

ICT 2023 – 2 – Determination Outage Reporting Rules Update



**UTILITY REGULATION AND COMPETITION OFFICE
CAYMAN ISLANDS**

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1. Background

1. The Utility Regulation and Competition Office (**'OfReg'** or the **'Office'**) is the independent regulator established by *section 4 of the Utility Regulation and Competition Act (2021 Revision)* (the **'URC Act'**) for the electricity, information and communications technology (**'ICT'**), water, wastewater and fuels sectors in the Cayman Islands. The Office also regulates the use of electromagnetic spectrum and manages the .ky Internet domain.
2. The Office's functions also include regulating the interconnection of ICT networks, regulating the quality of service offered by ICT service providers in the Cayman Islands, promoting innovation and facilitating investment in the Cayman Islands, promoting and maintaining an efficient, economic and harmonized utilisation of ICT infrastructure and ensuring the continuity of critical national ICT infrastructure.
3. The purpose of the Consultation on a Draft Determination¹ to which this Determination relates, was to propose an update to the existing Outage Reporting Rules (the **"Rules"**).
4. In 2016 the Information and Communications Technology Authority (**'the ICTA'**) introduced the Outage Reporting Rules (**'the Rules'**), that related the need for service providers to report outages impacting ICT Networks and Services.
5. In 2019 the Rules were updated to reflect the transition from the ICTA to the Utility Regulation and Competition Office and to introduce online reporting of outages.
6. Based on the experience obtained using the existing Rules, the Office reviewed the Rules and identified some areas that in the view of the Office require updating. The Office considers that the updates are necessary to better capture instances of outages on licensees' networks to better enable the Office to determine whether any outages or repeated outages justify regulatory interventions or industry cooperation initiatives to prevent the recurrence of similar outages. Additionally, the inclusion of requirements to notify customers of outages will help keep customers appropriately informed.
7. The Consultation on the update of the rules was launched on 18th May 2022.

¹ [ICT 2022-1 Consultation Proposed Outage Reporting Rules Update](#)

8. In presenting its proposals in the form of a draft determination as part of the Consultation, the Office solicited the input from industry and the public on its proposals. Having received several responses, the Office has reviewed responses as discussed at Part 3 below, giving due consideration to all comments prior to issuing the final Determination herein. In doing so, the Office has either maintained, amended or clarified its proposals and gives reasons for doing so.

2. Legal Framework

9. In developing the preceding consultation as well as drafting this determination, the Office is guided by its statutory remit as set out in the URC Act and *Information and Communications Technology Act (2019 Revision)* ("ICT Act"), each where applicable.

Utility Regulation and Competition Act

10. Section 6 of the URC Act sets out the principal functions of the Office. Of particular relevance to this consultation are the following:

(1)(c) to protect the short- and long-term interests of consumers in relation to utility services and in so doing –

(i) supervise, monitor, and regulate any sectoral provider, in accordance with this [Act], the regulations and sectoral legislation and any general policies made by Cabinet in writing;

(ii) ensure that utility services are satisfactory and efficient [...]; and

(iii) publish information, reports and other documents relating to utility services; and

(d) to promote innovation and facilitate economic and national development.

(2) In performing its functions and exercising its powers under this or any other Law, the Office may –

(d) make administrative determinations, decisions, orders and regulations; [...]

- (o) conduct research and studies into any matter or technology which may be relevant to its functions and publish its findings, if appropriate;*
- (dd) conduct public consultations; [...]*
- (hh) take any other action, not expressly prohibited by [Act],, that is necessary and proper to perform its duties under this [Act], and sectoral legislation;*

(3) Without prejudice to subsection (1) or (2), the Office has power to carry on any activity which appears to it to be requisite, advantageous or convenient for or in connection with the performance of its functions or the exercise of its powers under this or any other [Act],.

11. Section 7 of the URC Act sets out the Office's duty to consult on matters that impact the rights or obligations of a licensee.

Information and Communications Technology Act, 2019 Revision

12. Specific functions and powers of the Office in respect to information and communications technology are set out in the ICT Act.

13. Under **section 9** of the ICT Act, OfReg is required, among others:

1 [...] the Office has power to do all things necessary or convenient to be done for or in connection with the performance of its functions under this [Act]; and

3(h) to promote and maintain an efficient, economic and harmonised utilisation of ICT infrastructure; [...]

14. Section 72 of the ICT Act states as follows:

(1) ICT service providers and ICT network providers shall use reasonable endeavours to ensure that their ICT services and ICT networks are –

- (a) reliable;*
[...]
- (b) provided with due care and skill; and*
- (c) rendered in accordance with the standards reasonably expected of a competent provider of those ICT services and ICT networks.*

15. Pursuant to **Condition 4.1** in the ICT licences it has issued, the Office has the power to examine any and all aspects of a Licensee's business and can

require the Licensee to provide it with information about the business upon reasonable notice.

16. Therefore, it is the view of the Office that it retains the right to propose material amendments to the established Outage Reporting Rules when appropriate.

3. Proposed Changes and Responses

17. The Office received responses to the Consultation on the Draft Determination from, Cable and Wireless Cayman Islands (**'Flow'**), Digicel Cayman Limited (**'Digicel'**) and Datalink (**'Datalink'**).

18. Datalink did not provide comment on the various proposed updates to the Rules. Instead, Datalink provided a general statement:

In the proposed changes the primary responsibility for reporting an unplanned outage is that of one of DataLink's Attaching Utilities. Given that the responsibility to notify does not fall to DataLink, DataLink recommends a simplified reporting arrangement under which DataLink's notification could be given by reference to a fuller notification provided by the Attaching Utility.

DataLink does understand it's responsibility and obligation to report planned maintenance that could result in a degradation or outage of service to its Attaching Utilities on any part of their own infrastructure.

19. **OfReg's Response:** The Office agrees with Datalink to the extent that the obligations created by the Rules are imposed primarily on ICT licensees who own and operate ICT networks and provide ICT services, that require reporting as per the reporting criteria set out in Annex A of the proposed rules. The Office thanks Datalink for acknowledging its responsibility and obligation to report planned maintenance that could result in a degradation or outage of service to its Attaching Utilities on any part of their own infrastructure.

20. The Office's proposed updates, the responses to the consultation and the Office's considerations are summarised below. Detailed explanation of the final updated Rules is set out in **Annex 2** of this Determination.

Part 1: Basis and purpose. This part has been expanded to include information on why and how the data collected through Outage Reports is used.

21. The Office specifically proposed to replace Part 1:

The Utility Regulation and Competition Office (the “Office”) hereby establishes the rules and requirements pertinent to the reporting of disruptions to communications, and to the reliability and security of communications infrastructure and facilities.

with:

The Utility Regulation and Competition Office (the “Office”) hereby establishes these Rules and requirements which set out a Licensee’s obligations for reporting disruptions to public and other critical communication services, and to facilitate monitoring of the reliability and security of communications infrastructure and facilities. The information on service outages is essential to maintain and improve the infrastructure reliability as it provides the basis for the Office to determine whether any outages or repeated outages justify regulatory interventions or industry cooperation initiatives to prevent the recurrence of similar outages. Additionally, outage notifications sent to customers will help keep customers appropriately informed.

22. **Flow’s Response:** Flow did not provide a response to the proposed change of Part 1.

23. **Digicel’s Response:** *Digicel welcomes the OfReg taking steps to monitor outage reporting and recurrences to the extent that if they are deliberate outages, they may require some control.*

That said, while ex-ante regulations should only be considered in extreme circumstances, before they are imposed or contemplated by the OfReg, Digicel welcomes engaging in independent and separate consultations in this regard.

24. **OfReg’s Response:** The Outage Reporting Rules have been in place for approximately seven years and thus the concept of reporting outages is not new. At the time of implementation, the Office considered that the reporting requirements under the Rules were necessary as the information provided directly assisted the Office in considering how licensees were meeting their

- various licence and other obligations related to operation of their networks and provision of services.
25. The importance and value of outage reporting has not changed. Arguably the value of outage reported information has increased, keeping in-step with the ever-increasing dependency on communications services and thus the proper functioning of communication networks.
 26. The Office considers that consultation on the update to these Rules, the impact of which relates to several licensees as well as the public, is a process that must be conducted with transparency and thus be done publicly and not exclusively with Digicel alone. The Office is guided by its duty to consult as set out in the URC Act² as well as the procedures set out in the Offices Consultation Procedure Guidelines. The Office expects full compliance with the Rules as determined.
 27. **Datalink's Response:** Datalink did not provide a response to the proposed change of Part 1.

Part 3: Scope of these Rules. An addition to this section introduces the differentiation between planned and unplanned outages. The existing Rules only provided for reporting of outages after they had occurred. However, planned upgrade or maintenance work may also disrupt an ICT Service or ICT Network. The Office expects to be notified of such work to ensure that it is carried out in a way to create the least impact on consumers. Also, the Office will be able to determine if several service or network providers are planning to carry out such work at the same time.

28. The Office specifically proposed to insert the following paragraph at the end of Part 3:

Both Planned and Unplanned Outages fall within the scope of these Rules.
29. **Flow's Response:** Flow did not provide a response to this proposed change of Part 3.
30. **Digicel's Response:** *Digicel, at this time, has no comments to changes proposed under this Part 3.*

² Section 7 of the URC Act

31. **OfReg's Response:** OfReg notes Digicel's response.
32. **Datalink's Response:** Datalink did not provide a response to the proposed change of Part 3.
33. **Part 4: Definitions.** The Office proposed to expand the definitions section to include new terms used in the proposed update to the Rules, in line with the following summary:
- Part (a) has been renamed Unplanned Outages
 - A definition for Planned Outages has been inserted as part (b).
 - Part (c) (originally part (b)) has had hospitals and the Government Administration Building added to the list of Special Offices and Facilities. Additionally, reference to appropriate licence condition for reporting 9-1-1 outages has been updated.
 - Part (d) has been reformatted and the Cayman Islands Coast Guard and the Cayman Islands Regiment have been added to the list of organisations where a service outage would be deemed critical. Additionally, wording is simplified to make clear where outages are considered critical if affecting national security/emergency preparedness services and operations.
 - Part (e) now includes the link to the webpage for reporting outages electronically.
 - Part (f) adds a definition for Local IP Traffic.
 - Part (g) adds a definition for Subscriber.
 - Part (h) adds a definition for Urgent Planned Outages. Which are outages planned to commence within a short timeframe and which are necessary to resolve a network problem.
34. **Flow's Response:** Flow did not provide a response to this proposed change of Part 4.
35. **Digicel's Response:** *'Local IP' traffic contains a typo, where the word "mean", is superfluous and should be deleted.*

Definition (g) 'Subscriber', "ICT Service" should be expanded to "ICT Service Provider".

Under Definition (h), while 'Urgent Planned Outages' is defined as being an outage planned within 7 days, it does not contemplate planned outages where emergency maintenance or operations may be required within a very

short turnaround time, thereby reducing any set timeframe significantly. Digicel welcomes clarity on how such emergency planned outages are to be treated under the Draft Rules.

36. **OfReg's Response:** The Office agrees to amend the wording to correct the referenced typo and to provide further clarity in the definition of "subscriber".
37. Definition (h) "Urgent Planned Outages" is already meant to account for planned outages where emergency maintenance or operations may be required within a very short turnaround time. However, the Office agrees to amend the wording to provide for greater clarity by replacing "... commence within 7 days..." to "... commence less than 7 days after the decision...".
38. **Datalink's Response:** Datalink did not provide a response to the proposed change of Part 4.

Part 5: Unplanned Outage Requirements. Apart from adding "Unplanned" to the title of this section, the criteria for determining whether an outage is reportable or not, have been moved to Appendix A of the Rules. This has allowed the reporting criteria to be tailored to specific ICT networks, services and entities. This Part has also been updated to include a requirement to notify customers of outages, where reasonable to do so. These updates result in material changes to paragraphs (a) and (b) of Part 5. Changes are also made to ensure that references to ICT licence conditions and paragraph order are correct.

39. The proposed updated rules are as follows:
 - (a) *ICT Licensees identified in Part 3 of these Rules shall submit electronically an Initial Notification to the Office within 60 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilise, an Outage that meets the criteria listed in Appendix A.*
 - (b) *ICT Licensees identified in Part 3 of these Rules shall notify all its subscribers, of an unplanned outage that meets the criteria listed in Appendix A, within 60 minutes of discovering an Outage that meets the criteria listed in Appendix A where the ability to do so is not impacted by*

the Outage.

- (c) In the event of an Outage lasting more than four (4) hours, the ICT Licensee shall submit electronically an Update Notification to the Office every four (4) hours detailing steps being taken and progress made in resolving the Outage until resolution.*
- (d) The Licensee shall notify the Office of the return to service by submitting electronically a Resolution Notification no later than 60 minutes after the Outage has been resolved.*
- (e) Not later than fourteen (14) days after the Resolution Notification, the Licensee shall submit electronically a detailed Outage Report ("Report") to the Office.*
- (f) The Notifications and the Report shall comply with all of the requirements of Part 7 of these Rules.*
- (g) For the avoidance of doubt, these Rules are without prejudice to any other reporting requirements of the ICT Licensee, including without limitation to those set out in Condition 18 of the Licensee's ICT licence.*

40. **Flow's Response:** Flow did not provide a response to this proposed change of Part 5.

41. **Digicel's Response:** *Digicel refers to the requirements under Part 5(d) and (e).*

Digicel, in most instances, when submitting the Resolution Notification also includes the root cause, recommendations, and steps to mitigate any future reoccurrences. This, in Digicel's view provides the OfReg with sufficient information to work with Digicel in order to close out any outage related issues. For this reason, such Notification process should be treated as the final Outage Report by the OfReg and thereby taking out the unnecessary further step of submitting a similar, if not the same, comprehensive report again within fourteen (14) days after the Resolution Notification is submitted.

That being said, where the root cause is not immediately known and or submitted to the OfReg under the Resolution Notification process, the final Outage Report process may in this instance be invoked, and Digicel will provide the necessary detailed report during at this stage.

42. **OfReg's Response:** The Office thanks Digicel for its input and notes that the rules under (d) and (e) are longstanding, having been in force from 2016 when the first Outage Reporting Rules were enacted. The Office is not proposing any updates to them.
43. In the interest of clarity, the Office notes that the purpose of the Resolution Notification is only to inform the Office that the outage has been resolved rather than to record the root cause etc. When all licensees detail the root cause, mitigation actions etc. in the Outage Report the Office is provided with a complete report of the incident which allows for efficient and focused analysis of the information rather than having to look for it in both the Resolution Notifications and the Outage Reports.
44. Therefore, OfReg will continue to expect that the Resolution Notification is used to inform OfReg of the end of an outage and that the Outage Report has the root cause, resolution actions, mitigation actions etc. The Office expects full compliance with the Rules as determined.
45. **Datalink's Response:** Datalink did not provide a response to the proposed change of Part 5.

Part 6: Planned Outage Reporting Requirements. A separate section was required for Planned Outages as reporting is expected to happen before the event whereas Unplanned Outages are reported after the event. This part also includes requirements for reporting Urgent Planned Outages. Previous Part 6 "Communication of Notification and Outage Reports", now becomes Part 7.

46. OfReg proposes to insert a new section 6 to describe the requirements for reporting planned outages. This new section is shown below:
 - (a) *ICT Licensees identified in Part 3 of these Rules shall submit electronically, an Initial Notification to the Office for the scheduled upgrade or maintenance activities when these activities have been approved by their internal processes, at least seven (7) days prior to maintenance/works. Only activities that may result in an outage or degradation on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.*
 - (b) *ICT Licensees identified in Part 3 of these Rules shall notify all its subscribers, of a planned outage seven (7) calendar days in advance of the outage through the usual means used to communicate with its subscribers. Only activities that may result in an outage or degradation*

on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.

- (c) *Notification of an Urgent Planned Outage shall be notified to the Office as soon as the maintenance/works have been approved by the Licensees internal processes. Only activities that may result in an outage or degradation on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.*
- (d) *Notification of an Urgent Planned Outage shall be notified to all subscribers as soon as the maintenance/works have been approved by the Licensee's internal processes. This notification shall include, at least, the date, start time, expected duration of the outage and type of Service or Network (where appropriate) affected. Only activities that may result in an outage or degradation on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.*
- (e) *In the event of an Outage lasting more than four (4) hours, the ICT Licensee shall submit electronically an Update Notification to the Office every four (4) hours detailing steps being taken and progress made in resolving the Outage until resolution.*
- (f) *The Licensee shall notify the Office of the completion of the scheduled activities by submitting electronically a Resolution Notification no later than 60 minutes after the activity has been completed.*
- (g) *For the avoidance of doubt, these Rules are without prejudice to any other reporting requirements of the ICT Licensee, including without limitation those set out in Condition 18 of the Licensee's ICT licence.*

- 47. **Flow's Response:** Flow did not provide a response to this proposed change of Part 6.
- 48. **Digicel's Response:** *Digicel, in principle, agrees with, and to the best of its abilities will comply with the requirements specified under Part 6.*

That being said, Digicel notes that there may be occasions where Planned Outages are necessitated and required within a short turn-around time. For this reason, it may not always be possible to provide notice to the OfReg “at least 7 days prior to maintenance/works” being conducted by Digicel. While Digicel will take all reasonable steps to provide sufficient notice to the OfReg, and certainly aim to do so as required under Part 6(a) within the notification periods as set out, there may be occasions when the 7 days’ period may not be achievable and shortened to 5 days.

Digicel repeats the above proviso with respect to the requirements under Part 6(b).

The above comments are also repeated in so far as the same is contemplated under Part 6(c) and (d).

Finally, while Part 6(b) specifies ‘calendar’ days for the notification period, Part 6(a) only provides for 7 days, without reference to it being ‘calendar’ or ‘working’ days. This should be clarified and amended accordingly.

49. **OfReg’s Response:** OfReg considers that the definition of an Urgent Planned Outage (Part 4(h)) and the provisions included in Part 6(c) address Digicel’s comments regarding the needs to perform maintenance activities at short notice. The Office expects full compliance with the Rules as determined.

The reference to “days” in Part 6(a) is intended to mean “calendar days”. The draft updated rules will be amended to reflect this.

50. **Datalink’s Response:** Datalink did not provide a response to the proposed change of Part 6.

Part 8: Sanctions (previously Part 7). The wording of Part 8 is updated to reflect the change from Laws to Acts. The wording now becomes:

Failure to comply with the terms of these Rules may result, without prejudice to any other penalty or remedy which may be available to the Office, in administrative fines pursuant to section 91 of the Utility Regulation and Competition Act (2021 Revision) as amended from time to time

51. **Flow’s Response:** Flow did not provide a response to the change in Part 8.

- 52. **Digicel’s Response:** Digicel did not provide a response to the change in Part 8.
- 53. **Datalink’s Response:** Datalink did not provide a response to the change in Part 8.

Appendix A: Outage Reporting Criteria

- 54. The Office proposed moving the outage reporting criteria from Part 5 to Appendix A. The criteria have also been expanded to provide thresholds for specific services and network elements as follows:

Submarine Cable Systems

	Extent of Outage	Duration of Outage (minutes)
Submarine Cable System	Outage on submarine cable system causing the Cayman Islands to be unable to communicate with other places via that system.	any duration
Backhaul	A loss of more than 50% of the backhaul capacity of a submarine cable system within the Cayman Islands	>15

Switched Voice & Mobile Services

Outage Event	Extent of Outage	Duration of Outage (minutes)
Voice Services	Network equipment failure that affects >25% of total installed voice subscribers exchange lines/circuits (including interconnect circuits). Or any degradation of service or failure of other critical network elements that would affect >49 subscribers	>15
Service Control Point	A failure in an NP database, HSS etc.	>15

Base Stations	Loss of service at >30% of operator's base stations.	>15
Special Offices, Facilities & Critical Entity	Potentially affects an Office, Facility or Entity described in 4 (c) & (d) above.	>5
9-1-1 Emergency Routes	Failure that affects a route to the 911 call centre.	any duration

Internet Service Provision

Outage Event	Extent of Outage	Duration of Outage (minutes)
External Connectivity	A loss of >50% of licensee's total bandwidth off-island	>15
External Connectivity	>95% utilisation of licensee's total bandwidth off-island	>15
National Connectivity	A failure that results in local IP traffic being routed off-island	>15
Service Availability	Degradation of service or failure of critical network elements that would affect >49 subscribers	>15

55. **Flow's Response:** Flow provided its general comments in several paragraphs as set out below. The Office retains Flow's paragraph numbering.

***Flow's Response at paragraph 2.2:** While recognising that [.....] Flow is concerned that some of the Reporting Criteria may be disproportionate and overwhelming for the Company's existing resources.*

OfReg's Response to paragraph 2.2: OfReg is of the opinion that the updates to the Outage Reporting Rules represent a clarification of what should be reported and when. Also, OfReg does not anticipate that the changes will increase the burden of reporting on a licensee.

***Flow's Response at paragraph 2.3:** If the Office were to insist on implementing the Reporting Criteria as is, Flow would have to be provided with a transitional period to become compliant with the*

requirements and if compliance requires spend or additional resources, we will need at least one (1) fiscal year to budget for it.

OfReg's Response to paragraph 2.3: Flow and all other Licensees that must comply with the reporting thresholds in the Rules are all obligated by licence to establish, operate and maintain their various networks in order to provide service³. Consequently, all such licensees shall at all times have or have access to resources and systems of internal control to enable them to establish, operate and maintain the ICT Networks and provide the ICT Services under licence.⁴ The Office believes that it is reasonable and highly appropriate for large ICT network operators to already be monitoring network elements to identify outages and the extent of the impact. The new proposed Annex A thresholds serve to identify reporting requirements by network element instead of generalising the outage. The Office notes that Flow has not provided any justification for why a 12-month period would be required for Flow to comply with the new outage reporting thresholds. The Office further notes that no other major licensee raised similar concerns with the reporting thresholds.

Flow's Response at paragraph 2.4: *The Reporting Criteria as well does [sic] not seem to contemplate that individual mobile sites are sensitive to power and transmission fluctuations which is an inherent feature of mobile technology and not a failing of the network operator. This could result in being inundated by reporting. Because of these sensitivities Flow believes that the best approach to assessing availability of mobile service is to actually monitor 99.5% mobile network availability. We can agree that, if in a reporting period Flow does not meet the network availability standard, then we can identify the base stations impacted and the remedial action taken.*

OfReg's Response to paragraph 2.4: One of the objectives of the Outage Reporting Rules is to capture information about issues that affect the reliability and quality of licenced networks. Not reporting outages at individual mobile sites masks network problems that OfReg should be aware of.

³ Condition 2.1 of Flow and the other major ICT Licences.

⁴ Condition 5.3(b) of Flow and other major ICT Licences.

The proposed outage criteria specify that the loss of greater than 30% of an operator’s base stations is the threshold for reporting. This is more relaxed than the current Outage Reporting Rules.

Given the above and the low number of mobile site outages reported under the existing rules, OfReg does not agree with Flow’s view that it could be inundated by reporting.

With respect to Flow’s proposal that monitoring network availability would be a better course of action, OfReg notes that network availability is a long-term measure of network performance. This metric would be better included with the requirements of licence conditions 8.3 & 8.4 (Development Plan and Compliance reporting).

Flow’s Response at 2.5: *With regards to definition, Flow seeks the guidance of Ofreg [sic] on the definition of ‘critical network element’.*

OfReg’s Response to paragraph 2.5: OfReg recognises the need to ensure that there is no ambiguity in the wording of the rules. Accordingly, the word “critical” will be removed from the term “critical network element” as the word is superfluous.

56. In addition to Flow’s general comments, Flow also inserted comments into rows of the Annex A Reporting Criteria as shown below:

	Outage Event	Extent of Outage	Duration of Outage (minutes)	Flow’s Comments
Switched Voice and Mobile Services	Voice Services	Network equipment failure that affects >25% of totalled installed exchange lines/circuits (including interconnect circuits). Or any degradation of service or failure of other critical network elements that would affect >49 subscribers	>15	Agreement subject to definition of critical network elements.

OfReg’s Response: see OfReg’s response to Flow’s paragraph 2.5 above.

	Outage Event	Extent of Outage	Duration of Outage (minutes)	Flow’s Comments
Switched Voice and	Base stations	Loss of service at >30% of operator’s base stations	>15	Rather than focus on Base Stations focus should be on 99.5%

Mobile Services				network availability. See section 2 above on 'General Comments'.
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OfReg's Response: this was addressed in OfReg's response to Flow's paragraph 2.4 above.

	Outage Event	Extent of Outage	Duration of Outage (minutes)	Flow's Comments
Switched Voice and Mobile Services	Special Offices, Facilities & Critical Entity	Potentially affects an Office, Facility or Entity described in 4(c) & (d) above.	>5	>15 minutes recommended. Every outage is likely to affect entities identified at 4(c) and (d) which if >5 minutes would mean that effectively all the other reporting criteria would be >5 minutes.

OfReg's Response: The Office agrees with Flow's suggestion to increase the minimum duration to 15 minutes.

	Outage Event	Extent of Outage	Duration of Outage (minutes)	Flow's Comments
Internet Service Provision	External Connectivity	A loss of >50% of licensee's total bandwidth off-island.	>15	50% loss of bandwidth off-island should not affect end users so this measure may not be particularly useful.

OfReg's Response: Flow's comment assumes that a licensee has, at least, double their used capacity for redundancy purposes. Flow's comment also mentions 50% loss of bandwidth whereas the criterion is >50%. In the case where a licensee has exactly 50% of their total bandwidth used by customers, then >50% loss of capacity would have an impact on customers.

	Outage Event	Extent of Outage	Duration of Outage (minutes)	Flow's Comments
Internet Service Provision	External Connectivity	>95% utilisation of licensee's total bandwidth off-island.	>15	Note that this typically occurs under force majeure conditions. Under ordinary circumstances Flow

				does not assess utilisation in real time.
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OfReg’s Response: OfReg agrees to amend the threshold by replacing the wording “>95% of utilisation of licensee’s total bandwidth off-island” with “>95% of licensee’s total available bandwidth off-island”.

	Outage Event	Extent of Outage	Duration of Outage (minutes)	Flow’s Comments
Internet Service Provision	National Connectivity	A failure that results in local IP traffic being routed off-island.	>15	Carriers have been switching traffic among themselves locally. We are uncertain how to determine that IP traffic has been routed off-island.

OfReg’s Response: This part requires a licensee to notify the Office of any known failure of their network related to peering that results in local IP traffic being routed off-island.

	Outage Event	Extent of Outage	Duration of Outage (minutes)	Flow’s Comments
Internet Service Provision	Service Availability	Degradation of service or failure of critical network elements that would affect >49 subscribers	>15	>30 mins recommended.

OfReg’s Response: OfReg agrees with the suggestion of >30-minute reporting requirement here.

- 57. **Digicel’s Response:** Digicel did not provide a response to the proposed changes to the Outage Reporting Criteria.
- 58. **Datalink’s Response:** Datalink did not provide a response to the proposed changes to the Outage Reporting Criteria.

4. Determination

- 59. Having considered all of the submissions made by the respondents to the Consultation set out in the *ICT 2022-1- Consultation Proposed Outage Reporting Rules Update* the Office determines that the Proposed Outage

Reporting Rules Update will come into force ninety (90) days after the publication of this Determination, with the following changes:

1. The proposed change to Part 1 will be implemented without further alteration.
2. The proposed change to Part 3 will be implemented as is.
3. The errors in Part 4 have been corrected. Also, the definitions have been rearranged so they are now in alphabetical order.
4. The definition of an “Urgent Planned Outage” has been revised as noted in paragraph 37 above.
5. The proposed changes to Part 5 will be implemented as is.
6. Part 6(a), the reference to seven (7) days will be changed to seven (7) calendar days.
7. The proposed change to Part 8 will be implemented as is.
8. In Appendix A: Outage Reporting Criteria, as per Flow’s suggestion, the minimum period for outages affecting Special Offices, Facilities and Critical Entities is increased to fifteen (15) minutes.
9. In Appendix A: Outage Reporting Criteria, as per Flow’s suggestion, the minimum period for Service Availability outages is increased from fifteen (15) minutes to thirty (30) minutes.
10. In Annex A: Replace the wording “>95% of utilisation of licensee’s total bandwidth off-island” with “>95% of licensee’s total available bandwidth off-island”.
11. In Appendix A: The word “critical” is removed from the term “critical network element”.

Annex 1

ICT 2022 -1- Consultation Proposed Outage Reporting Rules Update

<https://www.ofreg.ky/consultations/ict-2022-1-consultation-proposed-outage-reporting-rules>



Annex 2

Final Outage Reporting Rules



ICT OUTAGE REPORTING RULES

ICT 2023 – Outage Reporting Rules

Part 1: Basis and purpose

The Utility Regulation and Competition Office (the “Office”) hereby establishes these Rules and requirements which set out a Licensee’s obligations for reporting disruptions to public and other critical communication services, and to facilitate monitoring of the reliability and security of communications infrastructure and facilities. The information on service outages is essential to maintain and improve the infrastructure reliability as it provides the basis for the Office to determine whether any outages or repeated outages justify regulatory interventions or industry cooperation initiatives to prevent the recurrence of similar outages. Additionally, outage notifications sent to customers will help keep customers appropriately informed.

Part 2: Availability of Reports filed under these Rules

Reports filed under these Rules may be submitted in accordance with the Information and Communications Technology Authority Act (Confidentiality) Regulations, 2003⁵. Requests by any person for disclosure of reports submitted under these Rules are subject to determination by the Office under the Confidentiality Regulations.

Part 3: Scope of these Rules

All ICT Licensees falling into any category Type outlined in Table 1 (“Major Public ICT Networks”), Table 6 (“ICT Services”) excluding Type 12 (“Retail sale of ICT equipment”), Table 7 (“Service Licences issued by Cabinet under Section 23(3) of the Act, for the development of the Sister Islands”), and Table 8 (“Class Licence issued by the Office under Section 23(2) of the Act, for Fall-back International Voice and Data Communications”) of the Section 23 Regulatory Notice issued from time to time pursuant to the Information and Communications Technology Act (2019 Revision) (the “Act”) as amended from time to time, are subject to the requirements of these Rules.

Both Planned and Unplanned Outages fall within the scope of these Rules.

Part 4: Definitions

⁵ <https://www.ofreg.ky/viewPDF/documents/legislation/2021-04-15-02-32-14-ICTA-Confidentiality-Regs.-2003.pdf>

- (a) Critical Entities are defined as:
- a. Royal Cayman Islands Police Service; or
 - b. Her Majesty's Armed Forces engaged in operations; or
 - c. Fire Stations; or
 - d. Hazard Management Cayman Islands; or
 - e. National Emergency Medical Centres; or
 - f. the Cayman Islands Coast Guard; or
 - g. the Cayman Islands Regiment
- (b) Critical Network Element means any network element that is required to provide the service within the licensee's network and where that element fails it will result in the outage.
- (c) Local IP traffic means Internet traffic which originates in the Cayman Islands on a network operated by an Internet Service Provider (ISP) and terminates in the Cayman Islands on a network operated by another ISP, irrespective of whether the networks in question are, fixed wireline, fixed wireless or mobile networks.
- (d) Planned Outage is defined as a degradation in the ability of a subscriber or end user to establish and/or maintain a channel of communications due to scheduled maintenance or upgrade work on an ICT Licensee's network or service.
- (e) Special Offices and Facilities are defined as the airports as listed by the Cayman Islands Airports Authority and seaports regulated by the Port Authority of the Cayman Islands, as well as such primary or secondary emergency services, public & private hospitals and the Government Administration Building. Department of Public Safety Communications (DPSC/9-1-1) special facilities are addressed separately in Section 18 of a Licensee's ICT Licence.
- (f) Submit electronically means the submission of the relevant information via the Offices' online form, or such other reporting systems as may be identified by the Office from time to time.
- (g) Subscriber means a person who is provided with an ICT service by an ICT service or Network provider and includes wholesale service.

- (h) **Unplanned Outage** is defined as a degradation in the ability of a subscriber or end user to establish and/or maintain a channel of communications as a result of failure of, or degradation in the performance of, an ICT Licensee's network or service.
- (i) **Urgent Planned Outages** means an outage that is planned to commence less than 7 days after the decision to initiate the outage and is necessary in order for the Licensee to resolve a problem with its network that is affecting or may affect service to its subscribers.

Part 5: Unplanned Outage reporting requirements

- (h) ICT Licensees identified in Part 3 of these Rules shall submit electronically an Initial Notification to the Office within 60 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilise, an Outage that meets the criteria listed in Appendix A.
- (i) ICT Licensees identified in Part 3 of these Rules shall notify all its subscribers, of an unplanned outage that meets the criteria listed in Appendix A, within 60 minutes of discovering an Outage that meets the criteria listed in Appendix A where the ability to do so is not impacted by the Outage.
- (j) In the event of an Outage lasting more than four (4) hours, the ICT Licensee shall submit electronically an Update Notification to the Office every four (4) hours detailing steps being taken and progress made in resolving the Outage until resolution.
- (k) The Licensee shall notify the Office of the return to service by submitting electronically a Resolution Notification no later than 60 minutes after the Outage has been resolved.
- (l) Not later than fourteen calendar (14) days after the Resolution Notification, the Licensee shall submit electronically a detailed Outage Report ("Report") to the Office.
- (m) The Notifications and the Report shall comply with all of the requirements of Part 7 of these Rules.
- (n) For the avoidance of doubt, these Rules are without prejudice to any other reporting requirements of the ICT Licensee, including without limitation to

those set out in Condition 18 of the Licensee's ICT licence.

Part 6: Planned Outage reporting requirements

- (h) ICT Licensees identified in Part 3 of these Rules shall submit electronically, an Initial Notification to the Office for the scheduled upgrade or maintenance activities when these activities have been approved by their internal processes, at least 7 calendar days prior to maintenance/works. Only activities that may result in an outage or degradation on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.
- (i) ICT Licensees identified in Part 3 of these Rules shall notify all its subscribers, of a planned outage 7 calendar days in advance of the outage through the usual means used to communicate with its subscribers. Only activities that may result in an outage or degradation on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.
- (j) Notification of an Urgent Planned Outage shall be sent to the Office as soon as the maintenance/works have been approved by the Licensees internal processes. Only activities that may result in an outage or degradation on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.
- (k) Notification of an Urgent Planned Outage shall be provided to all subscribers as soon as the maintenance/works have been approved by the Licensee's internal processes. This notification shall include, at least, the date, start time, expected duration of the outage and type of Service or Network (where appropriate) affected. Only activities that may result in an outage or degradation on any facilities that the Licensee owns, operates, leases, or otherwise utilises, that meets the criteria listed in Appendix A shall be reported.
- (l) In the event of an Outage lasting more than four (4) hours, the ICT Licensee shall submit electronically an Update Notification to the Office every four (4) hours detailing steps being taken and progress made in resolving the Outage until resolution.
- (m) The Licensee shall notify the Office of the completion of the scheduled activities by submitting electronically a Resolution Notification no later than

60 minutes after the activity has been completed.

- (n) For the avoidance of doubt, these Rules are without prejudice to any other reporting requirements of the ICT Licensee, including without limitation those set out in Condition 18 of the Licensee's ICT licence.

Part 7: Communication of Notification and Outage Reports

- (a) Notifications and Reports shall be submitted by a person authorised by the ICT Licensee to issue such reports.

- (b) The person submitting the Report to the Office shall also be authorised by the ICT Licensee to legally bind the ICT Licensee to the truth, completeness, and accuracy of the information contained in the Report.

- (c) The person submitting the Report shall certify that he/she has read the Report prior to submitting it, and that the information contained therein is true, correct and accurate to the best of his/her knowledge and belief and that the ICT Licensee certifies that this information is true, complete and accurate.

- (d) The Initial Notification shall provide:

1. The name of the reporting licensee;
2. The date and time of the onset of the Outage;
3. A brief description of the problem including, if available, geographic area or number of customers affected; and,
4. Estimated time of restoration.

- (e) An Update Notification shall provide:

1. The name of the reporting licensee;
2. The date and time of the onset of the Outage;
3. An updated description of the problem;
4. Updated estimated time of restoration;
5. Geographic area affected by the Outage; and,
6. Number of customers affected by the Outage.

- (f) The Resolution Notification shall provide:

1. The name of the reporting licensee;

2. The date and time of the resolution of the Outage; and,
3. A brief description of the actions taken to resolve the Outage.

(g) The Report shall contain all pertinent information on the Outage. The Report shall provide (at a minimum):

1. The name of the reporting licensee;
2. The date and time of onset of the Outage;
3. A description of the problem;
4. Services affected by the Outage;
5. Third party licensees affected;
6. Time of restoration;
7. The geographic area/s affected by the Outage;
8. The number of customers affected by the Outage;
9. The cause of the outage;
10. Corrective actions taken;
11. Actions taken to prevent the Outage happening again; and,
12. A contact name and contact telephone number by which the Office's technical staff may contact the reporting licensee.

(h) Where an Outage impacts the ability of an ICT Licensee to submit electronically a Notification or a Report, the ICT Licensee shall contact the Office's staff by other reasonable means. In all other cases, the ICT Licensee shall submit electronically.

Part 8: Sanctions

Failure to comply with the terms of these Rules may result, without prejudice to any other penalty or remedy which may be available to the Office, in administrative fines pursuant to section 91 of the Utility Regulation and Competition Act (2021 Revision) as amended from time to time.

Appendix A- Outage Reporting Criteria

Submarine Cable Systems

	Extent of Outage	Duration of Outage (minutes)
Submarine Cable System	Outage on submarine cable system causing the Cayman Islands to be unable to communicate with other places via that system.	any duration
Backhaul	A loss of more than 50% of the backhaul capacity of a submarine cable system within the Cayman Islands	>15

Switched Voice & Mobile Services

Outage Event	Extent of Outage	Duration of Outage (minutes)
Voice Services	Network equipment failure that affects >25% of totalled provisioned voice subscribers. Or any degradation of service or failure of other network elements that would affect >49 subscribers	>15
Service Control Point	A failure in an NP database, HSS etc.	>15
Base Stations	Loss of service at >30% of operator's base stations.	>15
Special Offices, Facilities & Critical Entities	Potentially affects an Office, Facility or Entity described in 4 (a) & (e) above.	>15
911 Emergency Routes	Failure that affects a route to the 911 call centre.	any duration

Internet Service Provision

Outage Event	Extent of Outage	Duration of Outage (minutes)
External Connectivity	A loss of >50% of licensee's total bandwidth off-island	>15
External Connectivity	>95% of licensee's total available bandwidth off-island	>15
National Connectivity	A failure that results in local IP traffic being routed off-island	>15
Service Availability	Degradation of service or failure of network elements that would affect >49 subscribers	>30

Glossary

HSS: Home Subscriber Server

IP: Internet Protocol

NP: Number Portability

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