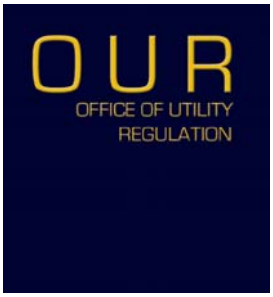

Office of Utility Regulation

Guernsey Electricity Limited Price Control

Consultation Paper

Document No: OUR 10/13 **November 2010**

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CONTENTS

1. Introduction

The current price control[1] for Guernsey Electricity is due to expire on 31st March 2011 and a new control will therefore commence from 1st April 2011. This will be the fourth price control period for Guernsey Electricity Limited (GEL) since its commercialization in 2002. This paper sets out those issues under consideration, inviting comment from stakeholders, and the process which the DG will follow in arriving at a new price control for Guernsey Electricity.

Since the last price control there have been periods of colder than normal weather, and certain energy intensive services have also grown, with significant increases in electricity demand as a consequence. This among other factors has led to GEL substantially rethinking its investment programme and it proposes to bring forward investment in new generation capacity. This will clearly have an impact on customers' bills.

The DG has also raised the issue of ring-fencing the company's "save to spend" reserve – the money which is used fund the business' investment programme and this is addressed as an issue in its own right in the consultation.

Significant volatility in international energy market prices, a weakened sterling and rising input costs mean that the pass-through mechanism agreed with GEL will also need to be adapted given these features are expected to continue into the future.

There is uncertainty around a number of significant factors (not least the level of expected increase in demand and the extent of the related investment programme in new generation capacity) the DG is considering keeping to a four year mechanism for this price review and to seek ways to improve the longevity and stability of the price control regime. This is something that all the stakeholders should agree is in their long term interests; it is the overall stability of the price control regime rather than the duration of individual price controls that should be key to this.

In the past, OUR has carried out detailed scrutiny of the efficiency of GEL and its operations. However, for this review the DG is minded to step back from some of this detail. This will reduce the regulatory burden on GEL, making use of past efficiency studies. A more high level approach is also proposed for regulatory oversight of capital investment.

Following lengthy and productive discussions with GEL, the DG is inclined to allow GEL's investment programme for this price review as proposed, but with incentives to beat the plan costs and on the basis that customers will fund investments as they deliver benefits. This means that rather than argue the detail of the investment programme and set benchmark costs - which would likely require OUR to duplicate GEL's procurement process, at significant cost and for potentially little benefit –the onus will be placed on the company to demonstrate that its investment has been delivered effectively and efficiently and is delivering benefits to customers.

[1] OUR 07/04

As well as rewards for excellent performance by GEL, there will be penalties for poor performance. The business may not be remunerated for the full cost of unnecessary or inefficient investments and ultimately these would be borne by the shareholder. The intention is that there should be a strong shareholder incentive on management to reduce costs, improve efficiency and invest appropriately.

Following responses to this consultation and the submission of information required to complete the price control, the OUR will publish a draft decision, prior to issuing a final decision regarding any price changes that may take place from 1st April 2011.

This consultative document does not constitute legal, commercial or technical advice. The Director General is not bound by it. The consultation is without prejudice to the legal position of the Director General or his rights and duties to regulate the market generally.

2. Structure of the Paper

2.1. Structure

The rest of this paper is structured as follows:

Section 3: summarises the legal framework of this price control;
Section 4: discusses the principles underpinning GEL's price control;
Section 5: sets out key issues for this price control;
Section 6: summarises the next steps in the process;

2.2. Comments

Interested parties are invited to submit comments in writing on the matters set out in this consultation paper to the following address:

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

Email: info@regutil.gg

All comments should be clearly marked "***Response to OUR Consultation on Guernsey Electricity Price Control***" and should arrive before **5pm on 3rd December 2010**.

In line with the policy set out in Document OUR 05/28 – "*Regulation in Guernsey; Revised Consultation Procedures*", the DG intends to make any comments received available on the OUR website. Any material that is confidential should be put in a separate annex and clearly marked so that it can be kept confidential. However, the DG regrets that he is not in a position to respond individually to the responses to this consultation. Any comments received will be taken into account by the DG in informing a draft decision for publication in January 2011, with the aim of announcing a final decision in 2011.

3. Licensing Regime and Legislative Framework

3.1. Overview

The legislative framework underpinning the regulatory regime for the electricity sector is governed by:

- The Regulation of Utilities (Bailiwick of Guernsey) Law, 2001 (the "Regulation Law");
- The Electricity (Guernsey) Law, 2001 (the "Electricity Law");
- The Electricity (Guernsey) Law 2001 (Commencement and Amendment) Ordinance 2001; and
- States Directions to the DG adopted by the States of Guernsey[2].

The Electricity Law defines the three activities that constitute the electricity supply chain under the current legislative framework. These are:

- the generation of electricity;
- the conveyance of electricity across the electricity network; and
- the supply of electricity directly to homes and businesses.

These terms are defined in the Electricity Law and govern the current licensing framework which is outlined below.

3.2. Current Licensing Regime

The States of Guernsey has issued a number of States Directions to the DG in relation to the licensing of electricity activities in Guernsey. In accordance with those Directions the DG issued the first licences for electricity generation, conveyance and supply to the incumbent electricity company – GEL - on 1st February 2002.

The market for generating electricity is, in principle, open to competition. In terms of conveyance, under the current regime no other operator can lay electricity cables until 2012 and anyone generating electricity must therefore use the existing electricity network of GEL to convey that electricity from their generation plant to customers. Until 2012 only GEL may sell electricity to end customers.

3.3. Legislative Background to Price Regulation

Section 5(1) of the Electricity (Guernsey) Law, 2001, provides that the DG may include in licences such conditions as he considers necessary to carry out his functions. The Law specifically provides that such conditions can include (but are not limited to) conditions regulating the price premiums and discounts that may be charged or (as the case may be) allowed by a licensee which has a dominant position[3] in a relevant market[4].

[2] Billet d'Etat No.XVIII 2001, pages 1263-1264 and Billet d'Etat I of 2003, p.55

[3] Condition 5(1)(f) of the Electricity (Guernsey) Law, 2001.

[4] Section 22 of "The Regulation of Utilities (Bailiwick of Guernsey) Law, 2001 states that:
"A dominant position in relation to a relevant market shall be construed as it would be in the United Kingdom under the Competition Act 1998, but with the substitution, where appropriate, of references to the Bailiwick for references to the United Kingdom."

In accordance with these provisions, the "Electricity Licence Conditions" include the following condition 20.2:

"The DG may determine the maximum level of charges the Licensee may apply within a relevant market in which the Licensee has been found to be dominant. A determination may;

(a) provide for the overall limit to apply to such charges;
(b) restrict increases in any such charges or to require reductions in them whether by reference to any formula or otherwise; and
(c) provide for different limits to apply in relation to different periods of time falling within the periods to which any determination applies."

This condition allows the DG to regulate the prices that a licensee charges for its electricity services in a way and for a period that he deems appropriate, provided the licensee has a dominant position in the relevant market.

As set out in a previous OUR document (OUR03/07), Guernsey's retail electricity market currently possesses a monopolist/dominant operator that also has a dominant position throughout the electricity supply chain. This position of economic strength is unlikely to change in the near to medium term. In this context it is essential that the social objective of maintaining the affordability of electricity provision, thus underpinning economic growth, is safeguarded. In the absence of competition, price control is widely accepted as the most appropriate tool to achieve this.

The OUR also wishes to highlight the States guidance to T&R at the time of commercialisation of GEL. This guidance stated, inter alia, that:

4. Financial performance targets for Guernsey Electricity Limited shall be set so as to:

1. *deliver improved efficiency in fulfilling the requirements of the Public Supply Obligation imposed under the regulatory regime whilst drawing 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; and*
2. *achieve as soon as is practicable an appropriate commercial return on the resources employed in the provision of other services.*

The Competition Act 1998 utilises the definition of dominance that has developed under European Community Competition Law.

4. Principles of GEL's Price Control

4.1. Form

The current price control is based on an incentive regulation form of price control (i.e. RPI-X or RPI+Y) on GEL. This is a standard form of price regulation and can provide the mechanism for proper incentives for GEL to run its business efficiently while offering consumers an appropriate level of protection where there is a monopoly provider of their service.

Form of price control*: The DG wishes to consult on whether an RPI-X form of price control remains an appropriate approach to the regulation of GEL's prices or whether an alternative is more appropriate?*

4.2. Scope

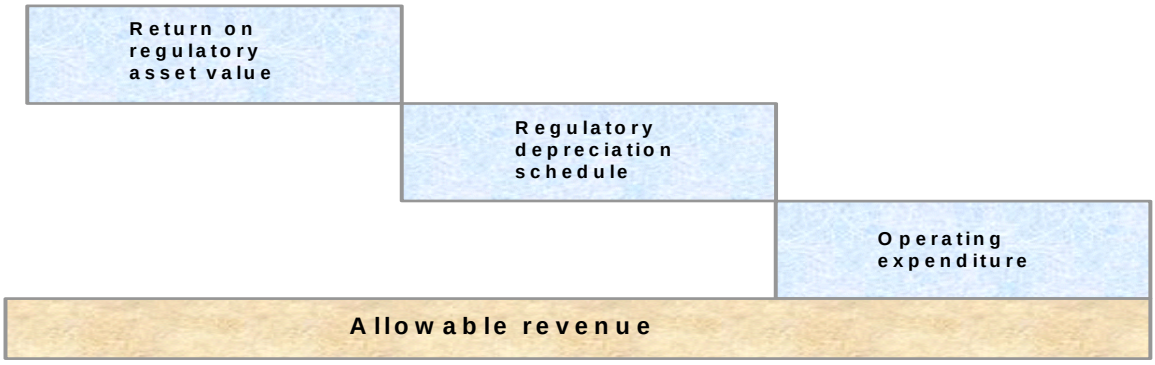
Annex A lists the tariffs currently charged by GEL. Section 5 raises the potential for undue cross subsidies between different customers. If the need for change were to arise in this area, it may be the case that the tariff categories might alter over the course of the price control and views are sought on this issue in Section 5.

Scope of price control *: The DG wishes to confirm that the above are the relevant tariffs on which the proposed price control of GEL's core business is based over the next control period?*

4.3. Price control Structure, Financeability & Save to Spend

4.3.1. Structure

A price control can take the following general structure, where allowable revenue is the sum of the amounts under each of the categories, where the allowable revenue is based on a maximum cap on electricity tariffs.



4.3.2. Financeability

It is normal regulatory practice to assess whether the regulated business has adequate funds to efficiently carry out the necessary functions of the business. Given the manner in which GEL is funded is not through debt or equity but through the Save-to-Spend approach, the key variable on which to assess GEL's financial viability appears to be the level of cash in the Save to Spend reserve.

Financeability:
Respondents are asked to comment on the above view, suggesting alternatives and reasons for these.

4.3.3. Save-to-Spend fund

GEL's core capex funding is met through a States of Guernsey policy referred to as 'Save to Spend'. This was most recently reaffirmed in Billet D'État X, 2006.

Publicly-available reports[5] have emphasised to the shareholder, represented by Treasury & Resources, that these funds should be clearly designated and identifiable in terms of the purpose for which they were gathered so that they are not used to offset the efficiency pressures of a price control or spent on activities for which they were not intended.

This reflects the well understood principle that the regulatory system is not in place to set tariffs that guarantee profitability of the business. In the current context this means the regulatory control is not intended to ensure the Save to Spend fund is always at levels required irrespective of how those funds are used. Clearly, there is no hard budget constraint in these circumstances.

The OUR has previously sought assurances from GEL that adequate checks are in place to prevent the business drawing down funds from the Save-to-Spend fund for purposes other than its core capex needs as approved by the DG for a given price control. The information available to the DG does not suggest that transparent and appropriate mechanisms are in place to ensure adequate control on how the 'Save to Spend' fund is used for the purpose of regulatory approved capex. There is no separate fund established to distinguish Save to Spend funds from other GEL's deposits held with Treasury, for example. As an indication of the type of withdrawals from the fund which the DG is concerned with, in 2008/09 GEL spent funds on non-core areas such as £0.7m on a sea-bed survey associated with GEL's interest in tidal energy and £0.4m on a property located close to the power station.

In the absence of transparent and effective checks, in the interests of protecting consumers, the DG proposes to set out an approach where the Save to Spend fund is separately identifiable and use his regulatory powers to ring fence these funds to ensure customers' interests are appropriately protected in this area. The OUR is therefore considering the introduction of a ring-fencing arrangement around the Save to Spend fund to safeguard consumers' interests and ensure this money is only spent for the purposes it was intended. It should be clearly noted that this proposal would not prevent GEL from making commercial decisions any company might wish to pursue. Investment in non-core areas is a matter for the Board and its shareholder to consider. The DG's primary concern is ensuring that funding provided by consumers through electricity tariffs is maintained and deployed for the purposes it was justified.

[5] Mott MacDonald, Generation Investment Options for Guernsey, December 2004 and Independent Expert Panel Report, 2006.

Since separate funds have not historically been maintained, in order to establish what the balance should be in the Save to Spend fund at the commencement of the next price control, it is noted that on the 1st of February 2002 GEL became a commercial States Trading Company operating under the Electricity (Guernsey) Law 2001. At the time of its establishment, initial estimates suggest GEL inherited a cash balance of £7.7m which was placed on deposit with the States Treasury. It is the OUR's view that this balance represented a cash reserve exclusively for the purpose of enabling GEL to invest in its core infrastructure and for working capital purposes. As a States Department there would not appear to be a strong case that these funds represented retained profits for the shareholder as the shareholder role was only in place after commercialisation.

The assessment below is based on GEL's non-core business being excluded since it is not regulated by the OUR, and all depreciation and capital expenditure relates only to core spend as set out by GEL in its annual regulatory accounts submissions. Interest rates are derived from those reported each year in GEL's annual financial accounts. Timing issues related to the passthrough mechanisms can cause the balance to deviate from actual where the save-to-spend fund is drawn upon to meet shortfalls or excesses due to the timing of tariff changes during a price control. For example, in April 2010 GEL raised tariffs by 8.5% through the passthrough mechanism, to compensate for a £10.5m shortfall which will only be recovered over 2010/11. Whether the save-to-spend fund is the appropriate source of funding in such cases is a matter for this consultation. The basis for the calculations set out in Table 2 below is as follows:

Closing Balance (pre interest) = Opening Balance
+ Core Depreciation Allowance
– Core Capital Expenditure

Closing Balance = Closing Balance (pre interest) +
Interest rate x [Opening Balance+Closing Balance(pre interest)] /2

Table 2
Estimated Save to Spend Fund

Year	Opening Balance: (£m)	Depreciation (£m)	Capital Expenditure (£m)	Closing Balance: (£m)	Interest rate (%)	Interest for year (£m)
2002-03	7.7	5.6	2.7	10.6	4.55%	0.4
2003-04	11.0	5.8	3.4	13.5	3.96%	0.5
2004-05	14.0	5.0	2.7	16.3	4.93%	0.7
2005-06	17.0	4.5	3.2	18.3	4.94%	0.9
2006-07	19.2	4.5	3.8	19.8	5.30%	1.0
2007-08	20.9	4.9	6.3	19.5	6.39%	1.3
2008-09	20.8	5.0	5.0	20.8	5.83%	1.2
2009-10	22.0	5.0	5.4	21.5	1.38%	0.3
2010-11	21.8	n/a	n/a	n/a	n/a	n/a

Source: Regulatory Accounts and Annual Financial Accounts of GEL
Note: Interest rate based on GEL Annual Accounts

Annual depreciation is added to the Save to Spend Fund each year. As a non-cash item, the annual depreciation charge results in the profit for a given year being lower than would otherwise be the case and a corresponding increase in the cash balances available. This increase in cash is then available to fund capital investment in the future and represents a provision for future capital expenditure to replace existing assets when they reach the end of their useful asset life. The capital expenditure in each year is deducted from the Save to Spend Fund as it is a use of the fund. Core Depreciation and Core Capital Expenditure are taken from GEL's annual regulatory accounts. It can be argued that interest should be added to the Save to Spend reserve and this has been estimated at the rate achieved by GEL in each financial year as reported in its financial accounts.

The above approach is a simple and pragmatic solution to the estimation of the balance on the Save to Spend Fund. On the basis of the above an estimate of the balance on the Save to Spend Fund of £21.8m is indicated as at the beginning of April 2010. This balance will alter over 2010/11 given capex needs over this year and a final figure is yet to be identified.

Save to Spend (1):
Do respondents consider there is a need for regulatory intervention given the issues set out above?

Save to Spend (2):
Do respondents agree that the approach and methodology set out above is likely to closely approximate the level of the Save to Spend Fund as if it had been separately maintained throughout the period? If respondents do not agree please set out your reasons and alternative recommendations.

Save to Spend (3):
Do respondents consider that the interest earned over the period since commercialisation should be added to the Save to Spend Fund or not? Please give your reasons.

4.4. Monitoring and Compliance

The aim of compliance procedures is to allow GEL to demonstrate that it has met its obligations under the price control, with the following objectives:

- to minimise the resources required for compliance and monitoring, both from GEL and the OUR; and
- to ensure maximum transparency and certainty for GEL to make its pricing decisions.

Currently compliance with the maximum level of tariffs set by GEL's price control involves GEL ensuring its tariffs do not exceed the levels set by the DG. It is proposed that the same approach remains.

Monitoring & Compliance*: Respondents are asked to comment on the above view, suggesting alternatives and reasons for these.*

5. Price Control Framework

In considering a further price control for GEL, a number of key issues need to be considered and addressed each of which is discussed further below.
These include:

- Capital Expenditure
- Cost reflective tariffs
- Energy policy related issues
- Operating costs
- Incentive framework
- Rate of return
- Period of control
- Pass-through

5.1. Capital Expenditure

GEL's October 2009 request for a price control reopener related specifically to the issue of pass-through costs. However, the submission included actual and forecast financials for the whole business which are assessed below. In particular, GEL submitted a capital expenditure plan covering the period 2007/08 to 2018/19, amounting to some £39m over the next four years and £81m over eight years.

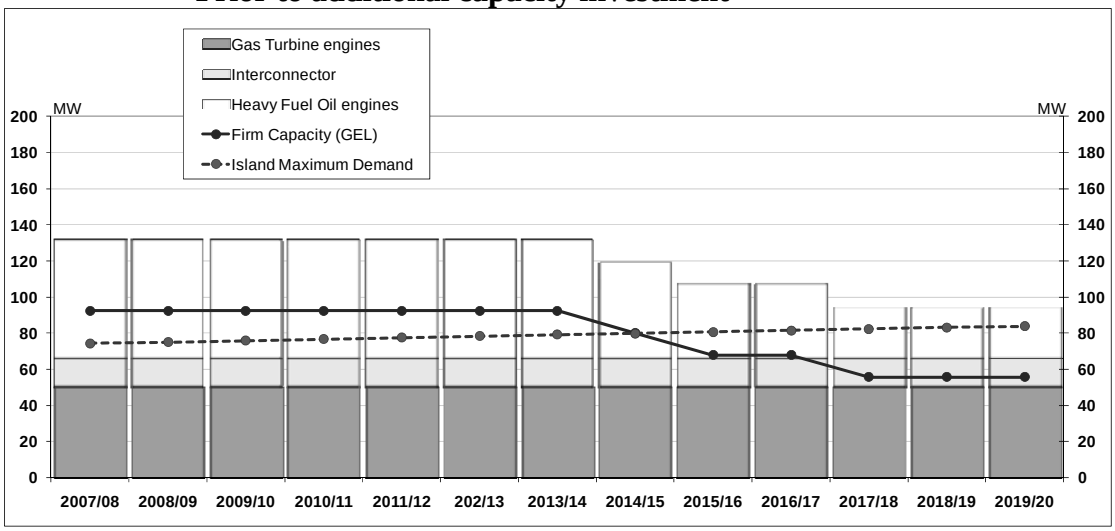
The OUR's advisors, PB Power, commenced a review of these capital expenditure proposals contained in this submission in November 2009. A draft report was presented to GEL on 1st February 2010 and GEL has commented on that draft. The OUR and its advisors also met with GEL to discuss the response and, following further receipt of evidence and a series of exchanges of information over several months, PB Power submitted its final report in July 2010. This report was provided to GEL on a confidential basis and that assessment will inform the next price control (EPC4) commencing April 2011. Key aspects of that assessment are highlighted in the discussion below.

5.1.1. 2007 Price Control (EPC3)

The maximum demand GEL forecast for the current price control period was assumed to rise from 74MW in 2007/08 to 77MW in 2010/11, with a maximum demand of 81MW predicted for 2015/16. Figure 1 below illustrates that despite having enough generation capacity in total, Guernsey would have had insufficient capacity to meet the security of supply criterion since firm capacity[6] would be below maximum demand by 2015/16.

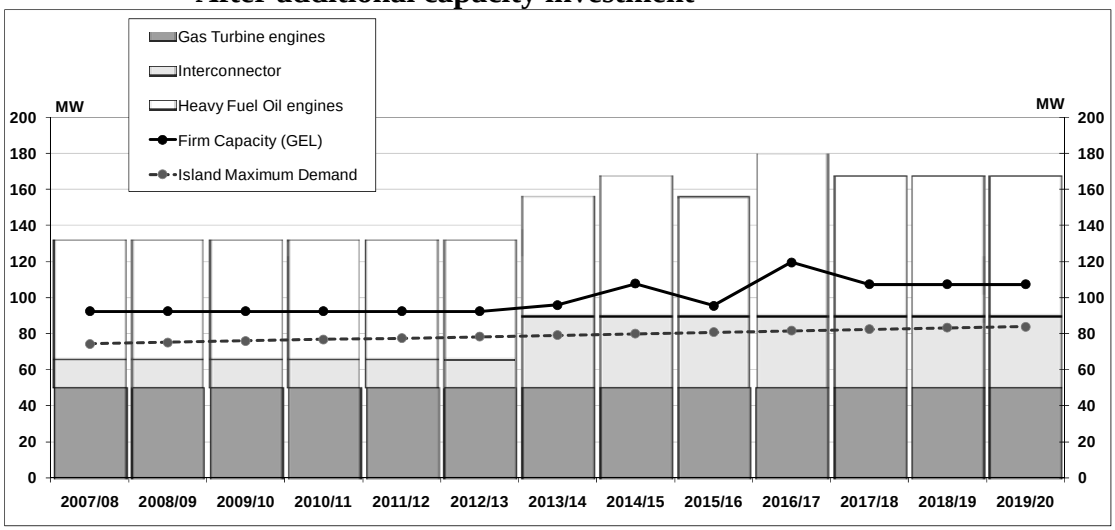
[6] i.e. in the event of failure of the two largest sources of electricity, the remaining (firm) capacity would fall below the island's maximum demand

Figure 1: GEL Generation capacity 2007-2019, EPC3 submission Prior to additional capacity investment



As a result, generation capacity investment was planned to address this shortfall in GEL's submission to EPC3. The timing of these investments is graphed in Figure 2.

Figure 2: GEL Generation capacity 2007-2019, EPC3 submission After additional capacity investment



Given the demand forecast in 2006, GEL had intended to retire three 12.2MW diesel engines in 2014/15, 2015/16 and 2017/18 respectively, based on an assumed operating life of 35 years. Replacement generation was to be provided from three separate investment projects up to 2016/17:

- **2013/14** – Increased interconnector capacity would lift the existing maximum entitlement through the Guernsey to Jersey interconnector from 16MW to 40MW through the additional contractual entitlement of 24MW at a cost of £14.4m.
- **2014/15** - GEL's generation plan was for 3x8MW engines to be installed, raising on-island capacity by 24MW at a cost of £11.6m.
- **2016/17** - With a further 3x8MW installation providing an additional 24MW for the island's on-island capacity at a cost of £16.4m.

5.1.2. 2009 GEL submission

GEL's October 2009 submission presented a significantly revised forecast of higher future growth in maximum demand. This showed maximum demand going from 72MW in 2007/08 to 85MW in 2010/11, rising to 99MW in 2015/16, resulting in a revised generation capex proposal up to 2016/17 as follows:

- **2012/13** – A generation plan to install an additional diesel generator raising the on-island capacity by 18MW at a cost of £11.8m
- **2013/14** – Increased capacity to lift the existing maximum entitlement through the Guernsey to Jersey interconnector from 16MW to 40MW through an additional contractual entitlement, with cost revised upwards to £15.8m.
- The replacement of HFO engines was postponed to 2019/20.

In terms of the forecast itself, the scale of the change in maximum demand has potential implications for the scale of additional generation capacity required to match this growth, as well as the additional capacity buffer needed to support the island's security of supply policy. In Figure 3 below, the revised total capex profile is compared to that on which the current control is based. This shows that over the short and medium term the cost of the investment sought by GEL would rise substantially.

Figure 3: Comparison between EPC3 capex and new proposed capex

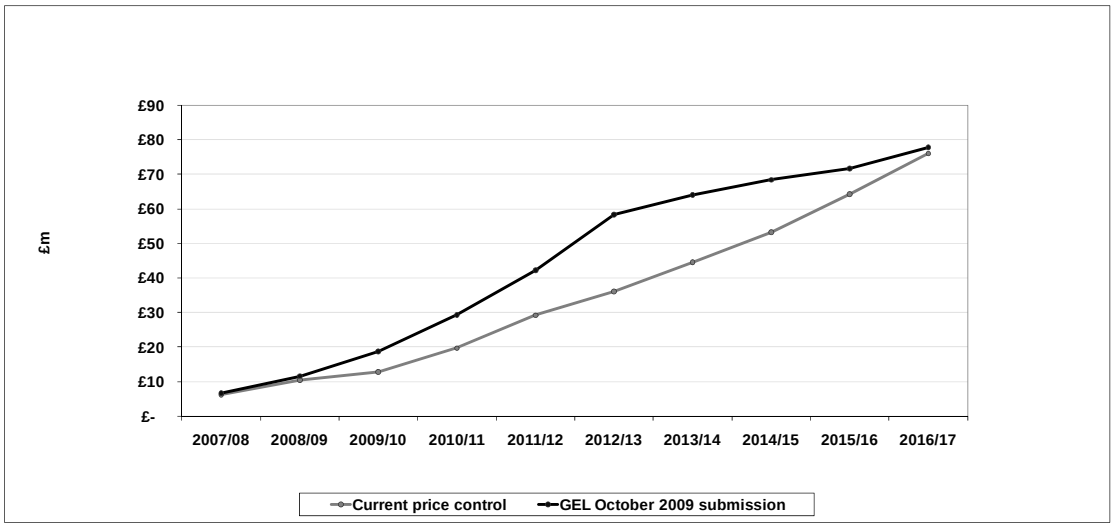
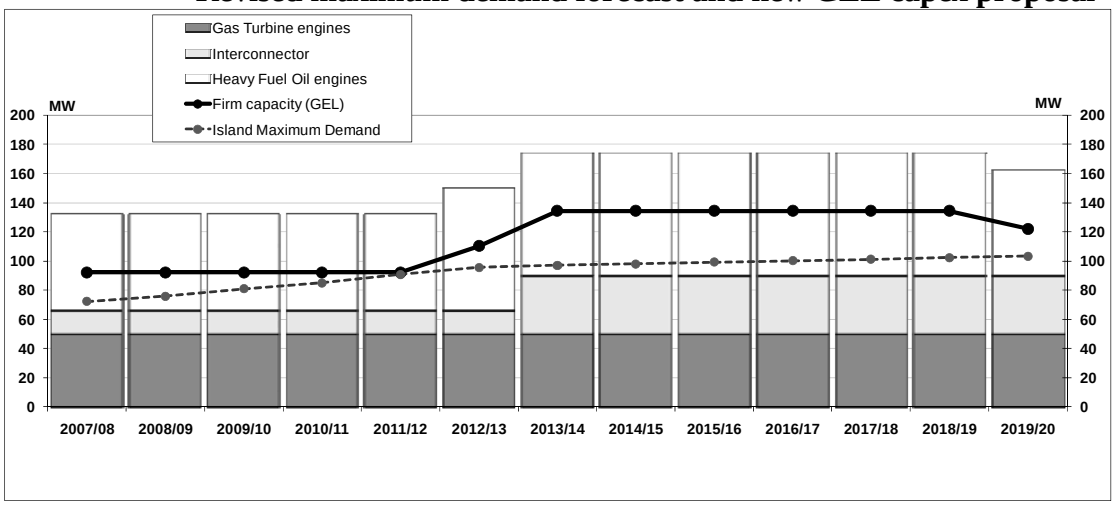


Figure 4 below illustrates the capacity implications of GEL's revised capital investment proposal in the next price control (EPC4) based on the revised forecast of maximum demand and extension of the HFO plant life by a further five years.

Figure 4: GEL Generation capacity, 2007-2019, EPC4 submission Revised maximum demand forecast and new GEL capex proposal



The OUR has discussed three areas of concern with GEL on its capex proposals. These are: a) reliance on only maximum demand forecasts, b) the view taken on firm capacity and c) the probability GEL associates with various scenarios that informed its generation capex proposals.

In terms of a critique of GEL's capex proposals, issues around exclusive reliance on its maximum demand forecasting have been raised with GEL given that throughput is a key variable that should also have been considered by GEL when deciding on the nature of engines required. In addition to the concerns around GEL's demand forecasting methodology, the approach by GEL to defining 'firm capacity' in the OUR's view appears overly conservative and inconsistent with that of a commercial business; certain anomalies of the current approach are identified below. GEL's risk associated with various combinations of failure in its generating engines and the interconnector also appear highly conservative. The OUR has also not been persuaded that proactive assessment of alternative mitigation action, other than further engine investment, that could be taken if these circumstances arose, were made in formulating these capex proposals.

Reliance on maximum demand forecasts - GEL's generation investment proposal reviewed by PB Power was supported by a forecast of maximum demand. In PB Power's view, new investment plans should also have taken adequate account of throughput factors, not only maximum demand. This aspect is identified as a significant weakness by PB Power who argue that such an approach is the norm for the development of future generation investment plans such as those proposed by GEL. PB Power also raises concerns with the forecasting methodology itself where extrapolation techniques appear less robust than that of, for example, Mott MacDonald in its review on behalf of Commerce and Employment in 2004[7].

PB Power's underlying concern is that while maximum demand informs the scale of capacity necessary, drivers of that growth as well as an understanding of the contributors to growth in throughput should also have informed decisions as to the

[7] 'Generation Investment Options for Guernsey – Final Report', December 2004, Mott MacDonald.

nature of capacity needed. The issue here is that where sustained increases in throughput throughout the year are driving the increase in maximum demand the nature of engines needed can be quite different to those only needed to meet short term spikes in demand during the coldest periods of the year.

Approach to defining 'firm capacity' - The 'N-2' Policy is a long established and accepted part of the regulatory framework which is taken into account in setting GEL's price control, in particular the level of the Save-to-Spend fund. The Resolution in the Report considered by the States in November 2005, which is the most recent, states:
"*To confirm their commitment to the existing policy of retaining sufficient sources of electricity to meet requirements, in any circumstances where two such sources (on-Island generators or the CIEG cable link to France) were unavailable at the same time (the n-2 policy)".*

However, the current application of the N-2 policy by GEL leads to unforeseen consequences that are now apparent when examining the basis for the capex proposals. These are:

1. The need for baseload generation capacity scaled to cater for the unavailability of backup engines. This means the capacity of the two backup generation sources now effectively dictates how much additional baseload generation is needed when the converse appears a more reasonable position for a commercial business to take.
2. In 2013/14 maximum demand is forecast to fall short of firm capacity by 5MW. Investment in interconnector capacity then raises the guaranteed capacity on the Guernsey to Jersey link to 40MW, with 24MW added to the existing 16MW at a cost of £15.8m. Because of the way N-2 is presently interpreted by GEL, this provides the island with only an additional 3.5MW of firm capacity which is insufficient to meet the 5MW shortfall despite an outlay of almost £15.8m forecast.
3. The peculiarity of the current approach is further illustrated by the fact that if GEL didn't acquire a contractual right to an additional 24MW and instead continued with a form of agreement with Jersey to access more than 16MW as it has done for several years already, the island's supply would in theory appear more secure when in practice there would be no difference.

The existing approach to defining 'firm capacity' risks considerable unnecessary expense to the customers of GEL. The driver of new generation capacity has arisen, not only from revised demand forecasts, but also as a consequence of having backup generators larger than any on-island or contractual interconnector capacity available - a situation the N-2 policy was unlikely to have foreseen. The anomaly of an application of the N-2 policy where an additional 24MW investment at a cost of £15.8m is insufficient to cover a 5MW shortfall raises questions of the approach.

Risk categorization – GEL's assessment of risk appears heavily based on avoiding the use of the existing backup engines. The rationale for this is the excessive cost of running these engines. The 'backup' generators have running costs that are excessive to the extent that GEL argues it is more cost effective to acquire new generation engines than risk running these backup engines for any extended period. This raises

the question why they were acquired and whether this key aspect featured in the financial case for these engines at the time they were acquired.

Capital Expenditure: (1) Comments are sought on the above assessment.

Capital Expenditure: (2) Comments are sought on whether there is merit in incentivizing GEL to pursue an alternative approach to the timing of its generation plant investment.

5.2. Cost reflective tariffs

Utility regulators are often faced with addressing cross subsidies in incumbent firms developed over long periods through priorities other than commercial or economic motives. Telecom exchange lines for example in many jurisdictions prior to commercialization will have been subsidized at the expense of call costs. The consequence of this practice was invariably to reduce demand for calls and contributed to under-funding of the fixed network.

In the electricity sector, demand for capacity and the consequent demand for backup capacity to meet the N-2 security of supply policy is borne by all customers more or less proportionate to their electricity consumption.

However, the level of security of supply is related to the potential cost of failure of supply. Different customers place a different level of importance on not losing supply, while the longer the interruption the greater the likely cost to all customers. In particular, the finance sector is invariably identified as a key reason why Guernsey has a high level of security of supply. It has been argued that other customers, in particular residential customers, may not place the same price on supply security as many businesses. A 'user pays' principle would suggest that residential customers should pay for only the level of security of supply they require and those businesses who value a higher standard of security should contribute more to those costs.

While the matter can be set out in theory, these are difficult issues to translate into monetary terms. The process is made more difficult by the fact that the Standard and Economy 12 tariffs are taken by both residential and business customers. In Guernsey, unlike many other jurisdictions, it is not possible to distinguish between residential and business customers on the basis of the tariffs they use.

The contribution by data hosting centres to the island's maximum demand, as well as the implication of planned installations to serve several major sites on the island has also brought more immediate challenges. The success of the gaming industry has seen significant benefits to the island's economy, but it has also contributed to a rise in baseload demand, which has then raised the maximum demand levels for the island on colder days of the year when consumption has peaked. As maximum demand has risen, with record maximum demand levels each year increasingly the norm, the N-2 security of supply policy requires even higher levels of capacity which must be paid for to satisfy the criterion.

The cost of additional capacity is such that currently all electricity customers face rises in electricity bills if the cost of the additional investment in generation capacity is not borne only by those users who require it. If undue cross-subsidisation between

users is a feature, this may require changes to the tariffs currently falling within the scope of this price control. In this case adjustments may be required that affect the scope of the price control currently.

Cross subsidization issues*: Comments are sought on whether GEL should be required to assess the extent to which different customers value different levels of security of supply. If so, how might the costs of security of supply be allocated between these different customers and over what timescale is such an adjustment reasonable?*

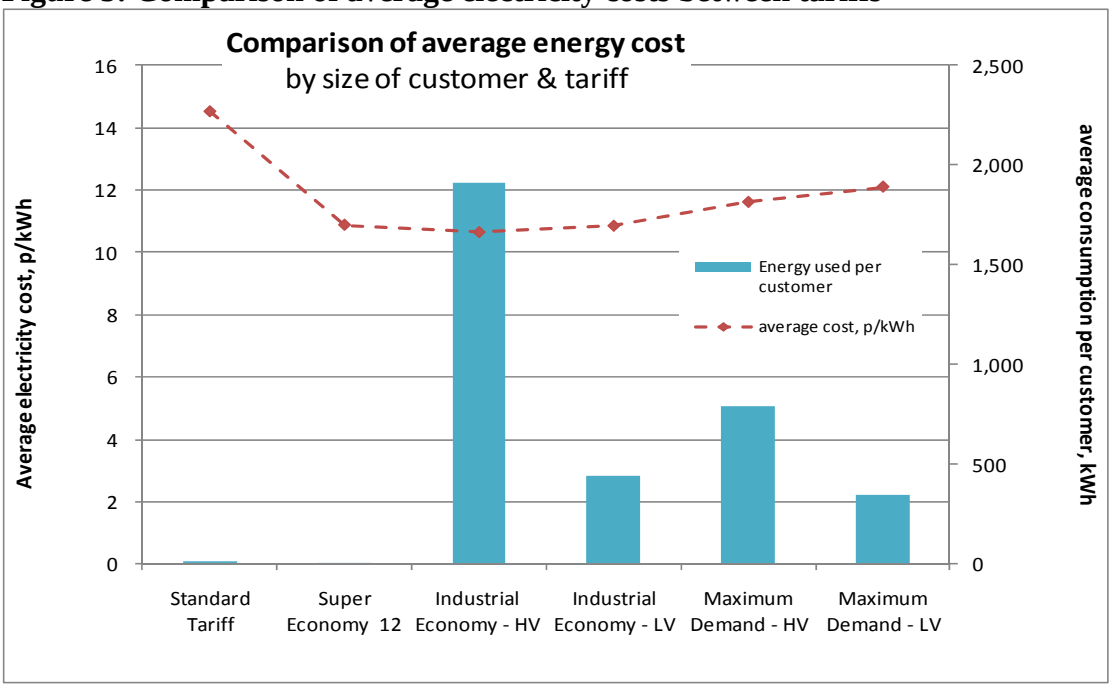
5.3. Differential prices based on volume consumption

The OUR has been requested by the Commerce and Employment Department to give the matter of differential prices based on volume consumption further consideration within the context of an electricity price review. This was initiated by the Energy Policy Group in a letter which stated the Group was uncomfortable for financial benefits to be given to high users of energy and requested a report from the OUR on this matter.

On the basis of the information available from GEL – both electricity tariffs and the latest information on the number of customers in each category – the DG is satisfied that at present there are no significant financial benefits given to large users of energy compared to smaller consumers.

In broad terms, the price paid by customers for their "average" unit of electricity is the same regardless of the size of customer. While there does appear to be a difference between the standard rate tariff and the average prices for other tariffs (eg, the "Super Economy 12" tariff), this can be explained by the lower charges for electricity in the off peak hours. That is, the issue is one of when electricity is used rather than the size of the customer. As of October 2010, there were approximately 6,000 domestic customers on standard tariffs, compared to around 18,000 Super Economy 12 customers.

Figure 5: Comparison of average electricity costs between tariffs



Given that customers on this tariff have the option to switch to an economy tariff if it suits them, the OUR's initial view is that this would not seem to be an issue that requires any specific attention at this time.

Volume discounts*: Comments are sought on whether volume based discounts are a material issue and if so how this might be addressed.*

5.4. Favouring the cable link as a low carbon emission source

Guernsey Electricity imports a substantial part of the electricity supplied to customers from France. At present, GEL's contract for this supply is with a major energy company, the majority of whose generation is from nuclear power stations. This means that the energy imported from France is largely been generated from nuclear power stations. It therefore has relatively low CO2 emissions compared to generation from thermal power stations which burn fossil fuels (coal, oil, natural gas).

GEL submitted to the Energy Policy Group a method indicating that the carbon intensity of their imported electricity was ~0.06kg/kWh and an equivalent figure for oil fired "on island" generation was roughly ten times as much at 0.67kg/kWh. This latter figure is similar to the figure for the typical mix of generation in the UK – where more CO2 intensive coal fired generation is offset by less CO2 intensive gas fired CCGTs, nuclear generation and renewables (principally wind turbines).

Alternative emission figures were presented by Guernsey Gas to the Energy Policy Group and to the OUR, suggesting emissions of between 0.38-0.6 kg of CO2 per kWh for imported electricity. On that basis, emissions from imported electricity would be closer to 80million kg of CO2 for the year, materially higher than might have been assumed by the Energy Policy Group. GGL have also suggested the GEL figure of 0.67 kg of CO2/kwh for on-island generated electricity is substantially lower than that

reported by Jersey Electricity. There is a large difference in these figures and one which would have a material impact on the debate about the costs and benefits of local (ie, on island) generation compared to electricity imports.

In reviewing the implications of favouring imported electricity, such a fundamental difference in the assumed carbon content needs to be resolved. The OUR will seek to do this by reference to accepted policy and in particular to current practice for the UK, as this is the jurisdiction under which Guernsey falls within the Kyoto Protocol. For example, Ofgem (the UK gas and electricity regulator) has set out guidelines on energy labeling by suppliers and disclosure of the fuel mix in accordance with EU directives and it would seem reasonable to adopt this approach.

Clearly this is a high profile area of discussion and there are important issues for customers which are affected by it – issues such as the security of energy supply, dependence on single sources of supply and of course the cost of electricity. In the absence of a clear energy policy from the States of Guernsey it is an area on which progress will be difficult, and is unlikely in the short term. An area of particular interest for all electricity customers and the OUR is what would be the economic consequences of decisions to favour minimising CO2 emissions, who would bear the cost of such an approach and who should determine the appropriate balance between costs and benefits.

Favouring cable link*:*
Evidence is sought from respondents on the level of carbon intensity of the interconnector and the principles which should be adopted to inform energy policy.

5.5. Operating costs

The current price control sets efficiency targets on GEL's overhead costs (including marketing, IT and other administration costs) by restricting these to a fixed proportion of total overhead costs, with the proportion of these operating costs in 2001/02 taken as the reference point. A detailed account of this approach is set out in Section 7.2 of OUR 06/17. The DG proposes to draw upon this approach again for purposes of the next price control.

Efficiency targets in generation costs in the current price control are based on the recommendations by PPA, a power consulting firm, who advised the DG following a review of GEL's generation business in 2006. The principle recommendations in that assessment would appear to remain relevant and the DG proposes to rely on this again to set operating cost based on the resourcing requirements considered efficient to support on-island generation as discussed in Section 7.3 of the OUR's consultation paper OUR 06/17.

Operating costs: ***Respondents are requested to consider the merits of the above approach to setting overhead and generation costs for the next price control, in particular evidence of developments that might alter the relative strength of the arguments for the above approach.***

5.6. Incentive Framework

In setting price controls for regulated utilities it is essential that appropriate incentives are incorporated to encourage appropriate commercial behaviour and effective management of the business assets. Appropriate incentives should ensure effective control of cost, influence investment and service level decisions and avoid customers paying unnecessarily high prices to a business that is insulated from competition by its monopoly position.

Incentives should apply to the investment programme, the management of existing assets as well as to the operating costs and decisions about the appropriate quality of service to be delivered. In the context of GEL, the most significant area financially are the operating costs, which account for over 85 per cent of the business revenue requirement. The approach to incentivisation of efficient operating costs is well established across the utility sector.

That is to say:

- Ongoing efficiency savings via the X component of RPI-X;
- Pass through of costs outwith the control of GEL at following price reviews (or at interim periods if they exceed the materiality threshold);
- Allowance of appropriate increases in operating costs to the extent they arise from new investment;

Incentives of this nature for operating costs are well established. They have stood up to the test of subsequent reviews and been responsible for delivering substantial reductions in the costs of regulated utilities. The DG proposes that for the GEL price control review, EPC4, that this existing approach is maintained. However, it should be noted that this mechanism has worked well with privatized utilities in the UK and elsewhere partly because of the nature of the relationship between shareholders and the business, which drives the delivery of continuous efficiency improvements to provide steady returns to investors, one of the key criteria by which the effectiveness of management is judged.

However, providing appropriate incentive schemes for capital investment programmes is more problematic and the solutions are much less well established. A range of approaches have been used by regulators across different industry sectors. While this issue has less of an immediate financial impact on the business, the consequences of investment decisions will impact on the business over an extensive period of time. Capital investment has assumed greater importance for EPC4 because of the substantially increased investment programme now proposed by GEL.

In providing incentives for capital investment the OUR's view is there needs to be a balance between overly detailed scrutiny of the plans of businesses, which can lead to regulators simply replicating the market evaluation work being carried out by the companies themselves or the use of complex arrangements which can be subject to gaming by the regulated businesses to deliver the outcomes that best suit them over their customers.

For this price control, the DG is minded to adopt a less intrusive approach which, as explained above adopts the investment programme and expenditure profile set out by

GEL and reviewed by independent consultants. However, with this there will need to be criteria to determine how much of this investment should be financed directly by customers through price increases. This is intended to ensure that the correct balance of risk and reward is shared by customers and shareholder, and that the impact of inefficient delivery or investment planning impacts on the shareholder and is not just carried through to customers.

Therefore for the purpose of EPC4 the OUR will need to determine a profile of benefit delivery to customers, which may not exactly match the expenditure profile of the investment plan but reflects the level of benefits being accrued to customers and what is required at any given time.

Incentives for over/underperformance - Where GEL is able to deliver its investment programme for less than the allowed capex, the benefits of this outperformance could be shared by the business and its shareholder with customers. Conversely, if GEL underperforms and does not deliver the investment programme it has set itself within the provision, it would be expected that the business and shareholder would bear a substantial part of the cost of underperformance. The DG would not want GEL to pass the entire burden onto its customers.

The proposed mechanism for this would be for the company to share the benefit of its outperformance (or underperformance) with customers. Delivery of the programme within a certain margin of cost variance will be deemed to be "on target" and there will be no adjustments.

In practice, if GEL delivers its capex programme for less than it proposed, if that saving was less than a given margin of variance no adjustment is made. If the saving exceeded this minimum this could be shared between GEL and customers

In the short term, customers and GEL would benefit from the saving of capex costs. However, in the longer term, customers would benefit from the fact that less of the save to spend fund has been used and a larger cash reserve is available for future investment. A lower regulatory asset base also ensures that over the course of time, the benefits will accrue fully to customers in the form of lower prices than would otherwise have been the case.

Incentives for timing of capital investment - As set out earlier, the Director General intends to allow GELs investment proposals according to the total investment and profile proposed in its earlier submissions. However, while it is reasonable to allow the business to draw down the necessary cash from its save to spend reserve to carry out this investment, it is not clear that customers should be expected to pay an immediate return to the shareholder for this investment.

In determining investment programmes for a utility business such as GEL, which:

- operates a monopoly;
- where a reserve of capital (in the form of save to spend) is readily available; and

- receives a guaranteed return in its investment by way of inclusion in its regulatory asset value;

there is a concern that in these circumstances a regulated utility business would tend to choose overly cautious and capital intensive business strategies and not be incentivised (as most commercial businesses would be) to minimise its capital investment and maximise its returns. The discussion in section 5.1 underline this concern.

If, for example, demand does not increase as implied by the forecast then customers should not have to pay for new generation that is not needed to meet growth in demand or to maintain the security of supply. Also, an overly risk averse approach to choosing the capex proposed may give rise to solutions which may be more expensive or simply larger in scale than would be the optimum to minimise the impact on the cost of electricity to customers or could be provided by alternative means (for example, by assisting customers to make energy efficiency improvements, encouraging backup on site generation etc.)

The DG believes that in order to maintain strong incentives on the business and shareholder, customers should only pay for improvements that are actually required. There are a number of ways in which appropriate incentives can be enacted but the preferred options would be either:

(i) adjust the base on which the rate of return is applied. For new generation this would be done by comparing actual demand growth against forecast and making the appropriate change through the cost pass through mechanism – upward if demand has risen faster than anticipated or downward if growth has been slower; or

(ii) allow returns against a nominal profile in during EPC4 and make subsequent adjustments through the RAB at the end of the price review period to carry forward to future years.

Each approach has its merits. Option one gives more immediate feedback and has a direct impact on customer bills but would be subject to annual fluctuations in customer demand (perhaps driven by weather) and give the business a degree of uncertainty during the review period. Option two is less immediate in its impact, but does give the business more certainty and allows the assessment of longer changes in demand and demand growth over the entire period of the price control.

Incentive framework: ***The DG wishes to consult on the appropriateness of using incentives on GELs capital investment programme and the preferred form of those incentives.***

5.7. Rate of Return

As GEL's activities demand capital that could be employed elsewhere if GEL did not use it, the DG needs to take account of the return that such capital could be expected to obtain in another use. Such consideration is automatic in the private sector – because funds are provided by investors who expect a return - but it applies to a state-

owned organisation also. The reasoning is that funds employed by state-owned organizations have alternative uses in the public sector which would generate a return, financial or otherwise.

In its decision on electricity tariffs in December 2006, the DG used two rates of return on separately identified assets depending in whether they were acquired pre-commercialisation or post-commercialisation (0.549% and 5.97% respectively).

The rate of return on assets acquired pre-commercialisation has been settled in EPC3 and the DG does not propose to revisit this aspect in this control. The return on assets acquired post-commercialisation reflects the cost of equity to GEL (not the cost of debt since it has no borrowing) and is based on the Capital Asset Pricing Model assumptions. The DG is aware of the most recent regulatory decisions on cost of equity in the UK. However, comparisons should be made with caution since estimates of the cost of equity listed below usually apply to entities whose activities are partially or largely financed by debt. The result is that, by-and-large, the cost of equity reflects the full weight of the risk borne by the whole operations concerned even if equity capital finances a small part of the operations only.

Table 2 Recent Regulatory Decisions on Cost of Equity (real pre-tax)*

Date	Regulator	Cost of Equity (%)
December 2009	Ofwat for 2010-15	7.1
October 2008	Competition Commission for 2009-14 (Stansted Airport)	6.94 – 11.39
October 2008	Office of Rail Regulator for 2009-14	9.0 – 9.7
March 2008	Civil Aviation Authority for 2008-2013	10.2-10.9
December 2009	Ofgem for 2010-15 (electricity distribution)**	9.3

* Europe Economics: Cost of Capital and Financeability at PR09 – Oct 2009
**Ofgem: Electricity Distribution Price Control Review – Final Proposals (Ref 144/09)

Rate of return: ***Respondents are invited to submit views on the appropriate cost of capital that should be applied to GEL's asset base post commercialisation.***

5.8. Period of price control

The DG proposes to set prices for a four year price control period from 1st April 2011. This strikes a reasonable balance between providing a stable regulatory framework for GEL and protecting the interests of customers. As before, cost pass through mechanisms will continue to operate.

Period of price control: ***Respondents are invited to submit views on the appropriate period of the price control.***

5.9. Passthrough mechanism

In response to concerns around the speed at which the passthrough mechanism made up for shortfalls where they occurred, as well as GEL's exposure to the sustained weakening of the UK Pound to the Euro, GEL submitted a request to reopen the price control in October 2009. Based on this submission, the DG agreed to a further price increase of 8.5% from 1 April 2010, which took account of GEL's 2008/09 shortfall as well as an estimate of the shortfall predicted by GEL for 2009/10. This price increase also provided for the weaker UK pound against the Euro over the 2009/10 year, which was not a feature of the passthrough mechanism over previous years but was acceded to given the sustained period of the weakened UK pound.

A major issue with the provision for passthrough costs over the current price control period was the speed at which these costs were recovered in tariffs. The scale and period of deviation from the relevant forecast variables was such, that certain sums were only recovered after a period of two years. The OUR is considering approaches that might see such deviations identified earlier and tariffs adjusted more rapidly to

reflect these changes. If tariffs are to reflect passthrough costs more speedily the timeliness of the information available to make these calculations is an issue.

GEL has in various discussions expressed a preference for it to have flexibility to change its tariffs and provide the justification for these retrospectively.

An alternative approach is to rely more on provisional data than at present with tariffs adjusted for the passthrough costs of the previous financial year, each April. For example, at the time of announcing tariff changes in January which would come into effect in April, the scale of shortfall or excess will not be informed by a complete year of data. In these circumstances, an alternative is to take estimated data, with a reconciliation of passthrough costs reflected in price changes the following year.

A further option is to introduce a maximum threshold. This would essentially trigger an earlier adjustment to tariffs if actual data indicates the passthrough costs exceed this threshold. In these circumstances a price change would take place within the year rather than wait until April of each year for this to come into effect.

Pass-through issues: ***From the above it is apparent that various alternatives are available. Respondents are requested to propose approaches considered appropriate.***

6. Next Steps

The DG would welcome comments on the proposals set out in this consultation paper. Comments on any aspect of the proposals for a further price control for GEL should be provided by 3rd December 2010. The DG will consider responses to this consultation before issuing a draft decision in this aspect of GEL's regulation in early January 2011.

Annex A – Tariff categories

- Standard Tariff:
    - Primary Standing charge;
    - Secondary Standing Charge; and
    - Unit charge;

- Super Economy 12:
    - Primary Standing charge;
    - Secondary Standing charge;
    - Low rate unit charge; and
    - Normal rate unit charge

- Industrial Economy Tariff – High Voltage Supplies:
    - kW charge (April-Oct);
    - kW charge (Nov-March);
    - Low rate unit charge;
    - Normal rate unit charge;
    - Standby Charge; and
    - Power Factor adjustment

- Maximum Demand Tariff – High Voltage Supplies:
    - kW charge (April–October);
    - kW charge (Nov-March);
    - Unit charge
    - Standby Charge; and
    - Power Factor adjustment

- Heat Pump Tariff:
    - Unit charge;

- Non-Peak Tariff:
    - Standing charge; and
    - Unit charge;

- Superheat Tariff:
    - Standing charge; and
    - Unit charge;

- Boiler Tariff:
    - Standing charge; and
    - Unit charge;

- Public lighting Tariff:
    - Standing charge; and
    - Unit charge;

- Industrial Economy Tariff – Low Voltage Supplies:
    - kW charge (April-Oct);
    - kW charge (Nov-March);
    - Low rate unit charge;
    - Normal rate unit charge;
    - Standby Charge; and
    - Power Factor adjustment

- Maximum Demand Tariff – Low Voltage Supplies:
    - kW charge (April-October);
    - kW charge (Nov-March);
    - Unit charge;
    - Standby Charge; and
    - Power Factor adjustment

Ends/