

# ST HELENA UTILITIES REGULATORY AUTHORITY



DECEMBER 2020

7<sup>TH</sup> ANNUAL REPORT ON QUALITY OF SERVICES PROVIDED  
BY CONNECT SAINT HELENA LTD – 2019/20

## EXECUTIVE SUMMARY

The Utilities Regulatory Authority has completed its review of the quality of services provided by Connect for the year to 1st April 2020. The Authority acts entirely independently and is not subject to the direction or control of the Governor, the Executive Council, Legislative Council or any other person or authority. This report is an annual review.

Connect is in its seventh year of trading and is progressing well. The company continues to make progress with subsidy reduction, despite reluctance to increase tariffs.

The Independent Review of Connect was published and acknowledges the very good progress made since divestment.

The Authority found that since utilities were divested to Connect, overall reliability of the electricity network has improved by 65% which is a significant improvement from last year where it stood at 36%. Overall reliability of the water network has increased since divestment by 10%, which is disappointing given last year improvement stood at 16%.

The microbiological integrity of treated water is good. The time taken to perform electricity connections has improved allowing a reduced target to be agreed from next year. The time taken to perform a water connection has also improved, again allowing an agreed reduction in the target. Renewable energy sources represent 25% of total electricity production.

The Authority notes that there has been a decrease in the overall reliability of the water network represented by an increase in leaks. This is concerning to the Authority who will expect a programme to be in place to reduce this by the time of the next report to enable target setting over the next few years. The Authority recognises that a lack of access to funds for investment combined with significant legacy issues from pre-divestment are underlying reasons for this deterioration, however Connect accept that this problem is concerning and are making efforts to address the problems. The Authority is aware that the timeframe for improvements will be measured in terms of years and consequently will wish to set reducing targets over a number of years that address total water losses.

The Authority congratulates Connect in the signing of the PPA on 29th May 2020 which it is expected will bring extensive benefits to the island as a whole.

## PART 1 – OVERVIEW

### 1.1 UTILITY SERVICES ORDINANCE 2013

On 1st April 2013 the Utility Services Ordinance 2013 came into force. This Ordinance established the Utilities Regulatory Authority and created a legal framework to facilitate the private sector provision of licensed public utility services.

These services are —

- (a) The generation, distribution and supply of electricity;
- (b) The collection, storage, treatment and distribution of water; and
- (c) The disposal of waste water.

## **1.2 UTILITIES REGULATORY AUTHORITY**

The members of the Authority are Chief Magistrate Duncan Cooke (as Chairman), Mr Bill Scanes and Mr Paul Hickling. The Judicial Services Manager\* is Secretary to the Authority, to whom any communication should be made. The Authority, and any person acting under its authority, act entirely independently and are not subject to the direction or control of the Governor, the Executive Council, Legislative Council or any other person or authority. \*(yvonne.williams@sainthelena.gov.sh)

## **1.3 OBJECTIVE OF AUTHORITY**

The objective of the Authority is to regulate the development and provision of public utility services in a manner which—

- (a) ensures that users of such services are protected from both unreasonable prices and unreasonably low levels of service;
- (b) ensures (so far as is consistent with paragraphs (d) and (e)) that the prices charged for such services do not create unreasonable hardships for households or unreasonable hindrance to commercial and economic development in St Helena;
- (c) Motivates Utilities Providers to improve the quality of the services they provide;
- (d) Ensures stability and predictability in the public utilities industry in the medium and long terms;
- (e) Supports a progressive reduction in levels of subsidy from public funds; and
- (f) has regard to such other regulatory objectives (if any) as may be prescribed.

## **1.4 DUTIES OF AUTHORITY**

It is the duty of the Authority, having regard to its objectives, to carry out its functions and to ensure that Utilities Providers comply with—

- (a) Ordinances, regulations and directives issued thereunder, regulating public utility services; and
- (b) The conditions of their licence.

### **1.5 POWERS OF THE AUTHORITY**

The Authority may, for the purpose of performing its duties, issue Directives to a Utilities Provider in connection with the provision of any public utility service; and, without prejudice to that generality, such Directives may impose requirements concerning;

- (a) The quality or standard of service which the Utilities Provider must deliver to its customers;
- (b) Payments of compensation (or abatement of charges) to compensate customers when the service provided does not meet the standards so set;
- (c) The maximum charges or fees to be levied by a Utilities Provider for providing the public utility service;
- (d) The terms and conditions on which public utility services are to be provided; and
- (e) Such other matters (if any) as may be prescribed.

### **1.6 PENALTIES BY THE AUTHORITY**

If the Authority is satisfied that a Utilities Provider has failed to comply with a Directive, or with a condition of its licence, the Authority may order the Utilities Provider to pay a penalty not exceeding the sum of £100,000.

A licence may be revoked by the Governor in Council upon recommendation of the Authority, where the Utilities Provider is in substantial and continuing breach of—

- (a) Any of the provisions of the licence;
- (b) Any Directives issued by the Authority; or
- (c) Any other obligations under the Ordinance.

### **1.7 UTILITIES PROVIDER- CONNECT SAINT HELENA LTD**

With effect from 1<sup>st</sup> April 2013 Connect Saint Helena Ltd (“Connect”) were licenced by the Governor in Council to provide all public utility services in St Helena. The Authority was instrumental in the drafting of the licence. The licence contains a considerable number of conditions relative to the quality of the services to be provided by Connect.

Connect is a private limited company which is wholly owned by the St Helena Government (“SHG”). The Board of Directors consist of a non-executive Chair, four further non-executive directors and two executive directors. The executive directors are the CEO and Business Support Director of Connect.

## **1.8 EXERCISE OF POWERS BY AUTHORITY**

It is important to note that, in performing its duties and in exercising its powers the Authority must have regard to ensuring the stability and predictability of the provision of public utility services. At this stage in the development of the private sector provision, any penalty imposed on Connect by the Authority would have to be reintroduced to Connect by way of increased subsidy or alternatively tariff increases to customers, as Connect are not profit making. The use of such penalty powers by the Authority would in reality only become practical were the utilities provider to commence making a financial profit and, while doing so, not meet the targets and expectations which could reasonably be expected of a Utilities Provider.

## **1.9 PURPOSE OF REPORT**

This report is principally concerned with motivating the Utilities Provider to improve the quality of the services they provide, where possible. The Authority has a duty to adopt a reasonable approach in setting targets and expectations in these stages of its regulation. Progressive targets and expectations have therefore been set, and amendments to those targets will be made this year. It would be unreasonable to expect an instantaneous improvement to the levels which the Authority will ultimately endeavour to motivate the Utilities Provider to achieve, consequently the URA view its role at this stage to encourage and assist Connect to achieve an ever improving level of service appropriate to its development as a Utility Provider.

This report has been prepared, amongst other things, for the purpose of assessing performance against the targets established by the authority for the period of the review year.

The additional purpose of this report is to inform the public on the level of services being delivered by Connect. In doing so it is hoped to motivate Connect to improve the quality of the services they provide. Connect are aware that such services are being monitored, scrutinised and will be publicly reported upon by the Authority. It should be emphasised that this report relates to the period from 1st April 2019 to 31st March 2020 being the review year.

## **1.10 DEVELOPMENTS IN THE PAST YEAR**

### **Electricity**

25% of the island's electricity has been generated by the solar and wind farms. The Authority is gratified to note the signing of the Power Purchase Agreement with PASH on 29th May 2020.

The long term impact of this agreement has the potential to reduce electricity costs for the consumer and ensure that most electricity generated is from renewable sources. This will reduce the reliance on diesel generators, which reduces the link between electricity production and fuel costs.

Connect see the reduction in their operating costs as an opportunity reduce reliance on subsidy and potentially to allow savings to be ploughed back into the business

There has also been a reduction in unplanned disruptions to the electricity network and statistical analysis demonstrates that these disruptions are shorter than previously experienced. New silicone insulators and the HV link from Sandy Bay Ridges to Blue Hill have been contributory factors to this improvement

## **Water**

Legacy issues from prior to 2013 are felt most keenly in the water network and concerns surrounding water provision has been brought into sharp relief this year by the impact of the drought over the summer of 19/20, the publication of the BDO Review of Utility Services Provision in May 2019 highlighting the issue of non-revenue water and the consultation document issued by SHG in July 2020 on a proposed Water Resource Strategy.

Improvement in water provision can only come about by investment in the network to address legacy matters. Given that funding of the necessary works cannot be from tariffs capital investment will have to be sourced through SHG. It is appreciated by the URA that Connect have sought grant payments which have not been forthcoming.

The URA does note the response to the recent drought demonstrated significant improvement in drought management at a time of budgetary restraint

## **Water Resource Strategy**

In July 2020 SHG issued a draft for consultation of a proposed Water Resource Strategy for 2020 to 2050. The concerns which prompted SHG to consider a policy were the impacts of drought in 2013, 2016 and 2019. Access to water being fundamental SHG is right to involve itself in ensuring the provision of water for the population at large. Drought also impacts upon GDP due to the impact upon the agriculture and construction industries.

The Water Resource Strategy has a number of aims which overlap with the duties of the URA and concerns itself with water security, water quality, water affordability and water sustainability. Targets and performance measures are proposed which gives rise to concerns regarding over regulation. However SHG concerns itself with setting the framework and endorsing a Water Resources Management Plan with the Utilities Provider being responsible for delivering that plan.

It is not proposed that there will be consultation of the WRMP until April-June 2021 and the URA awaits the final plan which may well inform its approach over the forthcoming years. Given the URA is

independent of SHG it is important to avoid conflict between the roles of the regulator and SHG which will require careful thought.

### **Unaccounted for Water**

The BDO report of 2019 was positive regarding Connect however the URA is concerned with unaccounted for water. Connect is well aware of the problem and has an Unaccounted for Water Programme in place. However this programme has been hindered by the departure of the Civil Engineer. Fortunately the engineer has returned and his job description will include focusing on water loss.

The measures used by the URA regarding leaks are a blunt tool in that they do not reflect the extent of water lost. The URA expects a medium to long term plan to be in place by the time of the 20/21 report, once the extent of the problem has been ascertained, with a view to target setting as early as 21/22 which reflects total losses. Connect believes water loss can be reduced to a level of 35% in the next 5-7 years and the URA is supportive of this aim.

### **Water Projects Team**

Progress has been made in the Bottom Woods water mains replacement before moving back to the next priority of Half Tree Hollow. The water maintenance teams aim to carry out preventative maintenance but results are tempered by the legacy issues that will take many years to address.

### **Water Quality**

In August 2020 samples of treated water from all four water treatment works (Red Hill, Hutt's Gate, Levelwood and Jamestown) were sent to South Africa for independent analysis regarding quality. The water from all four plants was found to be fit for human consumption. One recommendation was made which was to check the levels of alum if used for treatment of the water

### **Harpers 2 Dam**

This was drained and dredged resulting in 4000 m<sup>3</sup> of silt being removed. The reservoir is now back in service. The installation of silt traps in 2017 have now addressed the design flaw which led to the silt accumulation.

## Sewerage

Apart from normal maintenance activity there has been no further investment in the sewerage system. Outline development permission was granted some time ago to install a system to deal with both Jamestown and Half Tree Hollow but there has been no funding available for this.

In Bottom Woods progress has been made in that there is an agreement in principle that a simple plant could be installed that will take into account not only existing residents but also the additional burden from the new prison and the CDA. Again funding will be a potential barrier.

## Capital Works

Capital comes from two sources, either in the form of Capital Grants from SHG or from finances generated by Connect themselves. The table below shows how the capital was spent:

Asset Class	Grant Funded (£)	Connect Funded (£)	Total (£)
Electricity infrastructure		50,941	50,941
Equipment		8,183	8,183
Vehicles		-	-
Water Infrastructure		47,228	47,228
Total		<b>106,352</b>	<b>106,352</b>

There has been no Capital Grants through SHG this year. There is a new arrangement between SHG and the UK Government referred to as the Economic Development Investment Programme (EDIP). Submissions were made for funding but Connect was not prioritised for the initial tranche.

The cost of the drought to the company was significant, £228,000, however this was met from company funds and not by SHG.

## BDO Report

A review was carried out into utility services provision by BDO International Ltd. The report was largely positive and Connect are to be commended for this. The report is published on the SHG website.



BDO did provide benchmarking material to enable comparisons between St Helena and other small island nations. Connect and the URA believe that benchmarking is a useful tool to allow customers to judge cost and quality of service and information will be published when the URA considers requests for tariff increases

### **Organisation**

The second Executive Director position has now been filled. The postholder will have the title Business Support Director and will also undertake Company Secretary duties.

Meter reading has been transferred in house which will assist in unaccounted for water analysis

### **Disabled Employees**

The company policy focuses on the person's abilities rather than their disability and they are entitled not to be discriminated against or to be denied opportunities. This may mean making reasonable adjustments to the working environment for a disabled person, accommodating variations to working arrangements or taking some other positive action which would enable them to be effective in the job. At the present time Connect have no disabled employees, although they do have one employee who has taken an alternative position to accommodate their changing abilities.

### **Resilience**

One objective of the Authority is to ensure stability and predictability of utility services. Previous reports have shown the improved resilience against periods of low rainfall. On the energy side of the business Connect have protected themselves by introducing some backup diesel generators at the water treatment works and their offices.

When there is renewable energy supplied through the PPA the system will provide for grid stability and it will then be possible to provide electricity without the need for diesel generators to be running.

The Drought Management Plan was reviewed and found to be fit for purpose.

**PART 2 – PUBLIC UTILITIES DEVELOPMENT PLAN**

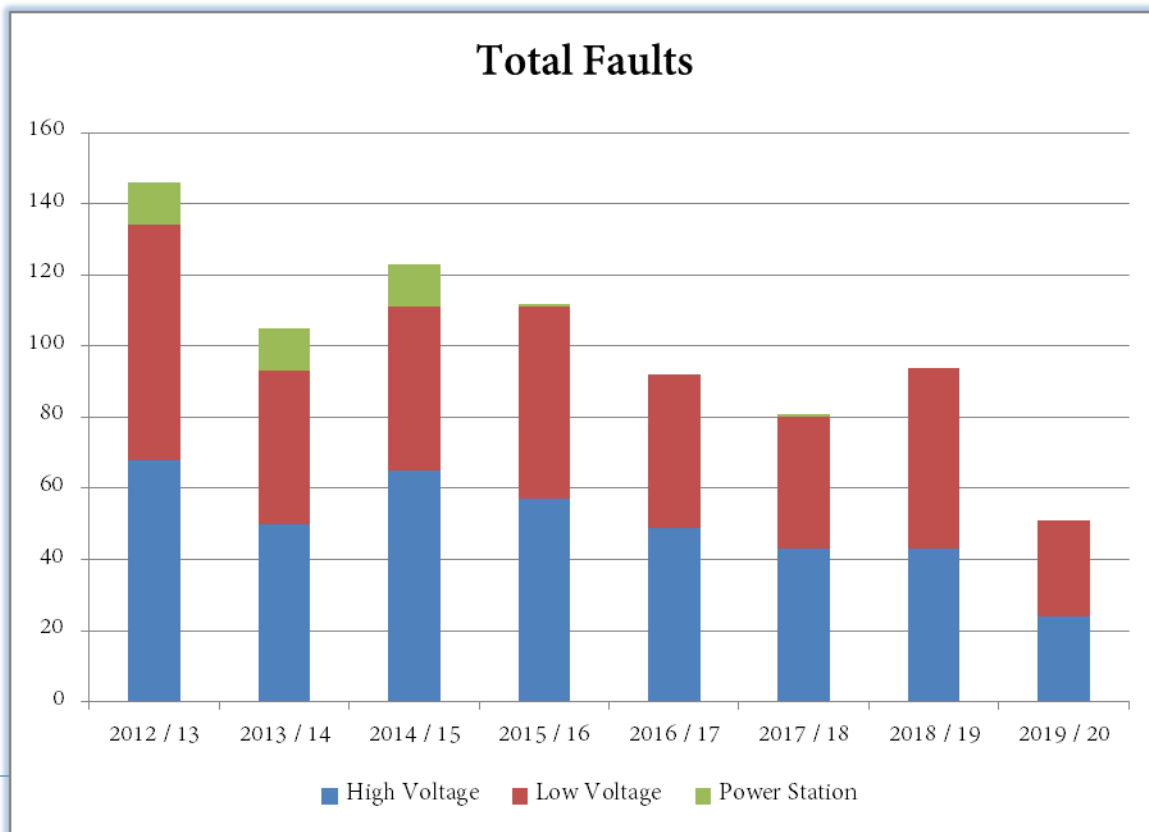
**2.1 PUDP**

The Public Utilities Development Plan (“PUDP”) was agreed, after extensive discussions, between Connect and the Authority. This provides for a planned improvement to the reliability and quality of public utility services. The plan requires the collation of performance indicators to assist in determining if such improvements are being achieved by Connect. Such performance indicators are measured against the “benchmark year” of 2012/13, namely the year prior to the commencement of the Connect operation as a private limited company.

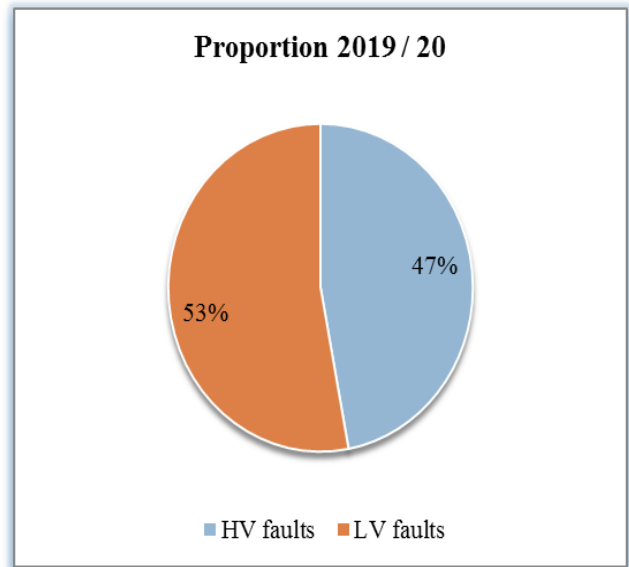
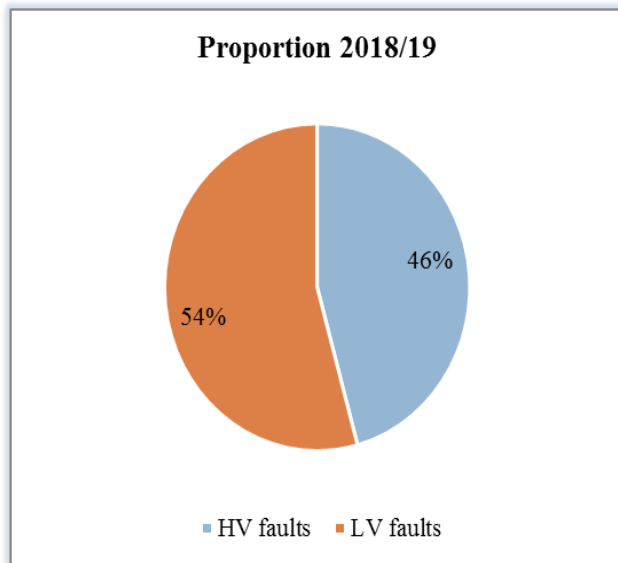
**2.2 RELIABILITY OF ELECTRICITY DISTRIBUTION NETWORK**

Disruptions to the Electricity Distribution Network (“EDN”) may be High Voltage “HV” affecting a large number of consumers or Low Voltage “LV” generally affecting a small number of consumers. In the benchmark year the EDN had in total 146 disruptions. Connect has reduced the number of total disruptions from the benchmark year of 146 to 51 (94 last year), within the agreed target of 95. This represents an improvement of 65%, and 46% on the previous year. 19/20 was the best year to date.

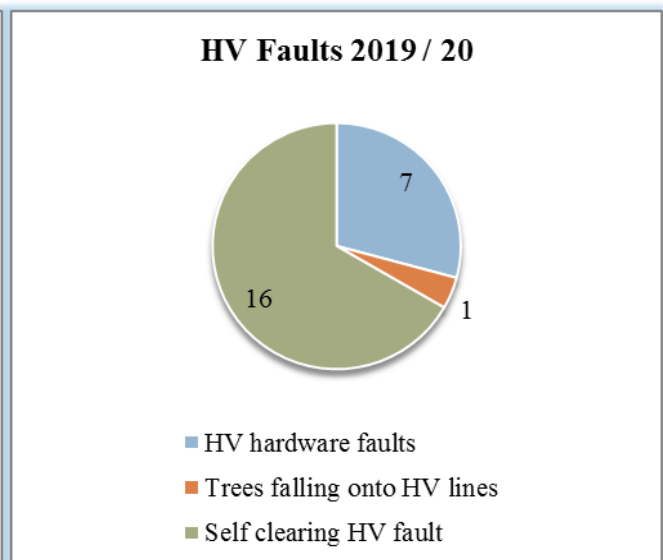
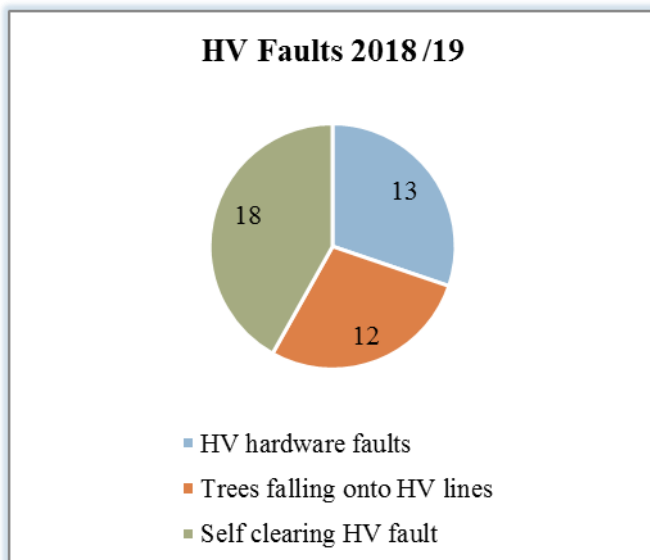
The graph below shows the improvement trend.



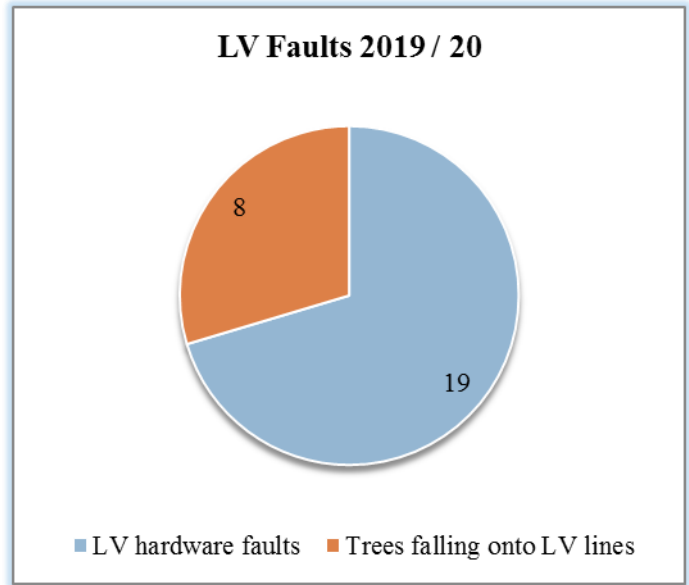
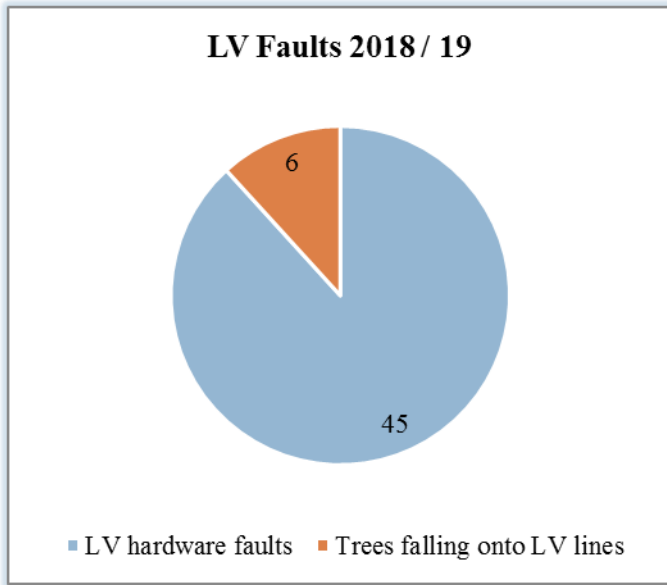
The pie charts show the spread of faults between the high and low voltage networks. The proportion is similar to the previous year.



The number of trees falling onto lines reduced to a single incident. This improvement is as a result of sustained tree clearance work that was brought inhouse a few years ago. Spurious tripping (self clearing faults) reduced most likely as a result of the continuing line clearance programme. With vegetation removed from the area around electricity lines there are reduced incidents of bark, twigs etc touching the lines resulting in the protection operating with the offending material then falling to the ground. High Voltage hardware faults should continue to reduce as more robust silicone hardware is replacing the ceramic insulators that were previously used.

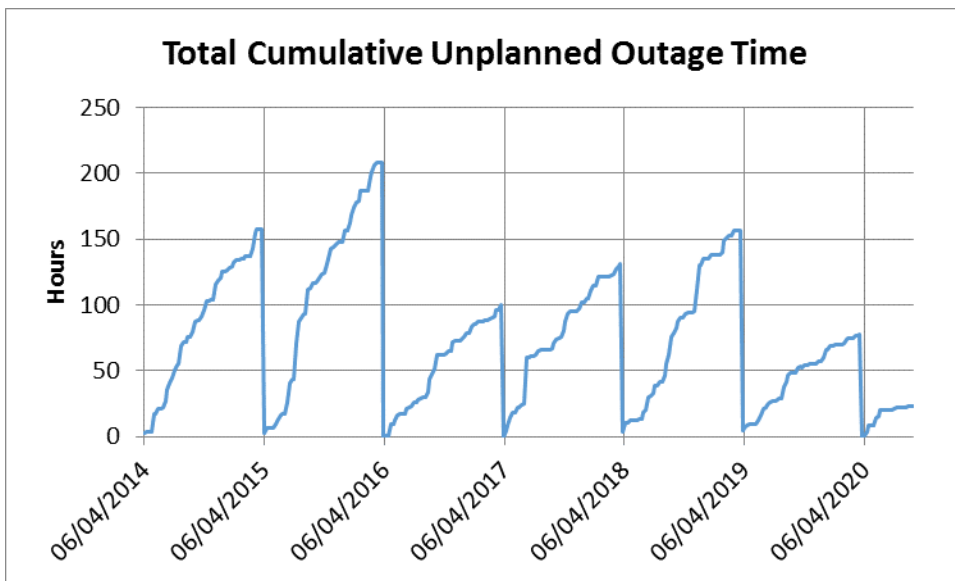


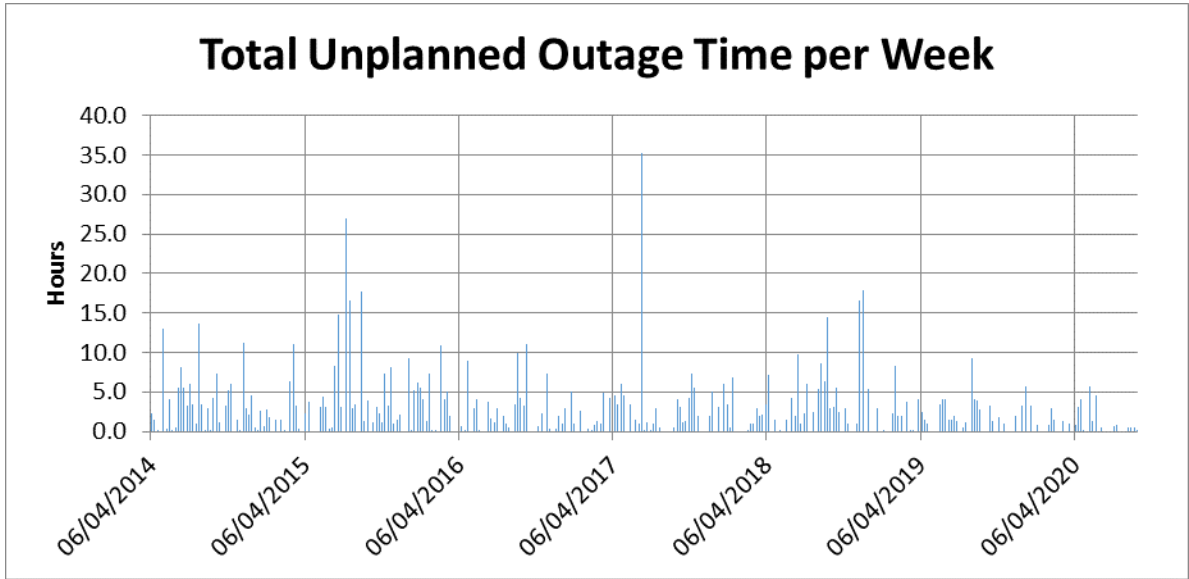
Low voltage faults have less impact than high voltage faults since they relate to single customers or small groups of customers. The number of hardware faults decreased from forty five to nineteen.

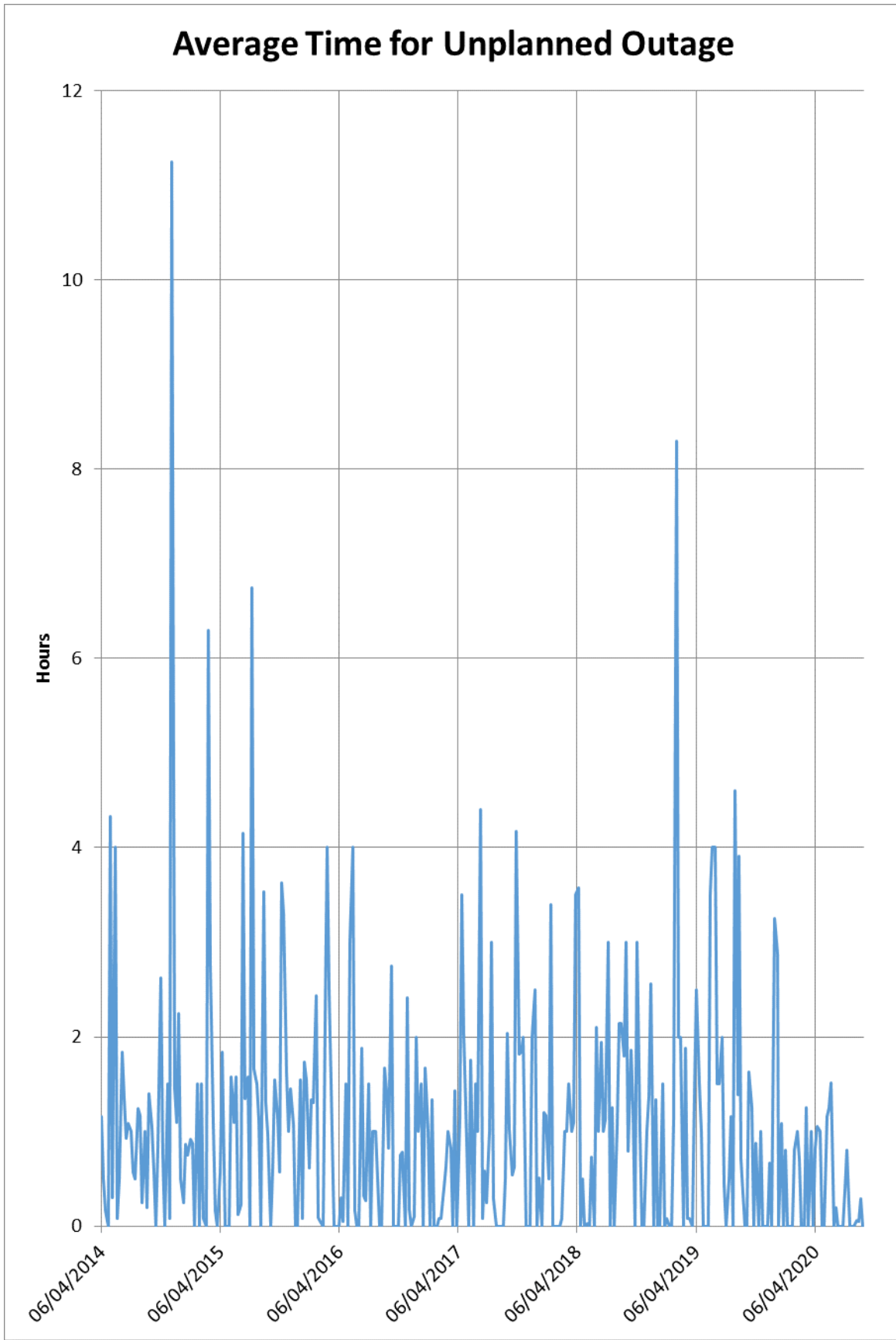


The URA have also asked Connect to provide details of the length of time of each interruption as these may also be a good indicator of improvements.

The three graphs below shows the trend which is encouraging



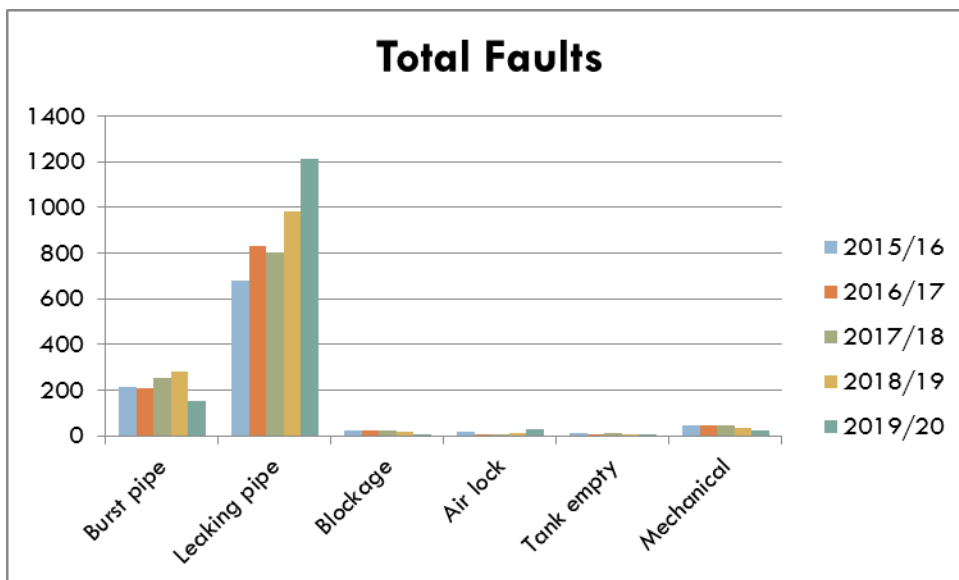
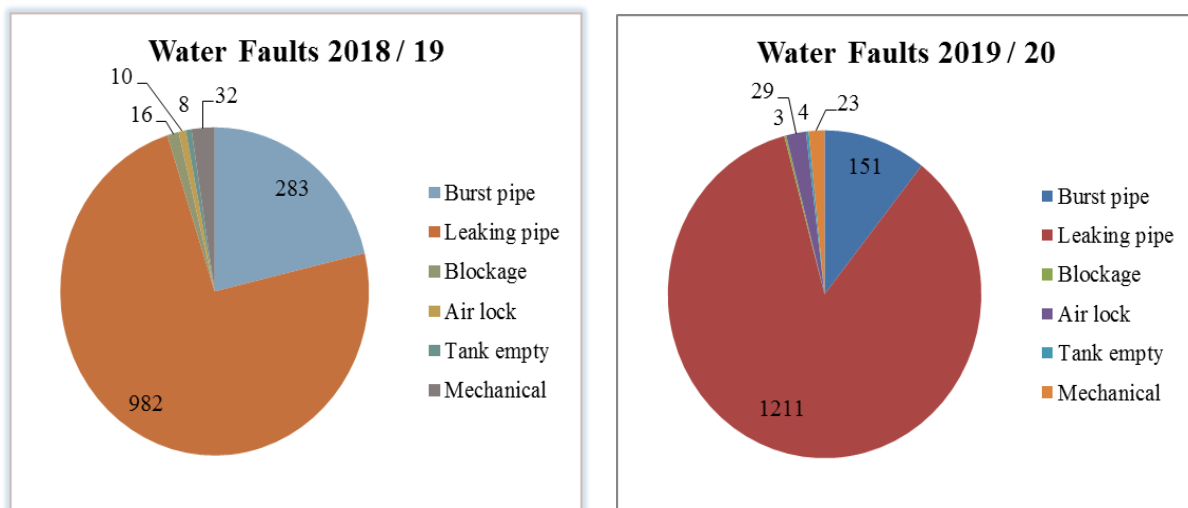




### 2.3 RELIABILITY OF WATER DISTRIBUTION NETWORK

Although the reliability of the water network has improved by 10% since divestment there is a worrying trend in relation to the amount of leaking pipes whilst other faults remain constant or improve. This has been raised by the URA with Connect as there is an upward trend that is outside the targets set. As indicated earlier in the report the URA is expecting a medium to long term plan to be in place in time for the next report with a view to target setting over the next few years.

Connect report that a dedicated team is renewing mains and survey work informs the location of pressure reducing valves which reduce the incidence of over pressure which is a cause of bursts. Connect conclude that the age and condition of the system are preventing actual improvement in system performance despite the efforts being made to deal with the known issues. An analysis of faults is shown below.



<b>Burst pipe</b>	<b>Leaking pipe</b>	<b>Blockage</b>	<b>Air lock</b>	<b>Tank empty</b>	<b>Mechanical</b>
<b>151</b>	<b>1211</b>	<b>3</b>	<b>29</b>	<b>4</b>	<b>23</b>

The trend is similar to last year and of the 1,421 faults 96% were attributable to bursts and leaks. The only way to reverse this trend is for further investment but tariff revenues are insufficient to allow this.

## **2.4 WATER QUALITY**

Appendix 3 shows the results in more detail but overall Connect were 100% compliant in water visual appearance and 100% compliant with microbiological integrity against a target of 99.5%. The Environmental Health Department continues to provide independent verification of results with the sampling and testing regime now working well supported by annual training from the Senior Microbiologist on correct sampling methodology.

Last year Connect reported deterioration in the visual quality of water which was attributed to the excessive quantity of silt built up in the Harpers 2 (Earth Dam) reservoir. This was removed during the year and the reservoir is full with the quality of water much improved. The silt traps installed in 2017 will slow down the rate at which silt will accumulate.

As the year progressed Connect experienced some technical problems with the turbidity measurement equipment at the Redhill Water Treatment Works. Connect's technician has been unable to resolve the issue and on island expertise has been exhausted. Arrangements were underway to source an overseas technician to rectify the problem but Covid-19 restrictions have prevented this from taking place. Since Connect are unable to measure they are unable to report on this figure, however Connect report that visually the water supplied has a favourable appearance when compared to other plants where the turbidity is being measured. With no adverse consumer feedback this leads Connect to believe that the turbidity is acceptable.

Connect have also agreed with the URA to reduce the NTU target for Jamestown from 6 to 5

## **2.5 CONNECTION TIMES**

Connect have agreed improved targets for the time to perform new connections to the electricity and water supply networks. The measure is the number of days Connect contributes to the process, for ease of measurement non-working days are included. Electricity connections were favourable against



the target, the 2012/13 benchmark was fifty days, the 2019/20 target was sixteen days and the actual was an achievement of six days. Connect have now agreed a reduced target of 10 days from 20/21

Water connections were also below the target of ten with the average time reduced to two days. The 2012/13 benchmark was ninety days. Connect have agreed a reduced target of 5 days from 20/21

## **2.6 COMPLAINTS**

The complaints handling system shows 100% compliance. A total of fourteen were resolved at the first level with one complaint being escalated to the second level and zero being escalated to the third level.

## **PART 3 - CODES OF PRACTICE**

### **3.1 TARGETS**

Codes of Practice were agreed between Connect and the URA. These make provision for the compliance with conditions 23 to 30 of Connect's licence. The URA sets targets of 100% compliance and these are more particularly dealt with in Appendix 2

Of note there is currently no CoP for efficient use of water. The URA believes that it is important that customers are assisted in reducing water usage and are enabled to monitor their own water usage. To this end a CoP will be included for 20/21 which will be discussed when the URA considers the pricing structure for 20/21

### **3.2 ACCESS TO PREMISES - CONDITON 23**

This condition requires that all employees (a) possess the skills necessary to perform their required duties, (b) are readily identifiable by the public, (c) are appropriate people to visit and enter a customer's premises and (d) in a position to advise customers of a contact point for help and advice if required.

The majority of customer contact is by the meter readers that are now contracted directly to Connect as opposed to the previous outsourced arrangement. The requirements of the Code of Practice have been included in their contracts so the meter readers are contractually bound by the requirements stated in the Code of Practice. Both the meter reader staff and Connect staff have ID badges to readily identify themselves to members of the public. Training material has been provided and information is now printed on the reverse side of the bills directing customers in relation to advice.

The URA has found no evidence of non-compliance

### **3.3 PAYMENT OF BILLS AND CUSTOMERS IN DEFAULT - CONDITIONS 24 AND 25**

These codes of practice were introduced and included into Connect process with input from the Social Services Manager in respect of those having difficulty in paying their bills and also identifying customers in default and ensuring reasonable payment terms are agreed.

Connect have a member of the finance staff dedicated to managing customer debt which includes agreeing alternative payment arrangements and liaising with Social Services to ensure the vulnerable are not unduly penalised. Although Connect does not publicise the fact, they do work with the charity 'Making Ends Meet' (MEM) and through the charity provide funding to those that MEM consider are vulnerable and unable to pay their bills once they are happy that measures have been put in place to ensure the debt cannot build again.

Last year Connect provided funds to help eighteen debtors and since divestment have helped a total of two hundred customers who were struggling to pay their bills.

The URA has found no evidence of non-compliance with both these CoP's

### **3.4 CONNECTIONS AND DISCONNECTIONS - CONDITION 26**

This condition requires specific connection and disconnection procedures to be followed within various time limits. The Authority found no evidence of non-compliance with advising, visiting to assess work required, reconnection and disconnection.

The Code of Practice requires a site visit within five working days. Thirty Five electricity applications were made and twenty eight for water. All site visits were carried out on time.

### **3.5 DISABLED, CHRONICALLY SICK AND PENSIONABLE AGE CUSTOMERS – CONDITION 27**

Through close liaison with the Social Services Manager Connect have undertaken to visit consumers at their request to provide advice on the use of electricity and water. Additionally, Connect have provided Social Services with a stock of high efficiency luminaires to distribute and have further committed to provide monitoring equipment in order that vulnerable consumers can, with assistance, understand more of their usage profile. Authorised officers can be readily identified by their identity card.

The Authority found no evidence of non-compliance.

### **3.6 FORMAL COMPLAINTS – CONDITION 28**

This condition requires that complaints are reviewed, resolved or referred within various time limits.

A total of fifteen complaints were received. Complaints are reviewed by the management team on a weekly basis. Fourteen complaints were resolved at the first level and one resolved when escalated to the second level.

The Authority found no evidence of non-compliance.

### **3.7 READING OF METERS - CONDITION 29**

Reliably obtaining accurate meter readings is an essential business function and Connect believes that the service provided has achieved this. The meter readers have been trained in identifying potentially dangerous meter installations.

This function is now managed in-house where there will be increased control in this area of the business.

The Authority found no evidence of non-compliance.

### **3.8 EFFICIENT USE OF ELECTRICITY – CONDITION 30**

A number of advertisements have been designed to inform the public. Customers are advised on the reverse side of their bills that information leaflets are available. Home visits are offered to disabled and chronically ill customers via Social Services. Two advertisements are placed each week in the local papers which is significantly greater than the six monthly requirements and the scope has been expanded to provide water consumers with information on efficient use of water. Connect also publish on an ad-hoc basis articles that they feel will be of interest to the general public.

## **PART 4 – CONCLUSIONS**

### **4.1 PUBLIC UTILITIES DEVELOPMENT PLAN COMPLIANCE**

The reliability of the electricity distribution network is ahead of the reducing targets set by the Authority and has demonstrated a significant improvement from the benchmark year..

The reliability of the water distribution network is an area where failing has occurred, as last year. It is hoped that the additional interest in the security of the water distribution network by SHG will further highlight the inherited problems that Connect is dealing with. These problems require investment and while revenue from water is significantly below the cost of water production the opportunity for such investment is limited.

### **4.2 CODES OF PRACTICE COMPLIANCE**

The Authority was impressed with the level of compliance with the CoP's and looks forward to agreeing a CoP for efficient use of water

### **4.3 GENERAL CONCLUSIONS**

This is the seventh annual report issued by the Authority.

Electricity provision is considered good given the starting point at divestment.

Reliability of the water network is an area of real concern. Water security is essential to any community and given the isolation of St Helena self-sufficiency is required. Investment is urgently required to firstly halt the degeneration of the system and secondly to reduce water loss. Investment from SHG last year was at zero. Connect cannot raise sufficient money to improve the network through tariffs which customers find a heavy financial burden.

The URA recognises that investment is a priority for Connect and that real efforts are being made to address problems despite limited finances

The BDO report is largely positive and none of the findings were a surprise to Connect or the URA

There is now a Power Purchase Agreement with PASH which the URA expects will lead to a downward pressure on tariffs and a reduction on the subsidy required from SHG. This will allow greater targeting of subsidies on the water network. The URA is further impressed that the reliance on renewable energy will be at a level well above that experienced by many wealthier and larger nations and Connect is commended for this.

Duncan Cooke

Chairman, Utilities Regulatory Authority

**APPENDIX 1**  
**PUBLIC UTILITIES DEVELOPMENT PLAN**

**APPENDIX 2**

**CODE OF PRACTICE COMPLIANCE MONITORING**

**APPENDIX 3**  
**WATER QUALITY**

**APPENDIX 4**  
**PERFORMANCE AGAINST PRE-DIVESTMENT BENCHMARKS**