL will continue to be funded from cash flow and its 'Save to Spend' reserve. Due to the above, it is essential that the OUR provides GEL with sufficient funds, through its price control, to finance its licensed activities under all reasonable scenarios and to contribute to the 'Save to Spend' reserve in a prudent manner reflecting expected future capital investment. The OUR should assume that GEL has access to no other resources beyond its 'Save to Spend' reserve. Nothing in OUR10/13 provides us with any confidence that the OUR will make sufficient funds available.

3.4 OUR Document Item 4.3.3 Save to Spend Fund.

Our interpretation of the issue raised by the OUR is that in OUR's opinion GEL have spent material amounts of the 'Save to Spend fund' on non-core projects, perhaps inefficiently and in a non-commercial manner. Hence, the OUR are minded to treat the next price control as if the money had not been spent and was still available to GEL. GG are of the opinion that the OUR should state in the text the actual amount in the save to spend fund, in order for the reader to assess the deficit. The OUR or GEL should provide a reconciliation between the figures in table 2 and the Annual Report and Accounts.

GG would like to make several comments here. They go beyond the narrow scope of the questions posed by the OUR, however we believe that they are relevant.

GG warned of this scenario at the previous price control consultation, in summary:-

- GG warned of the risk of leaving the cash balance with GEL as it would not promote efficiency and /or commercial behaviour. However this comment was ignored.

- GG advised that the 'Save to Spend' reserve should be ring fenced and that the OUR should monitor GEL's capital expenditure.

- GG have voiced our concerns with regard to one of the purposes for which the cash surplus could be used, i.e. to 'phase in price increases'.

If the OUR has failed to adopt this advice perhaps it should accept some responsibility for the current situation, along with other stakeholders (GEL directors, executive and non executive, T &R and others).

It seems ridiculous to GG that different organisations/stakeholders all effectively working for the public, the Guernsey Tax payer, cannot agree on what is an appropriate use for such funds. GG informed the OUR that the cash reserve should have been passed back to customers, thus forcing GEL to operate in a more commercial manner and avoiding inefficiency.

If , given this experience, the OUR and the States of Guernsey are still not persuaded to change the approach of financing GEL, something needs to be done urgently to address the problem of wasting the cash reserve. We do not believe that the OUR's approach will provide a pragmatic solution, establishing a price control on the basis that GEL have not spent money that they actually have spent will not help, nor will it improve relations between GEL, T & R and the OUR. One day someone will have to pay for this ridiculous situation and that will be GEL's customers and/or the tax payer.

GG would suggest the following pragmatic solution:-

a) Interested stakeholders should meet to discuss the issue in order to establish the facts and understand each other's perspectives.

b) The stakeholders should agree what can be funded from the cash reserves and then the OUR and GEL should control the spend accordingly.

c) Set the price control with the cash reserves as they are now. If the funds have been used inappropriately, from the information available to us it appears to be a shared responsibility, so accept the situation, learn the lessons and move on.

If the OUR do not wish to adopt our suggested approach and pursue the non-solution as described in the document, we would like to input the following to the specific questions posed.

Save to Spend (1): If our interpretation is correct that the OUR is of the opinion that GEL has been spending the Save to Spend fund inappropriately then there is an obvious need for regulatory intervention.

Save to Spend (2): As we have commented before to the OUR we are of the opinion that any calculation of the Save to Spend fund needs to allow GEL an allowance for working capital. GG would also suggest that given the previous price control and political direction that any calculation of the cash balance takes into account any draw down associated with "phasing of electric tariff increases". Since the OUR approved the electricity price increases, then the subsidies must have been made with OUR's full knowledge. GG are sure that GEL will be able to identify other valid adjustments to the OUR figure.

For the avoidance of doubt, GEL can only spend cash that exists in its reserves. The calculations in table 2 are therefore just theoretical. GEL can only spend real money and not the virtual money that the OUR has determined. Where is GEL going to obtain the difference between the theoretic reserve set out in table 2 and the actual level of reserves in its accounts?

3.5 OUR Document Item 4.4 Monitoring and Compliance:

GG are of the opinion that, the approach of ensuring tariffs do not exceed the levels set by the DG is insufficient for the OUR to ensure it meets the objectives set within the Regulation of Utilities (Bailiwick of Guernsey) Law 2001 particularly:-

- To protect the interests of consumers and other users in the Bailiwick in respect of the prices charged for, and the quality, service levels, permanence and variety of, utility services.
- To ensure that utility activities are carried out in such a way as best to serve and contribute to the economic and social development and well-being of the Bailiwick.
- To introduce, maintain and promote effective and sustainable competition in the provision of utility services in the Bailiwick, subject to any special or exclusive rights awarded to a licensee by the Director General pursuant to States' Directions.

The OUR have identified in section 5.2 of their document, concerns with regard to some service provisions may be cross subsidised as a result of tariffs not being cost reflective. GG has in the past also highlighted its concerns that electricity sold for heating may be being cross subsidised. More details of our concerns are given in item 3.6 and Appendix A of this communication.

GG remind the OUR of the Independent Expert panels view on this issue made in 2006, quoting examples:-

> "It is important that variable electricity charges should be set on proper economic principles to give appropriate price signals and ensure fair competition with other fuels."

> "At the economy-wide level, under or over pricing of electricity, relative to world fuel prices and hence gas prices, is likely to result in a misallocation of resources on the island to the detriment of living standards".

It is time that the OUR instruct GEL to undertake a complete review of their tariffs and services to ensure that they are cost reflective to enable the OUR to meet with its objectives set within the law and to ensure that some services where competition does not exist are not being overcharged to subsidise other loss making services or provisions.

3.6 OUR Document Item 5.1.1 2007 Price Control (EPC3)

With regard to capital expenditure on generation. GG feel at a disadvantage with regard to engaging in this debate as we have not been given access to the GEL or PB Power reports.

However, we do believe that given the information reported, that the OUR and GEL may be focusing on the symptoms and not paying due regard to the causes. What is causing GEL's peak demand to increase?

GG request the OUR and GEL to provide information and data to demonstrate that they can identify the drivers for the growth in peak demand, and that they are cost justified. Our understanding is that peak demand has increased ahead of GEL's estimates. The OUR should not be surprised by this trend, because it has constrained GEL's tariffs below an economic, and therefore efficient level. This has materially distorted the energy market on the island, which may be in contravention to OUR's duties.

Before the last price control decision process, back in 2006, and on many occasions since, GG warned the OUR of heating loads being attracted to electricity by off peak tariffs, that have not been demonstrated to be cost reflective. The OUR have repeatedly refused to look into this matter beyond stating that they see no case for a review. However now given evidence from GEL that its peak load is increasing and as such there is a significant requirement for Capital expenditure to fund this expansion, could we once again request that the OUR to investigate our concerns and observations. GG are of the opinion that the growth of electric heating is disoptimal, destroying value for GEL, and will lead to inefficient and unnecessary capital expenditure on generation and network facilities. These outcomes are the detriment to the Islands economy, the tax payer, the majority of GEL customers and ultimately all GEL customers.

GG and the OUR are aware that electric heating systems are being installed in both new and existing properties and that they are being actively promoted by GEL. Such heating systems are often not based upon heat pumps or heat storage systems. Many heating systems installed in Guernsey are simple resistance heaters, in some cases simply heating water to be circulated in a typical wet central heating system. The OUR know that in order to promote electricity for heating purposes that GEL discount the cost of connections on the condition that electricity is used for heating. It is not clear why customers who choose to use electricity for heating should be subsidised by the general consumer who does not.

It is our understanding that GG, the OUR and GEL are all of the opinion that customers who choose electric heating will attempt to optimise their usage of electricity to benefit as much as possible from the lower off peak tariffs. However, GG are of the opinion, particularly at times when it is very cold that electric heating customers will overlook the price differential and use their heating, thus adding to the peak load. This view is supported by plain common sense. If evidence is needed to support the view that heating will impact upon the peak load then the OUR and GEL should know that the GEL peak load periods correlate with cold weather conditions and occur in the evenings 17:00 to 21:00 – reference GEL's report in the Guernsey Press on 6/1/2010 of a new peak load of 80.5 MW at 18:30 on 4/01/2010, GEL are recorded as attributing it to heating.

Given the above analysis, the level of the off peak electricity tariffs and the capital intensity of GEL's operations we fail to understand how the OUR are convinced of the economics of providing electricity for heating. In order to demonstrate our position, various sample cases are presented in Appendix 1. In all of the examples presented electricity used for heating purposes cannot be justified on an economic basis. We believe that our assessments are reasonable and use

conservative estimates. A number of analyses are performed assuming the application of a heat pump, we do not believe that this is typical. GG believe that wet central heating systems, resistance heaters and storage heaters are more representative, these analyses are presented in appendix A, Items 2.3.2, 2.4.1 and 2.4.2. These assessments for a typical small property, with a heating load of 10,000 units per annum, indicate that GEL are likely be making a financial loss of circa £200 per customer per year through the provision of this type of heating service.

GG recognise that the OUR may feel that they have looked into this when they reviewed GEL's connection charging policy. However, GG are not satisfied with the outcome of this investigation with the OUR refusing to provide sample calculations for GG. The OUR seemingly accepted GEL's view that electric heating does not add to the peak load, and that economic justification can be made based upon revenue and not margin or profit. A full explanation of GG's concerns with regard to OUR's investigation into GEL's connection charges is included as appendix 2 of this report.

3.7 OUR's Document Item 5.2 Cost Reflective Tariffs

GG are encouraged by OUR's recognition that GEL's tariffs may not be cost reflective. We would expect GEL to have a duty to demonstrate to the OUR that their tariffs are cost reflective and that this information should be published for public scrutiny.

GG remind the OUR of the comments made by the Independent Expert Panel in 2006.

> "It is important that variable electricity charges should be set on proper economic principles to give appropriate price signals and ensure fair competition with other fuels."
>
> "At the economy-wide level, under or over pricing of electricity, relative to world fuel prices and hence gas prices, is likely to result in a misallocation of resources on the island to the detriment of living standards".

As you are aware GG believe that a review of GEL's tariff structure is long overdue to ensure that there are no cross subsidy situations.

However GG would like the OUR to provide more evidence to demonstrate that the increase in peak load is, and will continue to be driven by data centres. How do the OUR envisage that GEL will assess the extent to which different customers

value different levels of security of supply and ultimately how do the OUR believe customers tariffs or supplies could be modified to yield a solution to charge for security of supply. Given the information available to us, and our understanding, we do not believe this is a material issue, and do not believe there is a reasonable probability of a workable solution. GG's perception of a data centre is that if offers GEL an almost optimal consumption profile, we perceive that a data centre would take almost the same amount of electricity throughout the day regardless of the season. Such a profile must be significantly easier and less costly to serve than an electric heating customer.

However with regard to tariff rebalancing the OUR are aware that GG believe there is sufficient evidence to instigate an investigation into the economics of GEL supplying electricity for heating purposes, as highlighted in Item 3.6 above and appendix A.

Any customer who has their own generation plant may not require the same level of back-up as a general customer. This will be true whether the plant is purely as a contingency against supply failure or a CHP. In our experience, customers with their own generation and with the capacity to export power are penalised by GEL rather than encouraged. According to OUR's concept for charging for the security of supply, such customers should be given a discount on their bill in recognition of their contribution to overall security of supply and reduced demand for back-up supplies. Moreover GEL should buy electricity from them at a cost reflective price to promote supply efficiency, as it is required to under its licence.

Current buy-back tariffs discourage small generators from maximising their output even when they can provide electricity cheaper than GEL can source it. This suggests that GEL may not be buying power at the cheapest price as required by its licence.

3.8 OUR Document Item 5.3 Volume Discounts

With regard to the background and context provided and the current GEL tariffs GG believe this is not a material issue. However GG would object to the introduction of any new discounted electricity tariff system based on volume consumption if it were not proved to be cost reflective.

3.9 OUR Document Item 5.4 Favouring the Cable link as a low carbon emission source.

GG request the OUR to publish in detail the methodology used by GEL to determine the carbon intensity of the electricity supplied by them, through

on-island generation, imported from Europe and the mixture. GEL have ignored requests from GG to provide information for the reporting period 2008/2009 and 2009/2010. GG would also request the OUR and GEL explain why the carbon intensity they use for on-island generation is significantly lower than that of the Jersey Electric Company. GG request information from the OUR and GEL to support their assumed carbon intensity of imported electricity.

With regard to current practice in the UK, it is our understanding that electricity imported into the UK is not taken into account in the country level reporting, emission nor power imported. Hence, if we are correct and this approach was adopted the carbon intensity for electricity on the Island would resort to the on island generation figure of 0.676 kg of CO_2/kWh. GG are confident that this is not what the OUR wish to achieve. We suspect that the OUR will attempt to arrive at a low figure by:

a) Assigning zero as allowed by Kyoto Protocol method for declaring emissions. Please note zero is assigned because emissions take place elsewhere NOT because imports are low carbon, or
b) Adopting a methodology based upon the EU directive on the labelling of electricity. We would ask the OUR to ascertain if other jurisdictions use the labelling directive to inform policy?

Why are the OUR minded to reference accepted policy in the UK, the Channel Islands electricity is imported from Europe. Perhaps the OUR should reference work and studies performed in France, it would be more appropriate. France has very different issues to the UK.

Also the OUR should consider what the customer is likely to want to know. GG believes that customers who may be selecting or paying for electricity based upon its environmental credentials would want to know the ultimate global impact with regards to emissions of the incremental electricity available to enable them to make informed choices. GG believe that they could feel misinformed if they were to find out they made choices based upon a figure that was low simply as a consequence that another jurisdiction had reported the emissions, or was low as a result of a calculation method of averaging that hid the true impact, or it was low simply because of geography.

No matter how this debate is concluded, GG request that full details are recorded with regard to the calculation method adopted and that the rational of the decision is recorded in detail. Also, no matter what the outcome GG would like OUR's support in ensuring that the States of Guernsey's Energy Policy does not get confused and misinformed by their decision. Adopting a zero or low average

carbon intensity for imported electricity does not mean that electricity used for heating purposes is low carbon particularly for incremental loads switched from gas and/or oil. The carbon intensity of electricity varies throughout the day, week, season, etc. At the moment and foreseeable future, grid electricity in France, during periods of high demand is dependent upon high carbon fossil fuel generation. This fact has lead to studies that assign Carbon Intensities of 500–600g of CO_2/kWh to electric heating systems in France. An example of such a report is included in Appendix 3 along with a simple chart illustrating the concept of high carbon intensity marginal electricity. This information is in addition to the presentation and reports we have already forwarded to the OUR.

The OUR should appreciate we are keen that the public and the Energy Policy do not jump to the conclusion that electric heating is low carbon just because a zero or low average figure has been assigned to imported electricity.

3.10 OUR Document Item 5.5 Operating Costs

The text in OUR's document refers to OUR's consultation paper 06/17, Section 7.2 and 7.3. Both sections carry a single word 'Confidential'. If we are correct we assume that the OUR do not wish anyone to respond other than GEL. This is not in keeping with the good regulatory practice of openness and transparency.

Hence, GG's comments are of a general nature. The OUR need to set sensible targets recognising that GEL is a small business operating on a small Island with limited options to rationalise, downsize and outsource, etc. These factors are often not appreciated by off-island consultants who may refer to inappropriate benchmarks.

GG are also interested with regard to what happens if GEL fail to adopt or achieve OUR's targets. Would it merely result in another hole in GEL's finances to be filled at some point by GEL customers or the tax payer? GG would like OUR's comment.

3.11 OUR's Document Item 5.6 Incentive Frame Work

As the OUR notes in the third paragraph the incentive mechanism in Great Britain worked because the regulated companies are privately owned and shareholders expected managers to out-perform the regulatory targets. There is scant evidence of such incentives working in the public sector. The OUR should compare and publish the actual performance of GEL over EPC 3 compared to its own projections. Otherwise the public will have no idea whether the incentives in EPC3 achieved improved productivity. This issue was addressed by the

Independent Expert Panel, which made it clear that T&R should set financial and management targets for GEL to incentivise management to out-perform the price control. GG is not aware that this has happened.

Without a clear incentive for the management of GEL to outperform regulatory targets, there is nothing to stop GEL making up the performance shortfall from its 'Save to Spend' reserve. It can be argued that GEL's price control provides a perverse incentive for GEL to under-perform thereby evacuating the 'Save to Spend' reserve. Once that reserve is eliminated, the OUR will have no choice but the raise prices nearer to a sustainable level.

Until T&R has 'closed the loop' and incentivised GEL's managers to out-perform the regulatory target any incentives set by the OUR are of academic interest only, because there is no reason for GEL's management to take any notice of them.

3.12 OUR's Document Item 5.7 Rate of Return

GG does not agree with OUR's declared intention not to revisit the return on assets acquired pre commercialisation for the reasons set out in the introduction. GG believe that GG and GEL's representations on this matter recorded in the OUR document 07/04 were dismissed without proper consideration or explanation. We would like to question if OUR's and the IEP's absolute and specific interpretation that lead them to base the rate of return on a single year with regard to the States direction to the effect that *commercialisation in itself should not lead to a change in average bills* was as intended by the States . We would question if the OUR adequately explained to the States of Guernsey the circumstances at the time with regard to GEL's operating surplus being eroded by increasing costs of electricity and if the States understood how the OUR were going to interpret their direction. Also in the interests of openness and transparency we believe the OUR should ensure that the States of Guernsey are satisfied to continue with this level of return given the circumstances that have resulted from this decision. Please find attached as Appendix 4 an explanation of the circumstances as we perceive them immediately before GEL were commercialised. Our position is that GEL's operating surplus in 2001/02 was suppressed by GEL's slow response to passing through increased electricity costs, this was the year that the OUR chose to base the rate of return on assets pre-commercialisation.

With regard to the return on assets after commercialisation, as GEL is meant to be operating as a commercial company, then the OUR should allow the same rate of return as if it were a private utility. To apply a lower rate would be to distort the market and discourage private investment in generation. The question of the

source of finance (debt, equity or reserves) is not relevant. The OUR should know (Modigliana and Miller) that the cost of capital is the same regardless of gearing, except to the extent (Miller) that debt is treated advantageously for tax purposes. The risks to the business are the same no matter how it is financed. GG suggests that the OUR uses the same Weighted Cost of Capital (WACC) used by Ofgem for gas and electricity distribution, plus a small company premium of 1%.

3.13 OUR's Document Item 5.8 Period of Price Control

Given our concerns as set out in the introduction and the current States of Guernsey's Review of Regulation we propose a one year price control. Such a price control period will allow the States to determine their response to the Review of Regulation recommendations that may lead to a material change in the form of governance and regulation for GEL.

3.14 OUR's Document Item 5.9 Passthrough Mechanism

We agree that changes in market prices need to be passed through in the tariffs in a timely manner.

We would support GEL's view that it should have the flexibility to change its tariffs and provide justification for these changes retrospectively. We suggest that this could be done at the end of each financial year.

In accordance with arrangements in other markets GEL could be penalised if it were to over-recover or under-recover by an excessive margin.

4. GG's Proposed Next Steps

GG hope that you find our comments constructive. We feel it would be appropriate to have a meeting with the OUR as soon as possible to discuss our input. We intend to contact you by 10th December to arrange a convenient time for a meeting. In the meantime if you have any questions or queries with regard to our response please do not hesitate to contact me.

Yours sincerely

Paul Garlick
Managing Director
Guernsey Gas Limited

APPENDIX 1

Guernsey Gas Response to the OUR Consultation Paper 10/13 – November 2010

Various economic assessments with regard to promoting electricity for heating purposes

1. Estimated Cost of Providing Peak Load

From OUR's consultation paper 10/13 Section 5.1.2, GEL's October 2009 submission indicates 18 MW of generation plant costs £11.8M. Hence, the raw cost of generation capacity is £655/kW, depreciated over 30 years = £22/kW/year.

This is just the raw cost of generation, there will be other costs associated with meeting an increase in peak load, for example;

- Network costs to support the increasing peak load. From GEL's reports and accounts there is approximately an equal value of assets in network as in generation (at 31/3/2010 generation assets £33.7M and network assets £36.1M).
- Backup generation capacity to support the increase in peak load consistent with the N-2 policy.
- Financing of expenditure, even with the Save to Spend methodology, finance costs must exist, for example if the money was not spent it would earn interest.

Hence we believe it is a conservative estimate to add 30% to the above raw cost of generation to account for other items. Hence as a result we estimate the cost of adding peak load to be circa £28.60/kW/year (£22/kW/year x 1.3).

2. Various Economic Assessment of Electric Heating

In the following assessments we are forced to use the average cost of electricity "generation/import cost per unit sold" as recorded in the GEL's report and accounts. We have used the 2009/10 figure along with the electric tariffs for that period, i.e. excluding the tariff increase of 01/04/2010.

As the OUR are aware we have no other data available to us with regard to the cost of electricity. We suspect given the title for the information "generation/import costs" that this is an underestimate of the actual cost of electricity supplied. We invite the OUR to comment on this. Does this cost include for example the full costs of running on-Island generation and network losses?

Nevertheless as one can see from the following analysis, the economics of supplying electricity for heating purposes is questionable. We encourage the OUR to investigate this issue. Please note that many of the assessments assume the application of a heat pump whereas it is our understanding in Guernsey more conventional systems such as simple resistance heaters, wet central heating systems and storage heaters are more common. All of the assessments provided indicate that GEL are likely to be losing money from heating loads particularly from conventional heating systems.

2.1. Non peak tariff

Assume a 5kW input heat pump with a 3kW water heater backup. Supplying for example an underfloor wet central heating system.

Assume that the dwelling uses circa 5000 unit/annum to meet its heating requirements.

Electricity selling price on non peak tariff 01/04/2009 to 01/04/2010 = 6.59p/unit
Electricity selling price on standard tariff 01/04/2009 to 01/04/2010 = 13.37p/unit
Electricity average cost = 7.85 p/unit

A) This analysis assumes that no electricity is used during the 4 hours per day that the tariff may be unavailable.

Gross Margin on electricity sold (6.59 – 7.85) x 5000/year
Gross Margin on electricity sold = Loss of £63/year

The assumption of very low use of electricity outside of the tariff conditions may be reasonable most of the time. However it is likely that in extremely cold weather conditions, which coincide with GEL's peak load, that customers will want heat and top up with standard tariff electricity. This scenario is assessed in B) below.

B) The following analysis assumes that 5% of electricity is used at the Standard tariff, 95% at the non-peak tariff and 5 kW is added to the peak load.

Gross Margin on electricity non peak tariff = (6.59 – 7.85) x 5000 x 0.95 = Loss of £60
Gross Margin on electricity at peak rate = (13.37 – 7.85) x 5000 x 0.05 = Positive £14
Less estimated cost of providing peak electricity from item 1 above 5kW x £28.6/kW/y = £143
Estimated Total loss/year = £189/year

2.2 Heat Pump Tariff

Again assume a 5kW input heat pump with a 3kW water heater backup supplying an underfloor wet central heating system. Assuming 2.5% of the units sold at the standard tariff, i.e. that only a small amount of electricity is needed during the 1 hour a day that the tariff may not be available. Again this reflects the tendency for customers to use heat in periods of cold weather conditions, which coincide with GEL's peak load. Note that this tariff is only unavailable for up to 1 hour a day if GEL continues to connect heating load they will have even more prolonged periods of high demand such that this 1 hour period will not be of significant use in managing their peak load. It is our understanding that such heating systems normally have an override switch would allow customers to take electricity during this hour of interruption by reverting to the standard tariff.

Assume that the dwelling uses circa 5000 units per annum to meet its heating requirements and 5kW is added to GEL's peak load as a result of the customer boosting heating during extreme cold periods.

Electricity selling price on heat pump tariff 01/04/2009 to 01/04/2010 = 8.84p/unit
Electricity selling price on standard tariff 01/04/2009 to 01/04/2010 = 13.37p/unit
Electricity average costs 7.85p/unit

Gross Margin on electricity sold on heat pump tariff (8.84– 7.85) x 5000/year x 0.975 = Positive £48/year.
Gross Margin electricity sold on standard tariff (13.37 – 7.85) x 5000/year x 0.025 = Positive £7/year.
Less estimate cost of providing peak electricity from item 1 above 5kW x £28.6/kW/year = £143/year
Estimated total lost per year = £88/year.

2.3 Super Heat Tariff

2.3.1. Super heat tariff – Heat Pump.

Again assume a 5kW input heat pump with a 3kW water heater backup supplying an underfloor wet central heating system.

Assume that the dwelling uses circa 5000 units per annum to meet its heating requirements.

Electricity selling price on super heat tariff 01/04/2009 to 01/04/2010 = 6.38p/unit
Electricity average costs 7.85p/unit

Gross Margin on electricity sold (6.38– 7.85) x 5000/year = Loss of £74/year.

This analysis assumes that this load does not add to the peak load. If the load did add to the peak as can be seen from previous assessments the additional margin resulting from such electricity sales is highly unlikely to compensate for the additional cost of providing for the peak load.

2.3.2. Super Heat Tariff – traditional wet central heating system

We assume that the OUR are aware that GEL promote the use of a pressurised cylinder with an immersion heater element to provide hot water to support wet central heating systems. Our understanding is that a typical immersion heating element to service such a system has a load of circa 18 kW (higher rated devices are available).

Assuming a typical small dwelling with an average heating load of circa 10000 units per annum attempting to optimise the tariff to benefit from taking off peak electricity thus achieving 75% of sales on the super heat tariff, the remaining units purchased at the standard tariff. With such heating systems it is highly likely that the customer will be drawing close to the full amount of electricity during extreme cold weather conditions which coincides with GEL's peak load. The following scenario assesses the impact of such a load adding 10kW to GEL's peak load.

Electricity selling price on super heat tariff 01/04/2009 to 01/04/2010 = 6.38p/unit
Electricity selling price standard charge 13.37p/unit
Electricity average costs 7.85p/unit

Gross Margin on electricity sold on super heat tariff (6.38 – 7.85) x 10000/year x 0.75 = Loss £110/year
Gross Margin on electricity sold at standard rate (13.37 – 7.85) x 10000/year x 0.25 = Positive £138/year
Less estimated cost of providing peak electricity from item 1 above 10kW x £28.6/kW/year = £286/year
Estimated total lost per year = £258/year.

2.4 Super Economy 12 Tariff

2.4.1 Super Economy 12 Tariff used for traditional wet central heating systems or resistance heaters.

We assume that the OUR are aware that GEL promote the use of a pressurised cylinder with an immersion heater element to provide hot water to support wet central heating systems. Our understanding is that a typical immersion heating element to service such a system has a load of 18 kW (higher rating devices are available).

Assuming a typical small dwelling with an average heating load of circa 10000 units per annum attempting to optimise the tariff benefit of taking off peak electricity thus achieving 60% of sales on the SE12 low rate and the remaining units purchased at the high rate. With such a heating system it is highly likely that customer will be drawing close to the full amount of electricity during extreme weather conditions which is coincident with GEL's peak load. The following scenario assess the impact of such a scenario and adding 10kW to GEL's peak load.

Electricity selling price on SE12 low rate 01/04/2009 to 01/04/2010 = 5.80p/unit
Electricity selling price on the SE12 peak rate 13.98p/unit
Electricity average costs 7.85p/unit

Gross Margin on electricity sold on SE12 low rate (5.80 – 7.85) x 10000/year x 0.6 = Loss £123/year
Gross Margin on electricity sold at standard rate (13.98 – 7.85) x 10000/year x 0.4 = Positive £245/year
Less estimated cost of providing peak electricity from item 1) above 10kW x £28.6/kW/year = £286/year
Estimated total lost per year = £164/year.

2.4.2 Super Economy 12 tariff – Heating system with a thermal store

Assuming a small dwelling with an average heating load of circa 10000 units per year with a heating system with some sort of thermal storage such as underfloor heating or night storage heaters such that they can optimise the tariff benefit of off peak electricity thus achieving 85% of sales on the SE12 low rate and the remaining units purchased at the high rate. Even with such systems it is likely that a customer will boost their heating during extreme weather conditions which coincides with GEL's peak load. Hence we assess that 5kW is added to GEL's peak load.

Electricity selling price on SE12 low rate 01/04/2009 to 01/04/2010 = 5.80p/unit
Electricity selling price on the SE12 peak rate 13.98p/unit
Electricity average costs 7.85p/unit

Gross Margin on electricity sold on SE12 low rate (5.80 – 7.85) x 10000/year x 0.85 = Loss £174/year
Gross Margin on electricity sold at standard rate (13.98 – 7.85) x 10000/year x 0.15 = Positive £92/year
Less estimated cost of providing peak electricity from item 1 above 5kW x £28.6/kW/year = £143/year
Estimated total lost per year = £225/year.

2.4.3 Super Economy 12 – Heat Pump

Again assume a 5kW input heat pump with a 3kW water heater backup supplying an underfloor wet central heating system.

Assume that the dwelling uses circa 5000 units per annum to meet its heating requirements.

For the purpose of this exercise we will assume that there is no attempt to optimise the heating system to take advantage of low rate electricity and thus only 50% of the electricity is taken at the low rate. As such it is highly likely that some or all of the load will be added to GEL's peak load.

Electricity selling price on SE12 low rate 01/04/2009 to 01/04/2010 = 5.80p/unit
Electricity selling price on the SE12 peak rate 13.98p/unit
Electricity average costs 7.85p/unit

Gross Margin on electricity sold at low rate (5.8– 7.85) x 5000/year x 0.5 = Loss of £51/year.
Gross Margin on electricity sold at normal rate (13.98 – 7.85) x 5000/year x 0.5 = Positive of £153/year.
Less estimated cost of providing peak electricity from item 1 above 8kW x £28.6/kW/year = £229/year
Estimated total lost per year = £127/year.

APPENDIX 2

Guernsey Gas Response to the OUR Consultation Paper 10/13 – November 2010

Full Explanation with regard to Guernsey Gas's concerns with regard to the OUR's investigation in relation to GEL's connection charges

Guernsey Gas's concerns with regard to the OUR's investigation in relation to GEL's connection charges

The following explanation was provided in GG's submission to the States of Guernsey Commerce & Employments Department's Review of Regulation.

GG and the OUR are aware that GEL has offered developers and consumers reduced charges for electricity connections on condition that they install electric heating systems. GG are of the opinion that this is in conflict with various States of Guernsey objective. For example The States of Guernsey's and OUR's objectives are declared in 'The Regulation of Utilities (Bailiwick of Guernsey) Law 2001' as follows:

> *- To protect the interests of consumers and other users in the Bailiwick in respect of the prices charged for, and the quality, service levels, permanence and variety of, utility services;*
>
> *- To ensure that utility activities are carried out in such a way as to best serve and contribute to the economic and social development and wellbeing of the Bailiwick;*
>
> *- To introduce, maintain and promote effective and sustainable competition in the provision of utility services in the Bailiwick, subject to any special or exclusive rights awarded to a licensee by the director general pursuant to States directions; and*

Also GG remain of the belief that this practice may be in breach of GEL's licence conditions. The OUR did respond to GG's complaints by conducting an investigation and publishing its findings. On the key point the OUR accepted GEL's methodology and assumptions with regard to their connection charges. The methodology is to the effect that:

Customers contribution = cost of connection – technical contribution – commercial contribution.

GEL explained the commercial contribution as "representing the contribution GEL makes where the new load has a major off peak element which improves the GEL's generation and network asset utilisation." GEL argued that the commercial contribution was justified on two grounds "customers contributing significant off peak demand do not contribute substantially to maximum demand and hence the need for additional investment in capacity, but do generate additional revenue; and providing discounts for new connections was common practice for all companies in the island's energy market."

GG do not disagree with the above methodology. However we question whether the assumptions made are applicable to typical electric heating systems. We cannot understand how the methodology can result in a lower customer contribution for a customer who installs a typical electric heating system. GEL's off peaks tariffs have/are trending below a cost reflective level. Hence our view is that customers contributing significant off peak demand will tend to produce a zero or negative margin for GEL thus should result in a zero or negative commercial contribution. Note – in the above explanation GEL talk of "additional revenue" GG would argue that to be financially justified GEL should assess the margin or profit.

Also GG would question what assumption GEL make with regard to the contribution electric heating systems add to the GEL maximum demand. Unless restrained in some way GG are of

the opinion that a typical electric heating system is likely to make a relatively significant contribution to the peak load. GEL's peak load already occurs at a time when heating is likely to be required, in cold weather early evening. GG's view is supported by GEL's own reports, for example GEL reported in the Guernsey Press that it had recorded a new record peak demand of 80.5 MW at 18:30 on the 4 January 2010, they were quoted as stating it was due to heating.

*Based on the above GG are of the view that including a predominantly off peak heating load should result in a **higher** not lower customer contribution as*

- *A larger load will require a higher capacity and presumably a more expensive network.*
- *The predominance of off peak sales is likely to have a negative financial impact upon GEL; and*
- *The heating load is likely to add to GEL's current peak load placing additional demands on generation and network.*

Hence GG believes that such loads are disoptimal which is completely contrary to GEL's views as published in OUR's findings.

Unfortunately OUR's findings did not provide sufficient detail in order to address the above anomaly. OUR sought fit not to reveal any further details with regard to the calculations as requested by GG as it considered the information to be confidential and did not believe that it would assist GG in assessing the DG's decision.

APPENDIX 3

Guernsey Gas Response to the OUR Consultation Paper 10/13 – November 2010

A sample report indicating that electric heating in France has a carbon intensity of 500 – 600g of CO_2/kWh

And a pictorial representation explaining carbon dioxide emissions associated with marginal electricity

Focus 02 Electric heating: not so virtuous!

"We have a serious problem with electric heating in France. It was a mistake to develop it. One could think it was possible to do it because we have a very large nuclear fleet, but then it leads to peaks of electric consumption in winter time. [...] It is French folly to aim for transforming electricity into heat, a nonsense from the point of view of thermodynamics."

The 'all electric, all nuclear' wave on which France had ridden since the 1970s in the name of its 'energy independence', and which had led to extensive use of electric heating based on joule effect, received a sizeable new justification from the mid-1990s in the shape of nuclear power's more or less complete lack of emissions of CO_2, the main greenhouse gas. It was an excellent sales pitch for the heating salesmen and EDF alike.

However, matters were not so simple. Even in France, where nearly 80% of electricity is nuclear-generated, electric heating requires the use of fossil-fuel-generated electricity with its attendant CO_2 emissions – in winter, the peak heating demand is very often met by fossil-fuel generation. As a result, the Environment and Energy Management Agency (Agence de l'environnement et de la maîtrise de l'énergie – ADEME) and EDF announced average emissions of 180g per kilowatt hour for domestic electric heating over the period 2000–04. This represents a modest saving by comparison with modern gas heating (<10%), although a more significant one as compared with oil heating (40%), as Table 8 shows.

Table 8 Comparison of the CO_2 emissions of different methods of heating in France not involving electricity exchanges with European countries

Method of heating	CO_2 emissions per kWh	Δ compared to electricity
Electric heating in France supplied by the *national* generating fleet*	180 g	—
Natural gas*	195 g	+8%
Domestic heating oil*	310 g	+72%

*Assumptions: electric heating efficiency = 1, gas boiler efficiency = 0.95, oil boiler efficiency = 0.85.

Source: ADEME / EDF, 2005

In short, a France self-sufficient in electricity shows a saving in CO_2 emissions, albeit a modest one. **But what about the present situation, now that Europe has pressed ahead with its internal electricity market?**

The electricity consumed by domestic heating in France is not only French: it is European. Moment by moment, the network manager finds the cheapest available electricity on the European market. ADEME and RTE, the Gestionnaire du Réseau de Transport d'Electricité (operator of the national electric grid), which manages France's electricity network, have calculated the effects of the opening of this market on CO_2 levels per kilowatt hour of electric heating, as shown in Table 9.

Table 9 Comparison of the CO_2 emissions of different methods of heating in France in the context of the European electricity market

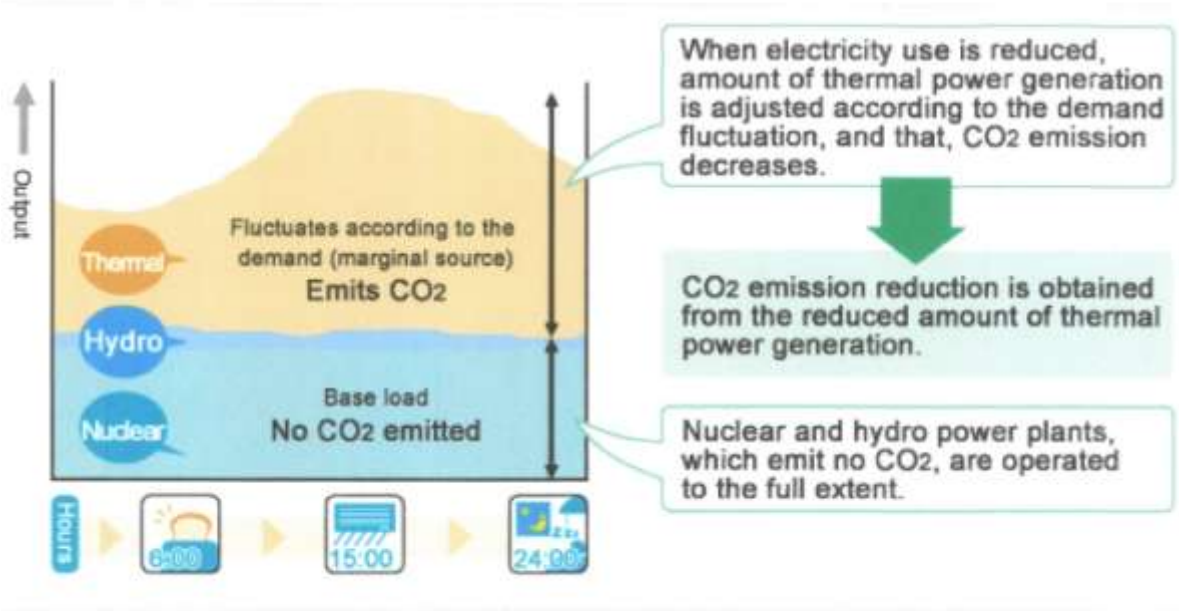
Method of heating	CO_2 emissions per kWh	Δ compared to electricity
Electric heating in France supplied by the *European* generating fleet	500 to 600 g	—
Natural gas	195 g	-60% to -67%
Domestic heating oil	310 g	-38% to -48%

Source: ADEME / RTE, 2007

The table shows that, in the context of the European market, electric heating becomes a catastrophe in CO_2 emission terms – with emissions two-and-a-half to three times as bad as they would have been if gas boilers rather than convection heaters had been installed in our houses! Installing heat pumps does admittedly bring an improvement in CO_2 levels. But such pumps must achieve an average annual performance coefficient of a factor of three to achieve performance comparable to gas heating, which is not the case for the air/air pumps which are at present the most widely sold.

Marginal Electricity explained

A typical grid system



Source http://www.osakagas.co.jp/csr_e/charter02/co2.html

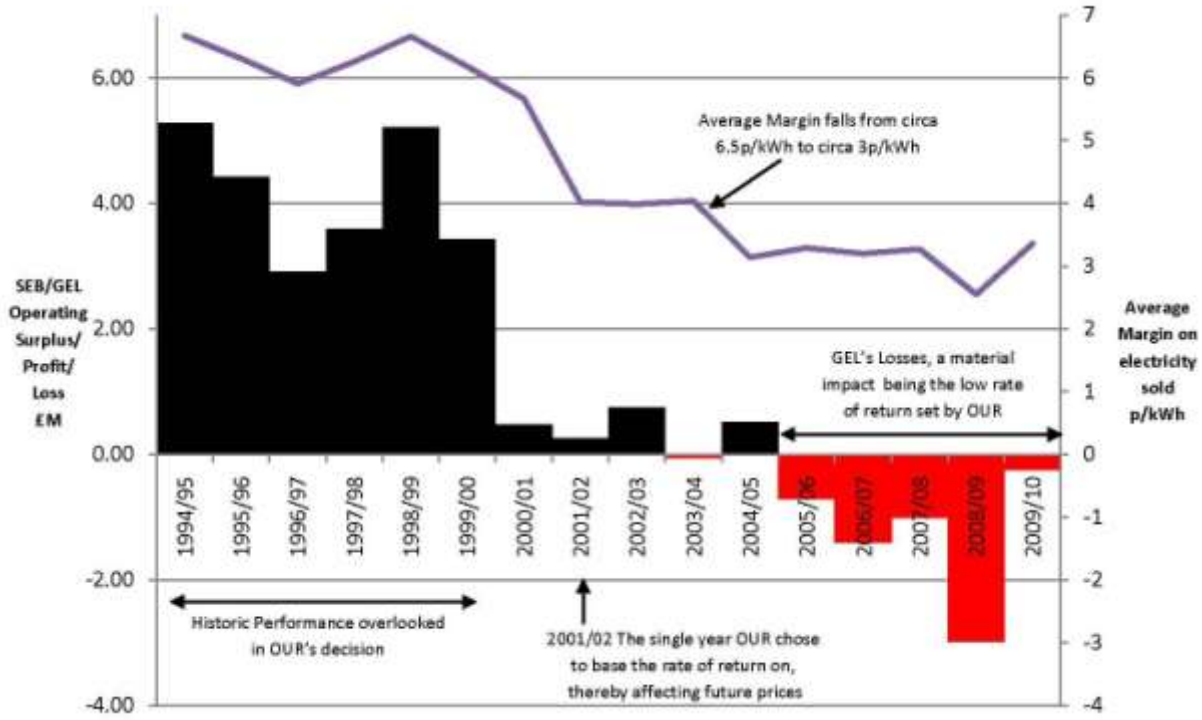
APPENDIX 4

Guernsey Gas Response to the OUR Consultation Paper 10/13 – November 2010

An explanation of the circumstances immediately before GEL were commercialised

The circumstances surrounding OUR's assessment of the rate of return on pre commercialisation assets for GEL

The following chart shows the SEB/GEL's operating surplus/profit and loss over the last 15 years. It also shows the average margin made per kWh sold by the SEB/GEL over the same period.



The graph is useful in illustrating the circumstances at the time that the rate of return was set at 0.549%. As one can see before commercialisation the SEB achieved annual operating profits/surpluses of £3M to £5M per annum. A major influence with regard to this financial performance is of course the average margin made on the electricity sold i.e. the difference between the average selling price and the average cost of electricity. As can be seen in the approach to commercialisation the average margin made on electricity decreased sharply from circa 6.5p/unit to circa 4.0p/unit as a direct result of the cost of electricity increasing and selling prices being held. This reduced the SEB's operating surplus to only £255k in 2001/02. It is accepted regulatory practice in a business model such as GEL that changes in the raw cost of electricity are passed through to customers. This was the case pre-commercialisation and OUR accept that it is the case post commercialisation. Around the time of the commercialisation process the SEB were slow to react to the increase in electricity costs, it was reported that they were considering a price increase in 2002, however the OUR imposed a price freeze upon them.

In OUR's final price control decision for GEL February 2007 they based the rate of return for pre-commercialisation assets on a single year, the reporting period 2001/02. As can be seen from the graph above this was not a representative year. In selecting this year the OUR were

able to establish a rate of return at an untypically low level that has and will continue to suppress electricity tariffs and impact upon GEL's finances for years to come. At the time the OUR rejected Guernsey Gas and GEL's requests to take a more representative timeframe over which to assess the return. GEL proposed a 5-year average which would result in a return of 4.3% when taking into account exceptional items. In the price control document the OUR seemed to overlook and dismiss Guernsey Gas and GEL's comments and stated *"no respondent has been able to provide objective evidence to support arguments for a time period over which surpluses earned by the States Electricity Board prior to commercialisation could provide a more appropriate basis for the return on RAB (historic) than that proposed by the IEP"*. The OUR supported the decision of taking this single year as it was recommended by the Independent Expert Panel. The OUR and the Independent Expert Panel refer to a political direction to the effect that *commercialisation in itself should not lead to a change in average bills* to support their position. Whilst all involved could agree with the sentiment of this political direction we feel that the basis for this decision was not properly defended and needs to be reviewed. We would question if

- The OUR and the Independent Expert Panel's absolute and specific interpretation was as intended by the States of Guernsey i.e. to base GEL's future tariffs on a single point in time.

- When the political direction was being formed if the OUR explained to the States of Guernsey the prevailing circumstances and how it was going to interpret the direction.

- Given the current circumstances and a change in government that a different approach would be recommended by the States of Guernsey. The adverse impact of OUR's original decision are now apparent, GEL's poor financial performance, declining cash balance and inability to provide a material return to its shareholder. Other adverse impacts have resulted associated with competition issues and setting false price signals in the market creating a demand for electricity resulting in the need for GEL to make significant investments in generation capacity based upon false economics.

We do not believe that the issue of setting a return on pre-commercialisation assets was or has been adequately addressed. We believe that OUR's latest approach of not revisiting this aspect is wrong; it is not in keeping with the good regulatory traits of openness and transparency.