

## Reference Offer (RIO)

### Annex E

## Forecasting

Version number :	Final Version
Version date :	January, 2022
Date of original Issue:	10 <sup>th</sup> December 2018
Authority for issue :	GM, Commercial Regulation

## Document History & Version Control Record

<b>name of document</b>	Forecasting
<b>author</b>	Director, Regulatory WBU
<b>authorised officer</b>	GM, Commercial Regulation
<b>description of document</b>	Contains the detailed Interconnection Services forecasting procedures that need to be followed by <b>stc</b> and the OLO.
<b>approved by</b>	CITC

Version No.	Version Date	Authorised Officer	Amendment Details
1.0	December,2018	GM, Regulatory Affairs	
2.0	March, 2020	GM, Commercial Regulation	
3.0	January, 2022	GM, Commercial Regulation	

## TABLE OF CONTENTS

<b>Clause</b>	<b>Page Number</b>
1 Forecasting Of Interconnection Traffic, Interconnect Links and SS7 Signalling Link Requirements.....	4
2 Forecasting Of Wholesale Leased Line Services.....	8
3 Forecasting Of International Outgoing Voice Minutes Services.....	8
4 Forecast Agreement and Approval .....	8
5 Forecast Review .....	9
6 Reciprocity of Forecasting .....	9
Attachment 1 – New Route Forecasting Form .....	10
Attachment 2 – Interconnect and SS7 Signalling link Forecasting Form .....	11
Attachment 3 – Network Capacity Forecasting Form .....	12
Attachment 4 – Wholesale Leased Line Service Forecasting Form .....	13
Attachment 5 – Outgoing International Minutes Forecasting Form .....	14

## Annex E: Forecasting

This Annex describes the manner in which Interconnection services are forecast and the relevant forms that will be used.

### 1 FORECASTING OF INTERCONNECTION TRAFFIC, INTERCONNECT LINKS AND SS7 SIGNALLING LINK REQUIREMENTS

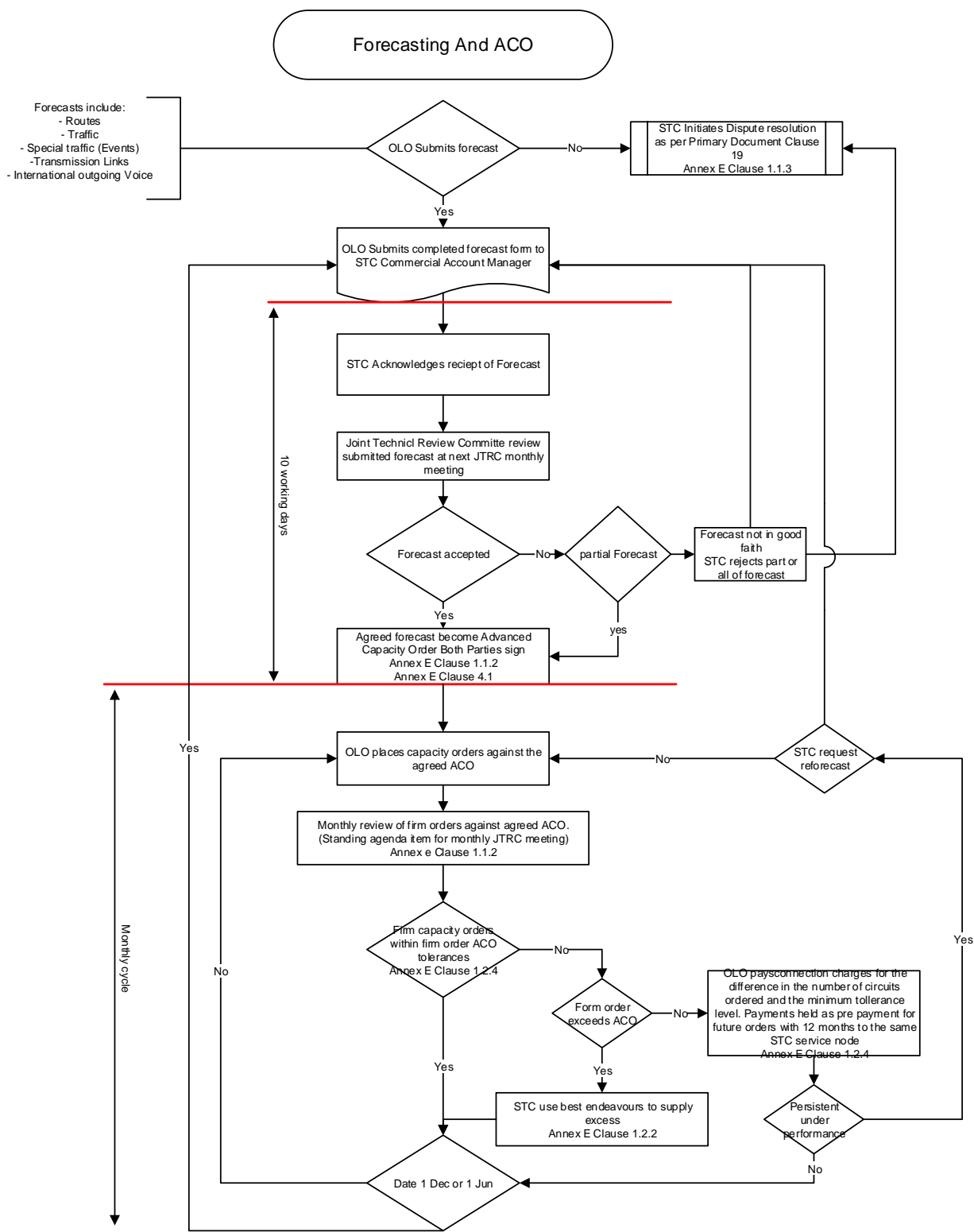
#### 1.1 Forecast Requirements

1.1.1 **stc** requires Other Licensed Operators using **stc**'s Interconnection services to provide forecasts between the Other Licensed Operator's and **stc**'s Networks, in good faith and as accurately as is reasonably possible, of the following:

- Traffic route capacity for routes from the Other Licensed Operator to **stc**
- Interconnect Link capacity for links carrying the above mentioned traffic routes
- Signalling capacity requirements.

1.1.2 The following high level forecasting steps will be adopted:

- Other Licensed Operator submits initial forecast
- Joint Technical Review Committee agree forecast
- Forecast becomes Advanced Capacity Order (ACO)
- ACO sets commitment levels for Calendar Months one (1) to twelve (12)
- Other Licensed Operator places firm orders against ACO
- Firm orders monitored against ACO
- Reforecast submitted every six (6) Calendar Months
- ACO extended by further six (6) Calendar Months



### Forecasting and ACO Flow Diagram

1.1.3 In the event that the Other Licensed Operator does not provide forecasts or is believed not to provide forecasts in good faith, stc has the right to initiate a

Dispute under Clause 19 of the Primary Document and amend the forecast in the interim until the Dispute is resolved.

- 1.1.4 Route forecasts shall be given in terms of the locations of the A and B ends for at least six (6) Calendar Months prior to any firm order. The Other Licensed Operator, in accordance with the template provided in this Annex E - Attachment 1 (*New Route Forecasting Form*), shall update these forecasts every six (6) Calendar Months.
  - 1.1.5 The Other Licensed Operator shall provide to **stc** forecasts for Interconnect Link capacity in terms of STM-1/STM-4 circuits required every six (6) Calendar Months on 1 December and 1 June of each year in the format shown in this Annex E, Attachment 2 (*Interconnect Link Forecasting Form*). This shall be monthly forecasts for months one (1) to twelve (12) and quarterly forecasts for months thirteen (13) to twenty four (24).
  - 1.1.6 The Other Licensed Operator shall provide to **stc** forecasts for network traffic in terms of busy hour erlangs required every six (6) Calendar Months on 1 December and 1 June of each year in the format shown in Annex E, Attachment 3 (*Network Capacity Forecasting Form*). This shall be monthly forecasts for months one (1) to twelve (12) and quarterly forecasts for months thirteen (13) to twenty four (24). The Other Licensed Operator shall update these forecasts every six (6) Calendar Months.
  - 1.1.7 The Other Licensed Operator shall provide to **stc** forecasts for any special or predicted network traffic variations (e.g. unusual or peak demands) as early as possible, but not less than six (6) Calendar Months before any such occurrence, if it is expected that traffic will deviate from normal patterns.
  - 1.1.8 If no capacity forecasting form update is received, the forecast shall remain unchanged from that previously submitted until the following period.
- 1.2 Advanced Capacity Order (ACO) Forecasting Restrictions
- 1.2.1 The Other Licensed Operator shall update the Advanced Capacity Orders (ACO) on 1 December and 1 June of each year by submitting the ACO forms, as per Attachments 1, 2 and 3 to this Annex E, to the **stc** commercial account manager.
  - 1.2.2 Increases in capacity orders for the next forecast period shall be subject to availability of equipment and resources. **stc** can offer no guarantees that such increases in ACOs can be satisfied. **stc** however accepts the capacity orders increase up to 25% deviation from the provided forecast.
  - 1.2.3 Decreases in capacity orders for the next forecast period shall be accepted subject to reasonable charges being levied by **stc** on the Other Licensed Operator for any costs reasonably and necessarily incurred as a result of planning for and potentially purchasing relevant equipment that cannot be reasonably used elsewhere in the **stc** network. However , **stc** accepts the

capacity orders decrease up to 25% without levying any additional charges as penalty.

1.2.4 Figure 1 below shall result in pre-payment of connection charges as specified in Annex F (*Price List*) being paid by the Other Licensed Operator up to the value of the minimum tolerance ACO. This payment will be treated as a pre-payment for future capacity orders placed for Interconnect Links to the same **stc** Interconnect Node within the next twelve (12) Calendar Months.

	T <sub>0</sub>	T <sub>-1</sub>	T <sub>-2</sub>	T <sub>-3</sub>	T <sub>-4</sub>	T <sub>-5</sub>	T <sub>-6</sub>	T <sub>-7</sub>	T <sub>-8</sub>	T <sub>-9</sub>	T <sub>-10</sub>	T <sub>-11</sub>	T <sub>-12</sub>
Change permitted	0%	0%	-12%	-14%	-16%	-18%	-20%	-25%	-25%	-25%	-25%	-25%	-25%

**Figure 1: Tolerance for Variations in ACOs by Month from Start of Forecast**

### 1.3 Reactive Capacity Planning

1.3.1 The Other Licensed Operator and **stc** shall agree to measure traffic on all Interconnect Links to identify congestion and maintain the target Unsuccessful Call Termination Ratio for voice service Interconnection as set out in Annex I (*Quality of Service Measures*).

1.3.2 In the event that the traffic, capacity and route forecasting processes have failed to maintain the target Unsuccessful Call Termination Ratio, **stc** and the Other Licensed Operator shall agree to work together in good faith to resolve congestion issues by planning, as necessary, further Interconnection capacity or new traffic routing plans in an expedient manner and permit the free flow of traffic between the networks according to the target Unsuccessful Call Termination Ratio. Either Licensee shall have the right to call a meeting of the Joint Technical Review Committee as detailed in Annex D (*Management of Interconnection*) to progress resolution of congestions.

### 1.4 Planning of New Points of Interconnection

1.4.1 Prior to making Interconnection available on new or previously not interconnected switching facilities, **stc** or the Other Licensed Operator, whichever is the equipment owner, shall have completed all commissioning and testing activities in accordance with the recommendations of the switch vendor and industry best practice, including but not limited to inter-working testing within its own network, and activated the SS7 Point Code. (See Annex H (*Operations and Maintenance Manual*)).

1.4.2 Forecasts for new routes should be submitted using the form in Attachment 1 (*New Route Forecasting Form*) of this Annex E.

## 2 Forecasting of Wholesale Leased Line Services

### 2.1 Forecast Requirements

2.1.1 **stc** requires Other Licensed Operators using **stc**'s Wholesale Leased Line Services to provide forecasts of the number and capacity of Services between the Other Licensed Operator's locations.

2.1.2 Wholesale Leased Line Services forecasts shall be given in terms of the locations of the A and B ends for at least six (6) Calendar Months prior to any firm order. The Other Licensed Operator, in accordance with the template provided in this Annex E, Attachment 4 (*Wholesale Leased Line Forecasting Form*), shall update these forecasts every six (6) Calendar Months.

## 3 Forecasting Of International Outgoing Voice Minutes Services

### 3.1 Forecast requirements

3.1.1 **stc** requires Other Licensed Operators using **stc**'s Wholesale Outgoing International Voice Call Services to provide forecasts of the number of minutes by destination for destinations expected to have over 5% or more of the total of all outgoing international voice minutes and an aggregated forecast for all other destinations.

3.1.2 The Other Licensed Operator shall provide to **stc** forecasts for Wholesale Outgoing International Voice Call Services minutes required every six (6) Calendar Months on 1 December and 1 June of each year in the format shown in this Annex E - Attachment 5 (*International Outgoing Minutes Forecasting Form*), this shall be monthly forecasts for months one (1) to twelve (12) and quarterly forecasts for months thirteen (13) to twenty four (24). The Other Licensed Operator shall update these forecasts every six (6) Calendar Months.

## 4 Forecasting of Other Wholesale Services

### 4.1 Forecast Requirements

4.1.1 **stc** requires Other Licensed Operators using **stc**'s Wholesale other wholesale services (whenever it is possible) to provide forecasts of the these services as far as possible to enable stc planning.

4.1.2 Other wholesale services forecasts shall be given in terms of the locations, capacities for at least six (6) Calendar Months prior to any firm order. The Other Licensed Operator, in accordance with the template provided in this Annex E, Attachment 4 (*Other Wholesale Services Forecasting Form*), shall update these forecasts every six (6) Calendar Months.

## 5 Forecast Agreement and Approval

5.1 The Joint Technical Review Committee shall review all forecasts (except for other



wholesale services) at a meeting to be convened within ten (10) Business Days of receipt of the forecast by stc. The forecasts shall be approved unless it is considered that they are unreasonable or impractical to implement in the time requested. If approved, authorised representatives of both Parties will sign the forecasts to signify their commitment to the forecasts.

- 5.2 If the Parties fail to agree the forecasts or part thereof then the Parties will use all reasonable endeavours to reach agreement within five (5) Business Days. If agreement cannot be reached then either Party may notify the other of a Dispute. Only those portions of the forecasts that have not been agreed shall be in Dispute.

## **6 Forecast Review**

- 6.1 The Technical Review Joint Committee will review the Other Licensed Operator forecasts on a monthly basis. If the ordering profile significantly deviates from the agreed forecast tolerances as stated in Clause 0 above stc reserves the right to request a re-forecast.

## **7 Reciprocity of Forecasting**

- 7.1 Demand forecasts for Interconnection services, and the adherence to the procedures stated in this Annex E, are required to be followed by both Parties. In the case of services which are not provided on a reciprocal basis then the forecasting arrangements stated in this Annex E are only applicable to the Party requesting the service.

**Attachment 1 – New Route Forecasting Form**

stc JV Code	Licensee Interconnect Node name	Licensee Switch type	Traffic type	Date route to be required operational	Initial required Capacity	Service protection (Yes/No)

Signature.....

(Other Licensed Operator’s Authorised Representative)

Date .....

**Attachment 2 – Interconnect And Ss7 Signalling Link Forecasting Form**

stc JV Code <sup>1</sup>	Licensee interconnect Node name <sup>2</sup>	Interconnect Route designation	Traffic type	Interconnect links					
				Period 1	Period 2	Period 3	Period 4	Period...n	Period 16

Signature.....

(Other Licensed Operator’s Authorised Representative)

Date .....

<sup>1</sup> stc JV Code should be as per Annex C – Attachment 2 – Points of Interconnection.

<sup>2</sup> The Interconnect route must be clearly defined with the address of the Licensee’s Node, building plan and other necessary details required to deliver a physical interconnection route to the Licensee’s Interconnect Node.

**Attachment 3 – Network Capacity Forecasting Form**

Traffic forecasts shall be given in terms of erlangs during the peak and off-peak ‘busy hours’ for a period of 2 years in advance. These forecasts will be updated every quarter by the Licensee as per the traffic forecast in the following format:

stc JV Code <sup>3</sup>	Licensee interconnect Node name <sup>4</sup>	Interconnect Route designation	Traffic type	Busy Hour time	Busy Hour erlangs				
					Period 1	Period 2	Period 3	Period ...n	Period 16

Signature.....

(Other Licensed Operator’s Authorised Representative)

Date .....

<sup>3</sup> stc JV Code should be as per Annex C – Attachment 2 – Points of Interconnection.

<sup>4</sup> The Interconnect route must be clearly defined with the address of the Licensee’s Node, building plan and other necessary details required to deliver a physical interconnection route to the Licensee’s Interconnect Node.

**Attachment 4 – Wholesale Leased Line Service Forecasting Form**

Licensee Location A-end	Licensee location B-end	Capacity	Date Transmission link to be required operational	Transmission rate	Number of Links

Signature.....

(Other Licensed Operator’s Authorised Representative)

Date .....

**Attachment 4A – Other Wholesale Services Forecasting Form**

Type of Service	Capacity	Location(s)	Location(s)	Quantity	Others

Signature.....

(Other Licensed Operator’s Authorised Representative)

Date .....

**Attachment 5 – Outgoing International Minutes Forecasting Form**

Country	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period ...n	Period 16

Signature.....

(Other Licensed Operator’s Authorised Representative)

Dates .....