Office of the Electricity Price Control Commissioner

Draft Determination for Consultation

Summary

1. On 19th July 2022, Sark Electricity Limited (SEL) set a standard tariff of 74 p/kWh for electricity from 1st August 2022. I am aware that the £40 monthly minimum usage charge is still being applied and that large discounts are given to heavier consumers of electricity, ranging from 12 to 19 p/kWh.

2. I have analysed the costs involved in producing and distributing electricity in Sark and the profit margin that an efficient operator could reasonably contemplate. I have come to the preliminary conclusion that the prices now being charged by SEL are not fair and reasonable. Depending on the evidence provided and representations made to my Office in submissions in response to this paper, issued under Section 14 of the Control of Electricity Prices (Sark) Law, 2016 ("The 2016 Law"), I shall make a Determination under Section 13 of the 2016 Law. Following which, my Office may consult on the imposition of a Price Control Order (PCO), under Section 15 of the 2016 Law.

3. In coming to my preliminary conclusions on what might constitute a fair and reasonable price for electricity in Sark, I first updated the analysis of the 2019 Determination, assuming:

    - the supplier continues to operate a system based on diesels and the existing distribution system's layout.
    - the supplier will be able to obtain wayleaves for the electrical equipment installed on others' land and the supplier's profits will continue to be protected from movements in electricity demand and fossil fuel prices. As a result, the supplier will be satisfied with a return of 7.3% per annum on investment.
    - the Minimum Monthly Usage Charge remains at £40 per month.
    - the current range of discounts for large customers of 12-19 p/kWh is retained.
    - the supplier should not be allowed to increase prices to residents on account of other customers deciding to generate their own power. Consumption of electricity in Sark not provided by SEL in 2021 amounted to 140,000 units.
    - annual island-wide consumption is 1,560,000 units, consistent with that reported by SEL, Chief Pleas and own generators for January-June 2022.
    - diesel fuel delivered to Sark costs 111 p/litre – the average price for July 2022.

4. This analysis demonstrated that a reasonably efficient operator would be able to enjoy a satisfactory return were the standard unit rate of electricity around 64 p/kWh.

5. In addition, I have examined the energypeople report, commissioned by my Office and available at www.epc.sark.gg. This suggested that a completely new system could provide electricity at a lower cost than refurbishing SEL's existing distribution network.

6. I have therefore also considered the prices an operator would need to charge, were it to install a completely new distribution system and a deploy a mix of different generation technologies, diesels, wind turbines and solar PV panels, to generate electricity. This analysis, which used the financial model supplied by energypeople (available at www.epc.sark.gg) suggested that the maximum unit price could be far lower, at around 47 – 51 p/kWh.

7. The achievement of prices lower than 50 p/kWh depends on some wind power, rather than just solar PV panels, being installed in Sark. Other than development control legislation, I am not aware of any legislation in force in Sark that prohibits the erection of wind turbines of 30-45m in height. I therefore believe it is reasonable to assume that a reasonably efficient and cost-conscious operator would seek and obtain permission to install one or more wind turbines and solar panels.

8. A description of the analyses of the diesel-based system, and those using alternative forms of generation is available in the Annex to this Draft Determination.

9. I therefore arrive at the preliminary conclusion that the prices charged for electricity by the regulated supplier, SEL, are neither fair nor reasonable. I look forward to receiving SEL's response to this consultation paper and I am interested to hear residents' and other interested parties' view of this preliminary conclusion. I am particularly interested to hear views on whether:

    i. customers with higher electricity consumption should enjoy such large, discounted unit prices.

    ii. the regulated supplier's profits should be protected from swings in consumption and diesel fuel prices under any PCO.

    iii. customers should continue to be protected from the impact of wealthier customers deciding to generate their own power, even though this would reduce the return that the supplier could expect to receive.

10. I should be grateful to receive submissions by 15th September 2022. All responses will be shared anonymously with SEL and, unless indicated otherwise, will be published on my Office's web-site.

Anthony White
Commissioner

23rd August 2022

Annex to Draft Determination of 23rd August 2022

Background

1. The Price Control Order (PCO)[1], set on 20th December 2019, was made on the basis that SEL would make operating profits that represented an annual return of 7.3% on the Regulated Asset Base (RAB). This amounted to a profit expectation of £102,000 in 2020. However, owing to the pandemic, electricity demand and fuel prices were both lower than forecast when the PCO was written and SEL's electricity supply business's operating profit for the year was just £43,781 on a regulated basis. The PCO anticipated a possible divergence from assumptions and incorporated an adjustment mechanism whereby the prices for 2021 would allow for any under or over recovery during 2020. SEL did not respond to the offer to adjust prices more frequently when the PCO was made in 2019.

2. The PCO was "Varied"[2] on 1st January 2021, to account for SEL's decision to introduce the "minimum monthly usage charge" (MMUC) and other material matters relating to SEL's costs and performance. The maximum unit charge for 2021 was set to allow the regulated supplier to enjoy a return of 8.8% on "island -wide" consumption of 1,350,000 kWh plus half of the "under-recovery" of 2020, some £37,695. Taking into account the "loss" of sales to customers who generated their own electricity, this implied that SEL, whose sales I projected would be about 1,200,000 kWh in 2021, would enjoy profits of £44,000 and the under-recovery mentioned above, i.e. some £81,000 in all.

3. On the basis of the accounting information supplied by SEL, which has not been audited, the electricity supply business made an operating profit during 2021 of £79,994. Thus, SEL enjoyed the profits anticipated when the Variation was set and received half the shortfall of 2020.

4. SEL claims to have made a loss of £160,065 in 2021, rather than the actual ~£79,994 profit mentioned above. The different view arises because:

   - SEL has included legal costs of ~£103,000. The Determination of 2019 and the Variation of January 2021 explained why I do not consider it reasonable for customers to pay these costs.

   - SEL used a depreciation charge of £90,608, rather than the figure of £60,828 calculated by consulting engineers WSP. I believe the difference is primarily due to SEL including the depreciation on assets which SEL has accepted that it did not finance.

   - SEL treated revenues not received (the under-recovery of £37,695) as a "cost". I am disappointed that SEL has presented this information in what I consider to be a highly misleading way.

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[1] Price Control Order, 20th December 2019, Office of the Electricity Price Control Commissioner

[2] Final Variation, Office of the Electricity Price Control Commissioner, 1st January 2021

- The inclusion of "Other costs-Finance" of £69,520, the basis of which has never been explained to my Office, despite my many requests. These costs would not be included under UK Generally Accepted Accounting Practices (UK GAAP) under which SEL purports to operate.

5. The PCO of 2019 expired on 19th December 2021. Consequently, SEL has not been subject to Price Controls. Initially, SEL kept the standard rate at 56 p/kWh, the price my Office set for December 2021, which was based on actual fuel prices in October 2021, the level of consumption, additional revenues SEL accumulated on account of SEL's MMUC and adjustments carried over from previous months. Since then, diesel fuel prices have risen dramatically. SEL chose to leave the unit charges unchanged but, in May 2022, stopped providing most of the dispensations it had previously allowed under the MMUC[3]. On 1st July, SEL increased the standard rate by 14 p/kWh to 70 p/kWh and added a further 4 p/kWh on 1st August 2022.

6. My Office has been seeking information from SEL to allow me to determine whether, or not, the prices charged for electricity are fair and reasonable. I have only received partial responses to some questions and nothing on others. Nevertheless, given the large increase in prices and the information provided in the energypeople report that suggested a different generation mix could supply electricity at much lower prices, I believe that it is appropriate for me to investigate SEL's price changes.

Establishing Reasonable Prices

7. Section 13 (2) of the Control of Electricity Prices (Sark) Law, 2016, provides that the Commissioner, when determining whether a price which is charged by a regulated supplier for the supply of electricity is, or is not, fair and reasonable, "….. shall take all material considerations into account, including without limitation the following matters:

   a) the cost of generating and distributing the supply of electricity, including the cost of

      i. acquisition and maintenance of any plant and equipment,

      ii. fuel and other consumables, and

      iii. labour

   required to generate the supply.

   b) The replacement cost of any plant and equipment required to generate and distribute the supply,

   c) The quality and reliability of the supply of electricity and the economy and efficiency with which the supply of electricity is generated and distributed,

   d) The margin of profit obtained by the regulated supplier,

[3] SEL, Letter to Customers, 2nd April 2022

e) The margin of profit obtained by such other electricity suppliers generating and distributing a supply of electricity in similar circumstances in such other islands as the Commissioner thinks fit,

f) The entitlement of the regulated supplier to receive such reasonable return, as the Commissioner thinks fit, on the assets (including plant and equipment and working capital) operated or used by the supplier for the purpose of generating and distributing the supply, and

g) Any representations made in response to a request given under section 14, or otherwise."

8. I have interpreted this section as requiring me to determine the level of costs a reasonably efficient company would incur providing an electricity supply in Sark. In the 2019 Determination, by considering staffing levels, market wages, SEL's historic costs and using my own experience, I made estimates for SEL's costs according to the following categories:

Fixed cash costs	these are not dependent on the amount of electricity consumed and relate to salaries, services, administrative and technical support.
Financing costs	relating to the returns the providers of finance may reasonably expect.
Variable costs	driven by the amount of electricity delivered and the cost of associated purchases of fuel.

9. There are two ways in which I have carried out this task of establishing reasonable costs. The first was to estimate the costs of using SEL's system of diesel generators and distribution network. This was the basis of the 2019 PCO and the subsequent Variation. The second considered other ways of providing power, using more cost-effective equipment such as solar PV, wind turbines as I have earlier suggested, as well as new diesels. The following analysis describes both approaches.

Calculation of SEL's costs

10. The methodology used for my Office's assessment of SEL's reasonable costs is described in detail in the Draft Determination of 1st October 2019, paragraphs 24-47. In essence, I estimated the annual costs a reasonably efficient operator would incur, added a reasonable profit margin and allowed for the depreciation of the investment in the company. I then divided this total annual fixed cost by the number of units of electricity I estimated would be delivered. To this "unit fixed cost", I added a fuel cost, based on an estimate of the efficiency of the SEL system of engines and network assets and arrived at an average unit cost.

Fixed annual cash costs

11. The Determination of 2019 made estimates of the various cash costs of SEL (see paragraph 26 onwards) which were updated for inflation in the Proposed Variation of October 2020 (see paragraph 50). I have also considered the analysis by energypeople in 2022 of the fixed cash costs of a replacement system using only diesels for generation. This is summarised in Table 1.

Table 1
Cash costs of operation

	SEL actual 2021	energypeople 2022	EPC 2021
Staff	264,070	200,000	291,887
Administration	9,490	14,000	10,811
Services	46,240		48,648
Operations	13,199	38,000	43,243
Total	332,999	252,000	394,589

12. The table does not show the £103,014 of exceptional additional legal expenses that SEL incurred during 2021. I have explained many times why I do not believe that these additional legal costs should be recovered from electricity customers, so they do not form part of my consideration of reasonable electricity prices. Similarly, the Table does not show SEL "Other costs – Finance", nor the "2021 Under-recovery" items included in SEL's management accounts, as explained further below.

13. SEL's expenditure on salaries was clearly somewhat lower than anticipated in the PCO and updated for 2021, so SEL's later complaint that the Variation did not include sufficient funds for training is clearly without merit. Moreover, SEL's non-executive director, for which provision was made, was only in place for a few months in 2020 and was not replaced. The remuneration of the Managing Director was greater than the market rate for the skills required and tasks performed. SEL's actual expenditure on operations during 2021 is worryingly low and I am concerned for the security of supply and system safety. SEL's engineering staff are to be congratulated for keeping the old engines operational, given the historic lack of expenditure by SEL on maintenance. It seems to me that the cash available for fixed cash costs has not been wisely spent by SEL. In particular, in arriving at the total figure of £394,589 for 2021, I had assumed that SEL's accounts would have been audited, but this is not the case. The most recent audited accounts I have seen for both SEL and SEHL[4] are for 2016.

14. The energypeople assessment of the fixed cash costs of operating the company are considerably lower than I had assumed and lower than those actually incurred by SEL in 2021. energypeople considered only the operational costs of running new diesels and the network, not the costs of corporate services and control of the company. I believe that it is important for SEL to able to obtain corporate advice and services. I am therefore considering allowing £300,000 as the annual fixed cash costs to be recovered by the tariff. I recognise that the 2019 PCO appears to have been generous to SEL.

[4] In 2014, The Sark Electricity Company Limited split into two companies, Sark Electricity Holdings Limited (SEHL) and its wholly owned subsidiary, SEL. SEHL retains ownership of the electricity generation and distribution assets though Mr Witney-Price runs the two companies as one for accounting purposes.

Financing costs – return and depreciation

15. The aim of regulation is to find a fair balance between the respective requirements of investors and customers. The form of regulation my Office introduced sets a price that is calculated to allow a company to make a reasonable return on its investment and ensure that the company keeps its costs as low as may reasonably be expected, as described in the Draft Determination of 1st October 2019. The key step in arriving at a fair value for the depreciation charge and profit margin is to assess the value of the company. Unfortunately, SEL claims not to have kept any documents that provide evidence of the funds invested in the company. However, in March 2020 Alan Witney-Price purchased SEL, thereby putting a value on the company. A fair way, therefore, to determine a fair return and depreciation charge would be to use the value of this latest transaction, adjusted for inflation and capital expenditure. I have asked Mr Witney-Price to provide evidence and supporting information for the price he paid to acquire the company but he has belatedly declined to provide this material information on the basis of confidentiality. The 2016 Law addresses this issue of confidentiality and I continue to pursue this approach.

16. In 2019, before this latest transaction, and in the absence of any evidence of commissioning dates and prices paid for SEL's equipment, my Office instructed WSP, consulting engineers, to derive a Regulated Asset Value (RAV) for SEL. This is a common way of estimating value in the utility sector when relevant records are not available. This estimates the "value" of the investment by finding the "Modern Equivalent Asset Value", commonly interpreted as the total of the depreciated replacement costs of each item of equipment. The value is adjusted each year to account for inflation, depreciation, capital expenditure and retirement of equipment. WSP's report is described in the Draft Determination of 2019 at paragraphs 29-40 with more detail provided in a confidential Annex. This Annex explained that my Office also added £10,000 to the RAV to account for equipment WSP had not included, i.e. mobile plant. A further £140,000 was added to allow for working capital items, such as cash and stock, to produce a "Regulated Asset Base" (RAB). The 2019 estimate was updated in the Proposed Variation of October 2020 to account for depreciation and inflation. This proposed a RAV of £1,160,000 (paragraph 41).

17. SEL has complained that WSP excluded a number of items when calculating the RAB. The major omission arises from my Office's decision to exclude cables that had been financed by SEL's customers, rather than SEL. I do not believe it is fair for SEL to enjoy a return on assets it has not financed. Other items WSP did not include represent items such as office furniture, tools and spares. At the time of the 2021 Variation, SEL had not provided details of any of these items, apart from the mobile plant. I accordingly made an allowance for them in the £140,000 working capital figure.

Recent Information

18. The EIS report, commissioned by Chief Pleas, on the operability of the SEL network and the energypeople report, commissioned by my Office, both identified that SEL's distribution equipment is out of date and no longer serviceable. SEL has conceded that the equipment is not fit for purpose. Accordingly, in this assessment of RAB, I am assuming that all the distribution equipment has no net value; i.e. that the scrap value may cover transportation costs. SEL has

also provided details of the items not considered by WSP. I have, as a result, lowered the working capital requirement, as shown in Table 2.

19. Conseillers were advised by Carey Olsen[5], SEL's advocates, that only two of SEL's four generators are in operation and so maintenance will be difficult, given that each will either be operating or on standby. This assessment leads to the following estimate of RAB, based on a depreciated replacement cost assessment, taking into account recent Guernsey inflation (2021: 3.3%, & 2022: 5.6%), depreciation and retirement of plant. The figures for Meters, Furniture & Fittings, IT, Tools, and Spares were provided by SEL.

Table 2

WSP & EPC RAB & Depreciation Assessment
Updated to 2022 by inflation for Guernsey

	Variation 2021		2022	
	RAB	Depreciation	RAB	Depreciation
HV Cables	£469,994	£16,242	£462,343	£17,164
LV Cables	£256,961	£17,131	£235,339	£18,103
Transformers	£36,141	£1,172		
HV Distribution	£44,150	£4,238		
LV Distribution	£62,143	£4,388		
Generation	£136,659	£17,661	£120,271	£18,131
Mobile plant	£10,000		£7,173	£2,690
Meters			£493	£25
Furniture & Fittings			£1,057	£522
IT			£3,672	£1,692
Tools			£6,013	£2,198
Spares			£53,278	£1,303
Freehold Land			£1,000	
Working Capital	£140,000		£80,000	
	£1,156,048	£60,830	£970,640	£61,828

Profit Margin

20. I see no reason to change the assessment of a reasonable rate of return for SEL from the 7.3% per annum originally proposed in September 2019. Indeed, my recent experience as a Director of a fund investing in energy efficiency projects, suggests that this rate of return would be attractive to investors for a company of this nature. This rate of return assumes:

- some form of regular price adjustments will be incorporated, as occurred during 2021, to protect the company's profits from movements in consumption levels and fuel prices; and

[5] Letter to Conseillers, 23rd June 2022

- the operator of the power company will be able to secure any wayleaves required. Chief Pleas has not enacted the draft Electricity (Sark) Law 2021 which included powers to introduce statutory wayleaves, so voluntary wayleaves are currently required. Judging from responses from earlier consultations, this should be possible for a company in which residents have sufficient confidence that they can place their trust.

21. On this basis, a return of 7.3% on £970,640 or around £70,857 per annum, should be attractive to investors. For the purposes of this paper, I have not taken into account SEL's actual performance when considering the level of the rate of return it would be fair for SEL to receive. This may become necessary if a PCO is to be contemplated.

Depreciation

22. WSP's investigation assumed various commissioning dates and operating lives for the equipment. The assessments were made in the face of obstructive behaviour from SEL, such as denying access to equipment but, after allowing for inflation and retirements, the resultant figure of £61,828 seems reasonable. Cables represent the majority of the charge but the total may be an overestimate, given the concerns about the continued operability of the generators.

Alternative valuation for RAB

23. Alternatively, both the reasonable margin and depreciation charge could be derived from the price paid by Alan Witney-Price to purchase the companies in March 2020 as the RAB. This figure would be depreciated over the remaining life of the equipment and updated for inflation and any further capital expenditure. SEL has not yet provided this figure, as explained above.

Other Expenses

24. SEL's management accounts include an item "Other costs-Finance". SEL has failed to explain this charge and how it is justified. I therefore have not included it in my assessment of the reasonable costs a competent operator would incur. These other costs also show the "under-recovery" of £37,695 as a "cost". I have explained to SEL that this is a deferred revenue item and not a cost. Continuing to refer to this as a cost is, in my view, a deliberate attempt to confuse and mislead those without financial experience.

Leasehold Improvements

25. SEL further complains that my Office has not included an allowance for leasehold improvements in SEL's recoverable costs. This item did not appear in SEL's audited accounts over 2008 to 2016, nor in its management accounts until 2021. SEL has not presented a case to my Office for including such an item.

26. I surmise that this "charge" may relate to the dilapidations arising at the power station site. A potential environmental hazard was raised in SEL's Board report and response to the Proposed Variation in November 2020, though no proposal was made to include such a provision in 2021. SEL may well wish to make a provision for the costs of returning the site and other potential hazards identified in SEL's own Board Report, as well as the EIS and energypeople reports, to a satisfactorily safe condition. However, SEL has not made a case to my Office why it believes that

current and future customers should pay for costs that have been caused by the action of the company in the past. SEL could and should have accumulated reserves for such remedial action, rather than provide such generous returns to shareholders and management during the 2010s. SEL has described the previous level of dividends as "inappropriate". Mr Witney-Price should have been aware of the absence of such a fund as part of the due diligence when the company was purchased. I need to be convinced there is a justifiable case for SEL to recover all these costs through the tariff and am willing to receive submissions on this matter.

Conclusion on Fixed costs

27. The above analysis suggests that an assessment of annual reasonable fixed costs is around £430,000 per annum, as shown below.

Table 3
Reasonable Annual Fixed costs 2022

	£
Fixed cash costs	300,000
Depreciation	61,800
Return	70,857
	432,657

Variable costs

28. The assessment described in the Proposed Variation of 2020 suggested that SEL's system efficiency when operating on diesels alone was around 2.92 kWh/litre. As explained in the 2019 Draft Determination, this was based on an assumed efficiency for the generating units of 235 g/kWh, as set out in the technical specifications for the units, increased by 10% to allow for wear and tear and a further 12% to allow for losses in the auxiliary plant at the station (5%) and 7% for losses on the distribution network, in line with other small island systems. It seems essential that these generators are urgently replaced. My Office has not been provided with a credible reason why this has not occurred. The energypeople report suggested that a new diesel engine could generate 3.958 kWh for each litre of fuel and, assuming the same 12% losses for auxiliaries and network losses, suggests an overall efficiency of 3.5 kWh/litre could be achieved by a reasonable operator.

29. Fuel prices have risen considerably since the 56.7 p/l used in November 2021 to set the price for December 2021. Prices of deliveries of fuel to Sark in July 2022, as implied from the diesel costs reported by Island of Sark Shipping (IOSS) which my Office uses as a benchmark for bulk prices in the Guernsey region[6], were closer to 111 p/l. This is equivalent to 38.0 p/kWh with SEL's existing

[6] See paragraph 21 of the Proposed Variation, 15th October 2020, for the reason for using this benchmark rather than SEL's actual purchase costs.

diesels or 31.7p/kWh were new engines installed. I note that SEL claims that it purchased fuel in July for 107.7 p/litre[7].

Setting Tariffs

30. The above described how I have assessed the fixed and variable costs of electricity supply. It is also necessary to consider the tariff structure in order to determine the maximum unit charges.

Tiered Tariff

31. In January 2021, SEL introduced a tiered system of tariffs, comprising discounts ranging from 12-19 p/kWh from the standard rate for larger customers. In November 2020, prior to the Variation, SEL proposed much smaller discounts (4 p/kWh) for these customers, and these were not taken into account when setting the Variation for 2021. Judging from sales in 2021, I estimate that these discounts represented a cost to SEL of around £19,000 during 2021.

Minimum Usage Charge

32. SEL introduced the MMUC in January 2021 and has continued to charge it during 2022, removing most of the exemptions in May 2022. Based on a spreadsheet provided by SEL, which I have found difficult to navigate, my calculations suggest that during the 6 months to June 2022, the MMUC raised £21,000. The amount increased when the last exemptions were removed in May, to a monthly income of £4,300, equivalent to around £50,000 per annum.

Electricity Consumption

33. In order to determine the revenues SEL is likely to receive, I need to consider the likely level of electricity consumption in Sark. Figure 1 below shows the historic electricity sales in Sark. In late 2019 when SEL announced its intention to increase electricity prices to 85 p/kWh, a few residents decided to generate their own electricity. In addition, 19 properties in the north of Sark have been supplied by Chief Pleas rather than SEL, following a dispute with a landowner. In my view, SEL's loss of sales arose on account of SEL's failure to engage effectively with the landowner in question. As a consequence, SEL's sales in 2021 represented only 90% of electricity consumed in Sark. SEL has complained that it is unfair of my Office to set the maximum unit price on the basis of "island-wide" (IW) sales. It believes that prices to all other customers should rise as a consequence of SEL's loss of sales.

34. My Office explained that I believe it would be unfair, and unsustainable[8], for SEL to recover its lost profits from all other customers on account of its misguided policy towards own generators. SEL has described this Policy as "…historically unfair to customers who wanted to generate their own power"[9]. Mr Witney-Price has not explained to my Office why, nevertheless, he believes that it would be reasonable for SEL's customers to pay more for their electricity.

35. SEL has written to my Office explaining that SEL's Policy no 26, which sets the tariff for "own generators" connected to the SEL network, has been changed. SEL has not justified, or

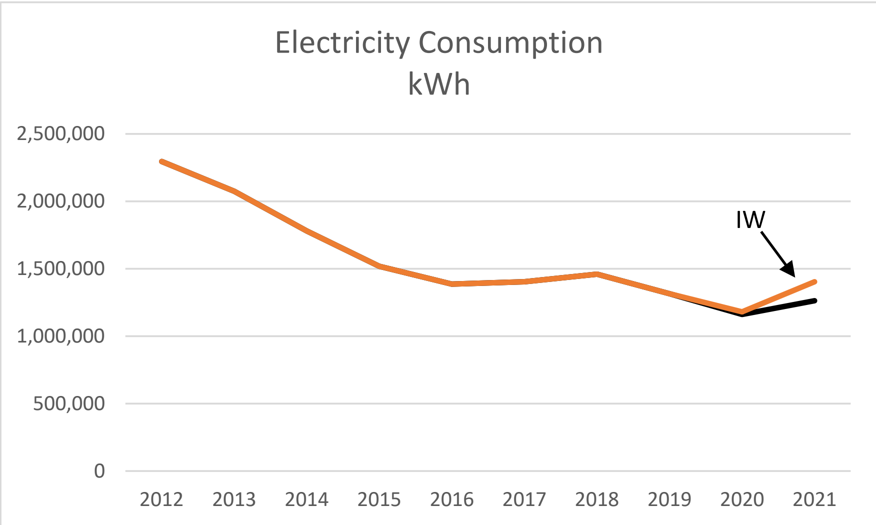
[7] SEL August Tariff notification, 19th July 2022

[8] Higher prices would encourage more customers to "own generate", causing SEL's sales to diminish further, and prices to rise yet further if SEL's profits were to be maintained.

[9] Letter to Commissioner from Carey Olsen, 26th October 2021

completely described, its current system of charges, despite numerous requests. If I find that the proposals are fair to own generators, existing customers and SEL alike, I will consider changing the way in which the reasonable price cap is calculated. As matters stand, it would be based on island-wide consumption.

Figure 1



Sources: SEL, Chief Pleas and Own Generators

36. SEL's sales in 2021 amounted to 1,262,906 kWh, 8.7% higher than in 2020. SEL has not, despite my requests, provided my office with definitive consumption figures for the first six months of 2022. Its billing system is still not, in my view and from complaints received from customers, fit for purpose. Nevertheless, from a recent download of data relating to the first six months of 2022, it appears that SEL's sales may have increased by 12.8% over the same six months of 2021. If this increased consumption is maintained, SEL's sales would be around 1,420,000 kWh over 2022 and, assuming consumption by own generators does not change, island-wide sales would be around 1,560,000 kWh.

A fair and Reasonable Price

37. SEL's margin will need to cover the annual fixed costs of around £430,000. This implies that the revenues recovered through the standard tariff will have to generate a gross margin (revenues less fuel costs) of:

	£430,000 (fixed cash costs, depreciation & return)
Plus	£20,000 (discounts for large customers)
Less	£50,000 (income from MMUC)

i.e. some £400,000.

38. Assuming 2022 consumption remains at current levels and diesel prices do not change, this would imply a maximum unit charge of 38.0p + £400,000/1,560,000 = 38.0+25.6/kWh = 64 p/kWh, based on Island-Wide sales. With SEL sales of 1,420,000 and its current price of 74p/kWh, a reasonably efficient company could currently be making a forward-looking return of ~18% per annum on investment. I recognise that, for the first six months of 2022, SEL chose to absorb the higher fuel costs and that it is only reasonable for SEL's profits for 2022 to be enhanced by the remaining 2020 under-recovery of £37,695. Nevertheless, I believe these returns are unreasonably high.

39. I note that the gap between electricity prices in Sark and those on Alderney appear to have grown larger. All customers pay a fuel cost component which was increased to 24.46 p/kWh on 1st May 2022. Customers on the "Scale A" Tariff pay an additional 29.89 p/kWh, as well as a quarterly meter charge of £1.51 and are subject to a minimum quarterly charge of £7.47. A subsidy of 4.35 p/kWh has now been introduced to maintain the unit price at 50 p/kWh.

40. Although this would have led to some customers paying a unit rate of just over 53 p/kWh, the States of Alderney is providing a 3 p/kWh subsidy.

New system and Alternative forms of generation

41. The energypeople report suggested that, rather than refurbish SEL's existing system, it would be more cost-effective to provide electricity in Sark by building a completely new distribution system and supply residents through a mixture of wind, solar PV and diesel generation. This report demonstrated that, with a 5% per annum cost of capital, Sark's needs of 1,400,000 kWh could be met at an average unit cost of ~45 p/kWh. This excluded any consideration of additional income from the MMUC or discounts to larger customers.

42. There are some assumptions in the energypeople report which may require modification. The capital cost used for the wind turbines may be too low, as it reflects the cost of one 45m high 500kW turbine. An alternative would be a number of 100 kW wind turbines but more would be required and the costs would be higher. The energypeople report only considered arrays of multiple solar panels. This does not exclude the possibility of panels being sited on individual dwellings, though, again, the unit costs of doing so would be greater. The report, and its associated financial model which is also available at www.epc.sark.gg, demonstrated that, in Sark, wind power is likely to be cheaper than solar but are best used together.

43. I have already mentioned (paragraph 14) that I may include an additional ~£50,000 per annum to the energypeople assessment of fixed annual cash costs to allow for corporate costs and services. I have used 7.3% per annum, rather than 5%, as the cost of capital. This suggests that an average unit price of 47-50 p/kWh would be sufficient to allow a company, using 600 kW of diesels, 500kW of wind turbines, 100-300kW of solar PV capacity, a new power station and a new distribution network, to make an adequate return. It would require an average unit price of 51-54 p/kWh based on SEL's sales alone.

44. These calculations contain a degree of uncertainty and depend on the acceptability of wind turbines. Nevertheless, together with the results for the current system using diesels, I believe they demonstrate that the current standard unit price of 74 p/kWh is neither fair nor reasonable.

Conclusion

45. I believe that the foregoing analysis demonstrates that an efficiently managed company, using diesels and SEL's current distribution network, would be able to supply power to residents at an average cost, including a reasonable profit margin, below SEL's current tariff. Moreover, a completely new system would be able to deliver power at significantly lower prices than currently charged by SEL. I therefore reach the preliminary conclusion that the prices currently charged by SEL are neither fair nor reasonable.

AALW
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